

**Remedial Investigation Report  
Brownfield Cleanup Program  
Site #C828184  
Former Carriage Factory  
33 Litchfield Street  
Rochester, Monroe County, New York**



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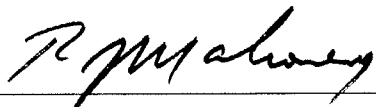
**August 2014**

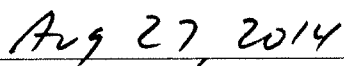


REMEDIAL INVESTIGATION REPORT  
FORMER CARRIAGE FACTORY  
BROWNFIELD CLEANUP PROGRAM SITE #C828184

**CERTIFICATION**

I, Robert Mahoney, certify that I am currently a registered professional geologist and that this Remedial Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date



## Executive Summary

This report documents the activities, methods and results of the Remedial Investigation (RI) for the Former Carriage Factory site located at 33 Litchfield Street in Rochester, New York (“the Site”).

The RI was performed pursuant to the Brownfield Cleanup Agreement (BCA) with the owners of the Site, Carriage Factory Special Needs Apartments, L.P. (CFSNA) that was executed by the New York State Department of Environmental Conservation (NYSDEC or the Department) on February 26, 2013. The RI was completed by Stantec in accordance with the Remedial Investigation Work Plan (RIWP) for the Site that was approved by NYSDEC on May 23, 2013. Interim Remedial Measures (IRMs) are in the process of being implemented by Stantec with Christa Construction in accordance with the Interim Remedial Measures Work Plan (IRMWP) for the Site that was approved by NYSDEC on August 30, 2013.

The RI accomplished the purposes of remedial investigations required by New York State’s Brownfield Cleanup Program. The RI provided:

- Characterization of the nature and extent of contamination at the Site, expanding on what had been identified in previous Phase II investigations;
- Information necessary to perform a qualitative assessment of related potential human health and ecological exposures, as documented herein; and
- Information necessary for the development of remedial measures to protect public health and the environment.

## Remedial Investigation Activities

The RI consisted of:

- A passive soil gas survey across the site and in adjacent rights-of-way (ROWs) to assess potential source areas for volatile organic compound (VOC) contamination;
- A geophysical survey in exterior and interior areas and in the Wiley Street ROW to assess the potential for underground storage tanks, piping or other subsurface structures;
- Excavation of test pits to further assess anomalies identified by the geophysical survey;
- Drilling of test borings in soil and bedrock at interior and exterior locations chosen to further evaluate areas of previously-identified or suspected VOC presence and to provide sitewide coverage;
- Installation of four bedrock groundwater monitoring wells;
- Hydraulic conductivity testing of selected wells;
- Surface soil sampling in exterior areas;
- Laboratory analysis of soil samples;
- Sampling of previously-installed Phase II investigation wells and newly-installed RI wells;
- Laboratory analysis of groundwater samples; and
- Sampling and bench testing of soil and groundwater samples to evaluate the potential for using enhanced reductive dechlorination (ERD) as an IRM for groundwater.



## Remedial Investigation Findings

The RI resulted in the following primary findings:

- Areas of elevated chlorinated VOC (CVOC) impacts were identified in soil gas beneath the west side of the building and adjacent to the loading dock on the south side of the building. The primary compounds were trichloroethene (TCE) and tetrachloroethene (PERC), which are common constituents of degreasing solvents likely used in historical operations at the Site. Lesser impacts by petroleum-related compounds were also observed in interior and exterior areas.

Elevated CVOCs were also observed in offsite areas north of the Site limits, in the Wiley Street ROW; however, these compounds appear to be at least in part from offsite sources.

- The geophysical survey identified four exterior locations south of the building where anomalous results indicated the potential presence of buried metallic objects. Test pits excavated at these locations found miscellaneous metallic objects but no evidence of underground tanks. Survey results inside the building indicated numerous buried pipe runs. Most, but not all of the pipes were related to roof drainage, as determined during subsequent excavation and removal.
- *Surface soil sampling results:* Surface soil samples exhibited concentrations of several metals, including lead, mercury, arsenic and barium at levels in excess of NYSDEC Restricted Residential (RR) Use and/or Protection of Groundwater (POGW) Soil Cleanup Objectives (SCOs). Subsequent sampling during the IRM identified more significant metals concentrations which will be discussed in the IRM Construction Completion Report (CCR). PCBs were also present in the samples at low concentrations below RR SCOs. The urban fill appeared to be generally less than 4 ft in thickness.
- *Subsurface Soil sampling results:* Relatively low levels of petroleum-related compounds were detected in basement soils samples. The results were indicative of highly-weathered petroleum products.

CVOC presence in RI samples for both interior and exterior areas was generally at low levels and not in excess of SCOs, except for one location, B-108, where dis-1,2-dichloroethene was reported above the POGW SCO. Subsequent sampling during IRM activities revealed more significant VOC presence; which presented in the IRMCCR.

- Groundwater levels are highest beneath the building and flow direction is radially away from this groundwater "mound."
- *Groundwater sampling results:* The sampling did not detect the presence of SVOCs, PCBs, or pesticides. Sodium and manganese were detected at levels in excess of NYSDEC groundwater standards; however these are naturally-occurring elements and are not indicative of a site contamination concern.

Samples from thirteen of the sixteen monitoring wells exceeded groundwater standards for one or more CVOC (primarily PERC and TCE). The greatest VOC concentrations on-Site were observed generally beneath the northern portion of the building; the highest overall concentrations were observed to the north of the property across Wiley Street.



- The types and concentration distribution of CVOCs was indicative that reductive dechlorination of these contaminants is occurring. This naturally-occurring process occurs when biochemical activity by microorganisms breaks down CVOCs into non-toxic by-products. Further, bench testing of soil and groundwater samples indicated that ERD would likely be an effective means of *in situ* remediation of groundwater, and sodium lactate was identified as the most effective amendment product to facilitate ERD.

### Interim Remedial Measures (IRMs)

Based on the findings of the RI and concurrent and subsequent construction-related activities, an IRM Work Plan was submitted to NYSDEC. The Work Plan, which was approved by NYSDEC, included the following primary elements:

- *Soil:* Construction activities related to the Site development commenced concurrently with the RI activities. Excavation and/or site grading in interior and exterior areas encountered petroleum, CVOC, and/or metal-impacted soils that required removal and offsite disposal. A detailed summary of these activities will be provided in the IRMCCR.

Due to the presence of urban fill and selected metals in exterior areas at concentrations in excess of SCOs, landscaped portions of the site will require placement of a 2-ft-thick clean soil “cap.” Other impacted areas will be covered with new impervious surfaces.

- *Groundwater:* Based on the findings of the RI, in-situ groundwater remediation through ERD was recommended. Since the area of impacted groundwater is primarily beneath the building, a series of horizontal piping runs was installed during construction to facilitate injection of the sodium lactate amendment.
- *Soil Vapor Intrusion:* Due to the presence of known VOC contamination in soil and groundwater beneath the building, the project includes installation of a vapor barrier and sub-slab depressurization system beneath the entire footprint of the building.



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## 1.0 Introduction

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On behalf of Carriage Factory Special Needs Apartments, L.P. (CFSNA), Stantec Consulting Services Inc. (Stantec) has prepared this Remedial Investigation Report (RIR) for the Former Carriage Factory located at 33 Litchfield Street, Monroe County, New York (Site, see location Figure 1).

The Remedial Investigation (RI) was completed pursuant to a Brownfield Cleanup Agreement (BCA) for the Site between CFSNA and the New York State Department of Environmental Conservation (NYSDEC or Department). The BCA was executed by the Department on February 26, 2013. The Site is designated by the Department as Brownfield Cleanup Program (BCP) Site #C828184.

The RI was performed in accordance with the Remedial Investigation Work Plan (RIWP), originally dated November 21, 2012, and re-submitted in revised form on April 26, 2013. The work plan was conditionally approved by the Department on April 16, 2013; the final version incorporated the Department's comments and was approved by the Department on May 23, 2013. A summary of RI field events is presented in Table 1 and a summary of significant deviations from the RIWP is presented in Table 2.

Note that limited "preliminary reconnaissance" activities were also performed in advance of written RIWP approval but with verbal approval from the Department, and were intended to supplement previous environmental characterization of the site and facilitate development of the RIWP. These investigations are also described herein and are included as part of the Remedial Investigations.

Periodic summaries of investigative activities and results were provided to the Department in the form of email correspondence and Monthly Progress Reports prepared in accordance with BCP requirements.

RI explorations performed within the street rights-of-way (ROWs) were conducted in accordance with appropriate permits obtained from the City of Rochester.

### 1.1 GOALS AND OBJECTIVES

The goals of the RI were to: 1) expand on the findings of the previous Phase II Environmental Site Assessment (ESA) activities performed by Development & Environmental Consultants, Inc. (DECI) prior to the site being entered into the BCP; 2) determine surface and subsurface characteristics of the Site; 3) assess the source(s) and the nature and extent of contamination on or migrating from the Site; and 4) identify migration pathways and potential receptors. The information developed by the RI facilitated the selection and implementation of the interim remedial measures (IRMs) that will attain conditions which are protective for the proposed use of the Site and of public health, the environment, and fish and wildlife resources.

The following objectives for the RI were specified in the RIWP:

- Build upon the data generated and findings of the previous environmental investigations performed, and perform the appropriate supplemental investigations necessary to satisfy DER-10 and address the identified data gaps;
- Develop a more thorough characterization of the nature and extent of contamination of soil and groundwater previously identified at the site, and to provide more thorough areal coverage of environmental media sampling and range of laboratory analyses performed;



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- Identify, to the extent practicable the sources of contamination, the migration pathways, and actual or potential receptors of contaminants on or through air, soil, bedrock, groundwater, utilities, and the onsite structure;
- Collect and evaluate data necessary to evaluate the actual and potential threats to public health and the environment, including evaluation of current and future potential public health exposure pathways, as well as potential impacts to biota; and
- Collect the data necessary to evaluate the known presence of contamination to facilitate evaluation of remedial alternative(s).

## 1.2 SCOPE OF WORK

To achieve the objectives of the RI, the investigation activities described below were performed by Stantec. The work was conducted in general accordance with the RIWP and DER-10 requirements.

- Performed a Pre-Characterization Investigation, with the approval of NYSDEC, prior to the final submission/approval of the RIWP. This work included:
  - Installation of 11 “Preliminary Reconnaissance” test borings in the northern building interior and collection of three subsurface soil samples;
  - Installation, retrieval and analysis of 56 passive soil gas (PSG) sampling modules, at interior and exterior locations, including several locations in the ROWs surrounding the building; and
  - Performing a geophysical survey utilizing electromagnetic and ground-penetrating radar (GPR) instrumentation to assess the potential for underground storage tanks (USTs), piping or other subsurface structures at exterior and interior locations;
- Excavated nine test pits with logging and field instrument screening of soils to further investigate metallic anomalies identified by the geophysical survey;
- Drilled ten test borings in overburden, and extended four of the test borings into bedrock;
- Performed continuous soil sampling in test borings, logged subsurface conditions, performed field instrument screening of the materials encountered;
- Collected ten subsurface soil samples from the boring locations;
- Installed four bedrock monitoring wells in completed test borings (two at exterior locations and two at interior locations), and performed well development of the newly installed wells;
- Collected three surface soil samples;
- Obtained soil and groundwater samples in areas of known chlorinated volatile organic compound (CVOC) contamination for the purpose of conducting bench-scale testing to determine potential in-situ remediation;
- Gauged water levels in previously-installed Phase II ESA and newly-installed RI monitoring wells;
- Collected groundwater samples from twelve previously-installed Phase II wells and 4 newly-installed RI wells;



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- Managed and disposed of investigation derived wastes, including drilling fluids and cuttings, development water and sampling purge water;
- Performed hydrogeologic testing of two previously-installed and two newly-installed wells to obtain hydraulic conductivity data for the bedrock aquifer;
- Performed laboratory analysis of samples and field duplicates, trip blanks, a rinsate blank, and matrix spike/matrix spike duplicates (MS/MSD) collected for quality assurance and quality control (QA/QC) purposes; and
- Surveyed the locations and elevations of wells and, where appropriate, other sampling locations.

Subsurface conditions observed during the investigation activities were documented in accordance with standard procedures and the RIWP. Passive soil gas samples were submitted to Beacon Environmental Services Inc. of BelAir, Maryland (Beacon). Soil and water samples collected during the RI were submitted to the NYSDOH ELAP-certified environmental laboratory Chemtech of Mountainside, NJ for chemical analysis. Laboratory analytical results were reviewed by an independent (third party) data validator, Data Validation Services, Inc. (DVS) of North Creek, New York, using standard data-usability evaluation criteria. The RI activities also included implementation of a comprehensive site-specific Quality Assurance Project Plan (QAPP), Health and Safety Plan (HASP) and the Community Air Monitoring Program (CAMP) that were included in the RIWP.

Interpretation of field data and laboratory analytical results and qualitative assessments of the potential impacts of Site conditions on human health and fish and wildlife resources are presented in this report. The project data used to evaluate and interpret Site conditions and the nature and extent of contamination at the Site includes the field and laboratory analytical data from the RI activities listed above and prior Phase II Investigations.

### **1.3 REPORT CONTENT AND ORGANIZATION**

This RI report provides the following information:

- Section 1: Purpose, objectives, and scope of the RI.
- Section 2: Presents a description of the Site and its setting and a summary of the background information that was the basis for the RI.
- Section 3: Describes the field investigations and laboratory analysis activities performed during the RI.
- Section 4: Describes the results and findings of the RI sampling, monitoring and analytical activities.
- Section 5: Describes the results of the third party validation of project RI analytical data.
- Section 6: Presents qualitative assessments of the human health and ecological risks posed by the Site conditions as observed during the RI.
- Section 7: Provides a summary of the findings, conclusions, and recommendations of the RI.
- Section 8: References.



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Report figures include a Site location map, previous and recent sample location maps, groundwater elevation contour plans, and contaminant concentration maps among others. The tables include comprehensive summaries of the project activities and field and lab data.

The following information is included herein as appendices:

- Logs of test pits, monitoring wells and borings;
- Geophysical survey report;
- Aquifer testing data;
- Investigation derived waste documentation;
- Laboratory reports for RI analytical data;
- Laboratory report for the passive soil gas survey;
- Enhanced Reductive Dechlorination (ERD) bench test results;
- Data Usability Summary Report (DUSR) for RI analytical data;
- Fish and wildlife resource documents; and
- CAMP data.



## **2.0 Background Information**

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### **2.1 SITE LOCATION, DESCRIPTION, AND SETTING**

The Site is a 1.5±-acre parcel located at 33 Litchfield Street in the City of Rochester, Monroe County, New York (see Site Plan, Figure 2). The property (Tax Parcel No. 120.36-2-20) is occupied by a vacant, five-story brick building with a basement, built circa 1900 for the production of horse-drawn carriages. Operations at the Site ceased in approximately 1993 and the Site has reportedly been vacant since that time. CFSNA proposes to redevelop the Site into 71 apartment units for individuals with special needs.

According to Site survey data, the ground surface elevation (el.) ranges from approximately el. 525 feet above mean sea level (ft. amsl) near the south wall of the building to el. 520 ft. amsl along portions of the eastern property line. The surface water drainage is generally to the south from the building. Stormwater catch basins exist in the streets adjacent to the Site.

No surface water bodies, significant natural resources, federal or state wetlands, or critical wildlife habitats of threatened or endangered species are known to be present within ½ mile of the property. In addition, the NYSDEC has indicated it has no records of rare or state-listed animals or plants, significant natural communities or other significant habitats on or in the immediate vicinity of the property, with the exception of the endangered peregrine falcon which was introduced to some of the taller buildings in the City of Rochester in the early 1990s.

According to FEMA Flood Map 36055C0194G, the FEMA flood zone designation for the property is Zone X. This designation indicates that the property is outside the 0.2% annual chance floodplain. The nearest FEMA floodplain areas are located approximately 0.7 miles from the Site, along the Genesee River to the east.

### **2.2 LAND USE**

#### **2.2.1 Current Site and Surrounding Land Uses**

The Site is occupied by a 5-story brick building (with a basement) that has been vacant since operations ceased on the property around 1993.

According to City of Rochester Planning and Zoning, the Site lies within the Center City District (CCD) Cascade-Canal District zone. Land uses in the surrounding urban area include commercial and industrial facilities on the properties to the north and east, commercial and residential properties to the south, and residential properties to the west of the Site.

No designated wellhead protection or groundwater recharge areas are known to be located in proximity to the Site. No water supply wells are known to be located on or adjacent to the Site. Potable water is supplied to the Site and surrounding area by the City of Rochester Bureau of Water. Existing domestic water mains border three sides of the Site. Groundwater is prohibited from use as a potable water supply within the city limits. A combined “stone box” sanitary sewer exists along Wiley Street to the north of the site and along Litchfield Street to the east of the site. Electric and natural gas services are provided to the area by Rochester Gas and Electric Corporation (RG&E).

No schools or federal, state, county, municipal or community parks or recreational areas are known to be present on or adjacent to the Site.



### **2.2.2 Past Uses of the Site and Adjoining Properties**

Detailed information on and documentation of past Site and property uses were reviewed in a report entitled *Phase I Environmental Site Assessment*, dated September 2010 by DECI. The Site has a variable history of use including the manufacturing of wood trim/accent-related products for the automotive industry, other automotive parts, and clothing washers and dryers; further details are discussed in Section 2.4.

## **2.3 GEOLOGIC AND HYDROGEOLOGIC SETTING**

Historic and recent test borings performed at the Site indicate the native soils to be glacial till. Urban fill soils overlie the native soils. The urban fill soils generally consist of granular material with variable mixtures or layers of ash, cinders, slag, brick, concrete and other miscellaneous materials. Bedrock underlying the subject property consists of dolostone of the Eramosa Formation (Lockport Group).

A groundwater mound exists in the northwest corner of the property, beneath and adjacent to the building footprint; groundwater flows radially away from this hydrologic high. The water table is generally observed to be at or near the top bedrock but at some locations is found in the overburden. Based on this observation and the fractured nature of the upper bedrock, it appears the overburden and upper fractured bedrock behave as a continuous water-bearing zone.

## **2.4 PREVIOUS INVESTIGATIONS AND ACTIVITIES**

### **2.4.1 Phase I Environmental Site Assessment**

A Phase I ESA was completed by DECI for the DePaul Group, Inc. (DePaul) in September 2010 to evaluate factors related to environmental liability, risk, and exposure. A copy of the 2010 Phase I ESA report was included as an Appendix in the Remedial Investigation Work Plan (RIWP). The Phase I ESA determined that historical Site operations included manufacture of wood trim/accent-related products for the automotive industry, other automotive parts, and clothing washers and dryers. Several “potential Recognized Environmental Conditions” (RECs, as defined by ASTM Standard E1527-05) were identified that warranted further investigation. These included: floor drains with unknown discharge points; abandoned and potentially leaking drums in the basement and on the third floor; and apparent petroleum staining near the loading dock and in the southern portion of the Site. Other environmental concerns were identified that do not constitute RECs, such as the potential presence of Asbestos-Containing Building Materials, Lead-Based Paint, and PCB-containing light ballasts. Excessive bird excrement was also observed in the building.

### **2.4.2 Phase II Environmental Site Assessments**

The following includes a summary of investigation activities conducted by DECI and results of those activities as described in five separate reports (see Section 8 for references). Copies of each of the reports were included in Appendix A of the RIWP. Soil and groundwater analytical results for these pre-RI investigations were summarized in tabular form in the RIWP. These results have been combined in this report with the RI data (Tables 3 and 4) to provide a comprehensive summary of environmental data for the Site.



#### **2.4.2.1 Limited Subsurface Investigation, dated February 2011 by DECI**

Based on the findings of the Phase I ESA, DECI conducted a limited subsurface site investigation and environmental assessment of the site that was completed in February 2011. The subsurface investigation consisted of a total of nine soil borings (B-1 through B-9): six exterior borings south of the building and three borings located in the basement (see Figure 3). The field work took place in December of 2010.

Exterior borings showed that nearly the entire yard area south of the building (the “yard”) was covered with an average of approximately 1.5 ft. of fill. The fill material was described as ash, cinders, slag, and brick fragments. The underlying native soils were variable but typically described as sand, with some silt and little gravel. This deposit was observed in each boring from the base of the overlying fill materials to the bottom of the borings which terminated at refusal on bedrock. The top of bedrock was generally encountered between 10 ft. and 12 ft. below ground surface (bgs).

Each of the three interior borings revealed a mixture of fill soil overlying native soils, and refusal on bedrock ranged from 2.3 ft. to 3.5 ft. bgs.

Photoionization detector (PID) readings did not indicate the presence of volatile organic compounds (VOCs) during field sampling.

The laboratory analyses of soil samples (Table 3) taken from the borings indicated the potential for environmental impacts from VOCs, semivolatile organic compounds (SVOCs), metals, and pesticides in the yard, and VOCs in the building. Chlorinated VOCs (CVOCs), including tetrachloroethene (PERC) and trichloroethene (TCE), were detected in soil samples from both the northern area of the yard and soil samples from the basement. No herbicides or PCBs were detected in any of the sample analyses.

#### **2.4.2.2 Site Qualification Investigation, dated (revised) November 2011 by DECI**

In response to the results of the subsurface investigation, DECI recommended that additional borings be completed in the yard and a vapor intrusion sampling event be completed in the basement. The findings from this additional research were presented to DePaul in the June 2011 Site Qualification Investigation Report. Seven additional borings (B-10 through B-16) were completed in the yard (Figure 3). In addition, twelve sub-slab vapor intrusion samples (TO-1 through TO-12) were obtained in the basement and analyzed for VOCs using TO-15 methodology (see Figure 4).

One boring was over-drilled at a previous boring location from the limited subsurface investigation (located immediately south of the former loading dock) where VOCs were detected in a sample from the overlying fill material. The subsequent boring sampled the native soils below the fill. Neither VOCs nor SVOCs were detected in the 4 ft. to 8 ft. bgs range. Six other borings were completed and sampled throughout the yard and in a parking lot to the south of the yard. Samples were taken at various intervals from 0 ft. to 10 ft. bgs. VOCs and SVOCs were not detected in any of the soil samples (Table 3). However, in three borings located in the central and northwestern areas of the yard, the pesticides DDT and dieldrin



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were detected in surface samples at concentrations exceeding NYSDEC NYCRR Part 375 unrestricted use (UU) soil cleanup objectives (SCOs) but below restricted residential (RR) use SCOs.

The vapor intrusion sampling detected VOCs at several points beneath the basement floor, especially in the northwestern and southeastern areas, at levels that would require mitigation in accordance with the NYSDOH Vapor Intrusion guidance. Indoor air sampling and consultation with the New York State Department of Health were recommended.

#### **2.4.2.3 Groundwater Sampling and Groundwater Sampling Addenda, dated April, May and June 2012 by DECI**

Three reports prepared by DECI in April 2012, May 2012, and June 2012 collectively summarize the installation and sampling of twelve groundwater monitoring wells (RW-1 through RW-9 and RW-11 through RW-13; see locations Figure 5) at the Site in three separate investigation phases during the time period between March and June 2012. Three wells were installed in the basement of the building; nine additional wells were installed at exterior locations, including two additional onsite wells and five offsite wells installed in the adjacent street rights-of-way (ROWs).

The wells were installed into bedrock to depths ranging from 12.7 to 14.0 ft below the basement floor slab (RW-1 through RW-3), and 17.6 to 23.3 ft below the existing grade for exterior locations (RW-4 through RW-13; note: no boring or well was installed at the RW-10 location). Apparent top of bedrock was encountered in the interior locations at depths of approximately 2.0 to 3.3 ft below the floor slab (corresponding to an approximate elevation of 513-514 ft amsl).

Rock core was obtained at each well location. The bedrock encountered is generally described as gray Dolostone, with variable frequency and orientations of fractures and with occasional pits and vugs. Drilling fluid losses during coring ranged between 20 and 225 gallons per well. Wells were developed after installation to recover groundwater in volumes equal or greater to that lost during drilling. 2-in. PVC slotted well screens were installed in each completed core hole.

Measurements were taken for the presence of non-aqueous phase liquids (NAPL) in each well; no evidence of NAPL was observed. Mapping of groundwater levels obtained on June 17, 2012 for the entire set of wells indicated overall groundwater flow to be toward the northeast and east. A comparison of the corresponding observed groundwater elevations to bedrock elevations at each well indicated the water table on that date ranged from up to 1.6 ft above the top of bedrock (wells RW-4, 9, 11, and 12) to 2.1 ft below the top of bedrock (wells RW-1, 2, 3, 5, 6, 7, 8 and 13).

Groundwater quality sampling was performed on March 23, April 25, and June 12, 2012. Results are shown in Table 4. All samples were analyzed for TCL VOCs; wells RW 1 through 6 were also sampled for SVOCs. SVOCs were not detected in the samples. CVOCs were detected at levels in excess of NYSDEC's groundwater standards in 9 of the 12 monitoring wells. The compounds included PERC, TCE, cis-1,2 DCE, trans-1,2 DCE, and vinyl chloride. Not all compounds were detected in each sample. The highest concentrations were observed in well RW-6 (total CVOCs 888 micrograms per liter, or ug/l; equivalent to parts per billion, or ppb), an offsite well located north of the site on the north side of Wiley Street. The



well exhibiting the highest onsite CVOC concentrations was RW-3 (224 ug/L), located near the center of the building footprint.

The soil and groundwater data obtained indicated that a source for at least a portion of the CVOCs observed in groundwater existed on the Site since similar compounds were observed in both soil and groundwater. However, the distribution of CVOC concentrations are such that TCE was the primary CVOC in the onsite wells but PERC was the primary contaminant in the offsite, downgradient well RW-6 located north of the Site. This was suggestive of a potential separate offsite VOC source to the north of the 33 Litchfield Street site.

### **2.4.3 Letters Submitted to the DePaul Group**

The following sections describe two letters submitted by DECI to the DePaul Group describing Site activities and sampling results for June and August 2012.

#### **2.4.3.1 Sub-slab Soil Sampling Events, June 2012, DECI**

A total of nine soil samples (001 through 009, see locations, Figure 6) were obtained from beneath the concrete basement floor slab as it was removed in June 2012. Composite samples were obtained from multiple locations within four distinct work areas on June 6, 8, 14 and 17, 2012. Visual observations and PID screening of the soils reportedly did not indicate the presence of contaminants. The samples were submitted for laboratory analysis for CVOCs using USEPA Method 8260B. The results are shown in Table 3.

Trace levels of one or more CVOCs were detected in each sample. Compounds included PERC, TCE, cis-1,2-DCE and trans-1,2-DCE. All concentrations were below the UU SCOs, and the report concluded that remedial action was therefore not required.

#### **2.4.3.2 Basement Sump Sampling Results**

Sediment, water and soil samples were obtained on August 2, 2012 in and surrounding a sump discovered in the northwest quadrant of the basement during the floor slab removal activities. The sump was a poured-concrete structure approximately 6 ft by 8 ft in lateral dimension, with two base levels at approximately 3 and 3.5 ft below grade. The sump appeared to be constructed directly on bedrock, with the deepest portion at approximate elevation 513.2 ft amsl.

The sump walls were exposed through excavation of a trench around the outside of the structure, and soil samples were obtained from each of the four exposed soil sidewalls for laboratory analysis of TCL VOCs and SVOCs, and TAL metals.

Water in the sump was noted to be "brackish," and the sediments "appeared black as if oil impacted." Samples of the water and sediment contained in the sump were obtained for laboratory analysis of TCL VOCs and SVOCs, and TAL metals. Results are shown in Table 4 (sample is labeled "Water Tank").



The DECI report incorrectly indicates no VOCs or SVOCs were detected in any of the samples. In fact, the lab report indicates two SVOC compounds (phenanthrene and pyrene) and one VOC compound (acetone) were detected in the sump sediment sample; however, the concentrations were below the respective RR SCOs. Acetone was attributed to laboratory contamination due to its presence in a lab blank. Acetone was the only VOC detected in the water sample; SVOCs were not detected in the sump water.

Several metals were detected in the soil and sediment samples; however, only calcium, iron and magnesium were detected at levels in excess of the RR SCOs. These metals occur naturally in soils in this region and their presence is not considered to be indicative of Site-related impacts. Several metals were detected in the water sample at concentrations above the NYSDEC groundwater standards (TOGS 1.1.1, June 1998 and addenda), including iron, lead, magnesium, manganese, nickel and sodium. The water sample was not reported to have been filtered, however, and therefore, these results are likely a function of suspended solids in the sample and not representative of dissolved metals concentrations.

#### **2.4.4 Discussion of Previous Findings**

Stantec's review of the previous environmental investigations described above resulted in the following conclusions:

- *Reliance on Previous Environmental Investigations:* Because at the time the investigations were performed the Site was not yet entered into the NYSDEC Brownfield Cleanup Program (BCP), the previous investigations were not intended to be performed in complete conformance with BCP guidance and DER-10 requirements. In addition, although NYSDEC was informed of work performed, written work plans for some of the phases of investigation were not submitted to NYSDEC, and since the Site was not in a NYSDEC program, none were formally approved.
- *Previous Analytical Data Reporting:* Analytical data reports for the previous investigations were reissued in Category B format, the data were reviewed for usability, and DUSRs were generated for the data. These DUSRs and data were presented in the RIWP. The DUSRs concluded that while the data were usable, some values required qualification as being "estimated." The only data that were rejected involved the VOC analyte 2-chloroethyl vinyl ether which is not on the target compound list and the SVOC compound 4-nitrophenol in the "Water Tank" sample only.

Note that since sub-slab vapor data were collected without corresponding indoor and outdoor ambient air samples, the basement floor slab had been removed, and there were plans to install a sub-slab depressurization system in the building, a DUSR was not prepared for the soil vapor data.

- *Soil and Groundwater Cleanup Objectives:* Based on the proposed development of the Site and the building for use as a residential facility, the pre-RI soil analytical results generated were compared to values provided for RR SCOs as provided in 6NYCRR Part 375. In addition, since contamination by CVOCs of both onsite and offsite groundwater was detected, the soil VOC results were also compared to Protection of Groundwater (POGW) SCOs. Data were also compared to UU SCOs.



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Groundwater results were compared to NYSDEC's *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* (TOGS 1.1.1, dated June 1998, with addenda).

- **Soil Conditions:** Shallow soils encountered in several exterior test borings consisted of a mix of fill materials including ash, cinders, slag, brick, concrete and other non-soil materials typical of urban fill. Groundwater is generally not present within the depth range of the fill soils. Although metals (in several locations) and SVOCs (in one location) were detected in laboratory analyses at levels in excess of RR SCOs, these compounds are generally not mobile in this type of subsurface setting. Further, measures such as encapsulation by covering the impacted materials with a layer of "clean" soil, asphalt or a structure is typically acceptable to manage urban fill on-site, provided a Site Management Plan (SMP) is prepared for the site to provide guidance for potential disturbance and proper handling of such materials.

Interior soils beneath the basement floor slab were sampled upon removal of the slab. Although CVOC compounds were detected in several of the samples, the analytical results indicated CVOC presence was below not only RR SCOs, but also below UU SCOs. This was indicative of conditions that could be mitigated through the installation of a sub-slab depressurization system (SSDS) designed to prevent VOC soil vapor intrusion into a structure. Accordingly, an SSDS is being installed in the basement as part of the floor slab reconstruction. The SSDS will be described in an IRM Construction Completion Report (IRMCCR) to be submitted under separate cover.

- **Bedrock Conditions:** Dolostone bedrock underlies the site at depths ranging from 2 to 3.3 ft below the building's former basement floor slab and 5 to 12.1 ft bgs at the exterior well locations. Rock Quality Designation (RQD) is a measure of the discontinuities (joints or fractures) in the rock mass. RQD values reported for rock core samples obtained in the previous investigations ranged from 0% (only noted in one top-of-rock core run) to 93%. RQD typically increased with depth, although exceptions were observed. These values are typical of the Eramosa dolostone formation where it subcrops in the Rochester area. RQD values typically increase significantly within approximately 15 to 20 ft of the top of rock and the corresponding permeability decreases.
- **Groundwater Quality Conditions:** One or more CVOCs were detected in groundwater samples from eleven of the twelve monitoring wells installed during the previous groundwater investigation phases. Ten of the wells exhibited at least one CVOC at a concentration in excess of groundwater standards and most wells exhibited several individual compound exceedences.

Total CVOC levels in onsite wells ranged up to 224 ug/L, with the highest concentration observed in well RW-3, located near the center of the building footprint. The PSG results also indicated a concentration of CVOCs in relatively close proximity to well RW-3. The compound with the highest concentration in this well was TCE (125 ug/L). Total CVOC levels in offsite wells ranged up to 888 ug/L, with the highest concentration observed in well RW-6, located on the north side of Wiley Street. The compound with the highest concentration in this well was PERC.

Other CVOC compounds detected in the impacted onsite and offsite wells included cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride (VC). This combination of compounds indicated that natural attenuation of the chlorinated ethenes, PERC and TCE, is occurring via reductive dechlorination.





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Reductive dechlorination is a natural process in which native bacteria present in the subsurface degrade chlorinated ethenes anaerobically. PERC and TCE are very susceptible to degradation through this process into the daughter products cis-1,2-DCE, trans-1,2-DCE, VC, and eventually ethene.

**Groundwater Flow Conditions:** Groundwater flow direction was generally toward the east and northeast. The water table at the time the well construction program was complete (June 2012) appeared to exist within 1 to 2 ft above or below the top of bedrock depending on the well location. Based on this observation and the observed fractured nature of rock samples from the upper bedrock it appears the overburden and bedrock essentially behave as a continuous water-bearing zone. The inferred groundwater flow direction in the vicinity of the two wells with the highest CVOC levels indicates that well RW-6 was essentially downgradient from well RW-3; however, the variation in distribution of predominant CVOC compounds in these two wells does not indicate that the presence of CVOCs in RW-6 is a result of migration from RW-3.

- **Sub-slab Vapor Conditions:** Several CVOCs were detected in some of the sub-slab vapor samples obtained by DECI at levels that warranted either monitoring or mitigation per NYSDOH VI guidance. The presence of these compounds may be the result of CVOC presence in sub-slab soils or groundwater, or both. No ambient air sampling was performed to provide a background comparison; however, since the proposed building development includes installation of a SSDS as a pre-emptive measure to prevent potential vapor intrusion, further vapor sampling is not considered to be warranted.

**Other Environmental Media:** Based on the previous investigations and Stantec's preliminary assessment of conditions on and near the site, the media that appear to be impacted are soil, groundwater and soil vapor. The site is located in a densely-developed urban environment and there are no streams or other water bodies on or near the site, and, thus, no potential surface water or sediment impacts are present.



## **3.0 Remedial Investigation Program**

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This section of the report presents a description of the investigative activities performed, methods used and procedures followed during the RI. Investigation results are described in Section 4.

The RI field program was conducted over the course of multiple field events beginning in December 2012 and concluding in June 2013 (with the exception of subsequent well gauging events). The locations investigated and dates and purposes of each of the field events are summarized in Table 1. RI exploration and sampling locations are shown on Figures 7 through 10.

The procedures followed while conducting the RI field program were performed in general accordance with NYSDEC's DER-10 and the Department-approved RIWP. Deviations from, and additions to, the program specified in the RIWP are described below in the relevant sections of the report and summarized in Table 2.

Samples collected for laboratory analytical testing for potential Site contaminants and other physical parameters were submitted to state-certified environmental laboratories Chemtech of Mountainside, New Jersey or Paradigm Environmental Services, Inc. (Paradigm) of Rochester, New York. Tables 3 and 4 respectively summarize the soil and groundwater samples collected, including sample dates, sample depths (where applicable), sample analytical parameters, and QA/QC samples. Third-party data usability reviews of the analytical data reports generated by Chemtech and Paradigm were performed by Data Validation Services (DVS). Passive soil gas samples were submitted to Beacon Environmental Services, Inc. (Beacon) of BelAir, Maryland for analysis. Samples analyzed for microbacterial populations in groundwater for the viability of enhanced reductive dechlorination (ERD) remedial approach were analyzed by SiREM in Guelph, Ontario, Canada.

The site is proposed for redevelopment with 71 apartment units for individuals with special needs. Site development-related construction activities involving excavation of interior and exterior soil began prior to completion of the RI field investigations. Stantec performed full-time observation of all activities that involved potential soil disturbance, and performed extensive sampling and analysis of soils to further characterize potential contaminant presence and facilitate offsite disposal of impacted soils. The results of these sampling activities have been regularly discussed with and reported to NYSDEC and have also been summarized in Monthly Progress Reports to the Department. A summary of conditions encountered, testing results, and IRMs performed during the construction-related activities will be provided in the IRM CCR to be submitted separately from this RI report.

### **3.1 PRE-CHARACTERIZATION INVESTIGATION**

#### **3.1.1 Preliminary Reconnaissance Test Borings**

A preliminary reconnaissance investigation was performed on December 10, 2012 in the northern portion of the building, which consisted of a one-story structure with no basement. This investigation was performed in response to a building walkthrough which identified the presence of debris piles and a sign suggesting dry cleaning may have been performed in this area of the building.



Eleven soil test borings (SB-1 through SB-11) were advanced with hand-operated drilling/sampling equipment to the top of bedrock which was encountered at depths ranging from 6.3 to 7.0 ft. below the floor slab. Figure 7 shows the test boring locations. Test boring logs are contained in Appendix A. Visual observation and screening of soil samples with a photoionization detector (PID) generally did not indicate VOC presence with the exception of samples obtained just above the top of bedrock in borings SB-5 and SB-9. These two samples and a third sample were submitted for analysis. The results, which were submitted to the Department on December 17, 2012, are summarized in Section 4.2.4.

### **3.1.2 Passive Soil Gas Survey**

A PSG survey was conducted across the Site and in two phases to characterize VOC presence in shallow soil gas.

The survey utilized PSG Emflux sampling modules provided by Beacon. Sample modules were installed and retrieved in accordance with the manufacturer's instructions. The modules were placed in sealed small-diameter boreholes advanced with a "slam bar" to depths of approximately 36 in. and allowed to passively absorb VOCs for approximately 12 to 14 days prior to retrieval. The retrieved samplers were analyzed for TCL VOCs using EPA Method 8260B.

Fifty eight PSG samplers were placed in two phases at the approximate locations shown on Figure 8. The first PSG phase, occurred between December 27, 2012 and January 10, 2013 and involved the deployment of 27 samplers; 26 samples, two field duplicates and one trip blank were submitted for analysis. The second PSG phase involved the deployment of 31 samplers, occurring between March 15, 2013 and March 27, 2013; 30 samples, two field duplicates and one trip blank were submitted for analysis. Over the two phases, two deployed samplers were not analyzed because one sampler was not properly deployed and the second could not be retrieved due to construction equipment obstructing the location. Permits were obtained from the City of Rochester to install samplers in ROWs.

Results of the PSG survey were evaluated and transmitted to NYSDEC for review. The data were used to generate color-coded maps graphically depicting ranges of VOC and TPH concentrations in samples. The results were taken into consideration when determining the proposed locations of the subsequent RI soil borings and monitoring wells discussed below in Section 3.4. PSG survey results are discussed in detail in Section 4.2.1.

### **3.1.3 Geophysical Survey**

In response to comments on the proposed RIWP received from the Department on March 8, 2013, a geophysical survey was performed following discussion with and approval from the Department. The investigation was designed to provide further subsurface characterization of the interior and exterior subsurface and focus further investigative activities. AMEC Environment and Infrastructure, Inc. (Amec) performed electromagnetic (EM-61) and ground penetrating radar (GPR) data acquisition between March 16 and April 1, 2013.

An EM-61 survey was conducted on March 16 to assess the potential presence of underground storage tanks in the exterior portion of the Site. EM-61 and GPR surveys were performed on March 23 and April 1, respectively, in the basement of the building to assess the potential presence of piping, vaults or other subsurface structures that might influence groundwater and/or contaminant migration and distribution.



A GPR survey was also performed in the Wiley Street right-of-way (ROW) north of and adjacent to the Site on April 1 to assess the potential for piping or other subsurface structures that could impact the presence or movement of contaminants to or from the area of PSG sample SG-12, where elevated PERC concentrations had been detected. Geophysical survey results are discussed in Section 4.2.2.

### **3.2 SURFACE SOIL SAMPLING**

Since no surface soil samples were obtained during the previous investigations, surface soil sampling was conducted to provide data relative to potential contaminant presence in surface soil. Three surface soil samples were collected on May 6 and May 7, 2013 in accordance with the RI Work Plan (see locations, Figure 9). One sample location was revised in accordance with e-mail correspondence with Mr. Todd Caffoe of NYSDEC.

The majority of the Site was covered with intact or partially-degraded asphalt; the areas of degraded asphalt contained variable weed growth. Surface soil samples were collected as planned from 0 to 2 in. below the asphalt, if present, or from 0 to 2 in. below any vegetative cover, at the location where asphalt was not present. The samples were field-screened with a PID, visually inspected for evidence of staining or other impacts, and classified with regard to soil type. Samples were collected with a stainless steel spade which was decontaminated with an Alconox wash and DI rinse between each location. One rinsate blank was collected for the surface soil sampling event by pouring deionized water provided by the laboratory over the decontaminated spade and shovel used to collect the surface soil samples.

The three surface soil samples were submitted for laboratory analysis. Surface soil sampling results are discussed in Section 4.2.5.

### **3.3 TRENCH AND TEST PIT EXCAVATION**

Nine test pits or test trenches were excavated on April 10, 2013 at the locations of anomalies identified by the geophysical survey (see locations, Figure 10). The test pits and trenches were excavated by Nothnagle Drilling Company Inc. (Nothnagle). Prior to initiating the excavation program, Dig Safely New York was contacted to locate publicly-owned utilities in these areas. After completion, each test pit was backfilled with the excavated soils.

Test pit logs are contained in Appendix A. Field observations from the test pit explorations are discussed in Section 4.2.3.

### **3.4 TEST BORING AND MONITORING WELL INSTALLATION**

#### **3.4.1 Overview**

Soil borings and monitoring well installations were completed in two events. The first event was conducted from April 22 to April 24, 2013 and the second was conducted on May 2 and 3, 2013. Locations of soil test borings and groundwater monitoring wells were determined based on the RIWP and results from the PSG surveys. All borings and well locations are shown on Figure 9.





During the April 2013 drilling event, five exterior soil test borings (B101 through B105) and two exterior bedrock monitoring wells (B101-MW and B102-MW) were installed. During the May 2013 drilling event, five interior soil test borings (B106 through B110) and two interior bedrock monitoring wells (B106-MW and B108-MW) were installed.

### **3.4.2 Test Boring and Well Installation and Soil Sampling Procedures**

Prior to each drilling mobilization, Nothnagle contacted Dig Safely New York to locate publicly-owned utilities in these areas. Test borings were advanced using either rotary or direct-push drilling methods. Soil samples were obtained continuously in overburden using a standard split spoon or Macrocore® sampler. Soils were field screened with a PID, visually described and classified, and the results recorded on test boring logs (Appendix A).

Ten soil samples were collected for lab analysis from the test borings as summarized in Table 5. Analytical parameters for each sample and the QA/QC samples (field duplicates) collected are also summarized in Table 5. If no impacts were observed the soils were returned to the borehole. Apparent impacted soils from soil borings and soils from the monitoring well locations were containerized and disposed of with other contaminated soils removed from the basement during IRM activities. These soils were disposed of at a later date at Waste Management's Mill Seat Landfill in accordance with the NYSDEC-accepted May 2013 "Contained-In" Demonstration Work Plan. This will be discussed in further detail in the IRM CCR to be submitted under separate cover.

For the exterior wells, soil borings converted to bedrock monitoring wells were installed by drilling a nominal 6-in diameter rock "socket" and grouting a 4-in diameter steel casing approximately two feet into bedrock. The grout seal was allowed to set for a minimum of 24 hours. At that point the grout inside the casing was reamed out and an approximately 10-foot long core was drilled with an HQ core barrel (nominal outside diameter of 3.5-in). The rock core was logged by an experienced geologist. A shallow bedrock well was constructed in the completed boring using 2-inch diameter, schedule-40 PVC casing with approximately 10-ft. of 0.010-inch slot well screen. A sand pack consisting of sand appropriately graded for the screen slot size was placed continuously from the bottom of the well bore upwards to a point approximately 24 inches above the well screen. The sand pack was capped with a 2-ft. thick bentonite seal and the remaining annulus was grouted to within approximately 2 ft. of the surface to accommodate future earthwork grading activities.

Based on the PSG results, the known presence of CVOCs in groundwater beneath the basement, and the observation that at times the water table may be above the top of bedrock, the interior RI monitoring wells were constructed as overburden/bedrock interface wells, rather than installing a steel casing into the top of bedrock. Such construction would also facilitate use of the wells for injection of materials into the formation for in-situ remediation, if deemed appropriate. Spanning the water table with well screens also facilitated assessment for the potential presence of LNAPL. The design and construction of the interface wells was finalized with NYSDEC approval.

A protective steel casing (stickup or flush-mounted depending on the location) was sealed and mounted in place with concrete at the surface for the recently installed exterior wells. A locking inner cap was installed on the well riser. The interior wells were temporarily finished with a stickup PVC riser and



protected by a temporary steel barrier. Upon completion of the basement slab, interior wells were/will be finished with a flush-mounted well box. Well construction details for the RI wells are provided on the well installation reports presented in Appendix A and are also summarized on Table 6.

### **3.5 MONITORING WELL DEVELOPMENT**

Each monitoring well was developed after installation to recover fluids lost during drilling, remove suspended sediments such that turbidity was reduced to the extent practicable, and establish a hydraulic connection between the well and the surrounding formation. The monitoring wells were developed with a decontaminated submersible pump. Approximately 110% of the volume of water lost during drilling was removed during development, and the removed water was temporarily containerized in 55-gallon drums and ultimately discharged to the sanitary sewer in accordance with Specialty Short-Term Sewer Discharge Permit No. ST-235, obtained from the Monroe County Department of Environmental Services (MCDES; see copy, Appendix B).

### **3.6 GROUNDWATER ELEVATION MEASUREMENT**

Water level measurements were recorded in the 12 previously-installed wells and four new monitoring wells at multiple points during the course of the RI. On some dates all wells could not be gauged because certain wells were not accessible, some wells had been abandoned (with NYSDEC approval), or wells had been damaged during construction. The water level measurements are provided in Table 7.

### **3.7 GROUNDWATER SAMPLING**

One round of groundwater sampling was performed at all four newly-installed wells and 12 previously-installed wells during the period May 20 to May 23, 2013. The purging and sampling was completed using low-flow methodology. Wells were purged and sampled utilizing EPA Region 2 low stress/low flow methods and a flow-through cell. General water quality field parameters (i.e., pH, temperature, specific conductance, oxidation reduction potential, dissolved oxygen and turbidity) were monitored and stabilized during purging prior to sampling. Field parameter measurements are summarized on Table 10. All purge water was temporarily containerized in 55-gallon drums and ultimately discharged to the sanitary sewer under the Short-term Discharge Permit discussed above.

Groundwater samples were analyzed for Target Compound List (TCL) VOCs plus tentatively-identified compounds (TICs) using EPA Method 8260B. In addition, four wells (two newly-installed and two previously-installed wells) were analyzed for the remaining "Full Suite" parameters, as proposed in the RIWP. QA/QC samples included daily trip blanks, field duplicates and MS/MSDs. Groundwater sampling results are discussed in Section 4.2.6. Table 8 summarizes the groundwater sampling program details.

### **3.8 HYDRAULIC CONDUCTIVITY TESTING**

Hydraulic conductivity tests (slug tests) were performed on two newly-installed wells and two previously-installed wells to estimate the hydraulic conductivity of the bedrock aquifer in the vicinity of each well. The tests were conducted on May 28, 2013 at monitoring wells RW-1, RW-3, B102-MW and B108-MW. The tests consisted of the insertion of a solid slug into the water column (falling head test) and/or the removal of a solid slug from the water column (rising head test) in order to displace the water level in the



well. Following slug placement or removal, recovery of the water level to static level was monitored with a pressure transducer (e.g., LevelTroll 700). After field tests were completed, the slug test data was analyzed with commercially-available software (i.e. AQTESOLV) to determine approximate hydraulic conductivity (K) values for each well. Results are summarized on Table 9, and data reports for each test are presented in Appendix C.

### **3.9 SANITARY SEWER ASSESSMENT**

A utility drawing for the site indicates the Litchfield Street sewer is an 18-in. by 24-in “stone box” combined sewer. A review of the sewer elevation information and information obtained relative to the top of rock elevations beneath Litchfield Street indicate the sewer invert is likely to be one to two feet below the top of bedrock. A comparison of apparent sewer elevations to the interpreted groundwater elevations based on well gauging during the RI indicates the base of the sewer is close to the typical groundwater table along the northern portion of Litchfield Street. As such, the potential exists for infiltration of groundwater into the sewer, although the degree of infiltration is likely to be small.

The Wiley Street Sewer is a 12-in. vitreous tile combined sewer that flows east and connects to the Litchfield Street sewer. Elevation data indicate this sewer is likely to be constructed essentially on the top of bedrock. Accordingly, groundwater infiltration into the Wiley Street sewer is less likely than with the Litchfield Street sewer.

### **3.10 ENHANCED REDUCTIVE DECHLORINATION ASSESSMENT**

The Phase II ESA groundwater sampling and analytical results suggested that reductive dechlorination of CVOCs was naturally occurring, and therefore ERD would likely be a viable remedial method to address the onsite impacts to groundwater. To assess the potential applicability and feasibility of ERD, a bench-scale test program was performed. The testing was performed on soil and groundwater from locations where the highest CVOC concentrations were observed. The bench-scale study focused on in-situ chemical enhancements to increase the kinetics of reductive dechlorination by indigenous micro-bacteria. Additionally, groundwater was analyzed for ERD-related parameters including pH, ORP, VOCs, TOC, and select inorganics, to assist with the bench-scale evaluation and the substrate material chosen for ERD. Groundwater was sampled from the previously-installed monitoring well RW-6 (Figure 5). Soil was sampled from a location adjacent to B108-MW (Figure 9) and included a continuous section of soil from surface to bedrock. The bench-scale study was performed by Stantec’s Treatability Testing Services Group in Sylvania, Ohio from May to August 2013.

A separate Gene-trac® study performed by Site Recovery and Management (SiREM) in Guelph, Ontario, Canada included obtaining baseline population data for indigenous microbacteria populations in groundwater necessary and favorable to the ERD process. Groundwater samples obtained in May 2013 from RI wells B102-MW and B108-MW were submitted to SiREM for this analysis.

Results of the bench-scale study and the Gene-trac® study are provided in Section 4.2.7.



### **3.11 DECONTAMINATION**

Sampling methods and equipment were chosen to maximize the use of dedicated equipment and thereby minimize the need for decontamination. All non-dedicated equipment was decontaminated prior to and following each use. Decontamination of drilling equipment was accomplished with Alconox wash and/or a high-pressure washer. Decontamination of smaller equipment (such as trowels) consisted of a wash with Alconox solution and a water rinse. Decontamination water was containerized in 55-gallon drums. Following decontamination, direct contact between sampling equipment and the ground surface was not permitted.

### **3.12 INVESTIGATION DERIVED WASTE**

Investigation-derived waste (IDW) materials were handled, containerized and disposed of in accordance with DER-10 guidance. Where permitted by DER-10, IDW from uncontaminated areas were discharged or replaced on-site. Water from drilling equipment decontamination, well development, and well purging that was containerized and temporarily stored on site was composited into a single water sample on May 24, 2013 as approved by the Department and MCDES. The analytical results (Appendix B) from the sample were approved by MCDES for discharge in accordance with the Site temporary discharge permit and the drums containing water were discharged to the sewer on June 4, 2013.

Impacted drill cuttings and decontamination pad poly sheeting were containerized in 55-gallon drums and stored on Site until they were added to an on-Site impacted soil stockpile. The stockpile was sampled and disposed at Mill Seat Landfill. This disposal will be documented in the forthcoming IRM CCR to be submitted under separate cover.

### **3.13 SAMPLING LOCATION SURVEY**

Monitoring wells were surveyed for coordinates and elevations by a Stantec licensed surveyor. Elevations are reflected in groundwater gaging data shown in Table 7. PSG sample locations and surface/subsurface soil sample locations were surveyed for horizontal coordinates using a handheld global positioning system (GPS) locating instrument with sub-meter precision.

### **3.14 FIELD QUALITY CONTROL SAMPLES**

Tables 5 and 8 summarize the field quality control (QC) samples collected during the field investigation for soil and groundwater respectively. Field QC samples that were collected include field duplicates, trip blanks, rinsate blanks, and matrix spike/matrix spike duplicate analyses. Field duplicates and matrix spike/matrix spike duplicates were collected at a rate of one per 20 field samples. Trip blanks were used for aqueous matrices only and consisted of deionized water. One trip blank accompanied each shipment of water samples scheduled for analysis of VOCs. One rinsate blank was collected for each piece of non-dedicated sampling equipment used, collected by pouring deionized water over decontaminated equipment. The non-dedicated equipment used for this project included split spoon samplers and hand soil sampling equipment. Analytical data were reviewed for usability by Ms. Judy Harry of DVS. Section 5 contains a discussion of the data usability summary reports.



### **3.15 COMMUNITY AIR MONITORING**

Community air monitoring was conducted in accordance with the CAMP included in the RIWP. Logs of these activities are included in Appendix D. This included continuous monitoring for VOCs with a PID and dust monitors stationed at upwind and downwind positions during activities that had the potential to disturb surface or subsurface soils.



## 4.0 RI RESULTS AND FINDINGS

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### 4.1 HYDROGEOLOGY

#### 4.1.1 Geology

The general subsurface profile observed across the Site consists of the following deposits, in order of increasing depth:

- Fill materials,
- Glacial till, and
- Dolostone bedrock (Eramosa Dolomite formation).

Fill materials overlying native soils were observed in nearly all overburden soil borings and test pits. Descriptions of the bedrock lithology (top of rock ranging from 2-13 ft bgs) are based on RI test borings where bedrock was cored (B101-MW, B102-MW, B106-MW, and B108-MW), and previous Phase II test borings). The borings in bedrock extended to depths ranging from 16 to 26 ft bgs. Test boring and test pit logs are provided in Appendix A. A generalized cross section that depicts the site-wide relationship between fill materials, bedrock, and groundwater is provided on Figure 11.

Surface Materials and Fill - Surface materials (0-1 ft bgs) at the investigation locations across the Site were typically topsoil, sand/silt/gravel mixtures, or intact to weathered asphalt.

Fill materials beneath the surface materials varied in composition, but typically consisted of silt/sand/gravel mixtures, with varying amounts of ash, cinder, and brick. The fill deposit extended in depth to approximately 2 to 4 ft bgs at the exploration locations and is deeper adjacent to building foundation walls. Fill materials encountered during trench and test pit excavation was primarily composed of urban fill consisting of ash, cinder, brick, construction debris (including large angular stone, rubble, and metal objects) and silt/sand/gravel mixtures.

Native Soils - Glacial till was encountered beneath the fill materials in test borings and test pits across the Site. The till is generally light brown and consists of a variable mixture of clay, silt and sand with variable amounts of gravel.

Bedrock - Bedrock was encountered at depths ranging from 2 to 13 ft bgs at the exploration locations. Rock was cored and characterized at those test boring locations which were converted into bedrock groundwater monitoring wells (B101-MW, B102-MW, B106-MW, and B108-MW). Bedrock at the site is the Eramosa Dolomite formation, and was characterized as light gray, hard, slightly-weathered, medium-to thick-bedded Dolostone. Dark gray shale seams, pits, vugs, and joints, including moderately weathered-bedding plane joints, were also observed at varying depths throughout the cores.

Core recovery percentage and Rock Quality Designation (RQD) values were calculated for each core run obtained in the bedrock. RQD is a quantitative measure of the quality of a rock mass relative to the frequency of natural discontinuities (joints or fractures) in the rock. RQD provides a more "sensitive" measure of rock quality than simple core recovery measurement, and can be indicative of zones of more degraded rock where groundwater flow may be increased.

The RQD value is expressed as a percentage, and is calculated as follows:

$$\text{RQD} = \frac{\text{Sum of length of core pieces} \geq 4 \text{ in. length (in.)}}{\text{Total drill run length (in.)}} \times 100$$



RQD values in the RI test borings ranged from 48 to 100 %. In general, the RQD values increased with depth below top of rock; this is typical of the shallow dolomite bedrock that underlies the Site and surrounding area.

A cross section depicting stratigraphy across a north-south transect of the site is shown on Figure 11. The cross section illustrates that the top of bedrock generally rises gradually from south to north; however a prominent low point exists at the location of monitoring well B106-MW (located beneath the building's atrium). It is uncertain whether this low point is related to rock removal during building construction or is a natural feature.

#### **4.1.2 Groundwater Elevation and Flow Direction**

Water level measurements recorded during and after the RI field work phase are summarized on Table 7. The data indicate that the water table across the Site typically ranges from approximately el. 510 to el. 514.5 ft above mean sea level (amsl).

Groundwater elevation contour maps for the Site developed from the data collected on May 15, 2013 and February 1, 2014 are presented on Figures 12 and 13.

The drawings indicate that variation in groundwater levels of up to approximately 1.5 ft has occurred since the RI wells were installed. The May 2013 contours indicate a groundwater mound existed in the northwest portion of the property beneath and adjacent to the building footprint, in the vicinity of B108-MW, RW-3, RW-8, and RW-9, and groundwater flowed radially away from this area. The contours developed for February 2014 indicate similar conditions; however, the overall groundwater levels had dropped. The area of highest groundwater elevation also appears to have reduced in size and was now centered less under the building. These changes in groundwater levels, especially in the vicinity of the building may be related to installation of a watertight roof and changes in the building roof drains as part of the building reconstruction. At the time the RI was performed the roof leaked and several roof drains in the building were not functioning such that during periods of high rain or snowmelt water from the roof drained directly through the building to the basement, where it infiltrated the soil. This may have contributed to the mounding affect seen under the building. Subsequent roof replacement and roof drain system repair performed as part of the building reconstruction reduced localized infiltration, which may have resulted in a corresponding lowering of the mounded groundwater under the building with time.

#### **4.1.3 Hydraulic Conductivity**

Hydraulic conductivity test results for RW-1, RW-3, B102-MW, and B108-MW are summarized in Table 9 and presented in Appendix C. Data from rising and falling head tests were analyzed for each well except RW-3. Only the rising head test was used to calculate hydraulic conductivity (K) values at RW-3 because the static water level was such that the well screen was not completely submerged. All wells are screened in bedrock.

Averaged K values for the tested wells ranged from  $1.2 \times 10^{-3}$  centimeters per second (cm/sec) in well RW-3 to  $3.8 \times 10^{-3}$  cm/s in well B108-MW. The overall small variation in K values in the tested wells indicates relatively homogeneous permeability conditions at the Site.



## 4.2 RI SAMPLING AND ANALYTICAL RESULTS

A copy of the passive soil gas data report is included in Appendix E. Soil and groundwater laboratory analytical data reports are presented in Appendix F. Analytical results for RI samples, including QA/QC samples, are summarized in Table 3 (soil) and Table 4 (groundwater).

Soil results are compared to New York State Codes, Rules and Regulations (NYCRR) Part 375 Soil Cleanup Objectives (SCOs) for Unrestricted Use (UU), Restricted Residential (RR) use and Protection of Groundwater (POGW), and NYSDEC Commissioner's Policy (CP)-51 Soil Cleanup Guidance SCOs for RR use, POGW, gasoline contaminated soils and fuel oil contaminated soils.

Groundwater results are compared to Class GA standards and guidance values listed in NYSDEC's Ambient Water Quality Standards and Guidance Values, Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Memorandum dated October 22, 1993, and revisions.

All RI soil and water analytical data were reviewed by Data Validation Services (DVS). The DVS data usability summary report (DUSR) is presented in Appendix G and discussed in Section 5.

### 4.2.1 Passive Soil Gas Survey Results

The passive soil gas (PSG) investigation was performed in two phases: from December 27 - January 10, 2013; and from March 15 -27, 2013. The PSG results along with interpreted concentration maps generated by analysis of the 56 PSG samples by Beacon Environmental Services, Inc. are presented in Appendix E. The report includes a figure with color plots depicting VOC concentration ranges. These data provided the following findings:

- An area with elevated CVOC (primarily TCE) soil gas concentrations was indicated beneath the western portion of the building. In the 1971 Sanborn Fire Insurance Map, this area appears to be labeled "Spray Paints 1st". Phase II ESA monitoring well RW-3, located generally downgradient of this area, exhibited elevated CVOC groundwater concentrations;
- PERC and TCE were detected in PSG samples along the south side of the building near the loading dock. These locations were in close proximity to a Phase II soil test boring where TCE was reported in soil;
- Areas of elevated petroleum-related VOC compounds (total petroleum hydrocarbons, or TPH) were indicated beneath the atrium in the south-central portion of the basement, and in the northwest corner of the building. On both the 1950 and 1912 Sanborn Fire Insurance maps, the atrium area was labeled "Testing Room, Cement Floor." During installation of the PSG samplers, gray stained soil, petroleum odors and positive PID readings (0.6 to 10.4 ppm) were observed in several PSG probe holes in that area.

Weathered petroleum-related compounds were detected in preliminary reconnaissance test borings performed in the north bldg. addition, in relatively close proximity to the northwestern area of TPH indicated by the PSG survey.

- Methylene chloride, a chlorinated VOC that was generally not detected in soil or groundwater in the prior investigations of the Site, was detected at three PSG sample locations in the Wiley Street ROW, immediately north of the building. This compound was initially detected in the first PSG investigation phase, and duplicate samplers were installed in similar locations for the second



phase to confirm the results. Methylene chloride was again detected in the second phase although at lower levels than the initial survey detected. Methylene chloride was not detected in other areas of the survey; as such, the methylene chloride source appears to be located off-site.

- An isolated area of elevated TCE and PERC soil gas concentrations was detected offsite, on the north side of Wiley Street (sample SG-12). No pipes or structures are known to exist in the Wiley Street ROW that might have served as a preferential pathway to allow for this CVOC concentration in that location. Thus it is not known if the presence of this area of impact is related to the onsite sources or other sources. Groundwater monitoring well RW-6, located approximately 20 ft. to the west of the SG-12 location, exhibited the highest concentration of PERC of all wells installed for the Site investigations.

#### **4.2.2 Geophysical Survey Results**

The geophysical survey report by Amec is provided in Appendix H. The EM-61 data for the exterior portion of the site showed four locations with significant anomalous readings, as shown on Figure 1 of the report. These anomalies were interpreted as likely being associated with metallic objects but were not considered likely to represent underground storage tanks (USTs) due to their shape and/or size. These locations were, however, further investigated through test pit excavation as described below in the next section.

EM-61 and GPR surveys performed in the basement indicated numerous cast iron pipes (generally associated with a buried roof drainage system) and two  $\pm$ 20-inch clay crocks as shown in Figure 2 of the Amec report. The data did not indicate piping associated with the crocks. The piping indicated by the survey, and associated impacted soils encountered along some of the pipe reaches were ultimately excavated and removed as part of the IRMs; these activities will be discussed in the IRM CCR to be submitted under separate cover.

GPR survey results from the area north of the building in Wiley Street did not indicate the presence of any suspect structures in the ROW that would indicate a potential contaminant pathway from the Site toward the north to the area of the PSG survey point SG-12 where elevated levels of PERC were observed.

#### **4.2.3 Test Pit Excavation Results**

Test pits and trenches were excavated by Nothnagle on April 10, 2013 at the locations of exterior anomalies identified by the geophysical (EM-61) survey discussed above in Section 4.2.2. Figure 10 shows the test pit locations; logs of the explorations are included in Appendix A. No evidence of USTs was observed in any of the test pits, and the anomalies appear to have been the result of miscellaneous metallic objects contained in the shallow fill soils at each location. PID screening did not indicate the presence of VOCs with the exception of relatively minor readings (0.1-0.2 ppm) in fill soils in test pit TP-4A located near the loading dock on the south side of the building. Given the absence of tanks, and the low PID readings, no samples were submitted for laboratory analysis. After the completion of each excavation, the test pits and trenches were backfilled with the excavated material.



#### **4.2.4 Test Borings and Subsurface Soil Sampling Results**

Eleven preliminary reconnaissance borings (SB-1 through SB-11) were drilled in the building interior (northern addition) and ten test borings (B101 through B110) were drilled at other interior and exterior locations during the RI field program; boring locations are shown on Figures 7 and 9. Logs of RI test borings are included in Appendix A. Soil samples were submitted from each boring location.

The RIWP also indicated that up to six soil samples would be obtained from the base of earthwork cuts to be made across the site to achieve design subgrades in preparation for subsequent paving or landscaping. This site grade excavation work had been only partially completed at the time this RI report was being prepared and thus this sampling is only partially complete; therefore, the results of this sampling will be included in the IRM CCR to be submitted under separate cover.

Analytical results for soil samples submitted for analysis are included on Table 3.

PID screening of soils was performed during drilling at each test boring location; all readings were recorded on the test boring logs. No positive PID readings were observed in the exterior borings (B101 through B105).

Interior soil borings B106-MW and B107, located in the atrium, exhibited maximum PID readings of 80 ppm at 1.5 ft. bgs in B106-MW and 64 ppm at 2 ft. bgs in B107. Soils in these borings also had a strong weathered petroleum-like odor. Soil borings B108-MW and B109 were located in the southwestern and western area of the basement at the edge of the TCE-impacted area indicated by the PSG survey data. PID readings in B108 ranged from 253 ppm to 395 ppm in the top 2.5 ft. of the boring, and in test boring B109 reached a maximum reading of 0.7 ppm at 1.5 ft. bgs. No positive PID readings were observed in soil from B110 located near the northwestern corner of the basement.

Three samples were submitted for analysis from the preliminary reconnaissance test borings (SB-5, SB-9, and SB-10) in the northern building addition. These samples were analyzed for VOCs plus tentatively identified compounds (TICs) by EPA Method 8260C. Ten soil samples (not including QA/QC samples) were submitted for laboratory analysis, one from each of the ten RI test borings. Samples from each of the four RI borings where monitoring wells were installed were submitted for “full-suite” laboratory analyses, which included:

- TCL VOCs plus TICs by EPA method 8260C
- TCL SVOCs plus TICs by EPA method 8270D
- TCL Pesticides and PCBs by EPA methods 8081B and 8082A
- TAL Metals by EPA methods 6010B and 7471A

The six soil samples obtained from test borings where monitoring wells were not installed were submitted only for VOCs plus TICs and SVOCs plus TICs by the methods listed above.

VOCs were not detected in any of the three preliminary reconnaissance boring soil samples with the exception of three petroleum-related compounds (methylcyclohexane, 1,2,3-trichlorobenzene, and 1,2,4-trichlorobenzene) that were present only at low level, estimated concentrations. Several apparent petroleum-related TICs were also present. These results are indicative of weathered petroleum product(s).



All samples analyzed from exterior borings were non-detect for CVOCs and were non-detect or had concentrations well below RR SCOs for all other VOCs, SVOCs, PCBs and Pesticides. Calcium and iron were detected at elevated levels in some of the exterior borings but these metals are naturally occurring and are not considered to be a threat to health or the environment based on presence in subsurface soils.

Samples B106-S1 and B107-S1 were non-detect for CVOCs and did not exhibit contaminants at levels at or above RR SCOs; however, some petroleum-related compounds were detected (ethylbenzene, xylene, and several SVOC TICs) suggesting that the observed PID readings resulted from the presence of weathered petroleum in these soils.

Sample B108-S1 exhibited elevated levels of four CVOC compounds: cis-1,2-dichloroethene was detected at 880 ppb which exceeds the SCO for the protection of groundwater. Tetrachloroethene, trans-1,2-dichloroethene, and trichloroethene were detected at concentrations of 390 ppb, 58.2 ppb and 18.9 ppb, respectively in the same sample.

Samples B109-S1 and B110-S1 were non-detect for all analyzed compounds.

#### **4.2.5 Surface Soil Sampling Results**

Surface samples were collected from three locations across the site south of the building prior to site grading for redevelopment, as shown on Figure 9. Samples SS-1 and SS-2 were taken from directly beneath asphalt and no asphalt was present at the location of sample SS-3. All three samples consisted of a mixture of dark brown sandy soil and urban fill material. Samples SS-1 and SS-3 contained a significant percentage of cinders. Each sample was screened with a PID and sample SS-1 exhibited the only positive reading, at 0.2 ppm. No staining or odors were observed in any of the samples.

The samples were submitted to Chemtech on May 7, 2013 and were analyzed for the following:

- TCL SVOCs plus TICs by EPA method 8270D;
- TCL Pesticides by EPA method 8081B;
- PCBs by EPA method 8082A; and
- TAL Metals EPA methods 6010B and 7471A

Laboratory results for the above analyses are presented in Table 3.

SVOCs and pesticides were not detected in any of the samples. One PCB compound, Arochlor 1260 was detected in each sample. In samples SS-2 and SS-3, this compound was detected at levels in excess of unrestricted SCOs but was well below the RR SCO of 1,000 ppb.

Several metals were detected in one or more surface soil samples at levels in excess of either the RR SCO or the POGW SCO. This included the following metals, listed with their maximum detected concentrations and locations:

- Lead (1,180 ppm in SS-3);
- Mercury (0.764 ppm in SS-2);
- Arsenic (21.5 in SS-1); and
- Barium (469 ppm in SS-1).



Removal of these surficial soils subsequently occurred during the earthwork cuts that were required for site redevelopment, as will be discussed in the IRM CCR.

#### **4.2.6 Groundwater Sampling Results**

Groundwater samples were obtained from all four RI wells and all twelve previously-installed wells between May 20 and May 23, 2013. Table 10 summarizes the final groundwater field parameters that were observed during purging prior to sampling including conductivity, dissolved oxygen (DO), oxidation reduction potential (ORP), pH, temperature, turbidity, and purge volume.

Four wells (B101-MW, B108-MW, RW-2, and RW-4) were analyzed for 'full suite' parameters including:

- TCL VOCs plus TICs by EPA method 8260C;
- TCL SVOCs plus TICs by EPA method 8270D;
- Pesticides by EPA method 8081B;
- PCBs by EPA method 8082A; and
- TAL metals by EPA methods 6010B and 7470A.

The remaining twelve wells were analyzed only for TCL VOCs plus TICs.

Groundwater analytical results, including those for QA/QC samples, are listed on Table 4; these results are compared to groundwater standards listed in NYSDEC's Technical and Operational Guidance Series 1.1.1 (TOGS; 1998 and revisions). Table 4 also compares RI groundwater sample analytical results with historical values from the Phase II ESA sampling event performed in 2012.

The four groundwater samples from the May 2013 sampling event submitted for full-suite analyses did not exhibit detections or exceedances of SVOCs, PCBs, or pesticides. Metals analytical results indicated samples B101-MW-GW1, B108-MW-GW1, and RW-2-GW1 exceeded the TOGS standard for sodium concentration of 20,000 micrograms per liter ( $\mu\text{g/L}$ ; equivalent to parts per billion, or ppb). The highest sodium concentration of 35,600  $\mu\text{g/L}$  was in RW-2-GW1. Samples RW-2-GW1 and RW-4-GW1 exceeded the TOGS standard for manganese concentration of 300  $\mu\text{g/L}$  with a maximum value of 667  $\mu\text{g/L}$  from RW-4-GW1. Sodium and manganese are naturally occurring elements and are not indicative of a site contamination concern.

Thirteen of the sixteen wells sampled exceeded TOGS standards for one or more CVOC concentrations including PERC, TCE, cis-1,2-dichloroethene, and VC. Figure 14 shows interpreted groundwater CVOC concentration contours based on the May 2013 sampling results. Wells B101-MW and RW-11 (located onsite) and RW-13 (located offsite to the northwest) did not exhibit TOGS exceedances of any compounds. Total CVOC concentrations for the remaining onsite wells ranged from 11.3  $\mu\text{g/L}$  in well RW-9 located immediately west of the building in Clark Alley, to 564  $\mu\text{g/L}$  in well RW-2, located in the northeast quadrant of the building. The highest total CVOC concentration observed for any sample was 1,069  $\mu\text{g/L}$  in well RW-6, located offsite on the north side of Wiley Street. As shown on Figure 14, CVOC concentrations generally drop off to the west, south and east of the concentration high represented by



wells RW-2 and RW-6. The wells in the southern portion of the site did not exceed groundwater standards.

Well RW-2 also exhibited 110 ug/L of methyl ethyl ketone (MEK; also known as 2-butanone) a non-chlorinated solvent. This compound was not detected in the 2012 sampling event in this well, nor has it been detected in any other well. The presence of this compound may be related to an attempt to repair the PVC well casing with PVC glue when the well was struck by equipment. Other VOCs detected at low levels in selected wells include acetone (a common laboratory contaminant) in well RW-2 and benzene in well RW-5. Acetone and 2-butanone are also temporary by-products of reductive dechlorination.

Both rounds of sampling detected significant presence of cis-1,2-DCE, trans-1,2-DCE, and VC all of which are “daughter” products that result from the natural breakdown of the chlorinated ethenes PERC and TCE via reductive dechlorination. Reductive dechlorination is a natural process in which native bacteria present in the subsurface break down chlorinated ethenes anaerobically, and PERC and TCE are both susceptible to this type of breakdown. Accordingly, ERD was considered to be a potentially-viable alternative for groundwater remediation, and sampling, analysis and bench-scale testing were performed on groundwater and soil samples from the Site to further evaluate this potential. This is discussed further in the following section.

#### **4.2.7 Enhanced Reductive Dechlorination**

##### **4.2.7.1 Gene-trac® study**

The Gene-trac® study of groundwater from RI wells B102-MW and B108-MW performed by SiREM tested for the presence of total *dehalococcoides* (*Dhc*) microbes by targeting *Dhc*-specific sequences of the 16S ribosomal ribonucleic acid (rRNA) gene, a gene commonly used to identify microbes. *Dhc* are the only known microorganisms capable of complete dechlorination of chloroethenes to non-toxic ethene. Additionally, groundwater from B102-MW was tested for the vinyl chloride reductase (*vcrA*) gene that codes for a *Dhc* enzyme that converts VC to ethene, a critical step in reductive dechlorination.

The results of the Gene-trac® study are presented in Appendix I. *Dhc* was detected in the groundwater sample from B102-MW at an estimated concentration of  $4 \times 10^3$  cells/L. The detection limit of the Gene-trac® method is  $3 \times 10^3$  cells/L. The groundwater sample from B108-MW was non-detect for *Dhc*. The groundwater sample from B102-MW was non-detect for *vcrA*. Given these results, the Gene-trac® study alone was inconclusive whether the *Dhc* population in the groundwater at the Site was sufficient enough for effective reductive dechlorination of CVOCs.

##### **4.2.7.2 Bench-Scale Testing**

A separate bench-scale testing program was developed to provide a comprehensive evaluation of the ERD technology. Representative soil and groundwater samples from the Site were analyzed by Stantec's Treatability Testing Services Group as outlined in Section 3.10. The pH and ORP of the groundwater were immediately tested upon arrival for the groundwater sample from RW-6. The measured pH level was 7.25 and the corresponding ORP level was +207 millivolts (mV). The positive ORP value recorded for the groundwater sample suggests that conditions in the proposed treatment area may not be suited for sustaining reductive dechlorination under the current conditions. The overall reductive biological



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processes at the Site may be limited by the availability of electron donors. This was further supported by the Gene-trac® analysis results that were inconclusive for the presence of *Dhc*.

The ERD testing involved preparation and monitoring of four sample subsets including an active control sample and samples amended with sodium lactate, sodium acetate, and emulsified vegetable oil (EVO) as electron donors. The treatability study was initiated with microcosm sample preparation on May 8, 2013, and gas chromatograph (GC) and sample monitoring occurred regularly through August 7, 2013 (Day 91). The GC analytical parameters consisted of PERC, TCE, cis-1,2-DCE, trans-1,2-DCE, VC) and ethene as the primary constituents of concern for the groundwater and soils.

The test samples were designed to represent a soil/water system enhanced with a supplemental carbon source and electron donor. Since the testing evaluated treatment of contaminants in a soil/water system rather than a soil or water system, the GC analytical results are reported in terms of VOC equivalents (GC peak areas) rather than concentration units. The peak area is proportional to the total mass of VOCs in both the soil and water. The results of the microcosm sample screening for reductive dechlorination parameters are summarized in Table 11. Appendix I contains graphs depicting pH, ORP, and VOC degradation over time for each test sample type.

Creation of the desired reducing conditions (negative ORP levels) necessary for the ERD process was only observed in the microcosm samples amended with sodium lactate and EVO. Levels of the parent compounds PERC and TCE were reduced below GC detection limits in the sodium lactate samples after 28 and 42 days, respectively. PERC was reduced below GC detection limits in the EVO samples after 35 days. The production of daughter products was observed in both the sodium lactate and EVO microcosm samples. The production of VC and ethane indicate the presence of a viable indigenous population of *Dhc* bacteria at the Site.

Based on the results of the bench-scale treatability testing, the application of a remediation program employing ERD appears to be a viable technology option for addressing chlorinated solvent impacts of the groundwater and saturated soils at the Site. During testing, the best contaminant reduction and process performance was observed using sodium lactate as a supplemental electron donor for the ERD process.

A work plan for and Interim Remedial Measure (IRM) involving ERD was submitted to NYSDEC under separate cover.

#### **4.2.8 Summary of Contaminant Presence**

The Remedial Investigation further delineated the presence of impacts to soil and groundwater initially identified by the previous Phase II ESA. Specifically, the following impacts were characterized:

- 1) Relatively low-level petroleum impacts were identified in soil and soil vapor within the building footprint. These impacts are primarily beneath the atrium area and the north building addition, as evidenced by PSG results, field PID screening, olfactory evidence and soil analyses. The detected contaminant concentrations in soil samples did not exceed SCOs. Collectively these results were indicative of the presence of unknown, highly-weathered petroleum products





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beneath the building and are likely the results of a release(s) of lubricants and/or fuels during historical site operations.

- 2) An area with elevated VOC soil gas concentrations was indicated beneath the western portion of the building. The VOC compounds detected are primarily chlorinated-solvent related (TCE, PERC). Traces of these compounds were identified in basement soils during the previous Phase II ESA. Soil samples from RI borings in the same area also detected the same CVOC compounds and their daughter compounds. These results are indicative of a likely release of solvents in the basement from historical Site operations.
- 3) TCE was reported in a Phase II ESA test boring performed near the former loading dock at a concentration that exceeded SCOs. PERC and TCE were also indicated in PSG samples outside the building near the former loading dock. Soil samples analyzed from RI borings in this area did not exhibit significant presence of VOCs.
- 4) CVOCs (primarily TCE and PERC) are also present in groundwater beneath the building, and offsite to the north. The highest total CVOC onsite concentration appears to exist beneath the northeast portion of the building, where cis-1,2 DCE was the VOC exhibiting the highest concentration. This is an indication that reductive dechlorination of TCE and/or PERC in groundwater is occurring on site.

The highest offsite VOC concentrations were observed in well RW-6, where PERC was the VOC with the highest concentration followed by TCE and cis-1,2 DCE. This suite of compounds is also indicative that reductive dechlorination is occurring in groundwater.

- 5) The three surface soil samples exhibited concentrations of several metals, including lead, mercury arsenic and barium at levels in excess RR and/or POGW SCOs. In addition, one PCB Aroclor was present at levels below RR SCOs.
- 6) Semi-volatile organic compounds, pesticides and herbicides, and PCBs were not detected at levels of concern in subsurface soil samples in any of the RI soil samples analyzed.
- 7) SVOCs, PCBs, or pesticides were not detected in RI groundwater samples. The analytical results indicated similar conditions to those observed in the previous Phase II ESA, although CVOC concentrations were slightly higher in the RI results. The slightly higher concentrations observed during the RI are suspected to be attributable to the removal of the basement's concrete floor after the Phase II groundwater sampling was performed, but prior to the RI groundwater sampling event. This allowed rainwater from the roof to enter the subsurface and mobilize contaminants in the vadose zone.





## 5.0 RI QA/QC Evaluation

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### 5.1 DATA USABILITY SUMMARY REPORT

Laboratory reports received from Chemtech for soil and groundwater samples submitted for laboratory analysis during the RI were forwarded to DVS for review of the usability of the laboratory analytical data. Results of the reviews were reported by DVS in their Data Usability Summary Report (DUSR), which is included in Appendix G.

As documented in the DUSR, the data usability reviews were completed by DVS using applicable guidance from the USEPA Region 2 standard operating procedures for data validation and the USEPA National Functional Guidelines for Data Review. The DUSR was also prepared in accordance with Appendix 2B of DER-10. Full reviews of the data deliverable summary forms and raw sample data for RI samples and limited reviews of raw QC data were performed in accordance with the above-referenced guidance. The scopes of their reviews are described in detail in the DUSR.

In summary, most of the laboratory data were found to be usable as reported by the lab or with minor qualification or edits. These qualifications and edits are described in the DUSR. Accuracy, precision and data completeness and analytical method comparability were acceptable.

The only results found to be unusable were for 1,4-dioxane in aqueous samples which were not useable due to poor instrument performance inherent in the methodology. These results are discussed in more detail in the DUSR.

Examples of issues that required the data to be qualified during data review included values marked as estimated due to: low response factors; poor mass spectral identification; elevated surrogate compound recoveries; low recoveries on internal standards; low response on internal calibration standards; or matrix spikes showing recoveries outside recommended limits.

The reviewed results described in the DUSR have been incorporated into the RI data summary tables.



## 6.0 Qualitative Exposure Assessment

### 6.1 GENERAL CONSIDERATIONS

As specified in NYSDEC's Technical Guidance for Site Investigation and Remediation (DER-10, May 2010), a qualitative exposure assessment for both human health and fish and wildlife resources qualitatively determines the route, intensity, frequency and duration of actual or potential exposures to contaminants.

The Site is a 1.5±-acre parcel located at 33 Litchfield Street in the City of Rochester, Monroe County, New York (see Site Plan, Figure 2). At the time of the RI, the property (Tax Parcel No. 120.36-2-20) was occupied by a vacant, 5-story brick building with a basement built circa 1900 for the production of horse-drawn carriages. Operations at the Site ceased in approximately 1993 and the Site has reportedly been vacant since that time. Detailed information on, and documentation of past Site and property uses were reviewed in a report entitled Phase I Environmental Site Assessment (ESA), dated September 2010 by Development & Environmental Consultants, Inc. (DECI). The Site has a variable history of use including the manufacturing of wood trim/accent-related products for the automotive industry, other automotive parts, and clothing washers and dryers. Land uses in the surrounding urban area include commercial and industrial facilities on the properties to the north and east, commercial and residential properties to the south, and residential properties to the west of the Site.

Surface water drainage on site is generally to the south from the building. Offsite drainage is generally toward the northeast. Stormwater catch basins exist in the streets adjacent to the Site. Based on measured water levels in previous and recently-installed groundwater monitoring wells, shallow bedrock groundwater flows radially from a groundwater high located in the northwest portion of the site. Potable water is supplied to the Site and surrounding area by the City of Rochester Bureau of Water. Groundwater is prohibited from use as a potable water supply within the city limits; therefore, use of the potable water supply for the Site and adjacent areas will continue in the future.

Redevelopment of the Site is currently underway and includes conversion of the building into the Carriage Factory Apartments for residential use. This residential development will include approximately 39 licensed treatment apartments for clients with special needs as well as 32 affordable housing units, and in addition to a ground surface parking area with approximately 52 parking spaces located to the south of the building. There will be no commercial space. As stated above, the existing land uses in the surrounding urban area are residential, industrial, and commercial. Land in the surrounding area is likely to continue to be used in the foreseeable future for its current purposes.

The Site characterization elements of the qualitative exposure assessment for the Former Carriage Factory Site are documented in the discussion of results presented above in Section 4.0 of this report. The RI Site characterization elements summarized in Section 4.0 are considered in this qualitative exposure assessment, since IRMs have not yet been completed.



## **6.2 HUMAN HEALTH EXPOSURE ASSESSMENT**

### **6.2.1 Introduction**

A human health exposure assessment identifies areas of concern and chemicals of concern, identifies and evaluates actual or potential exposure pathways, characterizes the potentially exposed receptors (residents, workers, recreational users, etc.), and identifies how any unacceptable exposure pathways might be eliminated or mitigated.

### **6.2.2 Human Health Exposure Pathways**

Possible exposure routes through which on-Site and off-Site receptors may come into contact with the contaminants of concern detected on-Site include:

- Inhalation of volatile and/or semi-volatile substances released from soil and/or groundwater (remediation worker, construction worker, occupants, occupational worker, visitors, patrons, etc.). Exposures to remediation workers could occur during remedial work, such as excavation or groundwater sampling or remediation-related activities. Exposures to construction workers could occur in the source area and surrounding soils on the Site during any ground-intrusive work. These potential exposures to remediation and construction workers will be mitigated by use of monitoring equipment such as PIDs and dust monitors, employment of engineering controls, and/or use of personal protective equipment (PPE), such as respirators, if needed. Exposures to the residential occupants, occupational workers and patrons at the future residential use building on-Site could potentially occur from vapor intrusion into the building. This exposure will be mitigated by use of a sub-slab depressurization system (SSDS);
- Ingestion and dermal contact with substances detected in groundwater, surface soil and subsurface soil (remediation worker, construction worker, occupants, occupational worker, patrons, etc.). Exposures to remediation workers could occur during remedial work, such as soil excavation, or groundwater sampling and remediation-related activities. Exposures to construction workers could occur in contaminated areas during any ground-intrusive work. These exposures to remediation and construction workers will be mitigated through use of PPE and proper work procedures (i.e. no eating, smoking, or drinking in work zones; and removal of PPE and washing prior to eating, smoking, or drinking once outside the work zone). Exposures to occupants, occupational workers, and patrons could occur during contact with contaminated surface soils. The exposures to occupants, occupational worker, and patrons will be mitigated by placing impervious surfaces or two feet of clean fill over contaminated areas and removing contaminated surface soils; and
- Inhalation of suspended particles dispersed in air if soils are excavated or regraded during future remedial or construction work (construction worker, persons on adjacent properties in close proximity). Mandatory engineering control measures will be required to minimize soil tracking, soil erosion and dispersion of dust during intrusive work.

Because of the specific conditions encountered at and near the Site, the following pathways have been reviewed, but do not represent important pathways of exposure:



- Contact with contaminated groundwater by off-site residents, workers, and visitors is unlikely due to the use of the public water supply for potable water;
- Results of the RI PSG and groundwater sampling indicate exposure to local residents through soil vapor intrusion into the downgradient off-site building to the north could potentially occur. This exposure will be minimized to the extent required by a volunteer in the BCP by addressing the on-site groundwater impacts in order to minimize further off-site contaminant migration; and
- Transient access by trespassers and local populations during earth moving work could occur; however, fencing installed across the Site entrance prior to the remedial and construction activities will limit access and minimize this risk.

### **6.2.3 Summary**

Source removal combined with groundwater remediation will address the on-Site exposure risks and the potential for further migration of the contaminated groundwater plume associated with the presence of VOCs. The non-VOC subsurface impacts are generally insoluble contaminants. Removal and proper off-site disposal or encapsulation of this material beneath asphalt, concrete, or two feet of clean soil will limit potential exposure risks to these materials.

Vapor inhalation exposure pathways for future on-Site occupants, occupational workers, and patrons/visitors will be addressed with vapor intrusion mitigation measures, involving a sub-slab depressurization system.

Exposure pathways involving inhalation of contaminants suspended in air in soil particles during earthwork or volatilized from groundwater during groundwater sampling would be expected to be temporary, limited to periods of excavation/earth work or groundwater sampling, and mitigated with engineering controls.

Direct exposure by way of ingestion, inhalation or dermal contact with impacted soils or groundwater will also be transient in nature and will be restricted to periods of earth work, utility work and remediation work. Ongoing groundwater remediation and the construction of an impervious surface cover or placement of two feet of clean fill will allow future restricted residential use of the Site in conjunction with implementation of appropriate institutional and engineering controls and a Site Management Plan (SMP).

## **6.3 FISH AND WILDLIFE EXPOSURE**

### **6.3.1 Ecological Resources**

For evaluations of fish and wildlife exposures and ecological risk, NYSDEC guidance focuses attention on sensitive ecological receptors. The following information was developed concerning the potential presence of sensitive receptors both on and adjacent to the Site.

#### **6.3.1.1 Site History and Current Conditions**

The Site is occupied by a vacant, 5-story brick building with a basement that was built circa 1900. Operations ceased in approximately 1993 and the Site has reportedly been vacant since that time. The Site has a variable history of use including the manufacturing of wood trim/accent-related products for





REMEDIAL INVESTIGATION REPORT  
FORMER CARRIAGE FACTORY  
BROWNFIELD CLEANUP PROGRAM SITE #C828184

the automotive industry, other automotive parts, and clothing washers and dryers; details can be found in the 2010 Phase I ESA by DECI which was appended to the RIWP.

Stantec performed a reconnaissance of the Site and the Site vicinity, and no sensitive ecological receptors were identified. No wildlife was observed on the Site. There was a narrow line of scrub/shrub vegetation along the fence line on the west side of the property. The majority of the Site consisted of asphalt drives and parking and gravel/soil and grass covered areas (south side) or it was occupied by the multi-story, brick building (north side of the Site).

No significant natural resources, federal or state wetlands, or critical wildlife habitats of threatened or endangered species are known to be present within ½ mile of the property. In addition, the NYSDEC has indicated it has no records of rare or state-listed animals or plants, significant natural communities or other significant habitats on or in the immediate vicinity of the property, with the exception of the endangered peregrine falcon which was introduced to some of the taller buildings in the City of Rochester a number of years ago.

Land uses in the surrounding urban area include commercial and industrial facilities on the properties to the north and east, commercial and residential properties to the south, and residential properties to the west of the Site.

#### **6.3.1.2 Agency Inquiries**

A request was sent to the New York Natural Heritage Program, and the U.S. Fish and Wildlife Service website was reviewed to determine any known occurrence of rare, endangered and/or threatened species in the vicinity of the Site.

The response from the NYSDEC Natural Heritage Program (see Appendix J, letter to Stantec dated April 19, 2013) indicated that no rare or state-listed animals or plants, significant natural communities or other significant habitats are known to be present on or in the immediate vicinity of the Site.

