



Streamlined Site Characterization & Closure

Phase II Site Characterization Report

**Former Glass Plant
Suntru Street
Rochester, New York**

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1.0 Introduction

S₂C₂ Inc. (S2C2) has prepared this Phase II Site Characterization Report (SCR) on behalf of Bausch and Lomb, Inc. (B&L) for the former Glass Plant (Site) located on Suntru Street, Rochester, New York. The purpose of this SCR is to present a summary of findings associated with an initial site evaluation of overburden soil and groundwater performed from June through August 2010 based on the approach presented in the Technical Approach – Phase II Site Investigation memorandum dated October 2009 (Appendix A). This approach was developed based on the Phase I Environmental Assessment (ESA) dated May 15, 2002 (Leader, 2002). Although this initial evaluation was not intended to satisfy all requirements for site investigations or remedial investigations as presented in the New York Department of Environmental Conservation’s (NYSDEC) Division of Environmental Remediation (DER) Draft Technical Guidance for Site Investigations and Remediation (DER-10), data was collected as part of this work in a manner that was not inconsistent with requirements set forth in DER-10 and therefore could be incorporated into future documents for NYDEC approval.

1.1 Site Description and History

The Site consists of a vacant, irregular shaped, 7.8-acre parcel of land located on the alluvial flood plain along the east bank of the Genesee River in the City of Rochester. A site location Map is provided in Figure 1-1. The Site includes the former Glass Plant building footprint and filled basements, unpaved parking lot, portions of Suntru Street, construction debris piles, and partially wooded areas. Figure 1-2 presents a figure of the Site conditions.

Initial site development was likely started circa 1850 or earlier concurrent with a general development of the Genesee River flats area in Rochester. During this initial development, two former hydro-power raceways were possibly located at the site during at least two periods from 1850 or earlier to around 1900. The former raceways were filled prior to the construction of the Glass Plant by B&L in 1910. After a fire in 1914, the plant was reconstructed and expanded. Operation of the Former Glass Plant continued until the mid-1980’s. During its operation, the Former Glass Plant was used to manufacture glass lenses for military and commercial uses. As part of this operation, thorium and radioactive potassium were used in manufacturing in addition to other non-radioactive metals.

Following cessation of operations, the facility was decommissioned in December 1994. An Asbestos/metals Survey (Paradigm, 1993) and the Final Project Report for the Decontamination and Release of the Bausch & Lomb Batch Room (NES, 1995) provide documentation of decommissioning. Following decontamination activities, the building was demolished and building materials were removed from the site. A Radiological Assessment of the surface soils at the property was conducted in 1995 and is documented in the Final Project Report for the Decontamination and Release of the Bausch & Lomb Batch Room Report (NES, 1995).

Neighboring properties to the Former Glass Plant include commercial properties located east of the facility along the bluffs and the Rochester Gas and Electric (RG&E) East Station Facility located directly to the south of the Site on the Genesee River flats. A coal carbonization manufactured gas plant (“MGP”) facility was first constructed at the RG&E property in 1872.

Several large coal gasification above ground storage tanks (ASTs), tar and oil ASTs, and associated structures have been documented on the RG&E property from 1892 to 1971 as discussed in the 2006 Phase I Environmental Assessment Report (Leader). RG&E has reportedly entered into a Voluntary Clean-Up Program agreement with NYSDEC, as a Coal Gasification Plant site. The facility has undergone numerous remedial investigations, under the supervision of the NYSDEC and has measureable concentrations of light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL) throughout the overburden of the property with the plumes extending to the north boundary onto the former Glass Plant Site.

1.2 Surface Waters and Wetlands

The Site is located along the east bank of the Genesee River between the Upper and Lower Falls. The Genesee River flows to the north and discharges to Lake Ontario approximately 5.8 miles from the site. A narrow strip of land directly adjacent to the Genesee River and west of the main terrace retaining wall would likely be classified as wetlands.

1.3 Regional and Local Geology and Hydrogeology

The Site is located within the Interior Lowlands Physiographic Province which is characterized by generally flat to gently dipping sedimentary rocks overlain by glacial and post-glacial sedimentary deposits (Van Diver 1985). This Physiographic Province encompasses all of northwestern New York in the vicinity of Lake Ontario. The Lowlands Province is bounded by the Appalachian Plateau Province to the south, the Adirondack Highlands Province to the east and the Canadian Shield to the north. Sedimentary rocks observed within the Lowlands Province of northwestern New York are part of the Niagaran Provincial Series which includes the Medina, Clinton and Lockport Groups. This Series consists of approximately 400 feet of fossiliferous dolomite, limestone, shale and sandstone deposited in shallow epeiric seas during the Silurian (439-408 Ma.) (Brett et al, 1995). In the Rochester vicinity, sedimentary rocks of the Lockport Group through the Clinton Group are observed and are present in a homoclinal structure known as the Niagara Escarpment with a generally east-northeast strike and south-southwest dip of approximately 55 feet per mile (Kappel and Young, 1988).

Based on drilling at the adjacent RG&E site, the local geology consists of a layer of unconsolidated artificial fill underlain by a layer of alluvium which overlies bedrock of the Rochester Shale. Fill thickness ranges from approximately 8 feet to 25 feet at its maximum, and alluvial deposits are up to 16 feet thick. Bedrock was encountered between 8 to 37 feet below grade and tended to slope toward the river. Bedrock was identified as highly weathered and fractured.

2.0 Site Investigation Field Activities

This section outlines the scope and investigative procedures utilized during the implementation of this Phase II site investigation. All sampling activities were conducted in a manner not inconsistent with the requirements set for in DER-10 and based on the Phase II Technical Approach dated October 2009 (S2C2, 2009). This technical approach identified four primary Areas of Environmental Concern (AOCs) which include the following:

- Historic Fill associated with the initial development of the Genesee River flats area prior to construction of the Glass Plant in 1910.
- Former Raceways – filled prior to construction of the Glass Plant
- Operation areas associated with the Former Glass Plant
 - Former Sand Blast Room/Dust Collectors
 - Former Laboratory
 - Former Septic Tank
 - Former Discharge Pipes to Genesee River
- Off-site sources including the coal gas production that occurred at the adjacent RG&E property.

Modifications to this technical approach were made based on field results and based on the anticipation that RG&E would be conducting off-site field activities (on the B&L Site) in order to further delineate impacts associated with their coal gas production. Specific modifications include the following:

- Removal of four (4) groundwater vertical profile borings proposed along the southern boundary of the facility due to planned investigation activities proposed by RG&E.
- Addition of ten (10) shallow soil borings based on location of former process areas.
- Addition of six (6) shallow soil borings along the river bank to investigate potential impacts associated with identified pipes.

2.1 Electrical Conductivity Investigation

In order to determine the nature of historic fill and attempt to locate the former Raceways identified during the ESA, a total of nineteen (19) electrical conductivity (EC) pushes were advanced on June 29, 2010 as presented in Figure 2-1. The electrical conductivity probe provides a real-time reading of lithologic properties based on the electrical conductivity of the formation. Direct-Sensing EC is capable of accurately defining lithologic units such as clay confining layers

(high EC), sand and gravel zones (low EC), as well as historic fill. Electrical conductivity logs collected during this investigation are presented in Appendix B.

2.2 Geophysical Survey

AMEC, Inc. completed a geophysical investigation at the Site on June 29, 2010 utilizing electromagnetic EM31 survey methodologies. This geophysical investigation was designed to characterize the subsurface and to focus subsequent soil sampling. The specific objective of the in geophysical investigation was to explore for anomalies indicative of abandoned raceways and buried pipes trending from the former building foundation toward the river.

A Geonics EM31 Terrain Conductivity meters was used to measure and record quadrature component (ground conductivity and the inphase component of the EM field along survey lines spaced approximately 10 ft apart. Figure 2-2 shows areas accessible to the EM geophysical survey equipment. Due to the presence of the building foundation, retaining wall, and fence, survey lines were completed along the western, southern, and eastern perimeter of the Former Glass Plant main building. Depth of penetration for the instrument utilized for this survey is estimated between 12 and 15 feet below ground surface. Amec's geophysical summary report is provided in Appendix C.

2.3 Soil Sampling and Analysis

Following completion of the conductivity borings, a total of fourteen (14) soil borings were advanced at locations presented in Figure 2-3. Soil sampling locations were based on results of the conductivity pushes, geophysical investigation results, known Glass Plant operation areas, and field observations. All soil borings were advanced with a Geoprobe 6620DT direct-push rig utilizing a 3.25-inch dual tube sampling system. Soil boring logs are provided in Appendix D. Soil cores were logged by the field geologist and screened with a photo-ionization detector (PID) for the presence of volatile organic compounds (VOCs) and a radiation meter for the presence of any radiological hazards associated with the Glass Plant's use of thorium and cerium oxide.

Soil samples were collected from specific depth intervals based on sampling objectives, field observations and field PID measurements. Soil samples were analyzed for VOCs, base/neutral acid extractable (BNAs) semi-volatile organic compounds (SVOCs), metals and polychlorinated biphenyls (PCBs). Table 2-1 summarizes soil sampling testing for each soil boring. In general, the following analytical analysis guidelines were followed:

- VOCs- Collected at unsaturated zone with highest PID reading or at the water table interface from deep borings if no elevated PID readings were obtained, collected from fill/native interface if present.
- BNAs – Collected at near surface, within fill material, and at the fill/native interface if present.

- Metals – Collected at near surface, within fill material, and at fill/native interface if present.
- PCBs – Collected at near surface.

All soil/sediment samples were submitted for analysis to Columbia Analytical of Rochester, New York, a New York certified laboratory. Quality Assurance/Quality Control requirements are discussed in Section 2.7.

2.4 Lower Terrace Soil/Sediment Sampling and Analysis

As part of the Phase I ESA, former piping and wastewater discharge points were identified as AOCs of need of further investigation. A survey of pipes along the lower Genesee River terrace at the retaining wall was conducted on June 30, 2010. Locations of pipes were marked for subsequent surveying and each pipe was described and photo-documented. Figure 2-4 presents the location of identified discharge pipes. Photographs of each pipe are presented in Appendix E.

A total of six (6) near surface soil/sediment samples were collected along the lower terrace adjacent to discharge pipes identified during the survey described above (Figure 2-4). Soil/sediment samples were collected using a hand bucket auger. The hand auger was advanced to approximately one foot below ground surface or refusal. Following retrieval of the soil core, soil samples were collected from the near surface, approximately 6-inches below ground surface, scanned with a PID, composited in a decontaminated stainless steel bowl, and transferred to their respective sampling jars. Each soil/sediment samples was analyzed for Base Neutral (BNs) SVOCs, PCBs, and metals.

In addition to the five (6) soil/sediment samples collected, one water sample was collected from the flowing pipe (Pipe G). The water sample was collected by lowering an unpreserved Volatile Organic Analysis (VOA) vial into the flowing pipe to fill the VOA. This water was then slowly poured into a hydrochloric acid (HCl) preserved VOA for submittal to the analytical laboratory.

All samples collected as part of the Lower Terrace sampling activities were submitted to Columbia Analytical of Rochester, New York. Quality Assurance/Quality Control requirements are discussed in Section 2.7.

2.5 Monitoring Well Installation Activities

Groundwater monitoring wells were installed at locations shown on Figure 2-5. Prior to installing each monitoring well, a soil boring was advanced with a Geoprobe 6620DT direct-push rig utilizing 3.25-inch dual tube sampling system as described in Section 2.3. Soil samples were collected continuously in order to define the soil lithology at each well location. Following the advancement of the soil boring at each location, each boring was completed as a groundwater monitoring well. Specifically, well screens were set at depths which intercepted the water table, and extended to the bottom of each boring. The tops of the solid flush-joint PVC risers were equipped with locking caps. A sandpack was placed in the annular space around the well screens, and extended approximately two

feet above the top of each screen. Above the sandpack, bentonite chips were placed to approximately two feet bgs. Table 2-1 summarizes specific well screen information for each well.

Following well completion, all wells were developed to help remove fine-grained geologic material from the area around the well screens, in an effort to enable the collection of relatively turbid-free groundwater samples that are representative of groundwater quality conditions within the aquifer. Development involved the removal and surging of groundwater in each well.

2.6 Monitoring Well Sampling Activities

Representative groundwater samples were collected from all four monitoring wells on August 23, 2010. Well sampling forms are provided in Appendix F. Groundwater samples were collected utilizing low-flow sampling procedures as follows:

1. The static water level and total well depth were measured from the well casing reference point using a water level meter.
2. Dedicated polyethylene tubing with a stainless steel check-valve was lowered to the intake depth (mid-point of the saturated screen interval) and the well was purged using a peristaltic pump. Measurements of water level, pump rate, temperature, pH, specific conductivity, turbidity, dissolved oxygen, and oxidation reduction potential (ORP) were collected using an in-line flow-through cell and recorded at the start of purging and at approximately five minute intervals.
3. Upon completion of well purging, the in-line flow-through cell was disconnected and the groundwater samples were collected directly into laboratory-prepared and pre-preserved sample containers.

Groundwater samples were submitted to Columbia Analytical of Rochester, New York for VOCs, BNAs, and metals. Quality Assurance/Quality Control requirements are discussed in Section 2.7.

2.7 Quality Assurance/Quality Control (QA/QC)

Standard QA/QC procedures were implemented during the field activities to ensure accurate and reliable data as per NYSDEC DER-10 guidance, and included the following:

1. Collection of soil field blanks from unused acetate Geoprobe liners by pouring laboratory grade deionized water down the acetate liner and into laboratory-prepared sample containers. Soil field blanks were collected for VOCs, BNAs, metals and PCBs.
2. Collection of water field blanks from unused polyethylene tubing by pumping deionized water through the tubing into laboratory-prepared sample containers. Groundwater field blanks were collected for VOCs, metals and BNAs.
3. Field duplicates were collected to evaluate

4. Trip Blanks
5. Matrix spike (MS) and matrix spike duplicates (MSD)

All samples were submitted to Columbia Analytical of Rochester New York, a New York certified laboratory. Final laboratory data packages were data validated by Alpha Geosciences of Clifton Park, New York and a Data Usability and Summary Reports (DUSR) were generated summarizing the data as presented in Appendix G. A summary of DUSR report findings for all analytical data are provided in Chapter 3.

2.8 Identification of Additional AOCs

Following the implementation of the field program a more detailed Glass Plant Floor Plan and Underground Pipe Lines diagram were discovered in the Asbestos/Metals Survey Report October 18-20, 1993. In order to further evaluate the soil and groundwater sampling results, these figures were scanned to an electronic file and rectified in a Geographic Information System (GIS) by assigning dataset positions to known positions in the map coordinates (New York State Plane West). These dataset positions were estimated based on the footprint of the building as interpreted from the 2002 Rochester aerial photographs. Figure 2-6 presents the rectified GIS interpretation of the Former Glass Plant floor plan presented in the Bausch & Lomb figure dated February 5, 1966 and revised September 4, 1980. Figure 2-7 presents interpreted piping diagram based on the Bausch & Lomb 1946 plan. Figure 2-6 also presents a revised depiction of AOCs based on the detailed floor plan and the AOCs identified in the Phase I Environmental Assessment and include the following:

- AOC-A: Former Raceways
- AOC-B: Bio-Cell
- AOC-C: Compressor Rooms
- AOC-D: Batch Room
- AOC-E: Homo Furnace
- AOC-F: Lehr/Tank Furnace
- AOC-G: Transformers/Electrical Platforms and Rooms
- AOC-H: Historic Fill
- AOC-I: Septic Tank
- AOC-J: Pit Area
- AOC-K: Upper Terrace

- AOC-L: Lower River Terrace – Discharge Pipes
- AOC-M: Offsite Coal Gasification Plant
- AOC-N: Former Buildings
- AOC-O: Prangborn Dust Collector
- AOC-P: Underground Piping

3.0 Soil and Groundwater Results

The following sections summarize results from the site investigation including the conductivity survey, geophysical survey, soil analytical results, groundwater analytical results and analytical results from soil/sediment samples collected from the lower riverbank terrace.

3.1 Electrical Conductivity Results

A total of 21 electrical conductivity pushes were advanced at the Site in order to determine the nature of historic fill and attempt to locate the former Raceways identified during the ESA. The conductivity probes were advanced from 2.55 ft bgs to 28.5 ft bgs. In general the conductivity values and patterns were indicative of historic fill (i.e, erratic response with relatively high conductivity values, greater than 150 mS/m) in the upper 5 to 10 feet of most borings. Conductivity response below the upper historic fill response is consistent with more native material responses with conductivity values that range from 10 to 150 mS/m. At locations CON-06, CON-11, CON-12, CON-14, CON-15, CON-16, CON-17, CON-18, and CON-19 much higher conductivity responses were recorded compared to other conductivity locations. Based on the spatial distribution of these points, they were all located outside of the former building pad (Building 9, 10, 12 and 13).

3.2 Geophysical Survey Results

Terrain conductivity and inphase geophysical results are summarized in Amec's summary report provided in Appendix C. In general, the majority of the anomalies evident with both the Conductivity and Inphase data are likely related to surface or near surface anthropogenic features. Linear anomalies that may be related to buried pipes were noted on the provided figures and include three linear features located west of the main Glass Plant Building. There were no anomalies associated with potential underground raceways observed.

3.3 Soil Sampling Results

A total of fourteen (14) soil borings were advanced within the main terrace (13) and upper terrace (1) with the purpose of classifying the overburden geology and to evaluate soil quality adjacent to known AOCs. A summary of soil analytical results are presented in Tables 3-1 through 3-4. Soil sample results are compared to New York State (NYS) Restricted Use Soil Clean-Up Objectives (RSCOs) as per NYS regulations Subpart 375-6 Remedial Program Soil Cleanup Objectives and NYS DEC Soil Cleanup Guidance (CP-51) dated October 21, 2010. In specific, the Industrial classification of these RSCO's was used based on the past, current and projected future use of the property.

3.3.1 Volatile Organic Compound Results (VOCs)

A total of six (6) VOC soil samples were collected from five (5) locations (SB-03, SB-06, SB-14, SB-20, and SB-23) at depths that range from 4.5 to 16 feet below ground surface. Positive results for VOCs detected in these samples includes: 2-butanone, acetone, benzene, carbon disulfide, cis-1,2-dichloroethene, ethylbenzene,

isopropylbenzene, naphthalene, toluene, and vinyl chloride. A summary of positive results are presented in Figure 3-1. No analytes detected were over Industrial RSCOs.

3.3.2 Semi-Volatile Organic Compound Results (SVOCs)

A total of 26 SVOC soil samples were collected from 14 locations at depths that ranged from 0.0 to 16 feet below ground surface. Positive results for SVOCs detected in these samples includes the following analytes: 2-Methylnaphthalene, acenaphthene, acenaphthylene, acetophenone, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene. A summary of positive results are presented in Figure 3-2. Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, which are all polycyclic aromatic hydrocarbon (PAHs) were detected above the Industrial RSCOs at borings SB-03, SB-14, SB-19, SB-20, SB-23, and SB-25.

3.3.3 Polychlorinated Biphenyl Results (PCBs)

A total of fifteen (15) PCB soil samples were collected from fifteen (15) locations as shown on Figure 3-3. All PCB soil samples were collected from the upper one foot of soil. Positive results for PCBs (Aroclor -1260) were detected in samples collected from borings SB-11 and SB-19. Both positive results were below the industrial NYS RSCO and below the Environmental Protection Agency (EPA) Toxic Substances Control Act (TSCA) guidance for PCB Cleanup levels for Low Occupancy Areas (< 25 mg/kg) (EPA, November 2005).

3.3.4 Metal Results

A total of 25 metals soil samples were collected from 14 locations at depths that ranged from 0.0 to 10.5 feet below ground surface. Positive results for metals detected in these samples included the following analytes: antimony, arsenic, barium, cadmium, calcium, total chromium, cobalt, cooper, cyanide, iron, lead, magnesium, manganese, mercury, nickel, selenium, silver, sodium, thallium, vanadium, and zinc. Arsenic, cadmium, copper, lead, mercury, and zinc were detected above industrial NYS RSCOs at borings SB-03, SB-12, SB-14, SB-20 and SB-22, SB-23, and SB-24.