The U.S. Fish and Wildlife Service provides an on-line searchable database for occurrences of federally listed threatened or endangered species by county. The database identifies the bog turtle (*Clemmys muhlenbergii*) as the only federally threatened or endangered species occurring in Monroe County. According to USFWS policy, if a subject site contains no habitat suitable for the subject species, no further investigation is required. Given that the subject Site and surrounding vicinity is located in a largely former industrial and residential area with no marsh cover/sedge wetlands that are the preferred habitat of the bog turtle, no further investigation is needed.

Given the available information and the industrially-developed, environmental setting of the area, sensitive ecological receptors have not been identified as being present at the Site or elsewhere in the vicinity of the Site. Possible exposure pathways for fish and wildlife are therefore not subject to further evaluation in this assessment. However, observations are provided in the following section concerning means of addressing generic potential ecological exposure risks and pathways associated with the Site.





### **6.3.2 Exposure Pathways**

Given the available information and the former development of the site, no sensitive ecological receptors have been identified as being present on or in the vicinity of the Site. Although there has been no identified ecological exposure risk, probable exposure pathways for generic ecological receptors are nonetheless described below.

Inhalation and contact by ecological receptors with suspended particles in air is not considered a significant risk unless subsurface soils are excavated and exposed to dispersion mechanisms. Mandatory measures would be required to control soil tracking, soil erosion and dispersion of dust during excavation and remediation work. Best management practices will be employed to contain and capture stormwater, soil and sediment within the remedial area and/or by using temporary storage structures.

The primary potential exposure pathway identified for generic sensitive ecological receptors is the potential off-Site migration of impacted groundwater. NYSDEC and the Monroe County Department of Environmental Services (MCDES) would be involved in reviewing and approving plans or issuing appropriate permits for treatment and/or discharge of groundwater generated by a remedial system. Any effluent, if generated would be discharged to the Monroe County sanitary sewer to eliminate any potential contact by wildlife with contaminants.

Any potential temporary discharge of stormwater or groundwater that may be collected and treated during construction efforts at the Site would also be subject to approval and permitting by NYSDEC and MCDES. Discharge to the sanitary sewer system would eliminate any potential contact with contaminants. It is not anticipated that potential construction activities would involve the construction or relocation of long-term storm sewer discharge locations and therefore this is not considered a likely exposure pathway.



## 7.0 Summary and Conclusions

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This report documents the activities, methods and results of the Remedial Investigation (RI) for the Former Carriage Factory site located at 33 Litchfield Street in Rochester, New York (“the Site”).

The RI was performed pursuant to the Brownfield Cleanup Agreement (BCA) with the owners of the Site, Carriage Factory Special Needs Apartments, L.P. (CFSNA) that was executed by the New York State Department of Environmental Conservation (NYSDEC or the Department) on February 26, 2013. The RI was completed by Stantec in accordance with the Remedial Investigation Work Plan (RIWP) for the Site that was approved by NYSDEC on May 23, 2013. Interim Remedial Measures (IRMs) are in the process of being implemented by Stantec with Christa Construction in accordance with the Interim Remedial Measures Work Plan (IRMWP) for the Site that was approved by NYSDEC on August 30, 2013.

The RI accomplished the purposes of remedial investigations required by New York State’s Brownfield Cleanup Program. The RI provided:

- Characterization of the nature and extent of contamination at the Site, expanding on what had been identified in previous Phase II investigations;
- Information necessary to perform a qualitative assessment of related potential human health and ecological exposures, as documented herein; and
- Information necessary for the development of remedial measures to protect public health and the environment.

### 7.1 REMEDIAL INVESTIGATION ACTIVITIES

The RI consisted of:

- A passive soil gas survey across the site and in adjacent ROWs to assess potential source areas for VOC contamination;
- A geophysical survey in exterior and interior areas and in the Wiley Street ROW to assess the potential for underground storage tanks, piping or other subsurface structures;
- Excavation of test pits to further assess anomalies identified by the geophysical survey;
- Drilling of test borings in soil and bedrock at interior and exterior locations chosen to further evaluate areas of previously-identified or suspected VOC presence and to provide sitewide coverage;
- Installation of four bedrock groundwater monitoring wells;
- Hydraulic conductivity testing of selected wells;
- Surface soil sampling in exterior areas;
- Laboratory analysis of soil samples for VOCs and/or “full suite” contaminants;
- Sampling of previously-installed Phase II investigation wells and newly-installed RI wells;



- Laboratory analysis of all groundwater samples for VOCs and selected samples for full-suite compounds; and
- Sampling and bench testing of soil and groundwater samples to evaluate the potential for using ERD as an IRM for groundwater.

## 7.2 REMEDIAL INVESTIGATION FINDINGS

The RI resulted in the following primary findings:

- Areas of elevated CVOC impacts were identified in soil gas beneath the west side of the building and adjacent to the loading dock on the south side of the building. The primary compounds were TCE and PERC, which are common constituents of degreasing solvents likely used in historical operations at the Site. Lesser impacts by petroleum-related compounds were also observed in interior and exterior areas.

Elevated CVOCs were also observed in offsite areas north of the Site limits, in the Wiley Street ROW; however these compounds appear to be at least in part from offsite sources.

- The geophysical survey identified four exterior locations south of the building where anomalous results indicated the potential presence of buried metallic objects. Test pits excavated at these locations found miscellaneous metallic objects but no evidence of underground tanks. Survey results inside the building indicated numerous buried pipe runs. Most, but not all of the pipes were related to roof drainage, as determined during subsequent excavation and removal.
- *Surface soil sampling results:* Surface soil samples exhibited concentrations of several metals, including lead, mercury, arsenic and barium at levels in excess of NYSDEC RR Use and/or POGW SCOs. Subsequent sampling during the IRM identified more significant metals concentrations which will be discussed in the IRM CCR. PCBs were also present in the samples at low concentrations below RR SCOs. The urban fill appeared to be generally less than 4 ft in thickness.
- *Subsurface Soil sampling results:* Relatively low levels of petroleum-related compounds were detected in basement soils samples. The results were indicative of highly-weathered petroleum products.

CVOC presence in RI samples for both interior and exterior areas was generally at low levels and not in excess of SCOs, except for one location, B-108, where cis-1,2-DCE was reported above the POGW SCO. Subsequent sampling during IRM activities revealed more significant VOC presence; which presented in the IRM CCR.

- Groundwater levels are highest beneath the building and flow direction is radially away from this groundwater “mound.”
- *Groundwater sampling results:* The sampling did not detect the presence of SVOCs, PCBs, or pesticides. Sodium and manganese were detected at levels in excess of NYSDEC groundwater





standards; however there are naturally-occurring elements and are not indicative of a site contamination concern.

Samples from thirteen of the sixteen monitoring wells exceeded groundwater standards for one or more CVOC (primarily PERC and TCE). The greatest VOC concentrations on-Site were observed generally beneath the northern portion of the building; the highest overall concentrations were observed to the north of the property across Wiley Street.

- The types and concentration distribution of CVOCs was indicative that reductive dechlorination of these contaminants is occurring. This naturally-occurring process occurs when biochemical activity by microorganisms breaks down CVOCs into non-toxic by-products. Further, bench testing of soil and groundwater samples indicated that ERD would likely be an effective means of *in situ* remediation of groundwater, and sodium lactate was identified as the most effective amendment product to facilitate ERD.

### 7.3 INTERIM REMEDIAL MEASURES (IRMS)

Based on the findings of the RI and concurrent and subsequent construction-related activities, an IRM Work Plan was submitted to NYSDEC. The Work Plan, which was approved by NYSDEC, included the following primary elements:

- *Soil:* Construction activities related to the Site development commenced concurrently with the RI activities. Excavation and/or site grading in interior and exterior areas encountered petroleum, CVOC, and/or metal-impacted soils that required removal and offsite disposal. A detailed summary of these activities will be provided in the IRMCCR.

Due to the presence of urban fill and selected metals in exterior areas at concentrations in excess of SCOs, landscaped portions of the site will require placement of a 2-ft-thick clean soil “cap.” Other impacted areas will be covered with new impervious surfaces.

- *Groundwater:* Based on the findings of the RI, in-situ groundwater remediation through ERD was recommended. Since the area of impacted groundwater is primarily beneath the building, a series of horizontal piping runs was installed during construction to facilitate injection of the sodium lactate amendment.
- *Soil Vapor Intrusion:* Due to the presence of known VOC contamination in soil and groundwater beneath the building, the project includes installation of a vapor barrier and sub-slab depressurization system beneath the entire footprint of the building.



## 8.0 References

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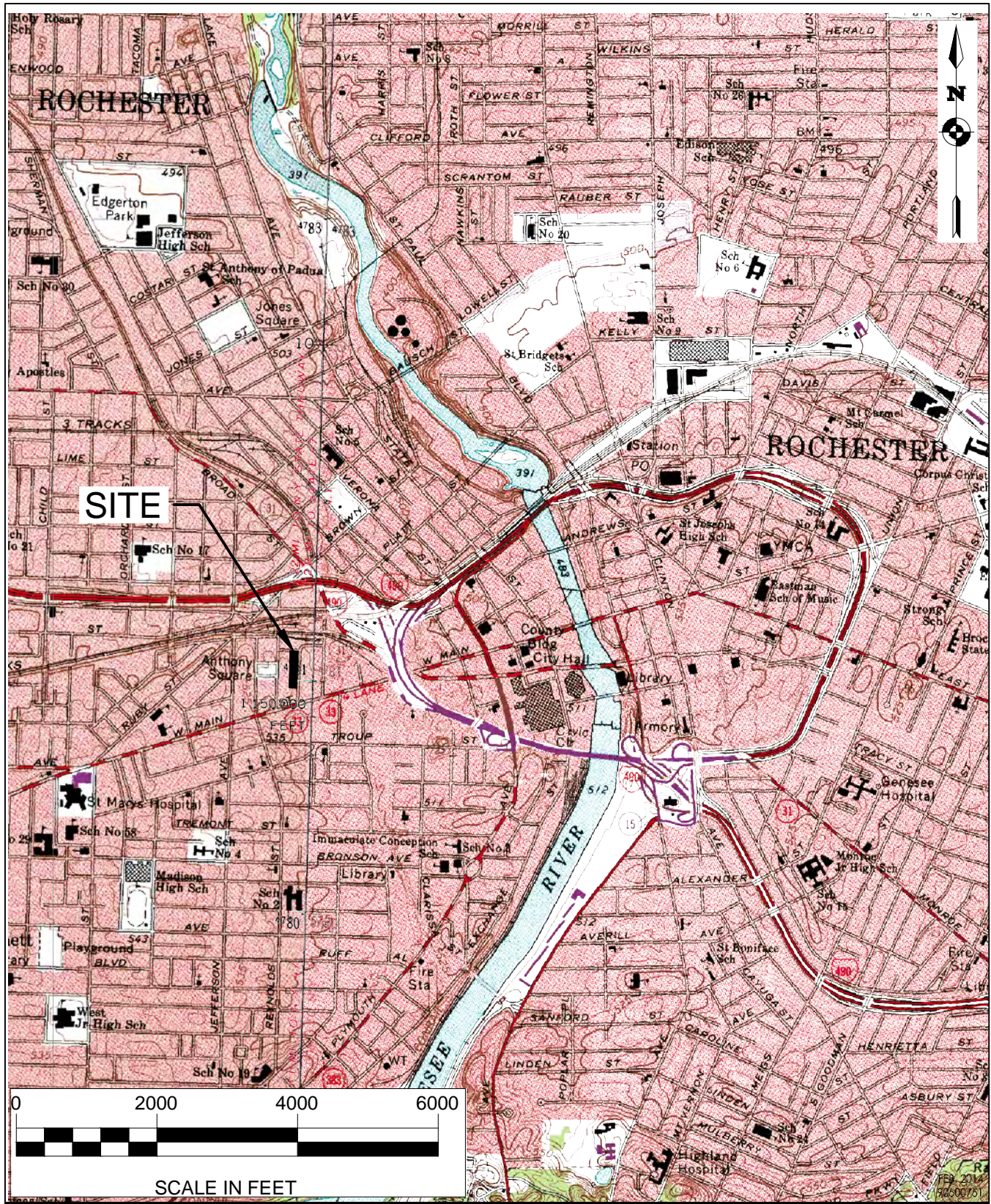
1. Remedial Investigation Work Plan, Brownfield Cleanup Program, Site #C828184, Former Carriage Factory, 33 Litchfield Street, Rochester, Monroe County, New York. Stantec Consulting Services Inc., April 2013 revised.
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# FIGURES



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CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
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Figure No.

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Title

REMEDIAL INVESTIGATION REPORT  
SITE LOCATION MAP





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Legend

 PROPERTY LINE

● SANITARY SEWER (SA MH=MANHOLE)



521 — GROUND SURFACE ELEVATION CONTOUR

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Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING.  
2. GROUND SURFACE ELEVATION CONTOURS OBTAINED FROM  
DRAWING ENTITLED "BORING LOCATION PLAN"  
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REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

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## SITE PLAN

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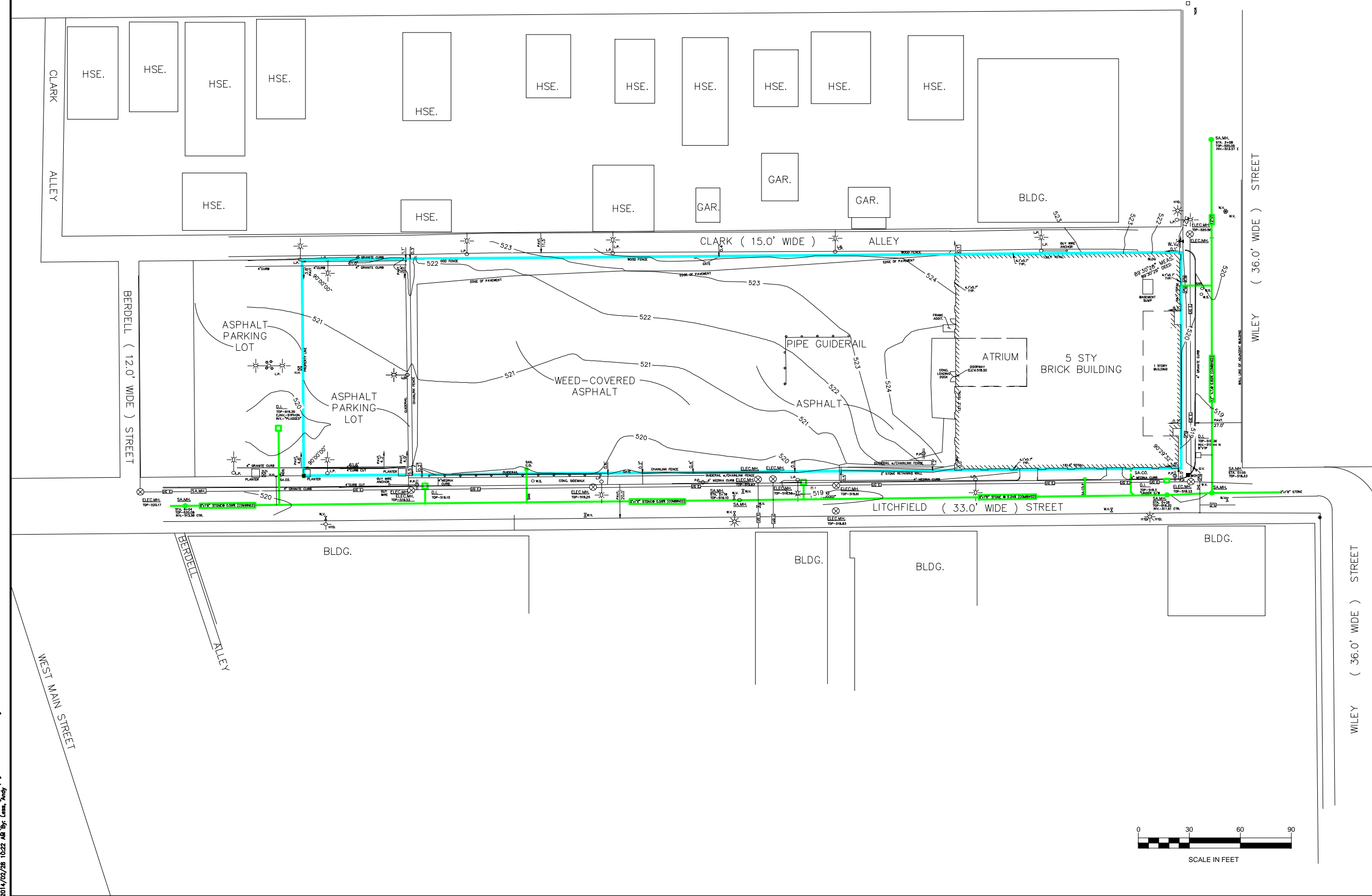
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FIGURE 2

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B-2 LOCATIONS OF PREVIOUS TEST BORINGS  
DEC 2010 AND MAY 2011

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—● SANITARY SEWER (SA MH=MANHOLE)

 101 GROUND SURFACE ELEVATION CONTOUR

## Notes

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REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
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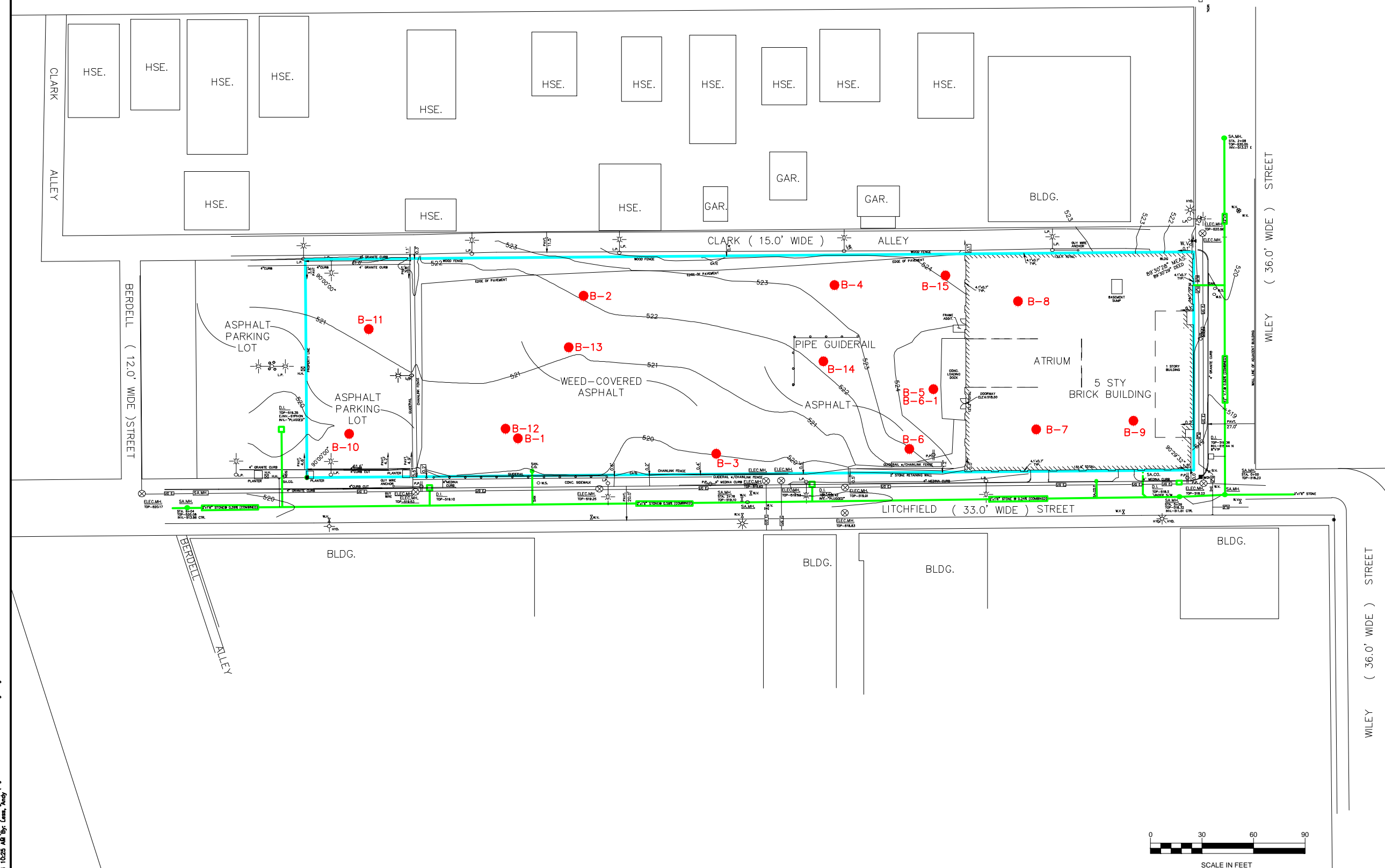
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PREVIOUS PHASE II SOIL TEST  
BORING LOCATIONS

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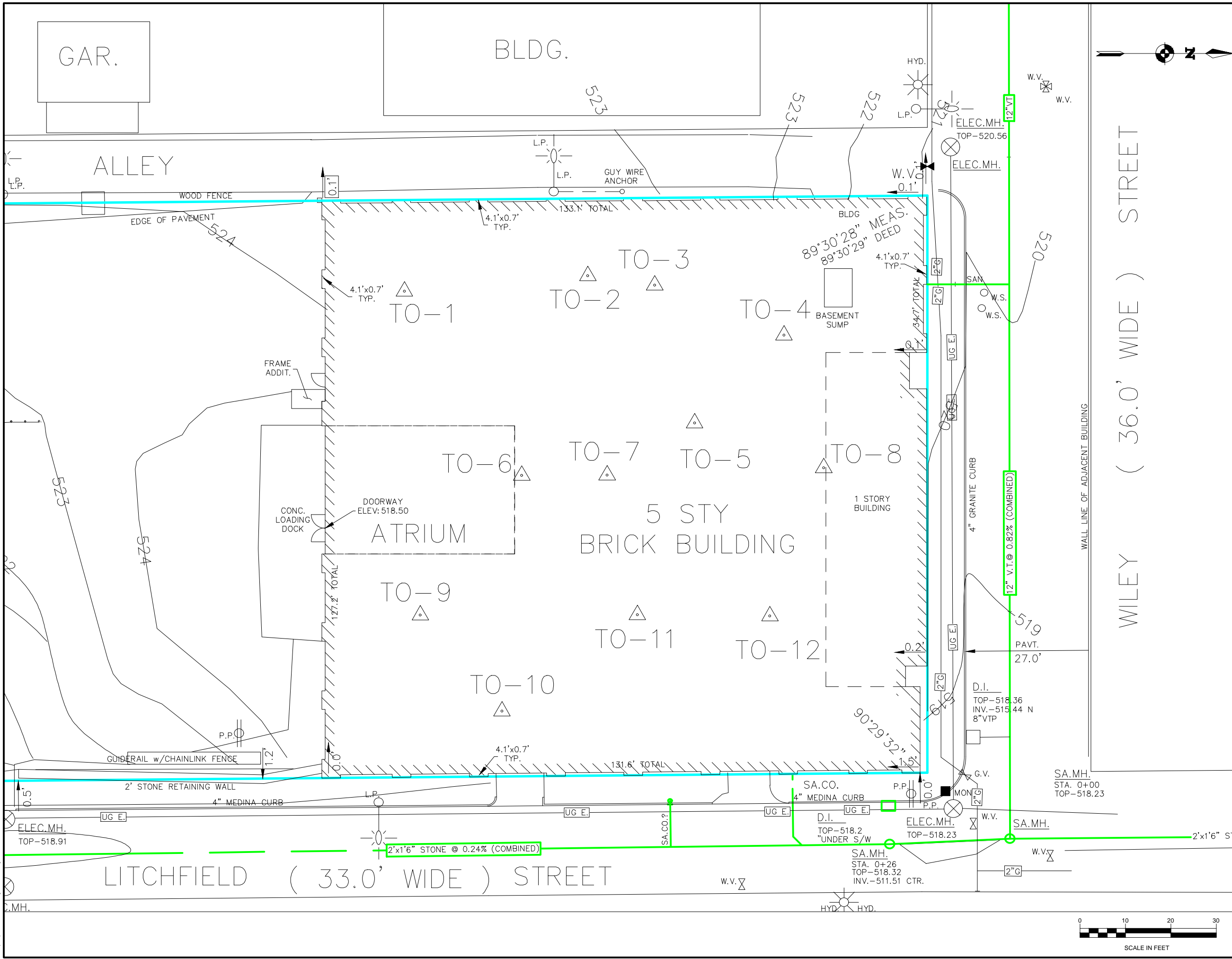
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- 33 LITCHFIELD STREET BUILDING LIMITS
- TO-11 LOCATIONS OF SUB-SLAB VAPOR SAMPLE LOCATIONS MAY 2011
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)
- GROUND SURFACE ELEVATION CONTOUR

Notes

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- TEST BORINGS OBTAINED FROM DECI PHASE II REPORT DEC 2010 AND MAY 2011

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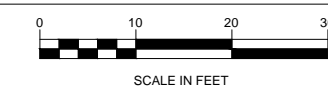
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FIGURE 4

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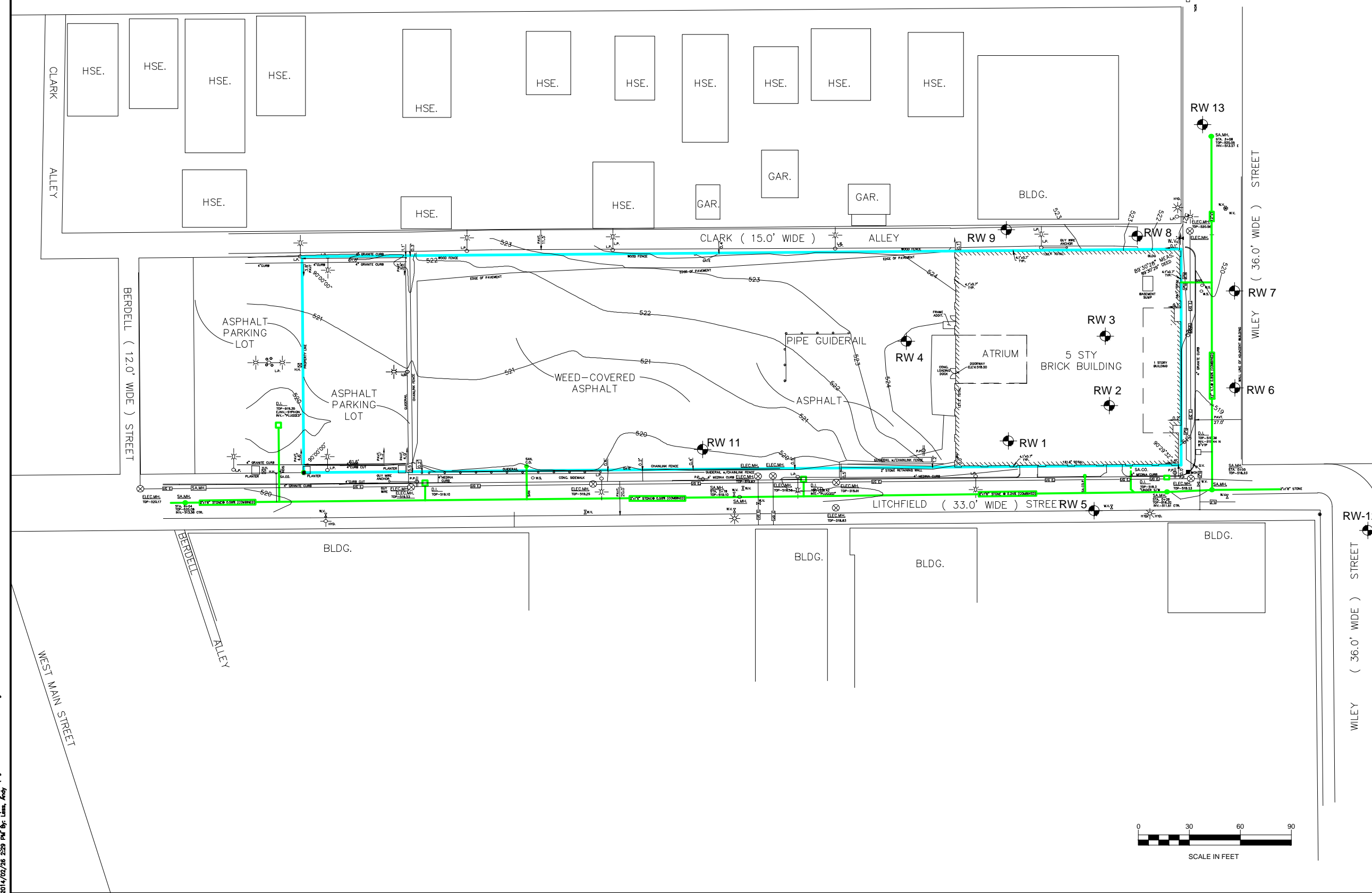
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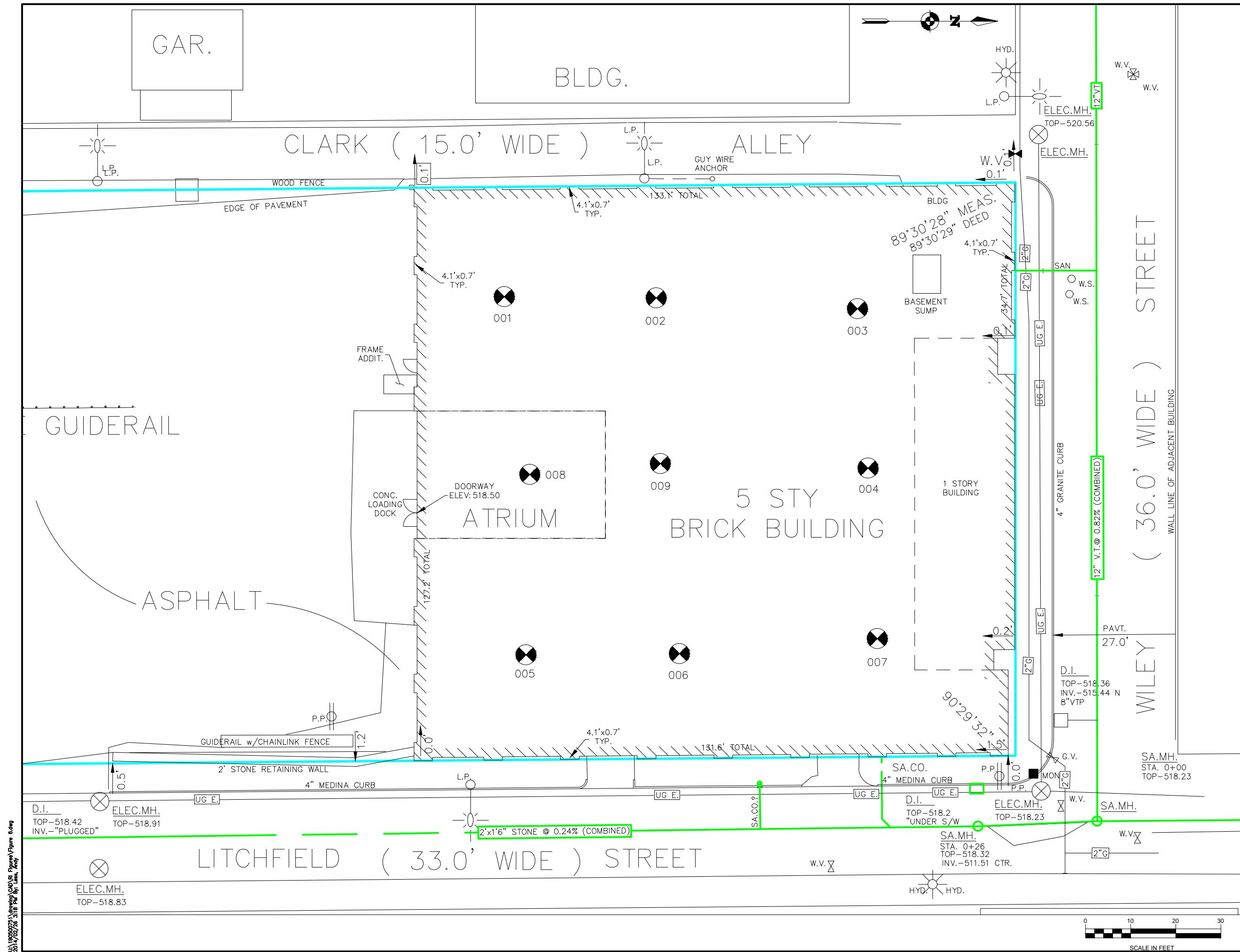
FIGURE 5

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Tel. 585-475-1440  
Fax. 585-424-5951  
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
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Legend

-  33 LITCHFIELD STREET BUILDING LIMITS  
 003 LOCATIONS OF PREVIOUS BASEMENT SOIL SAMPLE  
 PROPERTY LINE  
 SANITARY SEWER (SA MH=MANHOLE)

## Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING  
2. SOIL SAMPLE LOCATIONS OBTAINED FROM PREVIOUS  
ENVIRONMENTAL INVESTIGATION REPORTS BY DEVELOPMENT &  
ENVIRONMENTAL CONSULTANTS INC.

Revision	By	Appd.	YY.MM.DD
Issued	By	Appd.	YY.MM.DD

File Name:

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Client/Project

CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title

PREVIOUS BASEMENT SOIL  
SAMPLE LOCATIONS

Project No.  
190500751

Scale  
AS SHOWN

Drawing No. \_\_\_\_\_

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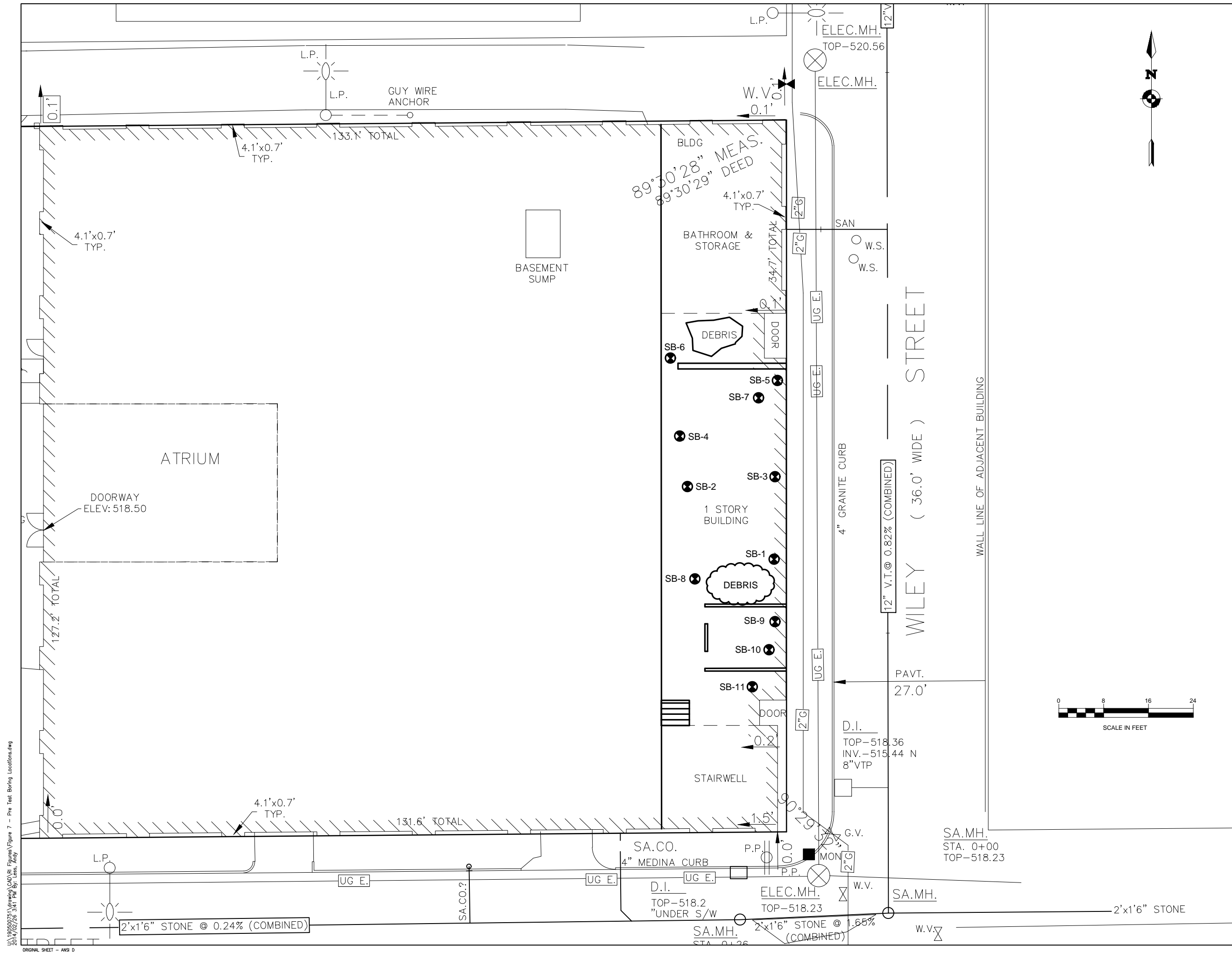
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FIGURE 6

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SB-2 TEST BORING LOCATIONS

## Notes

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Client/Project

CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
REMEDIAL INVESTIGATION REPORT

BROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER , NY

Title

PRELIMINARY RECONNAISSANCE  
TEST BORINGS LOCATIONS

Project No. 190500751	Scale 1" = 16'	
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FIGURE 7 of 0





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 SG-1 INITIAL PASSIVE SOIL GAS SAMPLING LOCATION  
(DECEMBER 2012)

▲ SG-201 SUPPLEMENTAL PASSIVE SOIL GAS SAMPLING POINT LOCATION (MARCH 2013)

 PROPERTY LINE

—● SANITARY SEWER (SA MH=MANHOLE)

## Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING.  
2. GROUND SURFACE ELEVATION CONTOURS OBTAINED FROM  
DRAWING ENTITLED "BORING LOCATION PLAN"  
BY FOUNDATION DESIGN, P.C., DATED JANUARY 26, 2011.

ADDED SUPPLEMENTAL PSG LOCATIONS	RM	MS	13.03.12
Revision	By	Appd.	YY.MM.DD

FINAL RIWP	RJM	MPS	13.04.24
Issued	By	Appd.	YY.MM.DD

File Name:

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Client/Project

CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title

### PASSIVE SOIL- GAS SURVEY SAMPLING LOCATIONS

Project No. \_\_\_\_\_

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Drawing No.

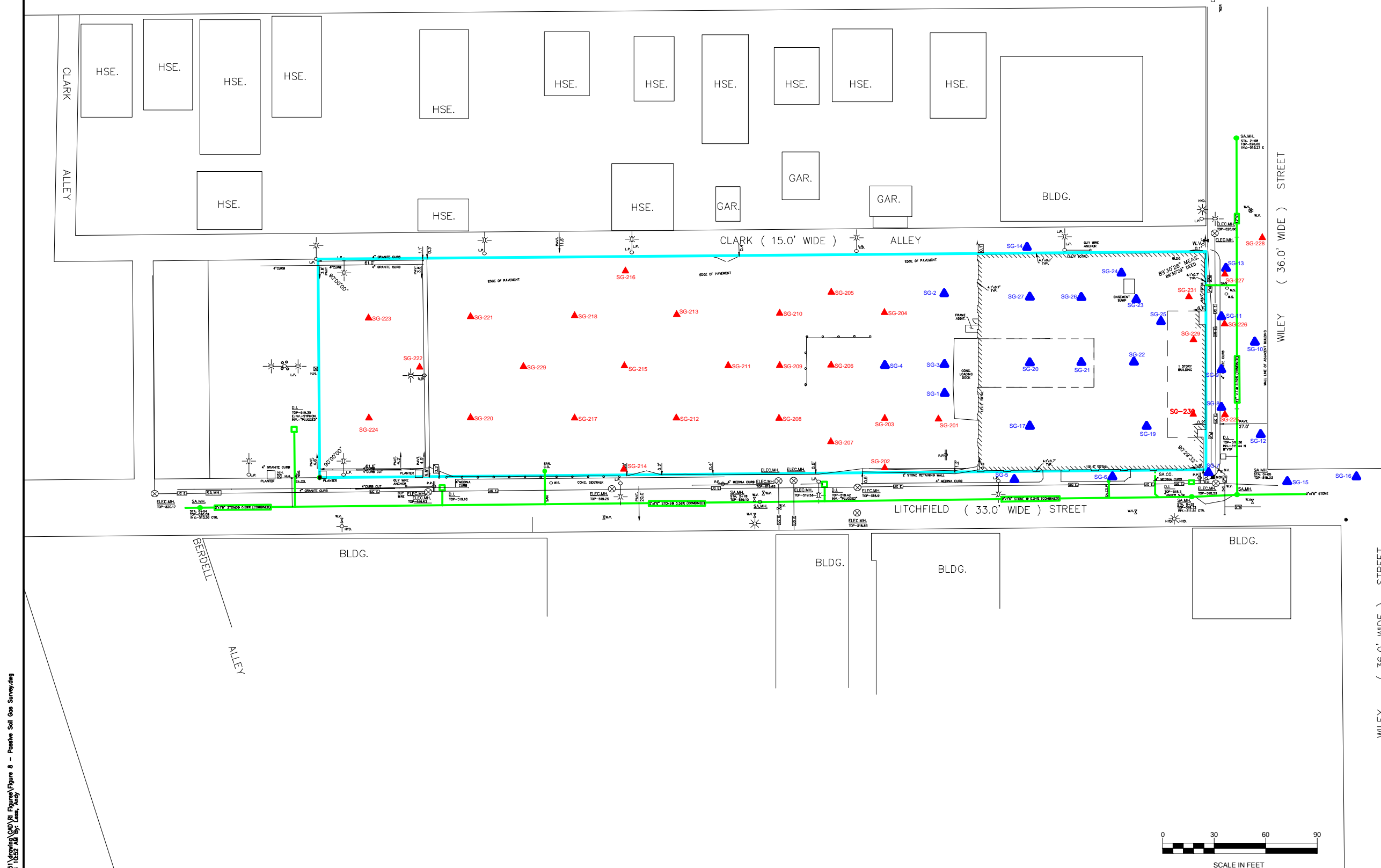
Sheet

Revision

FIGURE 8

of

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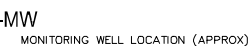
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2. GROUND SURFACE ELEVATION CONTOURS OBTAINED FROM  
DRAWING ENTITLED "BORING LOCATION PLAN"  
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REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title

REMEDIAL INVESTIGATION  
SURFACE SOIL, TEST BORING AND  
MONITORING WELL LOCATIONS

Project No. \_\_\_\_\_

Scale  
AS SHOWN

Drawing No. \_\_\_\_\_

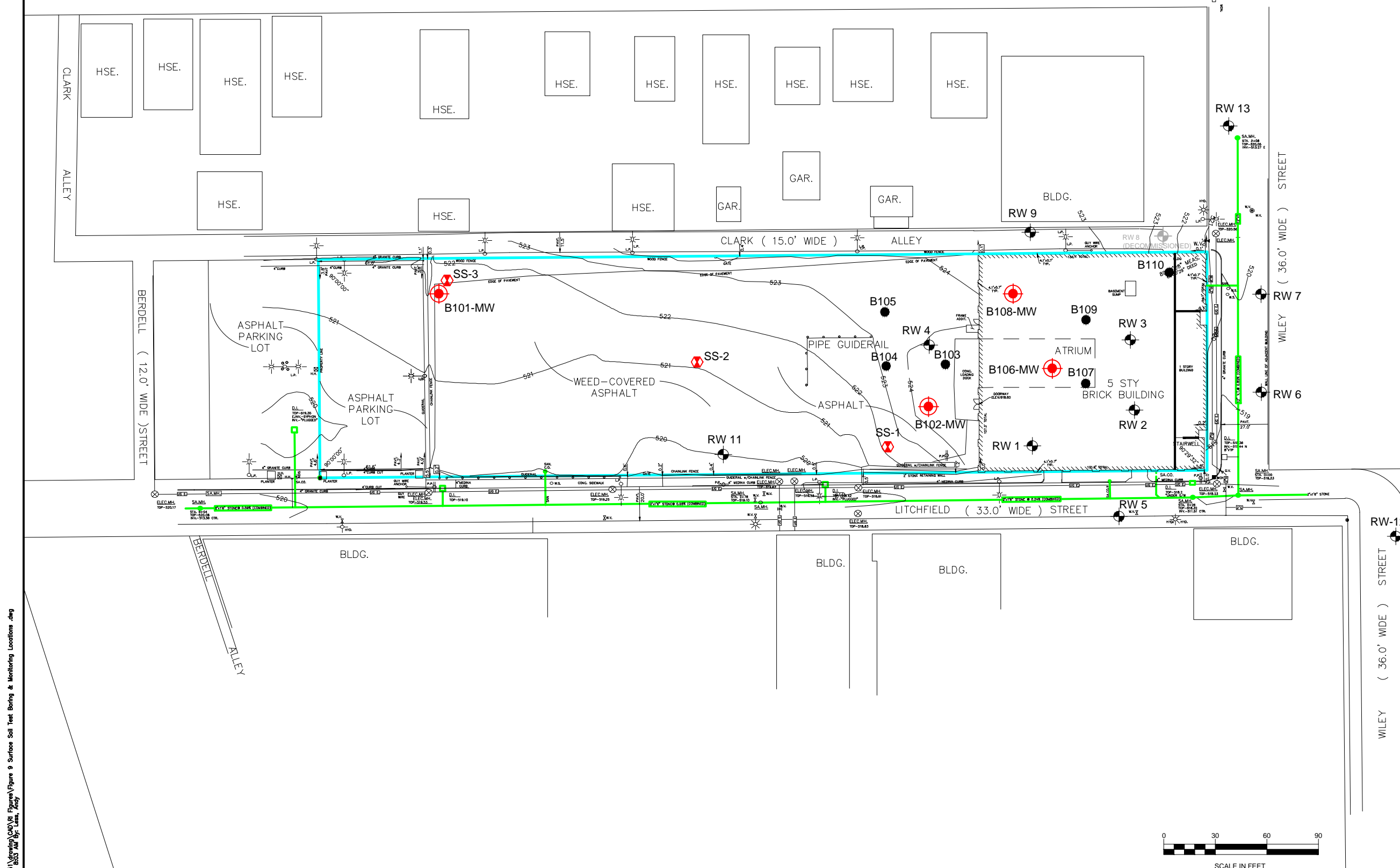
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FIGURE 9

of

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2014/02/27 8:03 AM By: Less, Andy

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 PROPERTY LINE

—● SANITARY SEWER (SA MH=MANHOLE)

TP2-

TEST PITS PERFORMED BY STANTEC (4-19-2013)

## Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING.
2. EXPLORATION, WELL AND SAMPLE LOCATIONS SUBJECT TO CHANGE BASED ON FIELD CONDITIONS, AND SUPPLEMENTAL PASSIVE SOIL GAS SURVEY RESULTS.
3. TEST PITS EXCAVATED AT THE LOCATIONS OF ANOMALIES IDENTIFIED BY A GEOPHYSICAL SURVEY, MARCH 16, 2013.

Revision	By	Appd.	YYMMDD
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File Name:	Dwn.	Chkd.	Dsgn.	YY.MM.DD
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REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title

REMEDIAL INVESTIGATION  
TEST PIT LOCATIONS

Project No.  
190500751

Scale  
AS SHOWN

Drawing No.

Sheet

Revision

FIGURE 10

of

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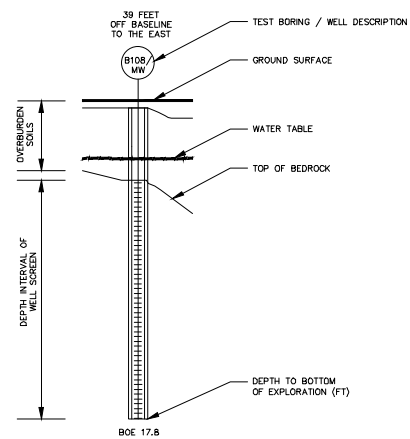


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REMEDIAL INVESTIGATION REPORT

BROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY  
33 LITCHFIELD STREET, ROCHESTER, NY

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Title

SUB-SURFACE PROFILE

Project No. \_\_\_\_\_

190500751

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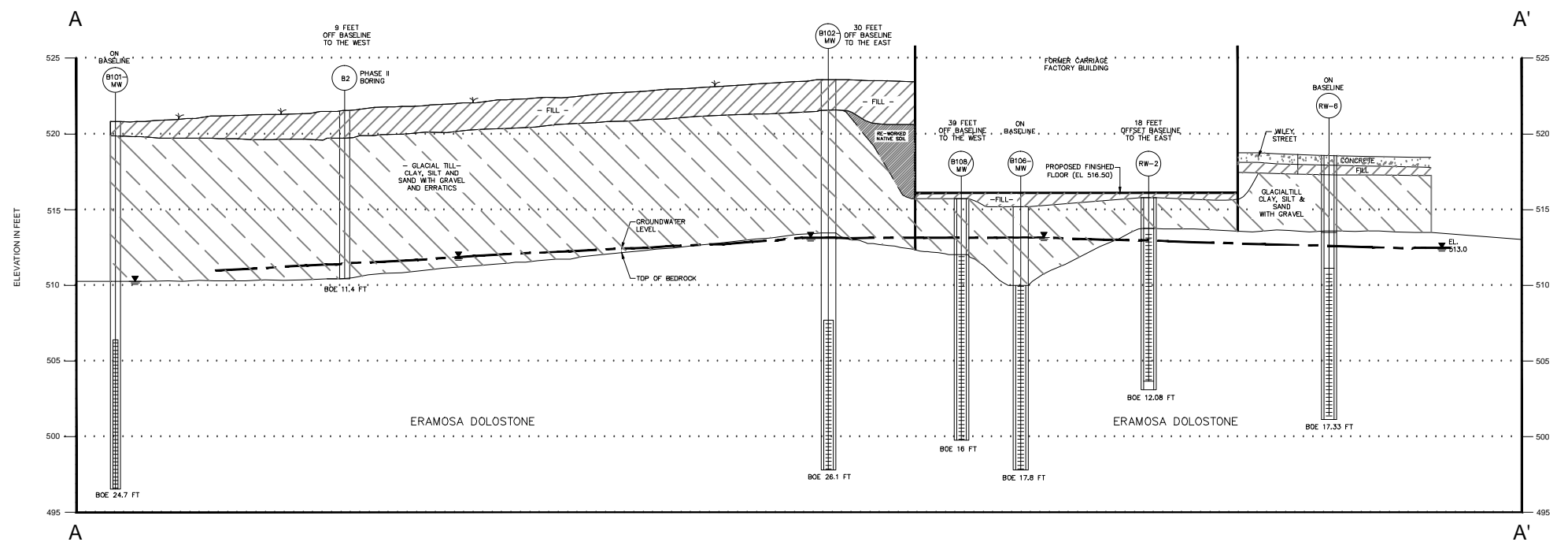
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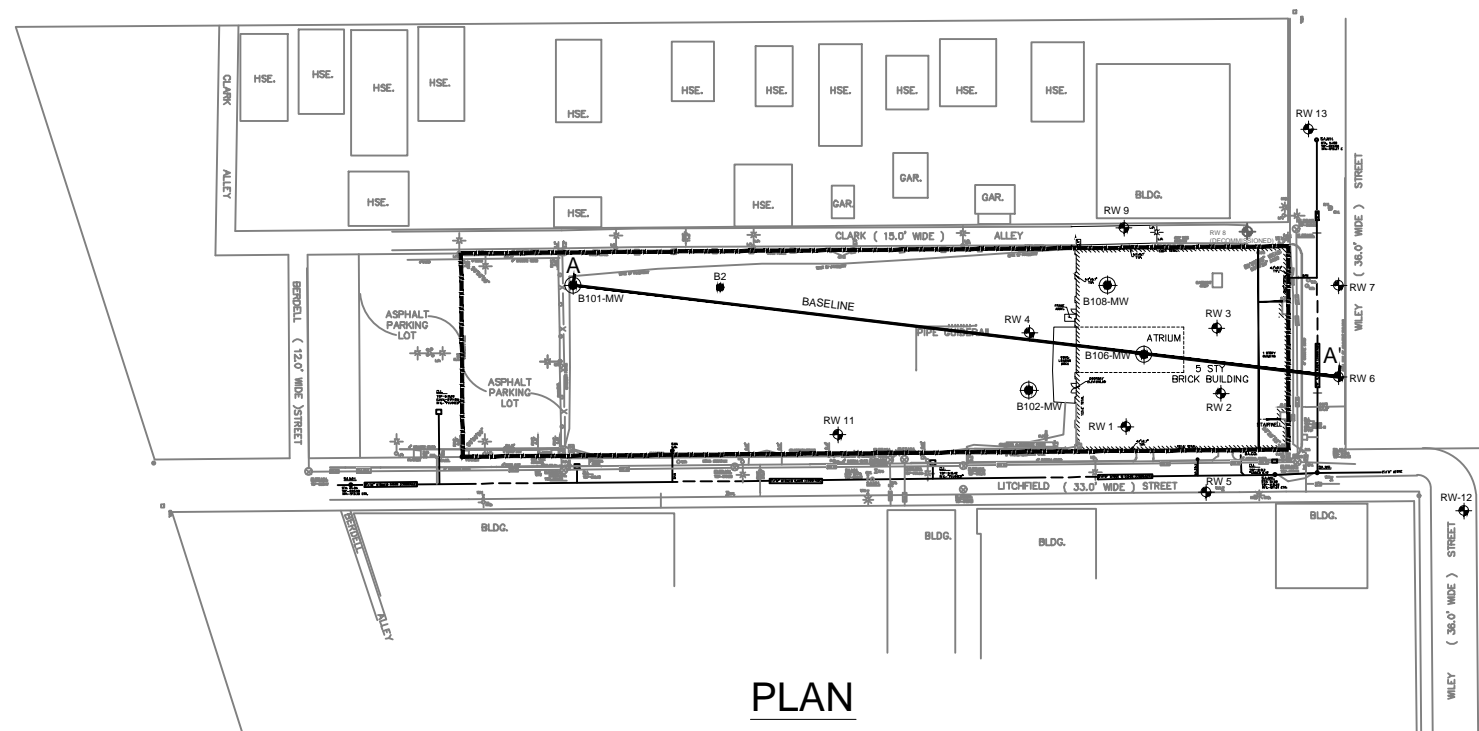
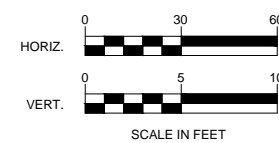
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FIGURE 11

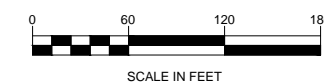
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## PROFILE



## PLAN







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- 33 LITCHFIELD STREET BUILDING LIMITS
- LOCATIONS OF PHASE II ESA GROUNDWATER MONITORING WELLS
- B101-MW RI MONITORING WELL LOCATION
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)
- GROUNDWATER CONTOURS 5-15-2013
- GROUNDWATER WELL ELEVATIONS 5-15-2013

Notes

- PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING.
- GROUND SURFACE ELEVATION CONTOURS OBTAINED FROM DRAWING ENTITLED "BORING LOCATION PLAN" BY FOUNDATION DESIGN, P.C., DATED JANUARY 26, 2011.

Revision By Appd. YY.MM.DD

Issued By Appd. YY.MM.DD

File Name: Dm. Chkd. Degn. YY.MM.DD

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CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
REMEDIAL INVESTIGATION REPORT  
BROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY  
33 LITCHFIELD STREET, ROCHESTER, NY

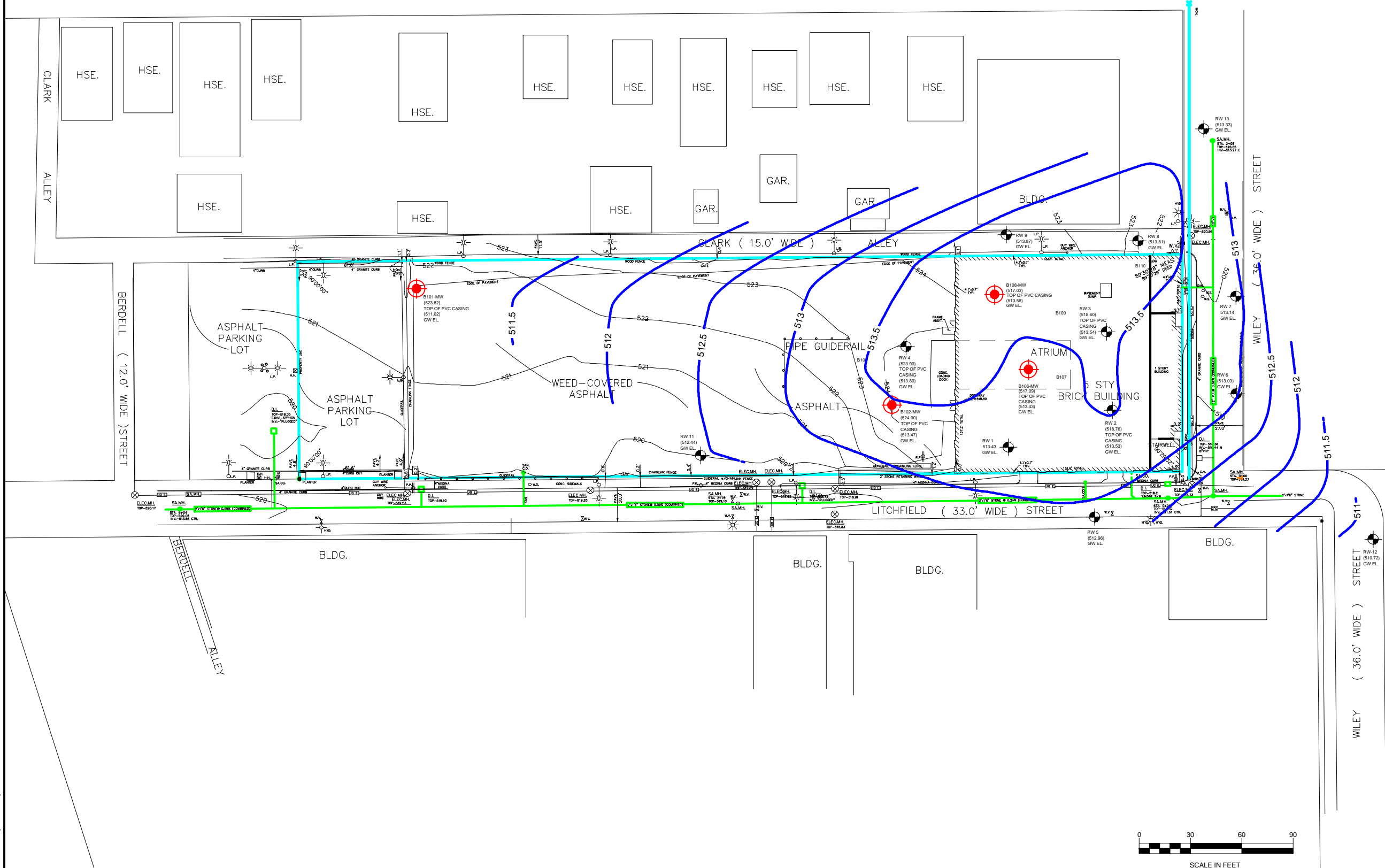
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GROUNDWATER CONTOUR PLAN  
MAY 15, 2013

Project No. 190500751 Scale AS SHOWN

Drawing No. Sheet Revision

FIGURE 12 of 0







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Legend



33 LITCHFIELD STREET BUILDING LIMITS



LOCATIONS OF PHASE II ESA GROUNDWATER MONITORING WELLS



I-MW

PROPERTY LINE

PROPERTY LINE

GROUNDWATER CONTOURS 03-01-2014

GROUNDWATER WELL ELEVATIONS 02-01-2014

## Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING.  
2. GROUND SURFACE ELEVATION CONTOURS OBTAINED FROM  
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REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title

GROUNDWATER CONTOUR PLAN  
FEBRUARY 1, 2014

Project No.  
190500751

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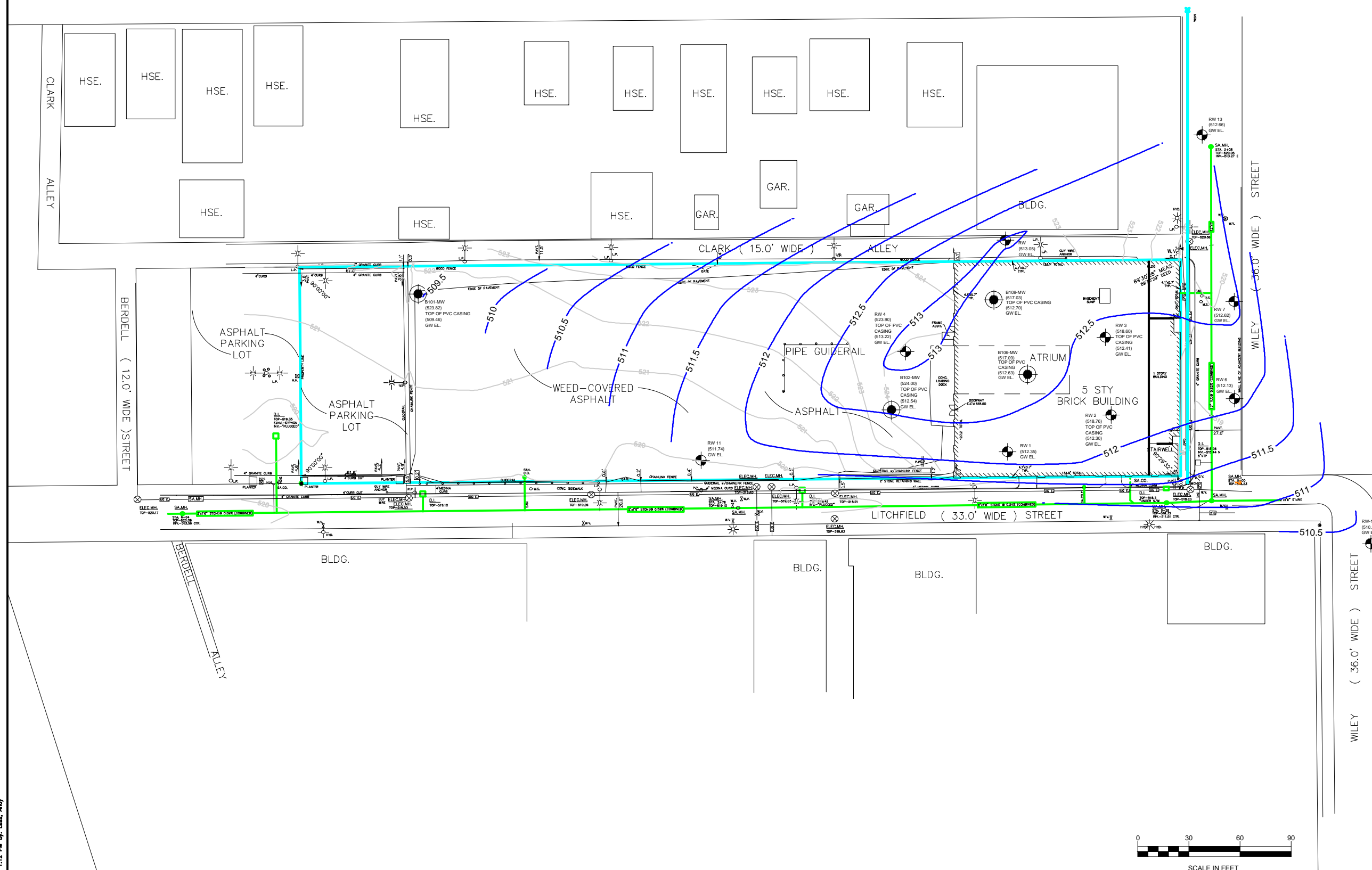
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Revision

FIGURE 13

9



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Legend

33 LITCHFIELD STREET BUILDING LIMITS

RW 2  
888 µg/L LOCATIONS OF PHASE II ESA GROUNDWATER MONITORING WELLS



B101-MW  
RI MONITORING WELL LOCATION

 PROPERTY LINE  
 SANITARY SEWER (SA MH=MANHOLE)

 CONCENTRATION CONTOURS (DASHED WHERE INFERRED)  
( $\mu\text{g/l}$ )

## Notes

1. PLAN ADAPTED FROM BASE PLAN BY PARRONE ENGINEERING

Revision	By	Appd.	YY.MM.DD
CID WORK PLAN	RJM	MPS	13.05.26
FINAL RIWP	RJM	MPS	13.04.27
Issued	By	Appd.	YY.MM.DD

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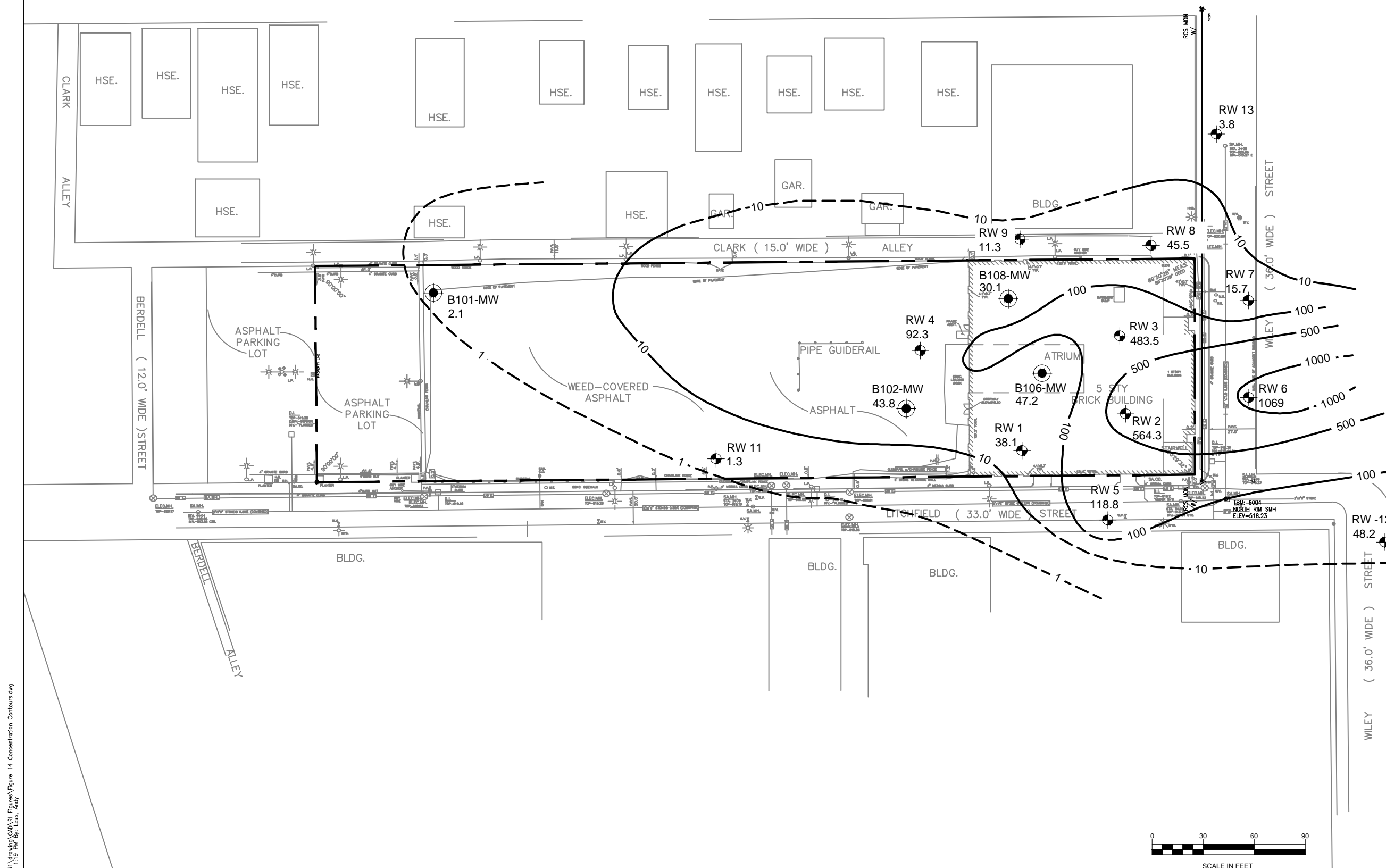
CARRIAGE FACTORY SPECIAL NEEDS APARTMENTS, L.P.  
REMEDIAL INVESTIGATION REPORTBROWNFIELD CLEANUP PROGRAM  
FORMER CARRIAGE FACTORY

33 LITCHFIELD STREET, ROCHESTER, NY

Title  
CVOC CONCENTRATIONS  
IN GROUNDWATER  
MAY 21-23, 2013

Project No.	Scale
190500751	AS SHOWN

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# TABLES



**Table 1**  
**Summary of RI Field Events**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Field Event	Locations	Start Date	End Date
Northern Addition Soil Borings and Sampling	SB-1 to SB-11	12/10/2012	12/10/2012
Passive Soil Gas Module Installation	LI-SG-1 to LI-SG-17 and LI-SG-18 to LI-SG-27	12/27/2012	12/27/2013
Passive Soil Gas Module Retrieval	LI-SG-1 to LI-SG-17 and LI-SG-18 to LI-SG-27	1/10/2013	1/10/2013
Passive Soil Gas Module Installation	U-SG-201 to U-SG-204 and U-SG-206 to U-SG-231	3/15/2013	3/15/2013
Water Level Measurement	RW-1 to RW-9 and RW-11 to RW-13	3/16/2013	3/16/2013
Geophysical Survey - EM61 Data Acquisition	Site-wide	3/16/2013	3/23/2013
Passive Soil Gas Module Retrieval	U-SG-201 to U-SG-204 and U-SG-206 to U-SG-231	3/27/2013	3/27/2013
Geophysical Survey - GPR	Basement and Wiley Street	4/1/2013	4/1/2013
Test Pit Excavation	TP-1A, TP-1B, TP-2A, TP-2B, TP-2C, TP-3A, TP-3B, TP-4A, TP-4B	4/10/2013	4/10/2013
Exterior Monitoring Well and Boring Installation	B101-MW, B102-MW, and B-103 to B-105	4/22/2013	4/24/2013
Exterior Monitoring Well Development	B101-MW and B102-MW	4/24/2013	4/24/2013
Interior Monitoring Well and Boring Installation	B106-MW, B-107, B108-MW, B-109, and B-110	5/2/2013	5/3/2013
Interior Monitoring Well Development	B106-MW and B108-MW	5/3/2013	5/6/2013
Enhanced Reductive Dechlorination Assessment Soil and Water Sampling	RW-6 and B108-MW	5/3/2013	5/17/2013
Surface Soil Sampling	LI-SS-1 to LI-SS-3	5/6/2013	5/7/2013
Dehalococcoides Population Assessment Water Sampling	B102-MW and B108-MW	5/7/2013	5/7/2013
Water Level Measurement	RW-1 to RW-9 and RW-11 to RW-13; B101-MW, B106-MW, and B108-MW	5/10/2013	5/10/2013
Water Level Measurement	RW-1 to RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	5/13/2013	5/13/2013
Water Level Measurement	RW-1 to RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	5/15/2013	5/15/2013
Water Level Measurement	RW-1 to RW-9 and RW-12 to RW-13; B101-MW, B102-MW, and B108-MW	5/20/2013	5/20/2013
Groundwater Sampling	RW-1 to RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	5/20/2013	5/23/2013
Aquifer Testing	RW-1, RW-3, B102-MW, and B108-MW	5/28/2013	5/28/2013
Monitoring Well Location Survey	B101-MW, B102-MW, B106-MW, and B108-MW	6/11/2013	6/11/2013
Water Level Measurement	RW-1, RW-3, RW-6, RW-7, RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	6/13/2013	6/13/2013
Water Level Measurement	RW-1, RW-3, RW-5 to RW-7, RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	7/2/2013	7/2/2013
Water Level Measurement	RW-1, RW-3 to RW-7, RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	8/2/2013	8/2/2013
Water Level Measurement	RW-1 to RW-4, RW-6, RW-7, RW-9 and RW-11 to RW-13; B101-MW, B102-MW, B106-MW, and B108-MW	2/1/2013	2/1/2013



**Table 2**

**Summary of Deviations From the Remedial Investigation Work Plan**

Remedial Investigation

Former Carriage Factory

33 Litchfield Street, Rochester, NY

Variance Description	Location(s)	Report Section	Rationale
Location Change	SS-3	3.2	The original location for southernmost surface soil sample was in an active parking lot with 4 inch asphalt cover. The sample location was revised in accordance with correspondence from NYSDEC.
Additional Hydraulic Conductivity Test Location	B102-MW, B108-MW	3.8	In an effort to better constrain the communication of the ERD fluid injection zone, an additional well was used to analyze hydraulic conductivity.
QA/QC sample not collected	NA	5.2	Only one Rinsate Blank sample was collected during RI sampling because all soil sampling except surface soil sampling was performed with dedicated equipment.





Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

On-Site Parking Lot																	
Sample Location			B-1		B-2		B-3		B-4		B-5		B-6		B-10		
Sample Date			21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	3-May-11	4-May-11	4-May-11
Sample ID			B-1 0-4 ft (S-001)	B-1 8-12 ft (S-002)	B-2 0-4 ft (S-003)	B-2 8-12 ft (S-004)	B-3 0-4 (S-005)	B-3 6-10 (S-006)	B-4 0-4 (S-007)	B-4 8-12 (S-008)	B-5 0-4 (S-009)	B-5 6-10 (S-010)	B-6 0-4 (S011)	B-6 10-14 (S012)	B-6-1 6-8 ft	B-10 0-4 ft	B-10 8-10 ft
Sample Depth			0 - 4 ft	8 - 12 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	10 - 14 ft	6 - 8 ft	0 - 4 ft	8 - 10 ft
Sampling Company			DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI
Laboratory			PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	11:1825	11:1825	11:1825
Laboratory Sample ID			16390	16391	16392	16393	16394	16395	16396	16397	16398	16399	16400	16401	6166	6175	6176
Sample Type	Units	NYSDEC <sup>1,2</sup>															
Metals																	
Aluminum	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	5080	3420	7040	3600	9860	3170	7819	3390	11300 <sup>BE</sup>	4440	5100	4670	-	-	-
Antimony	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	7.31 U	6.74 U	6.35 U	4.22 U	5.11 U	3.86 U	5.23 U	4.25 U	6.29 U	6.37 U	4.93 U	5.77 U	-	-	-
Arsenic	mg/kg	16 <sub>g</sub> <sup>AB</sup> 13 <sub>n</sub> <sup>C</sup>	8.95	1.63	6.69	1.71	5.18	2.28	5.19	1.51	12.3	1.57	14.7 <sup>C</sup>	2.48	-	-	-
Barium	mg/kg	400 <sup>A</sup> 820 <sup>B</sup> 350 <sub>n</sub> <sup>C</sup>	113	25.1	68	20.3	66.4	36.9	62.4	21.9	227	2.12 U	116	17.9	-	-	-
Beryllium	mg/kg	72 <sup>A</sup> 47 <sup>B</sup> 7.2 <sup>C</sup>	0.609 U	0.561 U	0.529 U	0.352 U	0.451	0.322 U	0.436 U	0.354 U	0.626	0.530 U	0.410 U	0.481 U	-	-	-
Cadmium	mg/kg	4.3 <sup>A</sup> 7.5 <sup>B</sup> 2.5 <sub>n</sub> <sup>C</sup>	0.609 U	0.561 U	0.529 U	0.352 U	0.426 U	0.322 U	0.436 U	0.354 U	2.28	0.530 U	3.08 <sup>C</sup>	0.481 U	-	-	-
Calcium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	18000 <sup>BE</sup>	34200 <sup>BE</sup>	6800	44300 <sup>BE</sup>	1520	119000 <sup>BE</sup>	2560	65600 <sup>BE</sup>	12100 <sup>BE</sup>	16300 <sup>BE</sup>	62900 <sup>BE</sup>	37100 <sup>BE</sup>	-	-	-
Chromium (Total)	mg/kg	<sup>NS</sup> <sub>d</sub> <sup>ABC</sup>	10.6	6.31	9.86	5.96	12	5.13	10	5.47	276	6.79	13.7	6.85	-	-	-
Cobalt	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	7.79	3.68	7.83	3.32	6.23	3.17	6.62	3.32	11	4.36	7.24	4.09	-	-	-
Copper	mg/kg	270 <sup>A</sup> 1720 <sup>B</sup> 50 <sup>C</sup>	261 <sup>C</sup>	16.2	253 <sup>C</sup>	7.25	198 <sup>C</sup>	8.42	223 <sup>C</sup>	6.16	2170 <sup>ABC</sup>	8.67	5680 <sup>ABC</sup>	19.6	-	-	-
Iron	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	49600 <sup>BE</sup>	95600 <sup>BE</sup>	20700 <sup>BE</sup>	9150	21500 <sup>BE</sup>	8758.4	19300 <sup>BE</sup>	8350	37400 <sup>BE</sup>	10900 <sup>BE</sup>	29300 <sup>BE</sup>	10400 <sup>BE</sup>	-	-	-
Lead	mg/kg	400 <sup>A</sup> 450 <sup>B</sup> 63 <sub>n</sub> <sup>C</sup>	1210 <sup>ABC</sup>	13	560 <sup>ABC</sup>	2.72	240 <sup>C</sup>	3.27	280 <sup>C</sup>	2.52	2520 <sup>ABC</sup>	2.98	1960 <sup>ABC</sup>	5.84	-	-	-
Magnesium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup>	3840	8080	1780	8340	1910	6190	1500	8100	3890	4040	9240	7130	-	-	-
Manganese	mg/kg	2000 <sub>g</sub> <sup>AB</sup> 1600 <sub>n</sub> <sup>C</sup>	284	302	253	266	390	2460 <sup>ABC</sup>	423	280	484	392	296	483	-	-	-
Mercury	mg/kg	0.81 <sub>n</sub> <sup>A</sup> 0.73 <sup>B</sup> 0.18 <sub>n</sub> <sup>C</sup>	0.803 <sup>BC</sup>	0.0046 U	0.268 <sup>C</sup>	0.006 U	0.493 <sup>C</sup>	0.0054 U	0.236 <sup>C</sup>	0.0142 U	0.308 <sup>C</sup>	0.0081	0.0164 U	0.0079 U	-	-	-
Nickel	mg/kg	310 <sup>A</sup> 130 <sup>B</sup> 30 <sup>C</sup>	26.1	10	18.8	5.77	12.5	6.15	12	5.7	327 <sup>ABC</sup>	6.57	3.28 U	7.18	-	-	-
Potassium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup>	727	756	748	818	1050	734	957	815	795	1020	814	1260	-	-	-
Selenium	mg/kg	180 <sup>A</sup> 4 <sub>g</sub> <sup>B</sup> 3.9 <sub>n</sub> <sup>C</sup>	0.609 U	0.561 U	0.529 U	0.352 U	0.426 U	0.322 U	0.436 U	0.354 U	0.524 U	0.530 U	0.410 U	0.481 U	-	-	-
Silver	mg/kg	180 <sup>A</sup> 8.3 <sup>B</sup> 2 <sup>C</sup>	2	1.12 U	1.06	0.703 U	0.9	0.645 U	0.872 U	0.709 U	1.48	1.06 U	7.51 <sup>C</sup>	0.962 U	-	-	-
Sodium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup>	145	115	106 U	111	702	206	87.2 U	133	327	117	479	197	-	-	-
Thallium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	0.731 U	0.674 U	0.635 U	0.422 U	0.511 U	0.386 U	0.523 U	0.425 U	0.629 U	0.637 U	0.493 U	0.577 U	-	-	-
Vanadium	mg/kg	<sup>NS</sup> <sub>AC</sub> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	15.7	13.6	18.2	13.2	21.5	11	20.2	12	26.1	15.4	15.4	13.3	-	-	-
Zinc	mg/kg	10000 <sub>g</sub> <sup>A</sup> 2480 <sup>B</sup> 109 <sub>n</sub> <sup>C</sup>	508 <sup>C</sup>	21.1	14.3	14.7	102	13.8	92.6	14.9	2680 <sup>BC</sup>	25.3	2460 <sup>C</sup>	21.4	-	-	-
Polychlorinated Biphenyls																	
Aroclor 1016	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1221	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1232	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1242	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1248	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1254	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Aroclor 1260	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>n</sub> <sup>C</sup>	361 U	-	356 U	-	357 U	-	349 U	-	358 U	-	350 U	-	-	-	-
Pesticides																	
Aldrin	µg/kg	97 <sup>A</sup> 190 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Atrazine	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BHC, alpha-	µg/kg	480 <sup>A</sup> 20 <sup>BC</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	15.5 U	-	3.37 U	-	-	3.43 U J	-
BHC, beta-	µg/kg	360 <sup>A</sup> 90 <sup>B</sup> 36 <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
BHC, delta-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 250 <sup>B</sup> 40 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Camphechlor (Toxaphene)	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	17.7 U	-	17.2 U	-	17.1 U	-	16.8 U	-	17.1 U	-	16.8 U	-	-	17.2 U J	-
Chlordane, alpha-	µg/kg	4200 <sup>A</sup> 2900 <sup>B</sup> 94 <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	18.8 J	-	3.37 U	-	-	3.43 U J	-
Chlordane, gamma-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 14000 <sup>E</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Chlordane, trans-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DDD (p,p'-DDD)	µg/kg	13000 <sup>A</sup> 14000 <sup>B</sup> 3.3 <sub>n</sub> <sup>C</sup>	16.0 U	-	3.43 U	-	3.41 U	-	3.37 U	-	22.0 U	-	3.37 U	-	-	3.43 U J	-
DDE (p,p'-DDE)	µg/kg	8900 <sup>A</sup> 17000 <sup>B</sup> 3.3 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
DDT (p,p'-DDT)	µg/kg	7900 <sup>A</sup> 136000 <sup>B</sup> 3.3 <sub>m</sub> <sup>C</sup>	4.07 NJ <sup>C</sup>	-	3.43 U	-	5.07 J <sup>C</sup>	-	3.37 U	-	22.4 NJ <sup>C</sup>	-	3.37 U	-	-	3.43 U J	-
Dieldrin	µg/kg	200 <sup>A</sup> 100 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	4.90 U	-	3.37 U	-	-	3.43 U J	-
Endosulfan I	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Endosulfan II	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sub>n</sub> <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.86 U	-	3.37 U	-	-	3.43 U J	-
Endosulfan Sulfate	µg/kg	24000 <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 2400 <sub>n</sub> <sup>C</sup>	10.4 U	-	3.43 U	-	3.41 U	-	3.37 U	-	12.4 U	-	3.37 U	-	-	3.43 U J	-
Endrin	µg/kg	11000 <sup>A</sup> 60 <sup>B</sup> 14 <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Endrin Aldehyde	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>o</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	4.58 J	-	3.43 U	-	3.41 U	-	3.37 U	-	4.12 U	-	3.37 U	-	-	3.43 U J	-
Endrin Ketone	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	12.2 U	-	3.43 U	-	5.78 NJ	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Heptachlor	µg/kg	2100 <sup>A</sup> 380 <sup>B</sup> 42 <sup>C</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Heptachlor Epoxide	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 20 <sup>E</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Lindane (Hexachlorocyclohexane, gamma)	µg/kg	1300 <sup>A</sup> 100 <sup>BC</sup>	3.53 U	-	3.43 U	-	3.41 U	-	3.37 U	-	3.43 U	-	3.37 U	-	-	3.43 U J	-
Methoxychlor (4,4'-Methoxychlor)	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 900000 <sup>E</sup>	81.5 U	-	3.43 U	-	84.8 U	-	3.37 U	-	6.37 U	-	22.0 U	-	-	3.43 U J	-

See last page for notes.





Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

		On-Site Parking Lot															
Sample Location		B-1		B-2		B-3		B-4		B-5		B-6		B-10			
Sample Date		21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	3-May-11	4-May-11	4-May-11	
Sample ID		B-1 0-4 ft (S-001)	B-1 8-12 ft (S-002)	B-2 0-4 ft (S-003)	B-2 8-12 ft (S-004)	B-3 0-4 (S-005)	B-3 6-10 (S-006)	B-4 0-4 (S-007)	B-4 8-12 (S-008)	B-5 0-4 (S-009)	B-5 6-10 (S-010)	B-6 0-4 (S011)	B-6 10-14 (S012)	B-6-1 6-8 ft	B-10 0-4 ft	B-10 8-10 ft	
Sample Depth		0 - 4 ft	8 - 12 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	10 - 14 ft	6 - 8 ft	0 - 4 ft	8 - 10 ft	
Sampling Company		DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	
Laboratory		PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	
Laboratory Work Order		10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	11:1825	11:1825	11:1825	
Laboratory Sample ID		16390	16391	16392	16393	16394	16395	16396	16397	16398	16399	16400	16401	6166	6175	6176	
Sample Type	Units	NYSDEC <sup>1,2</sup>															
Semi - Volatile Organic Compounds																	
3+4-Methylphenols	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthene	µg/kg	100000 <sup>A</sup> 98000 <sup>B</sup> 20000 <sup>CG</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	855	339 U	339 U	329 U	356 U J	345 U J	320 U J
Acenaphthylene	µg/kg	100000 <sup>B</sup> 107000 <sup>B</sup> 100000 <sup>B</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Acetophenone	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Aniline	µg/kg	100000 <sup>A</sup> 1000000 <sup>B</sup> 100000 <sup>a</sup> <sup>CD</sup> 330 <sup>E</sup>	-	-	-	-	-	-	-	-	-	-	-	-	356 U J	345 U J	320 U J
Anthracene	µg/kg	100000 <sup>AG</sup> 1000000 <sup>d</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	1830	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzaldehyde	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzidine	µg/kg	n/v	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Benzo(a)anthracene	µg/kg	1000 <sup>ABC</sup> 1000 <sup>n</sup> <sup>C</sup>	582	328 U	346 U	327 U	431	319 U	334 U	316 U	3020 <sup>ABCG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzo(a)pyrene	µg/kg	1000 <sup>a</sup> <sup>AG</sup> 22000 <sup>B</sup> 1000 <sup>n</sup> <sup>C</sup>	533	328 U	346 U	327 U	393	319 U	334 U	316 U	2640 <sup>ACG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzo(b)fluoranthene	µg/kg	1000 <sup>a</sup> <sup>AG</sup> 1700 <sup>B</sup> 1000 <sup>n</sup> <sup>C</sup>	477	328 U	346 U	327 U	417	319 U	334 U	316 U	2680 <sup>ABCG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzo(g,h,i)perylene	µg/kg	100000 <sup>B</sup> <sup>ACG</sup> 1000000 <sup>d</sup> <sup>B</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	1760	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzo(k)fluoranthene	µg/kg	3900 <sup>A</sup> 1700 <sup>B</sup> 800 <sup>n</sup> <sup>CG</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	1750 <sup>BCG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Benzoic acid	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup> 2700 <sup>F</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Benzyl Alcohol	µg/kg	n/v	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Biphenyl, 1,1'- (Biphenyl)	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bis(2-Chloroethoxy)methane	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Bis(2-Chloroethyl)ether	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Bis(2-Chloroisopropyl)ether	µg/kg	n/v	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Bis(2-Chloroisopropyl)ether (2,2-oxbis(1-Chloropropane))	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup> 435000 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Bromophenyl Phenyl Ether, 4-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Butyl Benzyl Phthalate	µg/kg	<sup>NS</sup> <sup>AC</sup> 1000000 <sup>d</sup> <sup>B</sup> 122000 <sup>E</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Caprolactam	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Carbazole	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloro-3-methyl phenol, 4-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Chloroaniline, 4-	µg/kg	<sup>NS</sup> <sup>AC</sup> 1000000 <sup>d</sup> <sup>B</sup> 220 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Chloronaphthalene, 2-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Chlorophenol, 2- (ortho-Chlorophenol)	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Chlorophenyl Phenyl Ether, 4-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Chrysene	µg/kg	3900 <sup>A</sup> 1000 <sup>BC</sup> 1000 <sup>n</sup> <sup>C</sup>	573	328 U	346 U	327 U	419	319 U	334 U	316 U	2940 <sup>BCG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Cresol, m- (Methylphenol, 3-)	µg/kg	100000 <sup>B</sup> <sup>A</sup> 330 <sup>B</sup> 330 <sup>m</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Cresol, o- (Methylphenol, 2-)	µg/kg	100000 <sup>B</sup> <sup>A</sup> 330 <sup>B</sup> 330 <sup>m</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dibenzo(a,h)anthracene	µg/kg	330 <sup>AG</sup> 1000000 <sup>d</sup> <sup>B</sup> 330 <sup>m</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	629 <sup>ACG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dibenzofuran	µg/kg	59000 <sup>A</sup> 210000 <sup>B</sup> 7000 <sup>C</sup> 6200 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	671	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dibutyl Phthalate (DBP)	µg/kg	<sup>NS</sup> <sup>AC</sup> 1000000 <sup>d</sup> <sup>B</sup> 8100 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	489	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dichlorobenzene, 1,2-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1100 <sup>BC</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dichlorobenzene, 1,3-	µg/kg	49000 <sup>A</sup> 2400 <sup>BC</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dichlorobenzene, 1,4-	µg/kg	13000 <sup>A</sup> 1800 <sup>BC</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dichlorobenzidine, 3,3'-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Dichlorophenol, 2,4-	µg/kg	100000 <sup>B</sup> <sup>A</sup> 1000000 <sup>d</sup> <sup>B</sup> 100000 <sup>a</sup> <sup>C</sup> 400 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U</			



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location  Sample Date  Sample ID  Sample Depth Sampling Company Laboratory  Laboratory Work Order Laboratory Sample ID Sample Type			On-Site Parking Lot														
			B-1		B-2		B-3		B-4		B-5		B-6		B-10		
			21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	3-May-11	4-May-11	4-May-11
			B-1 0-4 ft (S-001)	B-1 8-12 ft (S-002)	B-2 0-4 ft (S-003)	B-2 8-12 ft (S-004)	B-3 0-4 (S-005)	B-3 6-10 (S-006)	B-4 0-4 (S-007)	B-4 8-12 (S-008)	B-5 0-4 (S-009)	B-5 6-10 (S-010)	B-6 0-4 (S011)	B-6 10-14 (S012)	B-6-1 6-8 ft	B-10 0-4 ft	B-10 8-10 ft
			0 - 4 ft	8 - 12 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	10 - 14 ft	6 - 8 ft	0 - 4 ft	8 - 10 ft
			DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI
			PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH
10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	11:1825	11:1825	11:1825	
16390	16391	16392	16393	16394	16395	16396	16397	16398	16399	16400	16401	6166		6175	6176		
Units	NYSDEC <sup>1,2</sup>																
Semi - Volatile Organic Compounds (continued)																	
Hexachloroethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>b</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Indeno(1,2,3-cd)pyrene	µg/kg	500 <sub>g</sub> <sup>AG</sup> 8200 <sub>b</sub> <sup>B</sup> 500 <sub>n</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	1730 <sup>ACG</sup>	339 U	339 U	329 U	356 U J	345 U J	320 U J
Isophorone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 4400 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Methylnaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 36400 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Naphthalene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 12000 <sup>BCFG</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	424	339 U	339 U	329 U	356 U J	345 U J	320 U J
Nitroaniline, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 400 <sup>F</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Nitroaniline, 3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Nitroaniline, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Nitrobenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 15000 <sup>D</sup> 170 <sub>e</sub> <sup>E</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Nitrophenol, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 300 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Nitrophenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
N-Nitrosodimethylamine (NDMA)	µg/kg	n/v	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
N-Nitrosodi-n-Propylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
n-Nitrosodiphenylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Pentachlorophenol	µg/kg	6700 <sup>A</sup> 800 <sub>b</sub> <sup>B</sup> 800 <sub>m</sub> <sup>C</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Phenanthrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	491	328 U	346 U	327 U	569	319 U	334 U	316 U	6250	339 U	339 U	329 U	356 U J	345 U J	320 U J
Phenol	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>b</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Pyrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	878	328 U	346 U	327 U	724	319 U	334 U	316 U	5130	339 U	339 U	329 U	356 U J	345 U J	320 U J
Tetrachlorobenzene, 1,2,4,5-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenol, 2,3,4,6-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Trichlorophenol, 2,4,5-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	878 U	819 U	866 U	817 U	843 U	797 U	835 U	790 U	850 U	848 U	846 U	822 U	891 U J	863 U J	800 U J
Trichlorophenol, 2,4,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	351 U	328 U	346 U	327 U	337 U	319 U	334 U	316 U	340 U	339 U	339 U	329 U	356 U J	345 U J	320 U J
Total SVOC TICs	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds																	
Acetone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	51.8 U	25.9 U	27.4 U	38.2 U	37.0 U	37.0 U	22.9 U	32.6 U	244 U J	39.6 U	37.7 U J	42.5 U	44.9 U J	47.5 U J	44.1 U J
Benzene	µg/kg	4800 <sup>A</sup> 60 <sup>BCFG</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Bromodichloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Bromoform (Tribromomethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Bromomethane (Methyl bromide)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Carbon Disulfide	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 <sup>A</sup> 760 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Chlorobromomethane	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane (Ethyl Chloride)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Chloroethyl Vinyl Ether, 2-	µg/kg	n/v	51.8 U	25.9 U	27.4 U	38.2 U	37.0 U	37.0 U	22.9 U	32.6 U	244 U J	39.6 U	37.7 U J	42.5 U	44.9 U J	47.5 U J	44.1 U J
Chloroform (Trichloromethane)	µg/kg	49000 <sup>A</sup> 370 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Chloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromo-3-Chloropropane, 1,2- (DBCP)	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <															



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Parking Lot														
			B-1		B-2		B-3		B-4		B-5		B-6		B-10		
Sample Date			21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	22-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	21-Dec-10	3-May-11	4-May-11	4-May-11
Sample ID			B-1 0-4 ft (S-001)	B-1 8-12 ft (S-002)	B-2 0-4 ft (S-003)	B-2 8-12 ft (S-004)	B-3 0-4 (S-005)	B-3 6-10 (S-006)	B-4 0-4 (S-007)	B-4 8-12 (S-008)	B-5 0-4 (S-009)	B-5 6-10 (S-010)	B-6 0-4 (S011)	B-6 10-14 (S012)	B-6-1 6-8 ft	B-10 0-4 ft	B-10 8-10 ft
Sample Depth			0 - 4 ft	8 - 12 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	8 - 12 ft	0 - 4 ft	6 - 10 ft	0 - 4 ft	10 - 14 ft	6 - 8 ft	0 - 4 ft	8 - 10 ft
Sampling Company			DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI
Laboratory			PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	10:5252	11:1825	11:1825	11:1825
Laboratory Sample ID			16390	16391	16392	16393	16394	16395	16396	16397	16398	16399	16400	16401	6166	6175	6176
Sample Type	Units	NYSDEC <sup>1,2</sup>															
Volatile Organic Compounds (continued)																	
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexanone, 2- (Methyl Butyl Ketone)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Isopropylbenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2300 <sup>EF</sup> G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone (MEK)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 120 <sup>BC</sup> 300 <sup>F</sup>	51.8 U	25.9 U	27.4 U	38.2 U	37.0 U	37.0 U	22.9 U	32.6 U	244 U J	39.6 U	37.7 U J	42.5 U	44.9 U J	47.5 U J	44.1 U J
Methyl Isobutyl Ketone (MIBK)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1000 <sup>F</sup>	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Methyl tert-butyl ether (MTBE)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 930 <sup>BCF</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride (Dichloromethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Styrene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Tetrachloroethane, 1,1,2,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 600 <sup>F</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Tetrachloroethylene (PCE)	µg/kg	19000 <sup>A</sup> 1300 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	43.4 J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Toluene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 700 <sup>BCFG</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Trichlorobenzene, 1,2,3-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,1-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 680 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Trichloroethane, 1,1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Trichloroethylene (TCE)	µg/kg	21000 <sup>A</sup> 470 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	1110 J <sup>BC</sup>	7.92 U	12.3 J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Trichlorotrifluoroethane (Freon 113)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 6000 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate	µg/kg	n/v	25.9 U	13.0 U	13.7 U	19.1 U	18.5 U	18.5 U	11.4 U	16.3 U	122 U J	19.8 U	18.9 U J	21.3 U	22.4 U J	23.8 U J	22.0 U J
Vinyl chloride	µg/kg	900 <sup>A</sup> 20 <sup>BC</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Xylene, m & p-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Xylene, o-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	10.4 U	5.18 U	5.48 U	7.64 U	7.39 U	7.41 U	4.58 U	6.53 U	48.7 U J	7.92 U	7.55 U J	8.50 U	8.97 U J	9.51 U J	8.82 U J
Total VOC TICs	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Herbicides																	
2,4,5-TP (Silvex)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 3800 <sup>BC</sup>	250 U	-	233 U	-	243 U	-	234 U	-	243 U	-	242 U	-	-	-	-
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	250 U	-	233 U	-	243 U	-	234 U	-	243 U	-	242 U	-	-	-	-
Trichlorophenoxy acetic acid, 2,4,5- (2,4,5-T)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	250 U	-	233 U	-	243 U	-	234 U	-	243 U	-	242 U	-	-	-	-

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

			On-Site Parking Lot																	
Sample Location			B101MW	B102MW	B103	B104	B105	B-11		B-12		B-13	B-14	B-15		B-16		LI-SS1	LI-SS2	
Sample Date			22-Apr-13	22-Apr-13	24-Apr-13	24-Apr-13	24-Apr-13	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	3-May-11	3-May-11	3-May-11	3-May-11	6-May-13	6-May-13	
Sample ID			LI-B101MW-1S	LI-B102MW-1S	LI-B103-1S	LI-B104-1S	LI-B105-1S	B-11 0.5-4 ft	B-11 8-10 ft	B-12 0-4 ft	B-12 8-10 ft	B-13 0-4 ft	B-14 0.5-4 ft	B-15 0-4 ft	B-15 8-10 ft	B-16 10-14 ft	B-16 2-8 ft	LI-SS1	LI-SS2	
Sample Depth			9.5 - 10.4 ft	7 - 8 ft	5 - 6 ft	5.5 - 6 ft	11.4 - 11.9 ft	0.5 - 4 ft	8 - 10 ft	0 - 4 ft	8 - 10 ft	0 - 4 ft	0.5 - 4 ft	0 - 4 ft	8 - 10 ft	10 - 14 ft	2 - 8 ft	0 - 2 ft	0 - 2 ft	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	
Laboratory Work Order			E1976	E1976	E1976	E1976	E1976	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	E2101	E2101	
Laboratory Sample ID			E1976-01	E1976-02	E1976-04	E1976-07	E1976-08	6177	6178	6173	6174	6172	6171	6169	6170	6168	6167	E2101-10	E2101-11	
Sample Type	Units	NYSDEC <sup>1,2</sup>																		
Metals																				
Aluminum	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	2180 J	6900 J	-	-	-	-	-	-	-	-	-	-	-	-	-	8060 J	4780 J	
Antimony	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	2.430 U J	2.510 U J	-	-	-	-	-	-	-	-	-	-	-	-	-	1.320 U J	1.440 U J	
Arsenic	mg/kg	16 <sup>AB</sup> <sub>g</sub> 13 <sup>C</sup> <sub>n</sub>	1.53	2.05	-	-	-	-	-	-	-	-	-	-	-	-	-	21.5 <sup>ABC</sup>	14.6 <sup>C</sup>	
Barium	mg/kg	400 <sup>A</sup> 820 <sup>B</sup> 350 <sup>C</sup> <sub>n</sub>	14.5	46.6	-	-	-	-	-	-	-	-	-	-	-	-	-	469 <sup>AC</sup>	145	
Beryllium	mg/kg	72 <sup>A</sup> 47 <sup>B</sup> 7.2 <sup>C</sup> <sub>n</sub>	0.08 J	0.208 J	-	-	-	-	-	-	-	-	-	-	-	-	-	0.95	0.53	
Cadmium	mg/kg	4.3 <sup>A</sup> 7.5 <sup>B</sup> 2.5 <sup>C</sup> <sub>n</sub>	0.222 J	0.476	-	-	-	-	-	-	-	-	-	-	-	-	-	1.74	1.78	
Calcium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	36300 J <sup>BE</sup>	1600 J	-	-	-	-	-	-	-	-	-	-	-	-	-	55300 J <sup>BE</sup>	21100 J <sup>BE</sup>	
Chromium (Total)	mg/kg	<sup>NS,q</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	3.93	8.9	-	-	-	-	-	-	-	-	-	-	-	-	-	140	38.7	
Cobalt	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	3.05	6.62	-	-	-	-	-	-	-	-	-	-	-	-	-	10.3	8.87	
Copper	mg/kg	270 <sup>A</sup> 1720 <sup>B</sup> 50 <sup>C</sup> <sub>n</sub>	6.37 N	11.9 N	-	-	-	-	-	-	-	-	-	-	-	-	-	629 <sup>AC</sup>	1950 <sup>ABC</sup>	
Iron	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	6770 Q	13400 Q <sup>BE</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	33800 <sup>BE</sup>	43700 <sup>BE</sup>	
Lead	mg/kg	400 <sup>A</sup> 450 <sup>B</sup> 63 <sup>C</sup> <sub>n</sub>	4.6 N	6.81 N	-	-	-	-	-	-	-	-	-	-	-	-	-	575 <sup>ABC</sup>	1020 <sup>ABC</sup>	
Magnesium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	8310 J	1880 J	-	-	-	-	-	-	-	-	-	-	-	-	-	8110 J	9670 J	
Manganese	mg/kg	2000 <sup>AB</sup> <sub>g</sub> 1600 <sup>C</sup> <sub>n</sub>	212 J	336 J	-	-	-	-	-	-	-	-	-	-	-	-	-	250 J	233 J	
Mercury	mg/kg	0.81 <sup>A</sup> 0.73 <sup>B</sup> 0.18 <sup>C</sup> <sub>n</sub>	0.006 J	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	0.264 <sup>C</sup>	0.764 D <sup>BC</sup>	
Nickel	mg/kg	310 <sup>A</sup> 130 <sup>B</sup> 30 <sup>C</sup> <sub>n</sub>	5.06	13.2	-	-	-	-	-	-	-	-	-	-	-	-	-	51 <sup>C</sup>	66.2 <sup>C</sup>	
Potassium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	319 J	1270 J	-	-	-	-	-	-	-	-	-	-	-	-	-	589 J	447 J	
Selenium	mg/kg	180 <sup>A</sup> 4 <sup>B</sup> 3.9 <sup>C</sup> <sub>n</sub>	0.972 U J	1.000 U J	-	-	-	-	-	-	-	-	-	-	-	-	-	0.53 U J	0.58 U J	
Silver	mg/kg	180 <sup>A</sup> 8.3 <sup>B</sup> 2 <sup>C</sup> <sub>n</sub>	0.486 U J	0.501 U J	-	-	-	-	-	-	-	-	-	-	-	-	-	0.52 J	2.54 J <sup>C</sup>	
Sodium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	85.4 J	227	-	-	-	-	-	-	-	-	-	-	-	-	-	724	57.5 U	
Thallium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	1.940 U	2.000 U	-	-	-	-	-	-	-	-	-	-	-	-	-	1.060 U	1.3	
Vanadium	mg/kg	<sup>NS</sup> 10000 <sup>A</sup> <sub>d</sub> 10000 <sup>E</sup> <sub>a</sub>	8.35 N	17.3 N	-	-	-	-	-	-	-	-	-	-	-	-	-	55.1	42.3	
Zinc	mg/kg	10000 <sup>A</sup> <sub>d</sub> 2480 <sup>B</sup> 109 <sup>C</sup> <sub>n</sub>	15.2	33.9	-	-	-	-	-	-	-	-	-	-	-	-	-	374 <sup>C</sup>	404 <sup>C</sup>	
Polychlorinated Biphenyls																				
Aroclor 1016	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1221	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1232	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1242	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1248	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1254	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	18.3 U	20.1 U	
Aroclor 1260	µg/kg	1000 <sup>A</sup> <sub>o</sub> 3200 <sup>B</sup> <sub>o</sub> 100 <sup>C</sup> <sub>o</sub>	20 U	20.8 U	-	-	-	-	-	-	-	-	-	-	-	-	-	40	220 <sup>C</sup>	
Pesticides																				
Aldrin	µg/kg	97 <sup>A</sup> 190 <sup>B</sup> 5 <sup>C</sup> <sub>n</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
Atrazine	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U	
BHC, alpha-	µg/kg	480 <sup>A</sup> 20 <sup>BC</sup>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
BHC, beta-	µg/kg	360 <sup>A</sup> 90 <sup>B</sup> 36 <sup>C</sup> <sub>n</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
BHC, delta-	µg/kg	100000 <sup>A</sup> 250 <sup>B</sup> 40 <sup>C</sup> <sub>n</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
Camphechlor (Toxaphene)	µg/kg	100000 <sup>A</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> <sub>a</sub>	20 U	20.8 U	-	-	-	15.8 U J	-	17.1 U J	-	16.9 U J	16.5 U J	16.9 U J	-	-	16.7 U J	18.3 U	20.1 U	
Chlordane, alpha-	µg/kg	4200 <sup>A</sup> 2900 <sup>B</sup> 94 <sup>C</sup> <sub>n</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
Chlordane, gamma-	µg/kg	100000 <sup>A</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> <sub>a</sub> 14000 <sup>E</sup>	-	-	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	-	-	
Chlordane, trans-	µg/kg	n/v	2 U	2.1 U	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8 U	2 U	
DDD (p,p'-DDD)	µg/kg	13000 <sup>A</sup> 14000 <sup>B</sup> 3.3 <sup>C</sup> <sub>m</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	4.09 J <sup>C</sup>	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.99 J <sup>C</sup>	1.8 U	2 U	
DDE (p,p'-DDE)	µg/kg	8900 <sup>A</sup> 17000 <sup>B</sup> 3.3 <sup>C</sup> <sub>m</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	3.38 U J	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
DDT (p,p'-DDT)	µg/kg	7900 <sup>A</sup> 136000 <sup>B</sup> 3.3 <sup>C</sup> <sub>m</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	4.13 J <sup>C</sup>	-	6.65 J <sup>C</sup>	3.29 U J	3.38 U J	-	-	3.42 J <sup>C</sup>	1.8 U	2 U	
Dieldrin	µg/kg	200 <sup>A</sup> 100 <sup>B</sup> 5 <sup>C</sup> <sub>n</sub>	2 U	2.1 U	-	-	-	3.15 U J	-	3.42 U J	-	4.70 NJ	3.29 U J	3.38 U J	-	-	3.33 U J	1.8 U	2 U	
Endosulfan I	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sup>C</sup> <sub>n</sub>																		

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

			On-Site Parking Lot																
Sample Location			B101MW	B102MW	B103	B104	B105	B-11		B-12		B-13	B-14	B-15		B-16		LI-SS1	LI-SS2
Sample Date			22-Apr-13	22-Apr-13	24-Apr-13	24-Apr-13	24-Apr-13	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	3-May-11	3-May-11	3-May-11	3-May-11	6-May-13	6-May-13
Sample ID			LI-B101MW-1S	LI-B102MW-1S	LI-B103-1S	LI-B104-1S	LI-B105-1S	B-11 0.5-4 ft	B-11 8-10 ft	B-12 0-4 ft	B-12 8-10 ft	B-13 0-4 ft	B-14 0.5-4 ft	B-15 0-4 ft	B-15 8-10 ft	B-16 10-14 ft	B-16 2-8 ft	LI-SS1	LI-SS2
Sample Depth			9.5 - 10.4 ft	7 - 8 ft	5 - 6 ft	5.5 - 6 ft	11.4 - 11.9 ft	0.5 - 4 ft	8 - 10 ft	0 - 4 ft	8 - 10 ft	0 - 4 ft	0.5 - 4 ft	0 - 4 ft	8 - 10 ft	10 - 14 ft	2 - 8 ft	0 - 2 ft	0 - 2 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE
Laboratory Work Order			E1976	E1976	E1976	E1976	E1976	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	E2101	E2101
Laboratory Sample ID			E1976-01	E1976-02	E1976-04	E1976-07	E1976-08	6177	6178	6173	6174	6172	6171	6169	6170	6168	6167	E2101-10	E2101-11
Sample Type	Units	NYSDEC <sup>1,2</sup>																	
Semi - Volatile Organic Compounds																			
3+4-Methylphenols	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Acenaphthene	µg/kg	100000 <sub>a</sub> <sup>A</sup> 98000 <sub>b</sub> <sup>B</sup> 20000 <sub>c</sub> <sup>CG</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Acenaphthylene	µg/kg	100000 <sub>b</sub> <sup>AG</sup> 107000 <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Acetophenone	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Aniline	µg/kg	100000 <sub>a</sub> <sup>A</sup> 1000000 <sub>b</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>CD</sup> 330 <sub>b</sub> <sup>E</sup>	-	-	-	-	-	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	-	-
Anthracene	µg/kg	100000 <sub>b</sub> <sup>AG</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Benzaldehyde	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Benzidine	µg/kg	n/v	-	-	-	-	-	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	-	-
Benzo(a)anthracene	µg/kg	1000 <sub>a</sub> <sup>ABG</sup> 1000 <sub>c</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Benzo(a)pyrene	µg/kg	1000 <sub>a</sub> <sup>AG</sup> 22000 <sup>B</sup> 1000 <sub>c</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Benzo(b)fluoranthene	µg/kg	1000 <sub>a</sub> <sup>AG</sup> 1700 <sup>B</sup> 1000 <sub>c</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Benzo(g,h,i)perylene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Benzo(k)fluoranthene	µg/kg	3900 <sup>A</sup> 1700 <sup>B</sup> 800 <sub>n</sub> <sup>CG</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Benzoic acid	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	-	-	-	-	-	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	-	-
Benzyl Alcohol	µg/kg	n/v	-	-	-	-	-	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	-	-
Biphenyl, 1,1'- (Biphenyl)	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Bis(2-Chloroethoxy)methane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Bis(2-Chloroethyl)ether	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Bis(2-Chloroisopropyl)ether	µg/kg	n/v	-	-	-	-	-	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	-	-
Bis(2-Chloroisopropyl)ether (2,2-oxybis(1-Chloropropane))	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 435000 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Bromophenyl Phenyl Ether, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Butyl Benzyl Phthalate	µg/kg	<sub>NS</sub> <sup>AC</sup> 1000000 <sub>d</sub> <sup>B</sup> 122000 <sup>E</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Caprolactam	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Carbazole	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U
Chloro-3-methyl phenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Chloroaniline, 4-	µg/kg	<sub>NS</sub> <sup>AC</sup> 1000000 <sub>d</sub> <sup>B</sup> 220 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Chloronaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Chlorophenol, 2- (ortho-Chlorophenol)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Chlorophenyl Phenyl Ether, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Chrysene	µg/kg	3900 <sup>A</sup> 1000 <sub>a</sub> <sup>BC</sup> 1000 <sub>c</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Cresol, m- (Methylphenol, 3-)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>f</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	-	-	-	-	-	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	-	-
Cresol, o- (Methylphenol, 2-)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>f</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U
Dibenzo(a,h)anthracene	µg/kg	330 <sub>f</sub> <sup>AG</sup> 1000000 <sub>d</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J
Dibenzofuran	µg/kg	59000 <sup>A</sup> 210000 <sup>B</sup> 7000 <sup>C</sup>																	



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

			On-Site Parking Lot																		
Sample Location			B101MW	B102MW	B103	B104	B105	B-11		B-12		B-13	B-14	B-15		B-16		LI-SS1	LI-SS2		
Sample Date			22-Apr-13	22-Apr-13	24-Apr-13	24-Apr-13	24-Apr-13	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	3-May-11	3-May-11	3-May-11	3-May-11	6-May-13	6-May-13		
Sample ID			LI-B101MW-1S	LI-B102MW-1S	LI-B103-1S	LI-B104-1S	LI-B105-1S	B-11 0.5-4 ft	B-11 8-10 ft	B-12 0-4 ft	B-12 8-10 ft	B-13 0-4 ft	B-14 0.5-4 ft	B-15 0-4 ft	B-15 8-10 ft	B-16 10-14 ft	B-16 2-8 ft	LI-SS1	LI-SS2		
Sample Depth			9.5 - 10.4 ft	7 - 8 ft	5 - 6 ft	5.5 - 6 ft	11.4 - 11.9 ft	0.5 - 4 ft	8 - 10 ft	0 - 4 ft	8 - 10 ft	0 - 4 ft	0.5 - 4 ft	0 - 4 ft	8 - 10 ft	10 - 14 ft	2 - 8 ft	0 - 2 ft	0 - 2 ft		
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC		
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE		
Laboratory Work Order			E1976	E1976	E1976	E1976	E1976	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	E2101	E2101		
Laboratory Sample ID			E1976-01	E1976-02	E1976-04	E1976-07	E1976-08	6177	6178	6173	6174	6172	6171	6169	6170	6168	6167	E2101-10	E2101-11		
Sample Type	Units	NYSDEC <sup>1,2</sup>																			
Semi - Volatile Organic Compounds (continued)																					
Hexachloroethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Indeno(1,2,3-cd)pyrene	µg/kg	500 <sub>g</sub> <sup>AG</sup> 8200 <sub>b</sub> <sup>B</sup> 500 <sub>n</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J		
Isophorone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 4400 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Methylnaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 36400 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Naphthalene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 12000 <sub>BCFG</sub>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Nitroaniline, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 400 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
Nitroaniline, 3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
Nitroaniline, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
Nitrobenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 15000 <sup>D</sup> 170 <sub>e</sub> <sup>E</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Nitrophenol, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 300 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Nitrophenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
N-Nitrosodimethylamine (NDMA)	µg/kg	n/v	-	-	-	-	-	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	-	-		
N-Nitrosodi-n-Propylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
n-Nitrosodiphenylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Pentachlorophenol	µg/kg	6700 <sup>A</sup> 800 <sub>b</sub> <sup>B</sup> 800 <sub>m</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
Phenanthrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Phenol	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>b</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	390 U	400 U	390 U Q	390 U Q	370 U Q	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Pyrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U J	39000 U J		
Tetrachlorobenzene, 1,2,4,5-	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U		
Tetrachlorophenol, 2,3,4,6-	µg/kg	n/v	390 U	400 U	390 U	390 U	370 U	-	-	-	-	-	-	-	-	-	-	35500 U	39000 U		
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	-	-	-	-	-	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	-	-		
Trichlorophenol, 2,4,5-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	390 U	400 U	390 U	390 U	370 U	789 U J	822 U J	845 U J	787 U J	-	-	842 U J	803 U J	814 U J	826 U J	35500 U	39000 U		
Trichlorophenol, 2,4,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	390 U	400 U	390 U	390 U	370 U	315 U J	329 U J	338 U J	315 U J	-	-	337 U J	321 U J	326 U J	330 U J	35500 U	39000 U		
Total SVOC TICs	µg/kg	n/v	27650 A B J	27790 A B J	23810 A B J	26230 A B J	24670 A B J	-	-	-	-	-	-	-	-	-	-	7900.000 J	9500.000 J		
Volatile Organic Compounds																					
Acetone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	29.5 U	30.6 U	29.5 U	29.6 U	28.5 U	34.8 U J	35.1 U J	51.6 U J	69.7 J <sup>BC</sup>	-	-	40.4 U J	42.2 J	29.2 U J	43.1 U J	-	-		
Benzene	µg/kg	4800 <sup>A</sup> 60 <sup>BCFG</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-		
Bromodichloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-		
Bromoform (Tribromomethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-		
Bromomethane (Methyl bromide)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-		
Carbon Disulfide	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-		
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 <sup>A</sup> 760 <sup>BC</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-		
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.9						



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

On-Site Parking Lot																			
Sample Location			B101MW	B102MW	B103	B104	B105	B-11		B-12		B-13	B-14	B-15		B-16		LI-SS1	LI-SS2
Sample Date			22-Apr-13	22-Apr-13	24-Apr-13	24-Apr-13	24-Apr-13	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	4-May-11	3-May-11	3-May-11	3-May-11	3-May-11	6-May-13	6-May-13
Sample ID			LI-B101MW-1S	LI-B102MW-1S	LI-B103-1S	LI-B104-1S	LI-B105-1S	B-11 0.5-4 ft	B-11 8-10 ft	B-12 0-4 ft	B-12 8-10 ft	B-13 0-4 ft	B-14 0.5-4 ft	B-15 0-4 ft	B-15 8-10 ft	B-16 10-14 ft	B-16 2-8 ft	LI-SS1	LI-SS2
Sample Depth			9.5 - 10.4 ft	7 - 8 ft	5 - 6 ft	5.5 - 6 ft	11.4 - 11.9 ft	0.5 - 4 ft	8 - 10 ft	0 - 4 ft	8 - 10 ft	0 - 4 ft	0.5 - 4 ft	0 - 4 ft	8 - 10 ft	10 - 14 ft	2 - 8 ft	0 - 2 ft	0 - 2 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE
Laboratory Work Order			E1976	E1976	E1976	E1976	E1976	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	11:1825	E2101	E2101
Laboratory Sample ID			E1976-01	E1976-02	E1976-04	E1976-07	E1976-08	6177	6178	6173	6174	6172	6171	6169	6170	6168	6167	E2101-10	E2101-11
Sample Type	Units	NYSDEC <sup>1,2</sup>																	
Volatile Organic Compounds (continued)																			
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Hexanone, 2- (Methyl Butyl Ketone)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	29.5 U	30.6 U	29.5 U	29.6 U	28.5 U	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-
Isopropylbenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2300 <sup>EF</sup> <sub>G</sub>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Acetate	µg/kg	n/v	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone (MEK)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 120 <sup>BC</sup> 300 <sup>F</sup>	29.5 U	30.6 U	29.5 U	29.6 U	28.5 U	34.8 U J	35.1 U J	51.6 U J	34.6 U J	-	-	40.4 U J	29.8 U J	29.2 U J	43.1 U J	-	-
Methyl Isobutyl Ketone (MIBK)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1000 <sup>F</sup>	29.5 U	30.6 U	29.5 U	29.6 U	28.5 U	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-
Methyl tert-butyl ether (MTBE)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 930 <sup>BCF</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Methylcyclohexane	µg/kg	n/v	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride (Dichloromethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	1.7 J	6.1 U	5.9 U	5.9 U	5.7 U	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-
Styrene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-
Tetrachloroethane, 1,1,2,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 600 <sup>F</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Tetrachloroethylene (PCE)	µg/kg	19000 <sup>A</sup> 1300 <sup>BC</sup>	5.9 U	6.1 U	3 J	5.9 U	2.3 J	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Toluene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 700 <sup>BCFG</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Trichlorobenzene, 1,2,3-	µg/kg	n/v	5.9 U J	6.1 U J	5.9 U J	5.9 U J	5.7 U J	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	5.9 U J	6.1 U J	5.9 U J	5.9 U J	5.7 U J	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,1-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 680 <sup>BC</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Trichloroethane, 1,1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Trichloroethylene (TCE)	µg/kg	21000 <sup>A</sup> 470 <sup>BC</sup>	5.9 U	6.1 U	1.7 J	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Trichlorotrifluoroethane (Freon 113)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 6000 <sup>F</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate	µg/kg	n/v	-	-	-	-	-	17.4 U J	17.5 U J	25.8 U J	17.3 U J	-	-	20.2 U J	14.9 U J	14.6 U J	21.5 U J	-	-
Vinyl chloride	µg/kg	900 <sup>A</sup> 20 <sup>BC</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Xylene, m & p-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	11.8 U	12.2 U	11.8 U	11.8 U	11.4 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Xylene, o-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	5.9 U	6.1 U	5.9 U	5.9 U	5.7 U	6.97 U J	7.01 U J	10.3 U J	6.93 U J	-	-	8.08 U J	5.95 U J	5.85 U J	8.61 U J	-	-
Total VOC TICs	µg/kg	n/v	2.9 U	3.1 U	2.9 U	3 U	2.9 U	-	-	-	-	-	-	-	-	-	-	-	-
Herbicides																			
2,4,5-TP (Silvex)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 3800 <sup>BC</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenoxy acetic acid, 2,4,5- (2,4,5-T)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Parking Lot		On-Site Building															E08-1&2 EAST WALL 2-Aug-12 E08-1&2 EAST WALL
			LI-SS3		001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7	B-8	B-9	B106MW	B107		B108MW	B109		
			7-May-13	7-May-13	5-Jun-12	5-Jun-12	5-Jun-12	5-Jun-12	17-Jun-12	17-Jun-12	23-Dec-10	23-Dec-10	23-Dec-10	2-May-13	2-May-13	2-May-13	3-May-13	3-May-13		
			LI-SS3	LI-SS3	001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7 (S013)	B-8 (S014)	B-9 (S015)	LI-B106-S1	LI-B107-S1	LI-B107-S1-FD	LI-B108-S1	LI-B109-S1		
Sample Date			0 - 2 ft	0 - 2 ft										1 - 1.5 ft	1.5 - 2 ft	1.5 - 2 ft	1 - 2 ft	1 - 2 ft		
Sample ID			LI-SS3	LI-SS3	001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7 (S013)	B-8 (S014)	B-9 (S015)	LI-B106-S1	LI-B107-S1	LI-B107-S1-FD	LI-B108-S1	LI-B109-S1		
Sample Depth			0 - 2 ft	0 - 2 ft										1 - 1.5 ft	1.5 - 2 ft	1.5 - 2 ft	1 - 2 ft	1 - 2 ft		
Sampling Company			STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		
Laboratory			CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	CCGE	CCGE	CCGE		
Laboratory Work Order			E2101	E2101	12:2362	12:2362	12:2362	12:2362	12:2593	12:2593	10:5252	10:5252	10:5252	E2101	E2101	E2101	E2101	E2101		
Laboratory Sample ID			E2101-12	E2101-12RE	12:2362-01	12:2362-02	12:2362-03	12:2362-04	12:2593-01	12:2593-02	16402	16403	16404	E2101-01	E2101-02	E2101-09	E2101-05	E2101-06		
Sample Type	Units	NYSDEC <sup>1,2</sup>													Field Duplicate					
Metals																				
Aluminum	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	6250 J	-	-	-	-	-	-	-	3980	3920	5300	2880 J	-	3440 J	2960 J	-		
Antimony	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	12.5 J	-	-	-	-	-	-	-	4.83 U	6.23 U	4.51 U	2,440 U J	-	1,310 U J	2,350 U J	-		
Arsenic	mg/kg	16 <sub>g</sub> <sup>AB</sup> 13 <sub>n</sub> <sup>C</sup>	12.1	-	-	-	-	-	-	-	1.46	1.15	0.375 U	2.05	-	1.59	1.56	-		
Barium	mg/kg	400 <sup>A</sup> 820 <sup>B</sup> 350 <sub>n</sub> <sup>C</sup>	269	-	-	-	-	-	-	-	27.7	26.5	108	21.6	-	17.6	22.6	-		
Beryllium	mg/kg	72 <sup>A</sup> 47 <sup>B</sup> 7.2 <sub>n</sub> <sup>C</sup>	0.45	-	-	-	-	-	-	-	0.403 U	0.519 U	0.375 U	0.29 U	-	0.08 J	0.28 U	-		
Cadmium	mg/kg	4.3 <sup>A</sup> 7.5 <sup>B</sup> 2.5 <sub>n</sub> <sup>C</sup>	1.66	-	-	-	-	-	-	-	0.403 U	0.519 U	0.375 U	0.29 U	-	0.16 U	0.28 U	-		
Calcium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	26600 J <sup>BE</sup>	-	-	-	-	-	-	-	51500 <sup>BE</sup>	42200 <sup>BE</sup>	71700 <sup>BE</sup>	44100 J <sup>BE</sup>	-	38700 J <sup>BE</sup>	40400 J <sup>BE</sup>	-		
Chromium (Total)	mg/kg	<sup>NS,q</sup> <sup>ABC</sup>	35	-	-	-	-	-	-	-	6.66	5.86	8.35	3.93	-	5.23	4.22	-		
Cobalt	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	7.6	-	-	-	-	-	-	-	3.41	3.47	5.14	3.21	-	3.68	2.23	-		
Copper	mg/kg	270 <sup>A</sup> 1720 <sup>B</sup> 50 <sub>n</sub> <sup>C</sup>	674 <sup>AC</sup>	-	-	-	-	-	-	-	0.804 U	7.26	5520 <sup>ABC</sup>	5.78	-	5.34	3.26	-		
Iron	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	33200 <sup>BE</sup>	-	-	-	-	-	-	-	9480	8740	14400 <sup>BE</sup>	10500 <sup>BE</sup>	-	11700 <sup>BE</sup>	10800 <sup>BE</sup>	-		
Lead	mg/kg	400 <sup>A</sup> 450 <sup>B</sup> 63 <sub>n</sub> <sup>C</sup>	1180 <sup>ABC</sup>	-	-	-	-	-	-	-	3.35	4.21	37.2	3.54	-	3.89	3.36	-		
Magnesium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	12900 J <sup>B</sup>	-	-	-	-	-	-	-	9700	8560	11300 <sup>B</sup>	9850 J	-	8760 J	9650 J	-		
Manganese	mg/kg	2000 <sub>g</sub> <sup>AB</sup> 1600 <sub>n</sub> <sup>C</sup>	481 J	-	-	-	-	-	-	-	298	322	402	287 J	-	300 J	240 J	-		
Mercury	mg/kg	0.81 <sub>n</sub> <sup>A</sup> 0.73 <sup>B</sup> 0.18 <sub>n</sub> <sup>C</sup>	0.758 D <sup>BC</sup>	-	-	-	-	-	-	-	0.0161 U	0.0088 U	0.0086 U	0.005 J	-	0.011 U	0.003 J	-		
Nickel	mg/kg	310 <sup>A</sup> 130 <sup>B</sup> 30 <sub>n</sub> <sup>C</sup>	77 <sup>C</sup>	-	-	-	-	-	-	-	7.53	4.15 U	12.3	7.04	-	7.84	6.33	-		
Potassium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	739 J	-	-	-	-	-	-	-	1090	982	1251	629 J	-	770 J	984 J	-		
Selenium	mg/kg	180 <sup>A</sup> 4 <sub>g</sub> <sup>B</sup> 3.9 <sub>n</sub> <sup>C</sup>	0.54 U J	-	-	-	-	-	-	-	0.403 U	0.519 U	0.375 U	0.98 U J	-	0.53 U J	0.94 U J	-		
Silver	mg/kg	180 <sup>A</sup> 8.3 <sup>B</sup> 2 <sub>n</sub> <sup>C</sup>	2.35 J <sup>C</sup>	-	-	-	-	-	-	-	0.804 U	1.04 U	0.752 U	0.49 U J	-	0.26 U J	0.47 U J	-		
Sodium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	54.2 U	-	-	-	-	-	-	-	140	146	546	96.1 J	-	64.4	71.9 J	-		
Thallium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	0.96 J	-	-	-	-	-	-	-	0.483 U	0.623 U	0.451 U	0.49 J	-	1.050 U	0.44 J	-		
Vanadium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	17.2	-	-	-	-	-	-	-	13.5	1.04 U	13.1	8.32	-	11.2	8.71	-		
Zinc	mg/kg	10000 <sub>d</sub> <sup>A</sup> 2480 <sup>B</sup> 109 <sub>n</sub> <sup>C</sup>	659 <sup>C</sup>	-	-	-	-	-	-	-	17.1	17.3	5790 <sup>BC</sup>	19.4	-	22.6	22.4	-		
Polychlorinated Biphenyls																				
Aroclor 1016	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1221	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1232	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1242	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1248	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1254	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	18.9 U	18.9 U	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Aroclor 1260	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>o</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	130 <sup>C</sup>	160 <sup>C</sup>	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	41	-		
Pesticides																				
Aldrin	µg/kg	97 <sup>A</sup> 190 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
Atrazine	µg/kg	n/v	36600 U	-	-	-	-	-	-	-	-	-	-	370 U	370 U	370 U	370 U	-		
BHC, alpha-	µg/kg	480 <sup>A</sup> 20 <sup>BC</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
BHC, beta-	µg/kg	360 <sup>A</sup> 90 <sup>B</sup> 36 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
BHC, delta-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 250 <sup>B</sup> 40 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
Camphechlor (Toxaphene)	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	18.9 U	-	-	-	-	-	-	-	-	-	-	19.2 U	-	18.9 U	19.3 U	-		
Chlordane, alpha-	µg/kg	4200 <sup>A</sup> 2900 <sup>B</sup> 94 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
Chlordane, gamma-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 14000 <sup>E</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Chlordane, trans-	µg/kg	n/v	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
DDD (p,p'-DDD)	µg/kg	13000 <sup>A</sup> 14000 <sup>B</sup> 3.3 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
DDE (p,p'-DDE)	µg/kg	8900 <sup>A</sup> 17000 <sup>B</sup> 3.3 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
DDT (p,p'-DDT)	µg/kg	7900 <sup>A</sup> 136000 <sup>B</sup> 3.3 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
Dieldrin	µg/kg	200 <sup>A</sup> 100 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-	-	-	-	-	-	-	1.9 U	-	1.9 U	1.9 U	-		
Endosulfan I	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sub>n</sub> <sup>C</sup>	1.9 U	-	-	-	-													

See last page for notes.







Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

			On-Site Parking Lot		On-Site Building																			
Sample Location			LI-SS3		001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7	B-8	B-9	B106MW	B107		B108MW	B109	E08-1&2 EAST WALL					
Sample Date			7-May-13	7-May-13	5-Jun-12	5-Jun-12	5-Jun-12	5-Jun-12	17-Jun-12	17-Jun-12	23-Dec-10	23-Dec-10	23-Dec-10	2-May-13	2-May-13	2-May-13	3-May-13	3-May-13	2-Aug-12					
Sample ID			LI-SS3	LI-SS3	001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7 (S013)	B-8 (S014)	B-9 (S015)	LI-B106-S1	LI-B107-S1	LI-B107-S1-FD	LI-B108-S1	LI-B109-S1	E08-1&2 EAST WALL					
Sample Depth			0 - 2 ft	0 - 2 ft										1 - 1.5 ft	1.5 - 2 ft	1.5 - 2 ft	1 - 2 ft	1 - 2 ft						
Sampling Company			STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	DECI					
Laboratory			CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	CCGE	CCGE	CCGE	PARAROCH					
Laboratory Work Order			E2101	E2101	12:2362	12:2362	12:2362	12:2362	12:2593	12:2593	10:5252	10:5252	10:5252	E2101	E2101	E2101	E2101	E2101	12:3240					
Laboratory Sample ID			E2101-12	E2101-12RE	12:2362-01	12:2362-02	12:2362-03	12:2362-04	12:2593-01	12:2593-02	16402	16403	16404	E2101-01	E2101-02	E2101-09	E2101-05	E2101-06	12:3240-09					
Sample Type	Units	NYSDEC <sup>1,2</sup>													Field Duplicate									
Semi - Volatile Organic Compounds (continued)																								
Hexachloroethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Indeno(1,2,3-cd)pyrene	µg/kg	500 <sub>g</sub> <sup>AG</sup> 8200 <sub>b</sub> <sup>B</sup> 500 <sub>n</sub> <sup>C</sup>	36600 U J	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U J	370 U J	370 U J	370 U	370 U	323 U					
Isophorone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 4400 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Methylnaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 36400 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	410	170 J	370 U	180 J	370 U	323 U					
Naphthalene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 12000 <sup>BCFG</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	730	370 U	370 U	1100	370 U	323 U					
Nitroaniline, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 400 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U	807 U					
Nitroaniline, 3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U	807 U					
Nitroaniline, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U	807 U					
Nitrobenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 15000 <sup>D</sup> 170 <sub>b</sub> <sup>E</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Nitrophenol, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 300 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Nitrophenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U	807 U					
N-Nitrosodimethylamine (NDMA)	µg/kg	n/v	-	-	-	-	-	-	-	-	328 U	333 U	323 U	-	-	-	-	-	323 U					
N-Nitrosodi-n-Propylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
n-Nitrosodiphenylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Pentachlorophenol	µg/kg	6700 <sup>A</sup> 800 <sub>b</sub> <sup>B</sup> 800 <sub>m</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U J	807 U					
Phenanthrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	510	820	670	390	370 U	323 U					
Phenol	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>b</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Pyrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	36600 U J	-	-	-	-	-	-	-	328 U	333 U	323 U	260 J	190 J	270 J	370 U	370 U	323 U					
Tetrachlorobenzene, 1,2,4,5-	µg/kg	n/v	36600 U	-	-	-	-	-	-	-	-	-	-	370 U	370 U	370 U	370 U	370 U	-					
Tetrachlorophenol, 2,3,4,6-	µg/kg	n/v	36600 U	-	-	-	-	-	-	-	-	-	-	370 U	370 U	370 U	370 U	370 U	-					
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	-	-	-	-	-	-	-	-	328 U	333 U	323 U	-	-	-	-	-	323 U					
Trichlorophenol, 2,4,5-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	36600 U	-	-	-	-	-	-	-	820 U	833 U	808 U	370 U	370 U	370 U	370 U	370 U	807 U					
Trichlorophenol, 2,4,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	36600 U	-	-	-	-	-	-	-	328 U	333 U	323 U	370 U	370 U	370 U	370 U	370 U	323 U					
Total SVOC TICs	µg/kg	n/v	3700 U	-	-	-	-	-	-	-	-	-	-	40060 J	39450 J	27170 J	70000 J	3920 A B J	-					
Volatile Organic Compounds																								
Acetone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	-	-	-	-	-	-	-	-	29.4 U	22.8 U	36.7 U	28.1 U	22.4 J	25.3 J	13.7 J	28 U	37.9 U					
Benzene	µg/kg	4800 <sup>A</sup> 60 <sup>BCFG</sup>	-	-	-	-	-	-	-	-	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Bromodichloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Bromoform (Tribromomethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	24.8 U	22.5 U J	23.3 U	22.6 U	19.6 U	19.8 U	14.7 U	11.4 U	18.3 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	19.0 U					
Bromomethane (Methyl bromide)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Carbon Disulfide	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	-	-	-	-	-	-	-	-	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	1.3 NJ	5.6 U	7.58 U					
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 <sup>A</sup> 760 <sup>BC</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Chlorobromomethane	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	-					
Chloroethane (Ethyl Chloride)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U J	5.6 U J	5.7 U	5.6 U	7.58 U					
Chloroethyl Vinyl Ether, 2-	µg/kg	n/v	-	-	49.7 U	45.1 U J	46.6 U	45.3 U	39.3 U	39.6 U	29.4 U	22.8 U	36.7 U	-	-	-	-	-	37.9 U					
Chloroform (Trichloromethane)	µg/kg	49000 <sup>A</sup> 370 <sup>BC</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Chloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U	7.58 U					
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-														



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Parking Lot				On-Site Building											E08-1&2 EAST WALL 2-Aug-12 E08-1&2 EAST WALL	
			LI-SS3		001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7	B-8	B-9	B106MW	B107		B108MW		B109
			7-May-13	7-May-13	5-Jun-12	5-Jun-12	5-Jun-12	5-Jun-12	17-Jun-12	17-Jun-12	23-Dec-10	23-Dec-10	23-Dec-10	2-May-13	2-May-13	2-May-13	3-May-13		3-May-13
			LI-SS3	LI-SS3	001 SW Corner	002 W Center	003 NW Corner	004 North Center	008	009	B-7 (S013)	B-8 (S014)	B-9 (S015)	LI-B106-S1	LI-B107-S1	LI-B107-S1-FD	LI-B108-S1		LI-B109-S1
			0 - 2 ft	0 - 2 ft	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	1 - 1.5 ft	1.5 - 2 ft	1.5 - 2 ft	1 - 2 ft		1 - 2 ft
			STANTEC	STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
			Laboratory	CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	CCGE		CCGE
Laboratory Work Order	E2101	E2101	12:2362	12:2362	12:2362	12:2362	12:2593	12:2593	10:5252	10:5252	10:5252	E2101	E2101	E2101	E2101	E2101			
Laboratory Sample ID	E2101-12	E2101-12RE	12:2362-01	12:2362-02	12:2362-03	12:2362-04	12:2593-01	12:2593-02	16402	16403	16404	E2101-01	E2101-02	E2101-09	E2101-05	E2101-06			
Sample Type	Units	NYSDEC <sup>1,2</sup>											Field Duplicate						
Volatile Organic Compounds (continued)																			
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U		
Hexanone, 2- (Methyl Butyl Ketone)	µg/kg	100000 <sup>A</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup>	-	-	-	-	-	-	-	14.7 U	11.4 U	18.3 U	28.1 U	27.7 U	27.9 U	28.6 U	28 U		
Isopropylbenzene	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 2300 <sup>FG</sup>	-	-	-	-	-	-	-	-	-	-	71.9	5.8	7.5	120	5.6 U		
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U		
Methyl Ethyl Ketone (MEK)	µg/kg	100000 <sup>B</sup> 120 <sup>BC</sup> 300 <sup>F</sup>	-	-	-	-	-	-	-	29.4 U	22.8 U	36.7 U	28.1 U	27.7 U	27.9 U	28.6 U	28 U		
Methyl Isobutyl Ketone (MIBK)	µg/kg	100000 <sup>A</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 1000 <sup>F</sup>	-	-	-	-	-	-	-	14.7 U	11.4 U	18.3 U	28.1 U	27.7 U	27.9 U	28.6 U	28 U		
Methyl tert-butyl ether (MTBE)	µg/kg	100000 <sup>A</sup> 930 <sup>BCF</sup>	-	-	-	-	-	-	-	-	-	-	5.6 U	5.5 U	5.6 U	5.7 U	5.6 U		
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	5000 D	130	130	55.7	5.6 U		
Methylene Chloride (Dichloromethane)	µg/kg	100000 <sup>B</sup> 50 <sup>BC</sup>	-	-	24.8 U	22.5 U J	23.3 U	22.6 U	19.6 U	19.8 U	14.7 U	11.4 U	18.3 U	5.6 U	5.5 U	5.6 U	5.7 U		
Styrene	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup>	-	-	-	-	-	-	-	-	14.7 U	11.4 U	18.3 U	5.6 U	5.5 U	5.6 U	5.7 U		
Tetrachloroethane, 1,1,2,2-	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 600 <sup>F</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U		
Tetrachloroethylene (PCE)	µg/kg	19000 <sup>A</sup> 1300 <sup>BC</sup>	-	-	39.3	9.01 U J	44.2 J	12.6	32.2	132	24.4	4.57 U	22.2	5.6 U	5.5 U	5.6 U	410 J D		
Toluene	µg/kg	100000 <sup>B</sup> 700 <sup>BCFG</sup>	-	-	-	-	-	-	-	-	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	32.2		
Trichlorobenzene, 1,2,3-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	5.6 U J	5.5 U Q	5.6 U Q	5.7 U J		
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 3400 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	5.6 U J	5.5 U	5.6 U	5.7 U J		
Trichloroethane, 1,1,1-	µg/kg	100000 <sup>B</sup> 680 <sup>BC</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U		
Trichloroethane, 1,1,2-	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U		
Trichloroethylene (TCE)	µg/kg	21000 <sup>A</sup> 470 <sup>BC</sup>	-	-	168	374 J	153 J	50.5	7.85 U	7.92 U	6.08	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	18.9		
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	5.7 U		
Trichlorotrifluoroethane (Freon 113)	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 6000 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	5.6 U	5.5 U	5.6 U	5.7 U		
Vinyl Acetate	µg/kg	n/v	-	-	-	-	-	-	-	-	14.7 U	11.4 U	18.3 U	-	-	-	-		
Vinyl chloride	µg/kg	900 <sup>A</sup> 20 <sup>BC</sup>	-	-	9.93 U	9.01 U J	9.33 U	9.05 U	7.85 U	7.92 U	5.87 U	4.57 U	7.34 U	5.6 U	5.5 U	5.6 U	1.6 J		
Xylene, m & p-	µg/kg	100000 <sup>B,P</sup> 1600 <sup>B</sup> 260 <sup>C</sup>	-	-	-	-	-	-	-	-	5.87 U	4.57 U	7.34 U	280 <sup>C</sup>	12	13.4	130 NJ		
Xylene, o-	µg/kg	100000 <sup>B,P</sup> 1600 <sup>B</sup> 260 <sup>C</sup>	-	-	-	-	-	-	-	-	5.87 U	4.57 U	7.34 U	6.2 NJ	5.5 U	5.6 U	120 U		
Total VOC TICs	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	7818.8 J	1300.4 J	1875 J	16417.1 J		
Herbicides																			
2,4,5-TP (Silvex)	µg/kg	100000 <sup>B</sup> 3800 <sup>BC</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 500 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Trichlorophenoxy acetic acid, 2,4,5- (2,4,5-T)	µg/kg	100000 <sup>B</sup> 1000000 <sup>B</sup> 100000 <sup>C</sup> 1900 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Building									North Room Addition		
			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	SEDIMENT TANK		W06-1&2 WEST WALL	SB-5	SB-9	SB-10
Sample Date			3-May-13	14-Jun-12	2-Aug-12	8-Jun-12	8-Jun-12	2-Aug-12	2-Aug-12	2-Aug-12	2-Aug-12	10-Dec-12	10-Dec-12	10-Dec-12
Sample ID			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	01-1 SEDIMENT TANK	01-2 SEDIMENT TANK	W06-1&2 WEST WALL	B-5-6.8	B-9-7.0	B-10-7.0
Sample Depth			1.5 - 2 ft									6.8 ft	7 ft	7 ft
Sampling Company			STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC
Laboratory			CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CTECH	CTECH	CTECH
Laboratory Work Order			E2101	12:2524	12:3240	12:2432	12:2432	12:3240	12:3240	12:3240	12:3240	D5130	D5130	D5130
Laboratory Sample ID			E2101-07	12:2524-01	12:3240-06	12:2432-01	12:2432-02	12:3240-08	12:3240-01	12:3240-02	12:3240-07	D5130-01	D5130-02	D5130-05
Sample Type	Units	NYSDEC <sup>1,2</sup>												
Metals														
Aluminum	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	2990	-	-	4490	1440	1550	3180	-	-	-
Antimony	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	7.14 U	-	-	7.17 U	7.46 U	7.31 U	6.15 U	-	-	-
Arsenic	mg/kg	16 <sub>g</sub> <sup>AB</sup> 13 <sub>n</sub> <sup>C</sup>	-	-	1.51	-	-	2.43	2.60	2.60	2.18	-	-	-
Barium	mg/kg	400 <sup>A</sup> 820 <sup>B</sup> 350 <sub>n</sub> <sup>C</sup>	-	-	22.7	-	-	37.9	32.2	17.5	22.7	-	-	-
Beryllium	mg/kg	72 <sup>A</sup> 47 <sup>B</sup> 7.2 <sup>C</sup>	-	-	0.595 U	-	-	0.598 U	0.622 U	0.609 U	0.512 U	-	-	-
Cadmium	mg/kg	4.3 <sup>A</sup> 7.5 <sup>B</sup> 2.5 <sub>n</sub> <sup>C</sup>	-	-	0.595 U	-	-	0.598 U	0.622 U	0.609 U	0.512 U	-	-	-
Calcium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	35500 <sup>BE</sup>	-	-	48800 <sup>BE</sup>	8050	10800 <sup>BE</sup>	51000 <sup>BE</sup>	-	-	-
Chromium (Total)	mg/kg	<sup>NS,d</sup> <sup>ABC</sup>	-	-	4.75	-	-	6.03	7.71	4.44	5.69	-	-	-
Cobalt	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	5.95 U	-	-	5.98 U	6.22 U	6.09 U	5.12 U	-	-	-
Copper	mg/kg	270 <sup>A</sup> 1720 <sup>B</sup> 50 <sup>C</sup>	-	-	7.76	-	-	15.9	102 <sup>C</sup>	105 <sup>C</sup>	13.9	-	-	-
Iron	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	7760	-	-	8600	10100 <sup>BE</sup>	15100 <sup>BE</sup>	9740	-	-	-
Lead	mg/kg	400 <sup>A</sup> 450 <sup>B</sup> 63 <sub>n</sub> <sup>C</sup>	-	-	7.17	-	-	27.2	219 <sup>C</sup>	61.7	8.30	-	-	-
Magnesium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	-	-	8510	-	-	8450	1320	2870	10700 <sup>B</sup>	-	-	-
Manganese	mg/kg	2000 <sub>g</sub> <sup>AB</sup> 1600 <sub>n</sub> <sup>C</sup>	-	-	274	-	-	326	95.5	112	355	-	-	-
Mercury	mg/kg	0.81 <sub>n</sub> <sup>A</sup> 0.73 <sup>B</sup> 0.18 <sub>n</sub> <sup>C</sup>	-	-	0.0098 U	-	-	0.0197	0.0102 U	0.0314	0.0080 U	-	-	-
Nickel	mg/kg	310 <sup>A</sup> 130 <sup>B</sup> 30 <sup>C</sup>	-	-	5.57	-	-	6.99	28.5	13.4	6.77	-	-	-
Potassium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	-	-	834	-	-	796	310 U	305 U	1040	-	-	-
Selenium	mg/kg	180 <sup>A</sup> 4 <sub>g</sub> <sup>B</sup> 3.9 <sub>n</sub> <sup>C</sup>	-	-	1.19 U	-	-	1.19 U	1.24 U	1.22 U	1.02 U	-	-	-
Silver	mg/kg	180 <sup>A</sup> 8.3 <sup>B</sup> 2 <sup>C</sup>	-	-	1.19 U	-	-	1.19 U	1.24 U	1.22 U	1.02 U	-	-	-
Sodium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup>	-	-	297 U	-	-	298 U	310 U	305 U	257 U	-	-	-
Thallium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	2.97 U	-	-	2.98 U	3.10 U	3.05 U	2.57 U	-	-	-
Vanadium	mg/kg	<sup>NS</sup> <sup>AC</sup> 10000 <sub>d</sub> <sup>B</sup> 10000 <sub>a</sub> <sup>E</sup>	-	-	10.7	-	-	11.8	3.60	3.05 U	11.6	-	-	-
Zinc	mg/kg	10000 <sub>d</sub> <sup>A</sup> 2480 <sup>B</sup> 109 <sub>n</sub> <sup>C</sup>	-	-	33.2	-	-	30.6	180 <sup>C</sup>	122 <sup>C</sup>	33.4	-	-	-
Polychlorinated Biphenyls														
Aroclor 1016	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1221	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1232	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1242	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1248	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1254	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1260	µg/kg	1000 <sub>o</sub> <sup>A</sup> 3200 <sub>g</sub> <sup>B</sup> 100 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Pesticides														
Aldrin	µg/kg	97 <sup>A</sup> 190 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Atrazine	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
BHC, alpha-	µg/kg	480 <sup>A</sup> 20 <sup>BC</sup>	-	-	-	-	-	-	-	-	-	-	-	-
BHC, beta-	µg/kg	360 <sup>A</sup> 90 <sup>B</sup> 36 <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
BHC, delta-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 250 <sup>B</sup> 40 <sub>n</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Camphechlor (Toxaphene)	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane, alpha-	µg/kg	4200 <sup>A</sup> 2900 <sup>B</sup> 94 <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane, gamma-	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 14000 <sup>E</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane, trans-	µg/kg	n/v	-	-	-	-	-	-	-	-	-	-	-	-
DDD (p,p'-DDD)	µg/kg	13000 <sup>A</sup> 14000 <sup>B</sup> 3.3 <sub>m</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
DDE (p,p'-DDE)	µg/kg	8900 <sup>A</sup> 17000 <sup>B</sup> 3.3 <sub>m</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
DDT (p,p'-DDT)	µg/kg	7900 <sup>A</sup> 136000 <sup>B</sup> 3.3 <sub>m</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	µg/kg	200 <sup>A</sup> 100 <sup>B</sup> 5 <sub>n</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	µg/kg	24000 <sup>A</sup> 102000 <sup>B</sup> 2400 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan Sulfate	µg/kg	24000 <sup>A</sup> 1000000 <sub>o</sub> <sup>B</sup> 2400 <sub>o</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endrin	µg/kg	11000 <sup>A</sup> 60 <sup>B</sup> 14 <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>o</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Ketone	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	µg/kg	2100 <sup>A</sup> 380 <sup>B</sup> 42 <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>o</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 20 <sup>E</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Lindane (Hexachlorocyclohexane, gamma)	µg/kg	1300 <sup>A</sup> 100 <sup>BC</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor (4,4'-Methoxychlor)	µg/kg	100000 <sub>o</sub> <sup>A</sup> 1000000 <sub>o</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 900000 <sup>E</sup>	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.



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Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Building								North Room Addition			
			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	SEDIMENT TANK		W06-1&2 WEST WALL	SB-5	SB-9	SB-10
Sample Date			3-May-13	14-Jun-12	2-Aug-12	8-Jun-12	8-Jun-12	2-Aug-12	2-Aug-12	2-Aug-12	2-Aug-12	10-Dec-12	10-Dec-12	10-Dec-12
Sample ID			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	01-1 SEDIMENT TANK	01-2 SEDIMENT TANK	W06-1&2 WEST WALL	B-5-6.8	B-9-7.0	B-10-7.0
Sample Depth			1.5 - 2 ft									6.8 ft	7 ft	7 ft
Sampling Company			STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC
Laboratory			CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CTECH	CTECH	CTECH
Laboratory Work Order			E2101	12:2524	12:3240	12:2432	12:2432	12:3240	12:3240	12:3240	12:3240	D5130	D5130	D5130
Laboratory Sample ID			E2101-07	12:2524-01	12:3240-06	12:2432-01	12:2432-02	12:3240-08	12:3240-01	12:3240-02	12:3240-07	D5130-01	D5130-02	D5130-05
Sample Type	Units	NYSDEC <sup>1,2</sup>												
Semi - Volatile Organic Compounds														
3+4-Methylphenols	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/kg	10000 <sub>b</sub> <sup>A</sup> 98000 <sup>B</sup> 20000 <sup>CG</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Acenaphthylene	µg/kg	100000 <sub>b</sub> <sup>AG</sup> 107000 <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Acetophenone	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Aniline	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>CD</sup> 330 <sub>b</sub> <sup>E</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Anthracene	µg/kg	100000 <sub>b</sub> <sup>AG</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Benzaldehyde	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Benzidine	µg/kg	n/v	-	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Benzo(a)anthracene	µg/kg	1000 <sub>a</sub> <sup>ABG</sup> 1000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Benzo(a)pyrene	µg/kg	1000 <sub>a</sub> <sup>AG</sup> 22000 <sup>B</sup> 1000 <sub>n</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Benzo(b)fluoranthene	µg/kg	1000 <sub>a</sub> <sup>AG</sup> 1700 <sup>B</sup> 1000 <sub>n</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Benzo(g,h,i)perylene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Benzo(k)fluoranthene	µg/kg	3900 <sup>A</sup> 1700 <sup>B</sup> 800 <sub>n</sub> <sup>CG</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Benzoic acid	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	-	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Benzyl Alcohol	µg/kg	n/v	-	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Biphenyl, 1,1'- (Biphenyl)	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)methane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Bis(2-Chloroethyl)ether	µg/kg	100000 <sub>b</sub> <sup>A</sup> 10000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Bis(2-Chloroisopropyl)ether	µg/kg	n/v	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Bis(2-Chloroisopropyl)ether (2,2-oxybis(1-Chloropropane))	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 435000 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Bromophenyl Phenyl Ether, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Butyl Benzyl Phthalate	µg/kg	<sub>NS</sub> <sup>AC</sup> 1000000 <sub>d</sub> <sup>B</sup> 122000 <sup>E</sup>	-	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Caprolactam	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Carbazole	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	-	-	-	-	-	-	-	-	-	-
Chloro-3-methyl phenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Chloroaniline, 4-	µg/kg	<sub>NS</sub> <sup>AC</sup> 1000000 <sub>d</sub> <sup>B</sup> 220 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Chloronaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Chlorophenol, 2- (ortho-Chlorophenol)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Chlorophenyl Phenyl Ether, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Chrysene	µg/kg	3900 <sup>A</sup> 1000 <sub>a</sub> <sup>BG</sup> 1000 <sub>n</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Cresol, m- (Methylphenol, 3-)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>f</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Cresol, o- (Methylphenol, 2-)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>f</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dibenzo(a,h)anthracene	µg/kg	330 <sub>i</sub> <sup>AG</sup> 1000000 <sub>d</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Dibenzofuran	µg/kg	59000 <sup>A</sup> 210000 <sup>B</sup> 7000 <sup>C</sup> 6200 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dibutyl Phthalate (DBP)	µg/kg	<sub>NS</sub> <sup>AC</sup> 1000000 <sub>d</sub> <sup>B</sup> 8100 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dichlorobenzene, 1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dichlorobenzene, 1,3-	µg/kg	49000 <sup>A</sup> 2400 <sup>BC</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dichlorobenzene, 1,4-	µg/kg	13000 <sup>A</sup> 1800 <sup>BC</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dichlorobenzidine, 3,3'-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Dichlorophenol, 2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 400 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dichlorophenol, 2,6-	µg/kg	n/v	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Diethyl Phthalate	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 7100 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dimethyl Phthalate	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 27000 <sup>F</sup>	180 J	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Dimethylphenol, 2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dinitro-o-cresol, 4,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Dinitrophenol, 2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 200 <sup>F</sup>	380 U J	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Dinitrotoluene, 2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Dinitrotoluene, 2,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1000/170 <sub>b,sl</sub> <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Di-n-Octyl phthalate	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 120000 <sup>E</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Fluoranthene	µg/kg	100000 <sub>b</sub> <sup>AG</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Fluorene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 386000 <sup>B</sup> 30000 <sup>CG</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Hexachlorobenzene	µg/kg	1200 <sup>A</sup> 3200 <sup>B</sup> 330 <sub>m</sub> <sup>C</sup> 1400 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Hexachlorocyclopentadiene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U J	-	363 U J	-	-	361 U J	368 U J	364 U J	311 U J	-	-	-

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Building									North Room Addition		
			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	SEDIMENT TANK		W06-1&2 WEST WALL	SB-5	SB-9	SB-10
Sample Date			3-May-13	14-Jun-12	2-Aug-12	8-Jun-12	8-Jun-12	2-Aug-12	2-Aug-12	2-Aug-12	2-Aug-12	10-Dec-12	10-Dec-12	10-Dec-12
Sample ID			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	01-1 SEDIMENT TANK	01-2 SEDIMENT TANK	W06-1&2 WEST WALL	B-5-6.8	B-9-7.0	B-10-7.0
Sample Depth			1.5 - 2 ft									6.8 ft	7 ft	7 ft
Sampling Company			STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC
Laboratory			CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CTECH	CTECH	CTECH
Laboratory Work Order			E2101	12:2524	12:3240	12:2432	12:2432	12:3240	12:3240	12:3240	12:3240	D5130	D5130	D5130
Laboratory Sample ID			E2101-07	12:2524-01	12:3240-06	12:2432-01	12:2432-02	12:3240-08	12:3240-01	12:3240-02	12:3240-07	D5130-01	D5130-02	D5130-05
Sample Type	Units	NYSDEC <sup>1,2</sup>												
Semi - Volatile Organic Compounds (continued)														
Hexachloroethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Indeno(1,2,3-cd)pyrene	µg/kg	500 <sub>g</sub> <sup>AG</sup> 8200 <sub>n</sub> <sup>B</sup> 500 <sub>n</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U J	364 U	311 U	-	-	-
Isophorone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 4400 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Methylnaphthalene, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 36400 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Naphthalene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 12000 <sup>BCFG</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Nitroaniline, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 400 <sup>F</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Nitroaniline, 3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Nitroaniline, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Nitrobenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 15000 <sup>D</sup> 170 <sub>b</sub> <sup>E</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Nitrophenol, 2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 300 <sup>F</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Nitrophenol, 4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
N-Nitrosodimethylamine (NDMA)	µg/kg	n/v	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
N-Nitrosodi-n-Propylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
n-Nitrosodiphenylamine	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Pentachlorophenol	µg/kg	6700 <sup>A</sup> 800 <sub>b</sub> <sup>B</sup> 800 <sub>m</sub> <sup>C</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Phenanthrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	380 U	-	363 U	-	-	361 U	372	364 U	311 U	-	-	-
Phenol	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sub>b</sub> <sup>B</sup> 330 <sub>m</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Pyrene	µg/kg	100000 <sub>b</sub> <sup>ACG</sup> 1000000 <sub>d</sub> <sup>B</sup>	380 U	-	363 U	-	-	361 U	731 J	514	311 U	-	-	-
Tetrachlorobenzene, 1,2,4,5-	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenol, 2,3,4,6-	µg/kg	n/v	380 U	-	-	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	-	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Trichlorophenol, 2,4,5-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 100 <sup>F</sup>	380 U	-	908 U	-	-	903 U	919 U	909 U	778 U	-	-	-
Trichlorophenol, 2,4,6-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	380 U	-	363 U	-	-	361 U	368 U	364 U	311 U	-	-	-
Total SVOC TICs	µg/kg	n/v	849 A B J	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds														
Acetone	µg/kg	100000 <sub>b</sub> <sup>A</sup> 50 <sup>BC</sup>	28.9 U	-	63.8 U J	-	-	40.0 U	94.8 U J	60.4 U J	97.6 U J	29 U	29 U	30 U
Benzene	µg/kg	4800 <sup>A</sup> 60 <sup>BCFG</sup>	5.8 U	-	7.94 U	-	-	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Bromodichloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Bromoform (Tribromomethane)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	24.3 U J	19.9 U	20.0 U	17.5 U	20.0 U	20.0 U J	13.7 U	11.3 U J	5.8 U	5.7 U	6.0 U
Bromomethane (Methyl bromide)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Carbon Disulfide	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2700 <sup>F</sup>	5.8 U	-	7.94 U	-	-	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 <sup>A</sup> 760 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U J	34 NJ	6.0 U
Chlorobromomethane	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Chloroethane (Ethyl Chloride)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Chloroethyl Vinyl Ether, 2-	µg/kg	n/v	-	48.6 U J	39.7 U	40.0 U	35.0 U	40.0 U	39.9 U J	27.5 U	22.6 U J	-	-	-
Chloroform (Trichloromethane)	µg/kg	49000 <sup>A</sup> 370 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Chloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Cyclohexane	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	3.9 J	5.7 U	6.0 U
Dibromo-3-Chloropropane, 1,2- (DBCP)	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Dibromochloromethane	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichlorobenzene, 1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1100 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichlorobenzene, 1,3-	µg/kg	49000 <sup>A</sup> 2400 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichlorobenzene, 1,4-	µg/kg	13000 <sup>A</sup> 1800 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichlorodifluoromethane (Freon 12)	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Dichloroethane, 1,1-	µg/kg	26000 <sup>A</sup> 270 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloroethane, 1,2-	µg/kg	3100 <sup>A</sup> 20 <sub>a</sub> <sup>B</sup> 20 <sub>m</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloroethene, 1,1-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 330 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloroethylene, cis-1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 250 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloroethylene, trans-1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 190 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloropropane, 1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloropropene, cis-1,3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dichloropropene, trans-1,3-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Dioxane, 1,4-	µg/kg	13000 <sup>A</sup> 100 <sub>b</sub> <sup>B</sup> 100 <sub>m</sub> <sup>C</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/kg	41000 <sup>A</sup> 1000 <sup>BCFG</sup>	5.8 U	-	7.94 U	-	-	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U

See last page for notes.





Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Sample Location			On-Site Building									North Room Addition		
			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	SEDIMENT TANK		W06-1&2 WEST WALL	SB-5	SB-9	SB-10
			3-May-13	14-Jun-12	2-Aug-12	8-Jun-12	8-Jun-12	2-Aug-12	2-Aug-12	2-Aug-12	2-Aug-12	10-Dec-12	10-Dec-12	10-Dec-12
			LI-B110-S1	N. East Corner	N05-1&2 NORTH WALL	S. East Corner	S. East Corner North	S07-1&2 SOUTH WALL	01-1 SEDIMENT TANK	01-2 SEDIMENT TANK	W06-1&2 WEST WALL	B-5-6.8	B-9-7.0	B-10-7.0
			1.5 - 2 ft									6.8 ft	7 ft	7 ft
			STANTEC	DECI	DECI	DECI	DECI	DECI	DECI	DECI	DECI	STANTEC	STANTEC	STANTEC
			CCGE	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	PARAROCH	CTECH	CTECH	CTECH
Laboratory Work Order			E2101	12:2524	12:3240	12:2432	12:2432	12:3240	12:3240	12:3240	12:3240	D5130	D5130	D5130
Laboratory Sample ID			E2101-07	12:2524-01	12:3240-06	12:2432-01	12:2432-02	12:3240-08	12:3240-01	12:3240-02	12:3240-07	D5130-01	D5130-02	D5130-05
Sample Type	Units	NYSDEC <sup>1,2</sup>												
Volatile Organic Compounds (continued)														
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Hexanone, 2- (Methyl Butyl Ketone)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	28.9 U	-	19.9 U	-	-	20.0 U	20.0 U J	13.7 U	11.3 U J	29 U	29 U	30 U
Isopropylbenzene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 2300 <sup>EEG</sup>	5.8 U	-	-	-	-	-	-	-	-	20 NJ	32 NJ	6.0 U
Methyl Acetate	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Methyl Ethyl Ketone (MEK)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 120 <sup>BC</sup> 300 <sup>F</sup>	28.9 U	-	39.7 U	-	-	40.0 U	39.9 U J	27.5 U	22.6 U J	29 U	29 U	30 U
Methyl Isobutyl Ketone (MIBK)	µg/kg	100000 <sub>a</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1000 <sup>F</sup>	28.9 U	-	19.9 U	-	-	20.0 U	20.0 U J	13.7 U	11.3 U J	29 U	29 U	30 U
Methyl tert-butyl ether (MTBE)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 930 <sup>BCF</sup>	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Methylcyclohexane	µg/kg	n/v	5.8 U	-	-	-	-	-	-	-	-	38 J	5.7 U	1.6 J
Methylene Chloride (Dichloromethane)	µg/kg	100000 <sub>a</sub> <sup>A</sup> 50 <sup>BC</sup>	5.8 U	24.3 U J	19.9 U	20.0 U	17.5 U	20.0 U	20.0 U J	13.7 U	11.3 U J	5.8 U	5.7 U	6.0 U
Styrene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	-	19.9 U	-	-	20.0 U	20.0 U J	13.7 U	11.3 U J	5.8 U	5.7 U	6.0 U
Tetrachloroethane, 1,1,2,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 600 <sup>F</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	-	5.7 U	6.0 U
Tetrachloroethylene (PCE)	µg/kg	19000 <sup>A</sup> 1300 <sup>BC</sup>	5.8 U	10.4 J	7.94 U	18.5	17.2 J	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Toluene	µg/kg	100000 <sub>b</sub> <sup>A</sup> 700 <sup>BCFG</sup>	5.8 U	-	7.94 U	-	-	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Trichlorobenzene, 1,2,3-	µg/kg	n/v	5.8 U J	-	-	-	-	-	-	-	-	5.8 U J	5.7 U Q	6.0 U Q
Trichlorobenzene, 1,2,4-	µg/kg	100000 <sub>a</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 3400 <sup>F</sup>	5.8 U J	-	-	-	-	-	-	-	-	5.8 U J	5.7 U	6.0 U
Trichloroethane, 1,1,1-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 680 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Trichloroethane, 1,1,2-	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Trichloroethylene (TCE)	µg/kg	21000 <sup>A</sup> 470 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Trichlorotrifluoroethane (Freon 113)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 6000 <sup>F</sup>	5.8 U	-	-	-	-	-	-	-	-	5.8 U	5.7 U	6.0 U
Vinyl Acetate	µg/kg	n/v	-	-	19.9 U	-	-	20.0 U	20.0 U J	13.7 U	11.3 U J	-	-	-
Vinyl chloride	µg/kg	900 <sup>A</sup> 20 <sup>BC</sup>	5.8 U	9.72 U J	7.94 U	8.01 U	7.00 U	8.00 U	7.99 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Xylene, m & p-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	11.6 U	-	7.94 U	-	-	8.00 U	13.3 U J	5.50 U	4.51 U J	12 U	11 U	12 U
Xylene, o-	µg/kg	100000 <sub>b,p</sub> <sup>A</sup> 1600 <sub>p</sub> <sup>B</sup> 260 <sub>p</sub> <sup>C</sup>	5.8 U	-	7.94 U	-	-	8.00 U	8.31 U J	5.50 U	4.51 U J	5.8 U	5.7 U	6.0 U
Total VOC TICs	µg/kg	n/v	2.9 U	-	-	-	-	-	-	-	-	20630.5	31993	-
Herbicides														
2,4,5-TP (Silvex)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 3800 <sup>BC</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	µg/kg	100000 <sub>b</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 500 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorophenoxy acetic acid, 2,4,5- (2,4,5-T)	µg/kg	100000 <sub>a</sub> <sup>A</sup> 1000000 <sub>d</sub> <sup>B</sup> 100000 <sub>a</sub> <sup>C</sup> 1900 <sup>F</sup>	-	-	-	-	-	-	-	-	-	-	-	-

See last page for notes.



Table 3  
Summary of Historical and RI Analytical Results in Soil  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Notes:	
NYSDEC <sup>1</sup>	NYSDEC 6 NYCRR Part 375 Soil Clean-up Objectives (SCOs)
A	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Restricted Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Groundwater
C	NYSDEC 6 NYCRR Part 375 - Unrestricted Use Soil Cleanup Objectives
NYSDEC <sup>2</sup>	New York State Department of Environmental Conservation, DEC Policy CP-51, October 21, 2010
D	Table 1 Supplemental Soil Cleanup Objectives - Restricted Residential
E	Table 1 Supplemental Soil Cleanup Objectives - Protection of Groundwater
F	Table 2 Soil Cleanup Levels for Gasoline Contaminated Soils
G	Table 3 Soil Cleanup Levels for Fuel Oil Contaminated Soil
6.5 <sup>A</sup>	Concentration exceeds the indicated standard.
15.2	Concentration was detected but did not exceed applicable standards.
0.50 U	Laboratory reportable detection limit exceeded standard.
0.03 U	The analyte was not detected above the laboratory reportable detection limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
AC	No SCO has been established for this compound.
NS, d <sup>ABC</sup>	No SCO has been established for this compound. No SCO has been established for total chromium; however, see standards for trivalent and hexavalent chromium.
C	The SCOs for unrestricted use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3
a	Based on rural background study
b	
E	The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.
b	
A	The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
b,p	
b,s1	Based on rural background study. The value of 1.0 refers to SVOC analses while the 0.17b refers to VOC analyses.
d	The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 mg/kg (Organics) and 10000 mg/kg (Inorganics). See 6 NYCRR Part 375 TSD Section 9.3.
e	The SCOS for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.
f <sup>AB</sup>	For constituents where the calculated SCO was lower than the CRQL, the CRQL is used as the SCO value.
g	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.
AC	This SCO is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
J	
k	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 TSD Table 5.6-1.
m	For constituents where the calculated SCO was lower than the Contract Required Quantitation Limit (CRQL), the CRQL is used as the Track 1 SCO value.
n	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 1 SCO value for this use of the site.
o <sup>ABC</sup>	The criterion is applicable to total PCBs, and the individual Aroclors should be added for comparison.
A	MS/MSD, LCS/LCSD percent recovery outside QC limits.
B	Indicates analyte was found in associated blank, as well as in the sample.
D	Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.
J	The reported result is an estimated value.
N	Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
Q	Indicates LCS control criteria did not meet requirements



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			On-Site Parking Lot										On-Site Building				
Sample Location			B101MW		B102MW	RW-4		RW-11		B106MW	B108MW	RW-1		RW-2		RW-3	
Sample Date			21-May-13	21-May-13	22-May-13	25-Apr-12	22-May-13	14-Jun-12	22-May-13	23-May-13	23-May-13	23-Mar-12	23-May-13	23-Mar-12	21-May-13	23-Mar-12	22-May-13
Sample ID			LI-B101MW-GW1	LI-B101MW-GW1DUP	LI-B102MW-GW1	RW-4	LI-RW-4-GW1	RW-11	LI-RW-11-GW1	LI-B106MW-GW1	LI-B108MW-GW1	RW-1	LI-RW-1-GW1	RW-2	LI-RW-2-GW1	RW-3	LI-RW-3-GW1
Sampling Company			STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory			CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order			E2314	E2314	E2342	12:1770	E2342	12:2523	E2342	E2363	E2363	12:1239	E2363	12:1239	E2314	12:1239	E2342
Laboratory Sample ID			E2314-01	E2314-02	E2342-04	12:1770-01	E2342-03	12:2523-03	E2342-02	E2363-03	E2363-02	12:1239-01	E2363-01	12:1239-02	E2314-03	12:1239-03	E2342-01
Sample Type	Units	TOGS		Field Duplicate													
Metals																	
Aluminum	µg/L	n/v	36.9	32.5	-	-	43.8	-	-	-	66	-	-	-	64.5	-	-
Antimony	µg/L	3 <sup>B</sup>	12.5 U	12.5 U	-	-	12.5 U	-	-	-	12.5 U	-	-	-	12.5 U	-	-
Arsenic	µg/L	25 <sup>B</sup>	5.000 U	5.000 U	-	-	5.000 U	-	-	-	6.2	-	-	-	5.000 U	-	-
Barium	µg/L	1000 <sup>B</sup>	62	69.6	-	-	151	-	-	-	54.9	-	-	-	59.7 N	-	-
Beryllium	µg/L	3 <sup>A</sup>	1.500 U	1.500 U	-	-	1.500 U	-	-	-	1.500 U	-	-	-	1.500 U	-	-
Cadmium	µg/L	5 <sup>B</sup>	1.500 U	1.500 U	-	-	1.500 U	-	-	-	0.7 J	-	-	-	1.500 U	-	-
Calcium	µg/L	n/v	121000	132000	-	-	141000	-	-	-	97000	-	-	-	87300	-	-
Chromium (Total)	µg/L	50 <sup>B</sup>	2.500 U	2.500 U	-	-	2.500 U	-	-	-	2.500 U	-	-	-	2.500 U	-	-
Cobalt	µg/L	n/v	7.500 U	7.500 U	-	-	7.500 U	-	-	-	7.500 U	-	-	-	7.500 U	-	-
Copper	µg/L	200 <sup>B</sup>	5.000 U	5.000 U	-	-	5.000 U	-	-	-	4.16 J	-	-	-	5.000 U	-	-
Iron	µg/L	300 <sup>B</sup>	25.0 U	25.0 U	-	-	11.7 J	-	-	-	45.3	-	-	-	169	-	-
Lead	µg/L	25 <sup>B</sup>	12.6	12.5	-	-	17	-	-	-	4.9	-	-	-	9.61	-	-
Magnesium	µg/L	35000 <sup>A</sup>	30600	33100	-	-	29800	-	-	-	23200	-	-	-	29500	-	-
Manganese	µg/L	300 <sup>B</sup>	5.42 J	5.53 J	-	-	667 J <sup>B</sup>	-	-	-	46.4 J	-	-	-	305 J <sup>B</sup>	-	-
Mercury	µg/L	0.7 <sup>B</sup>	0.200 U	0.200 U	-	-	0.200 U	-	-	-	0.200 U	-	-	-	0.200 U	-	-
Nickel	µg/L	100 <sup>B</sup>	2.52 J	10.0 U	-	-	6.32 J	-	-	-	10.0 U	-	-	-	2.1 J	-	-
Potassium	µg/L	n/v	9810	11100	-	-	17800	-	-	-	10500	-	-	-	22600	-	-
Selenium	µg/L	10 <sup>B</sup>	5.92	4.23 J	-	-	5.52	-	-	-	5.03	-	-	-	5.000 U N	-	-
Silver	µg/L	50 <sup>B</sup>	2.500 U	2.500 U	-	-	2.500 U N	-	-	-	2.500 U	-	-	-	2.500 U	-	-
Sodium	µg/L	20000 <sup>B</sup>	24700 <sup>B</sup>	27600 <sup>B</sup>	-	-	8750	-	-	-	26300 <sup>B</sup>	-	-	-	35600 <sup>B</sup>	-	-
Thallium	µg/L	0.5 <sup>A</sup>	10.0 U	10.0 U	-	-	10.0 U	-	-	-	10.0 U	-	-	-	10.0 U	-	-
Vanadium	µg/L	n/v	10.0 U	10.0 U	-	-	10.0 U	-	-	-	10.0 U	-	-	-	10.0 U	-	-
Zinc	µg/L	2000 <sup>A</sup>	12.4	10.5	-	-	18.2	-	-	-	8.94 J	-	-	-	14.6	-	-
Pesticides																	
Aldrin	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Atrazine	µg/L	7.5 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
BHC, alpha-	µg/L	0.01 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
BHC, beta-	µg/L	0.04 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
BHC, delta-	µg/L	0.04 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Camphechlor (Toxaphene)	µg/L	0.06 <sup>B</sup>	0.5 U	0.51 U	-	-	0.51 U	-	-	-	0.5 U	-	-	-	0.51 U	-	-
Chlordane, alpha-	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.051 U	-	-	-	0.051 U	-	-
Chlordane, trans-	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
DDD (p,p'-DDD)	µg/L	0.3 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
DDE (p,p'-DDE)	µg/L	0.2 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
DDT (p,p'-DDT)	µg/L	0.2 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Dieldrin	µg/L	0.004 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Endosulfan I	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.051 U	-	-	-	0.051 U	-	-
Endosulfan II	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Endosulfan Sulfate	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Endrin	µg/L	n/v	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Endrin Aldehyde	µg/L	5 <sup>-B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Endrin Ketone	µg/L	5 <sup>-B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Heptachlor	µg/L	0.04 <sup>AB</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Heptachlor Epoxide	µg/L	0.03 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Hexachlorobenzene	µg/L	0.04 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Lindane (Hexachlorocyclohexane, gamma)	µg/L	0.05 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Methoxychlor (4,4'-Methoxychlor)	µg/L	35 <sup>B</sup>	0.05 U	0.051 U	-	-	0.051 U	-	-	-	0.05 U	-	-	-	0.051 U	-	-
Polychlorinated Biphenyls																	
Aroclor 1016	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1221	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1232	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1242	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1248	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1254	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-
Aroclor 1260	µg/L	0.09 <sup>B</sup>	0.5 U	0.5 U	-	-	0.51 U	-	-	-	0.51 U	-	-	-	0.51 U	-	-

See notes on last page



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			On-Site Parking Lot										On-Site Building				
Sample Location			B101MW		B102MW	RW-4		RW-11		B106MW	B108MW	RW-1		RW-2		RW-3	
Sample Date			21-May-13	21-May-13	22-May-13	25-Apr-12	22-May-13	14-Jun-12	22-May-13	23-May-13	23-May-13	23-Mar-12	23-May-13	23-Mar-12	21-May-13	23-Mar-12	22-May-13
Sample ID			LI-B101MW-GW1	LI-B101MW-GW1DUP	LI-B102MW-GW1	RW-4	LI-RW-4-GW1	RW-11	LI-RW-11-GW1	LI-B106MW-GW1	LI-B108MW-GW1	RW-1	LI-RW-1-GW1	RW-2	LI-RW-2-GW1	RW-3	LI-RW-3-GW1
Sampling Company			STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory			CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order			E2314	E2314	E2342	12:1770	E2342	12:2523	E2342	E2363	E2363	12:1239	E2363	12:1239	E2314	12:1239	E2342
Laboratory Sample ID			E2314-01	E2314-02	E2342-04	12:1770-01	E2342-03	12:2523-03	E2342-02	E2363-03	E2363-02	12:1239-01	E2363-01	12:1239-02	E2314-03	12:1239-03	E2342-01
Sample Type	Units	TOGS		Field Duplicate													
Semi - Volatile Organic Compounds																	
3+4-Methylphenols	µg/L	n/v	10 U Q	10.1 U Q	-	-	10.1 U Q	-	-	-	10.2 U	-	-	-	10 U Q	-	-
Acenaphthene	µg/L	20 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Acenaphthylene	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Acetophenone	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Aniline	µg/L	5- <sup>B</sup>	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Anthracene	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzaldehyde	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Benzidine	µg/L	5- <sup>B</sup>	-	-	-	-	-	-	-	-	-	25.0 U	-	25.0 U	-	25.0 U	-
Benzo(a)anthracene	µg/L	0.002 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzo(a)pyrene	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzo(b)fluoranthene	µg/L	0.002 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzo(g,h,i)perylene	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzo(k)fluoranthene	µg/L	0.002 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Benzoic acid	µg/L	n/v	-	-	-	-	-	-	-	-	-	25.0 U	-	25.0 U	-	25.0 U	-
Benzyl Alcohol	µg/L	n/v	-	-	-	-	-	-	-	-	-	25.0 U	-	25.0 U	-	25.0 U	-
Biphenyl, 1,1'- (Biphenyl)	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Bis(2-Chloroethoxy)methane	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Bis(2-Chloroethyl)ether	µg/L	1 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Bis(2-Chloroisopropyl)ether	µg/L	n/v	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Bis(2-Chloroisopropyl)ether (2,2-oxybis(1-Chloropropane))	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Bromophenyl Phenyl Ether, 4-	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Butyl Benzyl Phthalate	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Caprolactam	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Carbazole	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U	-	-
Chloro-3-methyl phenol, 4-	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Chloroaniline, 4-	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Chloronaphthalene, 2-	µg/L	10 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Chlorophenol, 2- (ortho-Chlorophenol)	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Chlorophenyl Phenyl Ether, 4-	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Chrysene	µg/L	0.002 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Cresol, m- (Methylphenol, 3-)	µg/L	n/v	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Cresol, o- (Methylphenol, 2-)	µg/L	n/v	10 U Q	10.1 U Q	-	-	10.1 U Q	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U Q	10.0 U	-
Dibenzo(a,h)anthracene	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dibenzofuran	µg/L	n/v	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dibutyl Phthalate (DBP)	µg/L	50 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dichlorobenzene, 1,2-	µg/L	3 <sup>B</sup>	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Dichlorobenzene, 1,3-	µg/L	3 <sup>B</sup>	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Dichlorobenzene, 1,4-	µg/L	3 <sup>B</sup>	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Dichlorobenzidine, 3,3'-	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dichloroethene, 1,1-	µg/L	5- <sup>B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	12.5 NJ <sup>B</sup>	-	-
Dichlorophenol, 2,4-	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dichlorophenol, 2,6-	µg/L	n/v	-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Diethyl Phthalate	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dimethyl Phthalate	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Dimethylphenol, 2,4-	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dinitro-o-cresol, 4,6-	µg/L	n/v	10 U J	10.1 U J	-	-	10.1 U J	-	-	-	10.2 U J	25.0 U	-	25.0 U	10 U J	25.0 U	-
Dinitrophenol, 2,4-	µg/L	10 <sup>A</sup>	10 U J	10.1 U J	-	-	10.1 U J	-	-	-	10.2 U J	25.0 U	-	25.0 U	10 U J	25.0 U	-
Dinitrotoluene, 2,4-	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Dinitrotoluene, 2,6-	µg/L	5- <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Di-n-Octyl phthalate	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Fluoranthene	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Fluorene	µg/L	50 <sup>A</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Hexachlorobenzene	µg/L	0.04 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/L	0.5 <sup>B</sup>	10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-

See notes on last page



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Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation				On-Site Parking Lot						On-Site Building								
Sample Location				B101MW		B102MW	RW-4		RW-11		B106MW	B108MW	RW-1		RW-2		RW-3	
Sample Date				21-May-13	21-May-13	22-May-13	25-Apr-12	22-May-13	14-Jun-12	22-May-13	23-May-13	23-May-13	23-Mar-12	23-May-13	23-Mar-12	21-May-13	23-Mar-12	22-May-13
Sample ID				LI-B101MW-GW1	LI-B101MW-GW1DUP	LI-B102MW-GW1	RW-4	LI-RW-4-GW1	RW-11	LI-RW-11-GW1	LI-B106MW-GW1	LI-B108MW-GW1	RW-1	LI-RW-1-GW1	RW-2	LI-RW-2-GW1	RW-3	LI-RW-3-GW1
Sampling Company				STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory				CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order				E2314	E2314	E2342	12:1770	E2342	12:2523	E2342	E2363	E2363	12:1239	E2363	12:1239	E2314	12:1239	E2342
Laboratory Sample ID				E2314-01	E2314-02	E2342-04	12:1770-01	E2342-03	12:2523-03	E2342-02	E2363-03	E2363-02	12:1239-01	E2363-01	12:1239-02	E2314-03	12:1239-03	E2342-01
Sample Type		Units	TOGS		Field Duplicate													
Semi - Volatile Organic Compounds (continued)																		
Hexachlorocyclopentadiene	µg/L	5 <sup>-B</sup>		10.0 U Q	10.1 U Q	-	-	10.1 U Q	-	-	-	10.2 U	10.0 U J	-	10.0 U J	10 U Q	10.0 U J	-
Hexachloroethane	µg/L	5 <sup>-B</sup>		10.0 U Q	10.1 U Q	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U Q	10.0 U	-
Indeno(1,2,3-cd)pyrene	µg/L	0.002 <sup>A</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Isophorone	µg/L	50 <sup>A</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Methylnaphthalene, 2-	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Naphthalene	µg/L	10 <sup>B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Nitroaniline, 2-	µg/L	5 <sup>-B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Nitroaniline, 3-	µg/L	5 <sup>-B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Nitroaniline, 4-	µg/L	5 <sup>-B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Nitrobenzene	µg/L	0.4 <sup>B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Nitrophenol, 2-	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Nitrophenol, 4-	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
N-Nitrosodimethylamine (NDMA)	µg/L	n/v		-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
N-Nitrosodi-n-Propylamine	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
n-Nitrosodiphenylamine	µg/L	50 <sup>A</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Octadecanoic acid (Stearic acid)	µg/L	n/v		-	-	-	-	-	-	-	-	-	-	-	-	3.2 NJ	-	-
Pentachlorophenol	µg/L	1.0 <sup>B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Phenanthrene	µg/L	50 <sup>A</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Phenol	µg/L	1.0 <sup>B</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Pyrene	µg/L	50 <sup>A</sup>		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Tetrachlorobenzene, 1,2,4,5-	µg/L	n/v		10 U Q	10.1 U Q	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U Q	-	-
Tetrachlorophenol, 2,3,4,6-	µg/L	n/v		10 U Q	10.1 U Q	-	-	10.1 U	-	-	-	10.2 U	-	-	-	10 U Q	-	-
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>		-	-	-	-	-	-	-	-	-	10.0 U	-	10.0 U	-	10.0 U	-
Trichlorophenol, 2,4,5-	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	25.0 U	-	25.0 U	10 U	25.0 U	-
Trichlorophenol, 2,4,6-	µg/L	n/v		10 U	10.1 U	-	-	10.1 U	-	-	-	10.2 U	10.0 U	-	10.0 U	10 U	10.0 U	-
Total SVOC TICs	µg/L	n/v		37.5 A B J	58.8 A B J	-	-	111.2 A B J	-	-	-	107.7 A B J	-	-	-	131 A B J	-	-
Volatile Organic Compounds																		
Acetone	µg/L	50 <sup>A</sup>		25 U	25 U	25 U	10.0 U J	25 U	-	25 U	25 U	25 U	10.0 U	25 U	10.0 U	160 <sup>A</sup>	10.0 U	25 U
Benzene	µg/L	1 <sup>B</sup>		5 U	5 U	5 U	0.700 U J	5 U	-	5 U	5 U	5 U	0.700 U	0.49 NJ	0.700 U	5 U	0.700 U	5 U
Bromodichloromethane	µg/L	50 <sup>A</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Bromoform (Tribromomethane)	µg/L	50 <sup>A</sup>		5 U	5 U	5 U	5.00 U J	5 U	5.00 U	5 U	5 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U
Bromomethane (Methyl bromide)	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U J	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Carbon Disulfide	µg/L	60 <sup>A</sup>		5 U	5 U	5 U	2.00 U J	5 U	-	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Carbon Tetrachloride (Tetrachloromethane)	µg/L	5 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U J	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chlorobenzene (Monochlorobenzene)	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chlorobromomethane	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	-	5 U	-	5 U Q	5 U	5 U	-	5 U	-	5 U	-	5 U
Chloroethane (Ethyl Chloride)	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chloroethyl Vinyl Ether, 2-	µg/L	n/v		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	7 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	0.67 J	3.78	3.9 J
Chloromethane	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Cyclohexane	µg/L	n/v		5 U	5 U	5 U	-	5 U	-	5 U	0.69 J	5 U	-	4.5 NJ	-	5 U	-	5 U
Dibromo-3-Chloropropane, 1,2- (DBCP)	µg/L	0.04 <sup>B</sup>		5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Dibromochloromethane	µg/L	50 <sup>A</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,2-	µg/L	3 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,3-	µg/L	3 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,4-	µg/L	3 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorodifluoromethane (Freon 12)	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Dichloroethane, 1,1-	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloroethane, 1,2-	µg/L	0.6 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U J	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloroethene, 1,1-	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	1 J	2.00 U	5 U
Dichloroethylene, cis-1,2-	µg/L	5 <sup>-B</sup>		5 U	5 U	7.5 <sup>B</sup>	23.1 J <sup>B</sup>	14.9 <sup>B</sup>	2.00 U	5 U	16.9 <sup>B</sup>	5.7 <sup>B</sup>	6.88 <sup>B</sup>	14.5 <sup>B</sup>	26.6 <sup>B</sup>	360 D <sup>B</sup>	81.8 <sup>B</sup>	130 <sup>B</sup>
Dichloroethylene, trans-1,2-	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	1.4 J	5 U	2.00 U	4.2 J	2.43	11.4 <sup>B</sup>	10.2 <sup>B</sup>	18.8 <sup>B</sup>
Dichloropropane, 1,2-	µg/L	1 <sup>B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloropropene, cis-1,3-	µg/L	0.4 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloropropene, trans-1,3-	µg/L	0.4 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dioxane, 1,4-	µg/L	n/v		100 U	100 U	R	-	R	-	R	R	R	-	R	-	100 U	-	R
Ethylbenzene	µg/L	5 <sup>-B</sup>		5 U	5 U	5 U	2.00 U J	5 U	-	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U

See notes on last page



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			On-Site Parking Lot										On-Site Building				
Sample Location			B101MW		B102MW	RW-4		RW-11		B106MW	B108MW	RW-1		RW-2		RW-3	
Sample Date			21-May-13	21-May-13	22-May-13	25-Apr-12	22-May-13	14-Jun-12	22-May-13	23-May-13	23-May-13	23-Mar-12	23-May-13	23-Mar-12	21-May-13	23-Mar-12	22-May-13
Sample ID			LI-B101MW-GW1	LI-B101MW-GW1DUP	LI-B102MW-GW1	RW-4	LI-RW-4-GW1	RW-11	LI-RW-11-GW1	LI-B106MW-GW1	LI-B108MW-GW1	RW-1	LI-RW-1-GW1	RW-2	LI-RW-2-GW1	RW-3	LI-RW-3-GW1
Sampling Company			STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	STANTEC	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory			CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	CCGE	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order			E2314	E2314	E2342	12:1770	E2342	12:2523	E2342	E2363	E2363	12:1239	E2363	12:1239	E2314	12:1239	E2342
Laboratory Sample ID			E2314-01	E2314-02	E2342-04	12:1770-01	E2342-03	12:2523-03	E2342-02	E2363-03	E2363-02	12:1239-01	E2363-01	12:1239-02	E2314-03	12:1239-03	E2342-01
Sample Type	Units	TOGS		Field Duplicate													
Volatile Organic Compounds (continued)																	
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/L	0.0006 <sup>B</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Hexanone, 2- (Methyl Butyl Ketone)	µg/L	50 <sup>A</sup>	25 U	25 U	25 U	5.00 U J	25 U	-	25 U	25 U	25 U	5.00 U	25 U	5.00 U	25 U	5.00 U	25 U
Isopropylbenzene	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Methyl Acetate	µg/L	n/v	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Methyl Ethyl Ketone (MEK)	µg/L	50 <sup>A</sup>	25 U	25 U	25 U	10.0 U J	25 U	-	25 U	25 U	25 U	10.0 U	25 U	10.0 U	110 <sup>A</sup>	10.0 U	25 U
Methyl Isobutyl Ketone (MIBK)	µg/L	n/v	25 U	25 U	25 U	5.00 U J	25 U	-	25 U	25 U	25 U	5.00 U	25 U	5.00 U	25 U	5.00 U	25 U
Methyl tert-butyl ether (MTBE)	µg/L	10 <sup>A</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	2.4 J	-	7.1
Methylcyclohexane	µg/L	n/v	5 U	5 U	5 U	-	5 U	-	5 U	0.77 J	5 U	-	3.1 J	-	5 U	-	5 U
Methylene Chloride (Dichloromethane)	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	5.00 U J	5 U	5.00 U	5 U	5 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U
Styrene	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	5.00 U J	5 U	-	5 U	5 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U
Tetrachloroethane, 1,1,2,2-	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Tetrachloroethylene (PCE)	µg/L	5 <sup>-B</sup>	1.6 J	1.2 J	20.9 <sup>B</sup>	62.6 J <sup>B</sup>	55.8 <sup>B</sup>	2.00 U	1.3 J	14.8 <sup>B</sup>	15.9 <sup>B</sup>	6.72 <sup>B</sup>	3.6 J	2.00 U	110 <sup>B</sup>	2.81	7.8 <sup>B</sup>
Toluene	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	2.00 U J	5 U	-	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichlorobenzene, 1,2,3-	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Trichloroethane, 1,1,1-	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichloroethane, 1,1,2-	µg/L	1 <sup>B</sup>	5 U	5 U	5 U	2.00 U J	5 U	2.00 U	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichloroethylene (TCE)	µg/L	5 <sup>-B</sup>	0.51 J	5 U	14.9 <sup>B</sup>	21.4 J <sup>B</sup>	19.8 <sup>B</sup>	2.00 U	5 U	12 <sup>B</sup>	8.5 <sup>B</sup>	7.15 <sup>B</sup>	8.1 <sup>B</sup>	9.19 <sup>B</sup>	76.4 <sup>B</sup>	125 <sup>B</sup>	320 D <sup>B</sup>
Trichlorofluoromethane (Freon 11)	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	2.00 U J	5 U	2.00 U J	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichlorotrifluoroethane (Freon 113)	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	-	5 U	-	5 U	5 U	5 U	-	5 U	-	5 U	-	5 U
Vinyl Acetate	µg/L	n/v	-	-	-	5.00 U J	-	-	-	-	-	5.00 U	-	5.00 U	-	5.00 U	-
Vinyl chloride	µg/L	2 <sup>B</sup>	5 U	5 U	0.53 J	3.86 J <sup>B</sup>	1.8 J	2.00 U	5 U	2.1 J <sup>B</sup>	5 U	3.99 <sup>B</sup>	7.7 <sup>B</sup>	2.00 U	5.9 <sup>B</sup>	2.00 U	3 J <sup>B</sup>
Xylene, m & p-	µg/L	5 <sup>-B</sup>	10 U	10 U	10 U	2.00 U J	10 U	-	10 U	10 U	10 U	2.00 U	10 U	2.00 U	10 U	2.00 U	10 U
Xylene, o-	µg/L	5 <sup>-B</sup>	5 U	5 U	5 U	2.00 U J	5 U	-	5 U	5 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Total VOC TICs	µg/L	n/v	2.5 U	2.5 U	2.5 U	-	2.5 U	-	2.5 U	2.5 U	2.5 U	-	4 900 J	-	770 000 J	-	2.5 U

See notes on last page



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			Off-Site Locations														
Sample Location			RW-5		RW-6			RW-7		RW-8		RW-9		RW-12		RW-13	
Sample Date			25-Apr-12	21-May-13	25-Apr-12	4-May-12	20-May-13	12-Jun-12	20-May-13	14-Jun-12	20-May-13	8-Jun-12	21-May-13	8-Jun-12	20-May-13	12-Jun-12	20-May-13
Sample ID			RW-5	LI-RW-5-GW1	RW-6	RW-6	LI-RW-6-GW1	RW-7	LI-RW-7-GW1	RW-8	LI-RW-8-GW1	RW-9	LI-RW-9-GW1	RW-12	LI-RW-12-GW1	RW-13	LI-RW-13-GW1
Sampling Company			DECI	STANTEC	DECI	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory			PARAROCH	CCGE	PARAROCH	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order			12:1770	E2314	12:1770	12:1927	E2301	12:2486	E2301	12:2523	E2301	12:2431	E2314	12:2431	E2301	12:2486	E2301
Laboratory Sample ID			12:1770-02	E2314-06	12:1770-03	12:1927-01	E2301-01	12:2486-02	E2301-02	12:2523-01	E2301-03	12:2431-01	E2314-07	12:2431-02	E2301-04	12:2486-01	E2301-05
Sample Type			Units	TOGS													
Semi - Volatile Organic Compounds (continued)																	
Hexachlorocyclopentadiene	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	µg/L	50 <sup>A</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	10 <sup>B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitroaniline, 2-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitroaniline, 3-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitroaniline, 4-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	µg/L	0.4 <sup>B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrophenol, 2-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrophenol, 4-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine (NDMA)	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-Propylamine	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Nitrosodiphenylamine	µg/L	50 <sup>A</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octadecanoic acid (Stearic acid)	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	µg/L	1.0 <sup>B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L	50 <sup>A</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	µg/L	1.0 <sup>B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	50 <sup>A</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorobenzene, 1,2,4,5-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenol, 2,3,4,6-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenol, 2,4,5-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenol, 2,4,6-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total SVOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds																	
Acetone	µg/L	50 <sup>A</sup>	10.0 U J	2.6 J	10.0 U J	100 U J	4.2 J	-	25 U	-	25 U	-	25 U	-	25 U	-	25 U
Benzene	µg/L	1 <sup>B</sup>	1.13 J <sup>B</sup>	5 U	0.700 U J	7.00 U	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Bromodichloromethane	µg/L	50 <sup>A</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Bromoform (tribromomethane)	µg/L	50 <sup>A</sup>	5.00 U J	5 U	5.00 U J	50.0 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U
Bromomethane (Methyl bromide)	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U J	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Carbon Disulfide	µg/L	60 <sup>A</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Carbon Tetrachloride (Tetrachloromethane)	µg/L	5 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U J	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chlorobenzene (Monochlorobenzene)	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chlorobromomethane	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Chloroethane (Ethyl Chloride)	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chloroethyl Vinyl Ether, 2-	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	7 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Chloromethane	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Cyclohexane	µg/L	n/v	-	5 U	-	-	5 U J	-	5 U	-	5 U J	-	5 U	-	5 U J	-	5 U J
Dibromo-3-Chloropropane, 1,2- (DBCP)	µg/L	0.04 <sup>B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Dibromochloromethane	µg/L	50 <sup>A</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,2-	µg/L	3 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,3-	µg/L	3 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorobenzene, 1,4-	µg/L	3 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichlorodifluoromethane (Freon 12)	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Dichloroethane, 1,1-	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloroethane, 1,2-	µg/L	0.6 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U J	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloroethene, 1,1-	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloroethylene, cis-1,2-	µg/L	5 <sup>-B</sup>	49.5 J <sup>B</sup>	18.2 <sup>B</sup>	59.8 J <sup>B</sup>	63.1 <sup>B</sup>	47.3 <sup>B</sup>	4.28	8.2 <sup>B</sup>	6.50 <sup>B</sup>	17.8 <sup>B</sup>	2.00 U	1.2 J	24.5 <sup>B</sup>	26.5 <sup>B</sup>	2.00 U	5 U
Dichloroethylene, trans-1,2-	µg/L	5 <sup>-B</sup>	5.63 J <sup>B</sup>	2.2 J	2.00 U J	20.0 U	1.1 J	2.00 U	0.92 J	2.00 U	2.1 J	2.00 U	5 U	2.00 U	1.2 J	2.00 U	5 U
Dichloropropane, 1,2-	µg/L	1 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloropropene, cis-1,3-	µg/L	0.4 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dichloropropene, trans-1,3-	µg/L	0.4 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Dioxane, 1,4-	µg/L	n/v	-	100 U	-	-	R	-	R	-	R	-	100 U	-	R	-	R
Ethylbenzene	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U

See notes on last page



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			Off-Site Locations														
Sample Location			RW-5		RW-6		RW-7		RW-8		RW-9		RW-12		RW-13		
Sample Date			25-Apr-12	21-May-13	25-Apr-12	4-May-12	20-May-13	12-Jun-12	20-May-13	14-Jun-12	20-May-13	8-Jun-12	21-May-13	8-Jun-12	20-May-13	12-Jun-12	20-May-13
Sample ID			RW-5	LI-RW-5-GW1	RW-6	RW-6	LI-RW-6-GW1	RW-7	LI-RW-7-GW1	RW-8	LI-RW-8-GW1	RW-9	LI-RW-9-GW1	RW-12	LI-RW-12-GW1	RW-13	LI-RW-13-GW1
Sampling Company			DECI	STANTEC	DECI	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC	DECI	STANTEC
Laboratory			PARAROCH	CCGE	PARAROCH	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE	PARAROCH	CCGE
Laboratory Work Order			12:1770	E2314	12:1770	12:1927	E2301	12:2486	E2301	12:2523	E2301	12:2431	E2314	12:2431	E2301	12:2486	E2301
Laboratory Sample ID			12:1770-02	E2314-06	12:1770-03	12:1927-01	E2301-01	12:2486-02	E2301-02	12:2523-01	E2301-03	12:2431-01	E2314-07	12:2431-02	E2301-04	12:2486-01	E2301-05
Sample Type	Units	TOGS															
Volatile Organic Compounds (continued)																	
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/L	0.0006 <sup>B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Hexanone, 2- (Methyl Butyl Ketone)	µg/L	50 <sup>A</sup>	5.00 U J	25 U	5.00 U J	50.0 U	25 U	-	25 U	-	25 U	-	25 U	-	25 U	-	25 U
Isopropylbenzene	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Methyl Acetate	µg/L	n/v	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Methyl Ethyl Ketone (MEK)	µg/L	50 <sup>A</sup>	10.0 U J	25 U	10.0 U J	100 U	25 U	-	25 U	-	25 U	-	25 U	-	25 U	-	25 U
Methyl Isobutyl Ketone (MIBK)	µg/L	n/v	5.00 U J	25 U	5.00 U J	50.0 U	25 U	-	25 U	-	25 U	-	25 U	-	25 U	-	25 U
Methyl tert-butyl ether (MTBE)	µg/L	10 <sup>A</sup>	-	1.3 J	-	-	2.1 J	-	1.8 J	-	3.3 J	-	5 U	-	0.85 J	-	5 U
Methylcyclohexane	µg/L	n/v	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Methylene Chloride (Dichloromethane)	µg/L	5 <sup>-B</sup>	5.00 U J	5 U	5.00 U J	50.0 U J	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U	5.00 U	5 U
Styrene	µg/L	5 <sup>-B</sup>	5.00 U J	5 U	5.00 U J	50.0 U	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Tetrachloroethane, 1,1,2,2-	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Tetrachloroethylene (PCE)	µg/L	5 <sup>-B</sup>	12.2 J <sup>B</sup>	5.6 <sup>B</sup>	881 J <sup>B</sup>	732 <sup>B</sup>	880 D <sup>B</sup>	2.00 U	0.76 J	2.00 U	4.3 J	11.3 <sup>B</sup>	8.5 <sup>B</sup>	2.71	4.9 J	2.00 U	2.8 J
Toluene	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Trichlorobenzene, 1,2,3-	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Trichloroethane, 1,1,1-	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichloroethane, 1,1,2-	µg/L	1 <sup>B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichloroethylene (TCE)	µg/L	5 <sup>-B</sup>	48.5 J <sup>B</sup>	25.2 <sup>B</sup>	112 J <sup>B</sup>	93.2 <sup>B</sup>	140 <sup>B</sup>	2.00 U	5.8 <sup>B</sup>	7.59 <sup>B</sup>	20.7 <sup>B</sup>	2.00 U	1.5 J	6.80 <sup>B</sup>	15 <sup>B</sup>	2.00 U	0.99 J
Trichlorofluoromethane (Freon 11)	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U	5 U	2.00 U	5 U	2.00 U J	5 U	2.00 U	5 U	2.00 U	5 U	2.00 U	5 U
Trichlorotrifluoroethane (Freon 113)	µg/L	5 <sup>-B</sup>	-	5 U	-	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Vinyl Acetate	µg/L	n/v	5.00 U J	-	5.00 U J	50.0 U	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	2 <sup>B</sup>	2.93 J <sup>B</sup>	0.6 J	2.00 U J	20.0 U	0.52 NJ	2.00 U	5 U	2.00 U	0.63 NJ	2.00 U	5 U	2.00 U	0.55 J	2.00 U	5 U
Xylene, m & p-	µg/L	5 <sup>-B</sup>	2.00 U J	10 U	2.00 U J	20.0 U	10 U	-	10 U	-	10 U	-	10 U	-	10 U	-	10 U
Xylene, o-	µg/L	5 <sup>-B</sup>	2.00 U J	5 U	2.00 U J	20.0 U J	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-	5 U
Total VOC TICs	µg/L	n/v	-	5,500 J	-	-	5,800 J	-	2.5 U	-	2.5 U	-	2.5 U	-	2.5 U	-	2.5 U

See notes on last page







Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation										
Sample Location			DRILL WATER	PUMP WATER	QA/QC			WATER TANK		
Sample Date			14-Jun-12	14-Jun-12	12-Jun-12	20-May-13	21-May-13	2-Aug-12	2-Aug-12	2-Aug-12
Sample ID			DRILL WATER (DW)	PUMP WATER (PW)	Trip Blank 7346	Trip Blank	Trip Blank	02 WATER TANK	03- WATER TANK	04-WATER TANK
Sampling Company			DECI	DECI	DECI	STANTEC	STANTEC	DECI	DECI	DECI
Laboratory			PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			12:2523	12:2523	12:2486	E2301	E2314	12:3240	12:3240	12:3240
Laboratory Sample ID			12:2523-02	12:2523-04	12:2486-03	E2301-07	E2314-08	12:3240-03	12:3240-04	12:3240-05
Sample Type	Units	TOGS			Trip Blank	Trip Blank	Trip Blank			
Semi - Volatile Organic Compounds										
3+4-Methylphenols	µg/L	n/v	-	-	-	-	-	-	-	-
Acenaphthene	µg/L	20 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Acenaphthylene	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Acetophenone	µg/L	n/v	-	-	-	-	-	-	-	-
Aniline	µg/L	5- <sup>S</sup>	-	-	-	-	-	10.0 U	-	-
Anthracene	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Benzaldehyde	µg/L	n/v	-	-	-	-	-	-	-	-
Benzidine	µg/L	5- <sup>S</sup>	-	-	-	-	-	25.0 U	-	-
Benzo(a)anthracene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Benzo(a)pyrene	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Benzo(b)fluoranthene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Benzo(g,h,i)perylene	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Benzo(k)fluoranthene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Benzoic acid	µg/L	n/v	-	-	-	-	-	25.0 U	-	-
Benzyl Alcohol	µg/L	n/v	-	-	-	-	-	25.0 U	-	-
Biphenyl, 1,1'- (Biphenyl)	µg/L	5- <sup>S</sup>	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)methane	µg/L	5- <sup>S</sup>	-	-	-	-	-	10.0 U	-	-
Bis(2-Chloroethyl)ether	µg/L	1 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Bis(2-Chloroisopropyl)ether	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Bis(2-Chloroisopropyl)ether (2,2-oxybis(1-Chloropropane))	µg/L	5- <sup>S</sup>	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	5 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Bromophenyl Phenyl Ether, 4-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Butyl Benzyl Phthalate	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Caprolactam	µg/L	n/v	-	-	-	-	-	-	-	-
Carbazole	µg/L	n/v	-	-	-	-	-	-	-	-
Chloro-3-methyl phenol, 4-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Chloroaniline, 4-	µg/L	5- <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Chloronaphthalene, 2-	µg/L	10 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Chlorophenol, 2- (ortho-Chlorophenol)	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Chlorophenyl Phenyl Ether, 4-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Chrysene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Cresol, m- (Methylphenol, 3-)	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Cresol, o- (Methylphenol, 2-)	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Dibenzo(a,h)anthracene	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Dibenzofuran	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Dibutyl Phthalate (DBP)	µg/L	50 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Dichlorobenzene, 1,2-	µg/L	3 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Dichlorobenzene, 1,3-	µg/L	3 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Dichlorobenzene, 1,4-	µg/L	3 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Dichlorobenzidine, 3,3'-	µg/L	5- <sup>S</sup>	-	-	-	-	-	10.0 U	-	-
Dichloroethene, 1,1-	µg/L	5- <sup>S</sup>	-	-	-	-	-	-	-	-
Dichlorophenol, 2,4-	µg/L	5- <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Dichlorophenol, 2,6-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Diethyl Phthalate	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Dimethyl Phthalate	µg/L	50 <sup>A</sup>	-	-	-	-	-	25.0 U	-	-
Dimethylphenol, 2,4-	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Dinitro-o-cresol, 4,6-	µg/L	n/v	-	-	-	-	-	25.0 U	-	-
Dinitrophenol, 2,4-	µg/L	10 <sup>A</sup>	-	-	-	-	-	25.0 U	-	-
Dinitrotoluene, 2,4-	µg/L	5- <sup>S</sup>	-	-	-	-	-	10.0 U	-	-
Dinitrotoluene, 2,6-	µg/L	5- <sup>S</sup>	-	-	-	-	-	10.0 U	-	-
Di-n-Octyl phthalate	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Fluoranthene	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Fluorene	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Hexachlorobenzene	µg/L	0.04 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/L	0.5 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
See notes on last page										



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation			QA/QC							
Sample Location			DRILL WATER	PUMP WATER	Trip Blank			WATER TANK		
Sample Date			14-Jun-12	14-Jun-12	12-Jun-12	20-May-13	21-May-13	2-Aug-12	2-Aug-12	2-Aug-12
Sample ID			DRILL WATER (DW)	PUMP WATER (PW)	Trip Blank 7346	Trip Blank	Trip Blank	02 WATER TANK	03- WATER TANK	04-WATER TANK
Sampling Company			DECI	DECI	DECI	STANTEC	STANTEC	DECI	DECI	DECI
Laboratory			PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			12:2523	12:2523	12:2486	E2301	E2314	12:3240	12:3240	12:3240
Laboratory Sample ID			12:2523-02	12:2523-04	12:2486-03	E2301-07	E2314-08	12:3240-03	12:3240-04	12:3240-05
Sample Type	Units	TOGS			Trip Blank	Trip Blank	Trip Blank			
Semi - Volatile Organic Compounds (continued)										
Hexachlorocyclopentadiene	µg/L	5 <sup>-B</sup>	-	-	-	-	-	10.0 U	-	-
Hexachloroethane	µg/L	5 <sup>-B</sup>	-	-	-	-	-	10.0 U	-	-
Indeno(1,2,3-cd)pyrene	µg/L	0.002 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Isophorone	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Methylnaphthalene, 2-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Naphthalene	µg/L	10 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Nitroaniline, 2-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	25.0 U	-	-
Nitroaniline, 3-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	25.0 U	-	-
Nitroaniline, 4-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	25.0 U	-	-
Nitrobenzene	µg/L	0.4 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Nitrophenol, 2-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Nitrophenol, 4-	µg/L	n/v	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine (NDMA)	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
N-Nitrosodi-n-Propylamine	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
n-Nitrosodiphenylamine	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Octadecanoic acid (Stearic acid)	µg/L	n/v	-	-	-	-	-	-	-	-
Pentachlorophenol	µg/L	1.0 <sup>B</sup>	-	-	-	-	-	25.0 U J	-	-
Phenanthrene	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Phenol	µg/L	1.0 <sup>B</sup>	-	-	-	-	-	10.0 U	-	-
Pyrene	µg/L	50 <sup>A</sup>	-	-	-	-	-	10.0 U	-	-
Tetrachlorobenzene, 1,2,4,5-	µg/L	n/v	-	-	-	-	-	-	-	-
Tetrachlorophenol, 2,3,4,6-	µg/L	n/v	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>	-	-	-	-	-	10.0 U	-	-
Trichlorophenol, 2,4,5-	µg/L	n/v	-	-	-	-	-	25.0 U	-	-
Trichlorophenol, 2,4,6-	µg/L	n/v	-	-	-	-	-	10.0 U	-	-
Total SVOC TICs	µg/L	n/v	-	-	-	-	-	-	-	-
Volatile Organic Compounds										
Acetone	µg/L	50 <sup>A</sup>	-	-	-	25 U	25 U	-	-	143 <sup>A</sup>
Benzene	µg/L	1 <sup>B</sup>	-	-	-	5 U	5 U	-	-	0.700 U
Bromodichloromethane	µg/L	50 <sup>A</sup>	4.23	2.61	2.00 U	5 U	5 U	-	-	2.00 U
Bromoform (Tribromomethane)	µg/L	50 <sup>A</sup>	5.00 U	5.00 U	5.00 U	5 U	5 U	-	-	5.00 U
Bromomethane (Methyl bromide)	µg/L	5 <sup>-B</sup>	2.00 U J	2.00 U J	2.00 U	5 U	5 U	-	-	2.00 U
Carbon Disulfide	µg/L	60 <sup>A</sup>	-	-	-	5 U	5 U	-	-	2.00 U
Carbon Tetrachloride (Tetrachloromethane)	µg/L	5 <sup>B</sup>	2.00 U J	2.00 U J	2.00 U	5 U	5 U	-	-	2.00 U
Chlorobenzene (Monochlorobenzene)	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Chlorobromomethane	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Chloroethane (Ethyl Chloride)	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Chloroethyl Vinyl Ether, 2-	µg/L	n/v	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	7 <sup>B</sup>	11.3 <sup>B</sup>	6.48	2.00 U	5 U	5 U	-	-	2.00 U
Chloromethane	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Cyclohexane	µg/L	n/v	-	-	-	5 U J	5 U	-	-	-
Dibromo-3-Chloropropane, 1,2- (DBCP)	µg/L	0.04 <sup>B</sup>	-	-	-	5 U	5 U	-	-	-
Dibromochloromethane	µg/L	50 <sup>A</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichlorobenzene, 1,2-	µg/L	3 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichlorobenzene, 1,3-	µg/L	3 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichlorobenzene, 1,4-	µg/L	3 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichlorodifluoromethane (Freon 12)	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Dichloroethane, 1,1-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloroethane, 1,2-	µg/L	0.6 <sup>B</sup>	2.00 U J	2.00 U J	2.00 U	5 U	5 U	-	-	2.00 U
Dichloroethene, 1,1-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloroethylene, cis-1,2-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloroethylene, trans-1,2-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloropropane, 1,2-	µg/L	1 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloropropene, cis-1,3-	µg/L	0.4 <sup>B p</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dichloropropene, trans-1,3-	µg/L	0.4 <sup>B p</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Dioxane, 1,4-	µg/L	n/v	-	-	-	R	100 U	-	-	-
Ethylbenzene	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	2.00 U

See notes on last page



Table 4  
Summary of Historical and RI Analytical Results in Groundwater  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, New York

Area of Site Investigation		QA/QC								
Sample Location			DRILL WATER	PUMP WATER	Trip Blank			WATER TANK		
Sample Date			14-Jun-12	14-Jun-12	12-Jun-12	20-May-13	21-May-13	2-Aug-12	2-Aug-12	2-Aug-12
Sample ID			DRILL WATER (DW)	PUMP WATER (PW)	Trip Blank 7346	Trip Blank	Trip Blank	02 WATER TANK	03- WATER TANK	04-WATER TANK
Sampling Company			DECI	DECI	DECI	STANTEC	STANTEC	DECI	DECI	DECI
Laboratory			PARAROCH	PARAROCH	PARAROCH	CCGE	CCGE	PARAROCH	PARAROCH	PARAROCH
Laboratory Work Order			12:2523	12:2523	12:2486	E2301	E2314	12:3240	12:3240	12:3240
Laboratory Sample ID			12:2523-02	12:2523-04	12:2486-03	E2301-07	E2314-08	12:3240-03	12:3240-04	12:3240-05
Sample Type	Units	TOGS			Trip Blank	Trip Blank	Trip Blank			

Volatile Organic Compounds (continued)										
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/L	0.0006 <sup>B</sup>	-	-	-	5 U	5 U	-	-	-
Hexanone, 2- (Methyl Butyl Ketone)	µg/L	50 <sup>A</sup>	-	-	-	25 U	25 U	-	-	5.00 U
Isopropylbenzene	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Methyl Acetate	µg/L	n/v	-	-	-	5 U	5 U	-	-	-
Methyl Ethyl Ketone (MEK)	µg/L	50 <sup>A</sup>	-	-	-	25 U	25 U	-	-	10.0 U
Methyl Isobutyl Ketone (MIBK)	µg/L	n/v	-	-	-	25 U	25 U	-	-	5.00 U
Methyl tert-butyl ether (MTBE)	µg/L	10 <sup>A</sup>	-	-	-	5 U	5 U	-	-	-
Methylcyclohexane	µg/L	n/v	-	-	-	5 U	5 U	-	-	-
Methylene Chloride (Dichloromethane)	µg/L	5 <sup>-B</sup>	5.00 U	5.00 U	5.00 U	5 U	3.4 J	-	-	5.00 U
Styrene	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	5.00 U
Tetrachloroethane, 1,1,2,2-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Tetrachloroethylene (PCE)	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Toluene	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	2.00 U
Trichlorobenzene, 1,2,3-	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Trichlorobenzene, 1,2,4-	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Trichloroethane, 1,1,1-	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Trichloroethane, 1,1,2-	µg/L	1 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Trichloroethylene (TCE)	µg/L	5 <sup>-B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Trichlorofluoromethane (Freon 11)	µg/L	5 <sup>-B</sup>	2.00 U J	2.00 U J	2.00 U	5 U	5 U	-	-	2.00 U
Trichlorotrifluoroethane (Freon 113)	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	-
Vinyl Acetate	µg/L	n/v	-	-	-	-	-	-	-	5.00 U
Vinyl chloride	µg/L	2 <sup>B</sup>	2.00 U	2.00 U	2.00 U	5 U	5 U	-	-	2.00 U
Xylene, m & p-	µg/L	5 <sup>-B</sup>	-	-	-	10 U	10 U	-	-	2.00 U
Xylene, o-	µg/L	5 <sup>-B</sup>	-	-	-	5 U	5 U	-	-	2.00 U
Total VOC TICs	µg/L	n/v	-	-	-	2.5 U	2.5 U	-	-	-

Notes:

TOGS	NYSDEC TOGS 1.1.1 (Reissued June 1998 with errata in January 1999 and addenda in April 2000 and June 2004)
A	TOGS 1.1.1 - Table 1 - Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Guidance
B	TOGS 1.1.1 - Table 1 - Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Standards
6.5 <sup>A</sup>	Concentration exceeds the indicated standard.
15.2	Concentration was detected but did not exceed applicable standards.
0.50 U	Laboratory reportable detection limit exceeded standard.
0.03 U	The analyte was not detected above the laboratory reportable detection limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
-	The standard for Iron and Manganese is 500 ug/L, which applies to the sum of these substances. As individual standards, the standard is 300 ug/L.
--	The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in the TOGS table) applies to this substance.
p	Applies to the sum of cis- and trans-1,3-dichloropropene.
A	MS/MSD, LCS/LCSD percent recovery outside QC limits.
B	Indicates analyte was found in associated blank, as well as in the sample.
D	Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.
J	The reported result is an estimated value.
N	Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
Q	Indicates LCS control criteria did not meet requirements
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.



**Table 5**  
**Summary of RI Soil Sampling Program**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Sample ID	Sample Date	Sample Depth (ft bgs)	PID Reading in ppm (miniRAE 3000 with 10.2 eV lamp)	Sample Type	Sample description	Analyses								QA/QC			Submitted (lab, date)
						TCL VOCs + TICs (8260)	TCL SVOCs + TICs (8270)	TAL Metals (6010)	Total Pesticides	Total PCBs	Total Pb, Hg	Benchscale ERD Assessment	Field Duplicate	Rinsate Blank	MS/MSD		
SB-5	12/10/2012	6.8'	22.2	grab	Pre-RI soil boring sample	X										Chemtech, 12/10/2012	
SB-9	12/10/2012	7'	172.1	grab	Pre-RI soil boring sample	X										Chemtech, 12/10/2012	
SB-10	12/10/2012	7'	0.2	grab	Pre-RI soil boring sample	X										Chemtech, 12/10/2012	
LI-B101MW-1s	4/22/2013	9.5'-10.4'	0	grab	soil boring sample from just above TOR	X	X	X	X	X						Chemtech, 4/22/2013	
LI-B102MW-1s	4/22/2013	7'-8"	0	grab	soil boring sample	X	X	X	X	X						Chemtech, 4/22/2013	
LI-B103-1s	4/24/2013	5'-6'	0	grab	soil boring sample from just above WT	X	X									Chemtech, 4/24/2013	
LI-B103-1s-MS/MSD	4/24/2013	5'-6'	0	grab	QA/QC sample from LI-B103-1s location	X	X								X	Chemtech, 4/24/2013	
LI-B104-1s	4/24/2013	5.5'-6'	0	grab	soil boring sample from just above WT	X	X									Chemtech, 4/24/2013	
LI-B105-1s	4/24/2013	11.4'-11.9'	0	grab	soil boring sample from just above TOR	X	X									Chemtech, 4/24/2013	
LI-B106-s1	5/2/2013	1'-1.5'	80	grab	soil boring sample with MS/MSD analysis	X	X	X	X	X					X	Chemtech, 5/3/2013	
LI-B107-s1	5/2/2013	1.5'-2'	64	grab	soil boring sample	X	X									Chemtech, 5/3/2013	
LI-B107-s1-FD	5/2/2013	1.5'-2'	64	grab	QA/QC sample from LI-B107-s1 location	X	X	X	X	X			X			Chemtech, 5/3/2013	
LI-B108-s1	5/3/2013	1'-2'	395	grab	soil boring sample	X	X	X	X	X						Chemtech, 5/3/2013	
LI-B109-s1	5/3/2013	1'-2'	0.7	grab	soil boring sample	X	X									Chemtech, 5/3/2013	
LI-B110-s1	5/3/2013	1.5'-2'	0	grab	soil boring sample	X	X									Chemtech, 5/3/2013	
LI-B-BT1	5/3/2013	0-3.6'	NA	grab	continuous 29" core							X				Stantec, 5/6/2013	
LI-B-BT2	5/3/2013	0-3.6'	NA	grab	continuous 34" core							X				Stantec, 5/6/2013	
LI-SS1	5/6/2013	0-2"	0.2	grab	surface soil sample		X	X	X	X						Chemtech, 5/7/2013	
LI-SS2	5/6/2013	0-2"	0	grab	surface soil sample		X	X	X	X						Chemtech, 5/7/2013	
LI-SS2-Rinse blank	5/6/2013	NA	0	water	QA/QC sample from LI-SS2 location	X	X	X	X	X				X		Chemtech, 5/7/2013	
LI-SS3	5/7/2013	0-2"	0.6	grab	surface soil sample		X	X	X	X						Chemtech, 5/7/2013	
LI-EW-S1	5/17/2013	1	0	composite	sample from base of earth work cut		X	X		X						Paradigm, 5/17/2013	
LI-EW-S1-1	5/17/2013	1	0	grab	sample from base of earth work cut						X					Paradigm, 5/17/2013	
LI-EW-S1-2	5/17/2013	1	0	grab	sample from base of earth work cut						X					Paradigm, 5/17/2013	
LI-EW-S4	6/25/2013	1.5	0	composite	sample from base of earth work cut		X	X		X						Paradigm, 6/25/2013	
LI-EW-S4g	6/25/2013	1.5	0	grab	sample from base of earth work cut	X										Paradigm, 6/25/2013	
LI-EW-S5	8/28/2013	1	0	composite	sample from base of earth work cut		X	X		X						Paradigm, 6/30/2013	
LI-EW-S6	8/30/2013	2	0	composite	sample from base of earth work cut		X	X		X						Paradigm, 6/30/2013	
					Two more EW samples to be taken when earthwork continues in spring										X		

Key:

eV = Electrovolt	ppm = Parts per million
Fe = Iron	QA/QC = Quality assurance / quality control
ft bgs = Feet below ground surface	SVOCs = Semivolatile organic compounds
Hg = Mercury	TAL = Target analyte list
MS/MSD = Matrix spike/matrix spike duplicate	TCL = Target compound list
PCBs = Polychlorinated biphenyls	TICs = Tentatively identified compounds
PID = Photoionization detector	VOCs = Volatile organic compounds



**Table 6**  
**Monitoring Well Completion Summary**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Well ID	Installation Date	Event	TOC Elevation (ft amsl)	Well Diameter (in)	Total Depth (ft bgs)	Screen Interval (ft bgs)	Depth to Bedrock (ft bgs)	Bentonite Interval (ft bgs)
RW-1	3/21/2012	Phase II	518.83*	2.0	14.0	4 - 14	3.3	0 - 3.4
RW-2	3/21/2012	Phase II	517.44*	2.0	12.1	2.1 - 12.1	2.0	0 - 1.8
RW-3	3/22/2012	Phase II	518.60	2.0	13.9	3.9 - 13.9	2.5	0 - 2.3
RW-4	4/18/2012	Phase II	523.90	2.0	21.0	11.0 - 21.0	10.5	0 - 10.8
RW-5	4/19/2012	Phase II	517.66*	2.0	20.5	10.5 - 20.5	7.0	1.0 - 8.0
RW-6	4/20/2012	Phase II	518.87*	2.0	17.4	7.4 - 17.4	5.0	1.0 - 5.5
RW-7	6/11/2012	Phase II	519.58*	2.0	18.3	8.3 - 18.3	6.1	0.5 - 7.1
RW-8	6/13/2012	Phase II	522.24*	2.0	21.2	11.2 - 21.2	9.0	1.0 - 9.3
RW-9	6/6/2012	Phase II	524.09*	2.0	23.3	13.2 - 23.3	12.1	0 - 12.8
RW-11	6/12/2012	Phase II	519.60*	2.0	19.7	9.7 - 19.7	8.2	1.0 - 8.8
RW-12	6/7/2012	Phase II	517.13	2.0	21.5	11.5 - 21.5	9.2	0.5 - 10.5
RW-13	6/8/2012	Phase II	519.38*	2.0	17.7	7.7 - 17.7	6.1	0.5 - 6.7
B101-MW	4/23/2013	RI	523.82	2.0	24.7	14.7 - 24.7	10.7	0 - 10.7
B102-MW	4/23/2013	RI	524.00	2.0	26.1	16.1 - 26.1	12.1	0 - 12.1
B106-MW	5/2/2013	RI	517.09	2.0	17.8	4.8 - 17.8	5.3	0 - 3.5
B108-MW	5/3/2013	RI	517.03	2.0	16	4 - 16	3.8	0 - 2.5

**Notes:**

TOC Top of Casing  
ft amsl Feet above mean sea level (NAVD 88)  
in Inches  
ft bgs Feet below ground surface  
RI Remedial Investigation  
\* Indicates a TOC elevation that was reported by another consultant during prior investigations





**Table 7**  
**Water Level Summary**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

		Groundwater Readings (depth in ft. below top of casing, elevation in ft amsl. <sup>(1)</sup> )																	
Well ID	Top of Casing Elevation (ft amsl)	Depth 3/16/13	Elevation 3/16/13	Depth 5/10/13	Elevation 5/10/13	Depth 5/13/13	Elevation 5/13/13	Depth 5/15/13	Elevation 5/15/13	Depth 5/20/13	Elevation 5/20/13	Depth 6/13/13	Elevation 6/13/13	Depth 7/2/13	Elevation 7/2/13	Depth 8/2/13	Elevation 8/2/13	Depth 2/1/14	Elevation 2/1/14
<b>Phase II ESA Wells</b>																			
RW-1	518.83	4.80	514.03	5.42	513.41	5.45	513.38	5.4	513.43	5.75	513.08	4.99	513.84	5.22	513.61	5.97	512.86	6.48	512.35
RW-2	517.44 <sup>(2)</sup>	3.38	514.06	3.92	513.52	3.92	513.52	3.91	513.53	5.41	513.35 <sup>(2)</sup>	NA <sup>(4)</sup>	NA <sup>(4)</sup>	NA <sup>(4)</sup>	NA <sup>(4)</sup>	NA <sup>(4)</sup>	NA <sup>(4)</sup>	6.4 <sup>(8)</sup>	512.3
RW-3	518.60	4.63	513.97	5.12	513.48	5.12	513.48	5.09	513.51	5.41	513.19	4.67	513.93	4.98	513.62	5.85	512.75	6.22	512.41
RW-4	523.90	7.64	516.26	10.1	513.80	10.13	513.77	10.1	513.80	10.18	513.72	Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	10.51	513.39	10.02 <sup>(9)</sup>	513.22
RW-5	517.66	10.78	506.88	4.67	512.99	4.71	512.95	4.7	512.96	4.84	512.82	Inacc. <sup>(5)</sup>	Inacc. <sup>(5)</sup>	4.45	513.21	5.45	512.21	Inacc. <sup>(5)</sup>	Inacc. <sup>(5)</sup>
RW-6	518.87	5.74	513.13	5.88	512.99	5.94	512.93	5.84	513.03	6.18	512.69	5.48	513.39	5.69	513.18	6.49	512.38	6.74	512.13
RW-7	519.58	5.94	513.64	6.41	513.17	6.45	513.13	6.44	513.14	6.64	512.94	6.00	513.58	6.27	513.31	7.03	512.55	6.96	512.62
RW-8	522.24	7.80	514.44	8.45	513.79	8.45	513.79	8.43	513.81	8.72	513.52	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>	NA <sup>(6)</sup>
RW-9	524.09	9.08	515.01	10.22	513.87	10.28	513.81	10.22	513.87	10.60	513.49	9.63	514.46	10.02	514.07	10.92	513.17	11.04	513.05
RW-11	519.60 <sup>(7)</sup>	6.17	513.43	7.17	512.43	7.26	512.34	7.16	512.44	Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	6.72	512.88	7.95	513.63 <sup>(7)</sup>	9.1	512.48 <sup>(7)</sup>	9.84	511.74 <sup>(7)</sup>
RW-12	517.13	6.02	511.11	6.45	510.68	6.45	510.68	6.38	510.75	6.64	510.49	5.52	511.61	5.8	511.33	6.97	510.16	6.82	510.28
RW-13	519.38	5.60	513.78	6.13	513.25	6.15	513.23	6.05	513.33	6.29	513.09	5.84	513.54	5.96	513.42	6.62	512.76	6.72	512.66
<b>Remedial Investigation Wells</b>																			
B101-MW	523.82			13.02	510.80	13.06	510.76	12.8	511.02	13.27	510.55	12.79	511.03	13.01	510.81	13.8	510.02	14.36	509.46
B102-MW	524.00			Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	10.58	513.42	10.53	513.47	10.82	513.18	10.01	513.99	10.31	513.69	11.25	512.75	11.46	512.54
B106-MW	517.09			3.71	513.38	3.72	513.37	3.66	513.43	Inacc. <sup>(3)</sup>	Inacc. <sup>(3)</sup>	3.07	514.02	3.53	513.56	4.47	512.62	4.46	512.63
B108-MW	517.03			3.45	513.58	3.49	513.54	3.45	513.58	3.78	513.25	2.92	514.11	3.28	513.75	4.19	512.84	4.33	512.7

Notes:

1. ft amsl = feet above mean sea level
2. RW-2 was repaired 5/16/13 with new casing elevation of 518.76 ft amsl. Groundwater elevation value for 5/20/13 reflects this.
3. "Inacc." - well inaccessible due to site construction activities.
4. "NA" - Not Applicable: RW-2 consistently damaged by construction activities; to be flushed out/repaired or re-drilled at a later date.
5. Well inaccessible due to runoff water/ice flooding road surface above curb box.
6. RW-8 decommissioned on 5/20/13 due to upcoming construction-related excavation.
7. RW-11 damaged and temporarily repaired on 6/20/13 with temporary casing elevation of 521.58 ft amsl. Groundwater elevations from 7/2/13 onward reflect this.
8. RW-2 flushed out and repaired 12/16/13; current temporary casing elevation: 518.7 ft amsl.
9. RW-4 riser cut on 10/25/13 for construction-related activities; current temporary casing elevation: 523.24 ft amsl.



**Table 8**  
**Summary of RI Groundwater Sampling Program**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Sample ID	Sample Date	Sample Type	Sample location	Analyses						QA/QC			Submitted (lab, date)
				TCL VOCs (8260)	TCL SVOCs (8270)	TAL Metals (6010)	Total Pesticides	Total PCBs	Benchscale ERD Assessment	Field Duplicate	Trip Blank	MS/MSD	
LI-B-BTW	5/6/2013	grab	B108-MW						X				Stantec, 5/6/2013
LI-B102-MW	5/7/2013	grab	B102-MW						X				Sirem 5/7/2013
LI-B108-MW	5/7/2013	grab	B108-MW						X				Sirem 5/7/2013
LI-BT-RW-6	5/17/2013	grab	RW-6						X				Stantec, 5/21/2013
LI-RW-1-GW1	5/23/2013	grab	RW-1	X									Chemtech, 5/23/2013
LI-RW-2-GW1	5/21/2013	grab	RW-2	X	X	X	X	X					Chemtech, 5/21/2013
LI-RW-2-GW1 MS/MSD	5/21/2013	grab - MS/MSD	RW-2	X	X	X	X	X				X	Chemtech, 5/21/2013
LI-RW-3-GW1	5/22/2013	grab	RW-3	X									Chemtech, 5/22/2013
LI-RW-4-GW1	5/22/2013	grab	RW-4	X	X	X	X	X					Chemtech, 5/22/2013
LI-RW-5-GW1	5/21/2013	grab	RW-5	X									Chemtech, 5/21/2013
LI-RW-6-GW1	5/20/2013	grab	RW-6	X									Chemtech, 5/20/2013
LI-RW-7-GW1	5/20/2013	grab	RW-7	X									Chemtech, 5/20/2013
LI-RW-8-GW1	5/20/2013	grab	RW-8	X									Chemtech, 5/20/2013
LI-RW-9-GW1	5/21/2013	grab	RW-9	X									Chemtech, 5/21/2013
LI-RW-11-GW1	5/22/2013	grab	RW-11	X									Chemtech, 5/22/2013
LI-RW-12-GW1	5/20/2013	grab	RW-12	X									Chemtech, 5/20/2013
LI-RW-13-GW1	5/20/2013	grab	RW-13	X									Chemtech, 5/20/2013
LI-B101MW-GW1	5/21/2013	grab	B101-MW	X	X	X	X	X					Chemtech, 5/21/2013
LI-B101MW-GW1DUP	5/21/2013	grab - Field Duplicate	B101-MW	X	X	X	X	X		X			Chemtech, 5/21/2013
LI-B102MW-GW1	5/22/2013	grab	B102-MW	X									Chemtech, 5/22/2013
LI-B106MW-GW1	5/23/2013	grab	B106-MW	X									Chemtech, 5/23/2013
LI-B108MW-GW1	5/23/2013	grab	B108-MW	X	X	X	X	X					Chemtech, 5/23/2013
Trip Blank	5/20/2013	grab - Trip Blank	NA	X							X		Chemtech, 5/20/2013
Trip Blank	5/21/2013	grab - Trip Blank	NA	X							X		Chemtech, 5/21/2013

Key:

eV = Electrovolt  
MS/MSD = Matrix spike/matrix spike duplicate  
PCBs = Polychlorinated biphenyls  
QA/QC = Quality assurance / quality control

SVOCs = Semivolatile organic compounds  
TAL = Target analyte list  
TCL = Target compound list  
VOCs = Volatile organic compounds



**Table 9**  
**Summary of Hydraulic Conductivity Testing Results**  
 Remedial Investigation  
 Former Carriage Factory  
 33 Litchfield Street, Rochester, NY

MONITORING WELLS	TEST TYPE	HYDRAULIC CONDUCTIVITY (cm/s)	AVERAGE HYDRAULIC CONDUCTIVITY (cm/s)
RW-1	Falling Head	1.7E-03	1.6E-03
	Falling Head	1.6E-03	
	Falling Head	1.6E-03	
	Rising Head	1.2E-03	1.3E-03
	Rising Head	1.4E-03	
	Rising Head	1.4E-03	
RW-3	Rising Head	1.2E-03	1.2E-03
	Rising Head	1.1E-03	
B102-MW	Falling Head	3.4E-03	3.3E-03
	Falling Head	3.2E-03	
	Falling Head	3.3E-03	
	Rising Head	3.6E-03	3.4E-03
	Rising Head	3.5E-03	
	Rising Head	3.3E-03	
B108-MW	Falling Head	3.7E-03	3.5E-03
	Falling Head	3.4E-03	
	Rising Head	4.0E-03	3.8E-03
	Rising Head	3.7E-03	

**Notes:**

1. Testing conducted with solid PVC slugs on May 28, 2013.
2. All data analysis completed using AQUTESOLV 4.02 Professional (2006) and the Bouwer-Rice Method (1976).

**Key:**

cm/s = centimeters per second



**Table 10**  
**Summary of Groundwater Field Parameters**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Sample Location		B101-MW	B102-MW	B106-MW	B108-MW	RW-1	RW-2	RW-3	RW-4
Purge Date		21-MAY-2013	22-MAY-2013	23-MAY-2013	23-MAY-2013	23-MAY-2013	21-MAY-2013	22-MAY-2013	22-MAY-2013
Purge Methodology		Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow
Purge Method		Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic
Sample Date		21-MAY-2013	22-MAY-2013	23-MAY-2013	23-MAY-2013	23-MAY-2013	21-MAY-2013	22-MAY-2013	22-MAY-2013
Sampling Method		Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic
Field Parameters Units									
Conductivity	mS/cm	0.99	0.86	0.92	0.95	0.74	0.85	0.87	0.91
Dissolved Oxygen	mg/L	1.34	0.10	0.13	0.13	0.13	0.28	0.15	0.11
Oxidation Reduction Potential	mV	-25.0	13.3	17.8	29.1	-94.3	-30.3	87.3	38.6
pH	S.U.	7.02	6.87	6.99	7.15	7.19	7.36	7.39	6.91
Temperature	deg C	13.4	20.5	16.1	13.6	12.5	12.7	12.4	20.0
Turbidity	NTU	0.68	4.07	4.77	0.62	10.55	5.23	0.88	5.68
Volume Purged	gal	0.8	1.2	1.1	0.5	0.7	1.2	0.5	0.8
Field Parameters Units									
Sample Location		RW-5	RW-6	RW-7	RW-8	RW-9	RW-11	RW-12	RW-13
Purge Date		21-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	21-MAY-2013	22-MAY-2013	20-MAY-2013	20-MAY-2013
Purge Methodology		Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow	Low flow
Purge Method		Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic
Sample Date		21-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	21-MAY-2013	22-MAY-2013	20-MAY-2013	20-MAY-2013
Sampling Method		Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic	Peristaltic
Field Parameters Units									
Conductivity	mS/cm	0.89	0.93	1.02	1.04	0.94	0.79	1.02	1.08
Dissolved Oxygen	mg/L	0.28	0.08	0.08	1.06	2.48	2.36	0.06	1.96
Oxidation Reduction Potential	mV	-2.3	-10.6	29.4	77.0	49.4	94.5	20.0	48.6
pH	S.U.	7.07	7.13	7.06	7.05	7.13	7.15	7.10	7.21
Temperature	deg C	16.2	19.0	16.8	14.4	14.0	14.6	16.0	17.2
Turbidity	NTU	2.98	7.08 <sup>a</sup>	10.38	2.54	0.33	0.11 <sup>b</sup>	— <sup>c</sup>	5.10
Volume Purged	gal	1.1	1.3	1.2	1.0	0.8	0.4	1.0	2.3

**Notes:**

deg c degrees Celsius

gal gallons

mg/l milligrams per liter

mS/cm milliSiemens per centimeter

mV millivolts

NTU nephelometric turbidity unit

AU attenuation unit (equivalent to NTU)

S.U. standard units

<sup>a</sup> Sample turbidity measured approximately 10 minutes prior to sampling; subsequent measurements (-126 NTU) indicated that the turbidity meter was not functioning properly.

<sup>b</sup> Sample turbidity measured approximately 5 minutes prior to sampling; subsequent measurement (-0.02 NTU) indicated that the turbidity meter was not functioning properly.

<sup>c</sup> Turbidity meter was not functioning; groundwater was clear and did not have an odor.



**Table 11**  
**Enhanced Reductive Dechlorination Treatability Results**  
Remedial Investigation  
Former Carriage Factory  
33 Litchfield Street, Rochester, NY

Sample Identification	Testing Timeframe (Days)	Testing Date	pH	ORP (mv)	GC Analytical Screening Results (VOC Equivalents)					
					Ethene	Vinyl Chloride	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Active Control	0	05/08/13	7.25	203	BDL	BDL	BDL	563	1,021	263
	16	05/24/13	6.97	190	BDL	BDL	BDL	545	971	250
	22	05/30/13	7.03	180	BDL	BDL	BDL	536	965	249
	28	06/05/13	7.08	208	BDL	BDL	BDL	533	986	243
	35	06/12/13	7.09	188	BDL	BDL	BDL	528	926	211
	42	06/19/13	7.08	187	BDL	BDL	BDL	514	918	209
	55	07/02/13	7.05	174	BDL	BDL	BDL	509	903	198
	63	07/10/13	7.06	175	BDL	BDL	BDL	498	887	191
	70	07/17/13	7.05	175	BDL	BDL	BDL	481	872	186
	91	08/07/13	7.05	169	BDL	BDL	BDL	465	781	179
Sodium Acetate	0	05/08/13	7.15	198	BDL	BDL	BDL	605	997	268
	16	05/24/13	6.94	174	BDL	BDL	BDL	581	979	259
	22	05/30/13	7.10	171	BDL	BDL	BDL	581	954	255
	28	06/05/13	7.05	161	BDL	BDL	BDL	574	946	248
	35	06/12/13	7.04	106	BDL	BDL	BDL	553	968	175
	42	06/19/13	7.05	102	BDL	BDL	BDL	525	828	100
	55	07/02/13	7.03	83	BDL	102	BDL	499	747	91
	63	07/10/13	7.02	12	BDL	173	BDL	517	651	BDL
	70	07/17/13	7.04	-36	BDL	211	BDL	512	503	BDL
	91	08/07/13	7.02	-89	BDL	652	BDL	323	112	BDL
Sodium Lactate	0	05/08/13	7.12	177	BDL	BDL	BDL	583	983	271
	16	05/24/13	7.05	56	BDL	BDL	BDL	524	884	241
	22	05/30/13	7.00	-3	BDL	409	BDL	700	515	122
	28	06/05/13	6.95	-70	BDL	583	53	632	492	BDL
	35	06/12/13	6.85	-133	BDL	3,491	53	401	302	BDL
	42	06/19/13	6.84	-193	231	2,687	BDL	476	BDL	BDL
	55	07/02/13	6.77	-262	565	1,918	BDL	299	BDL	BDL
	63	07/10/13	6.77	-275	583	1,506	BDL	198	BDL	BDL
	70	07/17/13	6.78	-269	549	1,067	BDL	72	BDL	BDL
	91	08/07/13	6.76	-252	422	711	BDL	BDL	BDL	BDL
Emulsified Vegetable Oil	0	05/08/13	7.18	183	BDL	BDL	BDL	612	992	263
	16	05/24/13	7.13	94	BDL	BDL	BDL	584	954	248
	22	05/30/13	7.14	72	BDL	BDL	BDL	563	670	163
	28	06/05/13	7.14	32	BDL	BDL	BDL	501	642	97
	35	06/12/13	7.17	10	BDL	BDL	BDL	563	592	BDL
	42	06/19/13	7.13	5	BDL	122	BDL	511	522	BDL
	55	07/02/13	7.09	-16	BDL	406	BDL	476	349	BDL
	63	07/10/13	7.10	-71	BDL	623	BDL	483	218	BDL
	70	07/17/13	7.09	-83	BDL	872	BDL	426	101	BDL
	91	08/07/13	7.08	-124	79	1,013	BDL	378	BDL	BDL

mV - Millivolts  
BDL - Below Detection Limits (50)



# **APPENDIX A**





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-1A

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 9:30 AM

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.1	Weathered ASPHALT	
	0		1.2	Gray coarse GRAVEL (Crushed Stone)	
	0			Brown to black layered ASH & CINDERS	
2	0			(increasing amount of demo debris in east end of pit: large angular stones)	4" CIP encountered at 2. ft., runs E-W.
3	0		2.8	- FILL -	Contact at base of ASH/ CINDERS varies
	0			Light brown SILT, trace - little Clay, trace fine sand, moist	
4	0			(grades to dark brown in east portion of pit) - TILL -	
5				Bottom of Pit at 4 ft.	Encountered 2nd 4" CIP at east end of pit, runs NE-SW
6					
7					No water encountered.
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusal observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for TP-1B





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-1B

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 9:45 AM

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.1	Weathered ASPHALT	Roots more prevalent than in TP-1A.
2	0			Brown to black layered ASH & CINDERS (large angular stones prevalent)	
3	0		2.8	- FILL -	
4	0			Light brown SILT, trace - little Clay, trace fine sand, moist - TILL -	
5				Bottom of Pit at 4 ft.	No water encountered.
6					
7					
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusual observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for TP-1B





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-2A

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 10:05

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.2	Weathered ASPHALT	Some peastone under asphalt.
	0		1.2	Variable colored, mixed CINDER/ASH/BRICK, trace gravel, occasional cobbles	
2	0			Black CINDERS, thinly-layered	
	0		2.6	Gray SILT, trace sand and clay.	
3	0			- TILL -	
4				Bottom of Pit 3.2 ft.	No water encountered.
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusual observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for test pits TP-2B and TP-2C





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-2B

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date 4/10/2013  
Time: 10:24

0	PID (ppm)	Sample Info		Strata Change	Soil & Stratigraphy Descriptions	Remarks
		ID	Depth			
	0			0.3	Dark Brown LOAM & roots - TOPSOIL -	
1	0			1	Black and gray ASH	
	0				Black CINDERS & ASH	
2	0			2.2		
	0				Tan Fine SAND	
3	0			2.8	- FILL -	
	0				Gray SILT, trace clay and fine sand	No water encountered.
4	0				- TILL -	
					Bottom of Pit 3.8 ft.	
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusal observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for test pits TP-2A and TP-2C





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-2C

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 10:30

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.5	Dark Brown LOAM with roots - TOPSOIL -	
2	0			Variable colored ASH & CINDERS in layers and pockets, occasional bricks	One piece of metal observed
3	0		2.4		
4	0		3.0	Black CINDERS/ASH	
5	0			Gray SILT, trace fine Sand, trace Clay, trace Gravel	
6				Bottom of Pit 3.5 ft.	
7					No water encountered.
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusual observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for test pits TP-2A and TP-2B





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-3A

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date 4/10/2013  
Time: 11:20

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.2	Brown LOAM & Roots - TOPSOIL -	Encountered several large metal objects
	0			Mixed. bldg stone rubble, loam and & sandy gravel	
2	0		1.5	- FILL -	
	0				
3	0			Mottled brown fine SAND, trace silt.	
	0			- FILL -	
4	0		3.5		No water encountered.
	0			Tan SILT, trace fine sand and clay - TILL -	
5				Bottom of Pit 4.0 ft.	
6					
7					
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusal observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for TP-3B, excavated perpendicular to TP-3A





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-3B

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date 4/10/2013  
Time: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.2	Brown LOAM & Roots - TOPSOIL -	Occasional metal encountered
	0		1	Mixed. bldg stone rubble, loam and & sandy gravel	
	0		1.5	Black ASH/CINDERS	
2	0				
	0			Mottled brown fine SAND, trace silt.	
3	0			- FILL -	
	0		3.5		
4	0			Tan SILT, trace fine sand and clay - TILL -	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusal observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

See also log for TP-3A, adjacent and perpendicular





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

Test Pit: TP-4A

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 12:30

0	PID (ppm)	Sample Info ID	Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0			0.3	ASPHALT	
2	0				Mixed ASH, CINDERS and SAND, with bricks, ceramics, rubber, wood, etc. - FILL -	Layers slope to west.
3	0.1				Layer of tan silty SAND at 2 ft.	"organic" odor noticed throughout excavation
4	0.2					
5	0					
6	0			3.7	Semi-cemented layer of ASH at ~3.0 ft., 8-in thick	
7	0				Brown to light brown SILT, trace sand and clay (grades to dark gray in south end of pit)	
8	0					
9						
10						
11						
12						
13						
14						
6					Bottom of Exploration at 5.0 Ft.	No water encountered
7						
8						
9						
10						
11						
12						
13						
14						

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

**Remarks (Unusual observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:**

Test pit bends toward south at west end (see plan).





61 Commercial Street  
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(585) 475-1440

Test Pit: TP-4B

Project: Former Carriage Factory  
Project #: 190500751.000  
Client: CFSNA, LP  
Location: 33 Litchfield St, Rochester

Contractor: Nothnagle  
Operator: S. Loranty  
Equip Used: Hitachi EX-25  
Weather: Rain, 40s

Date: 4/10/2013  
Time: 2:00

0	PID (ppm)	Sample Info ID Depth	Strata Change	Soil & Stratigraphy Descriptions	Remarks
1	0		0.2	ASPHALT	Several large pieces of rusty metal encountered.
	0		0.4	GRAVEL	
2	0		0.5	ASPHALT	
	0				
3	0			Mixed ASH, CINDER and BRICK, with other fill materials.	
4	0				
5				Bottom of Exploration at 4.0 Ft.	No water encountered
6					
7					
8					
9					
10					
11					
12					
13					
14					

**Notes:**

1. PID Model Mini-Rae 3000 with 10.2 eV lamp.
2. Depth to water at completion.

Remarks (Unusal observations, caving characteristics, sheen or layers on water, odors, boulder count, etc:

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61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: **B-101-MW**  
Page: **1 of 2**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation:  
Weather:

Date: 4/22/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0			0		
1	0			1.0	Black to dark brown CINDERS and ASH, trace sand, trace gravel, with organics (roots). - FILL -
2	0	30"	S1		Brown silty CLAY, trace fine sand.
3	0				
4			4.0		
5	0		4.0		
6	0	24"	S2		- GLACIAL TILL -
7					SAME
8			8.0		
9	0		8.0		
10	0	14"	S3		SAME
11			10.7	10.7	Top of rock at 10.7 ft.
12					
13				12.7	Advanced roller bit and began coring at 12.7 ft.
14			12.7		
15					Light gray, hard, slightly weathered, medium- to thick-bedded DOLOSTONE with occasional pits, vugs, and dark gray shale seams. Moderately weathered bedding plane joints spaced 0.2-0.8 ft.
16	RQD: 57" 95%	REC: 57" 95%	R1		
17					
18			17.7		
19			17.7		(7" core left in hole)
20			R2		

continued on page 2

## Notes:

- PID Model Mini-Rae 2000 with 10.6eV lamp.
- Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
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# TEST BORING LOG

Boring No: **B-101-MW**

Page: **2 of 2**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation:  
Weather:

Date: 4/22/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
		Rec. (in)	No. & Depth		
20					
21	RQD: 50"	REC: 55"			SAME  - ERAMOSA DOLOMITE -  * RQD percentage based on core recovered.
22	91%*	92%			
23			22.7		
24	RQD: 20"	REC: 24"	22.7 R3		
25	83%*	100%	24.7	24.7	(recovered some core from R2)
26					Bottom of Exploration at 24.7 ft.
27					Notes: (1) Monitoring well installed in completed borehole; see Well Completion Report. (2) Lost approx. 200 gal. water during reaming and coring.
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
38					
40					

## Notes:

1. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

## TEST BORING LOG

Boring No: **B-102-MW**

Page: **1 of 2**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation: \_\_\_\_\_  
Weather: \_\_\_\_\_

Date: 4/22/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

0	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
1	0		0	0.3	Asphalt
2	0		S1	0.6	Weathered ASPHALT, and SAND & GRAVEL
3	0			1.0	Black CINDERS and ASH - FILL -
4	0			1.2	Red BRICK FRAGMENTS and ASH
5	0			2.0	Black CINDERS and ASH - FILL -
6	0				Gray-Brown Silty CLAY
7	0		4.0		
8	0		4.0		
9	0		S2		Brown SILT to Silty CLAY
10	0				- GLACIAL TILL -
11	0				(Wet below 7 ft.)
12	0		8.0		
13	0		8.0		
14	0		S3		SAME, wet
15	0				
16	0		12.0		
17	0		S4	12.1	Sampler Refusal on Top of Rock at 12.1 ft
18			12.1		
19					Advance 6-in. roller bit and began coring at 14.1 ft.
20			14.1		
21	RQD: 36"	REC: 54"	R1		Light gray, hard, slightly weathered, medium to thick-bedded DOLOSTONE. Occasional pit and vugs, occasional dark gray shale seams. Moderately weathered bedding plane joints spaced 0.2-0.8 ft.
22	60%	90%			Rough, curved high-angle to vertical joint from 16.8-17.6 ft.
23					- ERAMOSA DOLOMITE -
24			19.1		
25			19.1		Rough, short low angle joint at 20.3 ft.

continued on page 2

### Notes:

- PID Model Mini-Rae 2000 with 10.6eV lamp.
- Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
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## TEST BORING LOG

Boring No: **B-102-MW**

Page: **2 of 2**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation: \_\_\_\_\_  
Weather: \_\_\_\_\_

Date: 4/22/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
		Rec. (in)	No. & Depth		
20					
21					
22			R2		SAME
23	RQD: 42" 84%*	REC: 50" 83%			- ERAMOSA DOLOMITE -  (11 " core left in hole) * RQD percentage based on core recovered.
24			24.1		
25	RQD: 26" 84%	REC: 31' 130%	24.1 R3		SAME  (recovered some core from R2)
26			26.1		
27					Bottom of Exploration at 26.1 ft.
28					Notes: (1) Monitoring well installed in completed borehole; see Well Completion Report.
29					(2) Lost approx. 250 gal. water during reaming and coring.
30					
31					
32					
33					
34					
35					
36					
37					
38					
38					
40					

### Notes:

1. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
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## TEST BORING LOG

Boring No: **B-103**

Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation:   
Weather:

Date: 4/24/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

0	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0	26"	0	0.5	Asphalt
1				1.0	Gray SAND and GRAVEL - FILL -
2	0			1.5	Dark brown SAND and CINDERS, pockets of brick
3	0				Gray to black CINDERS and ASH, with pockets of yellow.
4			4.0		- FILL -
5	0	32"	4.0	4.3	Brown clayey SILT to silty CLAY, silt and fine sand seams, wet below 6'. No staining/odor.
6	0				
7	0				
8			8.0		
9	0	36"	8.0		Grades to  - GLACIAL TILL -  Brown silty CLAY, trace sand, trace fine gravel, occasional silt seams, moist. No staining/odor.
10	0				
11	0				
12	0		12.0		
13	0	10"	12.0		Bottom of Exploration at 13.1 ft. (refusal)
14			13.1		
15					
16					
17					
18					
19					
20					

### Notes:

- PID Model Mini-Rae 2000 with 10.6eV lamp.
- Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
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## TEST BORING LOG

Boring No: **B-104**

Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation:   
Weather:

Date: 4/24/2013  
Drilling Method: Macrocore  
Supervisor: R. Mahoney

0	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
1	0	26"	0	0.2	Asphalt
2	0		0.4	Light gray SAND and GRAVEL - FILL -	
3			1.4	Black CINDERS and ASH, brick	
4	0		1.6	Gray brown clayey SILT	
5	0	26"	S1		Brown SILT, little fine sand, trace fine gravel
6					
7	0				
8					
9	0	26"	4.0		Same as above with pure silt seams
10	0		4.0		
11	0				
12	0				
13	0	26"	S2		Wet below 5.5'
14					
15					
16					
17		30"	S3		- GLACIAL TILL -
18					
19					
20					
21	0	30"	8.0		Brown fine sandy SILT, little to trace gravel, moist
22	0		8.0		
23					
24	0				
25	0	30"	S3		
26					
27					
28					
29		30"	S3		
30					
31					
32					
33		30"	S3		
34					
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36					
37		30"	S3		
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41		30"	S3		
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489		30"	S3		
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492					
493		30"	S3		
494					
495					
496					
497		30"	S3		
498					
499					

### Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.
2. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
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(585) 475-1440

## TEST BORING LOG

Boring No: **B-105**  
Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: S. Loranty  
Elevation: \_\_\_\_\_  
Weather: \_\_\_\_\_

Date: 4/24/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: R. Mahoney

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0	22"	0	0.1	Asphalt
1	0		S1		Black CINDERS, trace brick
	0			1.8	- FILL -
2	0			2.0	Dark gray SILT, trace sand and gravel
	0	26"	S2		Brown clayey SILT, trace to little fine sand, damp.
3	0				
4	0			4.0	
	0			4.0	
5	0	NR	S3		SAME
6	0				
7	0				- GLACIAL TILL -
8	0			8.0	
	0	NR	S3	8.0	
9	0				
10	0				
11	0				
12			11.9	11.9	
13					Bottom of Exploration at 11.9 ft. (refusal)
14					
15					
16					
17					
18					
19					
20					

### Notes:

- PID Model Mini-Rae 2000 with 10.6eV lamp.
- Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).
- "NR" - Not Recorded.





61 Commercial Street  
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# TEST BORING LOG

Boring No: **B-106-MW**

Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: N. Short  
Elevation:   
Weather:

Date: 5/2/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: B. Haravitch

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	75		0		Dark brown gravelly SAND, little silt
1					
	80				- FILL -
2					
	57	28"	S1	2.5	
3					Gray brown SILT, little fine sand, trace fine gravel, wet
	26				
4			4		
	0.3		4		- GLACIAL TILL -
5	1.5	12"	S2		SAME
	0.2		5.3	5.3	Sampler refusal at 5.3 ft.
6			5.5		Began coring at 5.5 ft.
7					
8	RQD: 44"	REC: 50"	R1		Light gray, hard, slightly weathered medium- to thick-bedded DOLOSTONE with occasional pitted seams and dark gray shale seams. Moderately weathered bedding plane joints spaced 0.2-0.8 ft.
9	81%	93%			
10			10.0		
11			10.0		
12					
13	RQD: 57"	REC: 58"	R2		
14	95%	97%			
15			15.0		
16	RQD: 26"	REC: 34"	R3		
17	76%	100%	17.8	17.8	
18					Bottom of Exploration at 17.8 ft.
19					Notes: (1) Monitoring well installed in completed borehole; see Well Completion Report.
20					(2) Lost approx. 40 gal. water during coring.

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.
2. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

## TEST BORING LOG

Boring No: B107

Page: 1 of 1

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: N. Short  
Elevation:   
Weather:

Date: 5/2/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: B. Haravitch

0	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
1	19	20"	0		Brown coarse to fine SAND, some gravel, trace silt.
	29				
2	64		2.0	2.0	
					Bottom of Exploration at 2 ft. (refusal)
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

### Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.
2. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: **B-108-MW**

Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: N. Short  
Elevation:  
Weather:

Date: 5/3/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: B. Haravitch

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	253		0		Brown coarse to fine SAND, little gravel. Gasoline-like odor, very little staining.  - FILL -
1	392				
	395				
2	373	40"	S1	2.0	Brown medium to fine silty SAND, trace gravel.  - GLACIAL TILL -
	387				
3	66				
	1.6				Refusal at 3.8 ft.
4			3.8	3.8	
5	RQD: 8" 48%	REC: 16" 95%	3.8 R1 5.2		Began coring at 3.8 ft.  Light gray, hard, slightly weathered medium- to thick-bedded DOLOSTONE with occasional pits and vugs and occasional dark gray shale seams. Moderately weathered bedding plane joints spaced 0.2-0.9 ft. throughout.  Curved, vertical joint from 5.3-5.6'          - ERAMOSA DOLOMITE -
6			5.2		
7					
8	RQD: 51"	REC: 58"	R2		
9	85%	97%			
10			10.2		
11			10.2		
12					
13	RQD: 57"	REC: 60"	R3		
14	95%	100%			
15	RQD: 11"	REC: 11"	15.2 R4		* RQD percentage based on core recovered.  Bottom of Exploration at 16 ft.  Notes: (1) Monitoring well installed in completed borehole; see Well Completion Report. (2) Lost approx. 65 gal. water during coring.
16	100%*	115%	16.0		
17					
18					
19					
20					

## Notes:

- PID Model Mini-Rae 2000 with 10.6eV lamp.
- Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

## TEST BORING LOG

Boring No: **B-109**

Page: **1 of 1**

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: N. Short  
Elevation:   
Weather:

Date: 5/3/2013  
Drilling Method: Direct Push / Rotary  
Supervisor: B. Haravitch

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0	22.8"	0	1.0	Brown coarse to fine SAND, little gravel.
1	0		S1		- FILL -
	0.7				Brown fine SAND, little silt, little gravel.
2	0.1		1.9		- GLACIAL TILL -
					Bottom of Exploration at 1.9 ft. (refusal)
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

### Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.
2. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
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# TEST BORING LOG

Boring No: B-110  
Page: 1 of 1

Project: Carriage Factory RI  
Project #: 190500751  
Client: CFSNA  
Location: Rochester, NY

Contractor: Nothnagle  
Driller: Niel S.  
Elevation:   
Weather:

Date: 5/3/2013  
Drilling Method: Direct Push / Rotary  
Supervisor:

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0	27.6"	0		Dark coarse to fine SAND and GRAVEL. - FILL -
1	0				
	0		S1	1.5	Medium to fine SAND, some silt, trace gravel. - GLACIAL TILL -
2	0		2.3	2.3	
3					Bottom of Exploration at 2.3 ft. (refusal)
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.
2. Sample Types: S=MACROCORE; R=ROCK CORE RUN (HQ Core).





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

## TEST BORING LOG

Boring No: SB-1  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	1.1	30"	0.0	0.3	Gray concrete
1			S1	1.5	Not logged
2	0.0			1.6	Black granular sand, moist
3	0.0				
4		31"	4.0	6.6	Brown fine to medium grained sand, trace gravel, moist
5	0.0		S2		
6	0.0				
7			6.6		
8					Refusal/end of boring at 6.5'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

### Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-2  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.0	14"	0.0	0.3	Gray concrete
1	0.0				
2	0.0		S1		
3					
4			4.0		Brown fine to medium grained sand, trace gravel, moist and becoming wet at 4'
5	0.0	32"	4.0		
6	0.0		S2		
7			6.7		
8					Refusal/end of boring at 6.7'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-3  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0		15"	0.0	0.3	Gray concrete
1	0.0				
2			S1		
3	0.0				
4			4.0		
5		28"	4.0		Brown fine to medium grained sand, trace gravel, dry-moist and becoming moist at 4'
6	0.0		S2		
7	0.0		7.0		
8					Refusal/end of boring at 7.0'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-4  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.0	23"	0.0	0.3	Gray concrete
1	0.0		S1	0.4	Black gravel, moist
					Brown fine to medium grained sand, trace gravel, moist
2	0.0				
3					
4			4.0		
5	0.0	34"	4.0		
6	0.0		S2		
7			6.8	6.8	
8					Refusal/end of boring at 6.8'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-5  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.0	19"	0.0	0.3	Gray concrete
1	0.0		S1	0.6	Black gravel, coarse sand, moist
	0.0				Brown fine to medium grained sand, gravel, moist
2					
3		21"	4.0		
4					
5					
6	2.7		S2	6.6	
7	22.2		7.0	7.0	Gray fine sand, some gravel, possible petroleum odor, moist-saturated
8					Refusal/end of boring at 7.0'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-6  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.2	17"	0.0	0.3	Gray concrete
1	0.0		S1	0.7	Black gravel, brown fine to medium grained sand, moist
				0.8	Red brick
2					
3		29"	4.0	7.0	Brown fine to medium grained sand, gravel, moist and becoming moist-saturated at 4'
4					
5					
6	0.0		S2		
7	0.0		7.0	7.0	
8					Refusal/end of boring at 7.0'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-7  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	1.0	23"	0.0	0.3	Gray concrete
1	0.0		S1	0.4	Dark brown gravel, moist
					Brown fine to medium grained sand, gravel, moist
2	0.0				
3					
4			4.0		
5		28"	4.0		
	0.0		S2		
6					
7	0.0		6.8	6.8	
8					Refusal/end of boring at 6.8'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-8  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0		13"	0.0	0.3	Gray concrete
1				0.4	Brown/black coarse gravel, moist
	0.1				Brown fine to medium grained sand, trace gravel, moist
2			S1		
3					
4			4.0		
	0.1	30"	4.0		
5					
			S2		
6	0.1		6.3	6.3	
7					Refusal/end of boring at 6.3'
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-9  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.3	23"	0.0	0.3	Gray concrete
1	0		S1	0.4	Black gravel, sand, moist
2	0			Brown fine to medium grained sand, gravel, moist	
3					
4					
5					
6		38"	4.0	6.5	Gray, fine to medium grained sand, gravel, possible petroleum odor, moist-saturated
7	0.1		S2		
8	0.1				
9					
10	172.1	7.1		7.1	
11					Refusal/end of boring at 7.1'
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-10  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.5	19"	0.0	0.3	Gray concrete
1	0.1		S1	0.4	Black gravel, moist
					Brown fine to medium grained sand, trace gravel, moist
2	0.1				
3		36"	4.0		
4					
5					
6					
7	0.2		7.1	7.1	
8					Refusal/end of boring at 7.1'
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.





61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

# TEST BORING LOG

Boring No: SB-11  
Page: 1 of 1

Project: Carriage Factory SC  
Project #: 190500751  
Client: CFSNA  
Location: 33 Litchfield Street  
Rochester, NY

Contractor: Nothnagle  
Driller: Jeff Schweitzer  
Elevation:   
Weather: N/A

Date: 12/10/2012  
Drilling Method: Macrocore by Jackhammer  
Supervisor: E. McCormick

	SAMPLE			Strata Change (ft)	Soil and Bedrock Descriptions And Remarks
	PID (ppm)	Rec. (in)	No. & Depth		
0	0.1	36"	0.0	0.3	Gray concrete
1			S1		Brown fine to medium grained sand, trace gravel, moist
2					
3	0.2		3.0	0.3	
4					Refusal/end of boring at 3.0'
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.

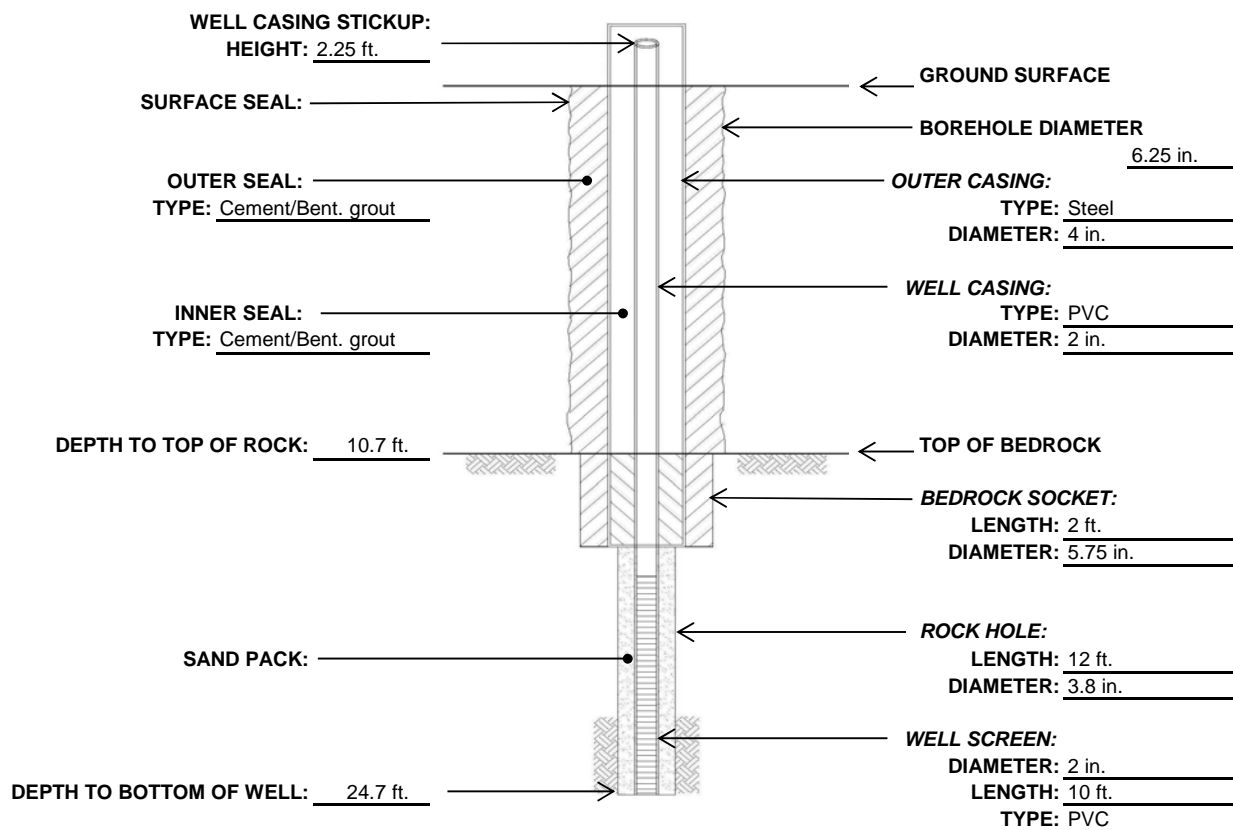




# Stantec MONITORING WELL COMPLETION REPORT - BEDROCK

61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

PROJECT NAME:	Carriage Factory	HOLE DESIGNATION :	B101-MW
PROJECT NUMBER:	190500751	DATE COMPLETED:	4/23/2013
CLIENT:	DePaul	DRILLING METHOD:	Direct Push / Rotary
LOCATION:	33 Litchfield St	DRILLER/STANTEC REP:	Nothnagle



**Note:**

Depths are referenced below ground surface.

SCREEN LENGTH:	10 ft
WELL CASING LENGTH:	16.95 ft
TOTAL LENGTH:	26.95 ft

REMARKS: Well to be finished with a flush-mount curb box when final grade is established.

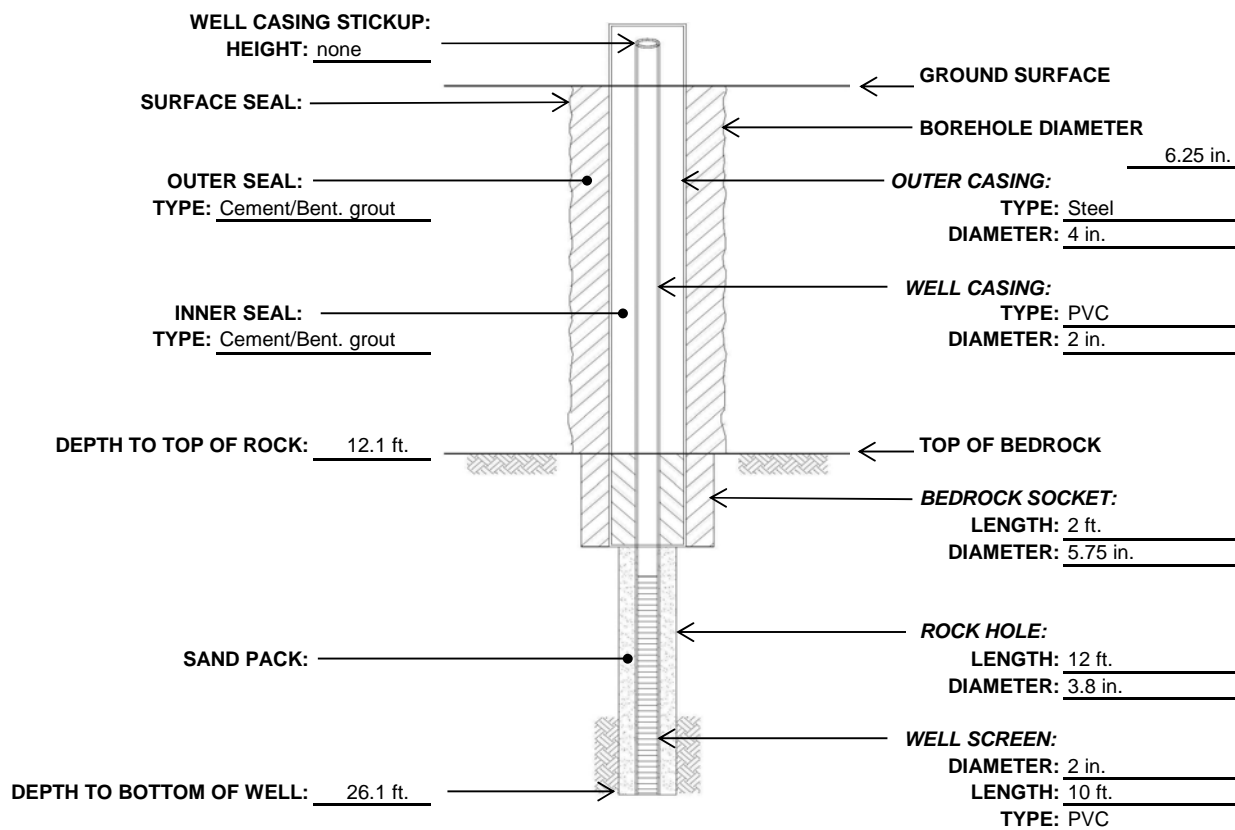




# Stantec MONITORING WELL COMPLETION REPORT - BEDROCK

61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

PROJECT NAME:	Carriage Factory	HOLE DESIGNATION :	B102-MW
PROJECT NUMBER:	190500751	DATE COMPLETED:	4/23/2013
CLIENT:	DePaul	DRILLING METHOD:	Direct Push / Rotary
LOCATION:	33 Litchfield St	DRILLER/STANTEC REP:	Nothnagle



## Note:

Depths are referenced below ground surface.

SCREEN LENGTH: 10 ft  
WELL CASING LENGTH: 16.1 ft  
TOTAL LENGTH: 26.1 ft

REMARKS: Well to be finished with a flush-mount curb box when final grade is established.