3.4 Lower Riverbank Terrace Soil/Sediment Results

A detailed inspection of the lower riverbank terrace was conducted in order to identify discharge pipes that emptied into the Genesee River from the former Glass Plant facility or other upland facilities. Based on photographs taken of the facility during its operation, the water levels in the Genesee River adjacent to the Site were higher than present day levels (Leader, 2002). As such, discharge pipes observed along the retaining wall likely discharged directly to the river during times of high water levels.

Samples collected along the lower river terrace were labeled as sediment samples in the field due to their proximity to the Genesee River and based on the premise that the unconsolidated material was likely deposited as fill or as sediment deposited during times of high river water levels. After reviewing the NYSDEC DER-10 definition of sediment: “unconsolidated material found at the bottom of a body of water”, the current state of this material is not consistent with this definition based on the following observations:

- Vegetative characteristics are primarily terrestrial
- Physical characteristics which include a natural shelf and a natural bank along the river bank are consistent with terrestrial land

Based on these observations, the results of the samples collected along the lower river terrace will be compared to Industrial SCOs. In addition the samples will also be compared to NYS Supplemental Soil Cleanup Objectives (SSCO) – Protection of Ecological Resource (PER) standards due to the proximity of the samples to the Genesee River.

Figure 3-5 shows the locations of all the identified discharge pipes labeled Pipe-A through Pipe-L. Photographs of each of these discharge pipes are provided in Appendix E. A description of each of these pipes is provided below:

- Pipe A – An approximately 8-inch diameter steel pipe exiting the retaining wall at present day ground level.
- Pipe B – An approximately 4-inch diameter steel pipe exiting the retaining wall at the present day ground level.
- Pipe C – An approximately 6-inch diameter pipe with an elbow facing downward that exits the retaining wall approximately three feet above the present day ground level.
- Pipe D – An approximately 8-inch diameter pipe with an elbow facing downward that exits above the existing concrete retaining wall within a fill held in place by a chain link fence.

- Pipe E - Three pipes with approximately 3,4, and 6-inch diameters that exit horizontally above the concrete wall within fill held in place by a chain link fence.
- Pipe F – An approximately 8-inch diameter steel pipe exiting horizontal at the present day ground surface with a very slow water discharge.
- Pipe G – an approximately 4-inch diameter steel pipe exiting vertical from the ground surface with flowing water.
- Pipe H – An approximately 6-inch diameter steel pipe exiting horizontal.
- Pipe I – An approximately 4-inch diameter steel pipe with downward elbow with water discharging at a slow drip.
- Pipe J – An approximately 10-12-inch steel pipe exiting at ground surface that extends back towards the site at an approximate 45 degree angle.
- Pipe K – An active trench for run-off that is protected from soil and fill with a large culvert. Concrete trench is open to the surface from the river bank to the east side of the former glass plant building. It appears this concrete trench may extend along the paved roadway towards the cliff face directly below a former Bausch and Lomb office building located on Saint Paul Street.
- Pipe L – An approximately 24-inch steel pipe with the top exposed. Run-off channel formed directly adjacent of the pipe suggests high velocity storm flow.

Figure 3-5 and tables 3-5 through 3-7 summarize soil/sediment results for samples collected directly adjacent to discharge pipes from the soil/sediments within the lower river bank terrace. A total of six (6) soil/sediment samples were collected from six locations and were analyzed for SVOCs, PCBs, and metals.

Positive results for SVOCs detected in these samples included the following analytes: 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, bis(2-ethylhexyl phthalate, carbazole, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene. The following SVOCs were detected at concentrations that exceed the Industrial RSCOs: benzo(a)anthracene, benzo(b)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene at locations SED-AB, SED-C, SED-E, SED-F, and SED-L. The RSCO PER standards for SVOCs for compounds detected within the Lower Terrace are higher than the Industrial RSCO or not given. As such, concentrations of SVOCs in the Lower Terrace soil samples only exceeded the RSCO PER standards for benzo(a)pyrene.

Positive results for PCBs detected in the lower River bank samples included the following Aroclors: Aroclor 1248, 1254 and 1260. Concentrations of total PCBs ranged from 0.37 mg/kg at SED-AB to 3.2 mg/kg at SED-E. These results are all below the Industrial RSCOs, but exceed the RSCOs for Protection of Ecological Receptors, 1 mg/kg, at location SED-AB.

Positive results for metals detected in the lower River bank samples included the following analytes: antimony, arsenic, barium, cadmium, calcium, total chromium, cobalt, cooper, cyanide, iron, lead magnesium, manganese, mercury, nickel, selenium, silver, sodium, vanadium, and zinc. Arsenic is over the industrial NYS RSCO at all sampling locations with concentrations that range from 20.2 to 175 mg/kg. Cadmium concentrations exceed the Industrial RSCO at location SED-I with a concentration of 63.3 mg/kg. In addition to the above compounds exceeding the Industrial RSCOs, the RSCO PER criteria were exceeded at all lower river terrace sampling locations for antimony, arsenic, copper, lead, silver, and zinc, and at locations SED-AB (cadmium, mercury, nickel, and vanadium), SED-C (cadmium, chromium, mercury and vanadium), SED-E (cadmium, chromium and mercury), SED-F (barium and mercury), SED-I (cadmium and nickel), and SED-L (chromium, mercury and vanadium).

3.5 Groundwater Sampling Results

The following section summarizes the groundwater fluid level gauging and groundwater analytical results for data collected from June through August, 2010.

3.5.1 Groundwater Flow Direction and Hydraulic Gradients

Table 3-9 summarizes fluid level measurement data collected from the four (4) monitoring wells installed as part of this Site Investigation program. Figure 3-6 presents interpreted water table contours for water level gauging data collected on August 23, 2010. The groundwater flow predicted from interpreted contours is from east to west across the Site approximately perpendicular to the flow of the Genesee River. The hydraulic gradient is approximately 0.02 ft/ft across the Site.

3.5.2 Groundwater Analytical Results

A total of five (5) groundwater samples were collected from one temporary grab location, four (4) monitoring wells, and from the flowing Pipe-G located within the lower river terrace. Groundwater samples were analyzed for VOCs, SVOCs, and metals. Tables 3-10 through 3-12 presents a comparison of groundwater analytical results compared to the New York Groundwater Quality Standards (GWQS). Figure 3-7 presents all positive groundwater analytical results for VOCs, SVOCs, and metals.

Groundwater samples indicated the presences of thirteen (13) VOCs (benzene, carbon disulfide, chloroform, cis-1-2-Dichloroethene, cyclohexane, ethylbenzene,

isopropylbenzene, m&p-xylenes, methylcyclohexane, o-xylene, toluene, trichloroethene, and vinyl chloride), nineteen (19) SVOCs (2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, biphenyl, carbazole, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, and pyrene), and twelve (12) metals (arsenic, barium, calcium, total chromium, copper, iron, lead, magnesium, manganese, nickel, sodium, and zinc).

All detected VOC compounds detected were below the GWQS with the exception of benzene, ethylbenzene, and trichloroethene. Benzene was detected at a concentration of 1.3 J ug/L at well MW-4 and a concentration of 150/170 ug/L at well MW-3, exceeding the GWQS of 1.0 ug/L. Ethylbenzene was detected at well MW-3 at a concentration of 6.6 ug/L exceeding the GWQS of 5 ug/L, and trichloroethene was detected at well MW-1 at a concentration of 13 ug/L exceeding the GWQS of 5 ug/L.

All detected SVOC compounds were below the GWQS with the exception of benzo(a)pyrene and biphenyl. Benzo(a)pyrene was detected at a concentration of 16 J at well MW-3, exceeding the GWQS of “not detectable”. Biphenyl was detected at a concentration of 28 ug/L at well MW-3, exceeding the GWQS of 5 ug/L.

All detected metal compounds were below the GWQS with the exception of iron, manganese and lead. Iron was detected in all monitoring wells with concentrations that ranged from 825 ug/L to 48,800 ug/L, exceeding the GWQS of 600 ug/L. Manganese was detected at wells MW-3 and MW-4 at concentrations that exceeded the GWQS of 600 ug/L. Lead was detected at a concentration of 50.3 at well MW-4, exceeding the GWQS of 50 ug/L.

3.6 QA/QC and DUSER Results Summary

Final laboratory data packages were data validated by Alpha Geosciences of Clifton Park, New York and a Data Usability and Summary Reports (DUSR) were generated summarizing the data. DUSR reports are provided in Appendix G. The overall performances of the analyses were acceptable. The following provides a summary of rejected findings:

- The “not-detected” results for target Aroclors in sample SB-26(0.5-1) were flagged as “unusable” (R) because 2 of 2 surrogate recoveries were below QC limits and 1 of 2 was below 10% in the sample.
- The “not detected” semi-volatile results for 12 acid extractable compounds in samples SB-24(0.5-1) and SB-24(0.5-1)RE were flagged as unusable (R) because 1 of 3 acid extractable surrogate recoveries was below control limits and 1 of 3 was below 10%.

- The “not detected” semi-volatile results for 12 acid extractable compounds in sample SED-E were flagged as unusable (R) because 2 of 3 acid extractable surrogate recoveries was below control limits and 1 of 3 was below 10%.
- The “not detected” results for target Aroclors in sample SB-26(0.5-1) were flagged as “unusable” (R) because 2 of 2 surrogate recoveries were below QC limits and 1 of 2 was below 10% in the sample.

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

4.0 Discussion

4.1 Site Geology

Based on observations of the overburden soil borings and conductivity borings, as well as from descriptions of geology from the *Focused Remedial Investigation Former manufactured Gas Plant Site, East Station, Rochester New York, Interim Report* (Meta Environmental, 2000), the subsurface of the site is composed of fill overlying unconsolidated alluvial deposits, which overlies bedrock. Fill at the Site is a complex mixture of demolition debris, imported excavation materials, coal cinder and ash, reworked fill/alluvial deposits, and fill resulting from former operations of the Glass Plant. Unconsolidated alluvial deposits consist of sands, silts and clays and can be difficult to distinguish from reworked fill. Bedrock at the Site (Rochester Shale Formation) was encountered at depths of 21.5 feet at borings SB-06 and SB-14. In addition to these two locations, depth to bedrock elevations can be estimated based on refusal depth at the conductivity boring locations. Bedrock depths are consistent with work at the adjacent RG&E site which reported bedrock at 8 to 47 feet below grade at the site. In general, the bedrock surface slopes from the exposed cliff surface to the river.

4.2 Soil Quality

The following section discusses soil quality for AOCs identified in Section 2.8 based on the sampling conducted during this site investigation. It should be noted the sampling pattern developed for this investigation was based on AOCs identified in the Phase I Environmental Site Assessment and objectives identified in the Phase II Memo and were not intended to satisfy requirements for soil sampling at every individual AOC.

4.2.1 AOC-A: Former Raceways

Two raceways from the Genesee River were present at the Site from at least 1851 to 1869, and then were filled in sometime between 1869 and 1875. Another single raceway was present on the Site from at least 1881. This raceway was filled prior to 1900. The fill contents in the former raceways may present an environmental concern to the property and as such the raceways were indicated as an AOC.

A number of techniques were used to attempt to locate the former raceways including:

- GIS processing of the former maps to estimate the current location of the raceways based on landmarks present in historic maps provided in the Phase I Environmental Assessment (Leader, 2006).
- A geophysical investigation was conducted, where accessible, to attempt to locate the former raceways using terrain conductivity and inphase geophysical techniques.

- Electrical conductivity borings were targeted within the suspected location of the former raceways and outside the former raceways to attempt to locate the raceways based on a unique downhole electrical conductivity signature.

Based on the results of this investigation, the former raceways channels could not be distinguished from surrounding fill/soil. As such, no further action is warranted for AOC-A.

4.2.2 AOC-B: Bio-Cell

The Bio-Cell is located within the upper terrace at the Site in what was a former Bausch & Lomb parking lot for the Glass Plant facility. The Bio-Cell contains VOC impacted soil removed as part of an interim remedial measure for a site located at 690 St. Paul Street in Rochester, New York. A soil boring was done at an accessible location west of the Bio-Cell (SB-19) in order to evaluate soil quality adjacent to the Bio-Cell. The soil core had no indications of VOC impacts (elevated PID readings or odor). A single soil sample was submitted for analysis of PCBs, BNs and metals. Soil sample SB-19 (0.5-1) indicated the presence of a number of PAHs and metals with a concentration of benzo(a)pyrene (2.0 mg/kg) slightly over the Industrial RSCO.

Based on the results of this investigation it does not appear that soil impacts within the imported soil have adversely affected soil adjacent to the Bio-Cell at the location sampled. Soil quality beneath and adjacent to the Bio-Cell should be evaluated following decommissioning requirements.

4.2.3 AOC-C: Compressor Rooms

Two compressor rooms were identified in the 1966 Bausch & Lomb Glass Plant drawing and were located in the northwest corner of the main facility building. Soil boring SB-22 was advanced adjacent to the former compressor rooms. The soil boring was advanced to four feet depth below ground surface and one soil sample was collected at the near surface, below the concrete slab. The soil core collected at this location was described as concrete, silt, brick, and black coal clinker. Soil sample SB-22 (0.5-1) indicated the presence of a number PAHs, PCBs, and metals with concentrations of benzo(a)pyrene (7.3 J mg/kg), arsenic (405 mg/kg), and lead (6,340 EJ mg/kg) over Industrial RSCOs.

During the 1993 Asbestos/metals survey a wipe sample was collected from the main compressor room and analyzed for metals. This sample showed had arsenic and lead concentrations of 22.1 and 135.9 ug/wipe, respectively. Based on the results of this investigation, it is likely that the soil impacts observed at this location were not the result of activities associated with the compressor rooms and are more appropriately classified with AOC-H (Historic Fill), AOC-G (Transformers/Electrical Rooms), and/or AOC-F (Lehr/Tank Furnace Area).

4.2.4 AOC-D: Batch Room

The batch room was used to mix/create raw materials for manufacturing glass lenses. Soil boring SB-26 was advanced to twelve feet below ground surface at the suspected location of this former room. A single soil sample was collected directly beneath the concrete slab (SB-26 0.5-1) to verify soil quality in this area. Soil sample SB-26 (0.5-1) indicated the presence of a number of PAHs and metals with concentrations of no compounds detected above Industrial RSCOs.

During the 1993 Asbestos/Metals Survey three wipe samples were collected within this room and analyzed for metals. These wipe samples indicated the presence of arsenic (1,330-4,600 ug/wipe), barium (1,234 – 5,703 ug/wipe), cadmium (20.3 – 175 ug/wipe), chromium (8.4 - 134.1 ug/wipe), lead (629.6 – 7,140 ug/wipe), nickel (1,185 – 2,210 ug/wipe), and selenium (36.8 – 116 ug/wipe). These results are elevated compared to samples collected in non-operation areas. Although former operations in this room included the use of a number of different metals, it does not appear that former operations in the batch room impacted soil quality directly beneath the concrete slab.

4.2.5 AOC-E: Homo Furnace

The former homo furnace is located south of the Batch Room adjacent to the Pit Area. The homo furnace is powered by an electrical connection and was likely used to process small batches of glass. No soil borings were advanced at this AOC.

4.2.6 AOC-F: Lehr/Tank Furnace

The Lehr/Tank Furnace AOC is located in the northwest corner of the main facility building. The tank furnace was used to melt the batch and was powered by natural gas possibly with an electric assist. The tank furnaces are typically heated to temperatures of 1,100 to 1,500°C. Molten glass was removed from the furnace and cooled. The Lehrs were used as a further stage in the cooling process as a temporary reheating step to remove stress points. The Lehrs was likely powered by electric or natural gas power source. Soil borings SB-08, and SB-22 were located adjacent to the Lehrs/Tank Furnace AOC. Soil sample SB-22, discussed above, indicated the presence of benzo(a)pyrene, arsenic, and lead over the Industrial RSCOs. Soil sample SB-08 (0.5-1) indicated the presence of a number of PAHs and metals with only a benzo(a)pyrene (1.9 mg/kg) concentration exceeding the Industrial RSCO.

During the 1993 Asbestos/Metals Survey four wipe samples were collected within this AOC and analyzed for metals. These wipe samples indicated the presence of arsenic (207 – 4,050 ug/wipe), barium (406 – 4,580 ug/wipe), cadmium (8.6 – 63.6 ug/wipe), chromium (5.1 – 45.0 ug/wipe), lead (880.4 – 9,083 ug/wipe), nickel (21.0 – 394 ug/wipe), and selenium (2.0 -135 ug/wipe). A wipe sample collected from the floor, located adjacent to the former lehrs unit indicated the highest results for all metals from this area. Former operation in this room included the use of a number of different metals,

which may have impacted soil quality as shown in soil results from borings SB-22. Lead concentrations in soil collected at SB-22 (405 mg/kg), were elevated compared to background lead concentrations and could be associated with a localized metals hot-spot in this area.

4.2.7 AOC-G: Transformers/Electrical Platforms and Rooms

Former transformer pads, electrical platforms and rooms were identified from the 1966 site plan and are shown on Figure 2-6. Soil borings SB-11, SB-22, and SB-23 were located adjacent to former electrical transformer pads or electrical rooms. Soil samples collected from soil borings at these locations were analyzed for PCBs as well as BNAs and metals. For the purpose of this AOC, only PCB sampling results will be discussed. PCBs were only detected in one of the AOC specified soil samples listed above. Soil sample SB-11 (0.5-1) had a total PCB concentration of 0.22 J mg/kg, which is below the Industrial RSCO of 25 mg/kg. Of the identified electrical areas, soil borings were collocated adjacent to all but one of these areas, an electrical shop located within the main facility building. Based on these sampling results, it does not appear that former electrical transformers/rooms have impacted soil quality.

4.2.8 AOC-H: Historic Fill

As presented in Section 4.1 Site Geology, the Site has had a long history of filling dating back to at least the mid-1800s. These filling episodes included, initial filling to allow for development along the Genesee River flats, filling of former Raceways, filling of the land prior to the construction of the former Glass Plant Facility, and lastly filling that occurred subsequent to demolition of the former Glass Plant Facility in 1994. As specified in NYDEC DER-10 a total of four borings/test pits are required per acre to characterize/delineate historic fill material (HFM). Based on the size of the B&L property (7.8 Acres) a total of approximately 32 borings would be required to satisfy the NYDEC HFM requirements.

A total of 21 electrical conductivity borings and three (3) soil borings were advanced through the HFM at the site. Based on field observations the following types of fill were identified in this investigation:

1. Non-historic fill (NHFM) – recent dumped debris
2. Non-historic fill – recent demolition debris
3. Non-historic fill – glass plant operations debris
4. Historic Fill Material – reworked soil with indications of demolition debris (i.e. brick)
5. Historic Fill Material - Coal ash/cinder
6. Historic Fill Material – emplaced soil

The NHFM includes recent dumped debris, demolition debris and glass plant operations debris. NHFM dumped debris was observed primarily within the upper terrace and is likely the result of illegal dumping. NHFM recent demolition debris is primarily located in the northwest corner of the facility adjacent to the former 3-story operation plant building location and is likely material moved to this area during building demolition activities. NHFM demolition debris related to Glass Plant Operations is primarily located along the retaining wall between the main terrace and Lower River Terrace and includes municipal trash (primarily glass bottles) and glass blanks produced by the former plant.

Historic Fill material identified on the site includes coal ash/cinder related to the burning of coal, reworked soil with indications of demolition debris, and emplaced soil. As described in the geology section, land surfaces at the site were predominantly created by importing fill. As a result, most of the overburden at the site is HFM. The reworked HRM material consists of what appears to be alluvial deposits (fine sand with silt and some gravel but also contains abundant brick debris) and the emplaced HFM consists of primarily sand silts and gravels that resemble till like material likely brought in from nearby locations above the gorge.

In general, soil samples collected within the HFM indicate the presence of PAHs, PCBs and metals with exceedences of the Industrial RSCOs for a number of PAHs and metals. Site specific impacts are overprinted on general HFM quality as discussed in AOC specific sections.

4.2.9 AOC-I: Septic Tank

The Phase I Environmental Site Assessment (Leader 2002), identified a former septic tank system as an AOC. The estimated location of this system was identified in the Technical Approach Memo (S2C2, 2009) and is shown on Figure 2-6. Boring CON-14/SB-14 was located adjacent to the suspected location of the former Septic Tank. Subsequent GIS processing of a Bausch & Lomb piping diagram from the 1993 Asbestos/Metals Survey (Paradigm) indicates an extensive piping system for water, steam, gas, air, and drains. The location of suspected drain lines are shown on Figure 2-7. Based on this figure, it is likely that interior drain lines with what appears to be settling tanks are located adjacent to the cafeteria and locker rooms and are likely sanitary sewer lines. It appears that a septic tank may be located west of the main plant near the transformer platform and high voltage area.

Soil boring SB-23 was advanced adjacent to the interpreted location of this possible septic tank. A total of three soil samples were collected from this boring and analyzed for BNAs, PCBs, and metals. Soil samples indicated the presence of PAHs and metals with benzo(a)pyrene (7.6 mg/kg), dibenz(a,h)anthracene (1.4 J mg/kg) and arsenic (55 mg/kg) over the Industrial RSCOs. Based on these results, it appears that the samples collected

are more representative of historic fill conditions than AOC specific impacts associated with a former septic tank.

4.2.10 AOC-J: Pit Area

The Pit Area, located in the southwest corner of the facility is a sunken concrete structure with an unknown use. No soil samples were collected from this AOC.

4.2.11 AOC-K: Upper Terrace

The Upper Terrace is located in the eastern portion of the site and extends to the cliff face which defines the eastern most boundary of the Site. This area was formerly used as a parking area for the former Glass Plant and currently contains the Bio-Cell (AOC-B). One soil boring was advanced within the upper Terrace, SB-19, as discussed in Section 4.2.2. A single soil sample was submitted for analysis of PCBs, BNs and metals. Soil sample SB-19 (0.5-1) indicated the presence of a number of PAHs and metals with a concentration of benzo(a)pyrene (2.0 mg/kg) slightly over the Industrial RSCO. No other Upper Terrace areas were accessible without disturbing the Bio-Cell.

4.2.12 AOC-L: Lower River Terrace – Discharge Pipes

The Lower River Terrace consists of a 0.84 acres strip of land located directly adjacent to the Genesee River at an elevation of approximately 390 ft (canal datum). As discussed in Section 2.8, six (6) soil samples were collected within this AOC and were targeted at identified discharge pipes. Results of these soil samples were compared to both the Industrial RSCO standards and the NYS PER standards due to the proximity of the Lower River Terrace to the Genesee River. Exceedences of both the Industrial RSCO criteria and the RSCO PER criteria for SVOCs, PCBs and metals were identified. Based on the results of this investigation, it appears that soil quality within the Lower Terrace has been impacted by site activities.

4.2.13 AOC-M: Off-Site RG&E Coal Gasification Plant

Based on known site conditions at the adjacent RG&E property, impacts associated with former Coal Gasification operations at the neighboring property were suspected on the Site. Olfactory indications of coal tar impacts were noted on boring logs for a number of soil borings including: SB-03, SB-06, SB-14, SB-20, and SB-26. In addition, free-phase coal tar was observed in soil cores collected at boring SB-20. Free-phase coal tar was identified from 13 to 18.5 feet bgs in unconsolidated overburden below the observed water table. Soil samples collected from this interval were submitted for analysis of VOCs and PAHs and indicated the presence of benzene, ethylbenzene, naphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. Concentrations of benzo(a)pyrene (24 mg/kg) and benzo(a)anthracene (23 mg/kg) exceed the Industrial

RSCOs. PAH concentrations observed in this soil sample were the highest concentrations reported for any sample collected at the Site. Based on these results, it is clear that coal gasification operations at the adjacent RG&E property have impacted soil quality on the Site.

4.2.14 AOC-N: Other Former Bausch & Lomb Glass Plant Buildings

A total of four additional former B&L Glass Plant Buildings were identified based on site plans presented in the Asbestos and Metals Report. Based on the GIS interpretation of these buildings locations, two of the four buildings were located on the adjacent RG&E property and were not investigated as part of this investigation. The remaining two buildings were located east of the main operations building.

Soil Boring SB-03 and SB-20 were both located near or within the suspected location of these two buildings. Soil boring SB-03 and SB-20 were advanced to a depth of 8 and 18.5 feet bgs, respectively. Two soil samples were collected at SB-03 and three soil samples were collected at SB-20 to verify soil quality at these locations. Soil samples at both locations indicated the presence of a number of PAHs and metals. Concentrations of benzo(a)pyrene (6.3 mg/kg at 0-0.5 ft bgs) and arsenic (26.4 mg/kg and 835 mg/kg at 0-0.5 and 4.5-5 ft bgs) at boring SB-03 exceeded the Industrial RSCOs. Concentrations of benzo(a)anthracene (25 mg/kg), benzo(a)pyrene (25 mg/kg), benzo(b)fluoranthene (37 mg/kg), dibenz(a,h)anthracene (11 mg/kg), arsenic (41.9 mg/kg), and lead (5,930 mg/kg) in soil sample SB-20 (0.5-1) also exceeded the Industrial RSCOs. Based on these results, it appears that operations at these former buildings or filling adjacent to these buildings prior to or following demolition may have impacted soil quality.

4.2.15 AOC-O: Prangborn Dust Collector

The Prangborn Dust Collector was used to collect dust resulting from mixing of raw materials for manufacturing glass lenses. Soil boring SB-12 was advanced to four (4) feet below ground surface adjacent to the suspected location of this unit. Two soil samples were collected (SB-12 0-0.5 and SB-12 3.5-4) to verify soil quality in this area. Both soil samples indicated the presence of a number of PAHs and metals with concentrations of arsenic (321 mg/kg) and lead (106,000 mg/kg) detected above Industrial RSCOs in sample SB-12 (3.5-4). The soil description at this soil borings consisted of crushed glass and a powder like substance at 3.5-4 feet bgs. Based on these results, it appears that soil quality adjacent to the former Prangborn Dust Collector has been impacted by site activities.

4.2.16 AOC-P: Underground Piping

Underground piping at the former Glass Plant facility is illustrated in Figure 2-7. The following types of piping were identified:

- Natural Gas Lines

- Sluice Ways and Drains
- Steam Lines
- Sewer Lines
- Water Lines

Soil samples collected within the Lower-River Terrace areas were targeted to observed discharge pipe locations with the purpose of evaluating soil conditions adjacent to these discharge areas. In addition two soil samples (SB-09 and SB-23) were located adjacent to underground piping as identified (following sampling activities) from the rectified site diagram. Results of soil samples collected at these locations indicate the presence of a number of PAHs and metals with concentrations of benzo(a)pyrene, dibenz(a,h)anthracene, and arsenic detected above industrial RSCO's. However, these results are consistent with general historic fill conditions. At this time, it is unknown if underground piping has impacted soil conditions at the Site.

4.3 Evaluation of Overburden Groundwater Quality

The following sections provide an evaluation of groundwater conditions in relationship to AOCs identified in Section 2.8. As discussed in Section 3.5.1, groundwater flow in the shallow overburden at the Site is from the east to the west approximately perpendicular to the flow of the Genesee River. A total of six (6) groundwater samples were collected from four monitoring wells, one temporary groundwater sampling point, and a flowing pipe (Pipe G). These groundwater samples provide a general indication of groundwater quality at the Site and are discussed below by compound type.

4.3.1 Discussion of Volatile Organic Compound Results

As discussed in Section 3.5, a total of six (6) groundwater samples were collected and analyzed for VOCs from four monitoring wells, one temporary groundwater grab sample location, and at Pipe G (flowing pipe). The only VOC compounds detected above the NYSDEC GWS in these samples were benzene (1.3 J ug/L at MW-04 and 150/170 ug/L at MW-03), ethylbenzene (6.6 ug/L at MW-03), and trichloroethene (13 ug/L at MW-01). Concentrations of benzene and ethylbenzene in MW-03 over the NYS GWQ are associated with coal tar impacts observed in soil core (SB-20) collocated with this well. The source for trichloroethene concentrations recorded at MW-04 is not known. However, TCE was not detected in any soil sample collected at the site and historic use of solvents on the property was not reported. Based on these data the origin of TCE in groundwater is unknown and may be related to a regional or upgradient source

4.3.2 Discussion of Semi-Volatile Organic Compound Results

As discussed in Section 3.5, a total of four (4) groundwater samples were collected and analyzed for VOCs from the four installed monitoring wells. The only SVOC compounds detected above the NYSDEC GWS are benzo(a)pyrene (16 J ug/L) and biphenyl (28 ug/L) both detected in a sample collected at MW-03. In general, low level detections of PAHs were recorded in samples collected from all monitoring wells with the exception of well MW-01 which had no detections of SVOCs. Well MW-03 indicated the presence of the most SVOC compounds compared to the other groundwater samples and also had the highest concentrations of SVOCs compared to the other groundwater samples collected. The SVOC groundwater impacts recorded at MW-03 are likely associated with the documented coal tar product observed in the soil core (SB-20) collocated with this well. Other SVOC detections are representative of general historic fill groundwater conditions.

4.3.3 Discussion of Metal Results

As discussed in Section 3.5, a total of four (4) groundwater samples were collected and analyzed for TAL metals from the four installed monitoring wells. The following metals were detected above the NYSDEC GWS: iron, lead, and manganese. With the exception of results for metals in the groundwater sample collected at MW-04, groundwater metal results are indicative of site-side conditions associated with historic fill. Metal groundwater concentrations recorded for the sample collected at MW-04 are elevated compared to the other metal samples. In addition, this is the only sampling location that had an exceedence of the NYSDEC GWS for lead. Groundwater collected at this location had a low pH compared to the other monitoring well sampling parameters. This low pH condition is likely a result of operations in the batch room which included the use of acids. The geochemistry of groundwater at this location (low pH) provides an ideal environment for solubilizing metals in groundwater and likely is responsible for the elevated metal concentrations in groundwater observed at this location.

5.0 Conclusions and Recommendations

Based on this Phase II Site Investigation, S2C2 has made the following conclusions and recommendations regarding the investigated AOCs:

5.1 AOC-A: Former Raceways

Based on the results of this investigation, the former raceways channels could not be distinguished from surrounding fill/soil. As such, no further action is warranted for AOC-A.

5.2 AOC-B: Bio-Cell

Based on the results of this investigation it does not appear that soil impacts within the imported soil have adversely affected soil adjacent to the Bio-Cell at the location sampled. Soil quality beneath and adjacent to the Bio-Cell should be evaluated following decommissioning requirements. As a result no further action is warranted for AOC-B.

5.3 AOC-C: Compressor Rooms

Although no soil samples were advanced within the suspected former location of the compressor rooms, a soil sample was collected directly adjacent to these locations. Based on the results of this investigation, it is likely that the soil impacts observed at the location sampled were not the result of activities associated with the compressor rooms and are more appropriately classified with AOC-H (Historic Fill), AOC-G (Transformers/Electrical Rooms), and/or AOC-F (Lehr/Tank Furnace Area). Collection of additional soil samples are recommended within the suspected former compressor rooms to satisfy sampling requirements as set forth in NYDEC DER-10.

5.4 AOC-D: Batch Room

Based on the results of this investigation it does not appear that operations within the former batch room have adversely impacted soil quality below the concrete slab. As a result, no further action is warranted for soils at AOC-D.

5.5 AOC-E: Homo Furnace

No soil borings were advanced at this AOC. Collection of a soil sample below the concrete slab at the suspected location of the homo furnace is recommended to satisfy sampling requirements as set forth in NYDEC DER-10.

5.6 AOC-F: Lehr/Tank Furnace

Soil sampling results from a sample (SB-22) collected within this AOC indicated the presence of elevated concentrations of lead (405 mg/kg) greater than background lead concentrations observed throughout the site. Further investigation of lead impacts at this AOC is recommended to determine the horizontal and vertical extent of metal impacts adjacent to soil boring SB-22 to satisfy requirements as set forth in NYDEC DER-10.

5.7 AOC-G: Transformers/Electrical Platforms and Rooms

Of the identified electrical areas, soil borings were collected adjacent to all but on of these areas, and electrical shop located within the main facility building. Based on the soil sampling results, it does not appear that former electrical transformers/rooms have impacted soil quality. Collection of an additional soil sample at the suspected location of the former electrical shop should be completed to satisfy sampling requirements as set forth in NYDEC DER-10.

5.8 AOC-H: Historic Fill

The Site has had a long history of filling dating back to at least the mid-1800s. HFM at the site includes coal ash/cinder, reworked soil with indications of demolition debris, and emplaced soil. In general, soil samples collected within the HFM indicated the presence of PAHs, PCBs, and metals with exceedences of the Industrial RSCOs for a number of PAHs and metals. Site specific impacts are overprinted on the general HFM quality as discussed in AOC specific sections. Based on the results of this investigation, further characterization is recommended to satisfy the NYDEC HFM requirements as specified in DER-10. Data collected as part of this investigation can be used to aid meeting the NYSDEC HFM requirements and limit the number of soil borings/sampling that is required.

5.9 AOC-I: Septic Tank

A former Septic Tank was reported in the initial Phase I report and further evaluated based on a piping diagram located in a former report as discussed in Section 4.2.9. Soil boring SB-23 was advanced adjacent to the suspected former location of the Septic Tank based on the piping diagram. Soil results from this boring do not indicate AOC specific impacts associated with the Septic Tank but are more representative of general historic fill conditions. Based on the results of this investigation, no further action is warranted for this AOC.

5.10 AOC-J: Pit Area

The Pit Area, located in the southwest corner of the facility is a sunken concrete structure with an unknown use. No soil samples were collected from this AOC during this investigation. Collection of a soil sample below the concrete slab within this area is recommended to evaluate soil quality and to satisfy sampling requirements as set forth in NYDEC DER-10.

5.11 AOC-K: Upper Terrace

The Upper Terrace is located in the eastern portion of the site and extends to the cliff face which defines the eastern most boundary of the Site. One soil sample was collected adjacent to the Bio-Cell as discussed in Section 5.2. Additional soil sampling at this AOC should be targeted to waste piles observed within this area following decommissioning of the Bio-Cell. Soil sampling should be conducted following sampling requirements set forth in NYDEC DER-10.

5.12 AOC-L: Lower River Terrace – Discharge Pipes

The lower river terrace is located adjacent to the Genesee River. Soil sampling conducted as part of this investigation at the AOC indicated that soil quality within the AOC had been impacted by site activities. Additional soil sampling is recommended to delineate the horizontal and vertical extent of soil impacts as specified in NYDEC DER-10. Based on the proximity of the area to the Genesee River it is likely that soil results should be compared to NYS RSCO PER criteria.

5.13 AOC-M: Off-Site RG&E Coal Gasification Plant

Based on the results of this investigation it is clear that off-site operations at the neighboring RG&E property have impacted soil quality at the Site. RG&E has proposed additional off-site work to delineate coal gasification related impacts in both soil and groundwater. No further action is warranted for this AOC by B&L.

5.14 AOC-N: Other Former B&L Glass Plant Buildings

A total of four additional former B&L Glass Plant Buildings were identified based site plans in previous reports. Of these four buildings two were located on the adjacent RG&E property and were not investigated as part of this investigation. The remaining two buildings were located east of the main operations buildings. Former operations in these buildings are unknown. Based on the results of this investigation, it appears that operations at these former buildings or filling adjacent to these buildings prior to or following demolition impacted soil quality. Additional investigation is recommended to delineate the horizontal and vertical extent of metal hot spots adjacent to SB-03 and SB-20 as required by NYDEC DER-10.

5.15 AOC-O: Prangborn Dust Collector

The Prangborn Dust Collector was used to collect dust resulting from mixing of raw materials for manufacturing glass lenses. Based on the results of this investigation it appears that soil quality adjacent to the former Prangborn Dust Collector has been impacted by site activities. Additional investigation is recommended to delineate the horizontal and vertical extent of metal hot spots adjacent to SB-12 as required by NYDEC DER-10.

5.16 AOC-P: Underground Piping

Underground piping exists at the facility and is associated with former operations of the Glass Plant. Soil samples collected as part of this investigation did not indicate AOC specific impacts associated with the underground piping; however, only two soil samples were located adjacent to suspected piping locations. As a result additional investigation is recommended to evaluate soil conditions associated with Underground Piping as required by NYDEC DER-10.

5.16 Overburden Groundwater

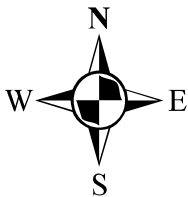
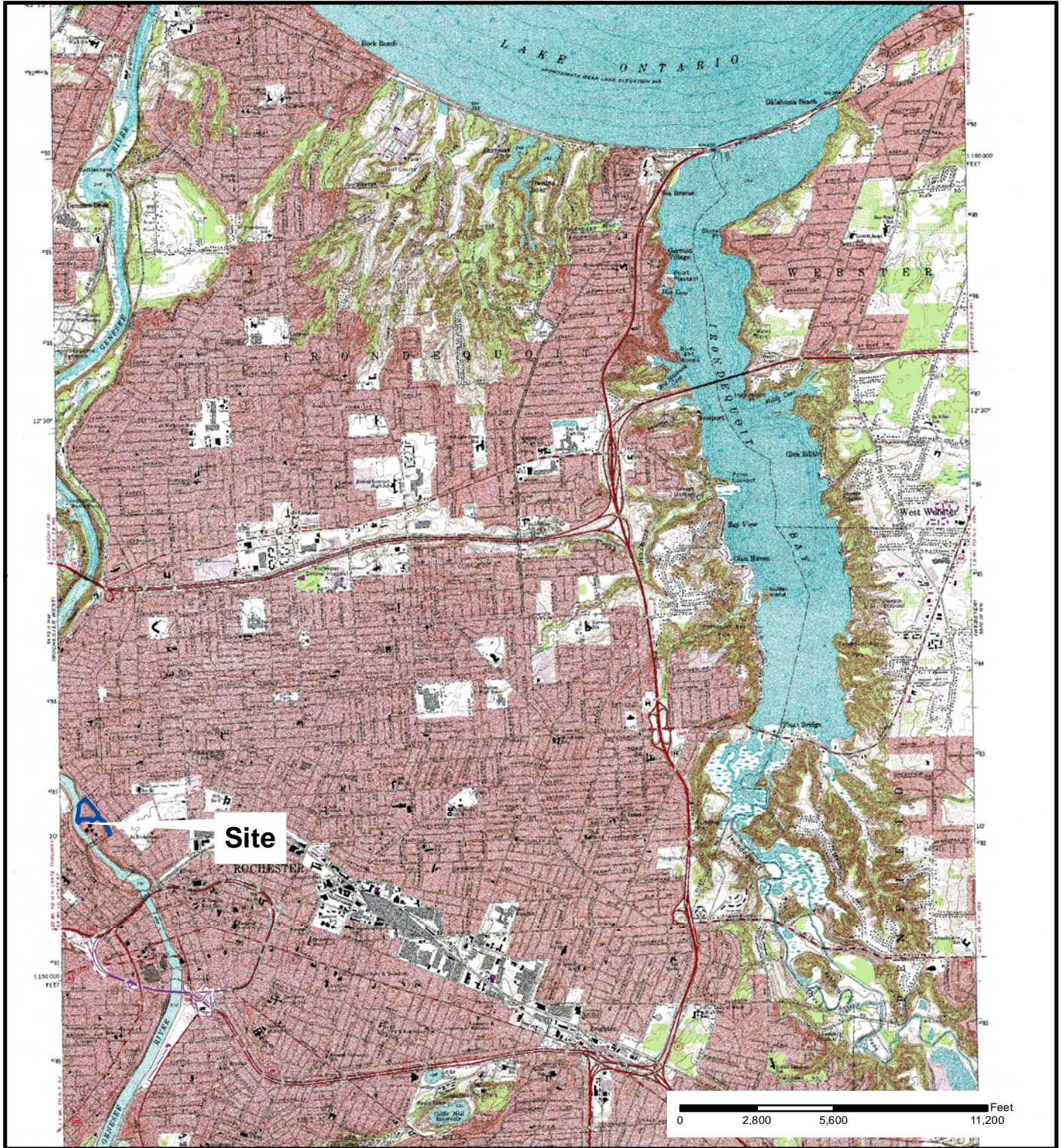
Overburden groundwater quality was evaluated at four monitoring well locations, one temporary groundwater grab sample location and at Pipe G (flowing pipe). Dissolved VOC concentrations in groundwater are associated with offsite coal tar impacts associated with the neighboring RG&E operations and possible from an unknown regional or upgradient source for dissolved CVOC impacts. Dissolved SVOC compounds recorded over the NYS GWS are likely associated with the documented coal tar associated with the neighboring RG&E site and from general historic fill groundwater conditions. Dissolved metal concentrations in overburden groundwater over the NYS GWS is likely the result of historic fill conditions with the exception of metal concentrations observed at MW-04. At this location, is suspected that site activities associated with the former Glass Plant has impacted the geochemistry of groundwater in this vicinity (low pH) which provides an ideal environment for solubilizing metals in groundwater.