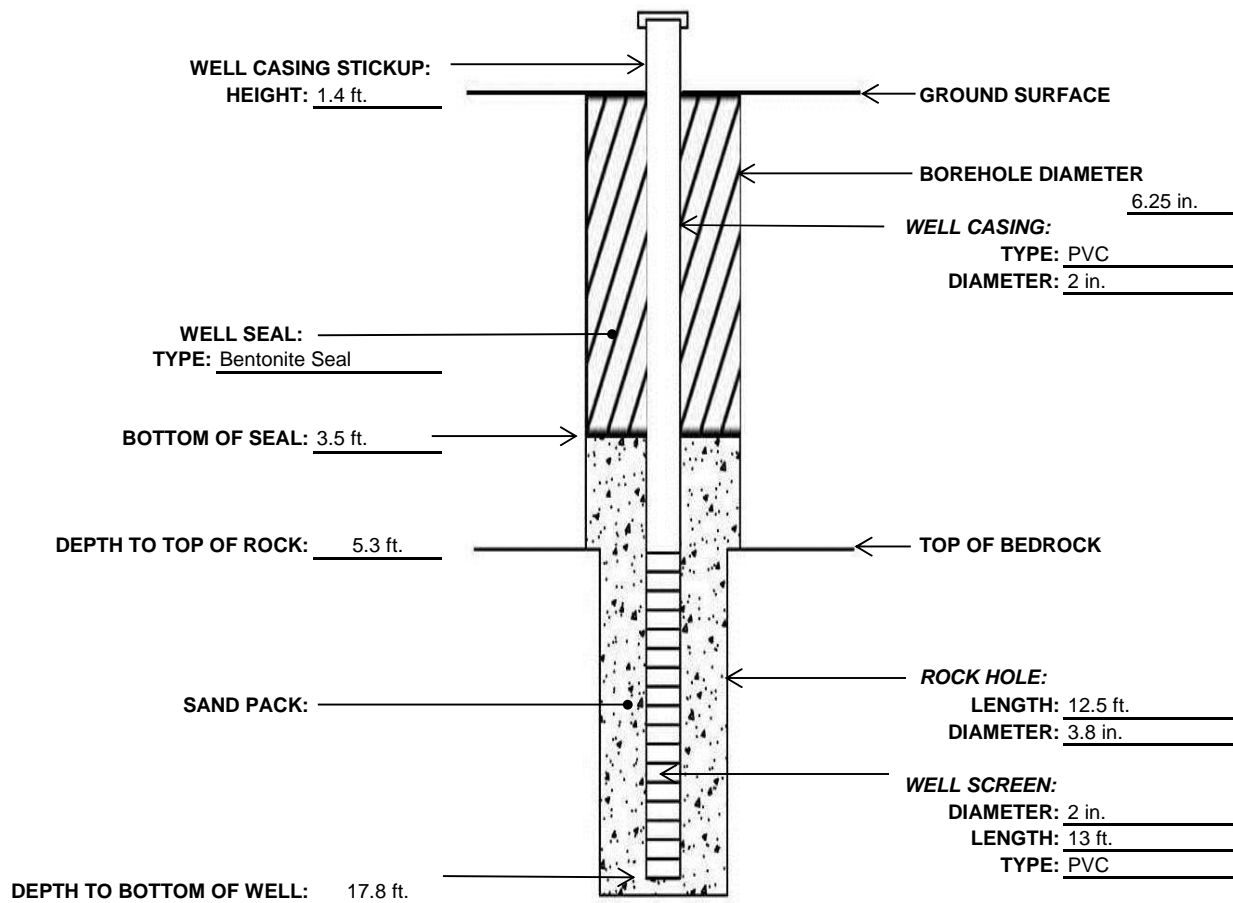




# Stantec MONITORING WELL COMPLETION REPORT - BEDROCK

61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

PROJECT NAME:	Carriage Factory	HOLE DESIGNATION :	B106-MW
PROJECT NUMBER:	190500751	DATE COMPLETED:	5/2/2013
CLIENT:	DePaul	DRILLING METHOD:	Direct Push / Rotary
LOCATION:	33 Litchfield St	DRILLER/STANTEC REP:	Nothnagle



**Note:**

Depths are referenced below ground surface.

SCREEN LENGTH: 13 ft  
WELL CASING LENGTH: 6.2 ft  
TOTAL LENGTH: 19.2 ft

REMARKS: Well to be finished at or below floor level when floor slab is constructed.

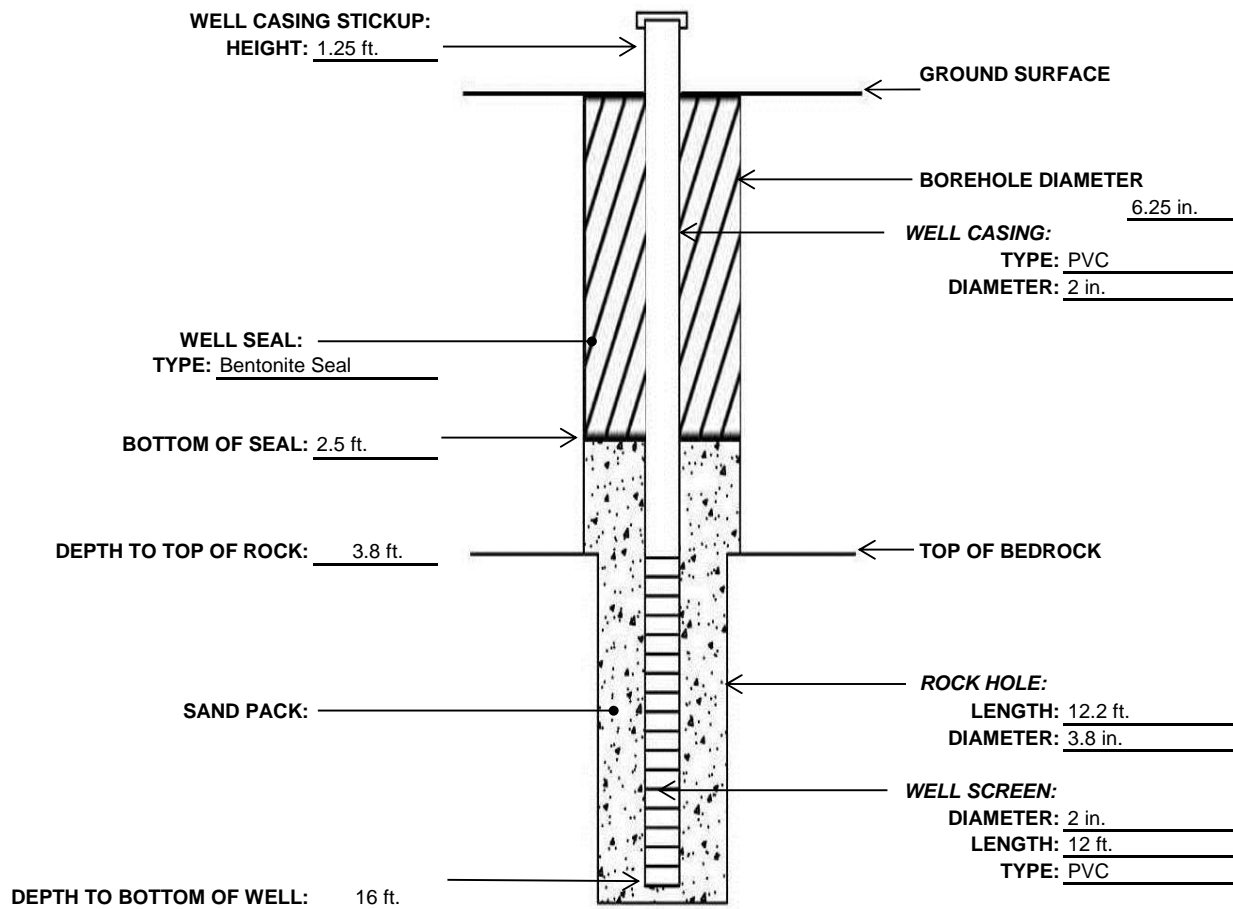




# Stantec MONITORING WELL COMPLETION REPORT - BEDROCK

61 Commercial Street  
Rochester, NY 14614  
(585) 475-1440

PROJECT NAME:	Carriage Factory	HOLE DESIGNATION :	B108-MW
PROJECT NUMBER:	190500751	DATE COMPLETED:	5/3/2013
CLIENT:	DePaul	DRILLING METHOD:	Direct Push / Rotary
LOCATION:	33 Litchfield St	DRILLER/STANTEC REP:	Nothnagle



## Note:

Depths are referenced below ground surface.

SCREEN LENGTH: 12 ft  
WELL CASING LENGTH: 5.25 ft  
TOTAL LENGTH: 17.25 ft

REMARKS: Well to be finished at or below floor level when floor slab is constructed.



## **APPENDIX B**



**COUNTY OF MONROE**  
**SEWER USE PERMIT ENCLOSURE**

Carriage Factory Special Needs Apartments, L.P.  
1931 Buffalo Rd  
Rochester, NY 14624

PERMIT NUMBER: ST-235  
DISTRICT NUMBER: 8575

SITE LOCATION: Carriage Factory Special Needs Apartments  
33 Litchfield Street  
Rochester, NY

and construction excavation

Source of Discharge (Sample point): ~~Effluent of Activated Carbon Filter~~  
-From remedial well boring activities on site (55 gallon drums).

**REQUIREMENTS**

- SELF MONITORING FREQUENCY:
1. Analytical Performance testing of treatment system with Monroe County approval prior to discharge.
  2. Analytical testing once per day for two consecutive days after start up and discharge commences (24 hour turnaround).
  3. Weekly for three weeks commencing at the end of the two consecutive day testing (depending on duration of project).
  4. Monthly thereafter (depending on duration of project).

SAMPLING PROTOCOL: Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. All analysis must be performed using wastewater testing methods. A grab sample, collected from the above noted sample point, must be analyzed for the following:

<u>Metals</u>	<u>Limit mg/l</u>
Cadmium(Cd)	1.0
Chromium(Cr)	3.0
Copper(Cu)	3.0
Lead(Pb)	1.0
Nickel(Ni)	3.0
Silver(Ag)	2.0
Zinc(Zn)	5.0
Arsenic(As)	0.5

- \*Volatile Organic Compounds (VOC's)
  - \*Semi-volatile Organic Compounds (SVOC's)
  - \*Pesticides and PCB's
  - \*\*total Petroleum Hydrocarbons (TPH)
- pH - pH must be between 5.5 and 10.0 Standard Units.

\*The summation of the VOC's, SVOC's, Pesticides and PCB's which  
are detected at or greater than 10 µg/L cannot exceed 2.13 mg/L.

\*\* The limit for TPH is 100mg/l.



CL # 203

## SPECIALTY SHORT TERM DISCHARGE PERMIT

County of Monroe Pure Waters District No. 8575

ST- Permit No: ST-235

Expires: 11/30/13

Fee: \$125.00

Firm Name Carriage Factory Special Needs Apartments, L.P.  
Address 1931 Buffalo Road  
Rochester, New York 14624

Type of Business or Service Non-for profit for health services living facilities

I. The above-named applicant is permitted to discharge wastes into the Monroe County Pure Waters Sewer system or Tributary thereto as applied for by an application dated 5/6/2013 and verified by the applicant except the Director of Pure Waters requires the following terms and conditions to govern the permitted discharge:

- A. \_\_\_\_\_  
B. \_\_\_\_\_  
C. \_\_\_\_\_

II. The applicant further agrees to:

1. Accept and abide by all provisions of the Sewer Use Law of Monroe County and of all pertinent rules or regulations now in force or shall be adopted in the future.
2. Notify the Director of Pure Waters in writing of any revision to the plant sewer system or any change in industrial wastes discharge to the public sewers as listed in the application. The latter encompasses either (1) an increase or decrease in average daily volume or strength of wastes listed in the application or (2) new wastes that were not listed in the application.
3. Furnish the Director of Pure Waters upon request any additional information related to the installation or use of sewer or drain for which this permit is sought.
4. Operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the County.
5. Cooperate with the Director of Pure Waters or his representatives in their inspecting, sampling, and study of wastes, or the facilities provided for pretreatment.
6. Notify the Director of Pure Waters immediately of any accident, negligence, breakdown of pretreatment equipment, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

Applicant's Name (please print) James M. Whalen

Applicant's Signature [Signature] Date 5/7/13

Applicant's Title CEO/Treasurer Phone 585-719-3170

Emergency Contact Michael Storonsky Phone 585-298-2386

Renewal Approved by: [Signature] Issued this 28 day of May 20 13.

Michael J. Garland, P.E.  
Director of Environmental Services-Pure Waters  
Monroe County





**Client:** Stantec

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

**Metals**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date/Time Analyzed</u>
Arsenic	< 0.0100	mg/L		5/29/2013 3:59:01 PM
Cadmium	< 0.00500	mg/L		5/29/2013 3:59:01 PM
Chromium	< 0.0100	mg/L		5/29/2013 3:59:01 PM
Copper	<b>0.0424</b>	mg/L		5/29/2013 3:59:01 PM
Lead (Axial)	< 0.0100	mg/L		5/29/2013 3:59:01 PM
Nickel	< 0.0400	mg/L		5/29/2013 3:59:01 PM
Silver	< 0.0100	mg/L		5/29/2013 3:59:01 PM
Zinc	<b>0.117</b>	mg/L		5/29/2013 3:59:01 PM

**Method Reference(s):** EPA 200.7

**Data File:** 052913b

**PCBs**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date/Time Analyzed</u>
PCB-1016	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1221	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1232	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1242	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1248	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1254	< 1.00	ug/L		5/29/2013 9:31:47 AM
PCB-1260	< 1.00	ug/L		5/29/2013 9:31:47 AM

**Method Reference(s):** EPA 608

**Chlorinated Pesticides**

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>Date/Time Analyzed</u>
4,4-DDD	< 0.100	ug/L		5/28/2013 7:57:31 PM
4,4-DDE	< 0.100	ug/L		5/28/2013 7:57:31 PM
4,4-DDT	< 0.100	ug/L		5/28/2013 7:57:31 PM
Aldrin	< 0.100	ug/L		5/28/2013 7:57:31 PM
alpha-BHC	< 0.100	ug/L		5/28/2013 7:57:31 PM
beta-BHC	< 0.100	ug/L		5/28/2013 7:57:31 PM
cis-Chlordane	< 0.100	ug/L		5/28/2013 7:57:31 PM

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**Lab Project ID: 131903**

**Client:** **Stantec**

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

delta-BHC	< 0.100	ug/L	5/28/2013 7:57:31 PM
Dieldrin	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endosulfan I	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endosulfan II	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endosulfan Sulfate	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endrin	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endrin Aldehyde	< 0.100	ug/L	5/28/2013 7:57:31 PM
Endrin Ketone	< 0.100	ug/L	5/28/2013 7:57:31 PM
gamma-BHC (Lindane)	< 0.100	ug/L	5/28/2013 7:57:31 PM
Heptachlor	< 0.100	ug/L	5/28/2013 7:57:31 PM
Heptachlor Epoxide	< 0.100	ug/L	5/28/2013 7:57:31 PM
Methoxychlor	< 0.100	ug/L	5/28/2013 7:57:31 PM
Toxaphene	< 1.00	ug/L	5/28/2013 7:57:31 PM
trans-Chlordane	< 0.100	ug/L	5/28/2013 7:57:31 PM

**Method Reference(s):** EPA 608

### ***pH***

<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Qualifier</b>	<b>Date/Time Analyzed</b>
pH	8.67 @ 18.6 C	S.U.		5/24/2013 5:58:00 PM

**Method Reference(s):** SM 4500 H+ B

### ***Semi-Volatile Organics (Acids)***

<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Qualifier</b>	<b>Date/Time Analyzed</b>
2,4,6-Trichlorophenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
2,4-Dichlorophenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
2,4-Dimethylphenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
2,4-Dinitrophenol	< 20.0	ug/L		5/29/2013 3:58:00 PM
2-Chlorophenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
2-Nitrophenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
4,6-Dinitro-2-methylphenol	< 20.0	ug/L		5/29/2013 3:58:00 PM
4-Chloro-3-methylphenol	< 10.0	ug/L		5/29/2013 3:58:00 PM
4-Nitrophenol	< 20.0	ug/L		5/29/2013 3:58:00 PM

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*Report Prepared Thursday, May 30, 2013*





**Lab Project ID: 131903**

**Client:** **Stantec**

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

Pentachlorophenol	< 20.0	ug/L	5/29/2013 3:58:00 PM
Phenol	< 10.0	ug/L	5/29/2013 3:58:00 PM
<b>Method Reference(s):</b>	EPA 625		
<b>Data File:</b>	S70012.D		

**Semi-Volatile Organics (Base Neutrals)**

<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Qualifier</b>	<b>Date/Time Analyzed</b>
1,2,4-Trichlorobenzene	< 10.0	ug/L		5/29/2013 3:27:00 PM
1,2-Dichlorobenzene	< 10.0	ug/L		5/29/2013 3:27:00 PM
1,3-Dichlorobenzene	< 10.0	ug/L		5/29/2013 3:27:00 PM
1,4-Dichlorobenzene	< 10.0	ug/L		5/29/2013 3:27:00 PM
2,4-Dinitrotoluene	< 10.0	ug/L		5/29/2013 3:27:00 PM
2,6-Dinitrotoluene	< 10.0	ug/L		5/29/2013 3:27:00 PM
2-Chloronaphthalene	< 10.0	ug/L		5/29/2013 3:27:00 PM
3,3'-Dichlorobenzidine	< 10.0	ug/L		5/29/2013 3:27:00 PM
4-Bromophenyl phenyl ether	< 10.0	ug/L		5/29/2013 3:27:00 PM
4-Chlorophenyl phenyl ether	< 10.0	ug/L		5/29/2013 3:27:00 PM
Acenaphthene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Acenaphthylene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Anthracene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Benzidine	< 20.0	ug/L		5/29/2013 3:27:00 PM
Benzo (a) anthracene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Benzo (a) pyrene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Benzo (b) fluoranthene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Benzo (g,h,i) perylene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Benzo (k) fluoranthene	< 10.0	ug/L		5/29/2013 3:27:00 PM
Bis (2-chloroethoxy) methane	< 10.0	ug/L		5/29/2013 3:27:00 PM
Bis (2-chloroethyl) ether	< 10.0	ug/L		5/29/2013 3:27:00 PM
Bis (2-chloroisopropyl) ether	< 10.0	ug/L		5/29/2013 3:27:00 PM
Bis (2-ethylhexyl) phthalate	< 10.0	ug/L		5/29/2013 3:27:00 PM
Butylbenzylphthalate	< 10.0	ug/L		5/29/2013 3:27:00 PM
Chrysene	< 10.0	ug/L		5/29/2013 3:27:00 PM

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**Lab Project ID: 131903**

**Client:** Stantec

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

Dibenz (a,h) anthracene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Diethyl phthalate	< 10.0	ug/L	5/29/2013 3:27:00 PM
Dimethyl phthalate	< 20.0	ug/L	5/29/2013 3:27:00 PM
Di-n-butyl phthalate	< 10.0	ug/L	5/29/2013 3:27:00 PM
Di-n-octylphthalate	< 10.0	ug/L	5/29/2013 3:27:00 PM
Fluoranthene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Fluorene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Hexachlorobenzene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Hexachlorobutadiene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Hexachlorocyclopentadiene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Hexachloroethane	< 10.0	ug/L	5/29/2013 3:27:00 PM
Indeno (1,2,3-cd) pyrene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Isophorone	< 10.0	ug/L	5/29/2013 3:27:00 PM
Naphthalene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Nitrobenzene	< 10.0	ug/L	5/29/2013 3:27:00 PM
N-Nitrosodimethylamine	< 10.0	ug/L	5/29/2013 3:27:00 PM
N-Nitroso-di-n-propylamine	< 10.0	ug/L	5/29/2013 3:27:00 PM
N-Nitrosodiphenylamine	< 10.0	ug/L	5/29/2013 3:27:00 PM
Phenanthrene	< 10.0	ug/L	5/29/2013 3:27:00 PM
Pyrene	< 10.0	ug/L	5/29/2013 3:27:00 PM

**Method Reference(s):** EPA 625

**Data File:** S70011.D

**Total Petroleum Hydrocarbons (Gravimetric)**

<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Qualifier</b>	<b>Date/Time Analyzed</b>
Total Petroleum Hydrocarbon (Silica Gel / HEM)	<5.0	mg/L		5/30/2013

**Method Reference(s):** EPA 1664A

**Subcontractor ELAP ID:** 10142

**Volatile Organics**

<b>Analyte</b>	<b>Result</b>	<b>Units</b>	<b>Qualifier</b>	<b>Date/Time Analyzed</b>
1,1,1-Trichloroethane	< 2.00	ug/L		5/25/2013 8:19:00 AM

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**Client:** **Stantec**

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

1,1,2,2-Tetrachloroethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,1,2-Trichloroethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,1-Dichloroethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,1-Dichloroethene	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,2-Dichlorobenzene	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,2-Dichloroethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,2-Dichloropropane	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,3-Dichlorobenzene	< 2.00	ug/L	5/25/2013 8:19:00 AM
1,4-Dichlorobenzene	< 2.00	ug/L	5/25/2013 8:19:00 AM
2-Chloroethyl vinyl Ether	< 10.0	ug/L	5/25/2013 8:19:00 AM
Benzene	< 0.700	ug/L	5/25/2013 8:19:00 AM
Bromodichloromethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
Bromoform	< 5.00	ug/L	5/25/2013 8:19:00 AM
Bromomethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
Carbon Tetrachloride	< 2.00	ug/L	5/25/2013 8:19:00 AM
Chlorobenzene	< 2.00	ug/L	5/25/2013 8:19:00 AM
Chloroethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
Chloroform	< 2.00	ug/L	5/25/2013 8:19:00 AM
Chloromethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
cis-1,3-Dichloropropene	< 2.00	ug/L	5/25/2013 8:19:00 AM
Dibromochloromethane	< 2.00	ug/L	5/25/2013 8:19:00 AM
Ethylbenzene	< 2.00	ug/L	5/25/2013 8:19:00 AM
Methyl tert-butyl Ether	< 2.00	ug/L	5/25/2013 8:19:00 AM
Methylene chloride	< 5.00	ug/L	5/25/2013 8:19:00 AM
Tetrachloroethene	<b>2.87</b>	ug/L	5/25/2013 8:19:00 AM
Toluene	< 2.00	ug/L	5/25/2013 8:19:00 AM
trans-1,2-Dichloroethene	< 2.00	ug/L	5/25/2013 8:19:00 AM
trans-1,3-Dichloropropene	< 2.00	ug/L	5/25/2013 8:19:00 AM
Trichloroethene	<b>13.3</b>	ug/L	5/25/2013 8:19:00 AM
Trichlorofluoromethane	< 2.00	ug/L	5/25/2013 8:19:00 AM

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**PARADIGM**  
ENVIRONMENTAL SERVICES, INC.

**Lab Project ID:** 131903

**Client:** Stantec

**Project Reference:** Carriage Factory

**Sample Identifier:** LI-WW1

**Lab Sample ID:** 131903-01

**Matrix:** Wastewater

**Date Sampled:** 5/24/2013 3:00 PM

**Date Received:** 5/24/2013

Vinyl chloride

< 2.00

ug/L

5/25/2013 8:19:00 AM

**Method Reference(s):** EPA 624

**Data File:** X05538.D

This report is part of a multipage document and should only be evaluated in its entirety. The Chain of Custody provides additional sample information, including compliance with the sample condition requirements upon receipt.

*Report Prepared Thursday, May 30, 2013*



# CHAIN OF CUSTODY

1062



## REPORT TO:

## INVOICE TO:

## LAB PROJECT ID

CLIENT: <b>Stantec</b>	CLIENT: <b>Stantec</b>	LAB PROJECT ID: <b>131903</b>
ADDRESS: <b>61 Commercial St</b>	ADDRESS: <b>Same</b>	Quotation #: <b>131903</b>
CITY: <b>Roch.</b>	CITY: <b>NY</b>	State: <b>NY</b>
STATE: <b>NY</b>	STATE: <b>NY</b>	ZIP: <b>14614</b>
PHONE: <b>413 5266</b>	PHONE: <b>413 5266</b>	ATTN: <b>Mike Stankovic</b>
ATTN: <b>Mike Stankovic</b>	ATTN: <b>Mike Stankovic</b>	Email: <b>Mike.Stankovic@stantec.com</b>

PROJECT REFERENCE: <b>Fitchfield Garage Factory</b>	Matrix Codes: <b>AQ - Aqueous Liquid</b>	WA - Water	DW - Drinking Water	SO - Soil	SD - Solid	WP - Wipe	OL - Oil
	<b>NQ - Non-Aqueous Liquid</b>	WG - Groundwater	WW - Wastewater	SL - Sludge	PT - Paint	CK - Caulk	AR - Air

## REQUESTED ANALYSIS

DATE COLLECTED	TIME COLLECTED	COMPOSITE	GARB	SAMPLE IDENTIFIER	MACRO TRENDS	COUNTS	PH	VOC 624	SVOC 625	Pest 608	PCBs 608	TPH 1664	Col, Cr, Cu	Pb, Ni, Ag	Zn, As	REMARKS	PARADIGM LAB SAMPLE NUMBER
5/24/13	1500	X		LI-WW1	WW	8	X	X	X	X	X	X	X	X	X		01
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Turnaround Time	Report Supplements
Availability contingent upon lab approval; additional fees may apply.	
Standard 5 day <input type="checkbox"/>	Batch QC <input checked="" type="checkbox"/>
Rush 3 day <input checked="" type="checkbox"/>	Category A <input type="checkbox"/>
Rush 2 day <input type="checkbox"/>	Category B <input type="checkbox"/>
Rush 1 day <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Other <input type="checkbox"/>	Other EDD <input checked="" type="checkbox"/>
please indicate: <b>016 All data due 5/30 per M.S./SD 5/28 EAH 5/28</b>	please indicate: <b>Stantec</b>

Sampled By: <b>Brian Herzog</b>	Date/Time: <b>5/24/13 15:00</b>
Relinquished By: <b>Brian Herzog</b>	Date/Time: <b>5/24 16:35</b>
Received By: <b>Chaiton A. Honch</b>	Date/Time: <b>5/24/13 16:36</b>
Received @ Lab By: <b>Chaiton A. Honch</b>	Date/Time: <b>5/24/13 17:12</b>

P.L.F.

Total Cost:





## Chain of Custody Supplement

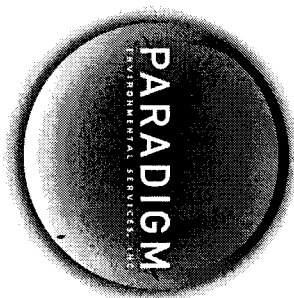
Client: StantecCompleted by: EAHLab Project ID: 131903Date: 5/24

### Sample Condition Requirements

Per NELAC/ELAP 210/241/242/243/244

NELAC compliance with the sample condition requirements upon receipt			
Condition	Yes	No	N/A
Container Type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	<hr/>		
Transferred to method-compliant container	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Headspace (<1 mL)	<input checked="" type="checkbox"/> 624	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	<hr/>		
Preservation	<input checked="" type="checkbox"/> Met. 11664TPH	<input checked="" type="checkbox"/> + 625	<input checked="" type="checkbox"/>
Comments	<hr/> Added 2ml 5% NaOH soln to bring pH from 5-6 to 7.		
Chlorine Absent (<0.10 ppm per test strip)	<input checked="" type="checkbox"/> 625 Pest	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments	<hr/> 624:		
Holding Time	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> pH	<input type="checkbox"/>
Comments	<hr/>		
Temperature	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Met
Comments	<hr/> 9°Ciced-pres begun in field		
Sufficient Sample Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments	<hr/>		





179 Lake Avenue, Rochester, NY 14608 Office (585) 647-2530 Fax (585) 647-3311

# CHAIN OF CUSTODY 66473-2

Envirotest

1061

## REPORT TO:

## INVOICE TO:

COMPANY: Paradigm Environmental	COMPANY: Same	LAB PROJECT #:	CLIENT PROJECT #:
ADDRESS:	ADDRESS:		
CITY:	CITY:	TURNAROUND TIME: (WORKING DAYS)	
STATE:	STATE:		
ZIP:	ZIP:		
PHONE:	PHONE:		
FAX:	FAX:		

PROJECT NAME/SITE NAME:	ATTN: Kate Hansen	ATTN: Meridith Dillman	Date Due: 5/30/13 by end of business day
COMMENTS: Please email results to khansen@paradigmenv.com and jdaloia@paradigmenv.com			

## REQUESTED ANALYSIS

DATE	TIME	COMPOSITION	GRADES	SAMPLE LOCATION/FIELD ID	MATERIALS	CONTAMINANTS	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	5/24/13	1500		131903-01	Wld	1	OK Meridith as per Kate	
2								
3								
4								
5								
6								
7								
8								
9								
10								

\*\*LAB USE ONLY BELOW THIS LINE\*\*

Sample Condition: Per NELAC/ELAP 210/241/242/243/244

Receipt Parameter NELAC Compliance

## Client

Sampled By Elizabeth A. Hansen Date/Time 5/23/13 1600

Total Cost:

Relinquished By Date/Time

Total Cost:

Received By Date/Time

P.L.F.

Received @ Lab By Date/Time

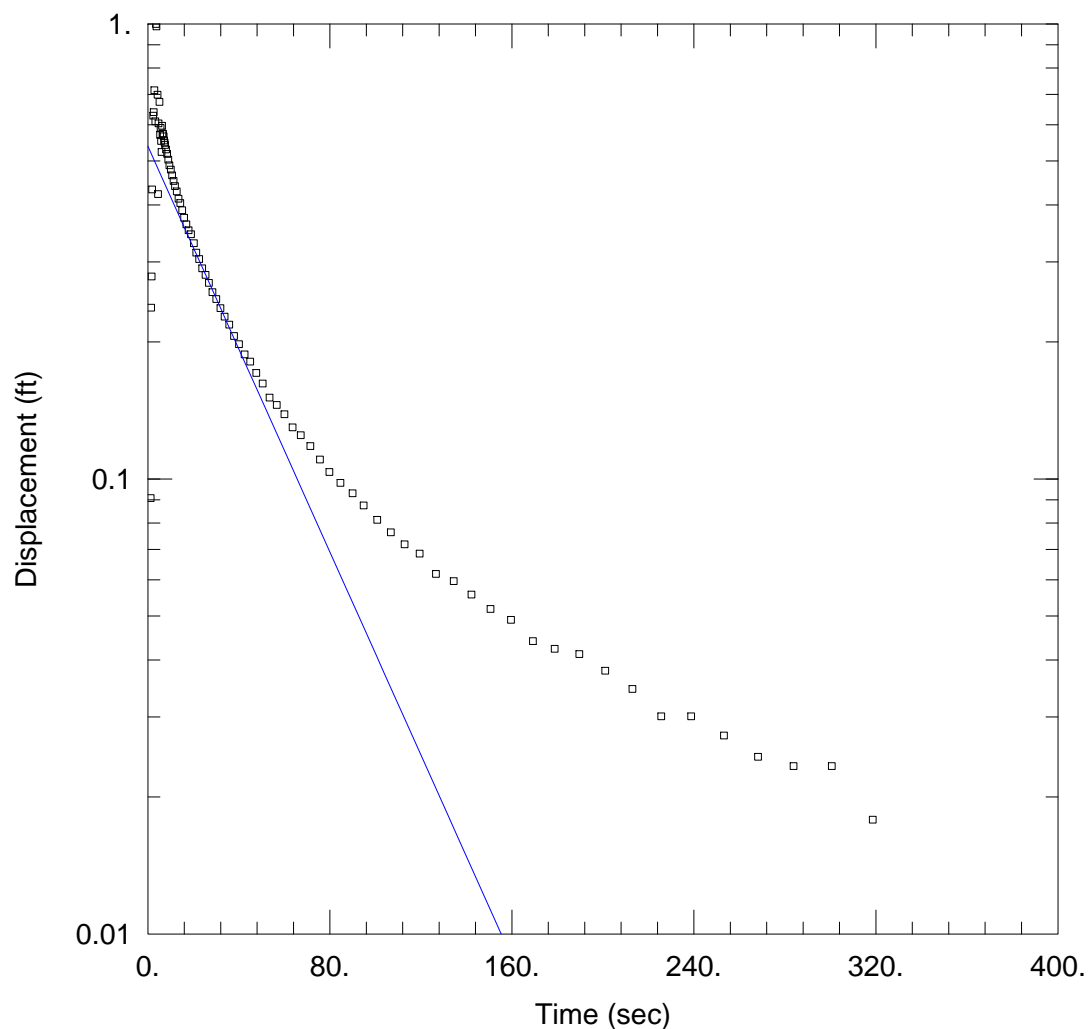
Total Cost:

Comments: Container Type: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Comments: Preservation: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Comments: Holding Time: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Comments: Temperature: 103 Y <input type="checkbox"/> N <input checked="" type="checkbox"/>



## **APPENDIX C**





### RW-1 - FALLING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-F1.aqt

Date: 10/10/13

Time: 16:29:07

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-1

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.84 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-1)

Initial Displacement: 1.795 ft

Total Well Penetration Depth: 10.84 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.84 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

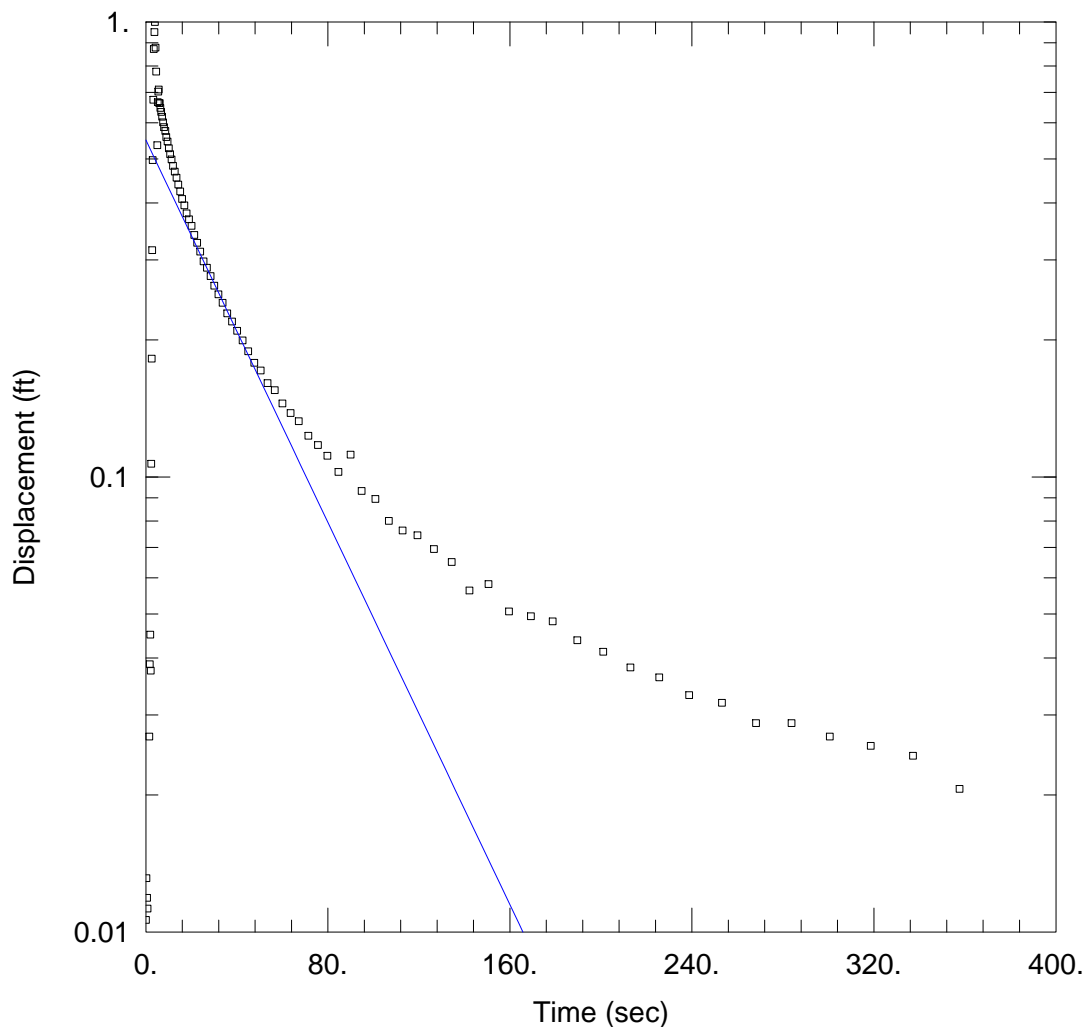
Aquifer Model: Unconfined

$K = 0.001663$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.5387$  ft





### RW-1 - FALLING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-F2.aqt

Date: 10/10/13

Time: 16:29:32

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-1

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.84 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-1)

Initial Displacement: 1.599 ft

Total Well Penetration Depth: 10.84 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.84 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

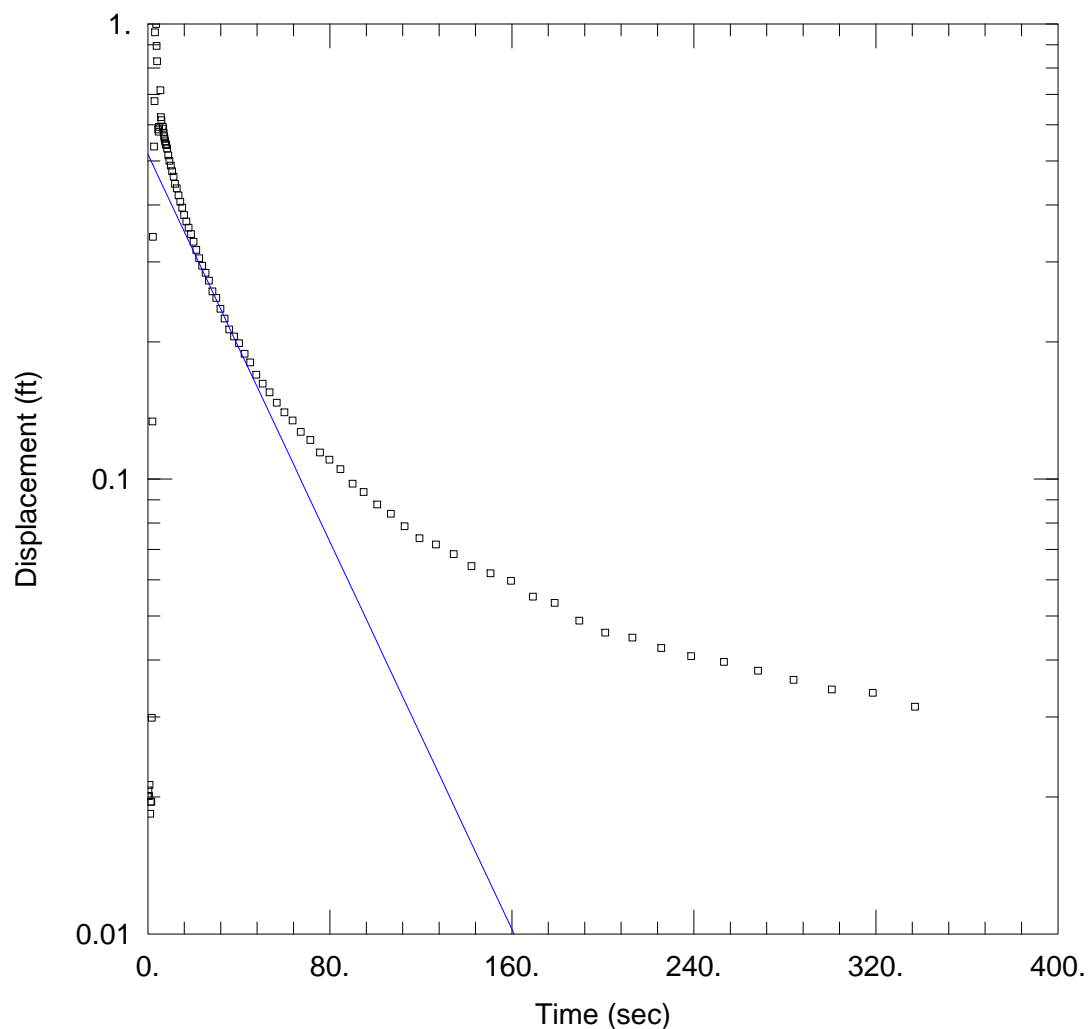
Aquifer Model: Unconfined

$K = 0.001567$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.55$  ft





### RW-1 - FALLING HEAD TEST #3

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-F3.aqt

Date: 10/10/13

Time: 16:29:54

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-1

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.84 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-1)

Initial Displacement: 1.741 ft

Total Well Penetration Depth: 10.84 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.84 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

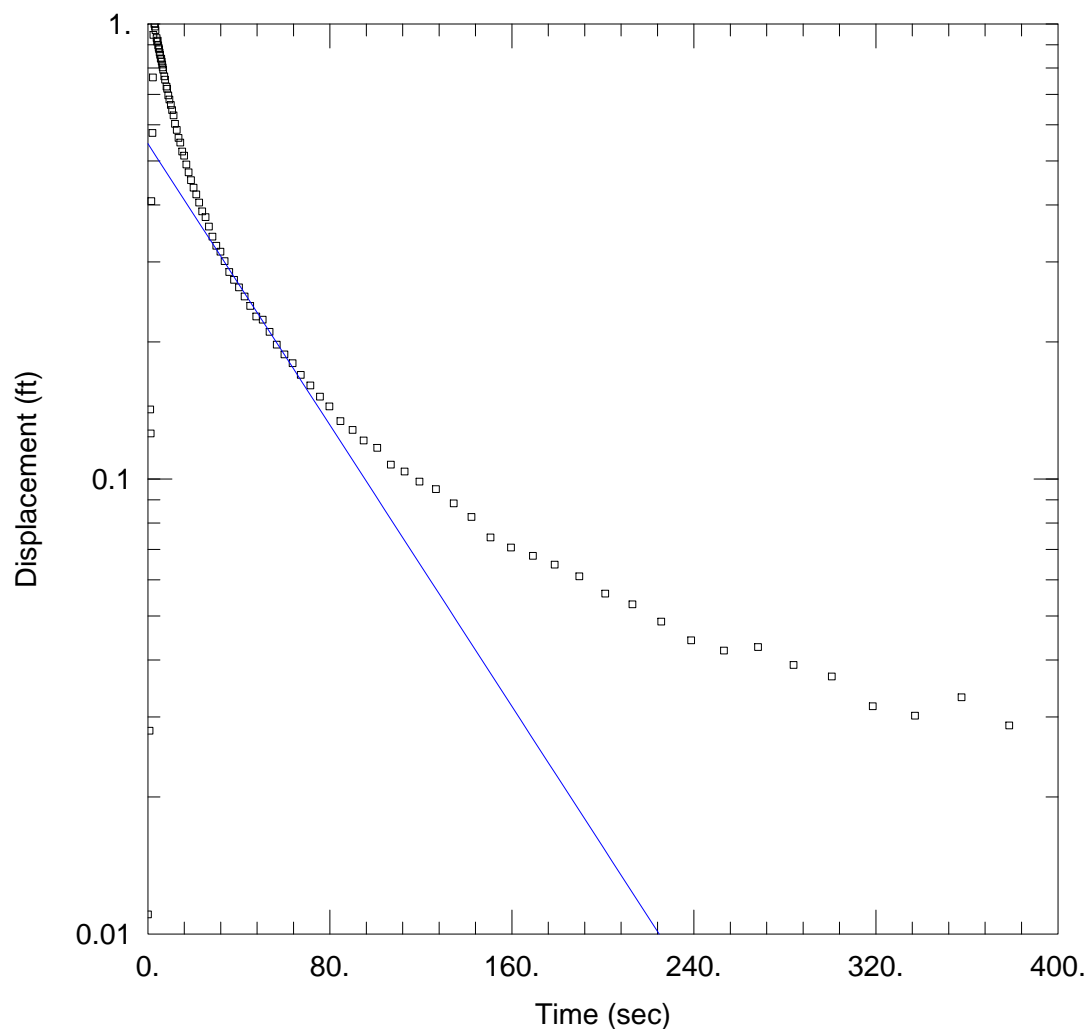
Aquifer Model: Unconfined

$K = 0.001588$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.5173$  ft





#### RW-1 - RISING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-R1.aqt  
 Date: 10/10/13 Time: 16:30:09

#### PROJECT INFORMATION

Company: Stantec  
 Client: CFSNA  
 Project: 190500765.200  
 Location: Former Carriage Factory  
 Test Well: RW-1  
 Test Date: 5/28/13

#### AQUIFER DATA

Saturated Thickness: 10.84 ft Anisotropy Ratio ( $K_z/K_r$ ): 1.

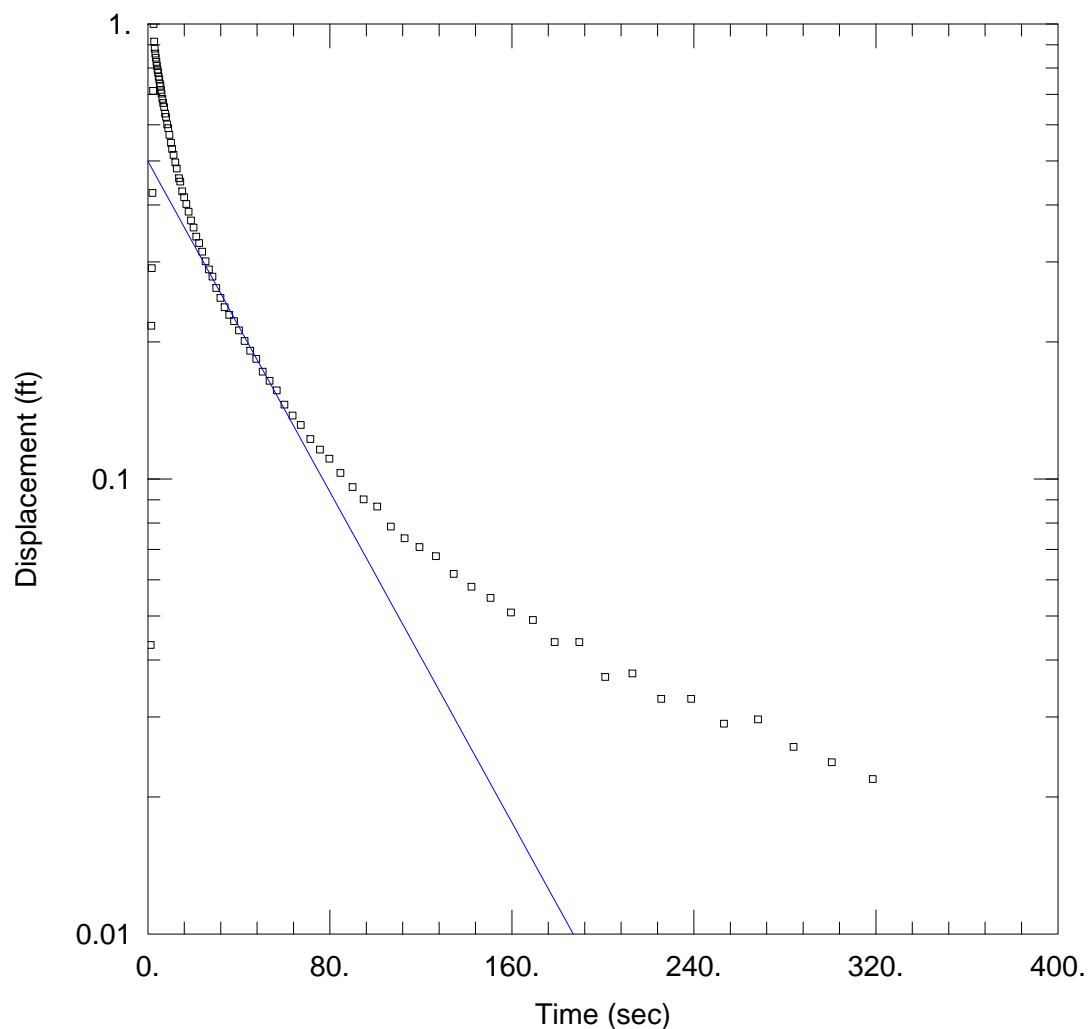
#### WELL DATA (RW-1)

Initial Displacement: 1.358 ft Static Water Column Height: 10.84 ft  
 Total Well Penetration Depth: 10.84 ft Screen Length: 10. ft  
 Casing Radius: 0.0833 ft Well Radius: 0.157 ft  
 Gravel Pack Porosity: 0.4

#### SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice  
 $K = 0.001153$  cm/sec  $y_0 = 0.5455$  ft





### RW-1 - RISING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-R2.aqt

Date: 10/10/13

Time: 16:30:31

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-1

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.84 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-1)

Initial Displacement: 1.552 ft

Total Well Penetration Depth: 10.84 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.84 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

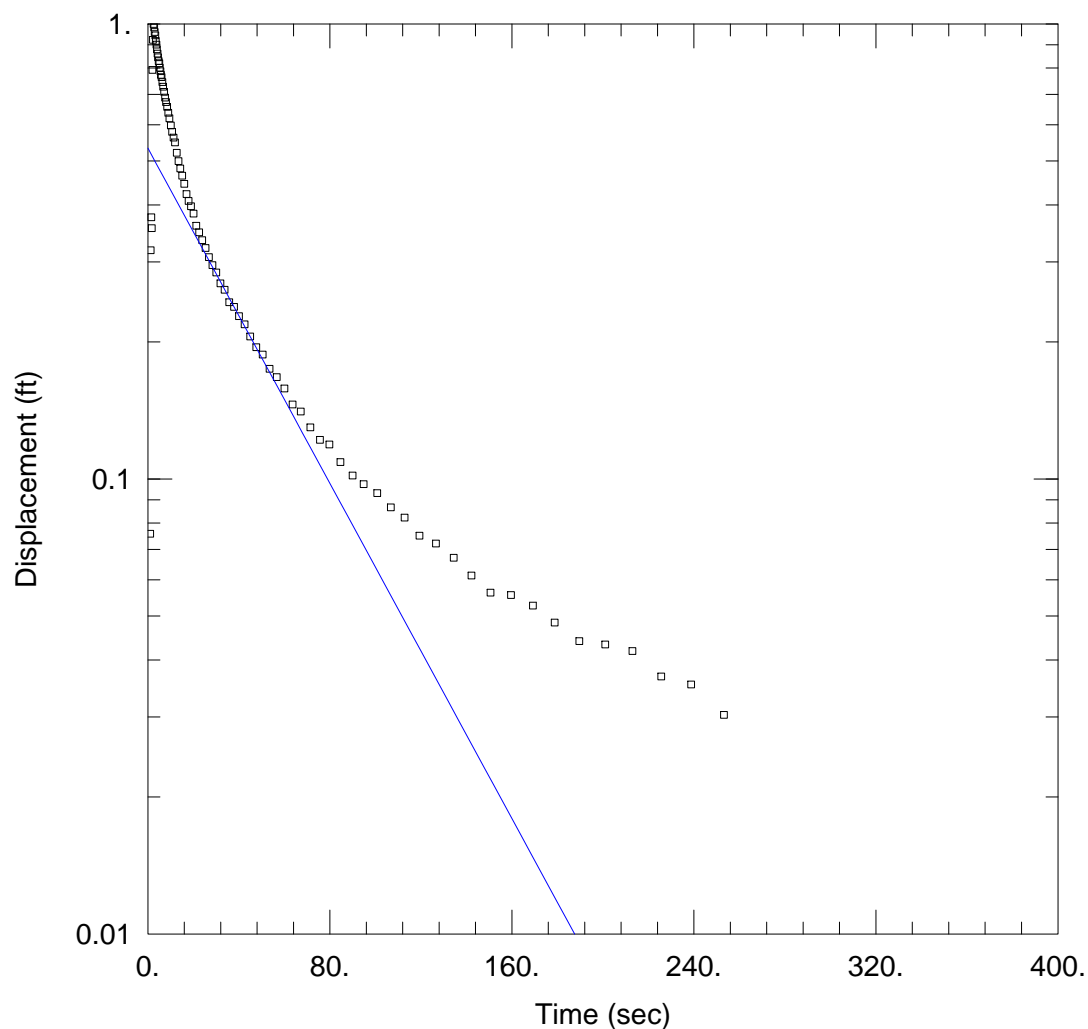
Aquifer Model: Unconfined

$K = 0.001355$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.4993$  ft





### RW-1 - RISING HEAD TEST #3

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-1\RW1-R3.aqt

Date: 10/10/13

Time: 16:30:52

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-1

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.84 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-1)

Initial Displacement: 1.386 ft

Total Well Penetration Depth: 10.84 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.84 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

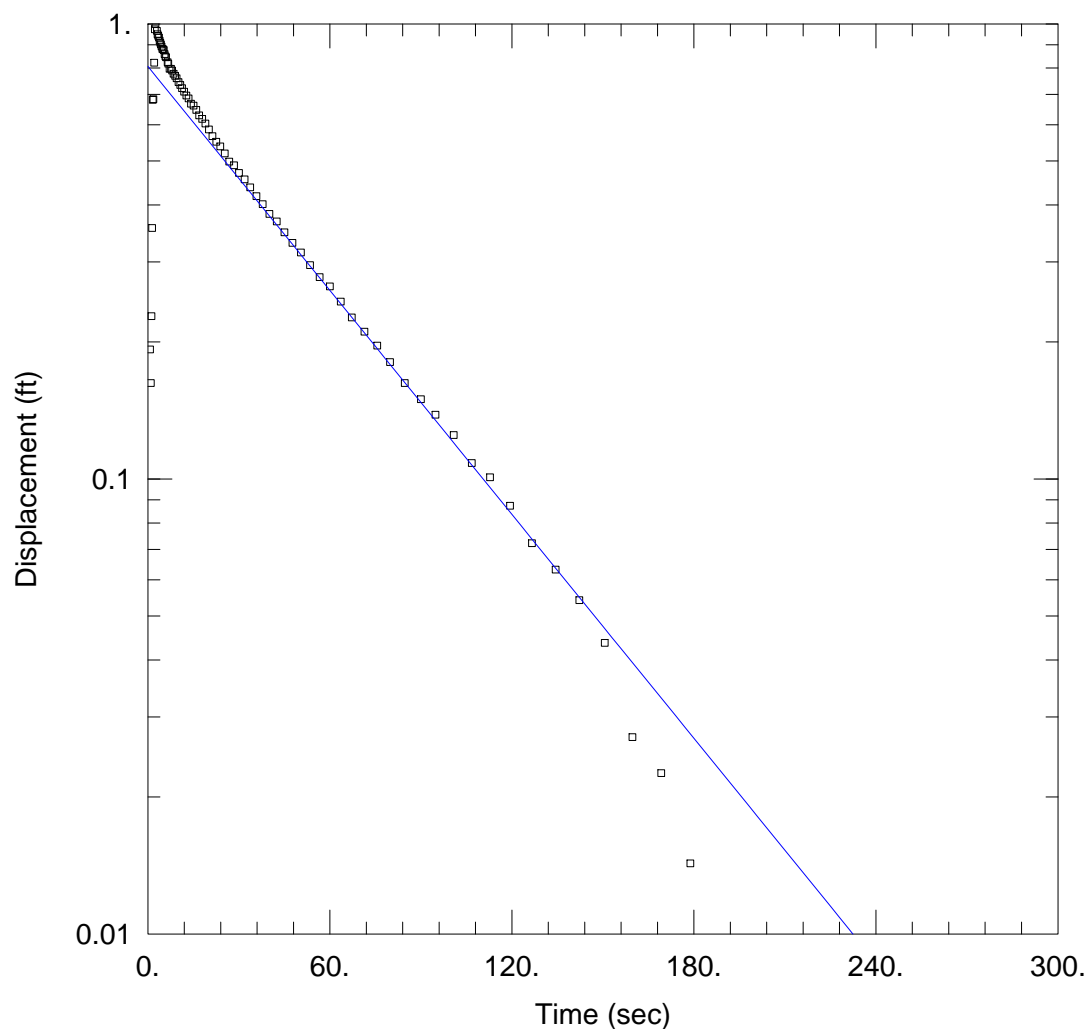
Aquifer Model: Unconfined

$K = 0.001374$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.5333$  ft





### RW- 3 - RISING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-3\RW3-R1.aqt

Date: 10/10/13

Time: 16:32:24

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-3

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.78 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-3)

Initial Displacement: 1.329 ft

Total Well Penetration Depth: 10.78 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.78 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

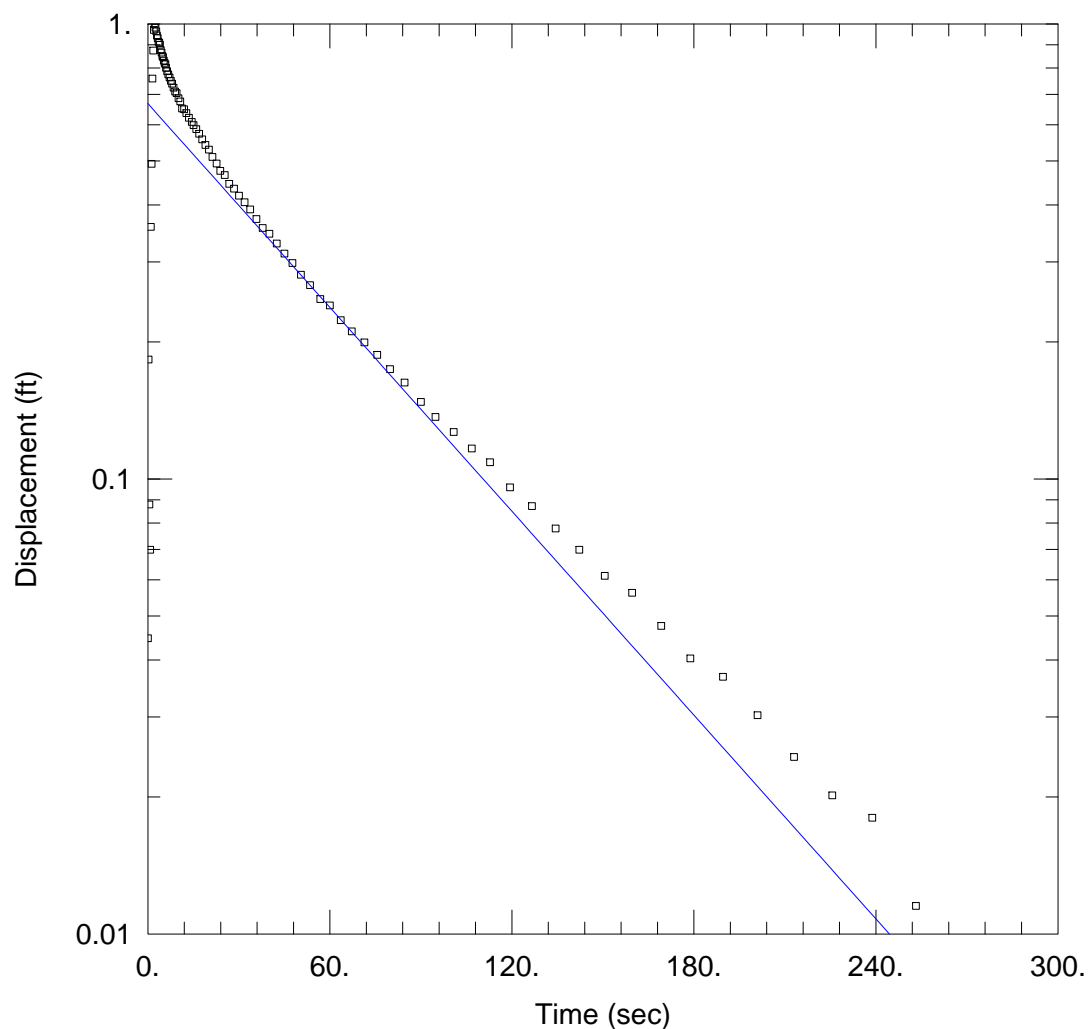
Aquifer Model: Unconfined

$K = 0.001222$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.8064$  ft





### RW- 3 - RISING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\RW-3\RW3-R2.aqt

Date: 10/10/13

Time: 16:32:39

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: RW-3

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 10.78 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (RW-3)

Initial Displacement: 1.388 ft

Total Well Penetration Depth: 10.78 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 10.78 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

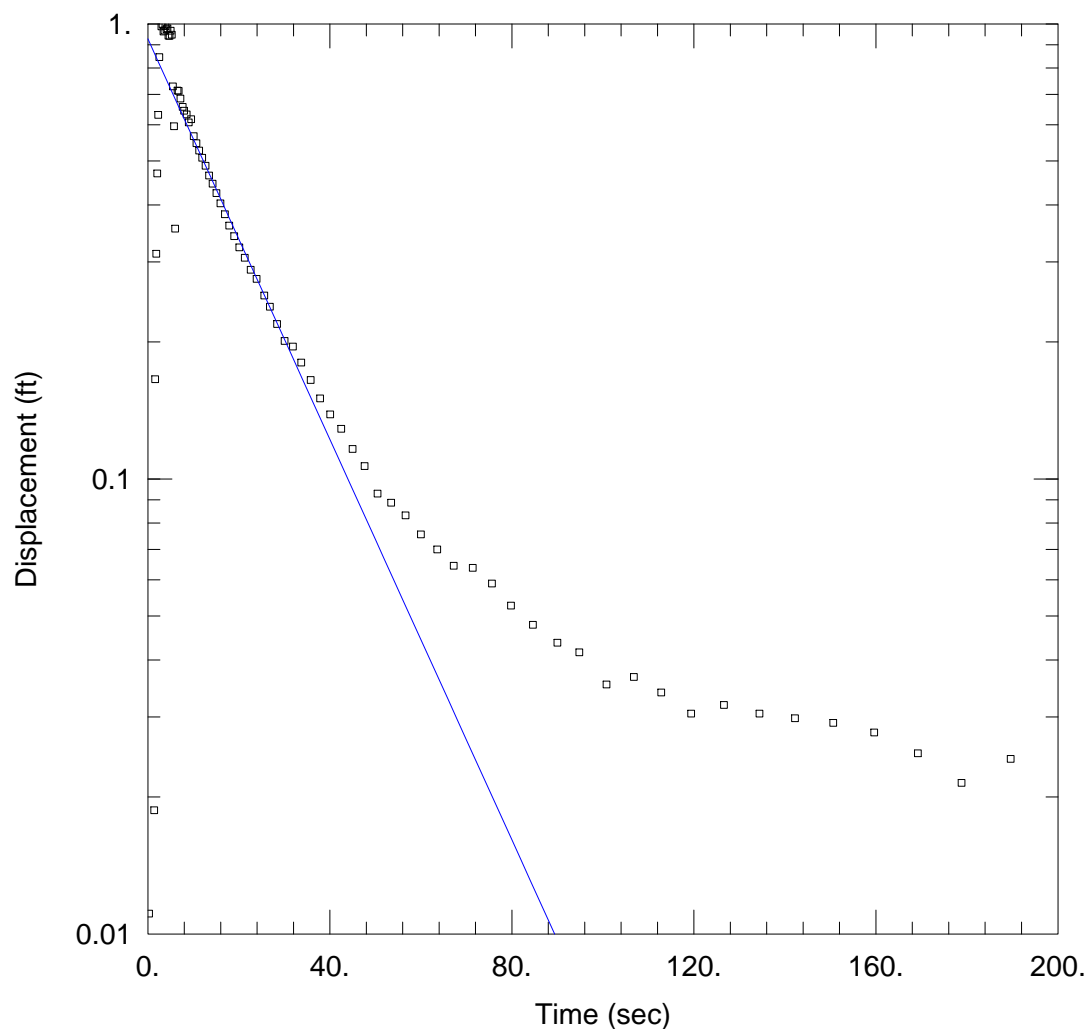
Aquifer Model: Unconfined

$K = 0.001112$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.6682$  ft





### B102-MW - FALLING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-F1.aqt

Date: 10/18/13

Time: 07:38:15

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.443 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

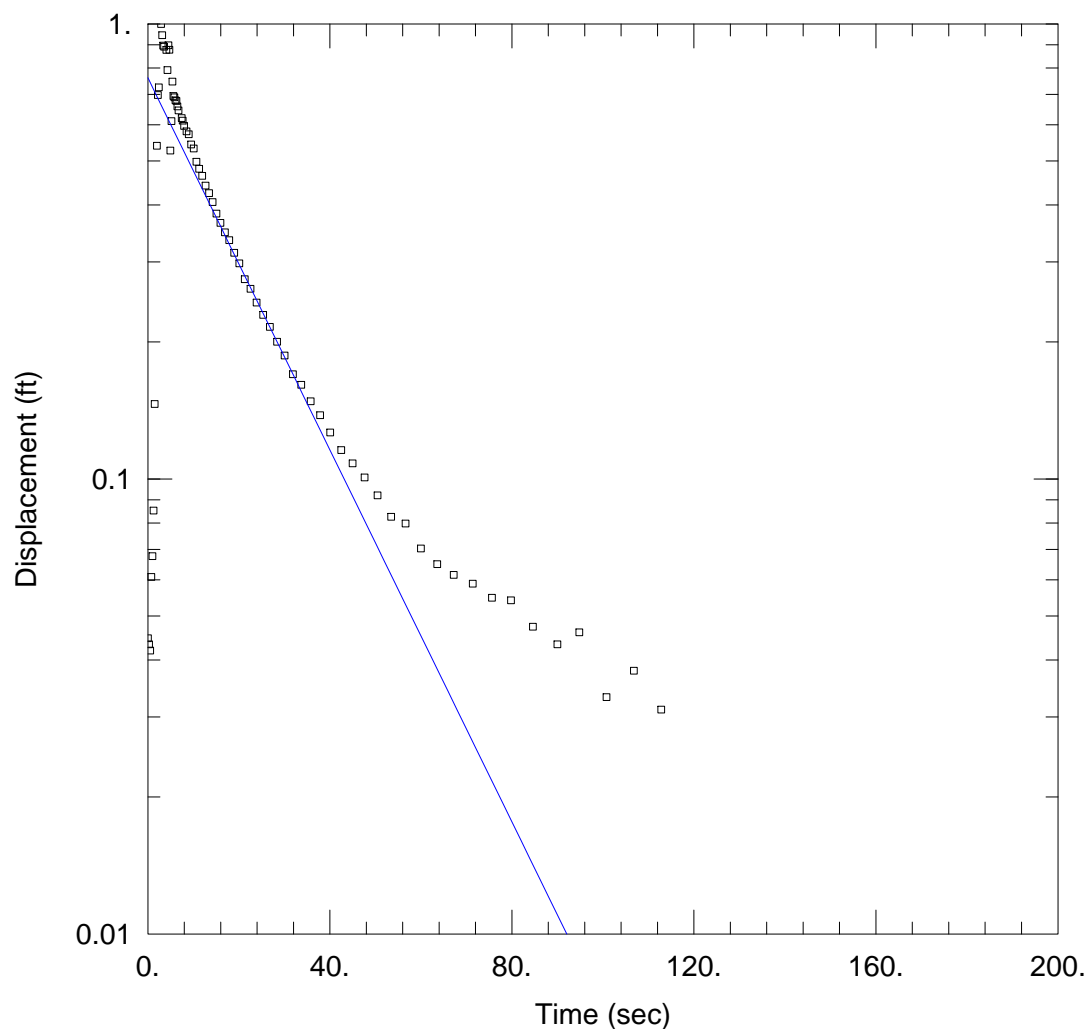
Aquifer Model: Unconfined

$K = 0.003446$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.927$  ft





### B102-MW - FALLING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-F2.aqt

Date: 10/18/13

Time: 07:40:00

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio (Kz/Kr): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.478 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

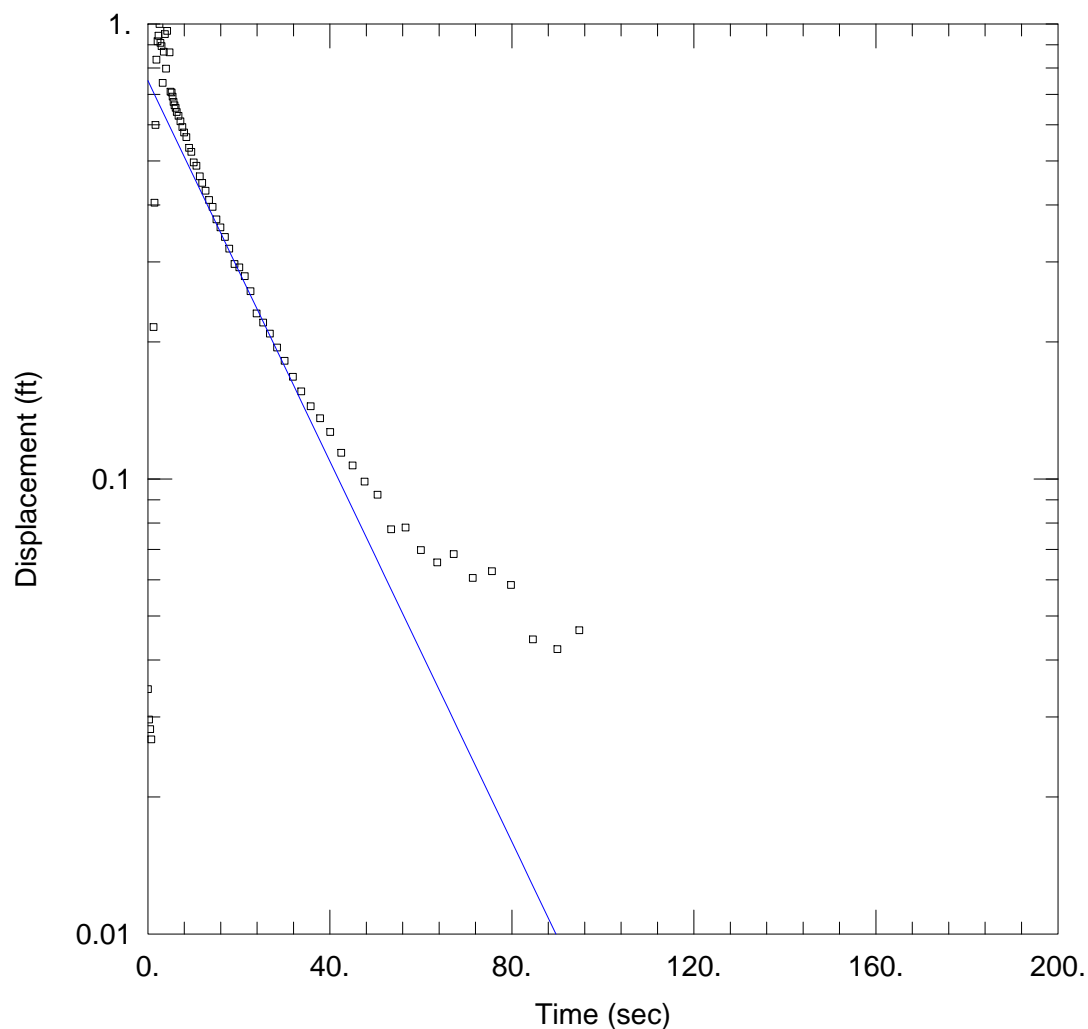
Aquifer Model: Unconfined

K = 0.003201 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.7613 ft





### B102-MW - FALLING HEAD TEST #3

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-F3.aqt

Date: 10/18/13

Time: 07:41:50

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.419 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

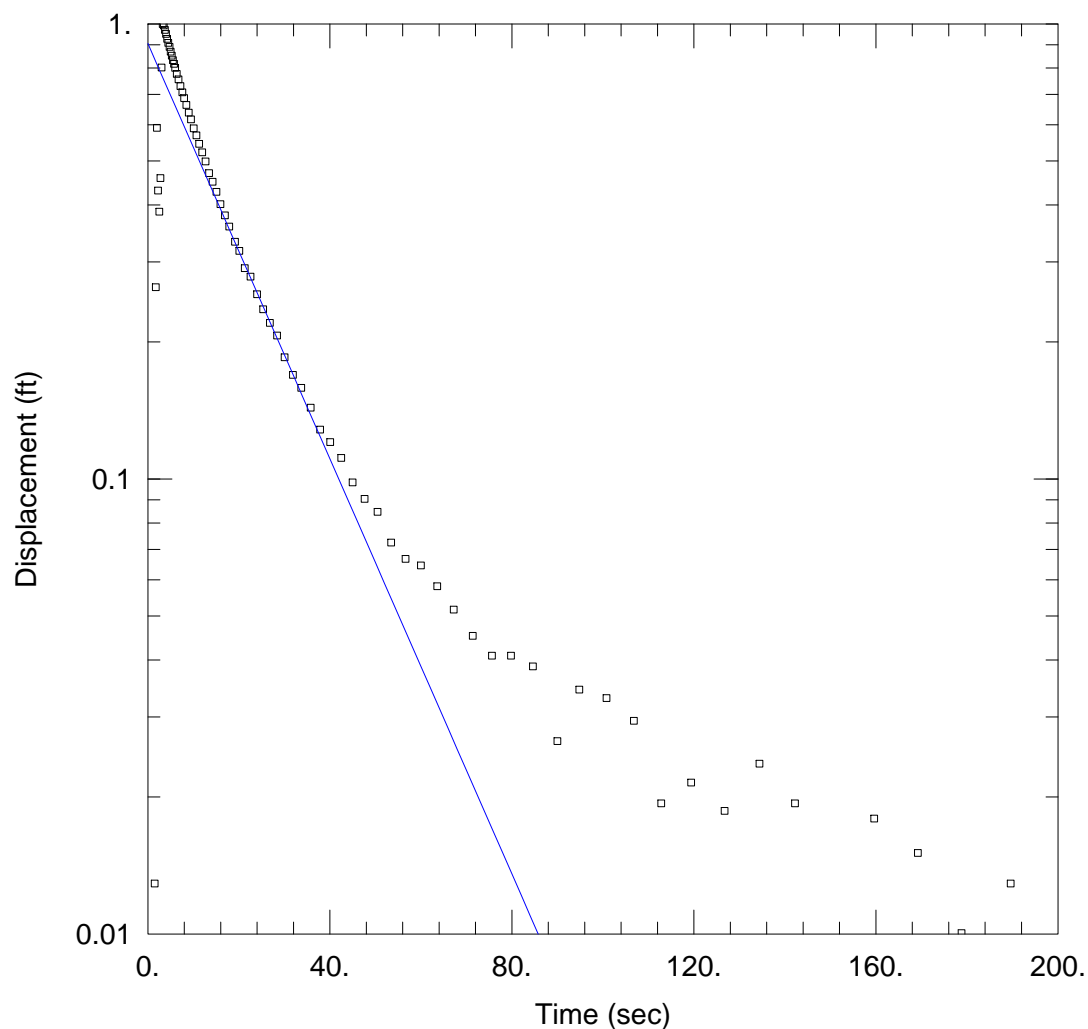
Aquifer Model: Unconfined

$K = 0.003275$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.7505$  ft





### B102-MW - RISING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-R1.aqt

Date: 10/18/13

Time: 07:42:59

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.394 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

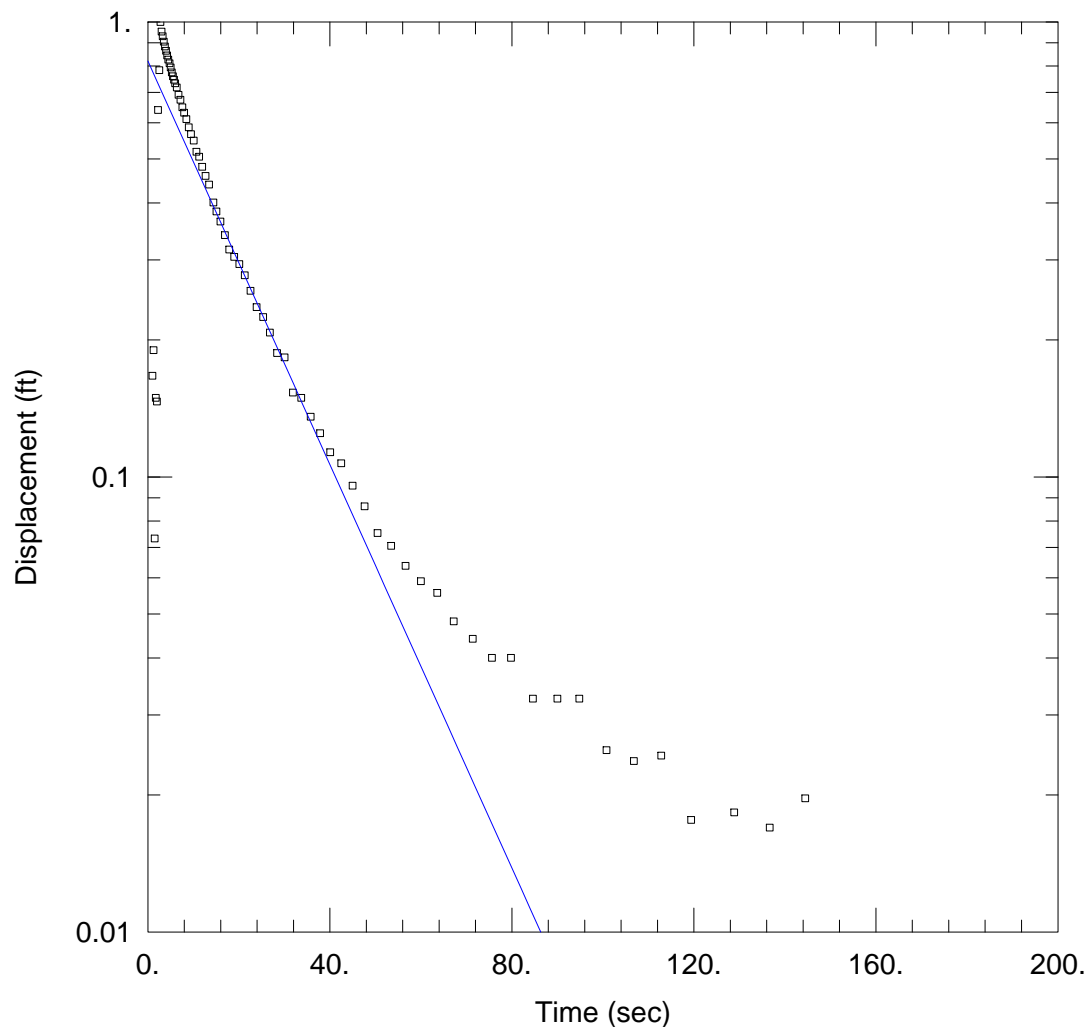
Aquifer Model: Unconfined

$K = 0.003573$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.9055$  ft





### B102-MW - RISING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-R2.aqt

Date: 10/18/13

Time: 07:43:59

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio (Kz/Kr): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.474 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

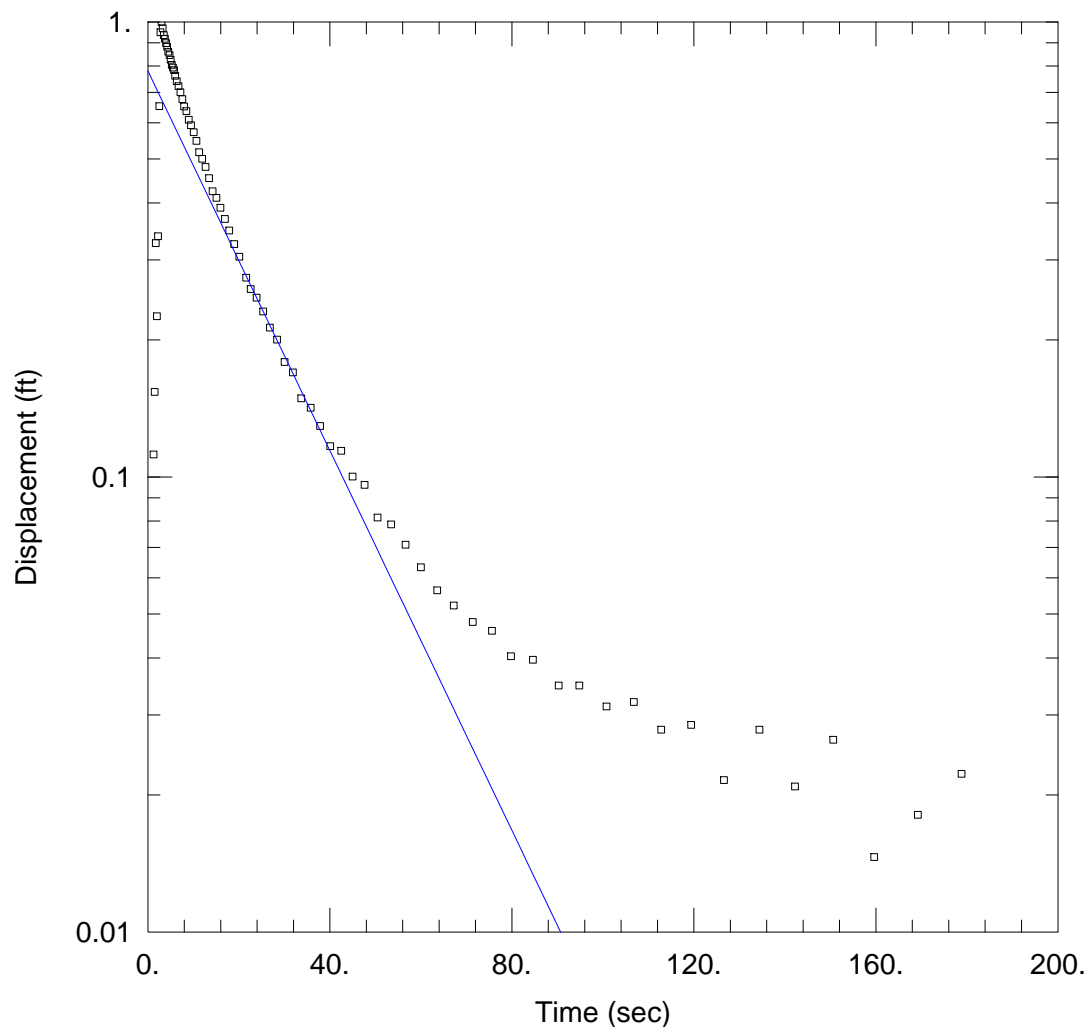
Aquifer Model: Unconfined

K = 0.003472 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.8206 ft





### B102-MW - RISING HEAD TEST #3

Data Set: U:\190500751\field\_data\Aquifer Test Data\102\B102-R3.aqt

Date: 10/18/13

Time: 07:45:11

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B102-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.97 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B102-MW)

Initial Displacement: 1.437 ft

Total Well Penetration Depth: 13.97 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.97 ft

Screen Length: 10. ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

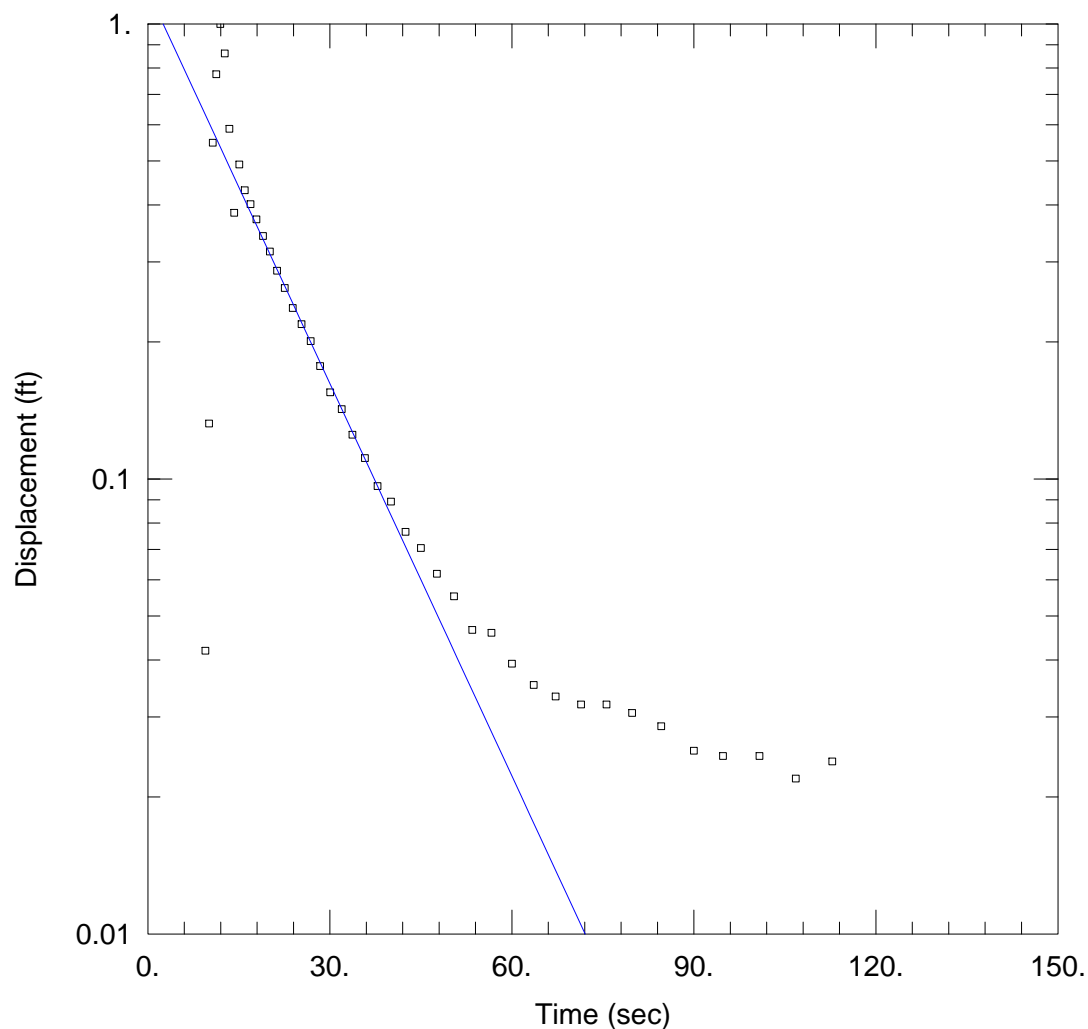
Aquifer Model: Unconfined

$K = 0.003268$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.7808$  ft





### B108-MW - FALLING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\108\B108-F1.aqt

Date: 10/18/13

Time: 07:46:35

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B108-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.2 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B108-MW)

Initial Displacement: 1.503 ft

Total Well Penetration Depth: 13.2 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.2 ft

Screen Length: 12.2 ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

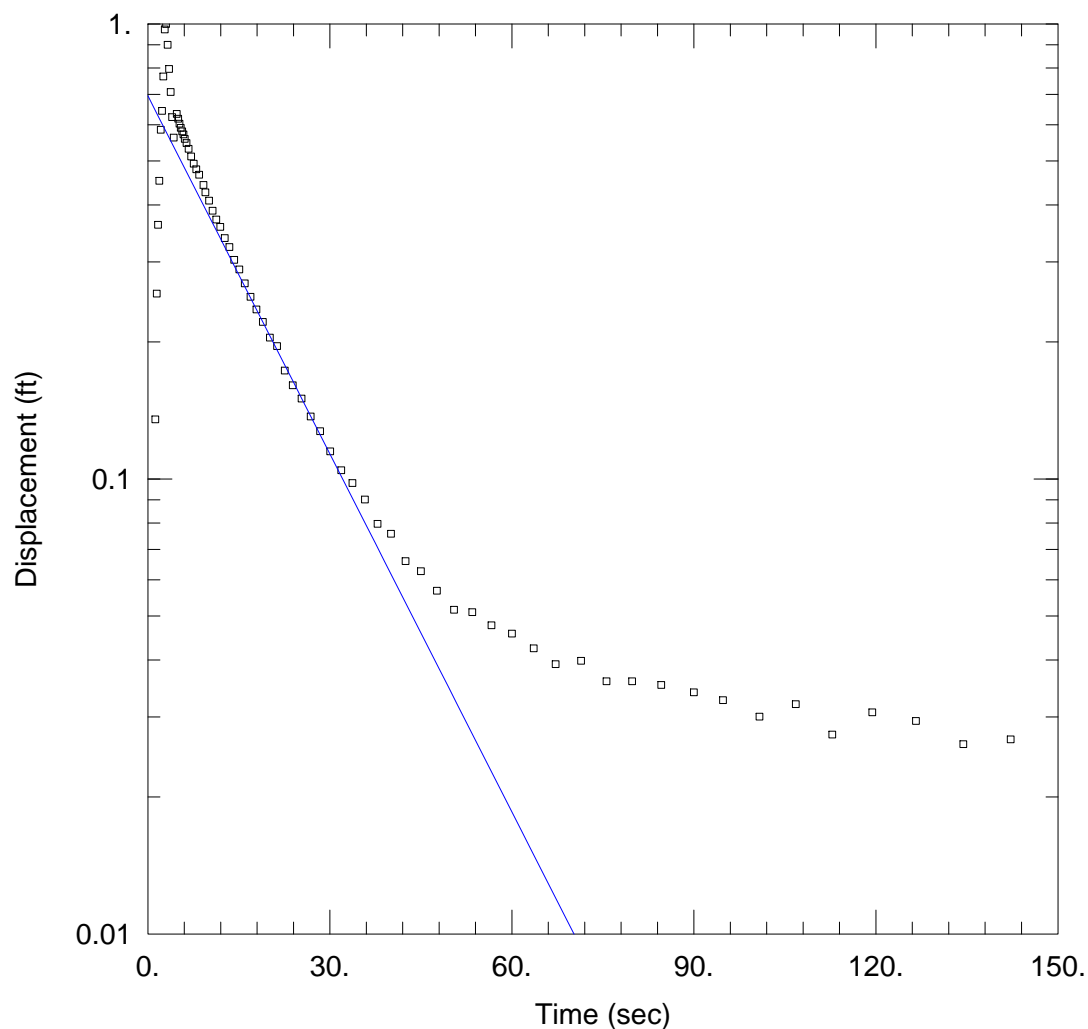
Aquifer Model: Unconfined

$K = 0.003685$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 1.182$  ft





### B108-MW - FALLING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\108\B108-F2.aqt

Date: 10/18/13

Time: 07:47:31

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B108-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.2 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B108-MW)

Initial Displacement: 1.531 ft

Total Well Penetration Depth: 13.2 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.2 ft

Screen Length: 12.2 ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

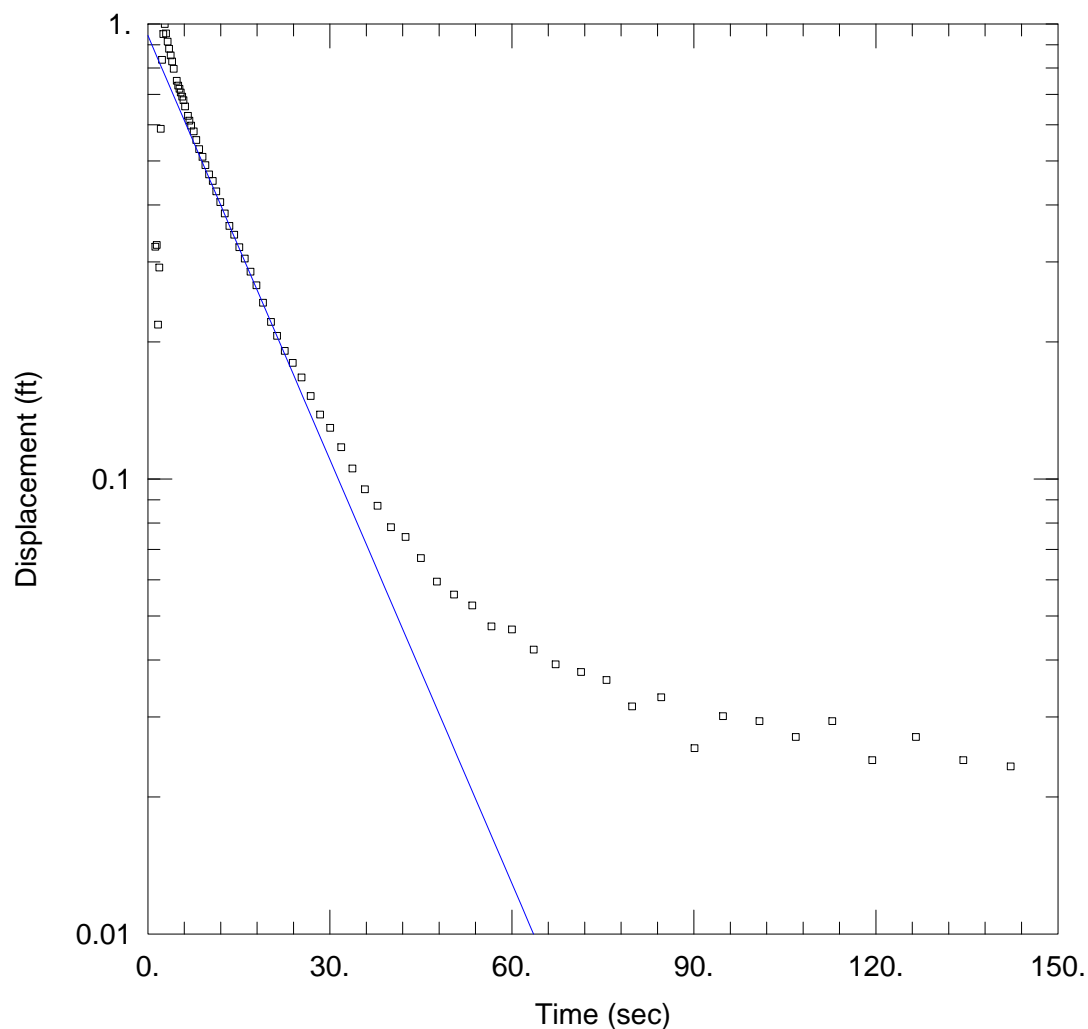
Aquifer Model: Unconfined

$K = 0.003361$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.6948$  ft





### B108-MW - RISING HEAD TEST #1

Data Set: U:\190500751\field\_data\Aquifer Test Data\108\B108-R1.aqt

Date: 10/18/13

Time: 07:48:38

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B108-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.2 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B108-MW)

Initial Displacement: 1.328 ft

Total Well Penetration Depth: 13.2 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.2 ft

Screen Length: 12.2 ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

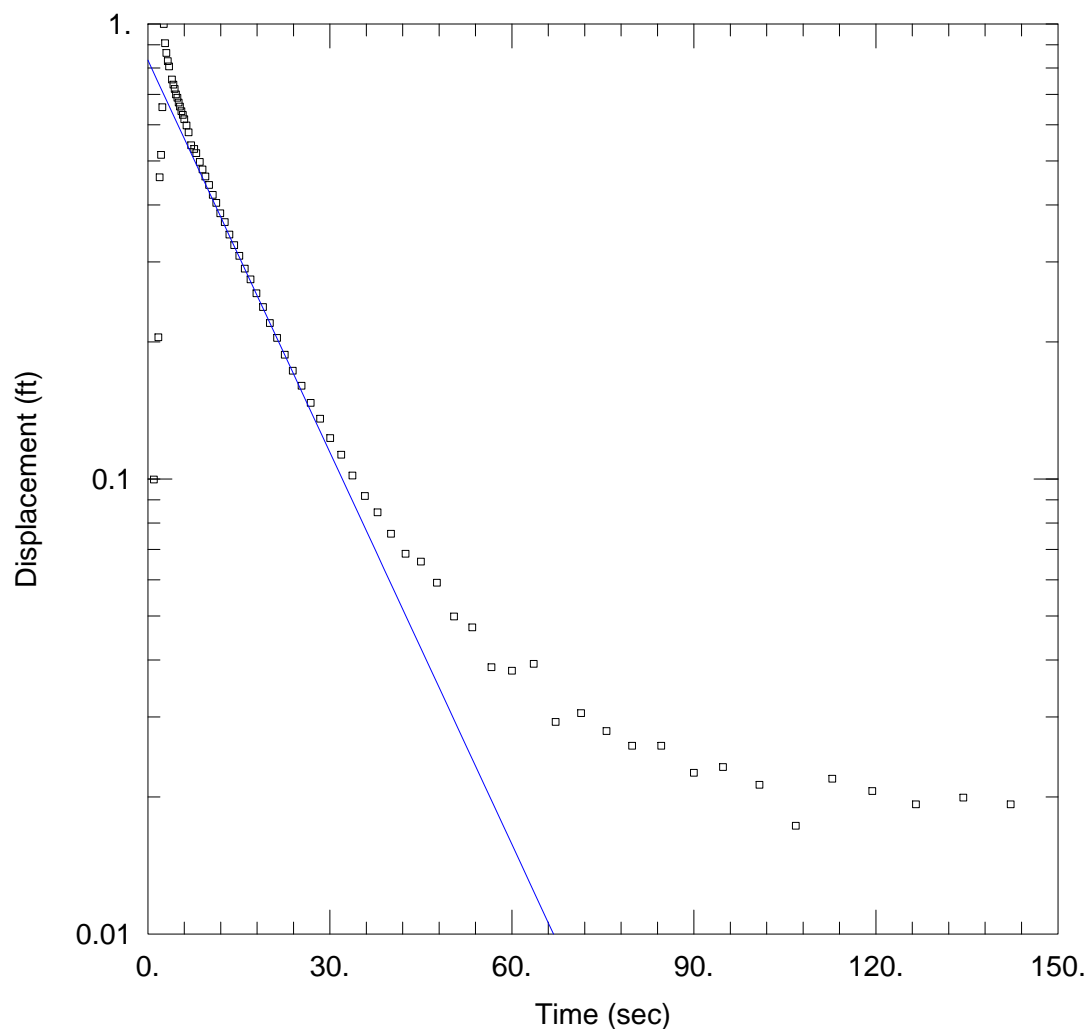
Aquifer Model: Unconfined

$K = 0.00398$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.9429$  ft





### B108-MW - RISING HEAD TEST #2

Data Set: U:\190500751\field\_data\Aquifer Test Data\108\B108-R2.aqt

Date: 10/18/13

Time: 07:49:59

### PROJECT INFORMATION

Company: Stantec

Client: CFSNA

Project: 190500765.200

Location: Former Carriage Factory

Test Well: B108-MW

Test Date: 5/28/13

### AQUIFER DATA

Saturated Thickness: 13.2 ft

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (B108-MW)

Initial Displacement: 1.504 ft

Total Well Penetration Depth: 13.2 ft

Casing Radius: 0.0833 ft

Static Water Column Height: 13.2 ft

Screen Length: 12.2 ft

Well Radius: 0.157 ft

Gravel Pack Porosity: 0.4

### SOLUTION

Aquifer Model: Unconfined

$K = 0.003681$  cm/sec

Solution Method: Bouwer-Rice

$y_0 = 0.8324$  ft



## **APPENDIX D**



Upwind Dust 4/10/2013
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Instrument		Data Properties	
Model	DustTrak II	Start Date	04/10/2013
Instrument S/N	8530131201	Start Time	08:25:32
		Stop Date	04/10/2013
		Stop Time	11:13:32
		Total Time	0:02:48:00
		Logging Interval	840 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/10/2013	08:39:32	0.038
2	04/10/2013	08:53:32	0.042
3	04/10/2013	09:07:32	0.039
4	04/10/2013	09:21:32	0.034
5	04/10/2013	09:35:32	0.033
6	04/10/2013	09:49:32	0.034
7	04/10/2013	10:03:32	0.030
8	04/10/2013	10:17:32	0.030
9	04/10/2013	10:31:32	0.031
10	04/10/2013	10:45:32	0.032
11	04/10/2013	10:59:32	0.031
12	04/10/2013	11:13:32	0.034



Downwind Dust 4/10/2013
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Instrument		Data Properties	
Model	DustTrak II	Start Date	04/10/2013
Instrument S/N	8530131224	Start Time	08:25:03
		Stop Date	04/10/2013
		Stop Time	14:54:03
		Total Time	0:06:29:00
		Logging Interval	900 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/10/2013	08:40:03	0.037
2	04/10/2013	08:55:03	0.040
3	04/10/2013	09:10:03	0.052
4	04/10/2013	09:25:03	0.035
5	04/10/2013	09:40:03	0.056
6	04/10/2013	09:55:03	0.037
7	04/10/2013	10:10:03	0.032
8	04/10/2013	10:25:03	0.029
9	04/10/2013	10:40:03	0.032
10	04/10/2013	10:55:03	0.033
11	04/10/2013	11:10:03	0.031
12	04/10/2013	14:54:46	0.000



Dust - Unit 1  
4/22/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/22/2013
Instrument S/N	8530131403	Start Time	07:44:34
		Stop Date	04/22/2013
		Stop Time	14:33:34
		Total Time	0:06:49:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/22/2013	07:45:34	0.020
2	04/22/2013	07:46:34	0.019
3	04/22/2013	07:47:34	0.019
4	04/22/2013	07:48:34	0.019
5	04/22/2013	07:49:34	0.019
6	04/22/2013	07:50:34	0.019
7	04/22/2013	07:51:34	0.020
8	04/22/2013	07:52:34	0.023
9	04/22/2013	07:53:34	0.020
10	04/22/2013	07:54:34	0.019
11	04/22/2013	07:55:34	0.020
12	04/22/2013	07:56:34	0.020
13	04/22/2013	07:57:34	0.020
14	04/22/2013	07:58:34	0.020
15	04/22/2013	07:59:34	0.020
16	04/22/2013	08:00:34	0.020
17	04/22/2013	08:01:34	0.020
18	04/22/2013	08:02:34	0.020
19	04/22/2013	08:03:34	0.021
20	04/22/2013	08:04:34	0.020
21	04/22/2013	08:05:34	0.020
22	04/22/2013	08:06:34	0.020
23	04/22/2013	08:07:34	0.020
24	04/22/2013	08:08:34	0.020
25	04/22/2013	08:09:34	0.020
26	04/22/2013	08:10:34	0.019
27	04/22/2013	08:11:34	0.019
28	04/22/2013	08:12:34	0.020
29	04/22/2013	08:13:34	0.020
30	04/22/2013	08:14:34	0.019
31	04/22/2013	08:15:34	0.019
32	04/22/2013	08:16:34	0.019
33	04/22/2013	08:17:34	0.019
34	04/22/2013	08:18:34	0.019
35	04/22/2013	08:19:34	0.019
36	04/22/2013	08:20:34	0.020
37	04/22/2013	08:21:34	0.019
38	04/22/2013	08:22:34	0.019
39	04/22/2013	08:23:34	0.019
40	04/22/2013	08:24:34	0.019
41	04/22/2013	08:25:34	0.020
42	04/22/2013	08:26:34	0.020
43	04/22/2013	08:27:34	0.020



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/22/2013	08:28:34	0.020
45	04/22/2013	08:29:34	0.020
46	04/22/2013	08:30:34	0.020
47	04/22/2013	08:31:34	0.020
48	04/22/2013	08:32:34	0.020
49	04/22/2013	08:33:34	0.020
50	04/22/2013	08:34:34	0.021
51	04/22/2013	08:35:34	0.020
52	04/22/2013	08:36:34	0.020
53	04/22/2013	08:37:34	0.020
54	04/22/2013	08:38:34	0.021
55	04/22/2013	08:39:34	0.021
56	04/22/2013	08:40:34	0.020
57	04/22/2013	08:41:34	0.020
58	04/22/2013	08:42:34	0.021
59	04/22/2013	08:43:34	0.021
60	04/22/2013	08:44:34	0.021
61	04/22/2013	08:45:34	0.020
62	04/22/2013	08:46:34	0.020
63	04/22/2013	08:47:34	0.020
64	04/22/2013	08:48:34	0.021
65	04/22/2013	08:49:34	0.021
66	04/22/2013	08:50:34	0.021
67	04/22/2013	08:51:34	0.021
68	04/22/2013	08:52:34	0.021
69	04/22/2013	08:53:34	0.022
70	04/22/2013	08:54:34	0.021
71	04/22/2013	08:55:34	0.022
72	04/22/2013	08:56:34	0.021
73	04/22/2013	08:57:34	0.021
74	04/22/2013	08:58:34	0.022
75	04/22/2013	08:59:34	0.021
76	04/22/2013	09:00:34	0.020
77	04/22/2013	09:01:34	0.020
78	04/22/2013	09:02:34	0.020
79	04/22/2013	09:03:34	0.020
80	04/22/2013	09:04:34	0.021
81	04/22/2013	09:05:34	0.020
82	04/22/2013	09:06:34	0.020
83	04/22/2013	09:07:34	0.021
84	04/22/2013	09:08:34	0.021
85	04/22/2013	09:09:34	0.021
86	04/22/2013	09:10:34	0.020
87	04/22/2013	09:11:34	0.020
88	04/22/2013	09:12:34	0.020
89	04/22/2013	09:13:34	0.020
90	04/22/2013	09:14:34	0.020
91	04/22/2013	09:15:34	0.021
92	04/22/2013	09:16:34	0.021
93	04/22/2013	09:17:34	0.020
94	04/22/2013	09:18:34	0.020
95	04/22/2013	09:19:34	0.020
96	04/22/2013	09:20:34	0.023
97	04/22/2013	09:21:34	0.020
98	04/22/2013	09:22:34	0.020



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/22/2013	09:23:34	0.021
100	04/22/2013	09:24:34	0.019
101	04/22/2013	09:25:34	0.019
102	04/22/2013	09:26:34	0.019
103	04/22/2013	09:27:34	0.019
104	04/22/2013	09:28:34	0.019
105	04/22/2013	09:29:34	0.020
106	04/22/2013	09:30:34	0.019
107	04/22/2013	09:31:34	0.019
108	04/22/2013	09:32:34	0.020
109	04/22/2013	09:33:34	0.035
110	04/22/2013	09:34:34	0.022
111	04/22/2013	09:35:34	0.043
112	04/22/2013	09:36:34	0.024
113	04/22/2013	09:37:34	0.020
114	04/22/2013	09:38:34	0.025
115	04/22/2013	09:39:34	0.021
116	04/22/2013	09:40:34	0.021
117	04/22/2013	09:41:34	0.020
118	04/22/2013	09:42:34	0.020
119	04/22/2013	09:43:34	0.020
120	04/22/2013	09:44:34	0.019
121	04/22/2013	09:45:34	0.020
122	04/22/2013	09:46:34	0.020
123	04/22/2013	09:47:34	0.022
124	04/22/2013	09:48:34	0.020
125	04/22/2013	09:49:34	0.021
126	04/22/2013	09:50:34	0.021
127	04/22/2013	09:51:34	0.024
128	04/22/2013	09:52:34	0.021
129	04/22/2013	09:53:34	0.021
130	04/22/2013	09:54:34	0.022
131	04/22/2013	09:55:34	0.022
132	04/22/2013	09:56:34	0.022
133	04/22/2013	09:57:34	0.020
134	04/22/2013	09:58:34	0.020
135	04/22/2013	09:59:34	0.020
136	04/22/2013	10:00:34	0.020
137	04/22/2013	10:01:34	0.020
138	04/22/2013	10:02:34	0.020
139	04/22/2013	10:03:34	0.022
140	04/22/2013	10:04:34	0.020
141	04/22/2013	10:05:34	0.020
142	04/22/2013	10:06:34	0.020
143	04/22/2013	10:07:34	0.021
144	04/22/2013	10:08:34	0.024
145	04/22/2013	10:09:34	0.019
146	04/22/2013	10:10:34	0.019
147	04/22/2013	10:11:34	0.020
148	04/22/2013	10:12:34	0.020
149	04/22/2013	10:13:34	0.020
150	04/22/2013	10:14:34	0.020
151	04/22/2013	10:15:34	0.020
152	04/22/2013	10:16:34	0.021
153	04/22/2013	10:17:34	0.021



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/22/2013	10:18:34	0.021
155	04/22/2013	10:19:34	0.020
156	04/22/2013	10:20:34	0.020
157	04/22/2013	10:21:34	0.020
158	04/22/2013	10:22:34	0.020
159	04/22/2013	10:23:34	0.020
160	04/22/2013	10:24:34	0.020
161	04/22/2013	10:25:34	0.019
162	04/22/2013	10:26:34	0.019
163	04/22/2013	10:27:34	0.019
164	04/22/2013	10:28:34	0.019
165	04/22/2013	10:29:34	0.019
166	04/22/2013	10:30:34	0.019
167	04/22/2013	10:31:34	0.019
168	04/22/2013	10:32:34	0.019
169	04/22/2013	10:33:34	0.019
170	04/22/2013	10:34:34	0.020
171	04/22/2013	10:35:34	0.021
172	04/22/2013	10:36:34	0.020
173	04/22/2013	10:37:34	0.022
174	04/22/2013	10:38:34	0.021
175	04/22/2013	10:39:34	0.023
176	04/22/2013	10:40:34	0.021
177	04/22/2013	10:41:34	0.050
178	04/22/2013	10:42:34	0.020
179	04/22/2013	10:43:34	0.020
180	04/22/2013	10:44:34	0.022
181	04/22/2013	10:45:34	0.020
182	04/22/2013	10:46:34	0.020
183	04/22/2013	10:47:34	0.019
184	04/22/2013	10:48:34	0.019
185	04/22/2013	10:49:34	0.020
186	04/22/2013	10:50:34	0.021
187	04/22/2013	10:51:34	0.020
188	04/22/2013	10:52:34	0.020
189	04/22/2013	10:53:34	0.020
190	04/22/2013	10:54:34	0.020
191	04/22/2013	10:55:34	0.019
192	04/22/2013	10:56:34	0.019
193	04/22/2013	10:57:34	0.020
194	04/22/2013	10:58:34	0.021
195	04/22/2013	10:59:34	0.019
196	04/22/2013	11:00:34	0.021
197	04/22/2013	11:01:34	0.020
198	04/22/2013	11:02:34	0.019
199	04/22/2013	11:03:34	0.018
200	04/22/2013	11:04:34	0.019
201	04/22/2013	11:05:34	0.018
202	04/22/2013	11:06:34	0.019
203	04/22/2013	11:07:34	0.018
204	04/22/2013	11:08:34	0.019
205	04/22/2013	11:09:34	0.019
206	04/22/2013	11:10:34	0.019
207	04/22/2013	11:11:34	0.023
208	04/22/2013	11:12:34	0.023



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/22/2013	11:13:34	0.018
210	04/22/2013	11:14:34	0.017
211	04/22/2013	11:15:34	0.017
212	04/22/2013	11:16:34	0.017
213	04/22/2013	11:17:34	0.017
214	04/22/2013	11:18:34	0.017
215	04/22/2013	11:19:34	0.017
216	04/22/2013	11:20:34	0.018
217	04/22/2013	11:21:34	0.016
218	04/22/2013	11:22:34	0.016
219	04/22/2013	11:23:34	0.016
220	04/22/2013	11:24:34	0.016
221	04/22/2013	11:25:34	0.015
222	04/22/2013	11:26:34	0.015
223	04/22/2013	11:27:34	0.015
224	04/22/2013	11:28:34	0.017
225	04/22/2013	11:29:34	0.015
226	04/22/2013	11:30:34	0.015
227	04/22/2013	11:31:34	0.015
228	04/22/2013	11:32:34	0.014
229	04/22/2013	11:33:34	0.014
230	04/22/2013	11:34:34	0.015
231	04/22/2013	11:35:34	0.015
232	04/22/2013	11:36:34	0.015
233	04/22/2013	11:37:34	0.015
234	04/22/2013	11:38:34	0.015
235	04/22/2013	11:39:34	0.015
236	04/22/2013	11:40:34	0.015
237	04/22/2013	11:41:34	0.015
238	04/22/2013	11:42:34	0.015
239	04/22/2013	11:43:34	0.015
240	04/22/2013	11:44:34	0.015
241	04/22/2013	11:45:34	0.014
242	04/22/2013	11:46:34	0.014
243	04/22/2013	11:47:34	0.014
244	04/22/2013	11:48:34	0.015
245	04/22/2013	11:49:34	0.015
246	04/22/2013	11:50:34	0.014
247	04/22/2013	11:51:34	0.014
248	04/22/2013	11:52:34	0.014
249	04/22/2013	11:53:34	0.014
250	04/22/2013	11:54:34	0.014
251	04/22/2013	11:55:34	0.014
252	04/22/2013	11:56:34	0.014
253	04/22/2013	11:57:34	0.014
254	04/22/2013	11:58:34	0.015
255	04/22/2013	11:59:34	0.014
256	04/22/2013	12:00:34	0.014
257	04/22/2013	12:01:34	0.014
258	04/22/2013	12:02:34	0.014
259	04/22/2013	12:03:34	0.014
260	04/22/2013	12:04:34	0.013
261	04/22/2013	12:05:34	0.013
262	04/22/2013	12:06:34	0.014
263	04/22/2013	12:07:34	0.013



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/22/2013	12:08:34	0.013
265	04/22/2013	12:09:34	0.013
266	04/22/2013	12:10:34	0.013
267	04/22/2013	12:11:34	0.014
268	04/22/2013	12:12:34	0.014
269	04/22/2013	12:13:34	0.014
270	04/22/2013	12:14:34	0.013
271	04/22/2013	12:15:34	0.013
272	04/22/2013	12:16:34	0.013
273	04/22/2013	12:17:34	0.013
274	04/22/2013	12:18:34	0.013
275	04/22/2013	12:19:34	0.013
276	04/22/2013	12:20:34	0.013
277	04/22/2013	12:21:34	0.014
278	04/22/2013	12:22:34	0.014
279	04/22/2013	12:23:34	0.013
280	04/22/2013	12:24:34	0.013
281	04/22/2013	12:25:34	0.013
282	04/22/2013	12:26:34	0.014
283	04/22/2013	12:27:34	0.013
284	04/22/2013	12:28:34	0.014
285	04/22/2013	12:29:34	0.014
286	04/22/2013	12:30:34	0.014
287	04/22/2013	12:31:34	0.014
288	04/22/2013	12:32:34	0.014
289	04/22/2013	12:33:34	0.014
290	04/22/2013	12:34:34	0.014
291	04/22/2013	12:35:34	0.014
292	04/22/2013	12:36:34	0.014
293	04/22/2013	12:37:34	0.014
294	04/22/2013	12:38:34	0.015
295	04/22/2013	12:39:34	0.016
296	04/22/2013	12:40:34	0.014
297	04/22/2013	12:41:34	0.015
298	04/22/2013	12:42:34	0.015
299	04/22/2013	12:43:34	0.015
300	04/22/2013	12:44:34	0.014
301	04/22/2013	12:45:34	0.015
302	04/22/2013	12:46:34	0.015
303	04/22/2013	12:47:34	0.013
304	04/22/2013	12:48:34	0.015
305	04/22/2013	12:49:34	0.014
306	04/22/2013	12:50:34	0.014
307	04/22/2013	12:51:34	0.014
308	04/22/2013	12:52:34	0.014
309	04/22/2013	12:53:34	0.014
310	04/22/2013	12:54:34	0.015
311	04/22/2013	12:55:34	0.014
312	04/22/2013	12:56:34	0.014
313	04/22/2013	12:57:34	0.014
314	04/22/2013	12:58:34	0.014
315	04/22/2013	12:59:34	0.015
316	04/22/2013	13:00:34	0.014
317	04/22/2013	13:01:34	0.015
318	04/22/2013	13:02:34	0.016



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/22/2013	13:03:34	0.014
320	04/22/2013	13:04:34	0.013
321	04/22/2013	13:05:34	0.014
322	04/22/2013	13:06:34	0.014
323	04/22/2013	13:07:34	0.014
324	04/22/2013	13:08:34	0.014
325	04/22/2013	13:09:34	0.014
326	04/22/2013	13:10:34	0.014
327	04/22/2013	13:11:34	0.014
328	04/22/2013	13:12:34	0.015
329	04/22/2013	13:13:34	0.014
330	04/22/2013	13:14:34	0.014
331	04/22/2013	13:15:34	0.014
332	04/22/2013	13:16:34	0.014
333	04/22/2013	13:17:34	0.013
334	04/22/2013	13:18:34	0.014
335	04/22/2013	13:19:34	0.014
336	04/22/2013	13:20:34	0.013
337	04/22/2013	13:21:34	0.014
338	04/22/2013	13:22:34	0.014
339	04/22/2013	13:23:34	0.014
340	04/22/2013	13:24:34	0.014
341	04/22/2013	13:25:34	0.013
342	04/22/2013	13:26:34	0.014
343	04/22/2013	13:27:34	0.015
344	04/22/2013	13:28:34	0.014
345	04/22/2013	13:29:34	0.015
346	04/22/2013	13:30:34	0.015
347	04/22/2013	13:31:34	0.016
348	04/22/2013	13:32:34	0.014
349	04/22/2013	13:33:34	0.014
350	04/22/2013	13:34:34	0.014
351	04/22/2013	13:35:34	0.014
352	04/22/2013	13:36:34	0.016
353	04/22/2013	13:37:34	0.015
354	04/22/2013	13:38:34	0.015
355	04/22/2013	13:39:34	0.015
356	04/22/2013	13:40:34	0.015
357	04/22/2013	13:41:34	0.015
358	04/22/2013	13:42:34	0.015
359	04/22/2013	13:43:34	0.015
360	04/22/2013	13:44:34	0.015
361	04/22/2013	13:45:34	0.014
362	04/22/2013	13:46:34	0.015
363	04/22/2013	13:47:34	0.014
364	04/22/2013	13:48:34	0.014
365	04/22/2013	13:49:34	0.014
366	04/22/2013	13:50:34	0.015
367	04/22/2013	13:51:34	0.015
368	04/22/2013	13:52:34	0.016
369	04/22/2013	13:53:34	0.016
370	04/22/2013	13:54:34	0.015
371	04/22/2013	13:55:34	0.015
372	04/22/2013	13:56:34	0.015
373	04/22/2013	13:57:34	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
374	04/22/2013	13:58:34	0.014
375	04/22/2013	13:59:34	0.015
376	04/22/2013	14:00:34	0.014
377	04/22/2013	14:01:34	0.015
378	04/22/2013	14:02:34	0.015
379	04/22/2013	14:03:34	0.016
380	04/22/2013	14:04:34	0.015
381	04/22/2013	14:05:34	0.016
382	04/22/2013	14:06:34	0.016
383	04/22/2013	14:07:34	0.015
384	04/22/2013	14:08:34	0.014
385	04/22/2013	14:09:34	0.014
386	04/22/2013	14:10:34	0.014
387	04/22/2013	14:11:34	0.014
388	04/22/2013	14:12:34	0.015
389	04/22/2013	14:13:34	0.015
390	04/22/2013	14:14:34	0.015
391	04/22/2013	14:15:34	0.016
392	04/22/2013	14:16:34	0.015
393	04/22/2013	14:17:34	0.015
394	04/22/2013	14:18:34	0.015
395	04/22/2013	14:19:34	0.015
396	04/22/2013	14:20:34	0.015
397	04/22/2013	14:21:34	0.015
398	04/22/2013	14:22:34	0.015
399	04/22/2013	14:23:34	0.015
400	04/22/2013	14:24:34	0.016
401	04/22/2013	14:25:34	0.015
402	04/22/2013	14:26:34	0.016
403	04/22/2013	14:27:34	0.016
404	04/22/2013	14:28:34	0.015
405	04/22/2013	14:29:34	0.015
406	04/22/2013	14:30:34	0.015
407	04/22/2013	14:31:34	0.016
408	04/22/2013	14:32:34	0.020
409	04/22/2013	14:33:34	0.016



Dust - Unit 2  
4/22/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/22/2013
Instrument S/N	8530131405	Start Time	07:58:20
		Stop Date	04/22/2013
		Stop Time	14:26:20
		Total Time	0:06:28:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/22/2013	07:59:20	0.019
2	04/22/2013	08:00:20	0.026
3	04/22/2013	08:01:20	0.021
4	04/22/2013	08:02:20	0.022
5	04/22/2013	08:03:20	0.020
6	04/22/2013	08:04:20	0.019
7	04/22/2013	08:05:20	0.020
8	04/22/2013	08:06:20	0.019
9	04/22/2013	08:07:20	0.019
10	04/22/2013	08:08:20	0.019
11	04/22/2013	08:09:20	0.019
12	04/22/2013	08:10:20	0.019
13	04/22/2013	08:11:20	0.022
14	04/22/2013	08:12:20	0.038
15	04/22/2013	08:13:20	0.020
16	04/22/2013	08:14:20	0.020
17	04/22/2013	08:15:20	0.020
18	04/22/2013	08:16:20	0.020
19	04/22/2013	08:17:20	0.020
20	04/22/2013	08:18:20	0.025
21	04/22/2013	08:19:20	0.031
22	04/22/2013	08:20:20	0.020
23	04/22/2013	08:21:20	0.021
24	04/22/2013	08:22:20	0.047
25	04/22/2013	08:23:20	0.022
26	04/22/2013	08:24:20	0.057
27	04/22/2013	08:25:20	0.022
28	04/22/2013	08:26:20	0.023
29	04/22/2013	08:27:20	0.020
30	04/22/2013	08:28:20	0.020
31	04/22/2013	08:29:20	0.019
32	04/22/2013	08:30:20	0.020
33	04/22/2013	08:31:20	0.020
34	04/22/2013	08:32:20	0.025
35	04/22/2013	08:33:20	0.036
36	04/22/2013	08:34:20	0.021
37	04/22/2013	08:35:20	0.020
38	04/22/2013	08:36:20	0.019
39	04/22/2013	08:37:20	0.021
40	04/22/2013	08:38:20	0.020
41	04/22/2013	08:39:20	0.022
42	04/22/2013	08:40:20	0.021
43	04/22/2013	08:41:20	0.020



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/22/2013	08:42:20	0.020
45	04/22/2013	08:43:20	0.019
46	04/22/2013	08:44:20	0.020
47	04/22/2013	08:45:20	0.020
48	04/22/2013	08:46:20	0.020
49	04/22/2013	08:47:20	0.020
50	04/22/2013	08:48:20	0.020
51	04/22/2013	08:49:20	0.027
52	04/22/2013	08:50:20	0.021
53	04/22/2013	08:51:20	0.020
54	04/22/2013	08:52:20	0.021
55	04/22/2013	08:53:20	0.020
56	04/22/2013	08:54:20	0.020
57	04/22/2013	08:55:20	0.020
58	04/22/2013	08:56:20	0.019
59	04/22/2013	08:57:20	0.020
60	04/22/2013	08:58:20	0.019
61	04/22/2013	08:59:20	0.020
62	04/22/2013	09:00:20	0.020
63	04/22/2013	09:01:20	0.021
64	04/22/2013	09:02:20	0.020
65	04/22/2013	09:03:20	0.020
66	04/22/2013	09:04:20	0.020
67	04/22/2013	09:05:20	0.021
68	04/22/2013	09:06:20	0.021
69	04/22/2013	09:07:20	0.020
70	04/22/2013	09:08:20	0.020
71	04/22/2013	09:09:20	0.020
72	04/22/2013	09:10:20	0.020
73	04/22/2013	09:11:20	0.022
74	04/22/2013	09:12:20	0.025
75	04/22/2013	09:13:20	0.023
76	04/22/2013	09:14:20	0.020
77	04/22/2013	09:15:20	0.019
78	04/22/2013	09:16:20	0.019
79	04/22/2013	09:17:20	0.019
80	04/22/2013	09:18:20	0.019
81	04/22/2013	09:19:20	0.019
82	04/22/2013	09:20:20	0.019
83	04/22/2013	09:21:20	0.020
84	04/22/2013	09:22:20	0.019
85	04/22/2013	09:23:20	0.019
86	04/22/2013	09:24:20	0.019
87	04/22/2013	09:25:20	0.024
88	04/22/2013	09:26:20	0.019
89	04/22/2013	09:27:20	0.019
90	04/22/2013	09:28:20	0.020
91	04/22/2013	09:29:20	0.022
92	04/22/2013	09:30:20	0.019
93	04/22/2013	09:31:20	0.019
94	04/22/2013	09:32:20	0.025
95	04/22/2013	09:33:20	0.019
96	04/22/2013	09:34:20	0.019
97	04/22/2013	09:35:20	0.019
98	04/22/2013	09:36:20	0.019



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/22/2013	09:37:20	0.019
100	04/22/2013	09:38:20	0.019
101	04/22/2013	09:39:20	0.020
102	04/22/2013	09:40:20	0.019
103	04/22/2013	09:41:20	0.020
104	04/22/2013	09:42:20	0.020
105	04/22/2013	09:43:20	0.020
106	04/22/2013	09:44:20	0.020
107	04/22/2013	09:45:20	0.021
108	04/22/2013	09:46:20	0.021
109	04/22/2013	09:47:20	0.026
110	04/22/2013	09:48:20	0.022
111	04/22/2013	09:49:20	0.021
112	04/22/2013	09:50:20	0.022
113	04/22/2013	09:51:20	0.087
114	04/22/2013	09:52:20	0.043
115	04/22/2013	09:53:20	0.022
116	04/22/2013	09:54:20	0.021
117	04/22/2013	09:55:20	0.020
118	04/22/2013	09:56:20	0.021
119	04/22/2013	09:57:20	0.022
120	04/22/2013	09:58:20	0.022
121	04/22/2013	09:59:20	0.024
122	04/22/2013	10:00:20	0.027
123	04/22/2013	10:01:20	0.025
124	04/22/2013	10:02:20	0.023
125	04/22/2013	10:03:20	0.022
126	04/22/2013	10:04:20	0.027
127	04/22/2013	10:05:20	0.027
128	04/22/2013	10:06:20	0.029
129	04/22/2013	10:07:20	0.024
130	04/22/2013	10:08:20	0.046
131	04/22/2013	10:09:20	0.032
132	04/22/2013	10:10:20	0.023
133	04/22/2013	10:11:20	0.025
134	04/22/2013	10:12:20	0.022
135	04/22/2013	10:13:20	0.021
136	04/22/2013	10:14:20	0.023
137	04/22/2013	10:15:20	0.023
138	04/22/2013	10:16:20	0.023
139	04/22/2013	10:17:20	0.029
140	04/22/2013	10:18:20	0.025
141	04/22/2013	10:19:20	0.030
142	04/22/2013	10:20:20	0.025
143	04/22/2013	10:21:20	0.022
144	04/22/2013	10:22:20	0.022
145	04/22/2013	10:23:20	0.024
146	04/22/2013	10:24:20	0.022
147	04/22/2013	10:25:20	0.020
148	04/22/2013	10:26:20	0.020
149	04/22/2013	10:27:20	0.023
150	04/22/2013	10:28:20	0.023
151	04/22/2013	10:29:20	0.020
152	04/22/2013	10:30:20	0.019
153	04/22/2013	10:31:20	0.021



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/22/2013	10:32:20	0.021
155	04/22/2013	10:33:20	0.024
156	04/22/2013	10:34:20	0.024
157	04/22/2013	10:35:20	0.022
158	04/22/2013	10:36:20	0.021
159	04/22/2013	10:37:20	0.023
160	04/22/2013	10:38:20	0.028
161	04/22/2013	10:39:20	0.023
162	04/22/2013	10:40:20	0.022
163	04/22/2013	10:41:20	0.022
164	04/22/2013	10:42:20	0.024
165	04/22/2013	10:43:20	0.024
166	04/22/2013	10:44:20	0.028
167	04/22/2013	10:45:20	0.032
168	04/22/2013	10:46:20	0.022
169	04/22/2013	10:47:20	0.022
170	04/22/2013	10:48:20	0.021
171	04/22/2013	10:49:20	0.020
172	04/22/2013	10:50:20	0.019
173	04/22/2013	10:51:20	0.020
174	04/22/2013	10:52:20	0.020
175	04/22/2013	10:53:20	0.020
176	04/22/2013	10:54:20	0.020
177	04/22/2013	10:55:20	0.021
178	04/22/2013	10:56:20	0.025
179	04/22/2013	10:57:20	0.022
180	04/22/2013	10:58:20	0.020
181	04/22/2013	10:59:20	0.021
182	04/22/2013	11:00:20	0.025
183	04/22/2013	11:01:20	0.021
184	04/22/2013	11:02:20	0.021
185	04/22/2013	11:03:20	0.026
186	04/22/2013	11:04:20	0.020
187	04/22/2013	11:05:20	0.033
188	04/22/2013	11:06:20	0.034
189	04/22/2013	11:07:20	0.023
190	04/22/2013	11:08:20	0.021
191	04/22/2013	11:09:20	0.020
192	04/22/2013	11:10:20	0.020
193	04/22/2013	11:11:20	0.019
194	04/22/2013	11:12:20	0.021
195	04/22/2013	11:13:20	0.018
196	04/22/2013	11:14:20	0.021
197	04/22/2013	11:15:20	0.021
198	04/22/2013	11:16:20	0.021
199	04/22/2013	11:17:20	0.019
200	04/22/2013	11:18:20	0.018
201	04/22/2013	11:19:20	0.017
202	04/22/2013	11:20:20	0.017
203	04/22/2013	11:21:20	0.017
204	04/22/2013	11:22:20	0.017
205	04/22/2013	11:23:20	0.017
206	04/22/2013	11:24:20	0.017
207	04/22/2013	11:25:20	0.017
208	04/22/2013	11:26:20	0.016



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/22/2013	11:27:20	0.016
210	04/22/2013	11:28:20	0.023
211	04/22/2013	11:29:20	0.020
212	04/22/2013	11:30:20	0.017
213	04/22/2013	11:31:20	0.016
214	04/22/2013	11:32:20	0.015
215	04/22/2013	11:33:20	0.016
216	04/22/2013	11:34:20	0.016
217	04/22/2013	11:35:20	0.016
218	04/22/2013	11:36:20	0.015
219	04/22/2013	11:37:20	0.018
220	04/22/2013	11:38:20	0.016
221	04/22/2013	11:39:20	0.016
222	04/22/2013	11:40:20	0.016
223	04/22/2013	11:41:20	0.016
224	04/22/2013	11:42:20	0.016
225	04/22/2013	11:43:20	0.032
226	04/22/2013	11:44:20	0.015
227	04/22/2013	11:45:20	0.016
228	04/22/2013	11:46:20	0.015
229	04/22/2013	11:47:20	0.015
230	04/22/2013	11:48:20	0.015
231	04/22/2013	11:49:20	0.015
232	04/22/2013	11:50:20	0.021
233	04/22/2013	11:51:20	0.015
234	04/22/2013	11:52:20	0.016
235	04/22/2013	11:53:20	0.015
236	04/22/2013	11:54:20	0.014
237	04/22/2013	11:55:20	0.014
238	04/22/2013	11:56:20	0.015
239	04/22/2013	11:57:20	0.015
240	04/22/2013	11:58:20	0.018
241	04/22/2013	11:59:20	0.021
242	04/22/2013	12:00:20	0.029
243	04/22/2013	12:01:20	0.016
244	04/22/2013	12:02:20	0.015
245	04/22/2013	12:03:20	0.014
246	04/22/2013	12:04:20	0.016
247	04/22/2013	12:05:20	0.015
248	04/22/2013	12:06:20	0.014
249	04/22/2013	12:07:20	0.013
250	04/22/2013	12:08:20	0.014
251	04/22/2013	12:09:20	0.016
252	04/22/2013	12:10:20	0.024
253	04/22/2013	12:11:20	0.019
254	04/22/2013	12:12:20	0.022
255	04/22/2013	12:13:20	0.013
256	04/22/2013	12:14:20	0.043
257	04/22/2013	12:15:20	0.013
258	04/22/2013	12:16:20	0.013
259	04/22/2013	12:17:20	0.014
260	04/22/2013	12:18:20	0.016
261	04/22/2013	12:19:20	0.014
262	04/22/2013	12:20:20	0.017
263	04/22/2013	12:21:20	0.017



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/22/2013	12:22:20	0.017
265	04/22/2013	12:23:20	0.034
266	04/22/2013	12:24:20	0.017
267	04/22/2013	12:25:20	0.015
268	04/22/2013	12:26:20	0.015
269	04/22/2013	12:27:20	0.017
270	04/22/2013	12:28:20	0.016
271	04/22/2013	12:29:20	0.016
272	04/22/2013	12:30:20	0.015
273	04/22/2013	12:31:20	0.018
274	04/22/2013	12:32:20	0.023
275	04/22/2013	12:33:20	0.020
276	04/22/2013	12:34:20	0.018
277	04/22/2013	12:35:20	0.048
278	04/22/2013	12:36:20	0.046
279	04/22/2013	12:37:20	0.023
280	04/22/2013	12:38:20	0.025
281	04/22/2013	12:39:20	0.031
282	04/22/2013	12:40:20	0.070
283	04/22/2013	12:41:20	0.035
284	04/22/2013	12:42:20	0.038
285	04/22/2013	12:43:20	0.039
286	04/22/2013	12:44:20	0.028
287	04/22/2013	12:45:20	0.051
288	04/22/2013	12:46:20	0.017
289	04/22/2013	12:47:20	0.015
290	04/22/2013	12:48:20	0.014
291	04/22/2013	12:49:20	0.026
292	04/22/2013	12:50:20	0.028
293	04/22/2013	12:51:20	0.035
294	04/22/2013	12:52:20	0.020
295	04/22/2013	12:53:20	0.018
296	04/22/2013	12:54:20	0.024
297	04/22/2013	12:55:20	0.017
298	04/22/2013	12:56:20	0.030
299	04/22/2013	12:57:20	0.041
300	04/22/2013	12:58:20	0.103
301	04/22/2013	12:59:20	0.043
302	04/22/2013	13:00:20	0.023
303	04/22/2013	13:01:20	0.132
304	04/22/2013	13:02:20	0.066
305	04/22/2013	13:03:20	0.021
306	04/22/2013	13:04:20	0.026
307	04/22/2013	13:05:20	0.015
308	04/22/2013	13:06:20	0.015
309	04/22/2013	13:07:20	0.018
310	04/22/2013	13:08:20	0.016
311	04/22/2013	13:09:20	0.023
312	04/22/2013	13:10:20	0.026
313	04/22/2013	13:11:20	0.030
314	04/22/2013	13:12:20	0.016
315	04/22/2013	13:13:20	0.018
316	04/22/2013	13:14:20	0.017
317	04/22/2013	13:15:20	0.015
318	04/22/2013	13:16:20	0.017



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/22/2013	13:17:20	0.016
320	04/22/2013	13:18:20	0.016
321	04/22/2013	13:19:20	0.019
322	04/22/2013	13:20:20	0.024
323	04/22/2013	13:21:20	0.037
324	04/22/2013	13:22:20	0.028
325	04/22/2013	13:23:20	0.028
326	04/22/2013	13:24:20	0.031
327	04/22/2013	13:25:20	0.034
328	04/22/2013	13:26:20	0.032
329	04/22/2013	13:27:20	0.023
330	04/22/2013	13:28:20	0.035
331	04/22/2013	13:29:20	0.047
332	04/22/2013	13:30:20	0.035
333	04/22/2013	13:31:20	0.013
334	04/22/2013	13:32:20	0.017
335	04/22/2013	13:33:20	0.014
336	04/22/2013	13:34:20	0.013
337	04/22/2013	13:35:20	0.014
338	04/22/2013	13:36:20	0.017
339	04/22/2013	13:37:20	0.017
340	04/22/2013	13:38:20	0.022
341	04/22/2013	13:39:20	0.028
342	04/22/2013	13:40:20	0.021
343	04/22/2013	13:41:20	0.026
344	04/22/2013	13:42:20	0.177
345	04/22/2013	13:43:20	0.019
346	04/22/2013	13:44:20	0.035
347	04/22/2013	13:45:20	0.015
348	04/22/2013	13:46:20	0.014
349	04/22/2013	13:47:20	0.034
350	04/22/2013	13:48:20	0.026
351	04/22/2013	13:49:20	0.042
352	04/22/2013	13:50:20	0.093
353	04/22/2013	13:51:20	0.076
354	04/22/2013	13:52:20	0.050
355	04/22/2013	13:53:20	0.023
356	04/22/2013	13:54:20	0.022
357	04/22/2013	13:55:20	0.018
358	04/22/2013	13:56:20	0.017
359	04/22/2013	13:57:20	0.015
360	04/22/2013	13:58:20	0.015
361	04/22/2013	13:59:20	0.013
362	04/22/2013	14:00:20	0.030
363	04/22/2013	14:01:20	0.017
364	04/22/2013	14:02:20	0.015
365	04/22/2013	14:03:20	0.016
366	04/22/2013	14:04:20	0.027
367	04/22/2013	14:05:20	0.019
368	04/22/2013	14:06:20	0.020
369	04/22/2013	14:07:20	0.020
370	04/22/2013	14:08:20	0.019
371	04/22/2013	14:09:20	0.018
372	04/22/2013	14:10:20	0.019
373	04/22/2013	14:11:20	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
374	04/22/2013	14:12:20	0.020
375	04/22/2013	14:13:20	0.020
376	04/22/2013	14:14:20	0.022
377	04/22/2013	14:15:20	0.023
378	04/22/2013	14:16:20	0.016
379	04/22/2013	14:17:20	0.016
380	04/22/2013	14:18:20	0.020
381	04/22/2013	14:19:20	0.017
382	04/22/2013	14:20:20	0.023
383	04/22/2013	14:21:20	0.018
384	04/22/2013	14:22:20	0.028
385	04/22/2013	14:23:20	0.024
386	04/22/2013	14:24:20	0.049
387	04/22/2013	14:25:20	0.034
388	04/22/2013	14:26:20	0.033



Dust - Unit 1  
4/23/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/23/2013
Instrument S/N	8530131403	Start Time	07:42:40
		Stop Date	04/23/2013
		Stop Time	14:02:40
		Total Time	0:06:20:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m <sup>3</sup>
1	04/23/2013	07:43:40	0.016
2	04/23/2013	07:44:40	0.015
3	04/23/2013	07:45:40	0.015
4	04/23/2013	07:46:40	0.013
5	04/23/2013	07:47:40	0.013
6	04/23/2013	07:48:40	0.013
7	04/23/2013	07:49:40	0.012
8	04/23/2013	07:50:40	0.012
9	04/23/2013	07:51:40	0.013
10	04/23/2013	07:52:40	0.014
11	04/23/2013	07:53:40	0.014
12	04/23/2013	07:54:40	0.013
13	04/23/2013	07:55:40	0.013
14	04/23/2013	07:56:40	0.013
15	04/23/2013	07:57:40	0.013
16	04/23/2013	07:58:40	0.013
17	04/23/2013	07:59:40	0.013
18	04/23/2013	08:00:40	0.013
19	04/23/2013	08:01:40	0.014
20	04/23/2013	08:02:40	0.013
21	04/23/2013	08:03:40	0.014
22	04/23/2013	08:04:40	0.013
23	04/23/2013	08:05:40	0.013
24	04/23/2013	08:06:40	0.013
25	04/23/2013	08:07:40	0.015
26	04/23/2013	08:08:40	0.013
27	04/23/2013	08:09:40	0.013
28	04/23/2013	08:10:40	0.013
29	04/23/2013	08:11:40	0.013
30	04/23/2013	08:12:40	0.013
31	04/23/2013	08:13:40	0.015
32	04/23/2013	08:14:40	0.015
33	04/23/2013	08:15:40	0.014
34	04/23/2013	08:16:40	0.014
35	04/23/2013	08:17:40	0.013
36	04/23/2013	08:18:40	0.013
37	04/23/2013	08:19:40	0.013
38	04/23/2013	08:20:40	0.014
39	04/23/2013	08:21:40	0.017
40	04/23/2013	08:22:40	0.023
41	04/23/2013	08:23:40	0.018
42	04/23/2013	08:24:40	0.015
43	04/23/2013	08:25:40	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/23/2013	08:26:40	0.015
45	04/23/2013	08:27:40	0.015
46	04/23/2013	08:28:40	0.015
47	04/23/2013	08:29:40	0.014
48	04/23/2013	08:30:40	0.014
49	04/23/2013	08:31:40	0.015
50	04/23/2013	08:32:40	0.015
51	04/23/2013	08:33:40	0.014
52	04/23/2013	08:34:40	0.014
53	04/23/2013	08:35:40	0.016
54	04/23/2013	08:36:40	0.045
55	04/23/2013	08:37:40	0.015
56	04/23/2013	08:38:40	0.015
57	04/23/2013	08:39:40	0.014
58	04/23/2013	08:40:40	0.015
59	04/23/2013	08:41:40	0.015
60	04/23/2013	08:42:40	0.014
61	04/23/2013	08:43:40	0.016
62	04/23/2013	08:44:40	0.020
63	04/23/2013	08:45:40	0.016
64	04/23/2013	08:46:40	0.023
65	04/23/2013	08:47:40	0.016
66	04/23/2013	08:48:40	0.030
67	04/23/2013	08:49:40	0.014
68	04/23/2013	08:50:40	0.015
69	04/23/2013	08:51:40	0.015
70	04/23/2013	08:52:40	0.014
71	04/23/2013	08:53:40	0.015
72	04/23/2013	08:54:40	0.014
73	04/23/2013	08:55:40	0.014
74	04/23/2013	08:56:40	0.035
75	04/23/2013	08:57:40	0.021
76	04/23/2013	08:58:40	0.021
77	04/23/2013	08:59:40	0.027
78	04/23/2013	09:00:40	0.019
79	04/23/2013	09:01:40	0.023
80	04/23/2013	09:02:40	0.018
81	04/23/2013	09:03:40	0.015
82	04/23/2013	09:04:40	0.015
83	04/23/2013	09:05:40	0.018
84	04/23/2013	09:06:40	0.015
85	04/23/2013	09:07:40	0.015
86	04/23/2013	09:08:40	0.016
87	04/23/2013	09:09:40	0.016
88	04/23/2013	09:10:40	0.015
89	04/23/2013	09:11:40	0.015
90	04/23/2013	09:12:40	0.016
91	04/23/2013	09:13:40	0.015
92	04/23/2013	09:14:40	0.015
93	04/23/2013	09:15:40	0.017
94	04/23/2013	09:16:40	0.016
95	04/23/2013	09:17:40	0.016
96	04/23/2013	09:18:40	0.015
97	04/23/2013	09:19:40	0.016
98	04/23/2013	09:20:40	0.016



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/23/2013	09:21:40	0.014
100	04/23/2013	09:22:40	0.014
101	04/23/2013	09:23:40	0.014
102	04/23/2013	09:24:40	0.015
103	04/23/2013	09:25:40	0.013
104	04/23/2013	09:26:40	0.016
105	04/23/2013	09:27:40	0.016
106	04/23/2013	09:28:40	0.015
107	04/23/2013	09:29:40	0.019
108	04/23/2013	09:30:40	0.016
109	04/23/2013	09:31:40	0.018
110	04/23/2013	09:32:40	0.015
111	04/23/2013	09:33:40	0.016
112	04/23/2013	09:34:40	0.017
113	04/23/2013	09:35:40	0.019
114	04/23/2013	09:36:40	0.015
115	04/23/2013	09:37:40	0.016
116	04/23/2013	09:38:40	0.016
117	04/23/2013	09:39:40	0.017
118	04/23/2013	09:40:40	0.018
119	04/23/2013	09:41:40	0.021
120	04/23/2013	09:42:40	0.016
121	04/23/2013	09:43:40	0.018
122	04/23/2013	09:44:40	0.021
123	04/23/2013	09:45:40	0.016
124	04/23/2013	09:46:40	0.026
125	04/23/2013	09:47:40	0.016
126	04/23/2013	09:48:40	0.014
127	04/23/2013	09:49:40	0.017
128	04/23/2013	09:50:40	0.021
129	04/23/2013	09:51:40	0.016
130	04/23/2013	09:52:40	0.015
131	04/23/2013	09:53:40	0.017
132	04/23/2013	09:54:40	0.014
133	04/23/2013	09:55:40	0.015
134	04/23/2013	09:56:40	0.018
135	04/23/2013	09:57:40	0.017
136	04/23/2013	09:58:40	0.018
137	04/23/2013	09:59:40	0.061
138	04/23/2013	10:00:40	0.015
139	04/23/2013	10:01:40	0.013
140	04/23/2013	10:02:40	0.014
141	04/23/2013	10:03:40	0.013
142	04/23/2013	10:04:40	0.014
143	04/23/2013	10:05:40	0.014
144	04/23/2013	10:06:40	0.013
145	04/23/2013	10:07:40	0.014
146	04/23/2013	10:08:40	0.015
147	04/23/2013	10:09:40	0.015
148	04/23/2013	10:10:40	0.018
149	04/23/2013	10:11:40	0.019
150	04/23/2013	10:12:40	0.020
151	04/23/2013	10:13:40	0.016
152	04/23/2013	10:14:40	0.016
153	04/23/2013	10:15:40	0.018



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/23/2013	10:16:40	0.013
155	04/23/2013	10:17:40	0.018
156	04/23/2013	10:18:40	0.017
157	04/23/2013	10:19:40	0.015
158	04/23/2013	10:20:40	0.012
159	04/23/2013	10:21:40	0.018
160	04/23/2013	10:22:40	0.016
161	04/23/2013	10:23:40	0.022
162	04/23/2013	10:24:40	0.018
163	04/23/2013	10:25:40	0.025
164	04/23/2013	10:26:40	0.096
165	04/23/2013	10:27:40	0.012
166	04/23/2013	10:28:40	0.015
167	04/23/2013	10:29:40	0.022
168	04/23/2013	10:30:40	0.018
169	04/23/2013	10:31:40	0.015
170	04/23/2013	10:32:40	0.014
171	04/23/2013	10:33:40	0.013
172	04/23/2013	10:34:40	0.012
173	04/23/2013	10:35:40	0.012
174	04/23/2013	10:36:40	0.012
175	04/23/2013	10:37:40	0.015
176	04/23/2013	10:38:40	0.020
177	04/23/2013	10:39:40	0.031
178	04/23/2013	10:40:40	0.037
179	04/23/2013	10:41:40	0.021
180	04/23/2013	10:42:40	0.015
181	04/23/2013	10:43:40	0.013
182	04/23/2013	10:44:40	0.013
183	04/23/2013	10:45:40	0.012
184	04/23/2013	10:46:40	0.015
185	04/23/2013	10:47:40	0.013
186	04/23/2013	10:48:40	0.013
187	04/23/2013	10:49:40	0.013
188	04/23/2013	10:50:40	0.014
189	04/23/2013	10:51:40	0.017
190	04/23/2013	10:52:40	0.036
191	04/23/2013	10:53:40	0.017
192	04/23/2013	10:54:40	0.018
193	04/23/2013	10:55:40	0.016
194	04/23/2013	10:56:40	0.013
195	04/23/2013	10:57:40	0.013
196	04/23/2013	10:58:40	0.014
197	04/23/2013	10:59:40	0.034
198	04/23/2013	11:00:40	0.019
199	04/23/2013	11:01:40	0.013
200	04/23/2013	11:02:40	0.012
201	04/23/2013	11:03:40	0.013
202	04/23/2013	11:04:40	0.017
203	04/23/2013	11:05:40	0.019
204	04/23/2013	11:06:40	0.035
205	04/23/2013	11:07:40	0.022
206	04/23/2013	11:08:40	0.023
207	04/23/2013	11:09:40	0.023
208	04/23/2013	11:10:40	0.018



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/23/2013	11:11:40	0.012
210	04/23/2013	11:12:40	0.012
211	04/23/2013	11:13:40	0.025
212	04/23/2013	11:14:40	0.021
213	04/23/2013	11:15:40	0.014
214	04/23/2013	11:16:40	0.013
215	04/23/2013	11:17:40	0.015
216	04/23/2013	11:18:40	0.013
217	04/23/2013	11:19:40	0.012
218	04/23/2013	11:20:40	0.016
219	04/23/2013	11:21:40	0.021
220	04/23/2013	11:22:40	0.012
221	04/23/2013	11:23:40	0.020
222	04/23/2013	11:24:40	0.021
223	04/23/2013	11:25:40	0.015
224	04/23/2013	11:26:40	0.022
225	04/23/2013	11:27:40	0.045
226	04/23/2013	11:28:40	0.019
227	04/23/2013	11:29:40	0.013
228	04/23/2013	11:30:40	0.021
229	04/23/2013	11:31:40	0.019
230	04/23/2013	11:32:40	0.042
231	04/23/2013	11:33:40	0.021
232	04/23/2013	11:34:40	0.018
233	04/23/2013	11:35:40	0.024
234	04/23/2013	11:36:40	0.055
235	04/23/2013	11:37:40	0.020
236	04/23/2013	11:38:40	0.014
237	04/23/2013	11:39:40	0.015
238	04/23/2013	11:40:40	0.022
239	04/23/2013	11:41:40	0.014
240	04/23/2013	11:42:40	0.015
241	04/23/2013	11:43:40	0.025
242	04/23/2013	11:44:40	0.013
243	04/23/2013	11:45:40	0.012
244	04/23/2013	11:46:40	0.014
245	04/23/2013	11:47:40	0.016
246	04/23/2013	11:48:40	0.013
247	04/23/2013	11:49:40	0.014
248	04/23/2013	11:50:40	0.015
249	04/23/2013	11:51:40	0.046
250	04/23/2013	11:52:40	0.020
251	04/23/2013	11:53:40	0.019
252	04/23/2013	11:54:40	0.017
253	04/23/2013	11:55:40	0.058
254	04/23/2013	11:56:40	0.018
255	04/23/2013	11:57:40	0.015
256	04/23/2013	11:58:40	0.044
257	04/23/2013	11:59:40	0.033
258	04/23/2013	12:00:40	0.044
259	04/23/2013	12:01:40	0.012
260	04/23/2013	12:02:40	0.011
261	04/23/2013	12:03:40	0.016
262	04/23/2013	12:04:40	0.014
263	04/23/2013	12:05:40	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/23/2013	12:06:40	0.015
265	04/23/2013	12:07:40	0.013
266	04/23/2013	12:08:40	0.020
267	04/23/2013	12:09:40	0.010
268	04/23/2013	12:10:40	0.010
269	04/23/2013	12:11:40	0.011
270	04/23/2013	12:12:40	0.012
271	04/23/2013	12:13:40	0.016
272	04/23/2013	12:14:40	0.031
273	04/23/2013	12:15:40	0.054
274	04/23/2013	12:16:40	0.020
275	04/23/2013	12:17:40	0.107
276	04/23/2013	12:18:40	0.012
277	04/23/2013	12:19:40	0.010
278	04/23/2013	12:20:40	0.016
279	04/23/2013	12:21:40	0.020
280	04/23/2013	12:22:40	0.018
281	04/23/2013	12:23:40	0.013
282	04/23/2013	12:24:40	0.013
283	04/23/2013	12:25:40	0.020
284	04/23/2013	12:26:40	0.015
285	04/23/2013	12:27:40	0.016
286	04/23/2013	12:28:40	0.012
287	04/23/2013	12:29:40	0.012
288	04/23/2013	12:30:40	0.012
289	04/23/2013	12:31:40	0.010
290	04/23/2013	12:32:40	0.011
291	04/23/2013	12:33:40	0.010
292	04/23/2013	12:34:40	0.013
293	04/23/2013	12:35:40	0.019
294	04/23/2013	12:36:40	0.012
295	04/23/2013	12:37:40	0.011
296	04/23/2013	12:38:40	0.018
297	04/23/2013	12:39:40	0.012
298	04/23/2013	12:40:40	0.087
299	04/23/2013	12:41:40	0.014
300	04/23/2013	12:42:40	0.021
301	04/23/2013	12:43:40	0.015
302	04/23/2013	12:44:40	0.029
303	04/23/2013	12:45:40	0.011
304	04/23/2013	12:46:40	0.012
305	04/23/2013	12:47:40	0.017
306	04/23/2013	12:48:40	0.011
307	04/23/2013	12:49:40	0.012
308	04/23/2013	12:50:40	0.010
309	04/23/2013	12:51:40	0.010
310	04/23/2013	12:52:40	0.011
311	04/23/2013	12:53:40	0.011
312	04/23/2013	12:54:40	0.011
313	04/23/2013	12:55:40	0.011
314	04/23/2013	12:56:40	0.014
315	04/23/2013	12:57:40	0.016
316	04/23/2013	12:58:40	0.026
317	04/23/2013	12:59:40	0.011
318	04/23/2013	13:00:40	0.011



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/23/2013	13:01:40	0.012
320	04/23/2013	13:02:40	0.038
321	04/23/2013	13:03:40	0.019
322	04/23/2013	13:04:40	0.015
323	04/23/2013	13:05:40	0.012
324	04/23/2013	13:06:40	0.013
325	04/23/2013	13:07:40	0.011
326	04/23/2013	13:08:40	0.011
327	04/23/2013	13:09:40	0.011
328	04/23/2013	13:10:40	0.018
329	04/23/2013	13:11:40	0.028
330	04/23/2013	13:12:40	0.013
331	04/23/2013	13:13:40	0.016
332	04/23/2013	13:14:40	0.015
333	04/23/2013	13:15:40	0.019
334	04/23/2013	13:16:40	0.011
335	04/23/2013	13:17:40	0.012
336	04/23/2013	13:18:40	0.012
337	04/23/2013	13:19:40	0.013
338	04/23/2013	13:20:40	0.012
339	04/23/2013	13:21:40	0.013
340	04/23/2013	13:22:40	0.016
341	04/23/2013	13:23:40	0.023
342	04/23/2013	13:24:40	0.026
343	04/23/2013	13:25:40	0.013
344	04/23/2013	13:26:40	0.011
345	04/23/2013	13:27:40	0.032
346	04/23/2013	13:28:40	0.019
347	04/23/2013	13:29:40	0.022
348	04/23/2013	13:30:40	0.012
349	04/23/2013	13:31:40	0.027
350	04/23/2013	13:32:40	0.018
351	04/23/2013	13:33:40	0.016
352	04/23/2013	13:34:40	0.011
353	04/23/2013	13:35:40	0.012
354	04/23/2013	13:36:40	0.015
355	04/23/2013	13:37:40	0.029
356	04/23/2013	13:38:40	0.013
357	04/23/2013	13:39:40	0.012
358	04/23/2013	13:40:40	0.012
359	04/23/2013	13:41:40	0.010
360	04/23/2013	13:42:40	0.017
361	04/23/2013	13:43:40	0.022
362	04/23/2013	13:44:40	0.026
363	04/23/2013	13:45:40	0.011
364	04/23/2013	13:46:40	0.013
365	04/23/2013	13:47:40	0.010
366	04/23/2013	13:48:40	0.010
367	04/23/2013	13:49:40	0.011
368	04/23/2013	13:50:40	0.015
369	04/23/2013	13:51:40	0.014
370	04/23/2013	13:52:40	0.013
371	04/23/2013	13:53:40	0.020
372	04/23/2013	13:54:40	0.014
373	04/23/2013	13:55:40	0.012



Test Data			
Data Point	Date	Time	AEROSOL mg/m <sup>3</sup>
374	04/23/2013	13:56:40	0.011
375	04/23/2013	13:57:40	0.022
376	04/23/2013	13:58:40	0.015
377	04/23/2013	13:59:40	0.017
378	04/23/2013	14:00:40	0.012
379	04/23/2013	14:01:40	0.011
380	04/23/2013	14:02:40	0.017



Dust - Unit 2  
4/23/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/23/2013
Instrument S/N	8530131405	Start Time	07:39:06
		Stop Date	04/23/2013
		Stop Time	14:14:06
		Total Time	0:06:35:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/23/2013	07:40:06	0.019
2	04/23/2013	07:41:06	0.023
3	04/23/2013	07:42:06	0.018
4	04/23/2013	07:43:06	0.018
5	04/23/2013	07:44:06	0.017
6	04/23/2013	07:45:06	0.018
7	04/23/2013	07:46:06	0.017
8	04/23/2013	07:47:06	0.018
9	04/23/2013	07:48:06	0.017
10	04/23/2013	07:49:06	0.017
11	04/23/2013	07:50:06	0.017
12	04/23/2013	07:51:06	0.018
13	04/23/2013	07:52:06	0.019
14	04/23/2013	07:53:06	0.017
15	04/23/2013	07:54:06	0.018
16	04/23/2013	07:55:06	0.017
17	04/23/2013	07:56:06	0.017
18	04/23/2013	07:57:06	0.017
19	04/23/2013	07:58:06	0.018
20	04/23/2013	07:59:06	0.017
21	04/23/2013	08:00:06	0.017
22	04/23/2013	08:01:06	0.017
23	04/23/2013	08:02:06	0.017
24	04/23/2013	08:03:06	0.018
25	04/23/2013	08:04:06	0.018
26	04/23/2013	08:05:06	0.018
27	04/23/2013	08:06:06	0.018
28	04/23/2013	08:07:06	0.022
29	04/23/2013	08:08:06	0.017
30	04/23/2013	08:09:06	0.018
31	04/23/2013	08:10:06	0.018
32	04/23/2013	08:11:06	0.017
33	04/23/2013	08:12:06	0.017
34	04/23/2013	08:13:06	0.018
35	04/23/2013	08:14:06	0.018
36	04/23/2013	08:15:06	0.017
37	04/23/2013	08:16:06	0.018
38	04/23/2013	08:17:06	0.018
39	04/23/2013	08:18:06	0.019
40	04/23/2013	08:19:06	0.017
41	04/23/2013	08:20:06	0.017
42	04/23/2013	08:21:06	0.018
43	04/23/2013	08:22:06	0.023



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/23/2013	08:23:06	0.018
45	04/23/2013	08:24:06	0.017
46	04/23/2013	08:25:06	0.017
47	04/23/2013	08:26:06	0.017
48	04/23/2013	08:27:06	0.017
49	04/23/2013	08:28:06	0.017
50	04/23/2013	08:29:06	0.017
51	04/23/2013	08:30:06	0.017
52	04/23/2013	08:31:06	0.017
53	04/23/2013	08:32:06	0.017
54	04/23/2013	08:33:06	0.018
55	04/23/2013	08:34:06	0.017
56	04/23/2013	08:35:06	0.017
57	04/23/2013	08:36:06	0.017
58	04/23/2013	08:37:06	0.018
59	04/23/2013	08:38:06	0.018
60	04/23/2013	08:39:06	0.017
61	04/23/2013	08:40:06	0.017
62	04/23/2013	08:41:06	0.016
63	04/23/2013	08:42:06	0.017
64	04/23/2013	08:43:06	0.017
65	04/23/2013	08:44:06	0.017
66	04/23/2013	08:45:06	0.018
67	04/23/2013	08:46:06	0.018
68	04/23/2013	08:47:06	0.017
69	04/23/2013	08:48:06	0.017
70	04/23/2013	08:49:06	0.017
71	04/23/2013	08:50:06	0.017
72	04/23/2013	08:51:06	0.017
73	04/23/2013	08:52:06	0.017
74	04/23/2013	08:53:06	0.017
75	04/23/2013	08:54:06	0.017
76	04/23/2013	08:55:06	0.018
77	04/23/2013	08:56:06	0.018
78	04/23/2013	08:57:06	0.018
79	04/23/2013	08:58:06	0.018
80	04/23/2013	08:59:06	0.017
81	04/23/2013	09:00:06	0.018
82	04/23/2013	09:01:06	0.017
83	04/23/2013	09:02:06	0.017
84	04/23/2013	09:03:06	0.017
85	04/23/2013	09:04:06	0.018
86	04/23/2013	09:05:06	0.018
87	04/23/2013	09:06:06	0.018
88	04/23/2013	09:07:06	0.017
89	04/23/2013	09:08:06	0.019
90	04/23/2013	09:09:06	0.017
91	04/23/2013	09:10:06	0.017
92	04/23/2013	09:11:06	0.017
93	04/23/2013	09:12:06	0.017
94	04/23/2013	09:13:06	0.018
95	04/23/2013	09:14:06	0.018
96	04/23/2013	09:15:06	0.018
97	04/23/2013	09:16:06	0.018
98	04/23/2013	09:17:06	0.018



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/23/2013	09:18:06	0.017
100	04/23/2013	09:19:06	0.017
101	04/23/2013	09:20:06	0.018
102	04/23/2013	09:21:06	0.017
103	04/23/2013	09:22:06	0.017
104	04/23/2013	09:23:06	0.016
105	04/23/2013	09:24:06	0.016
106	04/23/2013	09:25:06	0.017
107	04/23/2013	09:26:06	0.017
108	04/23/2013	09:27:06	0.017
109	04/23/2013	09:28:06	0.018
110	04/23/2013	09:29:06	0.016
111	04/23/2013	09:30:06	0.017
112	04/23/2013	09:31:06	0.017
113	04/23/2013	09:32:06	0.017
114	04/23/2013	09:33:06	0.017
115	04/23/2013	09:34:06	0.017
116	04/23/2013	09:35:06	0.016
117	04/23/2013	09:36:06	0.017
118	04/23/2013	09:37:06	0.020
119	04/23/2013	09:38:06	0.018
120	04/23/2013	09:39:06	0.017
121	04/23/2013	09:40:06	0.016
122	04/23/2013	09:41:06	0.016
123	04/23/2013	09:42:06	0.017
124	04/23/2013	09:43:06	0.017
125	04/23/2013	09:44:06	0.017
126	04/23/2013	09:45:06	0.026
127	04/23/2013	09:46:06	0.017
128	04/23/2013	09:47:06	0.017
129	04/23/2013	09:48:06	0.017
130	04/23/2013	09:49:06	0.017
131	04/23/2013	09:50:06	0.025
132	04/23/2013	09:51:06	0.017
133	04/23/2013	09:52:06	0.018
134	04/23/2013	09:53:06	0.019
135	04/23/2013	09:54:06	0.017
136	04/23/2013	09:55:06	0.016
137	04/23/2013	09:56:06	0.017
138	04/23/2013	09:57:06	0.018
139	04/23/2013	09:58:06	0.017
140	04/23/2013	09:59:06	0.018
141	04/23/2013	10:00:06	0.016
142	04/23/2013	10:01:06	0.016
143	04/23/2013	10:02:06	0.016
144	04/23/2013	10:03:06	0.016
145	04/23/2013	10:04:06	0.016
146	04/23/2013	10:05:06	0.016
147	04/23/2013	10:06:06	0.016
148	04/23/2013	10:07:06	0.017
149	04/23/2013	10:08:06	0.017
150	04/23/2013	10:09:06	0.016
151	04/23/2013	10:10:06	0.016
152	04/23/2013	10:11:06	0.019
153	04/23/2013	10:12:06	0.021



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/23/2013	10:13:06	0.016
155	04/23/2013	10:14:06	0.015
156	04/23/2013	10:15:06	0.015
157	04/23/2013	10:16:06	0.016
158	04/23/2013	10:17:06	0.018
159	04/23/2013	10:18:06	0.016
160	04/23/2013	10:19:06	0.015
161	04/23/2013	10:20:06	0.015
162	04/23/2013	10:21:06	0.015
163	04/23/2013	10:22:06	0.015
164	04/23/2013	10:23:06	0.015
165	04/23/2013	10:24:06	0.015
166	04/23/2013	10:25:06	0.016
167	04/23/2013	10:26:06	0.015
168	04/23/2013	10:27:06	0.015
169	04/23/2013	10:28:06	0.015
170	04/23/2013	10:29:06	0.015
171	04/23/2013	10:30:06	0.015
172	04/23/2013	10:31:06	0.015
173	04/23/2013	10:32:06	0.014
174	04/23/2013	10:33:06	0.015
175	04/23/2013	10:34:06	0.015
176	04/23/2013	10:35:06	0.015
177	04/23/2013	10:36:06	0.015
178	04/23/2013	10:37:06	0.015
179	04/23/2013	10:38:06	0.015
180	04/23/2013	10:39:06	0.015
181	04/23/2013	10:40:06	0.015
182	04/23/2013	10:41:06	0.015
183	04/23/2013	10:42:06	0.015
184	04/23/2013	10:43:06	0.015
185	04/23/2013	10:44:06	0.015
186	04/23/2013	10:45:06	0.015
187	04/23/2013	10:46:06	0.015
188	04/23/2013	10:47:06	0.015
189	04/23/2013	10:48:06	0.016
190	04/23/2013	10:49:06	0.017
191	04/23/2013	10:50:06	0.016
192	04/23/2013	10:51:06	0.015
193	04/23/2013	10:52:06	0.016
194	04/23/2013	10:53:06	0.016
195	04/23/2013	10:54:06	0.016
196	04/23/2013	10:55:06	0.016
197	04/23/2013	10:56:06	0.015
198	04/23/2013	10:57:06	0.014
199	04/23/2013	10:58:06	0.015
200	04/23/2013	10:59:06	0.016
201	04/23/2013	11:00:06	0.015
202	04/23/2013	11:01:06	0.015
203	04/23/2013	11:02:06	0.015
204	04/23/2013	11:03:06	0.015
205	04/23/2013	11:04:06	0.015
206	04/23/2013	11:05:06	0.015
207	04/23/2013	11:06:06	0.016
208	04/23/2013	11:07:06	0.015



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/23/2013	11:08:06	0.015
210	04/23/2013	11:09:06	0.014
211	04/23/2013	11:10:06	0.016
212	04/23/2013	11:11:06	0.016
213	04/23/2013	11:12:06	0.015
214	04/23/2013	11:13:06	0.015
215	04/23/2013	11:14:06	0.015
216	04/23/2013	11:15:06	0.015
217	04/23/2013	11:16:06	0.016
218	04/23/2013	11:17:06	0.015
219	04/23/2013	11:18:06	0.015
220	04/23/2013	11:19:06	0.015
221	04/23/2013	11:20:06	0.015
222	04/23/2013	11:21:06	0.015
223	04/23/2013	11:22:06	0.017
224	04/23/2013	11:23:06	0.021
225	04/23/2013	11:24:06	0.022
226	04/23/2013	11:25:06	0.015
227	04/23/2013	11:26:06	0.015
228	04/23/2013	11:27:06	0.015
229	04/23/2013	11:28:06	0.016
230	04/23/2013	11:29:06	0.016
231	04/23/2013	11:30:06	0.015
232	04/23/2013	11:31:06	0.015
233	04/23/2013	11:32:06	0.016
234	04/23/2013	11:33:06	0.015
235	04/23/2013	11:34:06	0.015
236	04/23/2013	11:35:06	0.014
237	04/23/2013	11:36:06	0.014
238	04/23/2013	11:37:06	0.015
239	04/23/2013	11:38:06	0.015
240	04/23/2013	11:39:06	0.015
241	04/23/2013	11:40:06	0.015
242	04/23/2013	11:41:06	0.014
243	04/23/2013	11:42:06	0.015
244	04/23/2013	11:43:06	0.015
245	04/23/2013	11:44:06	0.015
246	04/23/2013	11:45:06	0.015
247	04/23/2013	11:46:06	0.015
248	04/23/2013	11:47:06	0.015
249	04/23/2013	11:48:06	0.015
250	04/23/2013	11:49:06	0.015
251	04/23/2013	11:50:06	0.014
252	04/23/2013	11:51:06	0.014
253	04/23/2013	11:52:06	0.016
254	04/23/2013	11:53:06	0.016
255	04/23/2013	11:54:06	0.015
256	04/23/2013	11:55:06	0.014
257	04/23/2013	11:56:06	0.015
258	04/23/2013	11:57:06	0.015
259	04/23/2013	11:58:06	0.016
260	04/23/2013	11:59:06	0.015
261	04/23/2013	12:00:06	0.015
262	04/23/2013	12:01:06	0.015
263	04/23/2013	12:02:06	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/23/2013	12:03:06	0.015
265	04/23/2013	12:04:06	0.015
266	04/23/2013	12:05:06	0.015
267	04/23/2013	12:06:06	0.015
268	04/23/2013	12:07:06	0.016
269	04/23/2013	12:08:06	0.015
270	04/23/2013	12:09:06	0.015
271	04/23/2013	12:10:06	0.014
272	04/23/2013	12:11:06	0.014
273	04/23/2013	12:12:06	0.022
274	04/23/2013	12:13:06	0.016
275	04/23/2013	12:14:06	0.018
276	04/23/2013	12:15:06	0.015
277	04/23/2013	12:16:06	0.015
278	04/23/2013	12:17:06	0.015
279	04/23/2013	12:18:06	0.015
280	04/23/2013	12:19:06	0.015
281	04/23/2013	12:20:06	0.014
282	04/23/2013	12:21:06	0.014
283	04/23/2013	12:22:06	0.015
284	04/23/2013	12:23:06	0.015
285	04/23/2013	12:24:06	0.015
286	04/23/2013	12:25:06	0.014
287	04/23/2013	12:26:06	0.015
288	04/23/2013	12:27:06	0.015
289	04/23/2013	12:28:06	0.015
290	04/23/2013	12:29:06	0.015
291	04/23/2013	12:30:06	0.015
292	04/23/2013	12:31:06	0.015
293	04/23/2013	12:32:06	0.015
294	04/23/2013	12:33:06	0.016
295	04/23/2013	12:34:06	0.014
296	04/23/2013	12:35:06	0.015
297	04/23/2013	12:36:06	0.014
298	04/23/2013	12:37:06	0.014
299	04/23/2013	12:38:06	0.014
300	04/23/2013	12:39:06	0.015
301	04/23/2013	12:40:06	0.014
302	04/23/2013	12:41:06	0.015
303	04/23/2013	12:42:06	0.015
304	04/23/2013	12:43:06	0.015
305	04/23/2013	12:44:06	0.015
306	04/23/2013	12:45:06	0.015
307	04/23/2013	12:46:06	0.014
308	04/23/2013	12:47:06	0.015
309	04/23/2013	12:48:06	0.015
310	04/23/2013	12:49:06	0.014
311	04/23/2013	12:50:06	0.014
312	04/23/2013	12:51:06	0.015
313	04/23/2013	12:52:06	0.014
314	04/23/2013	12:53:06	0.014
315	04/23/2013	12:54:06	0.015
316	04/23/2013	12:55:06	0.014
317	04/23/2013	12:56:06	0.015
318	04/23/2013	12:57:06	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/23/2013	12:58:06	0.015
320	04/23/2013	12:59:06	0.016
321	04/23/2013	13:00:06	0.014
322	04/23/2013	13:01:06	0.014
323	04/23/2013	13:02:06	0.015
324	04/23/2013	13:03:06	0.015
325	04/23/2013	13:04:06	0.014
326	04/23/2013	13:05:06	0.014
327	04/23/2013	13:06:06	0.014
328	04/23/2013	13:07:06	0.014
329	04/23/2013	13:08:06	0.014
330	04/23/2013	13:09:06	0.015
331	04/23/2013	13:10:06	0.014
332	04/23/2013	13:11:06	0.014
333	04/23/2013	13:12:06	0.015
334	04/23/2013	13:13:06	0.014
335	04/23/2013	13:14:06	0.014
336	04/23/2013	13:15:06	0.014
337	04/23/2013	13:16:06	0.014
338	04/23/2013	13:17:06	0.014
339	04/23/2013	13:18:06	0.014
340	04/23/2013	13:19:06	0.014
341	04/23/2013	13:20:06	0.014
342	04/23/2013	13:21:06	0.014
343	04/23/2013	13:22:06	0.014
344	04/23/2013	13:23:06	0.014
345	04/23/2013	13:24:06	0.015
346	04/23/2013	13:25:06	0.014
347	04/23/2013	13:26:06	0.013
348	04/23/2013	13:27:06	0.015
349	04/23/2013	13:28:06	0.014
350	04/23/2013	13:29:06	0.013
351	04/23/2013	13:30:06	0.013
352	04/23/2013	13:31:06	0.014
353	04/23/2013	13:32:06	0.014
354	04/23/2013	13:33:06	0.013
355	04/23/2013	13:34:06	0.013
356	04/23/2013	13:35:06	0.013
357	04/23/2013	13:36:06	0.014
358	04/23/2013	13:37:06	0.014
359	04/23/2013	13:38:06	0.014
360	04/23/2013	13:39:06	0.014
361	04/23/2013	13:40:06	0.013
362	04/23/2013	13:41:06	0.014
363	04/23/2013	13:42:06	0.014
364	04/23/2013	13:43:06	0.013
365	04/23/2013	13:44:06	0.014
366	04/23/2013	13:45:06	0.014
367	04/23/2013	13:46:06	0.014
368	04/23/2013	13:47:06	0.013
369	04/23/2013	13:48:06	0.014
370	04/23/2013	13:49:06	0.014
371	04/23/2013	13:50:06	0.014
372	04/23/2013	13:51:06	0.013
373	04/23/2013	13:52:06	0.014



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
374	04/23/2013	13:53:06	0.014
375	04/23/2013	13:54:06	0.014
376	04/23/2013	13:55:06	0.013
377	04/23/2013	13:56:06	0.014
378	04/23/2013	13:57:06	0.014
379	04/23/2013	13:58:06	0.014
380	04/23/2013	13:59:06	0.013
381	04/23/2013	14:00:06	0.014
382	04/23/2013	14:01:06	0.014
383	04/23/2013	14:02:06	0.014
384	04/23/2013	14:03:06	0.015
385	04/23/2013	14:04:06	0.017
386	04/23/2013	14:05:06	0.016
387	04/23/2013	14:06:06	0.014
388	04/23/2013	14:07:06	0.014
389	04/23/2013	14:08:06	0.014
390	04/23/2013	14:09:06	0.014
391	04/23/2013	14:10:06	0.015
392	04/23/2013	14:11:06	0.014
393	04/23/2013	14:12:06	0.013
394	04/23/2013	14:13:06	0.014
395	04/23/2013	14:14:06	0.014



Dust - Unit 1  
4/24/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/24/2013
Instrument S/N	8530131403	Start Time	07:19:38
		Stop Date	04/24/2013
		Stop Time	13:47:38
		Total Time	0:06:28:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/24/2013	07:20:38	0.026
2	04/24/2013	07:21:38	0.027
3	04/24/2013	07:22:38	0.028
4	04/24/2013	07:23:38	0.028
5	04/24/2013	07:24:38	0.028
6	04/24/2013	07:25:38	0.028
7	04/24/2013	07:26:38	0.028
8	04/24/2013	07:27:38	0.027
9	04/24/2013	07:28:38	0.027
10	04/24/2013	07:29:38	0.027
11	04/24/2013	07:30:38	0.027
12	04/24/2013	07:31:38	0.027
13	04/24/2013	07:32:38	0.027
14	04/24/2013	07:33:38	0.027
15	04/24/2013	07:34:38	0.027
16	04/24/2013	07:35:38	0.027
17	04/24/2013	07:36:38	0.027
18	04/24/2013	07:37:38	0.027
19	04/24/2013	07:38:38	0.027
20	04/24/2013	07:39:38	0.027
21	04/24/2013	07:40:38	0.027
22	04/24/2013	07:41:38	0.027
23	04/24/2013	07:42:38	0.027
24	04/24/2013	07:43:38	0.027
25	04/24/2013	07:44:38	0.028
26	04/24/2013	07:45:38	0.028
27	04/24/2013	07:46:38	0.034
28	04/24/2013	07:47:38	0.029
29	04/24/2013	07:48:38	0.031
30	04/24/2013	07:49:38	0.028
31	04/24/2013	07:50:38	0.028
32	04/24/2013	07:51:38	0.028
33	04/24/2013	07:52:38	0.027
34	04/24/2013	07:53:38	0.027
35	04/24/2013	07:54:38	0.029
36	04/24/2013	07:55:38	0.029
37	04/24/2013	07:56:38	0.030
38	04/24/2013	07:57:38	0.032
39	04/24/2013	07:58:38	0.030
40	04/24/2013	07:59:38	0.029
41	04/24/2013	08:00:38	0.030
42	04/24/2013	08:01:38	0.030
43	04/24/2013	08:02:38	0.030



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/24/2013	08:03:38	0.030
45	04/24/2013	08:04:38	0.030
46	04/24/2013	08:05:38	0.029
47	04/24/2013	08:06:38	0.029
48	04/24/2013	08:07:38	0.029
49	04/24/2013	08:08:38	0.030
50	04/24/2013	08:09:38	0.030
51	04/24/2013	08:10:38	0.030
52	04/24/2013	08:11:38	0.030
53	04/24/2013	08:12:38	0.029
54	04/24/2013	08:13:38	0.029
55	04/24/2013	08:14:38	0.030
56	04/24/2013	08:15:38	0.030
57	04/24/2013	08:16:38	0.030
58	04/24/2013	08:17:38	0.029
59	04/24/2013	08:18:38	0.030
60	04/24/2013	08:19:38	0.030
61	04/24/2013	08:20:38	0.030
62	04/24/2013	08:21:38	0.030
63	04/24/2013	08:22:38	0.030
64	04/24/2013	08:23:38	0.030
65	04/24/2013	08:24:38	0.030
66	04/24/2013	08:25:38	0.030
67	04/24/2013	08:26:38	0.030
68	04/24/2013	08:27:38	0.031
69	04/24/2013	08:28:38	0.031
70	04/24/2013	08:29:38	0.031
71	04/24/2013	08:30:38	0.031
72	04/24/2013	08:31:38	0.030
73	04/24/2013	08:32:38	0.031
74	04/24/2013	08:33:38	0.031
75	04/24/2013	08:34:38	0.031
76	04/24/2013	08:35:38	0.031
77	04/24/2013	08:36:38	0.032
78	04/24/2013	08:37:38	0.031
79	04/24/2013	08:38:38	0.031
80	04/24/2013	08:39:38	0.032
81	04/24/2013	08:40:38	0.032
82	04/24/2013	08:41:38	0.032
83	04/24/2013	08:42:38	0.032
84	04/24/2013	08:43:38	0.032
85	04/24/2013	08:44:38	0.032
86	04/24/2013	08:45:38	0.032
87	04/24/2013	08:46:38	0.032
88	04/24/2013	08:47:38	0.033
89	04/24/2013	08:48:38	0.034
90	04/24/2013	08:49:38	0.035
91	04/24/2013	08:50:38	0.038
92	04/24/2013	08:51:38	0.037
93	04/24/2013	08:52:38	0.038
94	04/24/2013	08:53:38	0.040
95	04/24/2013	08:54:38	0.047
96	04/24/2013	08:55:38	0.050
97	04/24/2013	08:56:38	0.051
98	04/24/2013	08:57:38	0.051



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/24/2013	08:58:38	0.051
100	04/24/2013	08:59:38	0.048
101	04/24/2013	09:00:38	0.042
102	04/24/2013	09:01:38	0.038
103	04/24/2013	09:02:38	0.038
104	04/24/2013	09:03:38	0.037
105	04/24/2013	09:04:38	0.035
106	04/24/2013	09:05:38	0.034
107	04/24/2013	09:06:38	0.034
108	04/24/2013	09:07:38	0.033
109	04/24/2013	09:08:38	0.032
110	04/24/2013	09:09:38	0.033
111	04/24/2013	09:10:38	0.033
112	04/24/2013	09:11:38	0.032
113	04/24/2013	09:12:38	0.033
114	04/24/2013	09:13:38	0.033
115	04/24/2013	09:14:38	0.033
116	04/24/2013	09:15:38	0.033
117	04/24/2013	09:16:38	0.033
118	04/24/2013	09:17:38	0.032
119	04/24/2013	09:18:38	0.033
120	04/24/2013	09:19:38	0.032
121	04/24/2013	09:20:38	0.033
122	04/24/2013	09:21:38	0.032
123	04/24/2013	09:22:38	0.032
124	04/24/2013	09:23:38	0.032
125	04/24/2013	09:24:38	0.033
126	04/24/2013	09:25:38	0.033
127	04/24/2013	09:26:38	0.033
128	04/24/2013	09:27:38	0.033
129	04/24/2013	09:28:38	0.033
130	04/24/2013	09:29:38	0.033
131	04/24/2013	09:30:38	0.033
132	04/24/2013	09:31:38	0.033
133	04/24/2013	09:32:38	0.034
134	04/24/2013	09:33:38	0.034
135	04/24/2013	09:34:38	0.033
136	04/24/2013	09:35:38	0.033
137	04/24/2013	09:36:38	0.033
138	04/24/2013	09:37:38	0.034
139	04/24/2013	09:38:38	0.034
140	04/24/2013	09:39:38	0.032
141	04/24/2013	09:40:38	0.032
142	04/24/2013	09:41:38	0.033
143	04/24/2013	09:42:38	0.032
144	04/24/2013	09:43:38	0.033
145	04/24/2013	09:44:38	0.034
146	04/24/2013	09:45:38	0.033
147	04/24/2013	09:46:38	0.033
148	04/24/2013	09:47:38	0.032
149	04/24/2013	09:48:38	0.034
150	04/24/2013	09:49:38	0.032
151	04/24/2013	09:50:38	0.032
152	04/24/2013	09:51:38	0.032
153	04/24/2013	09:52:38	0.032