Based on the results of this investigation, additional investigation is recommended to delineate the low pH conditions and elevated metal concentrations in the vicinity of MW-04, which is located within AOC-D Batch Room. Additional investigation may be required to determine background groundwater conditions associated with historic fill as specified in NYDEC DER-10. Additional investigation of TCE impacted groundwater may also be required as specified in NYDEC DER-10; however it is believed that CVOCs are not a compound of concern at this site. Overburden groundwater impacts associated with coal tar impacts associated with the neighboring RG&E property should be delineated by the responsible party.

6.0 References

- Ish Inc. and Meta Environmental, Inc., 2000. Focused Remedial Investigation Former Manufactured Gas Plant Site East Station, Rochester, New York Interim Report. Rochester, New York.
- Leader Professional Services, Inc., 2002. Phase I Environmental Site Assessment. Rochester, New York.
- NES, INC., 1995. Final Project Report for the Decontamination and Release of the Bausch & Lomb Batch Room. Rochester, New York.
- New York Department of Environmental Conservation, 2009. DRAFT DER-10 Technical Guidance for Site Investigation and Remediation. Albany, New York.
- New York Department of Environmental Conservation, 2009. CP-51 / Soil Cleanup Guidance. Albany, New York.
- Paradigm Environmental Services, Inc., 1993. Asbestos/Metals Survey at the Glass Plant, Rochester, New York.
- S2C2 inc., 2009, Technical Approach – Phase II Site Investigation. Rochester, New York.

Figures



S₂ C₂ inc.




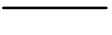
**Figure 1-1
Site Location Map**

Phase II Site Investigation Report
Bausch & Lomb Former Glass Plant
Suntru Street
Rochester, New York

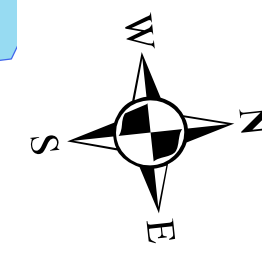
DATE: 12/3/2010	DRAWN BY: JCR	SCALE: 1:63,360	FIGURE: 1-1
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Legend

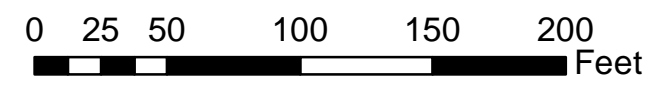
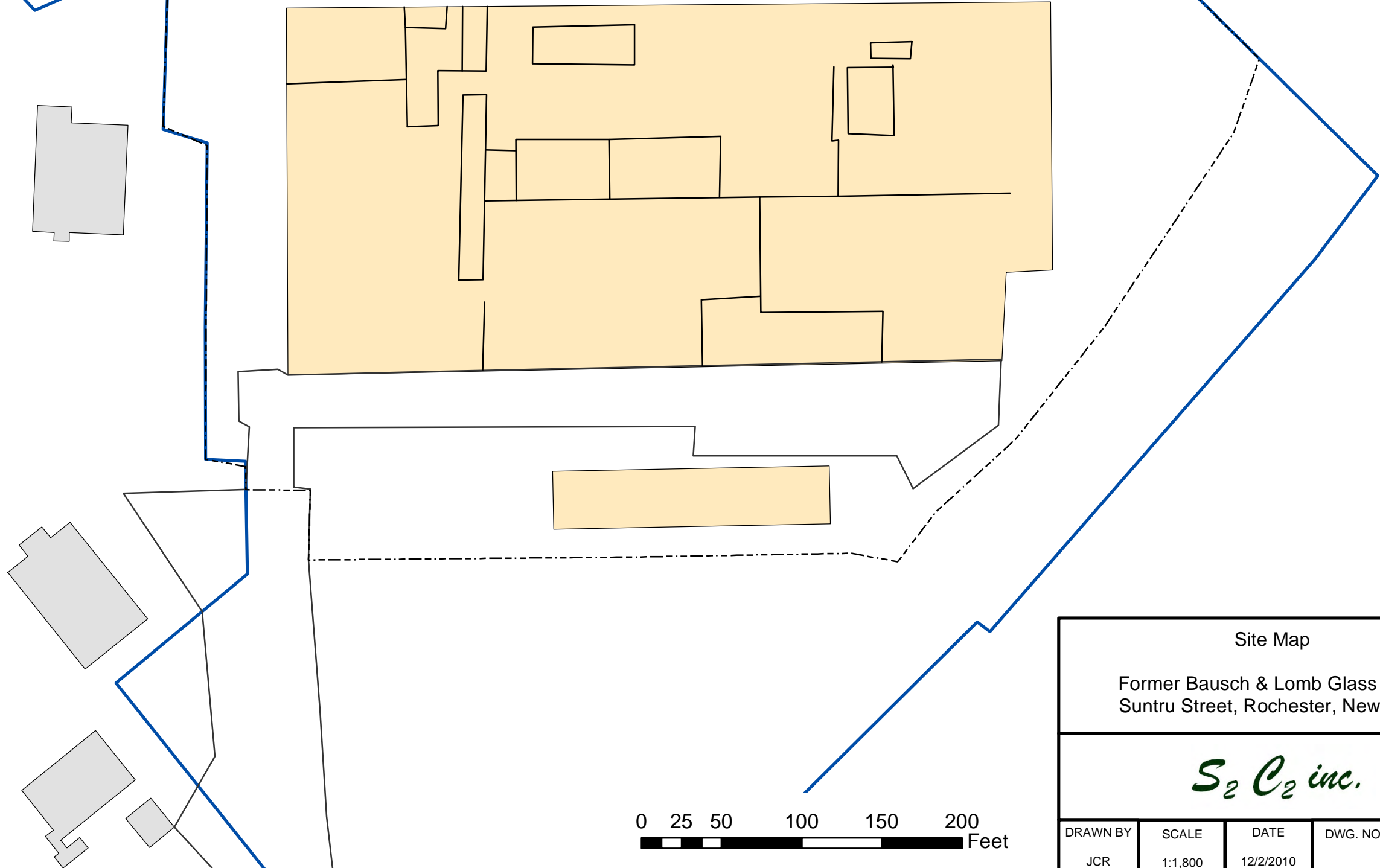
Site Features

-  Former Building
-  Fence
-  Paved Areas
-  Estimated Property Boundary
-  Genesee River
-  Building Interior

Genesee River








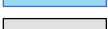
RGE Property

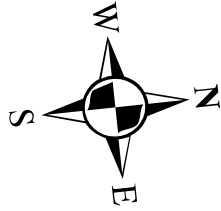


Site Map				
Former Bausch & Lomb Glass Plant Suntru Street, Rochester, New York				
<i>S₂ C₂ inc.</i>				
DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:1,800	12/2/2010		1-2

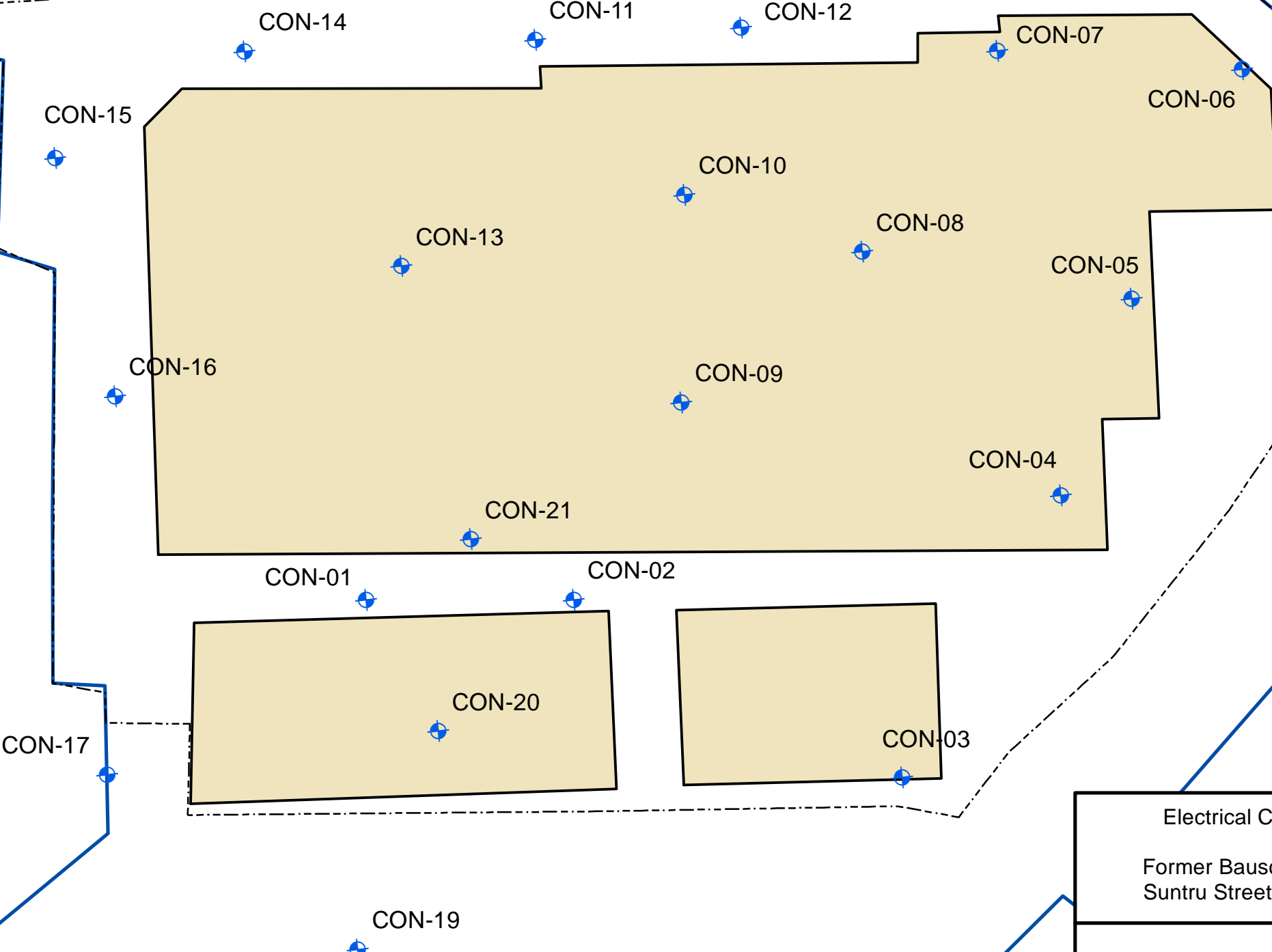
Genesee River

Legend

-  Electrical Conductivity (EC) Locations
-  Fence
-  Former Buildings
-  Estimated Property Boundary
-  Genesee River
-  Buildings

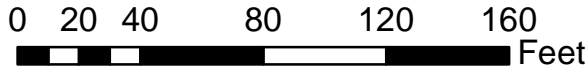


RGE Property



Electrical Conductivity Locations
 Former Bausch & Lomb Glass Plant
 Suntru Street, Rochester, New York

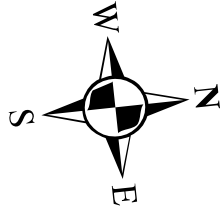
S₂C₂ inc.



DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:1,800	12/2/2010		2-1

Genesee River

- Legend**
- EM31 Survey Area
 - Fence
 - Former Buildings
 - Estimated Property Boundary
 - Genesee River
 - Buildings

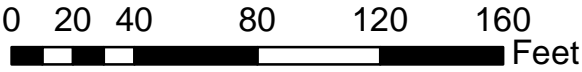


RGE Property

Geophysical Survey Area
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂ C₂ inc.




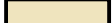


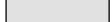
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JCR	1:1,800	12/6/2010		2-2

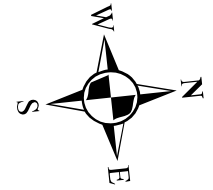


Genesee River

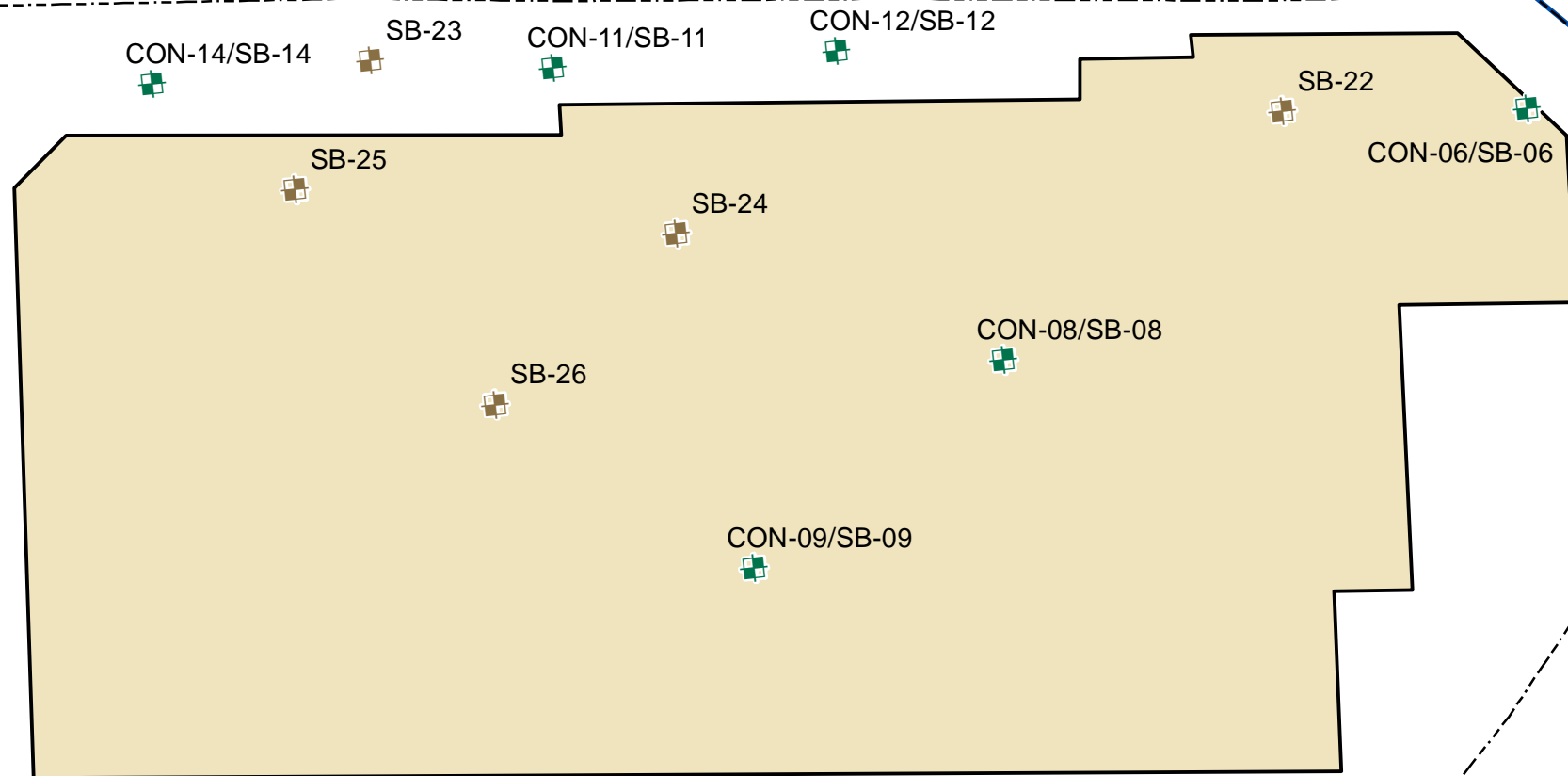
Legend

Soil Boring Locations

-  Conductivity/Soil Boring
-  Soil Boring
-  Fence
-  Former Buildings
-  Estimated Property Boundary
-  Genesee River
-  Buildings

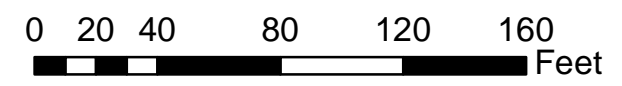


RGE Property



Soil Sampling Locations
 Former Bausch & Lomb Glass Plant
 Suntru Street, Rochester, New York

S₂ C₂ inc.



DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:1,800	12/6/2010		2-3


Genesee River


Legend

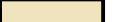
Discharge Pipe Locations

 Discharge Pipe

 Flowing Pipe

 Sed Soil Boring

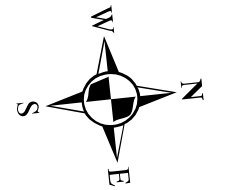
 Fence

 Former Buildings

 Estimated Property Boundary

 Genesee River

 Buildings

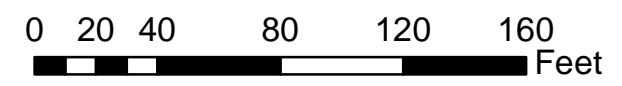


RGE Property

PIPE-L PIPE-J PIPE-I PIPE-H PIPE-G PIPE-F PIPE-E PIPE-D PIPE-C PIPE-B PIPE-A

Lower Terrace Sampling Locations
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂ C₂ inc.

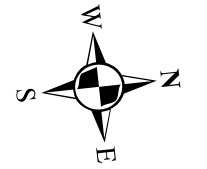


DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:1,800	12/6/2010		2-4

Genesee River

Legend

- Monitoring Well
- Fence
- Former Buildings
- Estimated Property Boundary
- Genesee River
- Buildings



RGE Property

MW-02

MW-01

MW-04

MW-03

Monitoring Well Locations

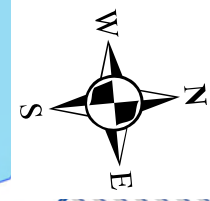
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂C₂ inc.

0 20 40 80 120 160 Feet

DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:1,800	12/6/2010		2-5

Genesee River



Lower River Terrace

Septic Tank

Lab

Transformer Platform

High Voltage

Parig Born

Compressor Room

Compressor Room

Building 13
3 Floors &
Basement
18,872 sq ft

Bldg 10
43,558 sq ft

Pit Area

Homo Furnaces

Storage Area

Batch Room

Glass "81"
Secured Storage

Lab

Glass "81"
Assembly Area

Building 9
17,000 sq ft

Locker Rooms
Fitness Area

Glass Storage

Bldg 12A
16,000 sq ft

Cafeteria

Office

Offices

Loading Dock

RGE Property

Former Building

Former Building

Former Building

Former Building

Upper Terrace

Bio-Cell

Legend

AOCs

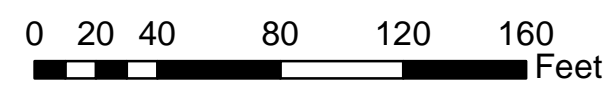
Description

- Batch Room
- Bio-Cell
- Compressor Rooms
- Former Building
- Former Septic Tank
- Homo Furnaces
- Laboratory
- Lower River Terrace
- Pangborn Dust Collector
- Pit Area
- Raceways
- Tank Furnace
- Tanks/Lehrs
- Transformers/Electrical
- Upper Terrace

Revised Areas of Concern (AOCs)

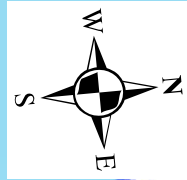
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂ C₂ inc.



DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	1/28/11		2-6

Genesee River

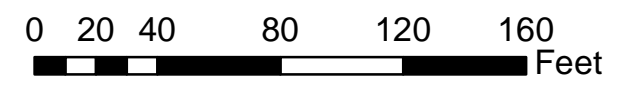
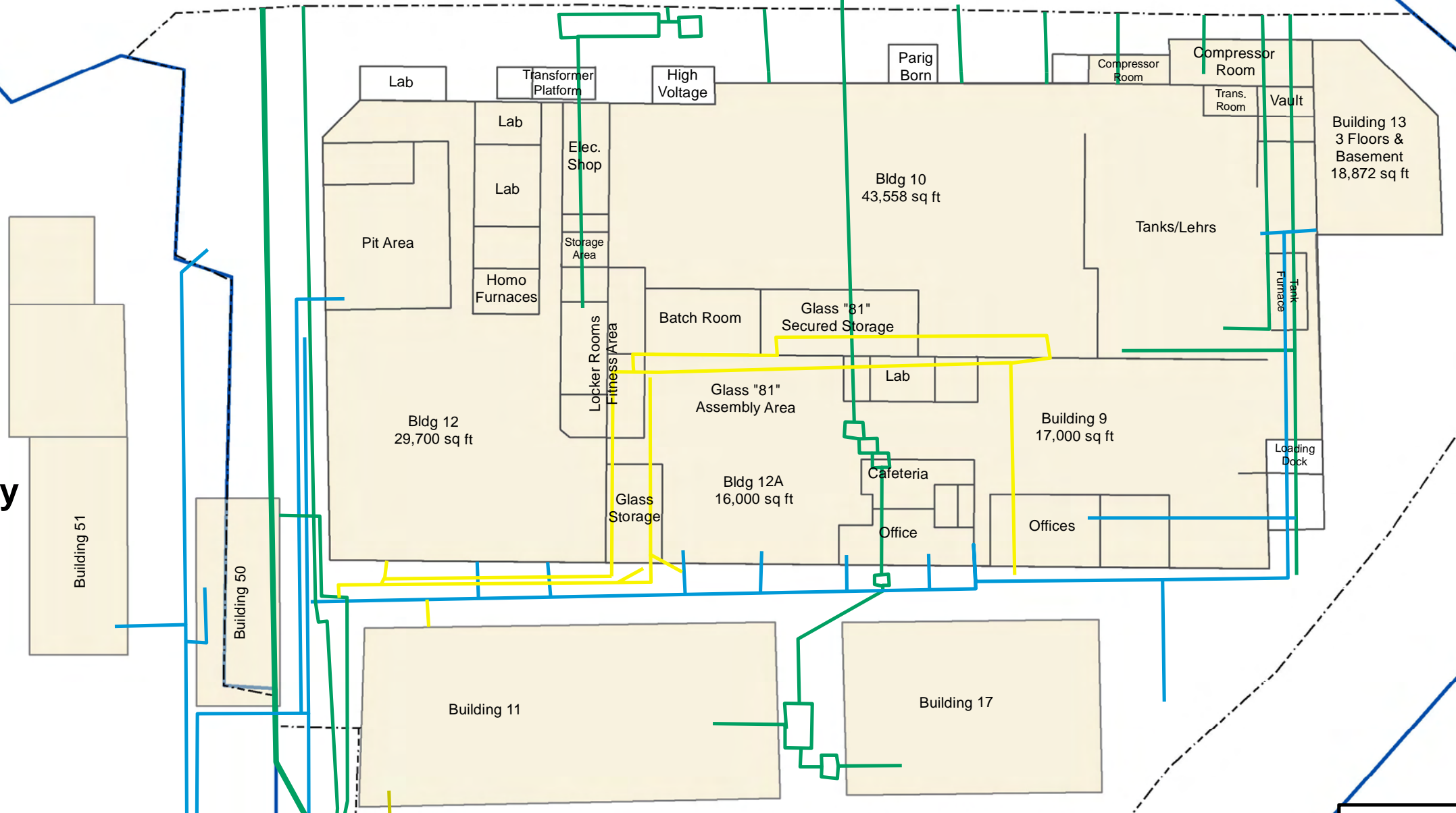


Legend

Pipping Description

- 11" Sewer Line
- Gas Lines
- Sluice Ways and Drains
- Steam Line
- Water Lines

RGE Property



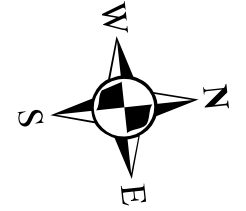
Piping Diagram

Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂ C₂ inc.

DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	1/31/2011		2-7

Genesee River



SB-14		
5.0-5.5 ft bgs		
Analyte	Units	Result
Acetone	mg/kg	0.0052 BJ

SB-23		
5.0-5.5 ft bgs		
Analyte	Units	Result
Acetone	mg/kg	0.0049 BJ

SB-06		
10-10.5 ft bgs		
Analyte	Units	Result
2-Butanone	mg/kg	0.0022 J
Acetone	mg/kg	0.0099 BJ
Carbon Disulfide	mg/kg	0.0018 J
cis-DCE	mg/kg	0.00079 J
Toluene	mg/kg	0.00058 J
Viny Chloride	mg/kg	0.00071 J

SB-03		
4.5-5.0 ft bgs		
Analyte	Units	Result
cis-DCE	mg/kg	0.0028 J
Toluene	mg/kg	0.0009 J

SB-20				
Analyte	Units	6.0-6.5 ft bgs	15.5-16.0 ft bgs	
Benzene	mg/kg	ND	0.5 J	
Ethylbenzene	mg/kg	ND	0.17 J	
Isopropylbenzene	mg/kg	0.76	ND	
Naphthalene	mg/kg	ND	28	

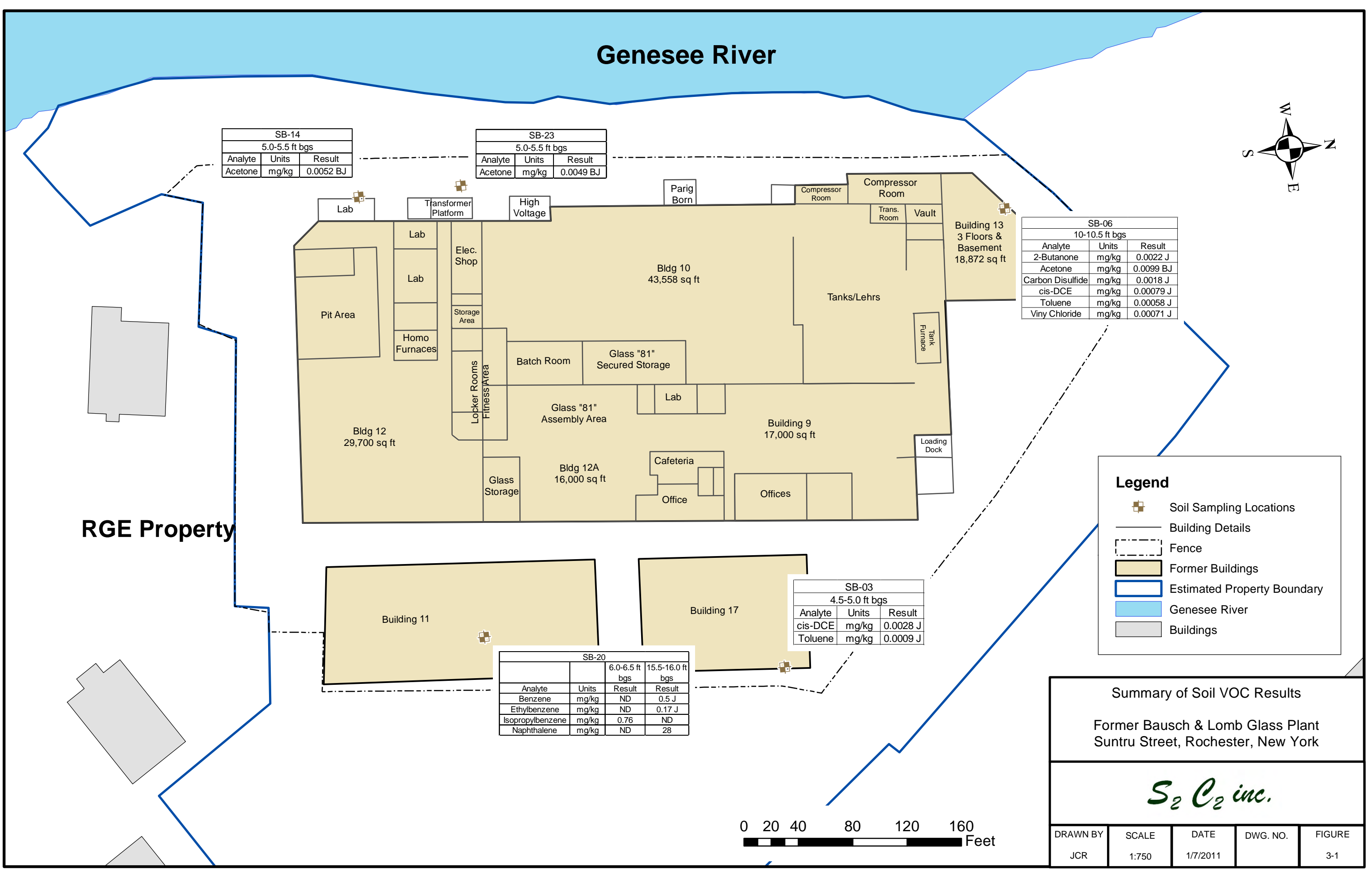
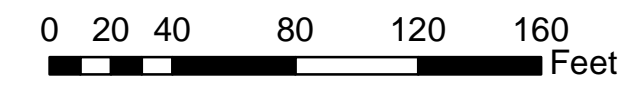
Legend

- Soil Sampling Locations
- Building Details
- Fence
- Former Buildings
- Estimated Property Boundary
- Genesee River
- Buildings

Summary of Soil VOC Results
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York



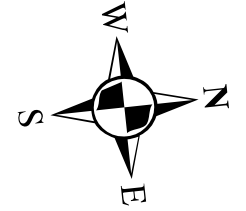
DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	1/7/2011		3-1



RGE Property

Genesee River

RGE Property



SB-14			SB-23			SB-11			SB-12			SB-22		
Sample Name	SB-14 (0-0.5)*		Sample Name	SB-23 (0-0.5)		Sample Name	SB-11 (0-0.5)		Sample Name	SB-12 (0-0.5)		Sample Name	SB-22 (0.5-1)	
Units	mg/kg		Units	mg/kg		Units	mg/kg		Units	mg/kg		Units	mg/kg	
Aroclor-1016	0.038	U	Aroclor-1016	0.038	U	Aroclor-1016	0.039	U	Aroclor-1016	0.038	U	Aroclor-1016	0.039	U
Aroclor-1221	0.076	U	Aroclor-1221	0.077	U	Aroclor-1221	0.079	U	Aroclor-1221	0.077	U	Aroclor-1221	0.079	U
Aroclor-1232	0.038	U	Aroclor-1232	0.038	U	Aroclor-1232	0.039	U	Aroclor-1232	0.038	U	Aroclor-1232	0.039	U
Aroclor-1242	0.038	U	Aroclor-1242	0.038	U	Aroclor-1242	0.039	U	Aroclor-1242	0.038	U	Aroclor-1242	0.039	U
Aroclor-1248	0.038	U	Aroclor-1248	0.038	U	Aroclor-1248	0.039	U	Aroclor-1248	0.038	U	Aroclor-1248	0.039	U
Aroclor-1254	0.038	U	Aroclor-1254	0.038	U	Aroclor-1254	0.039	U	Aroclor-1254	0.038	U	Aroclor-1254	0.039	U
Aroclor-1260	0.038	U	Aroclor-1260	0.038	U	Aroclor-1260	0.12		Aroclor-1260	0.038	U	Aroclor-1260	0.039	U
Total PCBs	ND		Total PCBs	ND		Total PCBs	0.12		Total PCBs	ND		Total PCBs	ND	

SB-25		
Sample Name	SB-25 (0.5-1)*	
Units	mg/kg	
Aroclor-1016	0.044	U
Aroclor-1221	0.089	U
Aroclor-1232	0.044	U
Aroclor-1242	0.044	U
Aroclor-1248	0.044	U
Aroclor-1254	0.044	U
Aroclor-1260	0.044	U
Total PCBs	ND	

SB-24		
Sample Name	SB-24 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.036	U
Aroclor-1221	0.073	U
Aroclor-1232	0.036	U
Aroclor-1242	0.036	U
Aroclor-1248	0.036	U
Aroclor-1254	0.036	U
Aroclor-1260	0.036	U
Total PCBs	ND	

SB-08		
Sample Name	SB-08 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.037	U
Aroclor-1221	0.074	U
Aroclor-1232	0.037	U
Aroclor-1242	0.037	U
Aroclor-1248	0.037	U
Aroclor-1254	0.037	U
Aroclor-1260	0.037	U
Total PCBs	ND	

SB-06		
Sample Name	SB-06 (0-0.5)	
Units	mg/kg	
Aroclor-1016	0.038	U
Aroclor-1221	0.078	U
Aroclor-1232	0.038	U
Aroclor-1242	0.038	U
Aroclor-1248	0.038	U
Aroclor-1254	0.038	U
Aroclor-1260	0.038	U
Total PCBs	ND	

SB-26		
Sample Name	SB-26 (0.5-1)*	
Units	mg/kg	
Aroclor-1016	0.045	U
Aroclor-1221	0.091	U
Aroclor-1232	0.045	U
Aroclor-1242	0.045	U
Aroclor-1248	0.045	U
Aroclor-1254	0.045	U
Aroclor-1260	0.045	U
Total PCBs	ND	

SB-09		
Sample Name	SB-09 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.038	U
Aroclor-1221	0.078	U
Aroclor-1232	0.038	U
Aroclor-1242	0.038	U
Aroclor-1248	0.038	U
Aroclor-1254	0.038	U
Aroclor-1260	0.038	U
Total PCBs	ND	

SB-20		
Sample Name	SB-20 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.043	U
Aroclor-1221	0.088	U
Aroclor-1232	0.043	U
Aroclor-1242	0.043	U
Aroclor-1248	0.043	U
Aroclor-1254	0.043	U
Aroclor-1260	0.043	U
Total PCBs	ND	

SB-03		
Sample Name	SB-03 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.037	U
Aroclor-1221	0.076	U
Aroclor-1232	0.037	U
Aroclor-1242	0.037	U
Aroclor-1248	0.037	U
Aroclor-1254	0.037	U
Aroclor-1260	0.037	U
Total PCBs	ND	

SB-19		
Sample Name	SB-19 (0.5-1)	
Units	mg/kg	
Aroclor-1016	0.19	U
Aroclor-1221	0.38	U
Aroclor-1232	0.19	U
Aroclor-1242	0.19	U
Aroclor-1248	0.19	U
Aroclor-1254	0.19	U
Aroclor-1260	1.6	
Total PCBs	1.6	

Legend

- Soil Sampling Locations
- Building Details
- Fence
- Former Buildings
- Estimated Property Boundary
- Genesee River
- Buildings

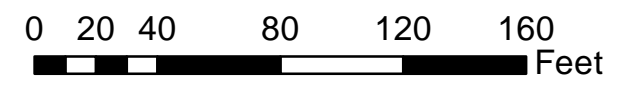
NY-RSCO-Industrial and EPA TSCA PCB standard is 25 mg/kg.

Summary of Soil PCB Results


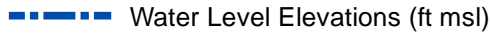
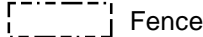



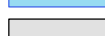
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂C₂ inc.

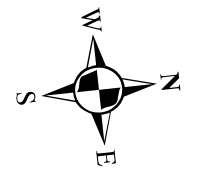
DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	1/7/2011		3-2



Legend

-  Monitoring Well
-  Water Level Elevations (ft msl)
-  Fence
-  Former Buildings
-  Estimated Property Boundary
-  Genesee River
-  Buildings

Genesee River



RGE Property

MW-02
390.2 ft msl

390 ft msl

MW-01
390.0 ft msl

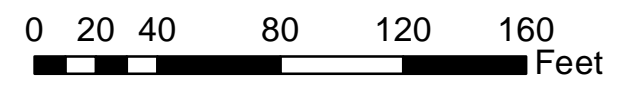
MW-04
391.5 ft msl

395 ft msl

MW-03
396.8 ft msl

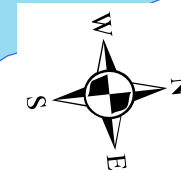
Water Level Elevations (August 2010)
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂C₂ inc.



DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	01/12/2011		3-6

Genesee River



New York State Groundwater Standards and Guidance Values April 2000 (ug/L)

Volatile Organic Compounds (VOCs)	
Benzene	1
Carbon Disulfide	60
Chloroform	7
cis-1,2-Dichloroethene	5 *
Cyclohexane	NS
Ethylbenzene	5 *
Isopropylbenzene	5 *
m&p-Xylenes	5 *
Methylcyclohexane	NS
o-Xylene	5 *
Toluene	5 *
Trichloroethylene	5 *
Vinyl Chloride	2

Semi-Volatile Organic Compounds (SVOCs)	
2-Methylnaphthalene	NS
Acenaphthene	NS
Acenaphthylene	NS
Anthracene	NS
Benzo(a)Anthracene	NS
Benzo(a)Pyrene	Not Detectable
Benzo(b)fluoranthene	NS
Benzo(g,h,i)Perylene	NS
Benzo(k)fluoranthene	NS
Biphenyl	5 **
Carbazole	NS
Chrysene	NS
Dibenzofuran	NS
Fluoranthene	NS
Fluorene	NS
Indeno(1,2,3-cd)Pyrene	NS
Naphthalene	NS
Phenanthrene	NS
Pyrene	NS

Metals	
Arsenic	50
Barium	2,000
Calcium	NS
Chromium (Total)	50
Copper	400
Iron	600
Lead	50
Magnesium	NS
Manganese	600
Nickel	200
Sodium	NS
Zinc	5,000

PIPE-G

MW-02

Sample Name	Units	MW-2 3Q10	ug/L
Volatile Organic Compounds (VOCs)			
Benzene	5	U	
Carbon Disulfide	10	U	
Chloroform	5	U	
cis-1,2-Dichloroethene	5	U	
Cyclohexane	10	U	
Ethylbenzene	5	U	
Isopropylbenzene	5	U	
m&p-Xylenes	5	U	
Methylcyclohexane	10	U	
o-Xylene	5	U	
Toluene	5	U	
Trichloroethylene	5	U	
Vinyl Chloride	5	U	
Semi-Volatile Organic Compounds (SVOCs)			
2-Methylnaphthalene	9.4	U	
Acenaphthene	3.2/3.4	J	
Acenaphthylene	9.4	U	
Anthracene	9.4	U	
Benzo(a)Anthracene	9.4	U	
Benzo(a)Pyrene	9.4	U	
Benzo(b)fluoranthene	9.4	U	
Benzo(g,h,i)Perylene	9.4	U	
Benzo(k)fluoranthene	9.4	U	
Biphenyl	9.4	U	
Carbazole	9.4	U	
Chrysene	9.4	U	
Dibenzofuran	9.4	U	
Fluoranthene	1.0/1.2	J	
Fluorene	9.4	U	
Indeno(1,2,3-cd)Pyrene	9.4	U	
Naphthalene	9.4	U	
Phenanthrene	9.4	U	
Pyrene	9.4	U	
Metals			
Arsenic	10	U	
Barium	192/195	U	
Calcium	121,000/121,000	U	
Chromium (Total)	10	U	
Copper	20	U	
Iron	808/825	U	
Lead	50	U	
Magnesium	45,900/46,800	U	
Manganese	349/355	U	
Nickel	40	U	
Sodium	465,000/467,000	U	
Zinc	20	U	

Sample Name	Units	MW-4 3Q10	ug/L
Volatile Organic Compounds (VOCs)			
Benzene	1.3	J	
Carbon Disulfide	0.44	J	
Chloroform	5	U	
cis-1,2-Dichloroethene	5	U	
Cyclohexane	10	U	
Ethylbenzene	2.2	J	
Isopropylbenzene	5	U	
m&p-Xylenes	5	U	
Methylcyclohexane	10	U	
o-Xylene	5	U	
Toluene	0.49	J	
Trichloroethylene	5	U	
Vinyl Chloride	5	U	
Semi-Volatile Organic Compounds (SVOCs)			
2-Methylnaphthalene	1.2	J	
Acenaphthene	9.4	U	
Acenaphthylene	9.4	U	
Anthracene	9.4	U	
Benzo(a)Anthracene	9.4	U	
Benzo(a)Pyrene	9.4	U	
Benzo(b)fluoranthene	9.4	U	
Benzo(g,h,i)Perylene	9.4	U	
Benzo(k)fluoranthene	9.4	U	
Biphenyl	9.4	U	
Carbazole	9.4	U	
Chrysene	9.4	U	
Dibenzofuran	9.4	U	
Fluoranthene	9.4	U	
Fluorene	9.4	U	
Indeno(1,2,3-cd)Pyrene	9.4	U	
Naphthalene	14	U	
Phenanthrene	9.4	U	
Pyrene	9.4	U	
Metals			
Arsenic	18.8	U	
Barium	20	U	
Calcium	310,000	U	
Chromium (Total)	49.7	U	
Copper	361	U	
Iron	48,800	U	
Lead	50.3	U	
Magnesium	48,300	U	
Manganese	1,570	U	
Nickel	128	U	
Sodium	66,600	U	
Zinc	863	U	

Sample Name	Units	PIPE G 3Q10	ug/L
Volatile Organic Compounds (VOCs)			
Benzene	5	U	
Carbon Disulfide	10	U	
Chloroform	5	U	
cis-1,2-Dichloroethene	5	U	
Cyclohexane	10	U	
Ethylbenzene	5	U	
Isopropylbenzene	5	U	
m&p-Xylenes	5	U	
Methylcyclohexane	10	U	
o-Xylene	5	U	
Toluene	5	U	
Trichloroethylene	0.26	J	
Vinyl Chloride	5	U	

MW-01/GW-06

Sample Name	Units	MW-1 3Q10	ug/L	GW-06 (16-18)	ug/L
Volatile Organic Compounds (VOCs)					
Benzene	5	U		5	U
Carbon Disulfide	10	U		10	U
Chloroform	5	U		5	U
cis-1,2-Dichloroethene	3.5	J		0.72	J
Cyclohexane	10	U		10	U
Ethylbenzene	5	U		5	U
Isopropylbenzene	5	U		5	U
m&p-Xylenes	5	U		5	U
Methylcyclohexane	10	U		10	U
o-Xylene	5	U		5	U
Toluene	5	U		5	U
Trichloroethylene	13	U		5	U
Vinyl Chloride	1.1	J		5	U
Semi-Volatile Organic Compounds (SVOCs)					
2-Methylnaphthalene	9.4	U		NA	
Acenaphthene	9.4	U		NA	
Acenaphthylene	9.4	U		NA	
Anthracene	9.4	U		NA	
Benzo(a)Anthracene	9.4	U		NA	
Benzo(a)Pyrene	9.4	U		NA	
Benzo(b)fluoranthene	9.4	U		NA	
Benzo(g,h,i)Perylene	9.4	U		NA	
Benzo(k)fluoranthene	9.4	U		NA	
Biphenyl	9.4	U		NA	
Carbazole	9.4	U		NA	
Chrysene	9.4	U		NA	
Dibenzofuran	9.4	U		NA	
Fluoranthene	9.4	U		NA	
Fluorene	9.4	U		NA	
Indeno(1,2,3-cd)Pyrene	9.4	U		NA	
Naphthalene	9.4	U		NA	
Phenanthrene	9.4	U		NA	
Pyrene	9.4	U		NA	
Metals					
Arsenic	10	U		NA	
Barium	162	U		NA	
Calcium	179,000	U		NA	
Chromium (Total)	10	U		NA	
Copper	20	U		NA	
Iron	2,030	U		NA	
Lead	50	U		NA	
Magnesium	79,500	U		NA	
Manganese	297	U		NA	
Nickel	40	U		NA	
Sodium	906,000	U		NA	
Zinc	20	U		NA	

Sample Name	Units	MW-3 3Q10 A	ug/L	MW-3 3Q10 B	ug/L
Volatile Organic Compounds (VOCs)					
Benzene	150		170		
Carbon Disulfide	10	U	0.64	J	
Chloroform	5	U	5	U	
cis-1,2-Dichloroethene	5	U	5	U	
Cyclohexane	5.7	J	6.5	J	
Ethylbenzene	4.2	J	6.6	J	
Isopropylbenzene	2.9	J	4.4	J	
m&p-Xylenes	3.2	J	3.9	J	
Methylcyclohexane	1.1	J	2.7	J	
o-Xylene	3	J	3.3	J	
Toluene	0.58	J	0.79	J	
Trichloroethylene	5	U	5	U	
Vinyl Chloride	5	U	5	U	
Semi-Volatile Organic Compounds (SVOCs)					
2-Methylnaphthalene	1.1	J	6.7	J	
Acenaphthene	23	U	120	U	
Acenaphthylene	9.4	U	25	U	
Anthracene	1.4	J	34	J	
Benzo(a)Anthracene	9.4	U	16	J	
Benzo(a)Pyrene	9.4	U	16	J	
Benzo(b)fluoranthene	9.4	U	7.9	J	
Benzo(g,h,i)Perylene	9.4	U	7.4	J	
Benzo(k)fluoranthene	9.4	U	7.7	J	
Biphenyl	1.4	J	28	J	
Carbazole	2.2	J	5.6	J	
Chrysene	9.4	U	15	J	
Dibenzofuran	9.4	U	5.4	J	
Fluoranthene	1.7	J	46	J	
Fluorene	2.8	J	48	J	
Indeno(1,2,3-cd)Pyrene	9.4	U	5.4	J	
Naphthalene	23	U	53	U	
Phenanthrene	6	J	150	J	
Pyrene	1.6	J	56	J	
Metals					
Arsenic	10	U	NA		
Barium	252	U	NA		
Calcium	131,000	U	NA		
Chromium (Total)	10	U	NA		
Copper	20	U	NA		
Iron	1,210	U	NA		
Lead	50	U	NA		
Magnesium	77,900	U	NA		
Manganese	684	U	NA		
Nickel	40	U	NA		
Sodium	576,000	U	NA		
Zinc	20	U	NA		

MW-03

RGE Property

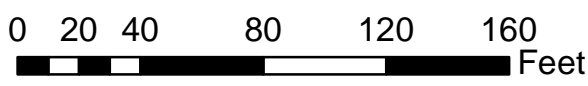
Overburden Groundwater Results
Former Bausch & Lomb Glass Plant
Suntru Street, Rochester, New York

S₂C₂ inc.

Legend

Locations

- Monitoring Well
- Flowing Pipe
- Fence
- Former Buildings
- Estimated Property Boundary
- Genesee River
- Buildings



DRAWN BY	SCALE	DATE	DWG. NO.	FIGURE
JCR	1:750	01/12/2011		3-7

Tables

**Table 2-1 Well Construction Summary
Bausch Lomb Glass Plant
Rochester, New York**

Monitoring Well ID	Status	Installation Date	Easting	Northing	Total Borehole Depth (ft)	Top of Casing Elevation (ft msl)	Ground Surface Elevation (ft msl)	Diameter (in)	Screened Interval (Nearest 0.5 ft)	Total Depth (ft)
MW-01	Active	6/30/2010	1404798.0	1156561.0	21.5	399.1	396.711	1.5	5-15	15
MW-02	Active	6/30/2010	1404736.8	1156090.0	21.5	401.5	399.4	1.5	10-20	20
MW-03	Active	6/30/2010	1405069.0	1156146.9	18.5	405.6	402.8	1.5	12-17	17
MW-04	Active	7/1/2010	1404859.9	1156195.7	12	402.2	400.971	1.5	8-13	13

Notes: Please note coordinates are in NAD 1983 NY State Plane West and elevations are reported to canal datum used on adjacent RG&E property.

Table 3-1 Soil Analytical Summary - Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name		SB-03 (4.5-5)	SB-06 (10-10.5)	SB-14 (5-5.5)	SB-20 (6-6.5)	SB-20 (15.5-16)
Sample Date		7/1/2010	6/30/2010	6/30/2010	6/30/2010	6/30/2010
Lab Sample ID	NY-RSCO-	R1003506-012	R1003506-003	R1003506-006	R1003506-009	R1003506-010
Date Analyzed	INDUSTRIAL	7/2/2010	7/2/2010	7/2/2010	7/8/2010	7/8/2010
Matrix		Soil	Soil	Soil	Soil	Soil
Percent Moisture		37.5	15	10	13	25.2
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,1,2,2-Tetrachloroethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,1,2-Trichloroethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,1-Dichloroethane	480	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,1-Dichloroethylene	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2,4-Trichlorobenzene	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2-Dibromo-3-Chloropropane (DBCP)	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2-Dibromomethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2-Dichlorobenzene	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2-Dichloroethane	60	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,2-Dichloropropane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
1,4-Dichlorobenzene	250	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
2-Butanone	1,000	0.024 U	0.0022 J	0.012 U	0.99 U	1.5 U
4-Methyl-2-Pentanone	NS	0.024 U	0.011 U	0.012 U	0.99 U	1.5 U
Acetone	1,000	0.047 U	0.0099 UJ	0.0052 UJ	2 U	3 U
Benzene	89	0.012 U	0.0057 U	0.0058 U	0.49 U	0.5 J
Bromodichloromethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Bromomethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Carbon Disulfide	NS	0.024 U	0.0018 J	0.012 U	0.99 U	1.5 U
Carbon Tetrachloride	44	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
CFC-11	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
CFC-12	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Chlorobenzene	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Chlorodibromomethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Chloroethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Chloroform	700	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Chloromethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
cis-1,2-Dichloroethene	1,000	0.0028 J	0.00079 J	0.0058 U	0.49 U	0.74 U
cis-1,3-Dichloropropene	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Cyclohexane	NS	0.024 U	0.011 U	0.012 U	0.99 U	1.5 U
Dichloromethane	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Ethylbenzene	780	0.012 U	0.0057 U	0.0058 U	0.49 U	0.17 J
Freon 113	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Isopropylbenzene	NS	0.012 U	0.0057 U	0.0058 U	0.76	0.74 U
m&p-Xylenes	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
m-Dichlorobenzene	560	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Methyl Acetate	NS	0.024 U	0.011 U	0.012 U	0.99 U	1.5 U
Methyl N-Butyl Ketone	NS	0.024 U	0.011 U	0.012 U	0.99 U	1.5 U
Methylcyclohexane	NS	0.024 U	0.011 U	0.012 U	0.99 U	1.5 U
Methyl-tert-Butyl Ether (MTBE)	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Naphthalene	1,000	7.9 U	0.39 U	0.37 U	1.9 U	28
o-Xylene	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Styrene (Monomer)	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Tetrachloroethene	300	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Toluene	1,000	0.0009 J	0.00058 J	0.00059 J	0.49 U	0.74 U
trans-1,2-Dichloroethene	1,000	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
trans-1,3-Dichloropropene	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Tribromomethane	NS	0.012 U	0.0057 U	0.0058 U	0.49 U	0.74 U
Trichloroethylene	400	0.017	0.0057 U	0.0058 U	0.49 U	0.74 U
Vinyl Chloride	27	0.012 U	0.00071 J	0.0058 U	0.49 U	0.74 U

Notes:

U Compound not detected at reporting limit.

B Compound detected in blank

J Estimated value below reporting limit.

**Table 3-1 Soil Analytical Summary - Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name		SB-23 (5-5.5)
Sample Date		7/1/2010
Lab Sample ID	NY-RSCO-	R1003506-020
Date Analyzed	INDUSTRIAL	7/2/2010
Matrix		Soil
Percent Moisture		12.8
Units	mg/kg	mg/kg

Volatile Organic Compounds (VOCs)

1,1,1-Trichloroethane	1,000	0.0067	U
1,1,2,2-Tetrachloroethane	NS	0.0067	U
1,1,2-Trichloroethane	NS	0.0067	U
1,1-Dichloroethane	480	0.0067	U
1,1-Dichloroethylene	1,000	0.0067	U
1,2,4-Trichlorobenzene	NS	0.0067	U
1,2-Dibromo-3-Chloropropane (DBCP)	NS	0.0067	U
1,2-Dibromomethane	NS	0.0067	U
1,2-Dichlorobenzene	1,000	0.0067	U
1,2-Dichloroethane	60	0.0067	U
1,2-Dichloropropane	NS	0.0067	U
1,4-Dichlorobenzene	250	0.0067	U
2-Butanone	1,000	0.013	U
4-Methyl-2-Pentanone	NS	0.013	U
Acetone	1,000	0.0049	UJ
Benzene	89	0.0067	U
Bromodichloromethane	NS	0.0067	U
Bromomethane	NS	0.0067	U
Carbon Disulfide	NS	0.013	U
Carbon Tetrachloride	44	0.0067	U
CFC-11	NS	0.0067	U
CFC-12	NS	0.0067	U
Chlorobenzene	1,000	0.0067	U
Chlorodibromomethane	NS	0.0067	U
Chloroethane	NS	0.0067	U
Chloroform	700	0.0067	U
Chloromethane	NS	0.0067	U
cis-1,2-Dichloroethene	1,000	0.0067	U
cis-1,3-Dichloropropene	NS	0.0067	U
Cyclohexane	NS	0.013	U
Dichloromethane	1,000	0.0067	U
Ethylbenzene	780	0.0067	U
Freon 113	NS	0.0067	U
Isopropylbenzene	NS	0.0067	U
m&p-Xylenes	NS	0.0067	U
m-Dichlorobenzene	560	0.0067	U
Methyl Acetate	NS	0.013	U
Methyl N-Butyl Ketone	NS	0.013	U
Methylcyclohexane	NS	0.013	U
Methyl-tert-Butyl Ether (MTBE)	1,000	0.0067	U
Naphthalene	1,000	0.38	U
o-Xylene	NS	0.0067	U
Styrene (Monomer)	NS	0.0067	U
Tetrachloroethene	300	0.0067	U
Toluene	1,000	0.0067	U
trans-1,2-Dichloroethene	1,000	0.0067	U
trans-1,3-Dichloropropene	NS	0.0067	U
Tribromomethane	NS	0.0067	U
Trichloroethylene	400	0.0067	U
Vinyl Chloride	27	0.0067	U

Notes:

U Compound not detected at reporting limit.

B Compound detected in blank

J Estimated value below reporting limit.

**Table 3-10 Groundwater Analytical Summary
Semi-Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	New York State	MW-1 3Q10	MW-2 3Q10	MW-2 3Q10 DUP	MW-3 3Q10 A	MW-3 3Q10 B
Sample Date	Groundwater	8/24/2010	8/24/2010	8/24/2010	8/24/2010	8/24/2010
Lab Sample ID	Standards and	R1004555-001	R1004555-002	R1004555-003	R1004555-005	R1004555-006
Analysis Date	Guidance	8/30/2010	8/30/2010	8/30/2010	8/30/2010	8/30/2010
Matrix	Values April	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dilution Factor	2000 (ug/L)	1	1	1	1	2
Units		ug/L	ug/L	ug/L	ug/L	ug/L
Semi-Volatile Organic Compounds (SVOCs)						
2,4,5-Trichlorophenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2,4,6-Trichlorophenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2,4-Dichlorophenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2,4-Dimethylphenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2,4-Dinitrophenol	1*	47 U	47 U	47 U	47 U	94 U
2,4-Dinitrotoluene	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2,6-Dinitrotoluene	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2-Chloronaphthalene	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2-Chlorophenol	1	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2-Methylnaphthalene	NS	9.4 U	9.4 U	9.4 U	1.1 J	6.7 J
2-Methylphenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
2-Nitroaniline	5**	47 U	47 U	47 U	47 U	94 U
2-Nitrophenol	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
3,3-Dichlorobenzidine	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
3-Nitroaniline	5**	47 U	47 U	47 U	47 U	94 U
4,6-Dinitro-2-methylphenol	NS	47 U	47 U	47 U	47 U	94 U
4-Bromophenyl Phenyl Ether	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
4-Chloro-3-Methylphenol	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
4-Chlorophenyl Phenyl Ether	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
4-Methylphenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
4-Nitrophenol	1*	47 U	47 U	47 U	47 U	94 U
Acenaphthene	NS	9.4 U	3.2 J	3.4 J	23	120
Acenaphthylene	NS	9.4 U	9.4 U	9.4 U	9.4 U	25
Acetophenone	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Anthracene	NS	9.4 U	9.4 U	9.4 U	1.4 J	34
Atrazine	7.5	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Benzaldehyde	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Benzo(a)Anthracene	NS	9.4 U	9.4 U	9.4 U	9.4 U	16 J
Benzo(a)Pyrene	Not Detectable	9.4 U	9.4 U	9.4 U	9.4 U	16 J
Benzo(b)fluoranthene	NS	9.4 U	9.4 U	9.4 U	9.4 U	7.9 J
Benzo(g,h,i)Perylene	NS	9.4 U	9.4 U	9.4 U	9.4 U	7.4 J
Benzo(k)fluoranthene	NS	9.4 U	9.4 U	9.4 U	9.4 U	7.7 J
Benzyl Butyl Phthalate	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Biphenyl	5**	9.4 U	9.4 U	9.4 U	1.4 J	28
Bis(1-Chlorisopropyl) Ether	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Bis(2-Chloroethoxy) Methane	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Bis(2-Chloroethyl) Ether	1	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Bis(2-Ethylhexyl) Phthalate	5	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Caprolactam	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Carbazole	NS	9.4 U	9.4 U	9.4 U	2.2 J	5.6 J
Chrysene	NS	9.4 U	9.4 U	9.4 U	9.4 U	15 J
dibenz(a,h)anthracene	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Dibenzofuran	NS	9.4 U	9.4 U	9.4 U	9.4 U	5.4 J
Diethyl Phthalate	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Dimethyl Phthalate	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Di-n-butyl phthalate	50	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Di-n-octyl phthalate	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Fluoranthene	NS	9.4 U	1 J	1.2 J	1.7 J	46
Fluorene	NS	9.4 U	9.4 U	9.4 U	2.8 J	48
Hexachloro-1,3-Butadiene	0.5	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Hexachlorobenzene	0.04	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Hexachlorocyclopentadiene	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Hexachloroethane	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Indeno(1,2,3-cd)Pyrene	NS	9.4 U	9.4 U	9.4 U	9.4 U	5.4 J
Isophorone	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Naphthalene	NS	9.4 U	9.4 U	9.4 U	23	53
Nitrobenzene	0.4	9.4 U	9.4 U	9.4 U	9.4 U	19 U
N-Nitroso-Di-n-propylamine	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
N-Nitrosodiphenylamine	NS	9.4 U	9.4 U	9.4 U	9.4 U	19 U
p-Chloroaniline	5**	9.4 U	9.4 U	9.4 U	9.4 U	19 U
Pentachlorophenol	1*	47 U	47 U	47 U	47 U	94 U
Phenanthrene	NS	9.4 U	9.4 U	9.4 U	6 J	150
Phenol	1*	9.4 U	9.4 U	9.4 U	9.4 U	19 U
p-Nitroaniline	5**	47 U	47 U	47 U	47 U	94 U
Pyrene	NS	9.4 U	9.4 U	9.4 U	1.6 J	56

Notes:

U Compound not detected at reporting limit.