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/24/2013	09:53:38	0.032
155	04/24/2013	09:54:38	0.032
156	04/24/2013	09:55:38	0.031
157	04/24/2013	09:56:38	0.036
158	04/24/2013	09:57:38	0.032
159	04/24/2013	09:58:38	0.032
160	04/24/2013	09:59:38	0.033
161	04/24/2013	10:00:38	0.033
162	04/24/2013	10:01:38	0.031
163	04/24/2013	10:02:38	0.031
164	04/24/2013	10:03:38	0.031
165	04/24/2013	10:04:38	0.031
166	04/24/2013	10:05:38	0.031
167	04/24/2013	10:06:38	0.031
168	04/24/2013	10:07:38	0.031
169	04/24/2013	10:08:38	0.032
170	04/24/2013	10:09:38	0.032
171	04/24/2013	10:10:38	0.031
172	04/24/2013	10:11:38	0.031
173	04/24/2013	10:12:38	0.031
174	04/24/2013	10:13:38	0.032
175	04/24/2013	10:14:38	0.032
176	04/24/2013	10:15:38	0.032
177	04/24/2013	10:16:38	0.030
178	04/24/2013	10:17:38	0.031
179	04/24/2013	10:18:38	0.030
180	04/24/2013	10:19:38	0.030
181	04/24/2013	10:20:38	0.031
182	04/24/2013	10:21:38	0.030
183	04/24/2013	10:22:38	0.032
184	04/24/2013	10:23:38	0.030
185	04/24/2013	10:24:38	0.030
186	04/24/2013	10:25:38	0.031
187	04/24/2013	10:26:38	0.030
188	04/24/2013	10:27:38	0.030
189	04/24/2013	10:28:38	0.030
190	04/24/2013	10:29:38	0.030
191	04/24/2013	10:30:38	0.030
192	04/24/2013	10:31:38	0.030
193	04/24/2013	10:32:38	0.030
194	04/24/2013	10:33:38	0.030
195	04/24/2013	10:34:38	0.030
196	04/24/2013	10:35:38	0.030
197	04/24/2013	10:36:38	0.030
198	04/24/2013	10:37:38	0.030
199	04/24/2013	10:38:38	0.029
200	04/24/2013	10:39:38	0.029
201	04/24/2013	10:40:38	0.029
202	04/24/2013	10:41:38	0.029
203	04/24/2013	10:42:38	0.030
204	04/24/2013	10:43:38	0.030
205	04/24/2013	10:44:38	0.029
206	04/24/2013	10:45:38	0.030
207	04/24/2013	10:46:38	0.029
208	04/24/2013	10:47:38	0.029



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/24/2013	10:48:38	0.029
210	04/24/2013	10:49:38	0.028
211	04/24/2013	10:50:38	0.028
212	04/24/2013	10:51:38	0.028
213	04/24/2013	10:52:38	0.028
214	04/24/2013	10:53:38	0.028
215	04/24/2013	10:54:38	0.027
216	04/24/2013	10:55:38	0.029
217	04/24/2013	10:56:38	0.028
218	04/24/2013	10:57:38	0.028
219	04/24/2013	10:58:38	0.028
220	04/24/2013	10:59:38	0.027
221	04/24/2013	11:00:38	0.027
222	04/24/2013	11:01:38	0.028
223	04/24/2013	11:02:38	0.027
224	04/24/2013	11:03:38	0.027
225	04/24/2013	11:04:38	0.027
226	04/24/2013	11:05:38	0.027
227	04/24/2013	11:06:38	0.027
228	04/24/2013	11:07:38	0.027
229	04/24/2013	11:08:38	0.027
230	04/24/2013	11:09:38	0.027
231	04/24/2013	11:10:38	0.026
232	04/24/2013	11:11:38	0.026
233	04/24/2013	11:12:38	0.027
234	04/24/2013	11:13:38	0.027
235	04/24/2013	11:14:38	0.026
236	04/24/2013	11:15:38	0.026
237	04/24/2013	11:16:38	0.026
238	04/24/2013	11:17:38	0.027
239	04/24/2013	11:18:38	0.027
240	04/24/2013	11:19:38	0.027
241	04/24/2013	11:20:38	0.027
242	04/24/2013	11:21:38	0.027
243	04/24/2013	11:22:38	0.027
244	04/24/2013	11:23:38	0.027
245	04/24/2013	11:24:38	0.027
246	04/24/2013	11:25:38	0.026
247	04/24/2013	11:26:38	0.026
248	04/24/2013	11:27:38	0.027
249	04/24/2013	11:28:38	0.027
250	04/24/2013	11:29:38	0.026
251	04/24/2013	11:30:38	0.026
252	04/24/2013	11:31:38	0.026
253	04/24/2013	11:32:38	0.026
254	04/24/2013	11:33:38	0.026
255	04/24/2013	11:34:38	0.026
256	04/24/2013	11:35:38	0.026
257	04/24/2013	11:36:38	0.025
258	04/24/2013	11:37:38	0.025
259	04/24/2013	11:38:38	0.026
260	04/24/2013	11:39:38	0.025
261	04/24/2013	11:40:38	0.025
262	04/24/2013	11:41:38	0.025
263	04/24/2013	11:42:38	0.025



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/24/2013	11:43:38	0.025
265	04/24/2013	11:44:38	0.026
266	04/24/2013	11:45:38	0.025
267	04/24/2013	11:46:38	0.025
268	04/24/2013	11:47:38	0.025
269	04/24/2013	11:48:38	0.025
270	04/24/2013	11:49:38	0.025
271	04/24/2013	11:50:38	0.025
272	04/24/2013	11:51:38	0.025
273	04/24/2013	11:52:38	0.025
274	04/24/2013	11:53:38	0.025
275	04/24/2013	11:54:38	0.025
276	04/24/2013	11:55:38	0.025
277	04/24/2013	11:56:38	0.025
278	04/24/2013	11:57:38	0.026
279	04/24/2013	11:58:38	0.025
280	04/24/2013	11:59:38	0.026
281	04/24/2013	12:00:38	0.025
282	04/24/2013	12:01:38	0.027
283	04/24/2013	12:02:38	0.026
284	04/24/2013	12:03:38	0.026
285	04/24/2013	12:04:38	0.025
286	04/24/2013	12:05:38	0.026
287	04/24/2013	12:06:38	0.026
288	04/24/2013	12:07:38	0.026
289	04/24/2013	12:08:38	0.026
290	04/24/2013	12:09:38	0.027
291	04/24/2013	12:10:38	0.028
292	04/24/2013	12:11:38	0.027
293	04/24/2013	12:12:38	0.026
294	04/24/2013	12:13:38	0.026
295	04/24/2013	12:14:38	0.026
296	04/24/2013	12:15:38	0.027
297	04/24/2013	12:16:38	0.026
298	04/24/2013	12:17:38	0.027
299	04/24/2013	12:18:38	0.026
300	04/24/2013	12:19:38	0.027
301	04/24/2013	12:20:38	0.028
302	04/24/2013	12:21:38	0.027
303	04/24/2013	12:22:38	0.032
304	04/24/2013	12:23:38	0.028
305	04/24/2013	12:24:38	0.027
306	04/24/2013	12:25:38	0.030
307	04/24/2013	12:26:38	0.030
308	04/24/2013	12:27:38	0.027
309	04/24/2013	12:28:38	0.028
310	04/24/2013	12:29:38	0.028
311	04/24/2013	12:30:38	0.031
312	04/24/2013	12:31:38	0.028
313	04/24/2013	12:32:38	0.035
314	04/24/2013	12:33:38	0.027
315	04/24/2013	12:34:38	0.028
316	04/24/2013	12:35:38	0.027
317	04/24/2013	12:36:38	0.026
318	04/24/2013	12:37:38	0.035



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/24/2013	12:38:38	0.028
320	04/24/2013	12:39:38	0.027
321	04/24/2013	12:40:38	0.028
322	04/24/2013	12:41:38	0.027
323	04/24/2013	12:42:38	0.028
324	04/24/2013	12:43:38	0.027
325	04/24/2013	12:44:38	0.027
326	04/24/2013	12:45:38	0.028
327	04/24/2013	12:46:38	0.027
328	04/24/2013	12:47:38	0.026
329	04/24/2013	12:48:38	0.026
330	04/24/2013	12:49:38	0.027
331	04/24/2013	12:50:38	0.027
332	04/24/2013	12:51:38	0.026
333	04/24/2013	12:52:38	0.026
334	04/24/2013	12:53:38	0.025
335	04/24/2013	12:54:38	0.025
336	04/24/2013	12:55:38	0.025
337	04/24/2013	12:56:38	0.026
338	04/24/2013	12:57:38	0.027
339	04/24/2013	12:58:38	0.025
340	04/24/2013	12:59:38	0.025
341	04/24/2013	13:00:38	0.026
342	04/24/2013	13:01:38	0.025
343	04/24/2013	13:02:38	0.025
344	04/24/2013	13:03:38	0.025
345	04/24/2013	13:04:38	0.024
346	04/24/2013	13:05:38	0.024
347	04/24/2013	13:06:38	0.025
348	04/24/2013	13:07:38	0.024
349	04/24/2013	13:08:38	0.025
350	04/24/2013	13:09:38	0.025
351	04/24/2013	13:10:38	0.025
352	04/24/2013	13:11:38	0.025
353	04/24/2013	13:12:38	0.025
354	04/24/2013	13:13:38	0.025
355	04/24/2013	13:14:38	0.025
356	04/24/2013	13:15:38	0.025
357	04/24/2013	13:16:38	0.025
358	04/24/2013	13:17:38	0.025
359	04/24/2013	13:18:38	0.025
360	04/24/2013	13:19:38	0.024
361	04/24/2013	13:20:38	0.025
362	04/24/2013	13:21:38	0.025
363	04/24/2013	13:22:38	0.025
364	04/24/2013	13:23:38	0.025
365	04/24/2013	13:24:38	0.025
366	04/24/2013	13:25:38	0.025
367	04/24/2013	13:26:38	0.025
368	04/24/2013	13:27:38	0.025
369	04/24/2013	13:28:38	0.025
370	04/24/2013	13:29:38	0.025
371	04/24/2013	13:30:38	0.025
372	04/24/2013	13:31:38	0.026
373	04/24/2013	13:32:38	0.026



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
374	04/24/2013	13:33:38	0.025
375	04/24/2013	13:34:38	0.025
376	04/24/2013	13:35:38	0.025
377	04/24/2013	13:36:38	0.025
378	04/24/2013	13:37:38	0.025
379	04/24/2013	13:38:38	0.025
380	04/24/2013	13:39:38	0.025
381	04/24/2013	13:40:38	0.025
382	04/24/2013	13:41:38	0.026
383	04/24/2013	13:42:38	0.025
384	04/24/2013	13:43:38	0.026
385	04/24/2013	13:44:38	0.025
386	04/24/2013	13:45:38	0.025
387	04/24/2013	13:46:38	0.025
388	04/24/2013	13:47:38	0.025



Dust - Unit 2  
4/24/2013

Instrument		Data Properties	
Model	DustTrak II	Start Date	04/24/2013
Instrument S/N	8530131405	Start Time	07:25:43
		Stop Date	04/24/2013
		Stop Time	13:43:43
		Total Time	0:06:18:00
		Logging Interval	60 seconds

Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
1	04/24/2013	07:26:43	0.029
2	04/24/2013	07:27:43	0.027
3	04/24/2013	07:28:43	0.027
4	04/24/2013	07:29:43	0.029
5	04/24/2013	07:30:43	0.030
6	04/24/2013	07:31:43	0.029
7	04/24/2013	07:32:43	0.027
8	04/24/2013	07:33:43	0.028
9	04/24/2013	07:34:43	0.038
10	04/24/2013	07:35:43	0.027
11	04/24/2013	07:36:43	0.027
12	04/24/2013	07:37:43	0.089
13	04/24/2013	07:38:43	0.059
14	04/24/2013	07:39:43	0.028
15	04/24/2013	07:40:43	0.027
16	04/24/2013	07:41:43	0.027
17	04/24/2013	07:42:43	0.027
18	04/24/2013	07:43:43	0.046
19	04/24/2013	07:44:43	0.037
20	04/24/2013	07:45:43	0.031
21	04/24/2013	07:46:43	0.033
22	04/24/2013	07:47:43	0.027
23	04/24/2013	07:48:43	0.029
24	04/24/2013	07:49:43	0.031
25	04/24/2013	07:50:43	0.105
26	04/24/2013	07:51:43	0.073
27	04/24/2013	07:52:43	0.030
28	04/24/2013	07:53:43	0.030
29	04/24/2013	07:54:43	0.070
30	04/24/2013	07:55:43	0.038
31	04/24/2013	07:56:43	0.035
32	04/24/2013	07:57:43	0.037
33	04/24/2013	07:58:43	0.035
34	04/24/2013	07:59:43	0.033
35	04/24/2013	08:00:43	0.028
36	04/24/2013	08:01:43	0.029
37	04/24/2013	08:02:43	0.031
38	04/24/2013	08:03:43	0.031
39	04/24/2013	08:04:43	0.030
40	04/24/2013	08:05:43	0.030
41	04/24/2013	08:06:43	0.030
42	04/24/2013	08:07:43	0.030
43	04/24/2013	08:08:43	0.029



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
44	04/24/2013	08:09:43	0.029
45	04/24/2013	08:10:43	0.029
46	04/24/2013	08:11:43	0.052
47	04/24/2013	08:12:43	0.037
48	04/24/2013	08:13:43	0.029
49	04/24/2013	08:14:43	0.030
50	04/24/2013	08:15:43	0.030
51	04/24/2013	08:16:43	0.030
52	04/24/2013	08:17:43	0.029
53	04/24/2013	08:18:43	0.030
54	04/24/2013	08:19:43	0.029
55	04/24/2013	08:20:43	0.029
56	04/24/2013	08:21:43	0.030
57	04/24/2013	08:22:43	0.029
58	04/24/2013	08:23:43	0.029
59	04/24/2013	08:24:43	0.030
60	04/24/2013	08:25:43	0.029
61	04/24/2013	08:26:43	0.029
62	04/24/2013	08:27:43	0.030
63	04/24/2013	08:28:43	0.030
64	04/24/2013	08:29:43	0.033
65	04/24/2013	08:30:43	0.031
66	04/24/2013	08:31:43	0.030
67	04/24/2013	08:32:43	0.030
68	04/24/2013	08:33:43	0.030
69	04/24/2013	08:34:43	0.030
70	04/24/2013	08:35:43	0.031
71	04/24/2013	08:36:43	0.030
72	04/24/2013	08:37:43	0.031
73	04/24/2013	08:38:43	0.035
74	04/24/2013	08:39:43	0.032
75	04/24/2013	08:40:43	0.031
76	04/24/2013	08:41:43	0.033
77	04/24/2013	08:42:43	0.033
78	04/24/2013	08:43:43	0.036
79	04/24/2013	08:44:43	0.031
80	04/24/2013	08:45:43	0.031
81	04/24/2013	08:46:43	0.031
82	04/24/2013	08:47:43	0.035
83	04/24/2013	08:48:43	0.033
84	04/24/2013	08:49:43	0.035
85	04/24/2013	08:50:43	0.036
86	04/24/2013	08:51:43	0.036
87	04/24/2013	08:52:43	0.037
88	04/24/2013	08:53:43	0.038
89	04/24/2013	08:54:43	0.042
90	04/24/2013	08:55:43	0.049
91	04/24/2013	08:56:43	0.050
92	04/24/2013	08:57:43	0.048
93	04/24/2013	08:58:43	0.047
94	04/24/2013	08:59:43	0.046
95	04/24/2013	09:00:43	0.156
96	04/24/2013	09:01:43	0.041
97	04/24/2013	09:02:43	0.035
98	04/24/2013	09:03:43	0.033



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
99	04/24/2013	09:04:43	0.032
100	04/24/2013	09:05:43	0.032
101	04/24/2013	09:06:43	0.032
102	04/24/2013	09:07:43	0.031
103	04/24/2013	09:08:43	0.032
104	04/24/2013	09:09:43	0.031
105	04/24/2013	09:10:43	0.031
106	04/24/2013	09:11:43	0.031
107	04/24/2013	09:12:43	0.032
108	04/24/2013	09:13:43	0.031
109	04/24/2013	09:14:43	0.032
110	04/24/2013	09:15:43	0.033
111	04/24/2013	09:16:43	0.033
112	04/24/2013	09:17:43	0.032
113	04/24/2013	09:18:43	0.032
114	04/24/2013	09:19:43	0.030
115	04/24/2013	09:20:43	0.031
116	04/24/2013	09:21:43	0.031
117	04/24/2013	09:22:43	0.031
118	04/24/2013	09:23:43	0.031
119	04/24/2013	09:24:43	0.031
120	04/24/2013	09:25:43	0.032
121	04/24/2013	09:26:43	0.032
122	04/24/2013	09:27:43	0.031
123	04/24/2013	09:28:43	0.032
124	04/24/2013	09:29:43	0.032
125	04/24/2013	09:30:43	0.032
126	04/24/2013	09:31:43	0.032
127	04/24/2013	09:32:43	0.031
128	04/24/2013	09:33:43	0.031
129	04/24/2013	09:34:43	0.032
130	04/24/2013	09:35:43	0.042
131	04/24/2013	09:36:43	0.033
132	04/24/2013	09:37:43	0.033
133	04/24/2013	09:38:43	0.032
134	04/24/2013	09:39:43	0.032
135	04/24/2013	09:40:43	0.032
136	04/24/2013	09:41:43	0.031
137	04/24/2013	09:42:43	0.031
138	04/24/2013	09:43:43	0.031
139	04/24/2013	09:44:43	0.032
140	04/24/2013	09:45:43	0.031
141	04/24/2013	09:46:43	0.031
142	04/24/2013	09:47:43	0.031
143	04/24/2013	09:48:43	0.030
144	04/24/2013	09:49:43	0.032
145	04/24/2013	09:50:43	0.030
146	04/24/2013	09:51:43	0.031
147	04/24/2013	09:52:43	0.031
148	04/24/2013	09:53:43	0.031
149	04/24/2013	09:54:43	0.031
150	04/24/2013	09:55:43	0.030
151	04/24/2013	09:56:43	0.030
152	04/24/2013	09:57:43	0.031
153	04/24/2013	09:58:43	0.031



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
154	04/24/2013	09:59:43	0.032
155	04/24/2013	10:00:43	0.046
156	04/24/2013	10:01:43	0.035
157	04/24/2013	10:02:43	0.037
158	04/24/2013	10:03:43	0.031
159	04/24/2013	10:04:43	0.029
160	04/24/2013	10:05:43	0.030
161	04/24/2013	10:06:43	0.030
162	04/24/2013	10:07:43	0.031
163	04/24/2013	10:08:43	0.030
164	04/24/2013	10:09:43	0.030
165	04/24/2013	10:10:43	0.040
166	04/24/2013	10:11:43	0.052
167	04/24/2013	10:12:43	0.046
168	04/24/2013	10:13:43	0.042
169	04/24/2013	10:14:43	0.038
170	04/24/2013	10:15:43	0.038
171	04/24/2013	10:16:43	0.082
172	04/24/2013	10:17:43	0.039
173	04/24/2013	10:18:43	0.040
174	04/24/2013	10:19:43	0.040
175	04/24/2013	10:20:43	0.031
176	04/24/2013	10:21:43	0.036
177	04/24/2013	10:22:43	0.057
178	04/24/2013	10:23:43	0.036
179	04/24/2013	10:24:43	0.030
180	04/24/2013	10:25:43	0.034
181	04/24/2013	10:26:43	0.029
182	04/24/2013	10:27:43	0.029
183	04/24/2013	10:28:43	0.030
184	04/24/2013	10:29:43	0.029
185	04/24/2013	10:30:43	0.029
186	04/24/2013	10:31:43	0.030
187	04/24/2013	10:32:43	0.030
188	04/24/2013	10:33:43	0.030
189	04/24/2013	10:34:43	0.029
190	04/24/2013	10:35:43	0.029
191	04/24/2013	10:36:43	0.030
192	04/24/2013	10:37:43	0.030
193	04/24/2013	10:38:43	0.030
194	04/24/2013	10:39:43	0.038
195	04/24/2013	10:40:43	0.029
196	04/24/2013	10:41:43	0.029
197	04/24/2013	10:42:43	0.029
198	04/24/2013	10:43:43	0.030
199	04/24/2013	10:44:43	0.030
200	04/24/2013	10:45:43	0.029
201	04/24/2013	10:46:43	0.030
202	04/24/2013	10:47:43	0.034
203	04/24/2013	10:48:43	0.031
204	04/24/2013	10:49:43	0.033
205	04/24/2013	10:50:43	0.032
206	04/24/2013	10:51:43	0.050
207	04/24/2013	10:52:43	0.030
208	04/24/2013	10:53:43	0.028



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
209	04/24/2013	10:54:43	0.030
210	04/24/2013	10:55:43	0.030
211	04/24/2013	10:56:43	0.028
212	04/24/2013	10:57:43	0.028
213	04/24/2013	10:58:43	0.029
214	04/24/2013	10:59:43	0.104
215	04/24/2013	11:00:43	0.137
216	04/24/2013	11:01:43	0.043
217	04/24/2013	11:02:43	0.029
218	04/24/2013	11:03:43	0.030
219	04/24/2013	11:04:43	0.046
220	04/24/2013	11:05:43	0.031
221	04/24/2013	11:06:43	0.054
222	04/24/2013	11:07:43	0.037
223	04/24/2013	11:08:43	0.039
224	04/24/2013	11:09:43	0.030
225	04/24/2013	11:10:43	0.033
226	04/24/2013	11:11:43	0.027
227	04/24/2013	11:12:43	0.027
228	04/24/2013	11:13:43	0.031
229	04/24/2013	11:14:43	0.036
230	04/24/2013	11:15:43	0.029
231	04/24/2013	11:16:43	0.036
232	04/24/2013	11:17:43	0.026
233	04/24/2013	11:18:43	0.027
234	04/24/2013	11:19:43	0.027
235	04/24/2013	11:20:43	0.027
236	04/24/2013	11:21:43	0.027
237	04/24/2013	11:22:43	0.028
238	04/24/2013	11:23:43	0.027
239	04/24/2013	11:24:43	0.027
240	04/24/2013	11:25:43	0.027
241	04/24/2013	11:26:43	0.027
242	04/24/2013	11:27:43	0.027
243	04/24/2013	11:28:43	0.027
244	04/24/2013	11:29:43	0.027
245	04/24/2013	11:30:43	0.026
246	04/24/2013	11:31:43	0.026
247	04/24/2013	11:32:43	0.026
248	04/24/2013	11:33:43	0.026
249	04/24/2013	11:34:43	0.026
250	04/24/2013	11:35:43	0.025
251	04/24/2013	11:36:43	0.026
252	04/24/2013	11:37:43	0.026
253	04/24/2013	11:38:43	0.031
254	04/24/2013	11:39:43	0.026
255	04/24/2013	11:40:43	0.029
256	04/24/2013	11:41:43	0.026
257	04/24/2013	11:42:43	0.026
258	04/24/2013	11:43:43	0.026
259	04/24/2013	11:44:43	0.026
260	04/24/2013	11:45:43	0.031
261	04/24/2013	11:46:43	0.042
262	04/24/2013	11:47:43	0.041
263	04/24/2013	11:48:43	0.028



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
264	04/24/2013	11:49:43	0.044
265	04/24/2013	11:50:43	0.028
266	04/24/2013	11:51:43	0.026
267	04/24/2013	11:52:43	0.027
268	04/24/2013	11:53:43	0.026
269	04/24/2013	11:54:43	0.040
270	04/24/2013	11:55:43	0.026
271	04/24/2013	11:56:43	0.027
272	04/24/2013	11:57:43	0.026
273	04/24/2013	11:58:43	0.032
274	04/24/2013	11:59:43	0.045
275	04/24/2013	12:00:43	0.029
276	04/24/2013	12:01:43	0.043
277	04/24/2013	12:02:43	0.027
278	04/24/2013	12:03:43	0.030
279	04/24/2013	12:04:43	0.030
280	04/24/2013	12:05:43	0.032
281	04/24/2013	12:06:43	0.028
282	04/24/2013	12:07:43	0.031
283	04/24/2013	12:08:43	0.029
284	04/24/2013	12:09:43	0.038
285	04/24/2013	12:10:43	0.029
286	04/24/2013	12:11:43	0.028
287	04/24/2013	12:12:43	0.027
288	04/24/2013	12:13:43	0.028
289	04/24/2013	12:14:43	0.028
290	04/24/2013	12:15:43	0.028
291	04/24/2013	12:16:43	0.030
292	04/24/2013	12:17:43	0.028
293	04/24/2013	12:18:43	0.029
294	04/24/2013	12:19:43	0.028
295	04/24/2013	12:20:43	0.028
296	04/24/2013	12:21:43	0.028
297	04/24/2013	12:22:43	0.028
298	04/24/2013	12:23:43	0.028
299	04/24/2013	12:24:43	0.030
300	04/24/2013	12:25:43	0.030
301	04/24/2013	12:26:43	0.029
302	04/24/2013	12:27:43	0.028
303	04/24/2013	12:28:43	0.028
304	04/24/2013	12:29:43	0.028
305	04/24/2013	12:30:43	0.029
306	04/24/2013	12:31:43	0.028
307	04/24/2013	12:32:43	0.031
308	04/24/2013	12:33:43	0.029
309	04/24/2013	12:34:43	0.028
310	04/24/2013	12:35:43	0.030
311	04/24/2013	12:36:43	0.030
312	04/24/2013	12:37:43	0.032
313	04/24/2013	12:38:43	0.030
314	04/24/2013	12:39:43	0.030
315	04/24/2013	12:40:43	0.027
316	04/24/2013	12:41:43	0.030
317	04/24/2013	12:42:43	0.031
318	04/24/2013	12:43:43	0.028



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
319	04/24/2013	12:44:43	0.029
320	04/24/2013	12:45:43	0.027
321	04/24/2013	12:46:43	0.029
322	04/24/2013	12:47:43	0.088
323	04/24/2013	12:48:43	0.030
324	04/24/2013	12:49:43	0.028
325	04/24/2013	12:50:43	0.271
326	04/24/2013	12:51:43	0.184
327	04/24/2013	12:52:43	0.032
328	04/24/2013	12:53:43	0.027
329	04/24/2013	12:54:43	0.030
330	04/24/2013	12:55:43	0.026
331	04/24/2013	12:56:43	0.032
332	04/24/2013	12:57:43	0.059
333	04/24/2013	12:58:43	0.038
334	04/24/2013	12:59:43	0.035
335	04/24/2013	13:00:43	0.028
336	04/24/2013	13:01:43	0.028
337	04/24/2013	13:02:43	0.078
338	04/24/2013	13:03:43	0.039
339	04/24/2013	13:04:43	0.028
340	04/24/2013	13:05:43	0.097
341	04/24/2013	13:06:43	0.034
342	04/24/2013	13:07:43	0.027
343	04/24/2013	13:08:43	0.027
344	04/24/2013	13:09:43	0.031
345	04/24/2013	13:10:43	0.037
346	04/24/2013	13:11:43	0.033
347	04/24/2013	13:12:43	0.027
348	04/24/2013	13:13:43	0.026
349	04/24/2013	13:14:43	0.027
350	04/24/2013	13:15:43	0.026
351	04/24/2013	13:16:43	0.033
352	04/24/2013	13:17:43	0.026
353	04/24/2013	13:18:43	0.025
354	04/24/2013	13:19:43	0.051
355	04/24/2013	13:20:43	0.048
356	04/24/2013	13:21:43	0.033
357	04/24/2013	13:22:43	0.026
358	04/24/2013	13:23:43	0.027
359	04/24/2013	13:24:43	0.027
360	04/24/2013	13:25:43	0.026
361	04/24/2013	13:26:43	0.026
362	04/24/2013	13:27:43	0.026
363	04/24/2013	13:28:43	0.029
364	04/24/2013	13:29:43	0.027
365	04/24/2013	13:30:43	0.029
366	04/24/2013	13:31:43	0.035
367	04/24/2013	13:32:43	0.032
368	04/24/2013	13:33:43	0.027
369	04/24/2013	13:34:43	0.027
370	04/24/2013	13:35:43	0.039
371	04/24/2013	13:36:43	0.034
372	04/24/2013	13:37:43	0.037
373	04/24/2013	13:38:43	0.034



Test Data			
Data Point	Date	Time	AEROSOL mg/m^3
374	04/24/2013	13:39:43	0.031
375	04/24/2013	13:40:43	0.039
376	04/24/2013	13:41:43	0.028
377	04/24/2013	13:42:43	0.038
378	04/24/2013	13:43:43	0.038



## **APPENDIX E**



**Stantec****Passive Soil Gas Investigation – Analytical Report****61 Commercial Street****Rochester, NY 14614****Attn: Mr. Bob Mahoney****Date: June 14, 2013****Beacon Project No. 2621**

<b>Project Reference:</b>	Former Carriage Factory, Rochester, NY
<b>Samplers Installed:</b>	December 27, 2012, and March 15, 2013
<b>Samplers Retrieved:</b>	January 10, 2013, and March 27, 2013
<b>Samples Received:</b>	January 11, 2013, and March 28, 2013
<b>Analyses Completed:</b>	January 12, 2013, and April 8, 2013
<b>Laboratory Data Issued:</b>	January 17, 2013, and April 9, 2013

**EPA Method 8260C**

All samples were successfully analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation to target a custom compound list following EPA Method 8260C. Laboratory results are reported in nanograms (ng) of specific compound per sample.

Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were in accordance with BEACON's Quality Assurance Project Plan.

**Reporting limits**

The contract required quantification limit (CRQL) is 25 nanograms (ng) for individual compounds, 250 ng for Methylene Chloride and 5,000 ng for Total Petroleum Hydrocarbons (TPH). **Tables 1 and 2** provide survey results in nanograms per sampler by sample-point number and compound name. The CRQLs represent a baseline above which results exceed laboratory-determined limits of precision and accuracy. Any field sample measurements above the upper calibration standard are estimated; however, these values are reported without qualifiers because all reported measurements are relative to each other and are appropriate to meet the survey objectives of locating source areas and vapor intrusion pathways and defining the lateral extent of contamination.

**Calibration Verification**

The continuing calibration verification (CCV) values for the calibration check compounds were all within  $\pm 20\%$  of the true values as defined by the initial five-point calibration and met the requirements specified in Beacon Environmental's Quality Assurance Project Plan.

**Method Blanks/Trip Blanks**

Laboratory method blanks are run with each sample batch to identify contamination present in the laboratory. If contamination is detected on a method blank, measurements of identical compounds in that sample batch are flagged in the laboratory report. The laboratory method blanks analyzed in connection with the present samples revealed no contamination.

The trip blank is a sampler prepared, transported, and analyzed with other samples but intentionally not exposed. Any target compounds identified on the trip blanks are reported in the laboratory data. The analysis of the trip blank (labeled Trip-1 in **Table 1**) reported none of the targeted compounds. The analysis of the trip blank (labeled Trip-1 in **Table 2**), reported 55 ng of Tetrachloroethene.

No other compounds were identified on the trip blanks, which suggests that except for the lower level measurements of tetrachloroethene in the second survey, the survey site itself is the source of detected compounds.



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### Passive Soil-Gas Survey Notes

When sample locations are covered with or near the edge of an artificial surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are often significantly higher than the concentrations would be if the surfacing were not present. Thus, a reading taken below or near an impermeable surface is much higher than it would be in the absence of such a cap. Therefore, the sample location conditions should be evaluated when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate survey and site information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times). BEACON recommends the guidelines stated in **Attachment 1** to establish a relationship between reported soil-gas measurements and actual subsurface contaminant concentrations, which will indicate those measurements representing significant subsurface contamination.

BEACON's passive soil-gas samplers are prepared with two sets of adsorbent cartridges for subsequent duplicate or confirmatory sample analysis. At Stantec's request, duplicate analysis was performed for four (4) field samples. The field sample duplicates were designated "Dup" following the sample number. When comparing quantitative results, a duplicate correspondence should be considered when the relative percent difference (RPD) between the two samples is less than or equal to 100%. For the purpose of calculating correspondences, all non-detections should be assigned, as a baseline value, the CRQL for the specific contaminant. Based on these assumptions, a 100% correlation was found between the field sample duplicates and their base samples.

### Project Details

This project was completed in two phases; in the initial phase Samplers were deployed on December 27, 2012, and were retrieved on January 10, 2013; a second round of PSG samplers were deployed on March 15, 2013, and retrieved on March 27, 2013. **Attachment 2** describes standard field procedures. Individual deployment and retrieval times will be found in the Field Deployment Report (**Attachment 3**).

Overall, fifty-six (56) field samples, four (4) field sample duplicates, and two (2) trip blanks were received by BEACON on January 11, 2013, and March 28, 2013. Adsorbent cartridges from the passive samplers were thermally desorbed, then analyzed using gas chromatography/mass spectrometry (GC/MS) equipment, in accordance with EPA Method 8260C, as described in **Attachment 4**. BEACON's laboratory analyzed each sample for the targeted compounds; analyses from the initial survey were completed on January 12, 2013; analyses from the second survey were completed April 8, 2013. Following a laboratory review, results were provided to Stantec on January 17, 2013 (initial survey), and April 9, 2013 (second survey). The Chain-of-Custody form, which was shipped with the samples for this survey, is supplied as **Attachment 5**.

Field samples L1-SG-20 (and corresponding duplicate L1-SG-20 Dup) and L1-SG-21 reported high measurements of petroleum-related compounds that masked the quantifying ions of the internal standard compounds (Chlorobenzene-d<sub>5</sub> and/or 1,4-Dichlorobenzene-d<sub>4</sub>). A manual integration was performed on the quantification ions for these internal standards to ensure that data quality objectives were met, which is in accordance with BEACON's QA/QC program. All data reported for these samples are reported with high confidence.



Sample locations are shown on **Figure 1**. The following table lists frequency of detections based on the number of field samples analyzed, the reporting limit, and the maximum value for each mapped compound. The table also includes the transformation and interpolation method for the compound distribution maps provided.

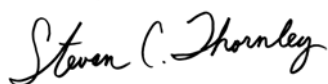
Figure No.	2	3	4	5	6
Compound	Methylene Chloride	Trichloroethene	Tetrachloroethene	Total Chlorinated Compounds*	Total Petroleum Hydrocarbons
Frequency	7	22	25	28	32
Reporting Limit (nanograms)	250	25	25	25	5,000
Max Value (nanograms)	164,967	24,346	15,900	37,744	685,687
Transformation Method	Log	Log	Log	Log	Log
Interpolation Method	Kriging	Kriging	Kriging	Kriging	Kriging

\* - At Stantec's request, the Total Chlorinated Compounds map excludes Methylene Chloride.

#### **Attachments:**

- 1- Applying Results From Passive Soil-Gas Surveys
- 2- Field Procedures
- 3- Field Deployment Report
- 4- Laboratory Procedures
- 5- Chain-of-Custody Form

ALL DATA MEET REQUIREMENTS AS SPECIFIED IN THE BEACON ENVIRONMENTAL SERVICES, INC. QUALITY ASSURANCE PROJECT PLAN AND THE RESULTS RELATE ONLY TO THE SAMPLES REPORTED. BEACON ENVIRONMENTAL SERVICES IS ACCREDITED TO ISO 17025:2005, AND THE WORK PERFORMED WAS IN ACCORDANCE WITH ISO 17025 REQUIREMENTS, WITH THE EXCEPTION THAT SAMPLES WERE ANALYZED WITHIN A 24-HOUR TUNE WINDOW AND FREON 113, 1,4-DIOXANE, 2-METHYLNAPHTHALENE, TPH C<sub>5</sub>-C<sub>9</sub> AND TPH C<sub>10</sub>-C<sub>15</sub> ARE NOT INCLUDED IN BEACON'S SCOPE OF ACCREDITATION. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY. RELEASE OF THE DATA CONTAINED IN THIS HARDCOPY DATA PACKAGE HAS BEEN AUTHORIZED BY THE LABORATORY DIRECTOR OR HIS SIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURES:



Steven C. Thornley  
Laboratory Director



Patti J. Riggs  
Quality Manager



Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	mb130111c	Trip-1	L1-SG-1	L1-SG-2	L1-SG-3	L1-SG-4
Project Number:		2621	2621	2621	2621	2621
Lab File ID:	C13011103	C13011105	C13011106	C13011107	C13011108	C13011109
Received Date:		1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Time:	14:34	15:17	15:42	16:03	16:24	16:46
Matrix:			Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<b>6,341</b>
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<b>44</b>	<b>142</b>
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<b>26</b>	<25	<b>84</b>	<b>78</b>
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<b>114</b>	<25	<b>662</b>	<b>978</b>
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<b>95</b>
Trichloroethene	<25	<25	<b>1,607</b>	<b>42</b>	<b>5,219</b>	<b>195</b>
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<b>30</b>	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<b>1,945</b>	<b>239</b>	<b>3,462</b>	<b>117</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<b>53</b>	<25	<b>29</b>	<b>39</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<b>28</b>	<25	<25	<b>33</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<b>88,644</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<b>68,148</b>

Results in nanograms (ng). B = Detected in method blank.



Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	L1-SG-5	L1-SG-6	L1-SG-7	L1-SG-8	L1-SG-9	L1-SG-10
Project Number:	2621	2621	2621	2621	2621	2621
Lab File ID:	C13011110	C13011111	C13011112	C13011113	C13011114	C13011115
Received Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Time:	17:07	17:28	17:49	18:11	18:32	18:54
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<b>106,762</b>	<b>31,399</b>	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<b>69</b>	<b>39</b>	<b>37</b>
Trichloroethene	<b>28</b>	<25	<25	<25	<25	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<b>101</b>	<b>84</b>	<b>129</b>
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<b>140</b>	<b>60</b>	<25	<25	<25	<b>109</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<b>26</b>	<25	<b>47</b>
p & m-Xylene	<25	<25	<b>84</b>	<b>140</b>	<b>99</b>	<b>316</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<b>30</b>	<b>59</b>	<b>38</b>	<b>99</b>
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<b>40</b>	<b>41</b>	<b>25</b>	<b>145</b>
1,2,4-Trimethylbenzene	<25	<25	<b>106</b>	<b>73</b>	<b>54</b>	<b>252</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<b>11,239</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<b>8,312</b>	<5,000	<5,000	<b>12,661</b>

Results in nanograms (ng). B = Detected in method blank.



Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	L1-SG-11	L1-SG-11 DUP	L1-SG-12	L1-SG-13	L1-SG-14	L1-SG-15
Project Number:	2621	2622	2621	2621	2621	2621
Lab File ID:	C13011116	C13011117	C13011118	C13011119	C13011120	C13011121
Received Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Time:	19:15	19:37	19:58	20:19	20:40	21:02
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<b>43</b>	<25	<25	<25
Methylene Chloride	<b>164,967</b>	<b>113,953</b>	<250	<b>149,695</b>	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<b>57</b>	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<b>198</b>	<25	<25	<b>123</b>
Chloroform	<25	<25	<25	<25	<25	<b>147</b>
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<b>90</b>	<b>69</b>	<b>55</b>	<b>27</b>	<25	<25
Trichloroethene	<25	<25	<b>4,729</b>	<25	<25	<b>143</b>
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<b>135</b>	<b>81</b>	<b>64</b>	<b>50</b>	<25	<b>62</b>
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<b>15,900</b>	<25	<25	<b>241</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<b>85</b>	<b>76</b>	<25	<25	<25	<25
p & m-Xylene	<b>544</b>	<b>503</b>	<b>64</b>	<b>72</b>	<b>26</b>	<b>51</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<b>123</b>	<b>118</b>	<25	<b>33</b>	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<b>39</b>	<b>39</b>	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<b>203</b>	<b>241</b>	<25	<b>32</b>	<25	<b>53</b>
1,2,4-Trimethylbenzene	<b>214</b>	<b>260</b>	<b>30</b>	<b>48</b>	<25	<b>79</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<b>2,941</b>
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<b>29</b>	<b>516</b>
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<5,000
TPH C <sub>10</sub> -C <sub>15</sub>	<b>15,660</b>	<b>15,511</b>	<5,000	<b>7,190</b>	<5,000	<b>16,701</b>

Results in nanograms (ng). B = Detected in method blank.



Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	L1-SG-16	L1-SG-17	L1-SG-19	L1-SG-20	L1-SG-20 DUP	L1-SG-21
Project Number:	2621	2621	2621	2621	2621	2622
Lab File ID:	C13011122	C13011123	C13011124	C13011125	C13011126	C13011127
Received Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Time:	21:23	21:44	22:05	22:27	22:48	23:10
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<b>171</b>
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<b>412</b>
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<b>59</b>	<25	<b>27</b>	<b>203</b>	<b>334</b>	<b>689</b>
Chloroform	<b>91</b>	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<b>28</b>	<b>26</b>	<b>70</b>	<b>54</b>	<b>53</b>
Trichloroethene	<b>118</b>	<b>226</b>	<b>325</b>	<b>54</b>	<b>56</b>	<b>1,187</b>
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<b>34</b>	<b>30</b>	<b>96</b>	<b>105</b>	<b>31</b>
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<b>158</b>	<b>696</b>	<b>407</b>	<b>66</b>	<b>106</b>	<b>126</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<b>3,815</b>	<b>4,332</b>	<b>139</b>
p & m-Xylene	<25	<25	<b>44</b>	<b>10,333</b>	<b>11,053</b>	<b>365</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<b>1,100</b>	<b>1,297</b>	<b>347</b>
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<b>1,043</b>	<b>1,374</b>	<b>734</b>
1,3,5-Trimethylbenzene	<25	<25	<b>59</b>	<b>17,192</b>	<b>12,510</b>	<b>5,289</b>
1,2,4-Trimethylbenzene	<25	<25	<b>31</b>	<b>17,583</b>	<b>14,000</b>	<b>5,476</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<b>542</b>	<b>772</b>	<b>232</b>
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<b>238</b>	<b>407</b>	<b>25</b>
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<b>5,168</b>	<b>80,996</b>	<b>98,102</b>	<b>74,146</b>	<b>148,301</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<b>40,236</b>	<b>587,585</b>	<b>510,724</b>	<b>347,873</b>

Results in nanograms (ng). B = Detected in method blank.



Table 1

**Beacon Environmental Services, Inc.**  
**323 Williams Street**  
**Bel Air, MD 21014 USA**

**Analysis by EPA Method 8260C (Modified)**

Client Sample ID:	L1-SG-22	L1-SG-23	L1-SG-24	L1-SG-25	L1-SG-26	L1-SG-27
Project Number:	2621	2621	2621	2621	2621	2621
Lab File ID:	C13011128	C13011129	C13011130	C13011131	C13011132	C13011133
Received Date:	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013	1/11/2013
Analysis Date:	1/11/2013	1/11/2013	1/12/2013	1/12/2013	1/12/2013	1/12/2013
Analysis Time:	23:31	23:52	0:14	0:35	0:56	1:18
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<b>31</b>	<25	<b>59</b>	<b>97</b>
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<b>28</b>	<25	<25	<25	<b>116</b>	<b>51</b>
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<b>232</b>	<b>123</b>	<b>382</b>	<25	<b>2,648</b>	<b>1,030</b>
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<b>308</b>	<b>347</b>	<b>2,667</b>	<b>42</b>	<b>10,424</b>	<b>9,155</b>
Chloroform	<25	<25	<25	<25	<b>57</b>	<b>57</b>
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<b>1,641</b>	<b>593</b>	<b>990</b>	<b>166</b>	<b>21,779</b>	<b>24,346</b>
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<b>350</b>	<b>85</b>	<25	<b>468</b>	<b>534</b>	<b>3,009</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<b>33</b>	<25	<25	<b>39</b>	<b>26</b>	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<b>51</b>	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<b>75</b>	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<b>6,282</b>	<5,000	<b>21,347</b>	<5,000	<5,000	<5,000
TPH C <sub>10</sub> -C <sub>15</sub>	<b>9,645</b>	<b>15,657</b>	<b>254,895</b>	<b>14,277</b>	<5,000	<5,000

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	mb130404c	Trip-1	U-SG-201	U-SG-202	U-SG-203	U-SG-204
Project Number:		2621.2	2621.2	2621.2	2621.2	2621.2
Lab File ID:	C13040412	C13040415	C13040416	C13040417	C13040418	C13040811
Received Date:		3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/27/2013
Analysis Date:	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/8/2013
Analysis Time:	12:44	13:48	14:10	14:31	14:52	14:13
Matrix:			Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<b>2,467</b>
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<b>130</b>	<b>46</b>
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<b>479</b>	<25	<b>296</b>	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<b>55</b>	<b>1,303</b>	<b>27</b>	<25	<b>38</b>
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<b>36</b>	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<b>62</b>	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<b>1,152</b>	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<b>365</b>	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<b>35,514</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<b>11,437</b>	<b>9,246</b>	<5,000	<b>299,912</b>

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	U-SG-206	U-SG-206 DUP	U-SG-207	U-SG-208	U-SG-209	U-SG-210
Project Number:	2621.2	2621.2	2621.2	2621.2	2621.2	2621.2
Lab File ID:	C13040420	C13040421	C13040422	C13040423	C13040424	C13040425
Received Date:	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013
Analysis Date:	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
Analysis Time:	15:36	15:57	16:18	16:39	17:01	17:22
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<b>54</b>	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<b>31</b>	<25	<25	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<b>128</b>	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<b>14,945</b>	<5,000	<b>7,534</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<b>14,153</b>	<5,000	<5,000	<5,000

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	U-SG-211	U-SG-212	U-SG-213	U-SG-214	U-SG-215	U-SG-216
Project Number:	2621.2	2621.2	2621.2	2621.2	2621.2	2621.2
Lab File ID:	C13040426	C13040427	C13040428	C13040429	C13040430	C13040812
Received Date:	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013
Analysis Date:	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/8/2013
Analysis Time:	17:43	18:05	18:27	18:49	19:10	14:34
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<25	<25	<25	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<b>57</b>
p & m-Xylene	<25	<25	<25	<25	<25	<b>196</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<b>111</b>
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<b>28,700</b>	<5,000	<b>5,952</b>	<b>10,276</b>	<b>44,004</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<b>8,297</b>	<5,000	<5,000	<5,000	<b>34,926</b>	<b>9,890</b>

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	U-SG-217	U-SG-218	U-SG-219	U-SG-220	U-SG-221	U-SG-222
Project Number:	2621.2	2621.2	2621.2	2621.2	2621.2	2621.2
Lab File ID:	C13040432	C13040433	C13040434	C13040435	C13040436	C13040437
Received Date:	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013
Analysis Date:	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
Analysis Time:	19:53	20:14	20:35	20:56	21:18	21:39
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25	<b>88</b>
Trichloroethene	<25	<25	<25	<25	<25	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<25	<25	<25	<25	<25	<b>45</b>
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<25	<25	<25	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<25	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<25	<25	<25	<25	<25	<b>48</b>
1,2,4-Trimethylbenzene	<25	<25	<25	<25	<25	<b>51</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<25	<25	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<5,000	<b>34,460</b>	<b>129,974</b>	<b>53,883</b>
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<5,000	<5,000	<5,000	<b>11,493</b>

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	U-SG-223	U-SG-224	U-SG-225	U-SG-226	U-SG-227	U-SG-228
Project Number:	2621.2	2621.2	2621.2	2621.2	2621.2	2621.2
Lab File ID:	C13040813	C13040439	C13040440	C13040441	C13040442	C13040443
Received Date:	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013	3/28/2013
Analysis Date:	4/8/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
Analysis Time:	14:55	22:22	22:43	23:06	23:27	23:48
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas
Units:	ng	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>						
Vinyl Chloride	<25	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<b>16,063</b>	<b>41,249</b>	<b>59,142</b>	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25	<25
Benzene	<b>64</b>	<b>61</b>	<b>67</b>	<25	<b>77</b>	<b>31</b>
Trichloroethene	<25	<25	<25	<25	<25	<25
1,4-Dioxane	<25	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25	<25
Toluene	<b>38</b>	<25	<b>25</b>	<25	<b>41</b>	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25	<25
Tetrachloroethene	<25	<25	<b>26</b>	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25	<25
p & m-Xylene	<25	<b>35</b>	<25	<25	<b>59</b>	<b>32</b>
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<25	<25	<b>38</b>	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene	<b>42</b>	<25	<25	<25	<b>60</b>	<25
1,2,4-Trimethylbenzene	<b>37</b>	<25	<25	<b>37</b>	<b>105</b>	<b>38</b>
1,3-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<25	<b>26</b>	<b>52</b>	<b>46</b>
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<b>92,367</b>	<b>48,842</b>	<5,000	<5,000	<5,000	<5,000
TPH C <sub>10</sub> -C <sub>15</sub>	<b>12,671</b>	<5,000	<5,000	<5,000	<b>16,059</b>	<5,000

Results in nanograms (ng). B = Detected in method blank.



Table 2

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road, Suite 1**  
**Forest Hill, MD 21050 USA**

**Analysis by EPA Method 8260C**

Client Sample ID:	U-SG-229	U-SG-230	U-SG-231	U-SG-231 DUP	mb130408c
Project Number:	2621.2	2621.2	2621.2	2621.2	
Lab File ID:	C13040444	C13040445	C13040446	C13040447	C13040803
Received Date:	3/28/2013	3/28/2013	3/28/2013	3/28/2013	
Analysis Date:	4/5/2013	4/5/2013	4/5/2013	4/5/2013	4/8/2013
Analysis Time:	0:09	0:30	0:52	1:13	10:18
Matrix:	Soil Gas	Soil Gas	Soil Gas	Soil Gas	
Units:	ng	ng	ng	ng	ng
<b>COMPOUNDS</b>					
Vinyl Chloride	<25	<25	<25	<25	<25
Trichlorofluoromethane (Freon 11)	<25	<25	<25	<25	<25
1,1-Dichloroethene	<25	<25	<25	<25	<25
Methylene Chloride	<250	<250	<250	<250	<250
1,1,2-Trichlorotrifluoroethane (Fr.113)	<25	<25	<25	<25	<25
trans-1,2-Dichloroethene	<25	<25	<25	<25	<25
Methyl-t-butyl ether	<25	<25	<25	<25	<25
1,1-Dichloroethane	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene	<25	<25	<25	<25	<25
Chloroform	<25	<25	<25	<25	<25
1,2-Dichloroethane	<25	<25	<25	<25	<25
1,1,1-Trichloroethane	<25	<25	<25	<25	<25
Carbon Tetrachloride	<25	<25	<25	<25	<25
Benzene	<25	<25	<25	<25	<25
Trichloroethene	<25	<25	<b>29</b>	<b>36</b>	<25
1,4-Dioxane	<25	<25	<25	<25	<25
1,1,2-Trichloroethane	<25	<25	<25	<25	<25
Toluene	<25	<25	<b>33</b>	<b>60</b>	<25
1,2-Dibromoethane (EDB)	<25	<25	<25	<25	<25
Tetrachloroethene	<b>32</b>	<25	<25	<25	<25
1,1,1,2-Tetrachloroethane	<25	<25	<25	<25	<25
Chlorobenzene	<25	<25	<25	<25	<25
Ethylbenzene	<25	<25	<25	<25	<25
p & m-Xylene	<25	<25	<b>49</b>	<b>81</b>	<25
1,1,2,2-Tetrachloroethane	<25	<25	<25	<25	<25
o-Xylene	<25	<25	<b>70</b>	<b>125</b>	<25
1,2,3-Trichloropropane	<25	<25	<25	<25	<25
Isopropylbenzene	<25	<25	<b>142</b>	<b>180</b>	<25
1,3,5-Trimethylbenzene	<25	<25	<b>1,932</b>	<b>2,356</b>	<25
1,2,4-Trimethylbenzene	<25	<25	<b>3,313</b>	<b>3,720</b>	<25
1,3-Dichlorobenzene	<25	<25	<25	<25	<25
1,4-Dichlorobenzene	<25	<25	<25	<25	<25
1,2-Dichlorobenzene	<25	<25	<25	<25	<25
1,2,4-Trichlorobenzene	<25	<25	<25	<25	<25
Naphthalene	<25	<25	<b>172</b>	<b>155</b>	<25
1,2,3-Trichlorobenzene	<25	<25	<25	<25	<25
2-Methylnaphthalene	<25	<25	<25	<25	<25
TPH C <sub>5</sub> -C <sub>9</sub>	<5,000	<5,000	<b>53,035</b>	<b>26,946</b>	<5,000
TPH C <sub>10</sub> -C <sub>15</sub>	<5,000	<5,000	<b>334,892</b>	<b>374,010</b>	<5,000

Results in nanograms (ng). B = Detected in method blank.





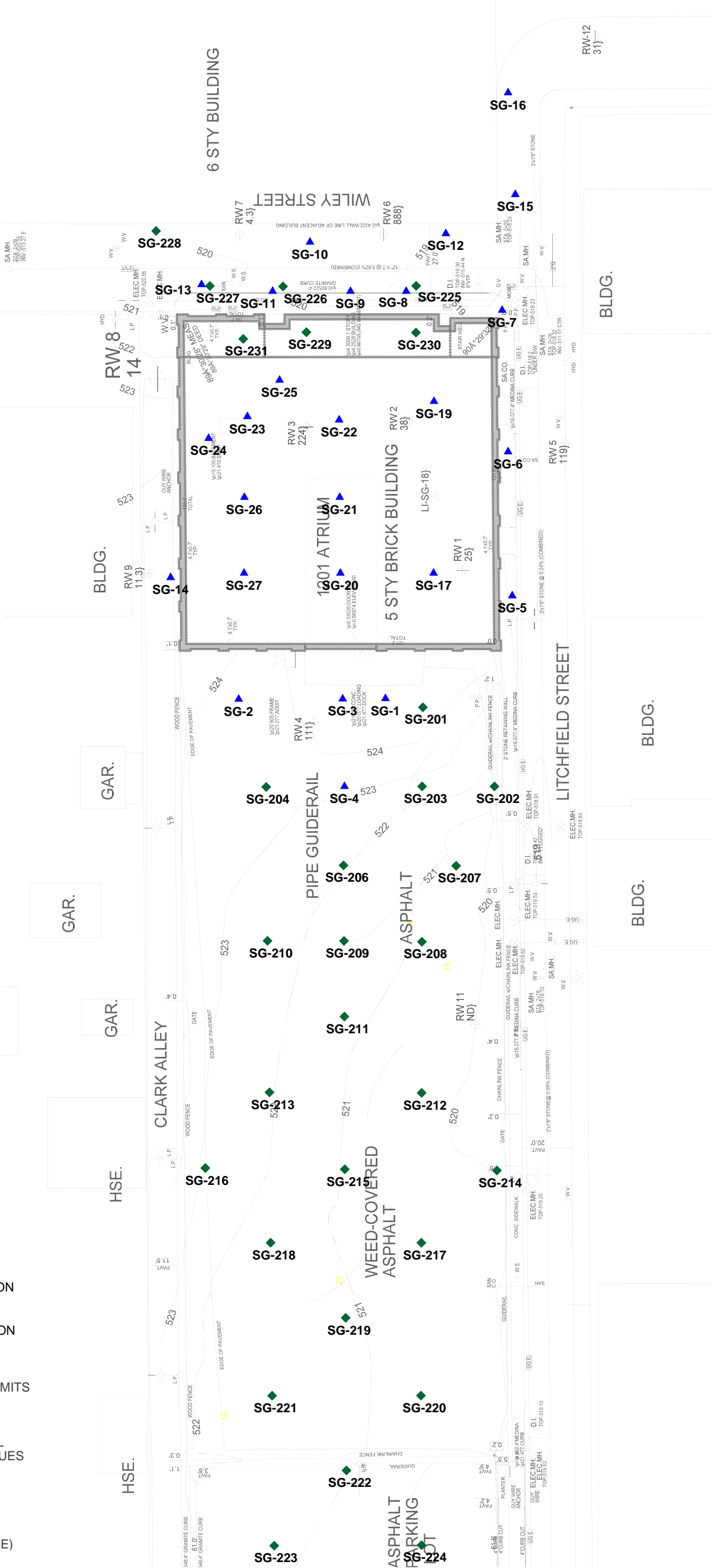
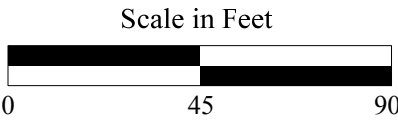
LEGEND

- SG-7** PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213** PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



**BEACON  
ENVIRONMENTAL  
SERVICES, INC.**

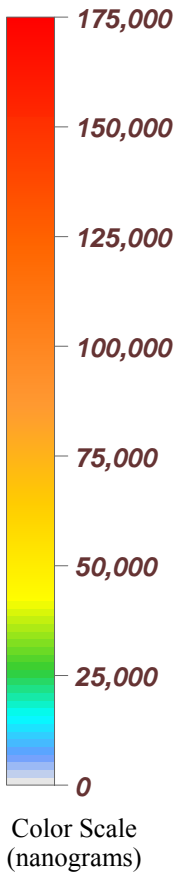
2203A Commerce Road, Suite 1, Forest Hill, MD 21050 USA  
www.Beacon-USA.com 1-410-838-8780  
Beacon Project No. 2621.2, April 2013



**Figure 1**  
**Passive Soil-Gas Survey**  
**Sample Locations**

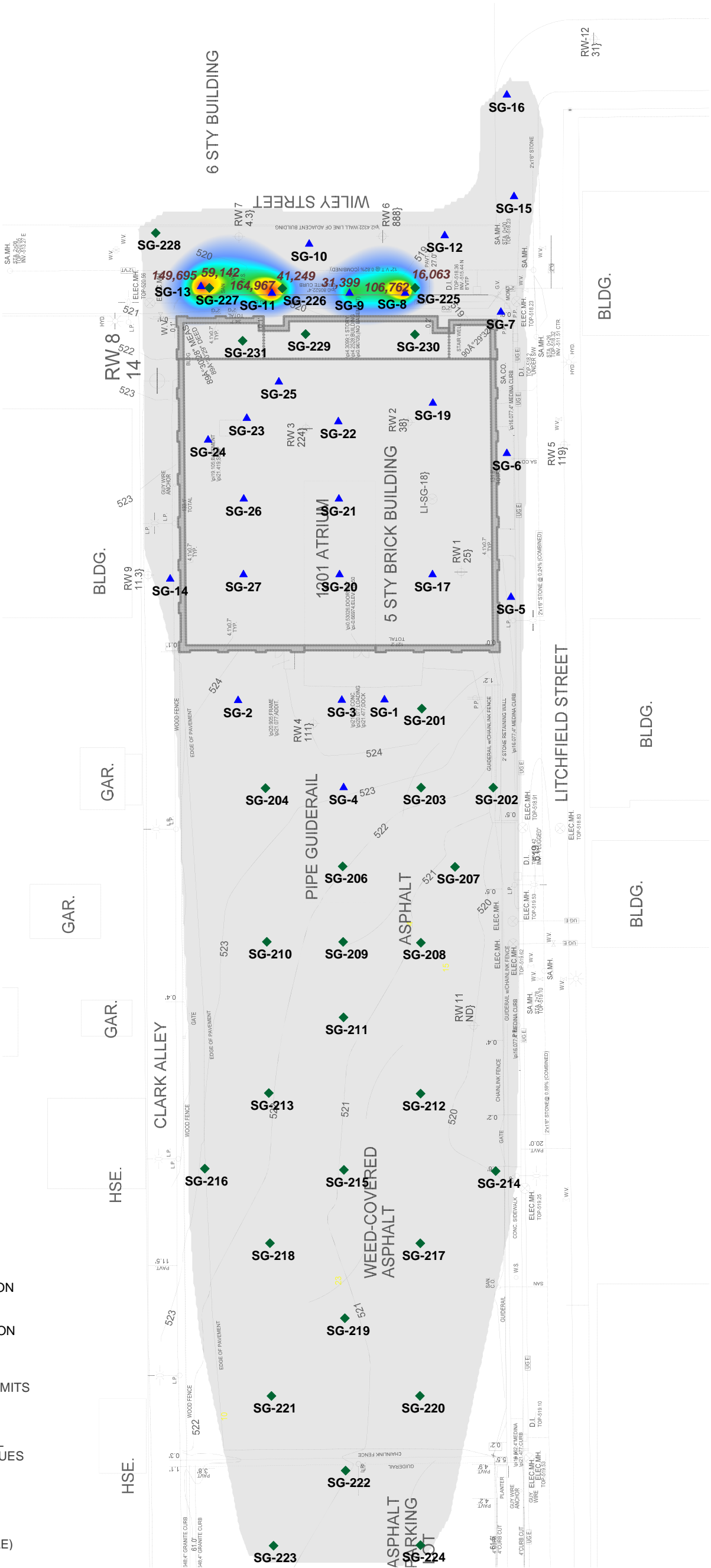
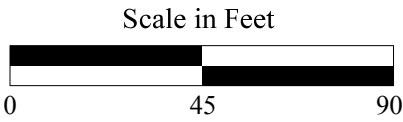
**Former Carriage Factory**  
**Rochester, NY**





## LEGEND

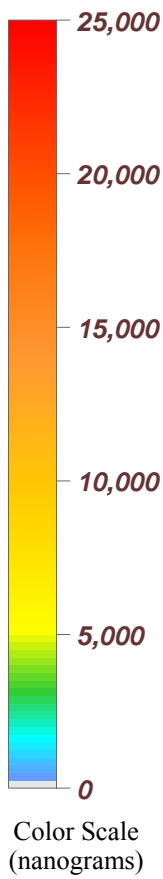
- 1,000** NANOGRAMS/SAMPLER
- SG-7** PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213** PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



**Figure 2**  
**Passive Soil-Gas Survey**  
**Methylene Chloride**

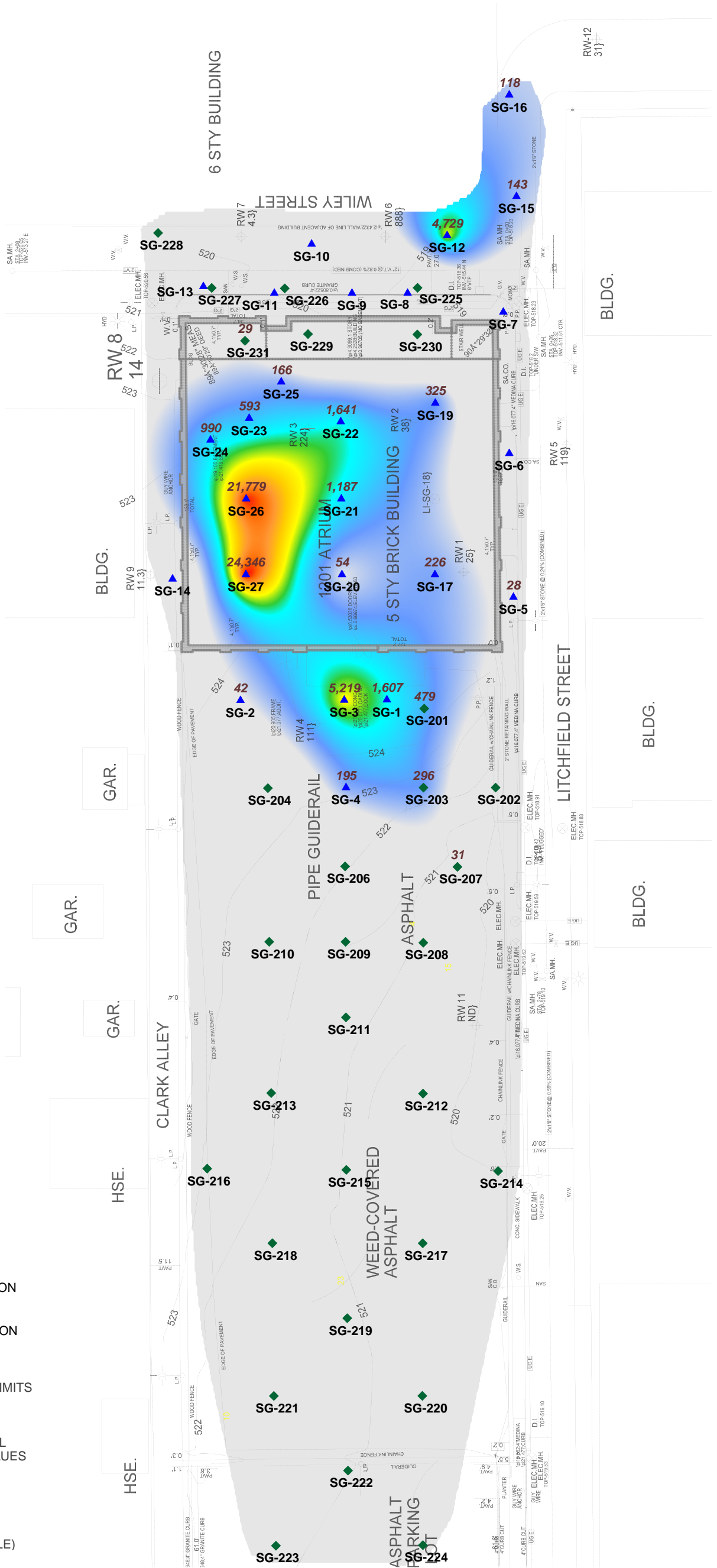
**Former Carriage Factory**  
**Rochester, NY**



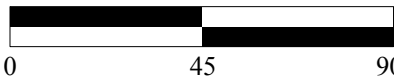


## LEGEND

- 1,000** NANOGRAMS/SAMPLER
- SG-7** PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213** PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



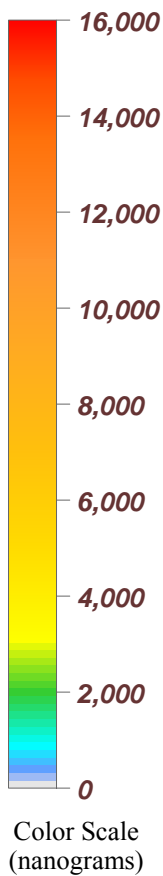
Scale in Feet



**Figure 3**  
**Passive Soil-Gas Survey**  
**Trichloroethene**

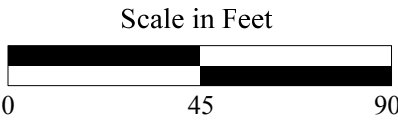
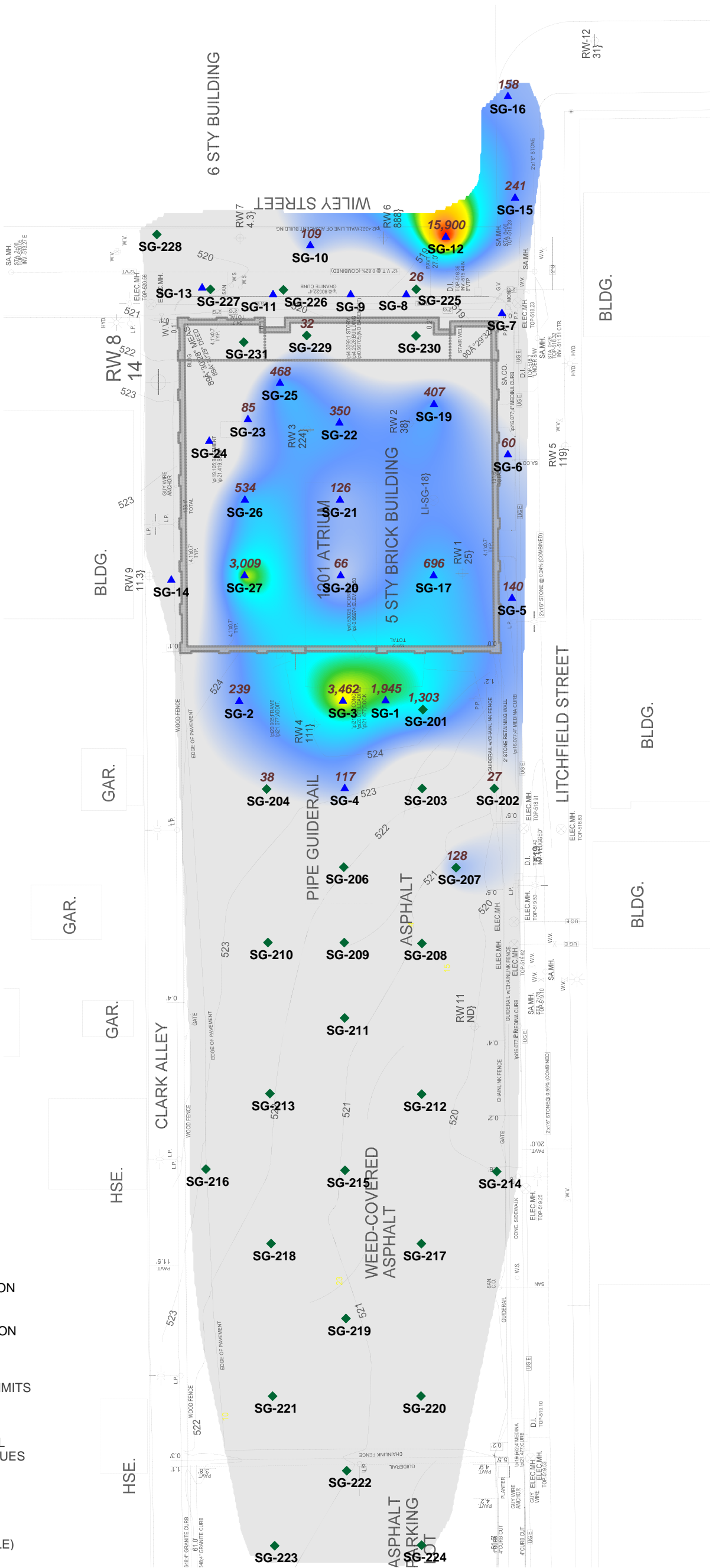
**Former Carriage Factory**  
**Rochester, NY**





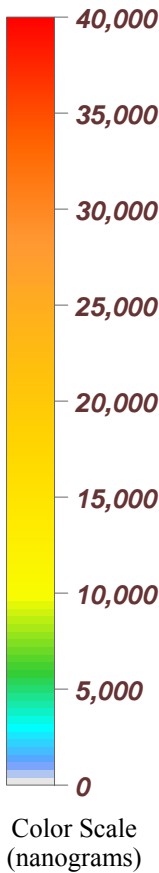
## LEGEND

- 1,000** NANOGRAMS/SAMPLER
- SG-7** PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213** PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



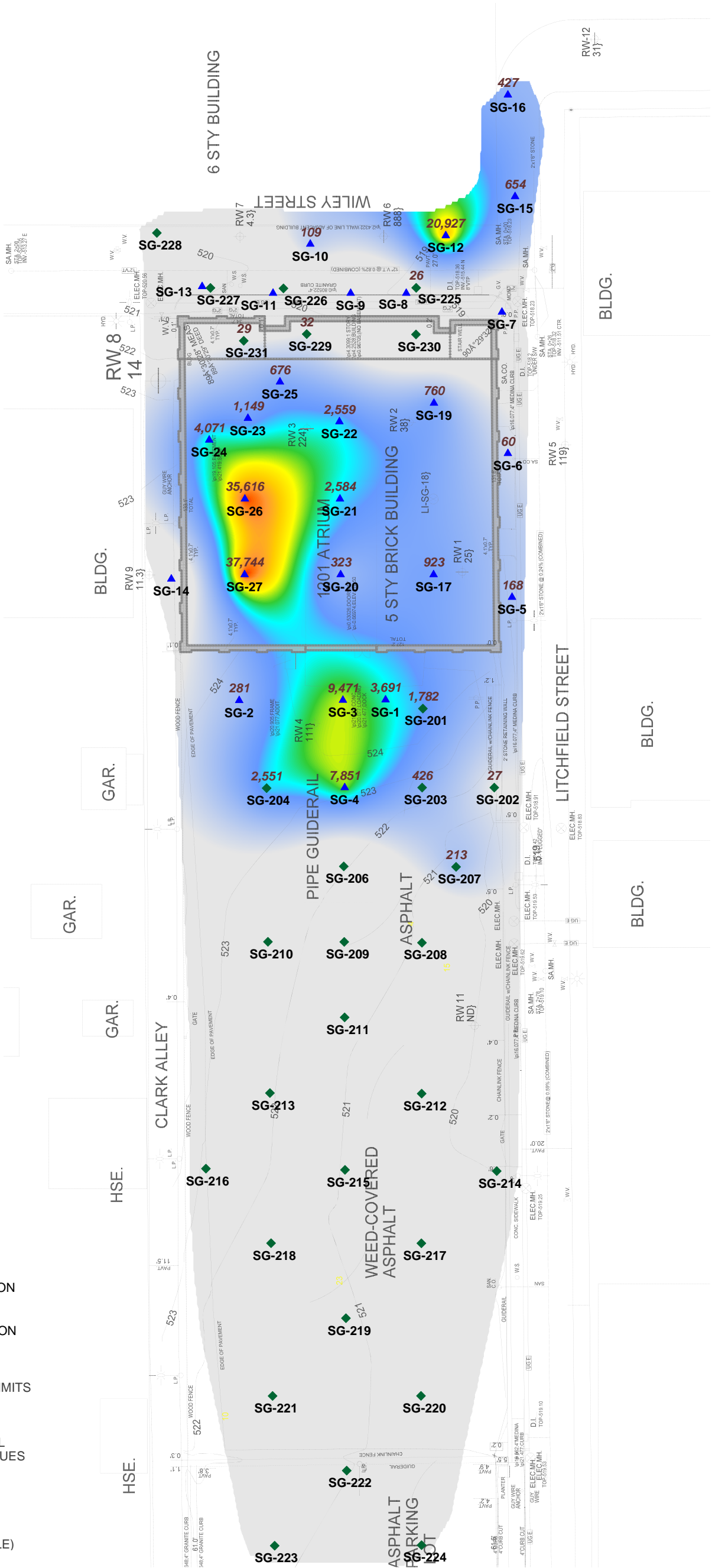
**Figure 4**  
**Passive Soil-Gas Survey**  
**Tetrachloroethene**  
**Former Carriage Factory**  
**Rochester, NY**



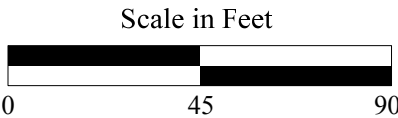


## LEGEND

- 1,000** NANOGRAMS/SAMPLER
- SG-7** PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213** PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



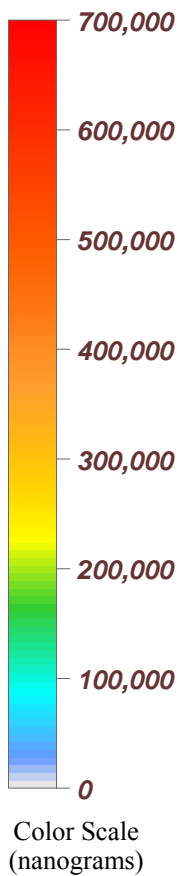
\* This total does not include Methylene Chloride



**Figure 5**  
**Passive Soil-Gas Survey**  
**Total Chlorinated Compounds**

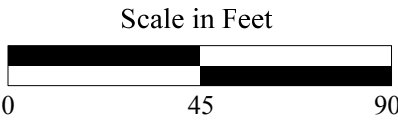
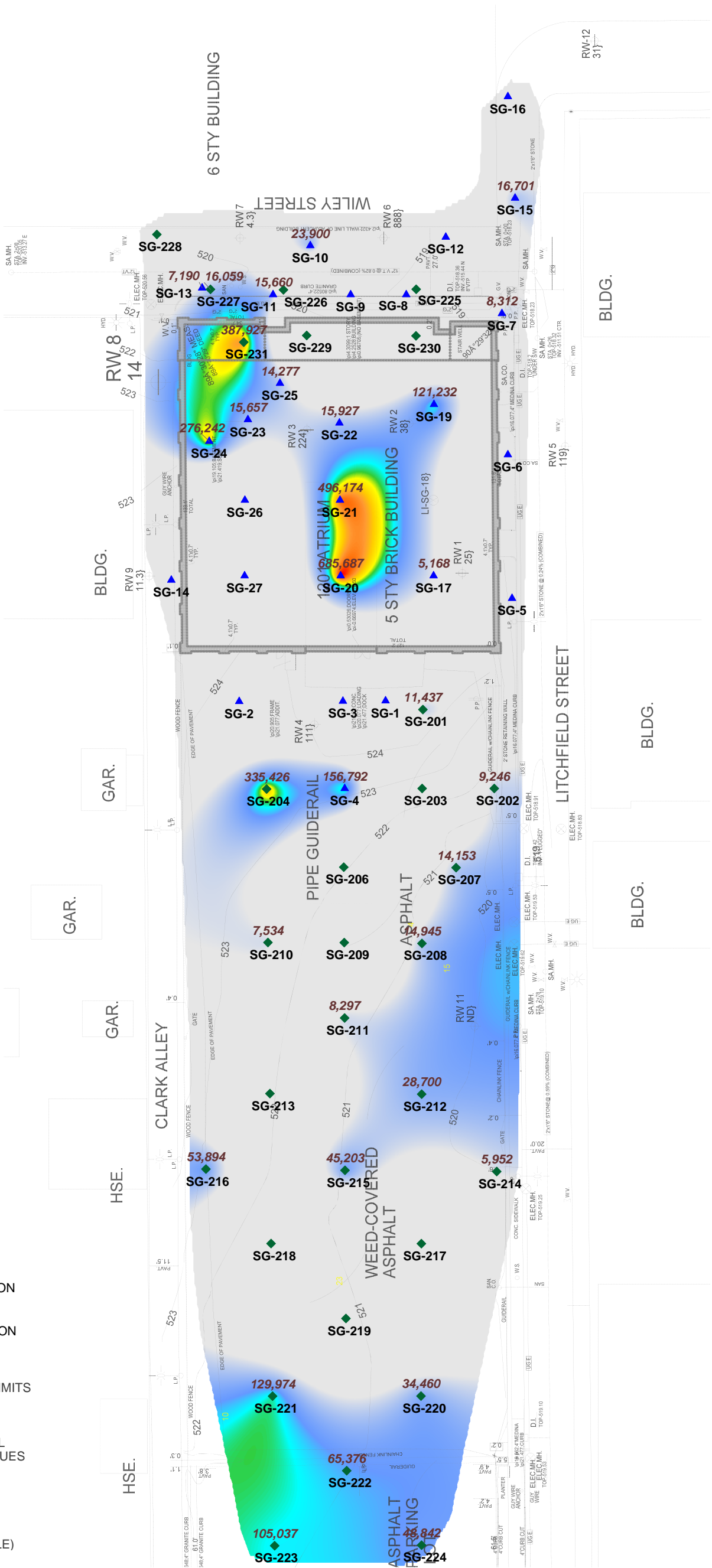
**Former Carriage Factory**  
**Rochester, NY**





LEGEND

- 1,000 NANOGRAMS/SAMPLER
- SG-7 PASSIVE SOIL-GAS SAMPLE LOCATION (January 2013)
- SG-213 PASSIVE SOIL-GAS SAMPLE LOCATION (March 2013)
- 33 LITCHFIELD STREET BUILDING LIMITS
- RW 2 888 ug/L LOCATIONS OF EXISTING GROUNDWATER MONITORING WELL WITH CVOCs CONCENTRATION VALUES (MICROGRAMS PER LITER)
- PROPERTY LINE
- SANITARY SEWER (SA MH=MANHOLE)



**Figure 6**  
**Passive Soil-Gas Survey**  
**Total Petroleum Hydrocarbons**  
**Former Carriage Factory**  
**Rochester, NY**



## **Attachments**



## Attachment 1

### APPLYING RESULTS FROM PASSIVE SOIL-GAS SURVEYS

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source(s). The vapor-phase is merely a fractional trace of the source(s) and, as a matter of convenience, the units used in reporting detection values from passive soil-gas surveys are smaller than those employed for source-compound concentrations.

Passive soil gas data are reported in mass of compounds identified per sample location (e.g., nanograms (ng) or micrograms (µg) per sampler). Results from a passive soil gas survey typically are then used to guide where follow-on intrusive samples should be collected to obtain corresponding concentrations of the contaminants in soil, soil gas, and/or groundwater, as well as eliminate those areas where intrusive samples are not required. It is not practical to report passive soil gas data as concentration because the sampler's uptake rates of the compounds are often greater than the replenishment rates of the compounds around the sampler, which results in low bias measurements, and the replenishment rates will be dependent on several factors that include, at a minimum, soil gas concentrations, soil porosity and permeability, and soil moisture level.

Whatever the relative concentrations of source and associated soil gas, best results are realized when the ratio of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass (e.g., nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting — at minimum — follow-on intrusive sampling in areas that show relatively high soil-gas measurements to obtain corresponding concentrations of soil and groundwater contaminants. These correspondent values furnish the basis for approximating a relationship. For extrapolating passive soil gas results to vapor intrusion evaluations, we recommend a minimum of three passive soil gas locations be converted to a shallow vapor well then sampled using an active soil gas method. Once a relationship is established, it can be used in conjunction with the remaining soil-gas measurements to estimate subsurface contaminant concentrations across the survey field. (See [www.beacon-usa.com/passivesoilgas.html](http://www.beacon-usa.com/passivesoilgas.html), Publication 1: *Mass to Concentration Tie-In for PSG Surveys* and Publication 4: *Groundwater and PSG Correlation*.) It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have an impact on soil-gas measurements at those locations.

When passive soil-gas surveys are utilized as described above, the data provide information that can yield substantial savings in drilling costs and in time. They furnish, among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent. Passive soil-gas surveys can also be used as a remediation or general site monitoring tool that can be implemented on a quarterly, semi-annual or annual basis.



## Attachment 2

### FIELD PROCEDURES FOR PASSIVE SOIL-GAS SURVEYS

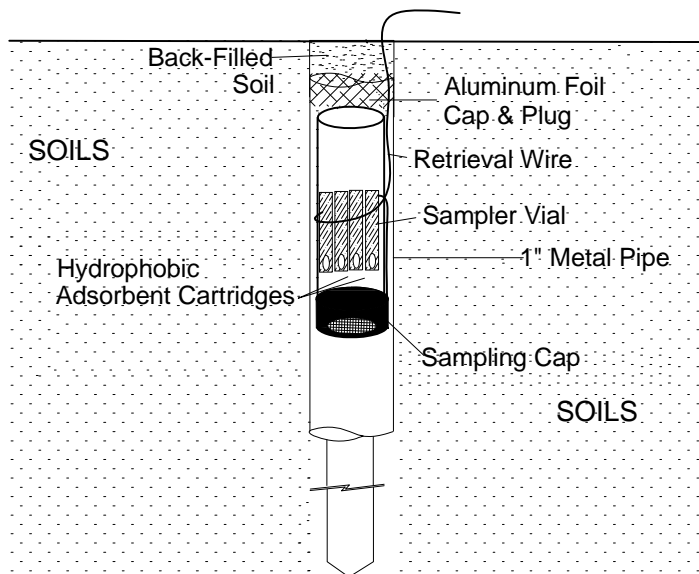
The following field procedures are routinely used during a BEACON Passive Soil-Gas Survey. Modifications can be and are incorporated from time to time in response to individual project requirements. In all instances, BEACON adheres to EPA-approved Quality Assurance and Quality Control practices.

- A. Field personnel carry a BESURE Sample Collection Kit™ and support equipment to the site and deploy the passive samplers in a prearranged survey pattern. A passive sampler consists of a borosilicate glass vial containing hydrophobic adsorbent cartridges with a length of wire attached to the vial for retrieval. Although samplers require only one person for emplacement and retrieval, the specific number of field personnel required depends upon the scope and schedule of the project. Each Sampler emplacement generally takes less than two minutes.
- B. At each survey point a field technician clears vegetation as needed and, using a hammer drill with a 1"- to 1½"-diameter bit, creates a hole 12 to 14 inches deep. [Note: For locations covered with asphalt, concrete, or gravel surfacing, the field technician drills a 1"- to 1½"-diameter hole through the surfacing to the soils beneath]. The technician then, using a hammer drill with a ½" diameter bit, creates a hole three-feet deep. The hole is then sleeved with a 1"-diameter metal sleeve.
- C. The technician then removes the solid plastic cap from a sampler and replaces it with a Sampling Cap (a plastic cap with a hole covered by screen meshing). The technician inserts the sampler, with the Sampling Cap end facing down, into the hole (**see attached figure**). The sampler is then covered with an aluminum foil plug and soils for uncapped locations or, for capped locations, an aluminum foil plug and a concrete patch. The sampler's location, time and date of emplacement, and other relevant information are recorded on the Field Deployment Form.
- D. One or more trip blanks are included as part of the quality-control procedures.
- E. Once all the samplers have been deployed, field personnel schedule sampler recovery and depart, taking all other equipment and materials with them.
- F. Field personnel retrieve the samplers at the end of the exposure period. At each location, a field technician withdraws the sampler from its hole, removes the retrieval wire, and wipes the outside of the vial clean using gauze cloth; following removal of the Sampling Cap, the threads of the vial are also cleaned. A solid plastic cap is screwed onto the vial and the sample location number is written on the label. The technician then records sample-point location, date, time, etc. on the Field Deployment Form.
- G. Sampling holes are refilled with soil, sand, or other suitable material. If samplers have been installed through asphalt or concrete, the hole is filled to grade with a plug of cold patch or cement.
- H. Following retrieval, field personnel ship or transport the passive samplers to BEACON's laboratory.

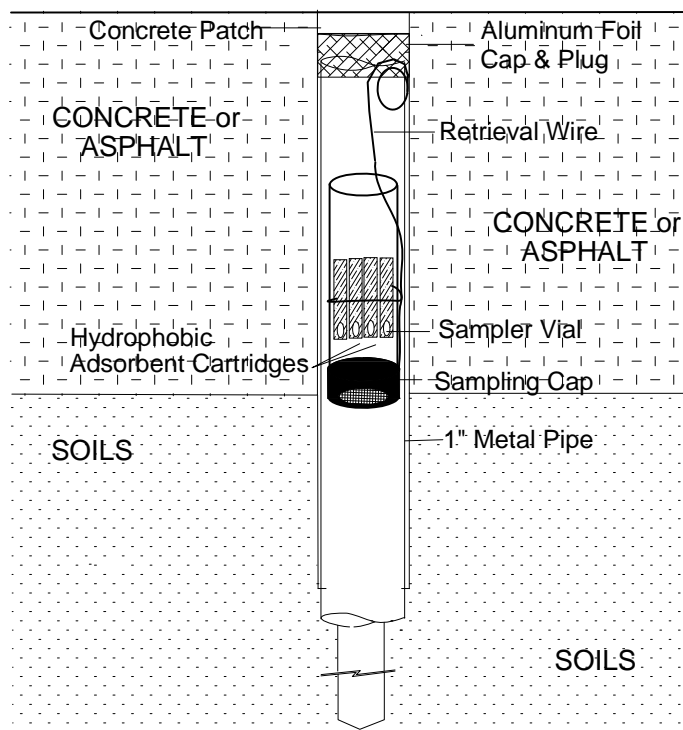


# BEACON'S PASSIVE SOIL-GAS SAMPLER

## DEPLOYMENT THROUGH SOILS



## DEPLOYMENT THROUGH AN ASPHALT/CONCRETE CAP





**Attachment 3**  
**Field Deployment Report**



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT

Project Information		Client Information	
Beacon Project No.:	2621	Company Name:	Stantec
Site Name:		Office Location:	Webster, NY
Site Location:	New York	Samples Collected By:	



FIELD SAMPLE ID	Date Emplaced		Date Retrieved		Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced		Time Retrieved			
L1-SG-1	12/27/12 - 0900		1/10/13 - 0927		36	Emplacement
-2	0945		0923		36	
-3	0950		0925		36	
-4	0955		0921		36	
-5	1015		0905		36	
-6	1020		0907		36	
-7	1030		0855		36	
-8	1045		0828		36	wet hole
-9	1050		0834		36	wet hole
-10	1055		0902		36	
* -11	1105		0838		36	Please analyze duplicate
-12	1110		0823		36	
-13	1118		0852		36	
-14	1125		0857		36	
-15	1150		0840		36	

\* Duplicate analysis



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT



Project Information				Client Information		
Beacon Project No.:	2621	Date Retrieved		Company Name:	Stantec	
Site Name:		Time Retrieved		Office Location:	Webster, NY	
Site Location:	New York	Time Emplaced		Samples Collected By:		

FIELD SAMPLE ID	Date Emplaced		Date Retrieved		Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)	
	Time Emplaced		Time Retrieved				
L1-SG-16	12/27/12 - 1200		01/10/13 - 0945		36	Emplacement	Retrieved PID at retrieval (background 0 ppm)
-17	1300		0938		30		
-18	1310		0946		31	Left solid cap on - DO NOT ANALYZE	0
-19	1320		0950		30		0
-20	1330		0959		30	Gray-stained soil; petroleum odor	27
* -21	1340		0954		31	Petroleum odor - Please Analyze duplicate - wet hole; odor 10.4	0
-22	1345		0952		22		0
-23	1355		1015		32		0
-24	1405		1010		26	Petroleum odor	1.9
-25	1415		1020		24		0
-26	1420		1007		29		0.6
-27	1430		1004		28		0.9

\* Duplicate analysis



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT



2203A Commerce Road | Suite 1  
Forest Hill, MD 21050 USA  
800-878-5510 | 410-838-8780

Project Information		Client Information	
Beacon Project No.:	2621.2	Company Name:	Stantec
Site Name:	Former Carriage Factory	Office Location:	Rochester, NY
Site Location:	Rochester, NY	Samples Collected By:	R. Mahoney

FIELD SAMPLE ID	Date Emplaced		Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)	
	Time Emplaced	Time Retrieved			
41-56-201	0805	1005	36"	Asphalt	Stove bent by heavy equipment.
-202	0812	1009			
-203	0815	1015			
-204	0820	1025			
-205	0823			Weathered Asphalt & gravel	COVERED BY STEEL EQUIPMENT CONTAINER - NOT RETRIEVED
-206	0826	1047		Asphalt	
-207	0829	1040			
-208	0832	1100			
-209	0835	1146		Weathered Asphalt & weeds	Under edge of roll-off
-210	0840	1104			
-211	0845	1110			
-212	0855	1125		Asphalt - high traffic area	
-213	0859	1117		Gravel	
-214	0915	1132		Asphalt (at Entrance gate)	
-215	0918	1120		Asphalt	



# PASSIVE SOIL-GAS SURVEY FIELD DEPLOYMENT REPORT



**BEACON ENVIRONMENTAL SERVICES, INC.**  
2203A Commerce Road | Suite 1  
Forest Hill, MD 21050 USA  
800-878-5510 | 1-410-838-8780

**Project Information**

Beacon Project No.: 2621.2

Site Name: Former Carriage Factory

Site Location: Rochester, NY

**Client Information**

Company Name: Stantec

Office Location: Rochester, NY

Samples Collected By:

FIELD SAMPLE ID	Date Emplaced		Date Retrieved	Sampling Hole Depth (inches)	FIELD NOTES (e.g., asphalt/concrete/gravel, description of sample location, PID/FID readings)
	Time Emplaced	Time Retrieved			
L1-SG-216	0920	1134	36"		weeds along W. fence
-217	0928	1137			Grass
-218	0932	0955			"
-219	0935	0952			Weathered asphalt (tree adjacent)
-220	0940	0956			"
-221	0943	0945			"
-222	0955	<del>0952</del> 1155			Paved parking lot S. of fence (Behind Crista trailer)
-223	1000	0915			- off SW cor. trailer
-224	1005	0920			- off SE cor. trailer
-225	1020	0845			Wiley St. Asphalt } Along S. curb
-226	1024	0850			
-227	1029	0855			
-228	1041	0859			- North curb, between overhead doors
-229	1120	0825			Inside 1-story section (concrete) } soft soil or void beneath slab.
-230	1125	0820			
-231	1145	0830	34"		Basement storage room.