B Compound detected in blank

J Estimated value below reporting limit.

Bold values indicate detected compounds

Highlighted values indicate exceedence of NY GW standard.

* Applies to sum of all phenolic compounds.

** The Principal organic contaminant standard for groundwater of 5 ug/L applies to this compound.

**Table 3-10 Groundwater Analytical Summary
Semi-Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	New York State	MW-4 3Q10	FB082310
Sample Date	State	8/24/2010	8/24/2010
Lab Sample ID	Groundwater	R1004555-004	R1004555-008
Analysis Date	Standards and	8/30/2010	8/30/2010
Matrix	Guidance	Groundwater	Lab Water
Dilution Factor	Values April	1	1
Units	2000 (ug/L)	ug/L	ug/L
Semi-Volatile Organic Compounds (SVOCs)			
2,4,5-Trichlorophenol	1*	9.4 U	9.4 U
2,4,6-Trichlorophenol	1*	9.4 U	9.4 U
2,4-Dichlorophenol	1*	9.4 U	9.4 U
2,4-Dimethylphenol	1*	9.4 U	9.4 U
2,4-Dinitrophenol	1*	47 U	47 U
2,4-Dinitrotoluene	5**	9.4 U	9.4 U
2,6-Dinitrotoluene	5**	9.4 U	9.4 U
2-Chloronaphthalene	NS	9.4 U	9.4 U
2-Chlorophenol	1	9.4 U	9.4 U
2-Methylnaphthalene	NS	1.2 J	9.4 U
2-Methylphenol	1*	9.4 U	9.4 U
2-Nitroaniline	5**	47 U	47 U
2-Nitrophenol	NS	9.4 U	9.4 U
3,3-Dichlorobenzidine	5**	9.4 U	9.4 U
3-Nitroaniline	5**	47 U	47 U
4,6-Dinitro-2-methylphenol	NS	47 U	47 U
4-Bromophenyl Phenyl Ether	NS	9.4 U	9.4 U
4-Chloro-3-Methylphenol	NS	9.4 U	9.4 U
4-Chlorophenyl Phenyl Ether	NS	9.4 U	9.4 U
4-Methylphenol	1*	9.4 U	9.4 U
4-Nitrophenol	1*	47 U	47 U
Acenaphthene	NS	9.4 U	9.4 U
Acenaphthylene	NS	9.4 U	9.4 U
Acetophenone	NS	9.4 U	9.4 U
Anthracene	NS	9.4 U	9.4 U
Atrazine	7.5	9.4 U	9.4 U
Benzaldehyde	NS	9.4 U	9.4 U
Benzo(a)Anthracene	NS	9.4 U	9.4 U
Benzo(a)Pyrene	Not Detectable	9.4 U	9.4 U
Benzo(b)fluoranthene	NS	9.4 U	9.4 U
Benzo(g,h,i)Perylene	NS	9.4 U	9.4 U
Benzo(k)fluoranthene	NS	9.4 U	9.4 U
Benzyl Butyl Phthalate	NS	9.4 U	9.4 U
Biphenyl	5**	9.4 U	9.4 U
Bis(1-Chloroisopropyl) Ether	5**	9.4 U	9.4 U
Bis(2-Chloroethoxy) Methane	5**	9.4 U	9.4 U
Bis(2-Chloroethyl) Ether	1	9.4 U	9.4 U
Bis(2-Ethylhexyl) Phthalate	5	9.4 U	9.4 U
Caprolactam	NS	9.4 U	9.4 U
Carbazole	NS	9.4 U	9.4 U
Chrysene	NS	9.4 U	9.4 U
dibenz(a,h)anthracene	NS	9.4 U	9.4 U
Dibenzofuran	NS	9.4 U	9.4 U
Diethyl Phthalate	NS	9.4 U	9.4 U
Dimethyl Phthalate	NS	9.4 U	9.4 U
Di-n-butyl phthalate	50	9.4 U	9.4 U
Di-n-octyl phthalate	NS	9.4 U	9.4 U
Fluoranthene	NS	9.4 U	9.4 U
Fluorene	NS	9.4 U	9.4 U
Hexachloro-1,3-Butadiene	0.5	9.4 U	9.4 U
Hexachlorobenzene	0.04	9.4 U	9.4 U
Hexachlorocyclopentadiene	5**	9.4 U	9.4 U
Hexachloroethane	5**	9.4 U	9.4 U
Indeno(1,2,3-cd)Pyrene	NS	9.4 U	9.4 U
Isophorone	NS	9.4 U	9.4 U
Naphthalene	NS	14	9.4 U
Nitrobenzene	0.4	9.4 U	9.4 U
N-Nitroso-Di-n-propylamine	NS	9.4 U	9.4 U
N-Nitrosodiphenylamine	NS	9.4 U	9.4 U
p-Chloroaniline	5**	9.4 U	9.4 U
Pentachlorophenol	1*	47 U	47 U
Phenanthrene	NS	9.4 U	9.4 U
Phenol	1*	9.4 U	9.4 U
p-Nitroaniline	5**	47 U	47 U
Pyrene	NS	9.4 U	9.4 U

Notes:

U Compound not detected at reporting limit.

B Compound detected in blank

J Estimated value below reporting limit.

Bold values indicate detected compounds

Highlighted values indicate exceedence of NY GW standard.

* Applies to sum of all phenolic compounds.

** The Principal organic contaminant standard for groundwater of 5 ug/L applies to this compound.

**Table 3-11 Groundwater Analytical Summary - Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name Sample Date Laboratory ID Analysis Date Matrix Unit	New York State Groundwater Standards and Guidance Values April 2000	MW-1 3Q10 8/24/2010 R1004555-001 8/26/2010 WG ug/l	MW-2 3Q10 8/24/2010 R1004555-002 8/26/2010 WG ug/l	MW-2 3Q10 DUP 8/24/2010 R1004555-003 8/26/2010 WG ug/l	MW-3 3Q10 A 8/24/2010 R1004555-005 8/26/2010 WG ug/l	MW-4 3Q10 8/24/2010 R1004555-004 8/26/2010 WG ug/l	FB082310 8/24/2010 R1004555-008 8/26/2010 WQ ug/l
Antimony	6	60 U	60 U	60 U	60 U	60 U	60 U
Arsenic	50	10 U	10 U	10 U	10 U	18.8	10 U
Barium	2,000	162	192	195	252	20 U	20 U
Cadmium	10	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	NS	179,000	121,000	121,000	131,000	310,000	1,000 U
Chromium (Total)	50	10 U	10 U	10 U	10 U	49.7	10 U
Cobalt	NS	50 U	50 U	50 U	50 U	50 U	50 U
Copper	400	20 U	20 U	20 U	20 U	361	20 U
Iron	600	2,030	808	825	1,210	48,800	100 U
Lead	50	50 U	50 U	50 U	50 U	50.3	50 U
Magnesium	NS	79,500	45,900	46,800	77,900	48,300	1,000 U
Manganese	600	297	349	355	684	1,570	10 U
Mercury	1.4	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	200	40 U	40 U	40 U	40 U	128	40 U
Selenium	20	10 U	10 U	10 U	10 U	10 U	10 U
Silver	100	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	NS	906,000	465,000	467,000	576,000	66,600	1,000 U
Thallium	NS	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	NS	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	5,000	20 U	20 U	20 U	20 U	863	20 U

Notes:

U Compound not detected at reporting limit.

Bold values indicate detected compounds

Highlighted values indicate exceedence of NY GW standard.

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	SB-03 (0.5-1) R1003506-011 7/1/2010 7/14/2010 Soil 11.7 mg/kg	SB-03 (4.5-5) R1003506-012 7/1/2010 7/14/2010 Soil 37.5 mg/kg	SB-06 (0-0.5) R1003506-001 6/30/2010 7/14/2010 Soil 13.8 mg/kg	SB-06 (10-10.5) R1003506-003 6/30/2010 7/13/2010 Soil 15 mg/kg	SB-06 (5.5-6) R1003506-002 6/30/2010 7/14/2010 Soil 14.2 mg/kg	SB-06 (5.5-6) R1003506-002 6/30/2010 7/24/2010 Soil 14.2 mg/kg
Semi-Volatile Organic Compounds							
2,4,5-Trichlorophenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2,4-Dichlorophenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2,4-Dimethylphenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2,4-Dinitrophenol	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
2,4-Dinitrotoluene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2,6-Dinitrotoluene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2-Chloronaphthalene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2-Chlorophenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2-Methylnaphthalene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2-Methylphenol	1,000	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
2-Nitroaniline	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
2-Nitrophenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
3,3-Dichlorobenzidine	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
3-Nitroaniline	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
4,6-Dinitro-2-methylphenol	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
4-Bromophenyl Phenyl Ether	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
4-Chloro-3-Methylphenol	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
4-Chlorophenyl Phenyl Ether	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
4-Methylphenol	1,000	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
4-Nitrophenol	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
Acenaphthene	1,000	0.37 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Acenaphthylene	1,000	1.4 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Acetophenone	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Anthracene	1,000	1.8 J	7.9 U	0.38 U	0.39 U	0.3 J	1.9 UJ
Atrazine	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Benzaldehyde	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Benzo(a)Anthracene	11	4.7 J	7.9 U	0.38 U	0.39 U	0.75 J	0.68 J
Benzo(a)Pyrene	1.1	6.3 J	7.9 U	0.38 U	0.39 U	0.95 J	0.92 J
Benzo(b)fluoranthene	11	6.1 J	7.9 U	0.38 U	0.39 U	0.65 J	0.62 J
Benzo(g,h,i)Perylene	1,000	8 J	7.9 U	0.38 U	0.39 U	1 J	0.86 J
Benzo(k)fluoranthene	110	4.8 J	7.9 U	0.38 U	0.39 U	0.83 J	0.65 J
Benzyl Butyl Phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Biphenyl	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Bis(1-Chlorisopropyl) Ether	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Bis(2-Chloroethoxy) Methane	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Bis(2-Chloroethyl) Ether	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Bis(2-Ethylhexyl) Phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Caprolactam	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Carbazole	NS	0.81 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Chrysene	110	5.9 J	7.9 U	0.38 U	0.39 U	0.76 J	0.7 J
dibenz(a,h)anthracene	1.1	1.9 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Dibenzofuran	1,000	0.4 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Diethyl Phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Dimethyl Phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Di-n-butyl phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Di-n-octyl phthalate	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Fluoranthene	1,000	8.8 J	7.9 U	0.38 U	0.39 U	1.4 J	1.1 J
Fluorene	1,000	0.41 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Hexachloro-1,3-Butadiene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Hexachlorobenzene	12	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Hexachlorocyclopentadiene	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Hexachloroethane	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Indeno(1,2,3-cd)Pyrene	11	6.1 J	7.9 U	0.38 U	0.39 U	0.75 J	0.68 J
Isophorone	NS	NA	NA	NA	NA	NA	NA
Naphthalene	1,000	0.79 J	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Nitrobenzene	15	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
N-Nitroso-Di-n-propylamine	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
N-Nitrosodiphenylamine	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
p-Chloroaniline	NS	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
Pentachlorophenol	55	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
Phenanthrene	1,000	5.9 J	7.9 U	0.38 U	0.39 U	0.82 J	0.69 J
Phenol	1,000	1.9 U	7.9 U	0.38 U	0.39 U	1.9 U	1.9 UJ
p-Nitroaniline	NS	9.6 U	41 U	2 U	2 U	9.9 U	9.9 UJ
Pyrene	1,000	8 J	7.9 U	0.38 U	0.39 U	1.2 J	1.2 J

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial RSCO.

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	SB-08 (0.5-1) R1003506-015 7/1/2010 7/13/2010 Soil 9.6 mg/kg	SB-09 (0.5-1) R1003506-026 7/1/2010 7/15/2010 Soil 13.6 mg/kg	SB-09 (2.5-3) R1003506-027 7/1/2010 7/15/2010 Soil 15.7 mg/kg	SB-11 (0-0.5) R1003506-004 6/30/2010 7/13/2010 Soil 15.6 mg/kg	SB-12 (0-0.5) R1003506-016 7/1/2010 7/14/2010 Soil 12.9 mg/kg
Semi-Volatile Organic Compounds						
2,4,5-Trichlorophenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2,4-Dichlorophenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2,4-Dimethylphenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2,4-Dinitrophenol	NS	1.9 U	20 U	2 U	2 U	2 U
2,4-Dinitrotoluene	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2,6-Dinitrotoluene	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2-Chloronaphthalene	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2-Chlorophenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2-Methylnaphthalene	NS	0.14 J	3.1 J	0.39 U	0.39 U	0.38 U
2-Methylphenol	1,000	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
2-Nitroaniline	NS	1.9 U	20 U	2 U	2 U	2 U
2-Nitrophenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
3,3-Dichlorobenzidine	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
3-Nitroaniline	NS	1.9 U	20 U	2 U	2 U	2 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	20 U	2 U	2 U	2 U
4-Bromophenyl Phenyl Ether	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
4-Chloro-3-Methylphenol	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
4-Chlorophenyl Phenyl Ether	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
4-Methylphenol	1,000	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
4-Nitrophenol	NS	1.9 U	20 U	2 U	2 U	2 U
Acenaphthene	1,000	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Acenaphthylene	1,000	0.24 J	3.8 U	0.39 U	0.39 U	0.38 U
Acetophenone	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Anthracene	1,000	0.15 J	0.55 J	0.39 U	0.06 J	0.15 J
Atrazine	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Benzaldehyde	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Benzo(a)Anthracene	11	0.83	2.3 J	0.39 U	0.23 J	0.9
Benzo(a)Pyrene	1.1	1.9	4.2	0.39 U	0.24 J	0.95
Benzo(b)fluoranthene	11	1.7	3 J	0.39 U	0.21 J	0.71
Benzo(g,h,i)Perylene	1,000	2.5	4.6	0.39 U	0.17 J	0.52
Benzo(k)fluoranthene	110	1.3	2.6 J	0.39 U	0.17 J	0.69
Benzyl Butyl Phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Biphenyl	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Bis(1-Chloroisopropyl) Ether	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Bis(2-Chloroethoxy) Methane	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Bis(2-Chloroethyl) Ether	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Bis(2-Ethylhexyl) Phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Caprolactam	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Carbazole	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Chrysene	110	1.2	3.3 J	0.39 U	0.26 J	0.84
dibenz(a,h)anthracene	1.1	0.52	3.8 U	0.39 U	0.39 U	0.17 J
Dibenzofuran	1,000	0.08 J	0.95 J	0.39 U	0.39 U	0.38 U
Diethyl Phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Dimethyl Phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Di-n-butyl phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Di-n-octyl phthalate	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Fluoranthene	1,000	1.1	3.4 J	0.39 U	0.54	1.9
Fluorene	1,000	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Hexachloro-1,3-Butadiene	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Hexachlorobenzene	12	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Hexachlorocyclopentadiene	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Hexachloroethane	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Indeno(1,2,3-cd)Pyrene	11	2	3.7 J	0.39 U	0.15 J	0.47
Isophorone	NS	NA	NA	NA	NA	NA
Naphthalene	1,000	0.19 J	2.4 J	0.39 U	0.39 U	0.38 U
Nitrobenzene	15	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
N-Nitroso-Di-n-propylamine	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
N-Nitrosodiphenylamine	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
p-Chloroaniline	NS	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
Pentachlorophenol	55	1.9 U	20 U	2 U	2 U	2 U
Phenanthrene	1,000	0.6	3.9	0.39 U	0.3 J	0.43
Phenol	1,000	0.37 U	3.8 U	0.39 U	0.39 U	0.38 U
p-Nitroaniline	NS	1.9 U	20 U	2 U	2 U	2 U
Pyrene	1,000	1.1	3.5 J	0.39 U	0.42	1.8

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	SB-12 (3.5-4) R1003506-017 7/1/2010 7/14/2010 Soil 8.7 mg/kg	SB-14 (0-0.5) R1003506-005 6/30/2010 7/14/2010 Soil 12.2 mg/kg	SB-14 (5-5.5) R1003506-006 6/30/2010 7/13/2010 Soil 10 mg/kg	SB-19 (0.5-1) R1003506-028 7/1/2010 7/15/2010 Soil 11.3 mg/kg	SB-20 (0.5-1) R1003506-007 6/30/2010 7/14/2010 Soil 24.1 mg/kg
Semi-Volatile Organic Compounds						
2,4,5-Trichlorophenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2,4-Dichlorophenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2,4-Dimethylphenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2,4-Dinitrophenol	NS	1.9 U	19 U	1.9 U	19 U	56 U
2,4-Dinitrotoluene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2,6-Dinitrotoluene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2-Chloronaphthalene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2-Chlorophenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2-Methylnaphthalene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2-Methylphenol	1,000	0.36 U	3.8 U	0.37 U	3.7 U	11 U
2-Nitroaniline	NS	1.9 U	19 U	1.9 U	19 U	56 U
2-Nitrophenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
3,3-Dichlorobenzidine	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
3-Nitroaniline	NS	1.9 U	19 U	1.9 U	19 U	56 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	19 U	1.9 U	19 U	56 U
4-Bromophenyl Phenyl Ether	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
4-Chloro-3-Methylphenol	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
4-Chlorophenyl Phenyl Ether	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
4-Methylphenol	1,000	0.36 U	3.8 U	0.37 U	3.7 U	11 U
4-Nitrophenol	NS	1.9 U	19 U	1.9 U	19 U	56 U
Acenaphthene	1,000	0.36 U	0.48 J	0.37 U	3.7 U	11 U
Acenaphthylene	1,000	0.36 U	5.3	0.37 U	3.7 U	1.3 J
Acetophenone	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Anthracene	1,000	0.055 J	3.8	0.37 U	0.41 J	6.8 J
Atrazine	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Benzaldehyde	NS	0.36 U	3.8 U	0.37 U	3.7 U	2.8 J
Benzo(a)Anthracene	11	0.18 J	16	0.37 U	1.6 J	25
Benzo(a)Pyrene	1.1	0.29 J	22	0.37 U	2 J	25
Benzo(b)fluoranthene	11	0.19 J	15	0.37 U	1.3 J	37
Benzo(g,h,i)Perylene	1,000	0.32 J	21	0.37 U	1.5 J	39
Benzo(k)fluoranthene	110	0.15 J	16	0.37 U	1.5 J	32
Benzyl Butyl Phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Biphenyl	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Bis(1-Chlorisopropyl) Ether	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Bis(2-Chloroethoxy) Methane	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Bis(2-Chloroethyl) Ether	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Bis(2-Ethylhexyl) Phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Caprolactam	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Carbazole	NS	0.36 U	0.91 J	0.37 U	3.7 U	5.7 J
Chrysene	110	0.21 J	17	0.37 U	1.7 J	34
dibenz(a,h)anthracene	1.1	0.36 U	4.5	0.37 U	3.7 U	11
Dibenzofuran	1,000	0.36 U	0.8 J	0.37 U	3.7 U	3 J
Diethyl Phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Dimethyl Phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Di-n-butyl phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Di-n-octyl phthalate	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Fluoranthene	1,000	0.33 J	23	0.37 U	2.8 J	47
Fluorene	1,000	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Hexachloro-1,3-Butadiene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Hexachlorobenzene	12	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Hexachlorocyclopentadiene	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Hexachloroethane	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Indeno(1,2,3-cd)Pyrene	11	0.24 J	17	0.37 U	1.3 J	32
Isophorone	NS	NA	NA	NA	NA	NA
Naphthalene	1,000	0.36 U	3.3 J	0.37 U	3.7 U	3.2 J
Nitrobenzene	15	0.36 U	3.8 U	0.37 U	3.7 U	11 U
N-Nitroso-Di-n-propylamine	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
N-Nitrosodiphenylamine	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
p-Chloroaniline	NS	0.36 U	3.8 U	0.37 U	3.7 U	11 U
Pentachlorophenol	55	1.9 U	19 U	1.9 U	19 U	56 U
Phenanthrene	1,000	0.25 J	10	0.37 U	1.5 J	41
Phenol	1,000	0.36 U	3.8 U	0.37 U	3.7 U	11 U
p-Nitroaniline	NS	1.9 U	19 U	1.9 U	19 U	56 U
Pyrene	1,000	0.33 J	25	0.37 U	2.7 J	36