## **Attachment 4**

### **LABORATORY PROCEDURES FOR PASSIVE SOIL-GAS SAMPLES**

Following are laboratory procedures used with BEACON Passive Soil-Gas Surveys, a screening technology for expedited site investigation. After exposure, adsorbent cartridges from the passive samplers are analyzed using U.S. EPA Method 8260C as a guidance document, a capillary gas chromatographic/mass spectrometric method, modified to accommodate high temperature thermal desorption of the adsorbent cartridges and to meet the objectives of reporting semi-quantitative data. This procedure is summarized as follows:

- A. The adsorbent cartridges are loaded with internal standards and surrogates prior to loading the autosampler with the cartridges. The loaded cartridges are purged in a helium flow. Then the cartridges are thermally desorbed in a helium flow onto a focusing trap. Any analytes in the helium stream are adsorbed onto a focusing trap.
- B. Following trap focusing, the trap is thermally desorbed onto a Rxi-624Sil MS 20m, 0.18 mm ID, 1.00 micron filament thickness capillary column.
- C. The GC/MS is scanned between 35 and 270 Atomic Mass Units (AMU) at 3.12 scans per second.
- D. BFB tuning criteria and the initial five-point calibration procedures are those stated in method SW846-8260C. System performance and calibration check criteria are met prior to analysis of samples. A laboratory method blank is analyzed after the daily standard to determine that the system is contaminant-free.
- E. The instrumentation used for these analyses includes:
  - Agilent 7890-5975c Gas Chromatograph/Mass Spectrometer;
  - Markes Unity2 thermal desorber;
  - Markes Ultra2 autosampler; and
  - Markes Mass Flow Controller Modules.



**Attachment 5**  
**Chain-of-Custody Form**



# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

Project Information		Client Information	
Beacon Project No.:	2621	Company Name:	Stantec
Site Name:		Office Location:	Webster, NY
Site Location:	New York	Samples Submitted By:	
Analytical Method:	EPA Method 8260C	Contact Phone No.:	
Target Compounds:	Beacon Project Number 2621 Target Compound List		



Field Sample ID	Comments (only necessary if problem or discrepancy)		
	Notes	Date	Time
Trip-1			
L1-S6-1			
L1-S6-2			
L1-S6-3			
L1-S6-4			
L1-S6-5			
L1-S6-6			
L1-S6-7			
L1-S6-8	DO NOT ANALYZE - Deployed with solid exp → Standing water in hole	1/10/13	1430
L1-S6-9			
L1-S6-10			
L1-S6-11			
L1-S6-12			
L1-S6-13			
L1-S6-14			
L1-S6-15			
L1-S6-16			
L1-S6-17			
L1-S6-18	DO NOT ANALYZE - Deployed with solid exp on vial	1/10/13	1430
L1-S6-19			

Shipment of Field Kit to Site — Custody Seal # 17350269		Intact?	Y	N
Relinquished by:	Date/Time	Courier	Received by:	Date/Time
Kenny Ipecho	12-21-2012 / 1700 Hours	FedEx	R. Macaloney	12/22/12 1230
Shipment of Field Kit to Laboratory — Custody Seal # 17350270		Intact?	Y	N
Relinquished by:	Date/Time	Courier	Received by:	Date/Time
R. Macaloney	1/10/13 1440	FedEx	Kenny Ipecho	01/11/13 1000 hours







# CHAIN-OF-CUSTODY PASSIVE SOIL-GAS SAMPLES

Project Information		Client Information	
Beacon Project No.:	2621.2	Company Name:	Stantec
Site Name:	Former Carriage Factory	Office Location:	Rochester, NY
Site Location:	Rochester, NY	Samples Submitted By:	<i>72. Mahoney</i>
Analytical Method:	EPA Method 8260C	Contact Phone No.:	<i>720 413 5301</i>
Target Compounds:	Beacon Project Number 2621.2 Target Compound List		



Field Sample ID	Comments (only necessary if problem or discrepancy)		
	Notes	Date	Time
Trip-1			
41-55-201			
-202			
-203			
204			
205	<i>Not retrieved due to field observation</i>	<i>3/27/13</i>	<i>1359</i>
206			
207			
208			
209			
210			
211			
212			
213			
214			
215			
216			
217			
218			
219			

Shipment of Field Kit to Site — Custody Seal # 3014029		Intact? <input checked="" type="radio"/> Y <input type="radio"/> N
Relinquished by:	Date/Time	Received by:
<i>Kenny Spades</i>	03-13-2013 / 1700 Hours	<i>7. Mahoney</i>
		Date/Time
		<i>3/14/12 0930</i>

Shipment of Field Kit to Laboratory — Custody Seal # 3014030		Intact? <input checked="" type="radio"/> Y <input type="radio"/> N
Relinquished by:	Date/Time	Received by:
<i>72 Mahoney</i>	03/27/13 1430	<i>Steven Thorneley</i>
		Date/Time
		<i>3.28.2013 / 1100</i>



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[illegible]

Shipment of Field Kit to Laboratory — Custody Seal #	3014030	Intact? <input checked="" type="radio"/> N	
Relinquished by:	Date/Time	Courier	Received by: Date/Time
		Tealox	Steven Thorsley 3.28.2013/1100



**APPENDIX F:**  
**Laboratory Data (400 MB) presented  
in separate file**



# **APPENDIX G**



# Data Validation Services

120 Cobble Creek Road P.O. Box 208  
North Creek, NY 12853

Phone 518-251-4429  
harry@frontiernet.net

December 20, 2013

Robert Mahoney  
Stantec  
61 Commercial St.  
Rochester, NY 14614

RE: Validation of the 33 Litchfield Carriage Factory Remedial Investigation Site  
Analytical Data Packages  
Chemtech SDG Nos. E1976, E2101, E2301, E2314, E2342, and E2363

Dear Mr. Mahoney:

Review has been completed for the data packages generated by Chemtech that pertain to samples collected between 04/22/13 and 05/23/13 at the 33 Litchfield Carriage Factory site. Four aqueous samples, two soil samples, and an aqueous field duplicate were analyzed for TCL Volatiles, TCL Semivolatiles, TCL pesticides TCL PCBs, and TAL metals. Five soil samples and a field duplicate were analyzed for TCL pesticides, TCL PCBs, and TAL metals; three of these were also processed for TCL semivolatiles. Eight soil samples were analyzed for TCL volatiles and TCL semivolatiles. Twelve aqueous samples were analyzed for TCL volatiles. The analytical methodologies are those of the USEPA SW846 6000/7000/8000.

The data packages submitted by the laboratory contain full deliverables for validation, but this usability report is generated from review of the QC summary form information, with full review of sample raw data and limited review of associated QC raw data. The reported QC summary forms and sample raw data have been reviewed for application of validation qualifiers, with guidance from the USEPA national and regional validation documents, and in consideration for the specific requirements of the analytical methodology. The following items were reviewed:

- \* Data Completeness
- \* Case Narrative
- \* Custody Documentation
- \* Holding Times
- \* Surrogate and Internal Standard Recoveries
- \* Matrix Spike Recoveries and Duplicate Correlations
- \* Field Duplicate Correlations
- \* Trip/Method/Calibration Blanks
- \* Laboratory Control Sample (LCS)
- \* Instrumental Tunes
- \* Calibration Standards
- \* Method Compliance
- \* Sample Result Verification



The data review includes evaluation of the specific items noted in The NYS DER-10 Appendix B section 2.0 (c). The items listed above that show deficiencies are discussed within the text of this narrative. The laboratory QC forms illustrating the excursions can be found within the laboratory data package.

**In summary**, most results for target analytes are usable either as reported or with qualification as minor qualification or edit. However, the results for 1,4-dioxane are not usable due to very poor instrument performance inherent in the methodology,

Accuracy, precision, data completeness, and the analytical method comparability are acceptable.

Copies of the client sample identifications are attached to this text, and should be reviewed in conjunction with this report. Also submitted with this narrative are client EDD files, editing in red to reflect the qualifications and edits recommended in this report.

### **General**

The laboratory should have reported the non-detection organic reporting limit values (on the data package sample report forms) using the LOQ/CRQL concentrations, not those shown.

The laboratory should be reporting organic results only to two significant figures. Accuracy is not ensured to the third figure.

### **Chain-of-Custody**

The collection and relinquish date entries of samples reported in SDG E2101, and the collection date entries of samples reported in SDGs E2342 and E2363 do not include the year. The year entry of the relinquish date entered on the custody for samples collected in E2363 should read “/13” rather than “/12”.

### **Field Duplicate Correlations**

Field duplicates were collected at locations LI-B107-S1 and LI-B101MW-GW1. Correlations fall within the acceptance guidelines.

### **Volatile Analyses by EPA8260C**

Results for analytes flagged by the laboratory with “E” (indicating response above the linear range of the instrument) are derived from the dilution analyses of the samples.

The results for 1,4-dioxane in the samples are not usable due to poor instrument performance that is inherent with the methodology. Other calibration standards show acceptable responses, with the exception of the following, results for which are qualified as estimated in the indicated samples:

- 1,2,3-trichlorobenzene and 1,2,4-trichlorobenzene are qualified as estimated due to low responses (64%RSD and 61%RSD) in LI-B106-S1, LI-B108-S1, LI-B109-S1, LI-B110-S1, and the samples reported in SDG E1976
- methylene chloride (24%D) in LI-B105-S1
- methylene chloride, 1,2-dibromo-3-chloropropane (21%D and 22%D) in LI-B103-1S and LI-B104-1S
- cyclohexane (21%D) in samples reported in SDG E2301



The detections of ethylbenzene and o-xylene in LI-B107-S1, LI-B108-S1, LI-B107-S1-FD are edited to reflect non-detection due to very poor mass spectral identification.

Due to poor mass spectral quality, the following results are qualified as tentative in identification and estimated in value:

- o-xylene in LI-B106-S1
- carbon disulfide in LI-B108-S1
- vinyl chloride in LI-RW-6-GW1 and LI-RW-6-GW1
- cyclohexane and benzene in LI-RW-1-GW1

The concentrations of detected compounds in LI-B106-S1 and LI-B108-S1 are qualified as estimated due to elevated surrogate compound recoveries.

The detection of cis-1,2-dichloroethylene in LI-B106-S1 is edited to reflect non-detection, as it was analyzed following a sample with a very high concentration of that analyte, and is suspected as being cross-contamination.

The following results are qualified as estimated due to low recoveries in the associated LCSs:

- 1,2,3-trichlorobenzene and 1,2,4trichlorobenzene (74% and 75%) in LI-B106-S1, LI-B108-S1, LI-B109-S1, and LI-B110-S1
- chloroethane (65%) in LI-B106-S1, LI-B107-S1 and LI-B107-S1-FD

The matrix spikes of LI-B103-1S and LI-RW-2-GW1 show acceptable recoveries and correlations. Although some elevated correlations were observed, the laboratory is utilizing a limit of 20%RPD for all compounds. The analytical protocol requires that individual limits be determined and applied.

Holding time requirements were met, and instrument tunes meet fragmentation requirements. Internal standard recoveries are within required ranges.

Some of the samples were processed at initial dilution due to target analyte concentrations. This results in elevated reporting limits for analytes not detected in the affected samples.

Tentatively Identified Compounds (TICs) that are identified (reported with a CAS number) should have been flagged as “N” to indicate tentative identification. Some of the reported identifications are overly characterized. TICs reported with the “B” flag are analysis artifacts that are to be removed from consideration as sample components. Additionally, the TIC located at 11.5' in the samples reported in SDG E1976 is also found in the associated method blank, and should be disregarded as a sample component.

#### **TCL Semivolatiles by EPA28270D**

Due to matrix effects, LI-SS1, LI-SS2, and LI-SS3 exhibited low recoveries for two internal standards on repeated analysis. Therefore, all results for the thirteen associated analytes in those samples are qualified as estimated. The initial analyses should be used.

LI-B106-S1, LI-B107-S1, and LI-B107-S1-FD exhibited low recoveries for one internal standard, on repeated analysis, and results for the eight associated compounds are qualified as estimated in those samples.



Due to poor mass spectral quality, the following results are qualified as tentative in identification and estimated in value:

- chrysene in LI-B106-S1, LI-B107-S1, LI-B108-S1, and LI-B107-S1-FD
- fluorene in LI-B107-S1
- fluoranthene in LI-B107-S1-FD

The detections of naphthalene in LI-B107-S1 are edited to reflect non-detection due to very poor mass spectral identification.

Matrix spike recoveries and duplicate correlations of LI-B103-1S, LI-B109-S1, and LI-RW-2-GW1 are acceptable. Although elevated correlations were observed, the laboratory is utilizing a limit of 20%RPD for all compounds. The analytical protocol requires that individual limits be determined and applied.

The reporting limit result for 2,4-dinitrophenol in LI-B109-S1 is edited upward by a factor of 2.5 due to unacceptably low response in the lowest concentration calibration standard.

Other calibration standards show acceptable responses, with the following exceptions, results for which are qualified as estimated in the indicated samples:

- 2,4-dinitrophenol (low RRF) in samples reported in SDG E1976 and E2101
- hexachlorocyclopentadiene (low RRF) in LI-B106-S1, LI-B107-S1, LI-B108-S1, LI-B110-S1, and LI-B107-S1-FD
- 4,6-dinitrophenol (low RRF) in LI-SS1, LI-SS2, and LI-SS3
- 4,6-dinitrophenol and pentachlorophenol (low RRFs), and 2,4-dinitrophenol (38%D) in LI-B109-S1
- 2,4-dinitrophenol and 4,6-dinitrophenol (low RRFs) in the samples reported in SDGs E2314 and E2342

Tentatively Identified Compounds (TICs) that are identified (reported with a CAS number) should have been flagged as “N” to indicate tentative identification.

TICs reported with the “A” and/or “B” flag are extraction artifacts that are to be removed from consideration as sample components. Additionally, TICs reported at about 5.45' in the samples reported in E3230 can be similarly considered. These artifacts typically contribute a large proportion of the total TIC concentrations.

#### **Aroclor PCBs and TCL Pesticides by EPA methods 8081B and 8082**

Due to elevated surrogate recoveries, the Aroclor detected result in LI-SS3 is qualified as estimated.

The pesticide matrix spikes of LI-B106-S1, LI-B107-S1, and LI—RW-2-GW1 show recoveries and duplicate correlations that are within validation action limits.

The Aroclor 1016/1260 matrix spikes of LI-B107-S1, LI-B107-S1-FD, and LI-RW-2-GW1 show recoveries and duplicate correlations that are within validation action limits.

Initial and continuing calibration standard instrument responses fall within validation guidelines.



The acceptance ranges used for the pesticide surrogate recoveries for the aqueous samples are overly generous (non-compliant), at 10% to 172% and 10% to 192%.

The pesticide chromatograms for LI-SS2 and LI-SS3 show numerous interference responses (many from Aroclor components). The provided integration output is edited to reflect the analyst's interpretation, and the reported pesticide non-detections are not independently verifiable. Many of the PCB chromatograms have a very large (sulfur-like) interferent peaks that dwarf the responses of the surrogate compounds and potential target analyte responses. The chromatograms should have been scaled to allow independent evaluation.

The raw data should state the analytical columns used in the analyses.

#### **TAL Metals Analyses by EPA 6010C, 7470A, and 7471A**

Matrix spikes/duplicates of LI-B106-S1 and LI-RW-2-GW1 show the following recoveries are outside the recommended limits, indicating a matrix effect on analyte recovery from the samples. The results for the listed elements are qualified as estimated in the indicated samples:

<u>Parent Sample</u>	<u>Element</u>	<u>%Recoveries</u>	<u>Affected Samples</u>
LI-B106-S1	Antimony	41 and 42	Soil Samples
	Silver	73 and 72	
	Selenium	74 and 74	
LI-B107-S1	Antimony	53 and 53	
	Silver	74 and 74	
LI-RW-2-GW1	Manganese	138 and 137	Aqueous Samples

The ICP serial dilution evaluation of LI-RW-2-GW1 shows acceptable correlations.

The following ICP serial dilution evaluations show elevated correlations, and therefore detected results for soil samples have been qualified as estimated in value. A matrix effect that suppresses analyte response is indicated:

<u>Parent Sample</u>	<u>Element</u>	<u>%D</u>	<u>Associated Samples</u>
LI-B106-S1	Aluminum	24	Soil Samples
	Calcium	33	
	Magnesium	31	
	Manganese	38	
	Potassium	24	
LI-B107-S1	Calcium	22	
	Magnesium	23	
	Manganese	27	
	Potassium	15	

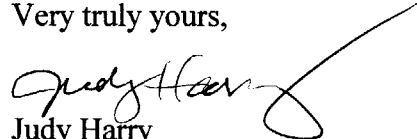
The QC summary Forms 1 and 8 were not properly flagged by the laboratory for the serial dilution outliers, and the laboratory case narrative comments on this evaluation were incorrect.

The blanks show no contamination affecting sample reported results.



Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,



Judy Harry



## **VALIDATION DATA QUALIFIER DEFINITIONS**

- U** The analyte was analyzed for, but was not detected above the level of the associated reported quantitation limit.
- J** The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
- UJ** The analyte was not detected. The associated reported quantitation limit is an estimate and may be inaccurate or imprecise.
- NJ** The detection is tentative in identification and estimated in value. Although there is presumptive evidence of the analyte, the result should be used with caution as a potential false positive and/or elevated quantitative value.
- R** The data are unusable. The analyte may or may not be present.
- EMPC** The results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.



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## **CLIENT and LABORATORY SAMPLE IDs**



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
FORM S-I

## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sampl ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
L1-B101MW-1S	E1976-01	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
L1-B102MW-1S	E1976-02	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-B103-1S	E1976-04	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-B104-1S	E1976-07	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-B105-1S	E1976-08	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP



## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## FORM S-I

## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sample ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
LI-B106-S1	E2101-01	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-B107-S1	E2101-02	8260C	8270D				Chemtech -SOP
LI-B108-S1	E2101-05	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-B109-S1	E2101-06	8260C	8270D				Chemtech -SOP
LI-B110-S1	E2101-07	8260C	8270D				Chemtech -SOP
LI-B107-S1 -FD	E2101-09	8260C	8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-SS1	E2101-10		8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-SS2	E2101-11		8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP
LI-SS3	E2101-12		8270D		8081B, 8082A	6010B, 7471A	Chemtech -SOP



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
FORM S-1

## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sampl ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
LI-RW-6-GW1	E2301-01	8260C					
LI-RW-7-GW1	E2301-02	8260C					
LI-RW-8-GW1	E2301-03	8260C					
LI-RW-12-GW1	E2301-04	8260C					
LI-RW-13-GW1	E2301-05	8260C					
TRIPBLANK	E2301-07	8260C					



## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

NYSDEC Sample ID/Code	Laboratory Sampl ID/Code	VOA GC/MS (Method #)	BNA GC/MS (Method #)	VOA GC (Method #)	Pest PCBs (Method #)	Metals (Method #)	Other (Method #)
LI-B101MW-GW1	E2314-01	8260C	8270D		8081B, 8082A	6010B, 7470A	
LI-B101MW-GW1DUP	E2314-02	8260C	8270D		8081B, 8082A	6010B, 7470A	
LI-RW-2-GW1	E2314-03	8260C	8270D		8081B, 8082A	6010B, 7470A	
LI-RW-5-GW1	E2314-06	8260C	8270D		8081B, 8082A	6010B, 7470A	
LI-RW-9-GW1	E2314-07	8260C	8270D		8081B, 8082A	6010B, 7470A	
TRIPBLANK	E2314-08	8260C	8270D		8081B, 8082A	6010B, 7470A	

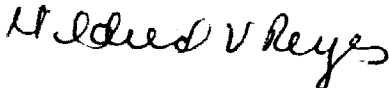


## Cover Page

**Order ID :** E2342**Project ID :** Former Carriage Factory RI**Client :** Stantec**Lab Sample Number**E2342-01  
E2342-02  
E2342-03  
E2342-04**Client Sample Number**LI-RW-3-GW1  
LI-RW-11-GW1  
LI-RW-4-GW1  
LI-B102MW-GW1

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : \_\_\_\_\_

Mildred V. Reyes, QA/QC Supervisor  
2013.06.06 13:21:00 -05'00'  
Date: 6/6/2013



## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

<b>NYSDEC Sample ID/Code</b>	<b>Laboratory Sample ID/Code</b>	<b>VOA GC/MS (Method #)</b>	<b>BNA GC/MS (Method #)</b>	<b>VOA GC (Method #)</b>	<b>Pest PCBs (Method #)</b>	<b>Metals (Method #)</b>	<b>Other (Method #)</b>
LI-RW-1-GW1	E2363-01	8260C					
LI-B108MW-GW1	E2363-02	8260C	8270D		8081B, 8082A	6010B, 7470A	
LI-B106MW-GW1	E2363-03	8260C					



# **APPENDIX H**



90 B John Muir Drive  
Amherst, New York 14228  
(716) 565-0624 • Fax (716) 565-0625



April 10, 2013

Michael P. Storonsky  
Managing Principal, Environmental Services  
Stantec  
61 Commercial Street  
Rochester NY 14614

Transmitted via email to: Storonsky, Mike [mike.storonsky@stantec.com]

Dear Mr. Storonsky:

**Subject: Geophysical Survey Results, 33 Litchfield St, Rochester, NY**

## **1.0 INTRODUCTION**

This letter report presents the results of the geophysical investigation performed for Stantec in support of their environmental investigation of a property located at 33 Litchfield St in Rochester, NY (the Site). The Site is the location of a former carriage factory and is approximately 1.5 acres in size. The exterior portion of the Site is a mix of gravel, pavement and grass covered areas. The basement floor of the Site building has been demolished and removed with a sump remaining.

The geophysical investigation was designed to geophysically characterize the subsurface and focus a follow-up intrusive investigation, if warranted. The specific objectives were:

- Map the distribution of buried metals in the exterior portion of the Site to identify anomalous areas that may be of potential environmental significance.
- Explore for buried piping and other features in the basement of the Site building.
- Explore for potential flow features (utility trenches) that may direct groundwater flow north across Wiley St.

The information provided herein is intended to assist Stantec with their assessment of potential environmental concerns at the Site. AMEC Environment and Infrastructure, Inc. (Amec) performed EM61 data acquisition on March 16 and 23, 2013 and ground penetrating radar (GPR) data acquisition on April 1, 2013.



## 2.0 METHODOLOGY

A reference grid was installed in the exterior at the site to facilitate data acquisition along lines spaced three feet apart. The grid was marked with orange and white spray paint with select coordinates labeled to allow subsequent work if necessary. "Grid North" was taken as the direction perpendicular to the south wall of the Site building. A separate grid was installed in the interior (basement) of the Site building and profile lines were chosen to minimize interference from metal bases on the structural supports.

The site was geophysically surveyed using the Geonics EM61. The EM61 unit is a high sensitivity, high resolution time domain electromagnetic (TDEM) metal detector that can detect both ferrous and nonferrous metallic objects. It has an approximate investigation depth of 10 feet. The processing console is contained in a backpack worn by the operator which is interfaced to a digital data logger. The transmitter and two receiver coils are located on a two-wheeled cart that is pulled by the operator.

The device's transmitter coil generates a pulsed primary EM field at a rate of 150 pulses per second, inducing eddy currents into the subsurface. The decay rates of these eddy currents are measured by two, 3.28 foot by 1.64 foot (1 meter by ½ meter) rectangular receiver coils. By taking the measurements at a relatively long time frame after termination of the primary pulse, the response is practically independent of the survey area's terrain conductivity. Specifically, the decay rates of the eddy currents are much longer for metals than for normal soils allowing the discrimination of the two.



EM61 in use (photo not from this site)

Data are collected from the EM61's two receiver coils. One of the receiver coils is located coincident to the transmitter coil. The other receiver coil is located 1.31 feet (0.4 meters) above the transmitter coil. Data from the top receiver coil are stored on Channel 1 of a digital data logger. Data from the bottom receiver coil are stored on Channel 2 of the data logger. Channel 1 and Channel 2 data are simultaneously recorded at each station location. The instrument responses are recorded in units of milliVolts



(mV). Data were recorded digitally by a data logger at a rate of approximately 2 measurements per foot along the survey lines.

## **GROUND PENETRATING RADAR SURVEY METHODOLOGY**

Ground penetrating radar works on the principle of inducing high frequency radio waves into the earth and recording the energy that is reflected back from depth. Depth of penetration is dependent on the transmitting frequency, the dielectric constant of the subsurface material and the electrical conductivity of the subsurface material and its pore fluid (i.e., depth of penetration is reduced in fine grained soils).

GPR reflections occur at interfaces between different materials. The magnitude and character of the reflections are dependent on the geometry of the reflecting interface and the change in the dielectric constant of the materials across that interface. GPR data were collected in reconnaissance mode along lines spaced 3 feet apart in the basement area and north of the Site building along Wiley St.

## **3.0 RESULTS**

### **3.1 Exterior EM61 Survey**

The EM61 data for the exterior portion of Site are shown in Figure 1. The color bar to the right of the map indicates the colors associated with the respective measured values. Recently installed soil gas probes are noted on the figures (if we observed/recognized them during the survey) with a small inverted triangle accompanied by the label "SG". Areas suspected to be free of buried metals are shown as color shades of blue. All areas exhibiting a response greater than background (0 to 30 mVolts) likely contain buried metals. These areas are depicted in shades of dark blue through yellow on the figure. The majority of the EM responses shown on Figure 1 are related to known surface metallic features such as the construction trailer, man-holes, drum storage and guard rails.

Anomalous zones labeled **A**, **B**, **C** and **D** on Figure 1 are interpreted as being potentially significant and may warrant further investigation. None of these anomalies are interpreted as likely representing a UST. They are identified as potential investigatory targets in the event that historical data or perhaps the soil gas data suggest possible impacts in their vicinity. Any of the additional above background responses may be significant from an environmental perspective however they are more likely associated with miscellaneous buried metals.



### 3.2 Interior EM61 and GPR Survey

EM61 and GPR surveys were performed in the basement area of the Site building in an attempt to map the piping and additionally explore for anomalies that may shed light on the elevated soil gas reading (SG-26 and SG-27). Numerous cast iron pipes were observed as well as two large (~20 inch) vertical clay pipes. The geophysical interpretation is presented in Figure 2 with interpreted pipes denoted with green lines. There were no anomalies detected with the GPR suggesting linear features trending away from the two clay pipes (denoted with red circles on Figure 2). The absence of a GPR response does not preclude the possibility that clay pipes exist and were not detectable with the geophysical equipment. The quality of the geophysical data (both EM61 and GPR) is considered poor and extra caution should be considered when relying on the results presented in the figure.

### 3.3 GPR Survey along Wiley Street

A GPR survey was conducted north of the Site building along Wiley St in an attempt to identify potential north-south utility trenches that may act as preferential groundwater flow paths towards an observed soil gas detection at location SG-12 (north east of Site).

The only utility mappable with the GPR was a section of the buried waterline on the east side of Wiley St. Prior to our survey however utility contractors mapped line locations in the area. We noted a marked sewer utility that appears to cross Wiley St (shown in photograph on right). We were unable to confirm this utility with the GPR however that may be due to the material used in construction of the sewer.






Michael P. Storonsky  
Stantec  
April 10, 2013  
Page 5

#### **4.0 LIMITATIONS**

The geophysical methods used during this survey are established, indirect techniques for non-destructive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (electrical wires, scrap metal, etc.) preclude reliable non-invasive data/results beneath, and in the immediate vicinity of, the surface features. Targets such as buried drums, buried tanks, conduits, etc. are detectable only if they produce recognizable anomalies or patterns against the background geophysical data collected. As with any remote sensing technique, the anomalies identified during a geophysical survey should be further investigated by other techniques such as historical aerial photography, test pit excavation and/or test boring, if warranted.

Please do not hesitate to contact us if you have any questions or require additional information.

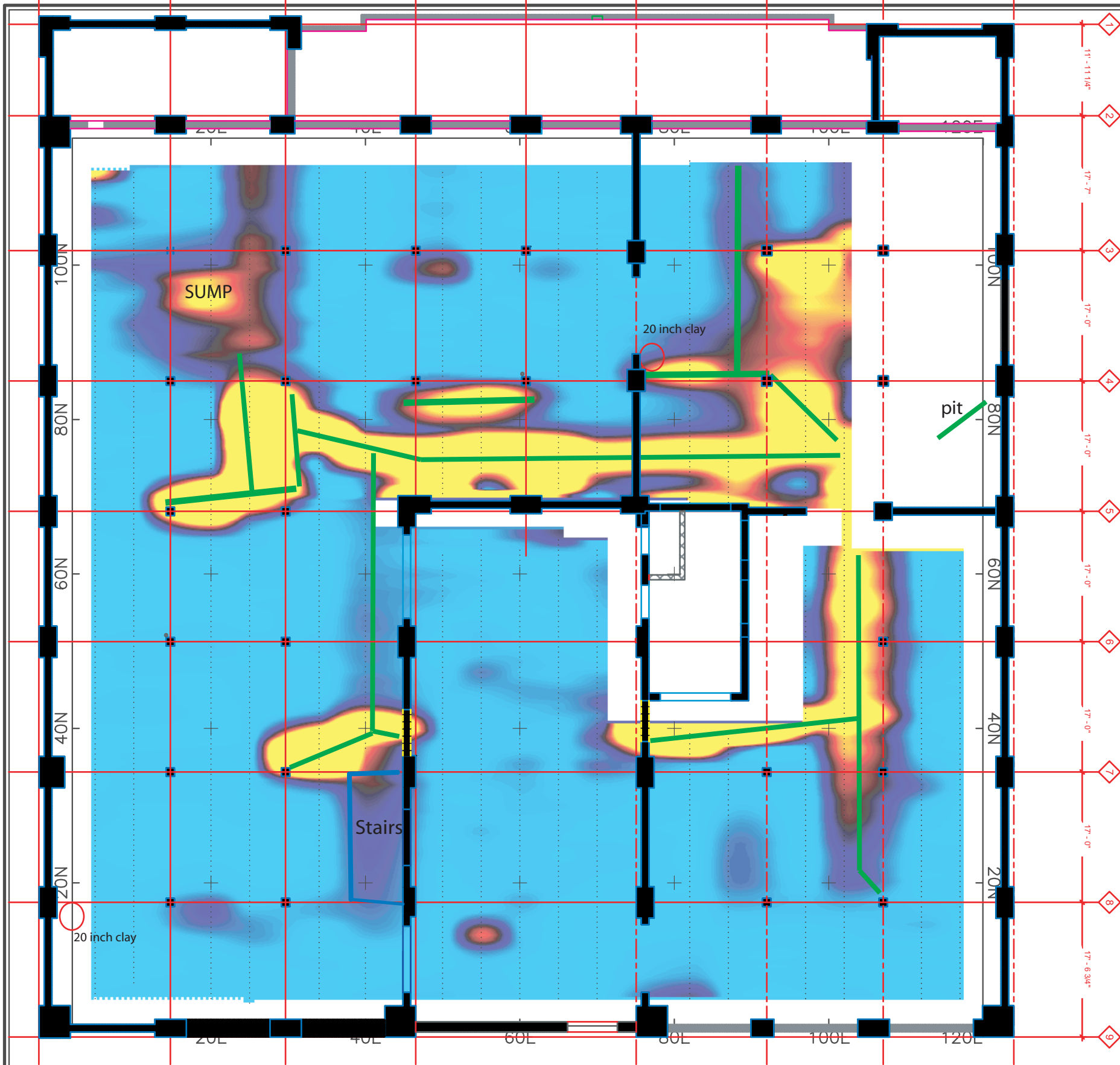
Sincerely yours,  
AMEC Environment and Infrastructure, Inc.

  
John Luttinger  
Senior Geophysicist









10

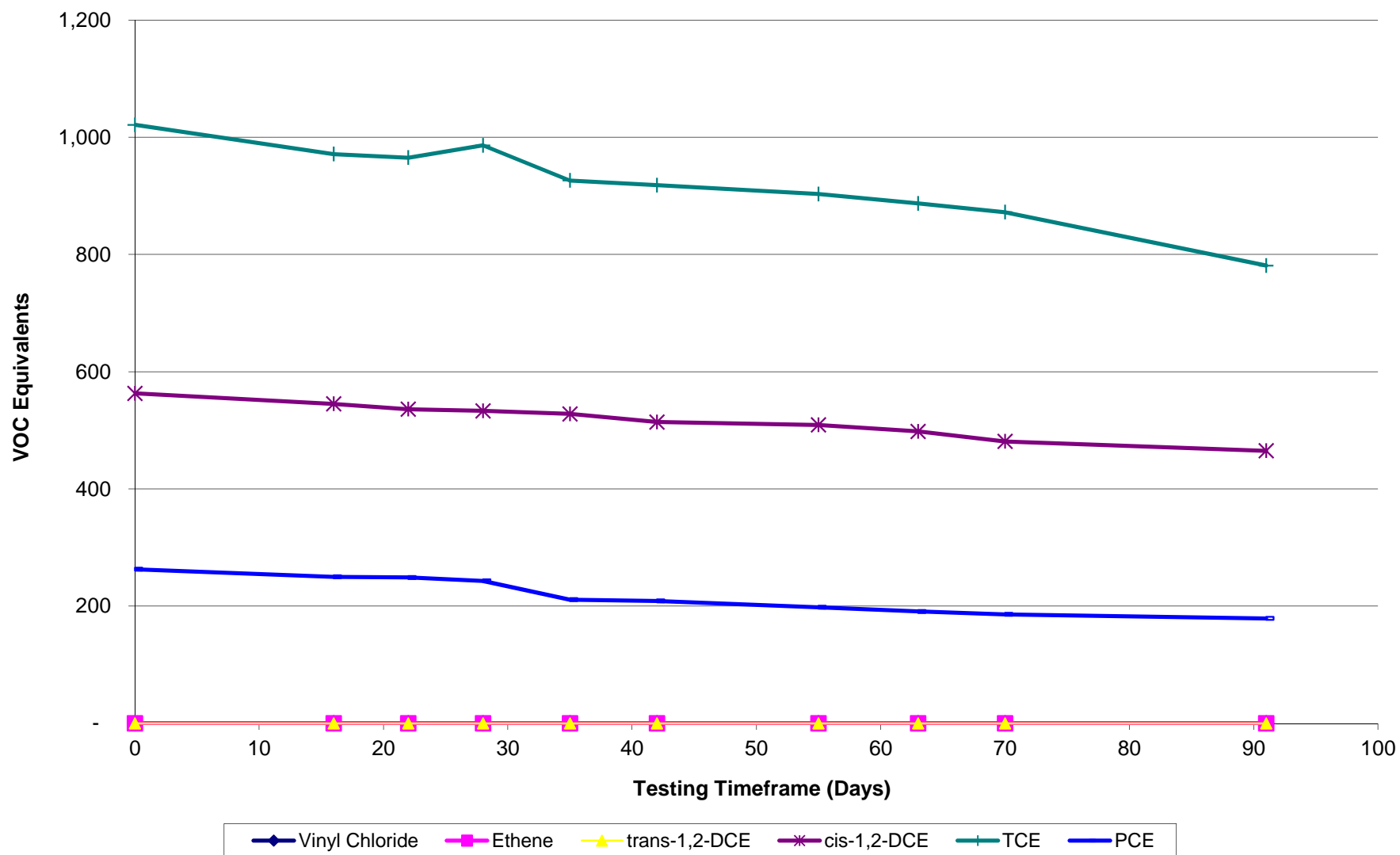
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# **APPENDIX I**

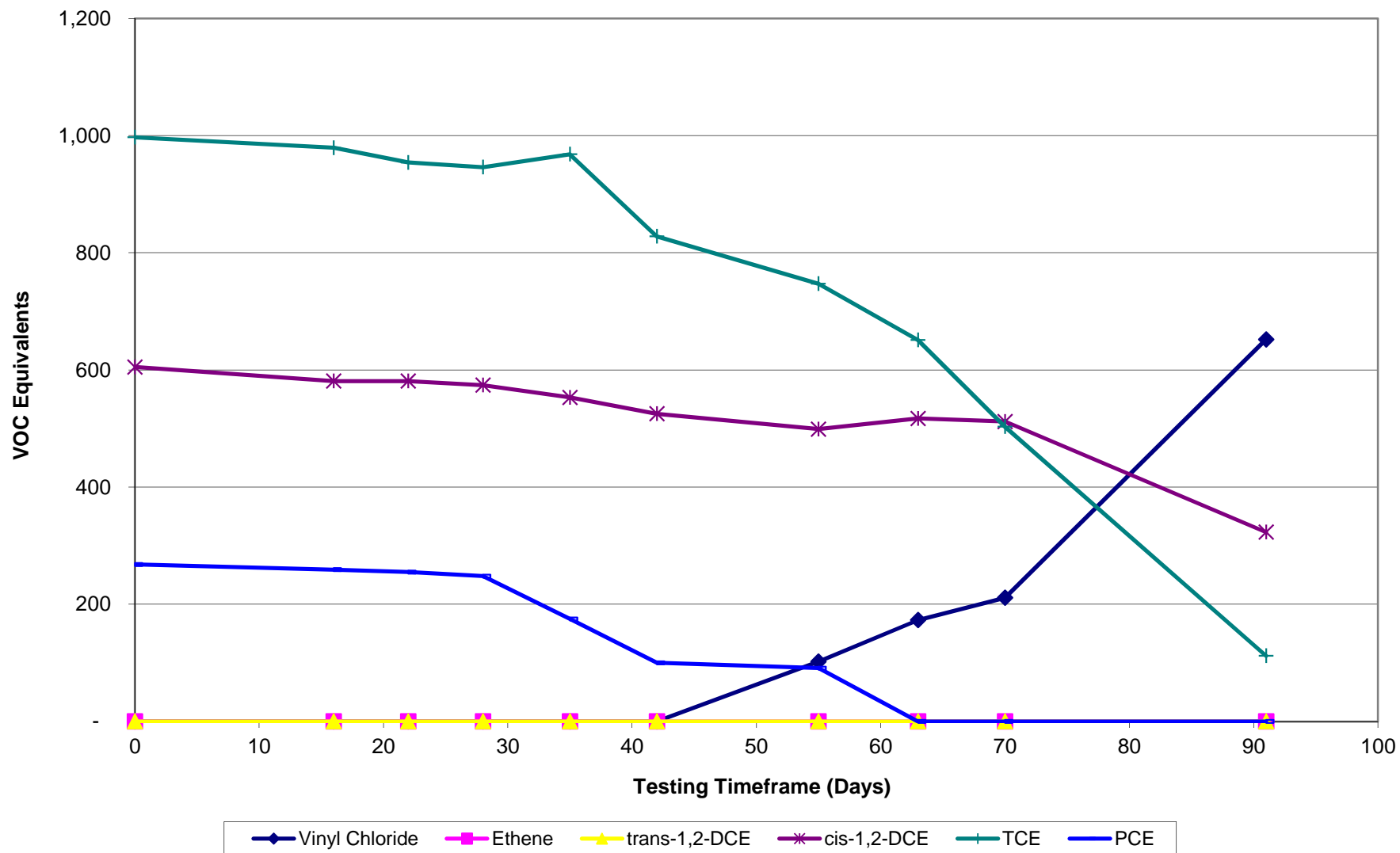


**FIGURE 1: Enhanced Reductive Dechlorination Rates versus Time - Active Control**



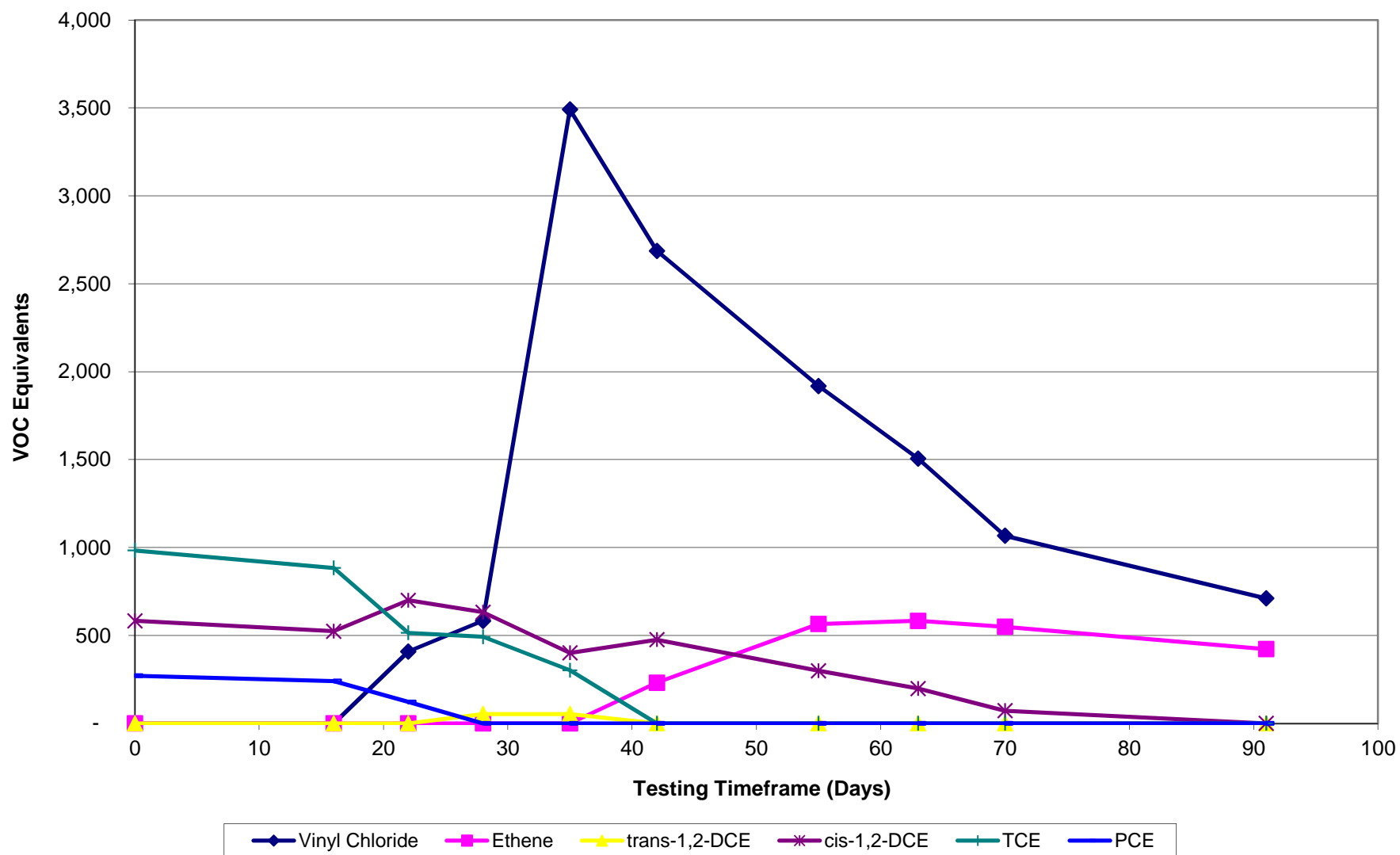


**FIGURE 2: Enhanced Reductive Dechlorination Rates versus Time - Sodium Acetate**





**FIGURE 3: Enhanced Reductive Dechlorination Rates versus Time - Sodium Lactate**





**FIGURE 4: Enhanced Reductive Dechlorination Rates versus Time - Emulsified Vegetable Oil**

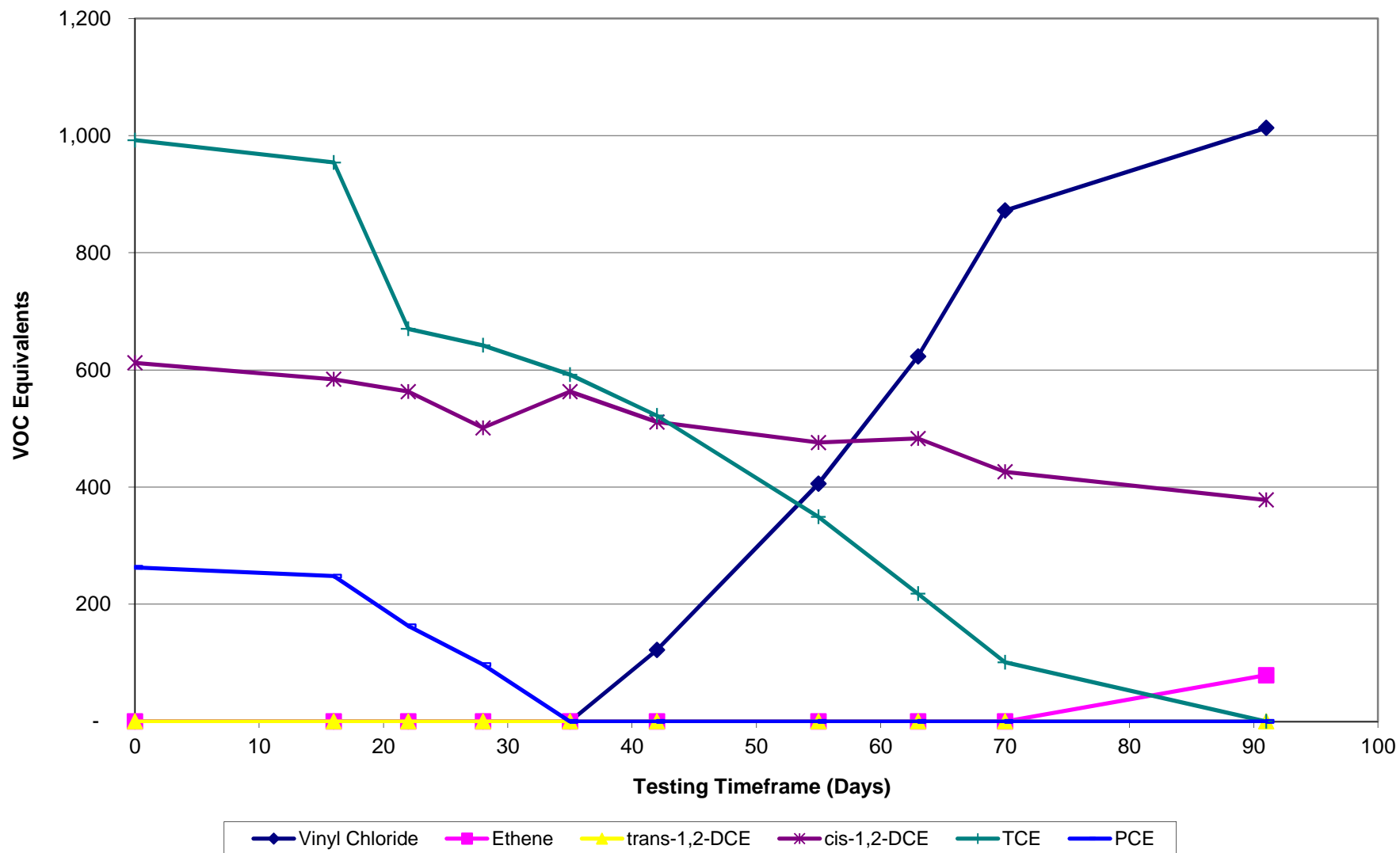
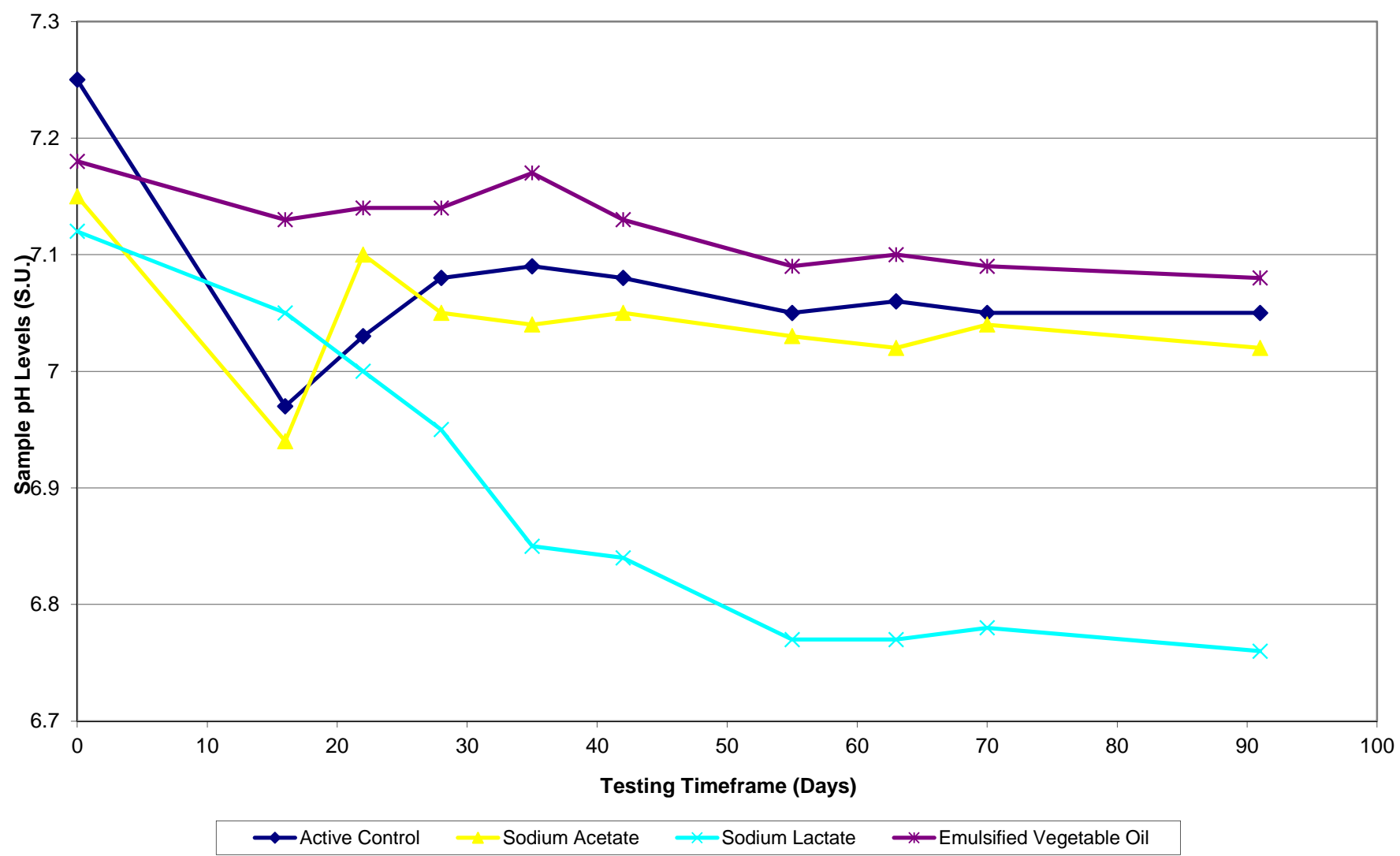


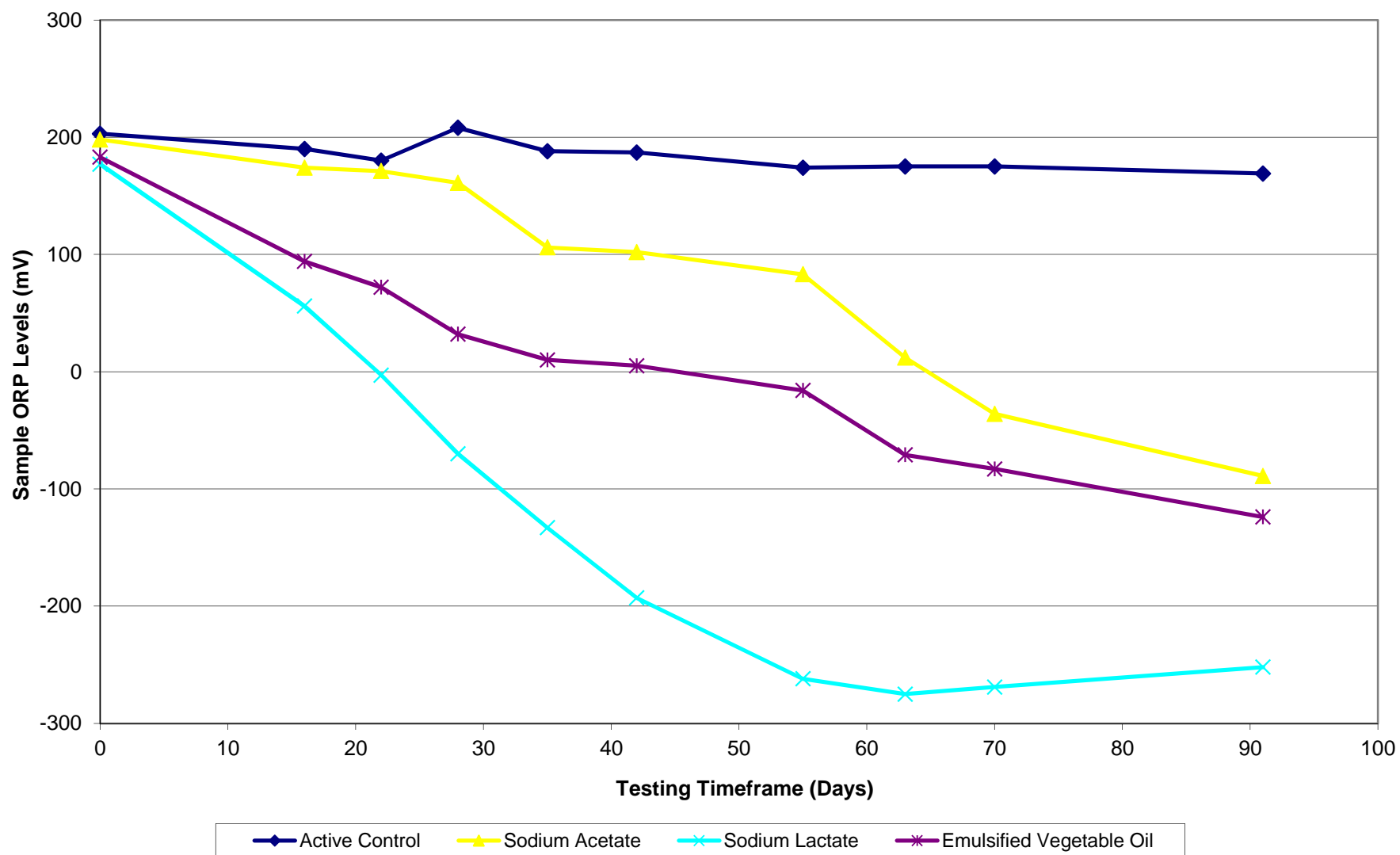


FIGURE 5: Microcosm pH Levels versus Time





**FIGURE 6: Microcosm ORP Levels versus Time**





**TABLE 1**  
**ENHANCED REDUCTIVE DECHLORINATION TREATABILITY TESTING RESULTS**  
**Former Carriage Factory - 33 Litchfield Street, Rochester, New York**

Sample Identification	Testing Timeframe (Days)	Testing Date	pH	ORP (mv)	GC Analytical Screening Results (VOC Equivalents)					
					Ethene	Vinyl Chloride	trans-1,2-DCE	cis-1,2-DCE	TCE	PCE
Active Control	0	05/08/13	7.25	203	BDL	BDL	BDL	563	1,021	263
	16	05/24/13	6.97	190	BDL	BDL	BDL	545	971	250
	22	05/30/13	7.03	180	BDL	BDL	BDL	536	965	249
	28	06/05/13	7.08	208	BDL	BDL	BDL	533	986	243
	35	06/12/13	7.09	188	BDL	BDL	BDL	528	926	211
	42	06/19/13	7.08	187	BDL	BDL	BDL	514	918	209
	55	07/02/13	7.05	174	BDL	BDL	BDL	509	903	198
	63	07/10/13	7.06	175	BDL	BDL	BDL	498	887	191
	70	07/17/13	7.05	175	BDL	BDL	BDL	481	872	186
	91	08/07/13	7.05	169	BDL	BDL	BDL	465	781	179
Sodium Acetate	0	05/08/13	7.15	198	BDL	BDL	BDL	605	997	268
	16	05/24/13	6.94	174	BDL	BDL	BDL	581	979	259
	22	05/30/13	7.10	171	BDL	BDL	BDL	581	954	255
	28	06/05/13	7.05	161	BDL	BDL	BDL	574	946	248
	35	06/12/13	7.04	106	BDL	BDL	BDL	553	968	175
	42	06/19/13	7.05	102	BDL	BDL	BDL	525	828	100
	55	07/02/13	7.03	83	BDL	102	BDL	499	747	91
	63	07/10/13	7.02	12	BDL	173	BDL	517	651	BDL
	70	07/17/13	7.04	-36	BDL	211	BDL	512	503	BDL
	91	08/07/13	7.02	-89	BDL	652	BDL	323	112	BDL
Sodium Lactate	0	05/08/13	7.12	177	BDL	BDL	BDL	583	983	271
	16	05/24/13	7.05	56	BDL	BDL	BDL	524	884	241
	22	05/30/13	7.00	-3	BDL	409	BDL	700	515	122
	28	06/05/13	6.95	-70	BDL	583	53	632	492	BDL
	35	06/12/13	6.85	-133	BDL	3,491	53	401	302	BDL
	42	06/19/13	6.84	-193	231	2,687	BDL	476	BDL	BDL
	55	07/02/13	6.77	-262	565	1,918	BDL	299	BDL	BDL
	63	07/10/13	6.77	-275	583	1,506	BDL	198	BDL	BDL
	70	07/17/13	6.78	-269	549	1,067	BDL	72	BDL	BDL
	91	08/07/13	6.76	-252	422	711	BDL	BDL	BDL	BDL
Emulsified Vegetable Oil	0	05/08/13	7.18	183	BDL	BDL	BDL	612	992	263
	16	05/24/13	7.13	94	BDL	BDL	BDL	584	954	248
	22	05/30/13	7.14	72	BDL	BDL	BDL	563	670	163
	28	06/05/13	7.14	32	BDL	BDL	BDL	501	642	97
	35	06/12/13	7.17	10	BDL	BDL	BDL	563	592	BDL
	42	06/19/13	7.13	5	BDL	122	BDL	511	522	BDL
	55	07/02/13	7.09	-16	BDL	406	BDL	476	349	BDL
	63	07/10/13	7.10	-71	BDL	623	BDL	483	218	BDL
	70	07/17/13	7.09	-83	BDL	872	BDL	426	101	BDL
	91	08/07/13	7.08	-124	79	1,013	BDL	378	BDL	BDL

mV - Millivolts

BDL - Below Detection Limits (50)



## Certificate of Analysis: Gene-Trac® *Dehalococcoides* Assay

**Customer:** Mike Storonsky, Stantec

**Project:** Carriage Factory

**Customer Reference:** 190500751

**SiREM Reference:** S-2831

**Report Date:** 23-May-13

**Data Files:** MyiQ-DHC-QPCR-1010  
MyiQ-DHC-QPCR-1011  
MyiQ-DB-DHC-QPCR-0376  
MyiQ-DB-DHC-QPCR-0377  
DHC-UP-0745

**Table 1a: Test Results**

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent Dhc *	<i>Dehalococcoides</i> Enumeration/Liter **
LI-B102-MW	DHC-9341	7-May-13	Groundwater	0.0006 - 0.002 %	4 x 10 <sup>3</sup>
LI-B108-MW	DHC-9330	7-May-13	Groundwater	NA	3 x 10 <sup>3</sup> U, I

**Notes:**

\* Percent *Dehalococcoides* (Dhc) in microbial population. This value is calculated by dividing the number of Dhc 16S ribosomal ribonucleic acid (rRNA) gene copies by the total number of bacteria as estimated by the mass of DNA extracted from the sample. Range represents normal variation in Dhc enumeration.

\*\* Based on quantification of Dhc 16S rRNA gene copies. Dhc are generally reported to contain one 16S rRNA gene copy per cell; therefore, this number is often interpreted to represent the number of Dhc cells present in the sample.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

U Not detected, associated value is the quantification limit.

B Analyte was also detected in the method blank.

NA Not applicable as *Dehalococcoides* not detected and/or quantifiable DNA not extracted from the sample.

I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

E Extracted genomic DNA was not detected in sample.

**Analyst:**



**Jennifer Wilkinson**  
Senior Laboratory Technician

**Approved:**



**Ximena Druar, B.Sc.**  
Genetic Testing Coordinator



## Certificate of Analysis: Gene-Trac<sup>®</sup> VC, Vinyl Chloride Reductase (*vcrA*) Assay

**Customer:** Mike Storonsky, Stantec

**Project:** Carriage Factory

**Customer Reference:** 190500751

**SiREM Reference:** S-2831

**Report Date:** 23-May-13

**Data Files:** MyiQ-VC-QPCR-0567  
VC-QPCR-check-gel-0582  
MyiQ-DB-VC-QPCR-0293

**Table 1b: Test Results**

Customer Sample ID	SiREM Sample ID	Sample Collection Date	Sample Matrix	Percent <i>vcrA</i> *	Vinyl Chloride Reductase ( <i>vcrA</i> ) Gene Copies/Liter
LI-B102-MW	VCR-3965	7-May-13	Groundwater	NA	3 x 10 <sup>3</sup> U

**Notes:**

\* Percent *vcrA* in microbial population. This value is calculated by dividing the number of vinyl chloride reductase A (*vcrA*) gene copies quantified by the total number of bacteria estimated to be in the sample based on the mass of DNA extracted from the sample. Range represents normal variation in enumeration of *vcrA*.

J The associated value is an estimated quantity between the method detection limit and quantitation limit.

U Not detected, associated value is the quantification limit.

B Analyte was also detected in the method blank.

NA Not applicable as *vcrA* not detected and/or quantifiable DNA not extracted from the sample.

I Sample inhibited the test reaction based on inability to PCR amplify extracted DNA with universal primers.

C Correction factor applied to correct for non-specific PCR amplification products, value is an estimated quantity.

**Analyst:**



**Jennifer Wilkinson**  
Senior Laboratory Technician

**Approved:**



**Ximena Druar, B.Sc.**  
Genetic Testing Coordinator



**Table 2: Detailed Test Parameters, Gene-Trac Test Reference S-2831**

Customer Sample ID	LI-B102-MW	LI-B108-MW
SiREM Dhc Sample ID	DHC-9341	DHC-9330
SiREM <i>vcrA</i> Sample ID	VCR-3965	NA
Date Received	8-May-13	8-May-13
Sample Temperature	6 °C	6 °C
Filtration Date	16-May-13	9-May-13
Volume Used for DNA Extraction	500 mL	500 mL
DNA Extraction Date	21-May-13	10-May-13
DNA Concentration in Sample (extractable)	1254 ng/L	1401 ng/L
PCR Amplifiable DNA	Detected	ND
Dhc qPCR Date Analyzed	21-May-13	15-May-13
<i>vcrA</i> qPCR Date Analyzed	22-May-13	NA
Laboratory Controls (see Tables 3 & 4)	Passed	Passed
Comments	--	--

**Notes:**

Refer to Tables 3 & 4 for detailed results of controls.

NA = not applicable

ND = not detected

°C = degrees Celsius

PCR = polymerase chain reaction

qPCR = quantitative PCR

Dhc = *Dehalococcoides*

*vcrA* = vinyl chloride reductase

ng/L = nanograms per liter

mL = milliliters

DNA = Deoxyribonucleic acid



**Table 3: Gene-Trac Dhc Control Results, Test Reference S-2831**

Laboratory Control	Analysis Date	Control Description	Spiked Dhc 16S rRNA Gene Copies per Liter	Recovered Dhc 16S rRNA Gene Copies per Liter	Comments
Positive Control Low Concentration	15-May-13	qPCR with KB1 genomic DNA (CSLD-0648)	$8.4 \times 10^4$	$1.1 \times 10^5$	--
Positive Control High Concentration	15-May-13	qPCR with KB1 genomic DNA (CSHD-0648)	$1.2 \times 10^7$	$1.6 \times 10^7$	--
DNA Extraction Blank	15-May-13	DNA extraction sterile water (FB-1934)	0	$2.2 \times 10^3$ J	See Note 1
Negative Control	15-May-13	Tris Reagent Blank (TBD-0607)	0	$2.6 \times 10^3$ U	--
Positive Control Low Concentration	21-May-13	qPCR with KB1 genomic DNA (CSLD-0649)	$8.4 \times 10^4$	$8.1 \times 10^4$	--
Positive Control High Concentration	21-May-13	qPCR with KB1 genomic DNA (CSHD-0649)	$1.2 \times 10^7$	$1.0 \times 10^7$	--
DNA Extraction Blank	21-May-13	DNA extraction sterile water (FB-1940)	0	$2.6 \times 10^3$ U	--
Negative Control	21-May-13	Tris Reagent Blank (TBD-0608)	0	$2.6 \times 10^3$ U	--

**Notes:**

Dhc = *Dehalococcoides*

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

<sup>1</sup>Acceptable as relevant sample was ND for Dhc.



**Table 4: Gene-Trac VC Control Results, Test Reference S-2831**

Laboratory Control	Analysis Date	Control Description	Spiked <i>vcrA</i> reductase Gene Copies per Liter	Recovered <i>vcrA</i> reductase Gene Copies per Liter	Comments
<b>Positive Control Low Concentration</b>	22-May-13	qPCR with KB1 genomic DNA (CSLV-0435)	$8.2 \times 10^4$	$9.2 \times 10^4$	--
<b>Positive Control High Concentration</b>	22-May-13	qPCR with KB1 genomic DNA (CSHV-0435)	$1.0 \times 10^5$	$1.0 \times 10^7$	--
<b>DNA Extraction Blank</b>	22-May-13	DNA extraction sterile water (FB-1940)	0	$2.6 \times 10^3$ U	--
<b>Negative Control</b>	22-May-13	Tris Reagent Blank (TBV-0406)	0	$2.6 \times 10^3$ U	--

**Notes:**

DNA = Deoxyribonucleic acid

qPCR = quantitative PCR

16S rRNA = 16S ribosomal ribonucleic acid

U Not detected, associated value is the quantification limit.

*vcrA* = vinyl chloride reductase





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Lab #

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Project Name <b>Carriage Factory</b>		Project # <b>190500751</b>		Analysis															
Project Manager <b>Mike Storonsky</b>				Preservative															
Email Address <b>Mike.Storonsky@stantec.com</b>				<div style="display: flex;"> <div style="flex: 1;"> <p>Gene-Trac D1c</p> <p>Gene-Trac VC</p> <p>Gene-Trac D1b</p> </div> <div style="flex: 1;"> <p>Preservative Key</p> <p>0. None</p> <p>1. HCl</p> <p>2. Other _____</p> <p>3. Other _____</p> </div> </div>															
Company <b>Stantec</b>																			
Address <b>61 Commercial St. Rochester, NY 14614</b>																			
Phone # <b>585 413 5266</b>		Fax #																	
Sampler's Signature <b>Benjamin Horvitz</b>		Sampler's Printed Name <b>Ben Horavitch</b>																	
Customer Sample ID		Sampling		Matrix		# of Containers		Other Information											
		Date	Time																
<b>LI-B102-MW</b>		<b>5/7</b>	<b>745</b>	<b>W</b>		<b>1</b>		<b>B-00244, B-00243</b>											
<b>LI-B108-MW</b>		<b>"</b>	<b>800</b>	<b>"</b>		<b>"</b>													

Cooler Condition: <b>Good</b>		Billing Information		Turnaround Time Requested		For Lab Use Only	
Cooler Temperature: <b>6°C</b>		P.O. # <b>190500751</b>		Normal <input checked="" type="checkbox"/>		Proposal #: _____	
Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Bill To: <b>Stantec</b>		Rush <input type="checkbox"/>			

Relinquished By:		Received By:		Relinquished By:		Received By:		Relinquished By:		Received By:	
Signature <b>Benjamin Horvitz</b>		Signature <b>Susan Fayer</b>		Signature		Signature		Signature		Signature	
Printed Name <b>Benjamin Horavitch</b>		Printed Name <b>Susan Fayer</b>		Printed Name		Printed Name		Printed Name		Printed Name	
Firm <b>Stantec</b>		Firm <b>SiREM</b>		Firm		Firm		Firm		Firm	
Date/Time <b>5/7 1100</b>		Date/Time <b>5/8/13, 1:00pm</b>		Date/Time		Date/Time		Date/Time		Date/Time	

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client



## SiREM Technical Note 1.5:

### Guidelines for Interpretation of Gene-Trac® Test Results

This document provides technical background information and guidelines for interpreting the results for the following Gene-Trac® assays:

- (1) Gene-Trac® Dhc
- (2) Gene-Trac® VC
- (3) Gene-Trac® Dhb

SiREM Technical Note 1.4 - *Quantitative Gene-Trac® Assay Test Procedure and Reporting Overview* provides detailed information on Gene-Trac® test procedures and reporting. Explanation of data qualifiers and commonly used notes is provided as Appendix A. Table 1 provides a brief interpretation for some common scenarios, more detailed interpretation information is provided in the following sections.

**Table 1: Common Gene-Trac® Test Result Scenarios and Interpretation**

Gene-Trac® Dhc ( <i>Dehalococcoides</i> )	Gene-Trac® VC ( <i>vcrA</i> )	Gene-Trac® Dhb ( <i>Dehalobacter</i> )	Interpretation
>1 x10 <sup>7</sup> /L	>1 x10 <sup>7</sup> /L	Not Analyzed	Complete dechlorination to ethene likely as Dhc high and <i>vcrA</i> high
1 x10 <sup>7</sup> /L	Not Detected	Not Analyzed	VC accumulation possible as <i>vcrA</i> negative
Not Detected	Not Detected	Not Analyzed	Dhc negative/ lack of dechlorination or <i>cis</i> -DCE accumulation likely
Not Analyzed	Not Analyzed	1 x10 <sup>6</sup> /L	Dhb positive, potential for biodegradation of 1,1,1-TCA, 1,2-DCA, carbon tetrachloride and chloroform, PCE and TCE to <i>cis</i> -DCE
Not Analyzed	Not Analyzed	Not Detected	Biodegradation of 1,1,1-TCA, carbon tetrachloride and chloroform not expected as Dhb negative



## **Gene-Trac<sup>®</sup> Dhc -Total *Dehalococcoides* Test**

### **Background:**

Gene-Trac<sup>®</sup> Dhc is a quantitative PCR (qPCR) test for total *Dehalococcoides* (Dhc) microbes that targets Dhc specific sequences of the 16S ribosomal ribonucleic acid (rRNA) gene, a gene commonly used to identify microbes. Dhc are the only known microorganisms capable of complete dechlorination of chloroethenes (i.e., tetrachloroethene, trichloroethene, cis-1,2-dichloroethene [cis-DCE] and vinyl chloride) to non-toxic ethene. Gene-Trac<sup>®</sup> Dhc may also be used to assess the in situ growth of Dhc containing bioaugmentation cultures such as KB-1<sup>®</sup>.

### ***Negative Gene-Trac<sup>®</sup> Dhc Test Results (U qualified)***

A non-detect in the Gene-Trac<sup>®</sup> Dhc assay (e.g., 4,000U) indicates that Dhc were not detected in the sample. The absence of Dhc is frequently associated with a lack of complete dechlorination or incomplete dechlorination of chlorinated ethenes. Where Dhc are absent the accumulation of cis-DCE is commonly observed, particularly after addition of electron donors. Bioaugmentation with Dhc containing cultures, such as KB-1<sup>®</sup>, is commonly used to improve bioremediation performance at sites that lack an indigenous Dhc population.

### ***Positive Gene-Trac<sup>®</sup> Dhc Test Results***

The detection of Dhc has been correlated with the complete biological dechlorination of chlorinated ethenes to ethene at contaminated sites (Hendrickson et al., 2002). A positive Gene-Trac<sup>®</sup> Dhc test indicates that Dhc DNA was detected in the sample and is encouraging for dechlorination of chlorinated ethenes to ethene. Note not all Dhc are capable of conversion of vinyl chloride to ethene; this capability can be determined by the Gene-Trac<sup>®</sup> VC test (see Section 2) which is commonly performed as a follow-on analysis after positive Gene-Trac<sup>®</sup> Dhc tests. In most cases Dhc must be present at sufficient concentrations in order for significant dechlorination to be observed, guidelines for expected impacts at various Dhc concentrations are indicated below.

**Values of  $10^4$  Dhc gene copies per liter (or lower):** indicates that the sample contains low concentrations of Dhc which may indicate that site conditions are suboptimal for high rates of dechlorination. Increases in Dhc concentrations at the site may be possible if conditions are optimized (e.g., electron donor addition).

**Values of  $10^5$ - $10^6$  Dhc gene copies per liter:** indicates the sample contains moderate concentrations of Dhc which may, or may not, be associated with observable dechlorination activity (i.e., detectable ethene).

**Values at or above  $10^7$  Dhc gene copies per liter:** indicates that the sample contains high concentrations of Dhc that are often associated with high rates of dechlorination (Lu et al., 2006) and the production of ethene.

**Values of  $10^9$  Dhc gene copies per liter** are generally the highest observed for groundwater samples with rare exceptions.

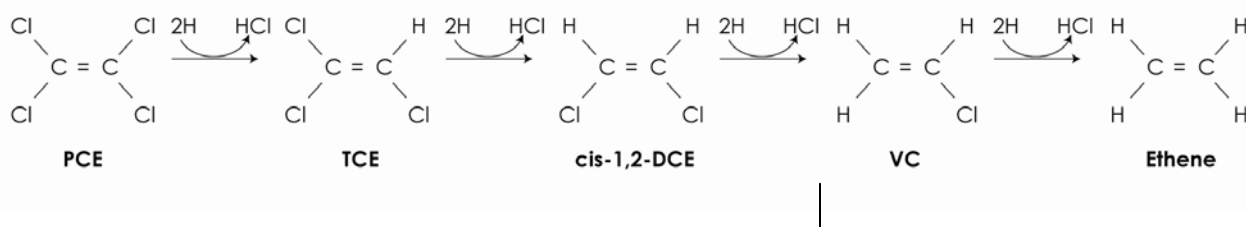


## Gene-Trac<sup>®</sup> VC- Vinyl Chloride Reductase (*vcrA*) Test

### Background

Gene-Trac<sup>®</sup> VC is a qPCR test for the vinyl chloride reductase (*vcrA*) gene that codes for a Dhc enzyme that converts (VC) to ethene, a critical step in reductive dechlorination of chlorinated ethenes. Gene-Trac<sup>®</sup> VC is commonly used where Gene-Trac<sup>®</sup> Dhc test results are positive to confirm that the Dhc detected are capable of complete dechlorination to ethene. #

The vinyl chloride reductase gene (*vcrA*) (Müller et al., 2004) produces an enzyme that is found in many (but not all) Dhc and is reported to be the most common identified VC reductase in the environment (van der Zaan et al., 2010).



**Key activity of vinyl chloride reductase *vcrA* gene/enzyme**

### Interpretation of Gene-Trac<sup>®</sup> VC Results

#### Detect in Gene-Trac<sup>®</sup> VC Test

A detect in the Gene-Trac<sup>®</sup> VC test indicates that a Dhc population has the *vcrA* gene and the prospects for complete dechlorination to ethene are good. As a minimal requirement, *vcrA* copies exceeding  $10^5$ /L combined with observed increases over time (i.e., cell growth) are required for robust VC dechlorination (van der Zaan et al., 2010). Also the guidelines for detection of ethene provided under Gene-Trac<sup>®</sup> Dhc are conservative for interpretation of Gene-Trac<sup>®</sup> VC (i.e.,  $> 1 \times 10^7$  gene copies/L indicate a high likelihood of detection of ethene). In one study, more than 90% of samples where *vcrA* enumeration exceeded  $1 \times 10^7$  gene copies/L had detectable ethene (Dennis, 2009). In cases where *vcrA* gene copies are lower the likelihood of detectable ethene decreases.

#### Non-Detect in Gene-Trac<sup>®</sup> VC Test (*U* qualified)

A non-detect in the Gene-Trac<sup>®</sup> VC test indicates that *vcrA* gene sequences in the sample are below the detection limit of the assay (typically  $4 \times 10^3$  *vcrA* gene copies/L). This indicates VC accumulation (VC stall) is possible. Note negative Gene-Trac<sup>®</sup> VC test results do not indicate with 100% certainty that a VC-stall will occur as there are other vinyl chloride reductase genes, such as *bvcA* (van der Zaan et al., 2010) that also convert VC to ethene.



## Comparing Gene-Trac® VC and Gene-Trac® Dhc Test Results

Sites may contain different types of Dhc populations. At some sites the Dhc population is homogenous while other sites have Dhc populations that are mixtures of different types of Dhc. This can lead to differing results for Gene-Trac® Dhc and Gene-Trac® VC.

In many cases, the numerical results of Gene-Trac® VC test are identical to those obtained in the Gene-Trac® Dhc test, indicating that the entire Dhc population contains the *vcrA* gene. In other cases, Gene-Trac® VC results may differ significantly (i.e., more than an order or magnitude) from the total Dhc for a number of reasons.

Table 3 provides some common scenarios for Gene-Trac® VC and Gene-Trac® Dhc test results. In general, where Gene-Trac® VC results are non-detect, or significantly lower than Gene-Trac® Dhc, accumulation of VC is more likely.

**Table 2: Interpretation of Gene-Trac® VC in Relation to Gene-Trac® Dhc**

Gene-Trac® Dhc (16S rRNA gene copies/ L)	Gene-Trac® VC ( <i>vcrA</i> gene copies/L)	Results Summary	Interpretation	Potential Site Implications
$2 \times 10^8$ /L	$3 \times 10^8$ /L	Total Dhc and <i>vcrA</i> are ~the same (within 3-fold)	Entire Dhc population has <i>vcrA</i> gene	Potential for complete dechlorination high. VC stall unlikely-sites with <i>vcrA</i> above $1 \times 10^7$ /L typically have detectable ethene
$1 \times 10^8$ /L	Non-detect	Total Dhc high; <i>vcrA</i> non-detect	High concentration of Dhc and entire population lacks the <i>vcrA</i> gene	Likelihood for VC accumulation high as <i>vcrA</i> non-detect
$1 \times 10^8$ /L	$1 \times 10^6$ /L	Total Dhc is significantly higher (100 fold) than <i>vcrA</i>	Dhc population consists of different types, some with the <i>vcrA</i> gene (~1%) and some without (~99%)	VC-accumulation possible; Dhc/ <i>vcrA</i> proportions may change over course of remediation
$1 \times 10^6$ /L	$1 \times 10^8$ /L	<i>vcrA</i> orders of magnitude higher than Dhc	Significantly higher <i>vcrA</i> may indicate the presence of populations of non-Dhc microorganisms with <i>vcrA</i> like genes	Potential for VC-stall likely low



## **Gene-Trac<sup>®</sup> Dhb-Total *Dehalobacter* Test**

Gene-Trac<sup>®</sup> Dhb is a qPCR test targeting the 16S rRNA gene sequences unique to *Dehalobacter* (Dhb). Dhb are implicated in the biodegradation of 1,1,1-trichloroethane (to chloroethane), 1,1,2-trichloroethane and 1,2-dichloroethane to ethene (Grostern and Edwards, 2006) and chloroform (to dichloromethane) (Grostern et al., 2010) as well as incomplete dechlorination of PCE and TCE to cis-DCE (Holliger et al., 1998). Gene-Trac<sup>®</sup> Dhb may also be used as a tool to assess the impact of bioaugmentation with the KB-1<sup>®</sup> Plus cultures which contain high concentrations of Dhb.

### ***Positive Gene-Trac<sup>®</sup> Dhb Test Results (Detects)***

A positive Gene-Trac<sup>®</sup> Dhb indicates that a member of the *Dehalobacter* (Dhb) genus was detected in the sample. The detection of Dhb indicates that some or all of the dechlorination activities attributed to Dhb may be present at the subject site. Increasing concentrations of Dhb are indicative of increased potential to degrade some or all of these compounds.

Note: the Gene-Trac<sup>®</sup> Dhb test will not differentiate the type of Dhb; therefore, observations of the specific biodegradation pathways and end products based on chemical analytical methods in conjunction with Gene-Trac<sup>®</sup> Dhb will increase the interpretability of Gene-Trac<sup>®</sup> Dhb results.

Note: Dhb have been reported to contain multiple copies (up to 4 per cell) of the 16S rRNA gene (Grostern and Edwards, 2008). This means that, unlike Dhc, there is not a 1:1 ratio between the 16S rRNA gene copy and the number of Dhb cells in a sample. Calculating the number of Dhb cells requires dividing the Gene-Trac<sup>®</sup> Dhb test result by the 16S rRNA gene copy number (often 3-4 copies/cell).

### ***Non-detect Gene-Trac<sup>®</sup> Dhb Results (U qualified)***

In cases where Gene-Trac<sup>®</sup> Dhb is not detected (e.g., 4,000U) this indicates that *Dehalobacter* species were not identified in the sample and that anaerobic reductive dechlorination of 1,1,1-TCA, 1,1,2-TCA, 1,2-DCA or chloroform, which are dechlorinated by *Dehalobacter*, may not be observed. This activity can be introduced at sites through the addition of bioaugmentation cultures containing *Dehalobacter* such as KB-1<sup>®</sup> Plus.



## **Key Elements of Gene-Trac® Data**

Gene-Trac® test results include two key values (a) Target Gene Enumeration, an enumeration of target gene sequence by quantitative PCR (e.g. “Dhc Enumeration” “Dhb 16S Gene Copies” or “*vcrA* gene copies”) and (b) Target gene percent (e.g. “Percent Dhc”), an estimated percentage of the microbial population comprised by microbes harboring the target gene and other microbes present in sample. Further explanation of these values is provided below.

### **a) Target Gene Enumeration**

This value is the concentration of Dhc or Dhb 16S rRNA or *vcrA* gene copies detected in the sample. Results may be reported as either gene copies per liter (for groundwater) or per gram (for soil). In general, the greater the number of gene copies in a sample the greater the likelihood of related dechlorination activity. Dhc 16S gene copies are typically equivalent to the number of Dhc as they have 1 gene copy per cell this is not necessarily true for Dhb or *vcrA* which have the potential be present in multiple gene copies per cell. Guidelines for relating target gene presence and concentration to observable dechlorination activity for groundwater samples are provided below in previous sections.

### **b) Target Gene Percent (%Dhc, %Dhb, %*vcrA*)**

This value estimates the percentage of the target gene (e.g., %Dhc) relative to other microorganisms in the sample based on the formulas/assumptions presented below. For example, %Dhc is a measure of the predominance of Dhc and, in general, the higher this percentage the better.

$$\%Dhc = \frac{\text{Number Dhc}}{\text{Number Dhc} + \text{Number other Bacteria}}$$

Where:

$$\text{Number other Bacteria} = \frac{\text{Total DNA in sample (ng)} - \text{DNA attributed to Dhc (ng)}}{4.0 \times 10^{-6} \text{ ng DNA per bacterial cell}}$$

\*Paul and Clark, (1996).

Percent Dhc (and % *vcrA*) values can range from very low fractions of percentages, in samples with low numbers of Dhc and a high number of other bacteria (incompletely colonized by Dhc), to greater than 50% in Dhc enriched locations (highly colonized by Dhc).

In addition to determining the predominance of the target gene target gene percent is also useful for interpretation of Dhc counts from different sampling locations, or the same location over time. For example, the %Dhc value can be used to correct Dhc counts where samples are biased due to non-representative sampling. Example 1 illustrates a hypothetical scenario where the %Dhc value improved data interpretation.



### **Example 1, use of %Dhc to interpret enumeration data**

Table 2 presents results from MW-1 sampled in April, May and June. Based on the Dhc enumeration alone one would conclude that the concentration of Dhc held steady between April and May; however, the %Dhc indicates the proportion of Dhc actually increased from April to May and the unchanged count in May could be a case of low biomass recovery during sampling or other losses such as sample degradation in transit. The higher raw count and the higher percentage of Dhc in June confirm the trend of increasing Dhc concentrations over time.

**Table 3: Use of % Dhc\* Value to Diagnose Sampling Bias**

Sample	Dhc Enumeration	%Dhc	Interpretation Based on %Dhc
MW-1, April	$1.0 \times 10^5/\text{Liter}$	0.1%	Dhc is a low proportion of total microbial population
MW-1, May	$1.0 \times 10^5/\text{Liter}$	1%	Dhc proportion increased 10-fold from April. Dhc enumeration was unchanged possibly due to low biomass recovery from monitoring well, non-biased sample would be $[(1.0/0.1) \times 1.0 \times 10^5] = 1.0 \times 10^6/\text{Liter}$
MW-1, June	$1.0 \times 10^7/\text{Liter}$	10%	Dhc has increased 100-fold from April and confirms May sample was likely low biased

*\*Note: the above approach is also applicable to the “%vcrA” and “%Dhb” values provided on their respective test certificates*



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## Appendix A: Data Qualifiers



## **Data Qualification**

Data qualifiers and notes are used to clarify Gene-Trac® test results. Additional explanation beyond that provided on the test certificate is provided below.

**“U” Not detected, associated value is the quantitation limit.** Indicates that the target gene (microbe) was not detected in the sample above the quantitation limit of the assay. Note the quantitation limit value can change between samples as the volume filtered can vary; thus, a sample in which 100 ml was tested would have a 5-fold higher quantification limit compared with a sample in which 500 ml was tested.

**“J” The associated value is an estimated quantity between the method detection limit and quantitation limit.** Indicates that the target gene was conclusively detected but the concentration is below the quantitation limit where it cannot be accurately quantified.

**“I” Sample inhibited the test reaction.** This means universal primers were incapable of amplifying DNA from this sample. The inability to amplify with universal primers suggests that the sample may be imparting matrix interference. Matrix interference is commonly attributed to humic compounds, polyphenols and metals. Non-detects with an “I” qualifier are more likely to be false negative.

**“B” Analyte was also detected in the method blank.** Indicates that DNA was detected in a method blank or negative control; detectable contamination of the blanks with microbes or DNA containing the gene of interest is not uncommon as the test reaction is extremely sensitive. In most cases, blank contamination is at a very low level relative to test results (often orders of magnitude lower). In these cases, blank contamination is not relevant to interpretation of test results. The potential of test samples being contaminated (i.e. false positives) should be considered in cases where blank results are within 1 order of magnitude of test results.



## **APPENDIX J**



**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**Division of Fish, Wildlife & Marine Resources**  
**New York Natural Heritage Program**  
625 Broadway, 5<sup>th</sup> Floor, Albany, New York 12233-4757  
**Phone:** (518) 402-8935 • **Fax:** (518) 402-8925  
**Website:** [www.dec.ny.gov](http://www.dec.ny.gov)



Joe Martens  
Commissioner

April 19, 2013

Andy Smith  
Stantec  
61 Commercial Street  
Rochester, NY 14614

Dear Mr. Smith:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for a 1.5 Acre Parcel, located north of West Main Street, site as indicated on your enclosed map, located in the City of Rochester.

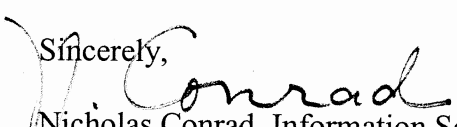

We have no records of rare or state listed animals or plants, or significant natural communities, on, or in the immediate vicinity, of your project site.

The absence of data does not necessarily mean that rare or state-listed species, or significant natural communities, do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Databases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at [www.dec.ny.gov/about/39381.html](http://www.dec.ny.gov/about/39381.html).

Sincerely,

  
Nicholas Conrad, Information Services  
NYS Department Environmental Conservation 

Enc.  
cc: Reg, 8, Wildlife Mgr.

# 326





# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
NEW YORK ECOLOGICAL SERVICES FIELD OFFICE  
3817 LUKER ROAD  
CORTLAND, NY 13045  
PHONE: (607)753-9334 FAX: (607)753-9699  
URL: [www.fws.gov/northeast/nyfo/es/section7.htm](http://www.fws.gov/northeast/nyfo/es/section7.htm)

Consultation Tracking Number: 05E1NY00-2013-SLI-0413

April 02, 2013

Project Name: Carraige Factory Special Needs Apartments

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

## To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: <http://www.fws.gov/northeast/nyfo/es/section7.htm>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects



should follow the Services wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment





United States Department of Interior  
Fish and Wildlife Service

Project name: Carraige Factory Special Needs Apartments

## Official Species List

**Provided by:**

NEW YORK ECOLOGICAL SERVICES FIELD OFFICE

3817 LUKER ROAD

CORTLAND, NY 13045

(607) 753-9334

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

**Consultation Tracking Number:** 05E1NY00-2013-SLI-0413

**Project Type:** Development

**Project Description:** The redevelopment of a vacant former industrial building located at 33 Litcfield Street in Rochester NY into special needs residential housing.





United States Department of Interior  
Fish and Wildlife Service

Project name: Carraige Factory Special Needs Apartments

**Project Counties:** Monroe, NY





United States Department of Interior  
Fish and Wildlife Service

Project name: Carraige Factory Special Needs Apartments

## Endangered Species Act Species List

Species lists are not entirely based upon the current range of a species but may also take into consideration actions that affect a species that exists in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Please contact the designated FWS office if you have questions.

### Bog Turtle (*Clemmys muhlenbergii*)

Population: northern

Listing Status: Threatened