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	SB-20 (3.5-4) R1003506-008 6/30/2010 7/13/2010 Soil 8.5 mg/kg	SB-20 (6-6.5) R1003506-009 6/30/2010 7/14/2010 Soil 13 mg/kg	SB-20 (15.5-16) R1003506-010 6/30/2010 7/16/2010 Soil 25.2 mg/kg	SB-22 (0.5-1) R1003506-029 7/1/2010 7/15/2010 Soil 15.6 mg/kg	SB-23 (0-0.5) R1003506-018 7/1/2010 7/14/2010 Soil 12.8 mg/kg
Semi-Volatile Organic Compounds						
2,4,5-Trichlorophenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2,4-Dichlorophenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2,4-Dimethylphenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2,4-Dinitrophenol	NS	1.9 U	9.8 U	NA	60 U	1.9 U
2,4-Dinitrotoluene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2,6-Dinitrotoluene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2-Chloronaphthalene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2-Chlorophenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2-Methylnaphthalene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
2-Methylphenol	1,000	0.36 U	1.9 U	NA	12 U	0.38 U
2-Nitroaniline	NS	1.9 U	9.8 U	NA	60 U	1.9 U
2-Nitrophenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
3,3-Dichlorobenzidine	NS	0.36 U	1.9 U	NA	12 U	0.38 U
3-Nitroaniline	NS	1.9 U	9.8 U	NA	60 U	1.9 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	9.8 U	NA	60 U	1.9 U
4-Bromophenyl Phenyl Ether	NS	0.36 U	1.9 U	NA	12 U	0.38 U
4-Chloro-3-Methylphenol	NS	0.36 U	1.9 U	NA	12 U	0.38 U
4-Chlorophenyl Phenyl Ether	NS	0.36 U	1.9 U	NA	12 U	0.38 U
4-Methylphenol	1,000	0.36 U	1.9 U	NA	12 U	0.38 U
4-Nitrophenol	NS	1.9 U	9.8 U	NA	60 U	1.9 U
Acenaphthene	1,000	0.36 U	1.9 U	90	12 U	0.38 U
Acenaphthylene	1,000	0.36 U	1.9 U	11	12 U	0.38 U
Acetophenone	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Anthracene	1,000	0.36 U	1.9 U	48	12 U	0.38 U
Atrazine	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Benzaldehyde	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Benzo(a)Anthracene	11	0.038 J	1.9 U	23	4.2 J	0.38 U
Benzo(a)Pyrene	1.1	0.36 U	1.9 U	24	7.3 J	0.38 U
Benzo(b)fluoranthene	11	0.36 U	1.9 U	8.2	5.1 J	0.38 U
Benzo(g,h,i)Perylene	1,000	0.36 U	1.9 U	8.7	8.2 J	0.38 U
Benzo(k)fluoranthene	110	0.36 U	1.9 U	11	3.9 J	0.38 U
Benzyl Butyl Phthalate	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Biphenyl	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Bis(1-Chlorisopropyl) Ether	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Bis(2-Chloroethoxy) Methane	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Bis(2-Chloroethyl) Ether	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Bis(2-Ethylhexyl) Phthalate	NS	0.36 U	1.9 U	NA	2.5 J	0.38 U
Caprolactam	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Carbazole	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Chrysene	110	0.043 J	1.9 U	21	4.4 J	0.38 U
dibenz(a,h)anthracene	1.1	0.36 U	1.9 U	4.4 U	12 U	0.38 U
Dibenzofuran	1,000	0.36 U	1.9 U	NA	12 U	0.38 U
Diethyl Phthalate	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Dimethyl Phthalate	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Di-n-butyl phthalate	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Di-n-octyl phthalate	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Fluoranthene	1,000	0.097 J	1.9 U	51	6.4 J	0.046 J
Fluorene	1,000	0.36 U	0.66 J	53	12 U	0.38 U
Hexachloro-1,3-Butadiene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Hexachlorobenzene	12	0.36 U	1.9 U	NA	12 U	0.38 U
Hexachlorocyclopentadiene	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Hexachloroethane	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Indeno(1,2,3-cd)Pyrene	11	0.36 U	1.9 U	6.5	6.3 J	0.38 U
Isophorone	NS	NA	NA	NA	NA	NA
Naphthalene	1,000	0.36 U	1.9 U	28	12 U	0.38 U
Nitrobenzene	15	0.36 U	1.9 U	NA	12 U	0.38 U
N-Nitroso-Di-n-propylamine	NS	0.36 U	1.9 U	NA	12 U	0.38 U
N-Nitrosodiphenylamine	NS	0.36 U	1.9 U	NA	12 U	0.38 U
p-Chloroaniline	NS	0.36 U	1.9 U	NA	12 U	0.38 U
Pentachlorophenol	55	1.9 U	9.8 U	NA	60 U	1.9 U
Phenanthrene	1,000	0.087 J	0.25 J	170	2.8 J	0.38 U
Phenol	1,000	0.36 U	1.9 U	NA	12 U	0.38 U
p-Nitroaniline	NS	1.9 U	9.8 U	NA	60 U	1.9 U
Pyrene	1,000	0.085 J	1.9 U	93	6.5 J	0.041 J

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	SB-23 (3-3.5) R1003506-019 7/1/2010 7/14/2010 Soil 8.6 mg/kg	SB-23 (3-3.5)* R1003506-019 7/1/2010 7/24/2010 Soil 8.6 mg/kg	SB-23 (5-5.5) R1003506-020 7/1/2010 7/15/2010 Soil 12.8 mg/kg	SB-24 (0.5-1) R1003506-021 7/1/2010 7/15/2010 Soil 8.6 mg/kg	SB-24 (0.5-1) R1003506-021 7/1/2010 7/23/2010 Soil 8.6 mg/kg
Semi-Volatile Organic Compounds						
2,4,5-Trichlorophenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
2,4-Dichlorophenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
2,4-Dimethylphenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
2,4-Dinitrophenol	NS	1.9 U	9.3 UJ	1.9 U	1.9 UR	1.9 UJR
2,4-Dinitrotoluene	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
2,6-Dinitrotoluene	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
2-Chloronaphthalene	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
2-Chlorophenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
2-Methylnaphthalene	NS	0.36 U	0.24 J	0.38 U	0.36 U	0.36 UJ
2-Methylphenol	1,000	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
2-Nitroaniline	NS	1.9 U	9.3 UJ	1.9 U	1.9 U	1.9 UJ
2-Nitrophenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
3,3-Dichlorobenzidine	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
3-Nitroaniline	NS	1.9 U	9.3 UJ	1.9 U	1.9 U	1.9 UJ
4,6-Dinitro-2-methylphenol	NS	1.9 U	9.3 UJ	1.9 U	1.9 UR	1.9 UJR
4-Bromophenyl Phenyl Ether	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
4-Chloro-3-Methylphenol	NS	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
4-Chlorophenyl Phenyl Ether	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
4-Methylphenol	1,000	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
4-Nitrophenol	NS	1.9 U	9.3 UJ	1.9 U	1.9 UR	1.9 UJR
Acenaphthene	1,000	0.66 J	0.39 J	0.38 U	0.36 U	0.36 UJ
Acenaphthylene	1,000	0.76 J	0.35 J	0.076 J	0.36 U	0.36 UJ
Acetophenone	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Anthracene	1,000	2.5 J	1.3 J	0.11 J	0.36 U	0.36 UJ
Atrazine	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Benzaldehyde	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Benzo(a)Anthracene	11	6.7	3.9 J	0.39	0.36 U	0.36 UJ
Benzo(a)Pyrene	1.1	7.6	4.4 J	0.44	0.36 U	0.36 UJ
Benzo(b)fluoranthene	11	5.8	3.3 J	0.36 J	0.36 U	0.36 UJ
Benzo(g,h,i)Perylene	1,000	5.7	3.4 J	0.42	0.36 U	0.36 UJ
Benzo(k)fluoranthene	110	5.2	2.9 J	0.33 J	0.36 U	0.36 UJ
Benzyl Butyl Phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Biphenyl	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Bis(1-Chlorisopropyl) Ether	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Bis(2-Chloroethoxy) Methane	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Bis(2-Chloroethyl) Ether	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Bis(2-Ethylhexyl) Phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Caprolactam	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Carbazole	NS	1.1 J	0.51 J	0.38 U	0.36 U	0.36 UJ
Chrysene	110	7.3	4.4 J	0.43	0.36 U	0.36 UJ
dibenz(a,h)anthracene	1.1	1.4 J	0.89 J	0.092 J	0.36 U	0.36 UJ
Dibenzofuran	1,000	0.62 J	0.24 J	0.38 U	0.36 U	0.36 UJ
Diethyl Phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Dimethyl Phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Di-n-butyl phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.16 J
Di-n-octyl phthalate	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Fluoranthene	1,000	15	7.9 J	0.76	0.36 U	0.36 UJ
Fluorene	1,000	0.75 J	0.36 J	0.38 U	0.36 U	0.36 UJ
Hexachloro-1,3-Butadiene	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Hexachlorobenzene	12	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Hexachlorocyclopentadiene	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Hexachloroethane	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Indeno(1,2,3-cd)Pyrene	11	4.6	2.6 J	0.35 J	0.36 U	0.36 UJ
Isophorone	NS	NA	NA	NA	NA	NA
Naphthalene	1,000	0.64 J	0.28 J	0.38 U	0.36 U	0.36 UJ
Nitrobenzene	15	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
N-Nitroso-Di-n-propylamine	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
N-Nitrosodiphenylamine	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
p-Chloroaniline	NS	0.36 U	1.8 UJ	0.38 U	0.36 U	0.36 UJ
Pentachlorophenol	55	1.9 U	9.3 UJ	1.9 U	1.9 UR	1.9 UJR
Phenanthrene	1,000	12	6.2 J	0.49	0.36 U	0.36 UJ
Phenol	1,000	0.36 U	1.8 UJ	0.38 U	0.36 UR	0.36 UJR
p-Nitroaniline	NS	1.9 U	9.3 UJ	1.9 U	1.9 U	1.9 UJ
Pyrene	1,000	13	8.7 J	0.6	0.36 U	0.36 UJ

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial

Table 3-2 Soil Analytical Summary - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name	NY-RSCO-INDUSTRIAL	SB-25 (0.5-1) R1003506-022	SB-25 (2.5-3) R1003506-023	SB-26 (0.5-1) R1003506-024	FB070110 R1003506-013
Lab ID					
Sample Date		7/1/2010	7/1/2010	7/1/2010	7/1/2010
Date Analyzed		7/14/2010	7/15/2010	7/14/2010	7/6/2010
Matrix		Soil	Soil	Soil	Lab Water
Percent Moisture		25.1	9.0	26.1	1
Units	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
Semi-Volatile Organic Compounds					
2,4,5-Trichlorophenol	NS	13 U	0.36 U	8.9 U	9.4 U
2,4-Dichlorophenol	NS	13 U	0.36 U	8.9 U	9.4 U
2,4-Dimethylphenol	NS	13 U	0.36 U	8.9 U	9.4 U
2,4-Dinitrophenol	NS	68 U	1.9 U	46 U	9.4 U
2,4-Dinitrotoluene	NS	13 U	0.36 U	8.9 U	9.4 U
2,6-Dinitrotoluene	NS	13 U	0.36 U	8.9 U	9.4 U
2-Chloronaphthalene	NS	13 U	0.36 U	8.9 U	9.4 U
2-Chlorophenol	NS	13 U	0.36 U	8.9 U	9.4 U
2-Methylnaphthalene	NS	13 U	0.36 U	8.9 U	9.4 U
2-Methylphenol	1,000	13 U	0.36 U	8.9 U	9.4 U
2-Nitroaniline	NS	68 U	1.9 U	46 U	47 U
2-Nitrophenol	NS	13 U	0.36 U	8.9 U	9.4 U
3,3-Dichlorobenzidine	NS	13 U	0.36 U	8.9 U	9.4 U
3-Nitroaniline	NS	68 U	1.9 U	46 U	47 U
4,6-Dinitro-2-methylphenol	NS	68 U	1.9 U	46 U	47 U
4-Bromophenyl Phenyl Ether	NS	13 U	0.36 U	8.9 U	9.4 U
4-Chloro-3-Methylphenol	NS	13 U	0.36 U	8.9 U	9.4 U
4-Chlorophenyl Phenyl Ether	NS	13 U	0.36 U	8.9 U	9.4 U
4-Methylphenol	1,000	13 U	0.36 U	8.9 U	9.4 U
4-Nitrophenol	NS	68 U	1.9 U	46 U	47 U
Acenaphthene	1,000	13 U	0.36 U	8.9 U	9.4 U
Acenaphthylene	1,000	6.2 J	0.36 U	2.3 J	9.4 U
Acetophenone	NS	7.8 J	0.36 U	10	9.4 U
Anthracene	1,000	3.5 J	0.36 U	8.9 U	9.4 U
Atrazine	NS	13 U	0.36 U	8.9 U	9.4 U
Benzaldehyde	NS	13 U	0.36 U	8.9 U	9.4 U
Benzo(a)Anthracene	11	11 J	0.044 J	2.7 J	9.4 U
Benzo(a)Pyrene	1.1	12 J	0.36 U	8.9 U	9.4 U
Benzo(b)fluoranthene	11	21	0.36 U	7.6 J	9.4 U
Benzo(g,h,i)Perylene	1,000	16	0.04 J	4.4 J	9.4 U
Benzo(k)fluoranthene	110	18	0.36 U	5.8 J	9.4 U
Benzyl Butyl Phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Biphenyl	NS	13 U	0.36 U	8.9 U	9.4 U
Bis(1-Chlorisopropyl) Ether	NS	13 U	0.36 U	8.9 U	9.4 U
Bis(2-Chloroethoxy) Methane	NS	13 U	0.36 U	8.9 U	9.4 U
Bis(2-Chloroethyl) Ether	NS	13 U	0.36 U	8.9 U	9.4 U
Bis(2-Ethylhexyl) Phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Caprolactam	NS	13 U	0.36 U	8.9 U	9.4 U
Carbazole	NS	13 U	0.36 U	8.9 U	9.4 U
Chrysene	110	27	0.049 J	14	9.4 U
dibenz(a,h)anthracene	1.1	4.4 J	0.36 U	8.9 U	9.4 U
Dibenzofuran	1,000	2.5 J	0.36 U	8.9 U	9.4 U
Diethyl Phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Dimethyl Phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Di-n-butyl phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Di-n-octyl phthalate	NS	13 U	0.36 U	8.9 U	9.4 U
Fluoranthene	1,000	26	0.086 J	7.6 J	9.4 U
Fluorene	1,000	13 U	0.36 U	8.9 U	9.4 U
Hexachloro-1,3-Butadiene	NS	13 U	0.36 U	8.9 U	9.4 U
Hexachlorobenzene	12	13 U	0.36 U	8.9 U	9.4 U
Hexachlorocyclopentadiene	NS	13 U	0.36 U	8.9 U	9.4 U
Hexachloroethane	NS	13 U	0.36 U	8.9 U	9.4 U
Indeno(1,2,3-cd)Pyrene	11	16	0.36 U	4.2 J	9.4 U
Isophorone	NS	NA	NA	NA	NA
Naphthalene	1,000	5.6 J	0.36 U	2.9 J	9.4 U
Nitrobenzene	15	13 U	0.36 U	8.9 U	9.4 U
N-Nitroso-Di-n-propylamine	NS	13 U	0.36 U	8.9 U	9.4 U
N-Nitrosodiphenylamine	NS	13 U	0.36 U	8.9 U	9.4 U
p-Chloroaniline	NS	13 U	0.36 U	8.9 U	9.4 U
Pentachlorophenol	55	68 U	1.9 U	46 U	47 U
Phenanthrene	1,000	15	0.36 U	1.4 J	9.4 U
Phenol	1,000	13 U	0.36 U	8.9 U	9.4 U
p-Nitroaniline	NS	68 U	1.9 U	46 U	47 U
Pyrene	1,000	20	0.081 J	5.5 J	9.4 U

Notes:

J Estimated value below sample quantitation limit.

U: Analyte not detected.

Bold values indicate detected compounds

Shaded cells indicate exceedence of most Industrial

**Table 3-3 Soil Analytical Summary - Polychlorinated Biphenyls (PCBs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name		SB-03 (0.5-1)	SB-06 (0-0.5)	SB-08 (0.5-1)	SB-09 (0.5-1)	SB-11 (0-0.5)	SB-11 (0-0.5)*	SB-12 (0-0.5)	SB-14 (0-0.5)	SB-14 (0-0.5)*	
Sample Date		7/1/2010	6/30/2010	7/1/2010	7/1/2010	6/30/2010	6/30/2010	7/1/2010	6/30/2010	6/30/2010	
Lab Sample ID	NY-RSCO-INDUSTRIAL	R1003506-011	R1003506-001	R1003506-015	R1003506-026	R1003506-004	R1003506-004	R1003506-016	R1003506-005	R1003506-005	
Date Analyzed		7/16/2010	7/16/2010	7/16/2010	7/17/2010	7/16/2010	7/21/2010	7/16/2010	7/16/2010	7/21/2010	
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
Percent Moisture		11.7	13.8	9.6	13.6	15.6	15.6	12.9	12.2	12.2	
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Polychlorinated Biphenyls											
Aroclor-1016	25	0.037 U	0.038 U	0.037 U	0.038 U	0.039 UJ	0.039 UJ	0.038 U	0.038 UJ	0.038 UJ	
Aroclor-1221	25	0.076 U	0.078 U	0.074 U	0.078 U	0.079 UJ	0.079 UJ	0.077 U	0.076 UJ	0.076 UJ	
Aroclor-1232	25	0.037 U	0.038 U	0.037 U	0.038 U	0.039 UJ	0.039 UJ	0.038 U	0.038 UJ	0.038 UJ	
Aroclor-1242	25	0.037 U	0.038 U	0.037 U	0.038 U	0.039 UJ	0.039 UJ	0.038 U	0.038 UJ	0.038 UJ	
Aroclor-1248	25	0.037 U	0.038 U	0.037 U	0.038 U	0.039 UJ	0.039 UJ	0.038 U	0.038 UJ	0.038 UJ	
Aroclor-1254	25	0.037 U	0.038 U	0.037 U	0.038 U	0.039 UJ	0.039 UJ	0.038 U	0.038 UJ	0.038 UJ	
Aroclor-1260	25	0.037 U	0.038 U	0.037 U	0.038 U	0.12 J	0.22 J	0.038 U	0.038 UJ	0.038 UJ	
Total PCBs	25	ND	ND	ND	ND	0.12 J	0.22 J	ND	ND J	ND J	

Notes:

U Compound not detected at reporting limit.

ND Non-Detect

J Estimated concentration.

R Rejected result see DUSR.

* QC parameter in non-compliance

**Table 3-3 Soil Analytical Summary - Polychlorinated Biphenyls (PCBs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name		SB-19 (0.5-1)	SB-20 (0.5-1)	SB-22 (0.5-1)	SB-23 (0-0.5)	SB-24 (0.5-1)	SB-25 (0.5-1)	SB-25 (0.5-1)*	SB-26 (0.5-1)	SB-26 (0.5-1)*	FB070110
Sample Date		7/1/2010	6/30/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010
Lab Sample ID	NY-RSCO-INDUSTRIAL	R1003506-028	R1003506-007	R1003506-029	R1003506-018	R1003506-021	R1003506-022	R1003506-022	R1003506-024	R1003506-024	R1003506-013
Date Analyzed		7/19/2010	7/16/2010	7/17/2010	7/16/2010	7/17/2010	7/17/2010	7/21/2010	7/17/2010	7/21/2010	7/14/2010
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	QAQC
Percent Moisture		11.3	24.1	15.6	12.8	8.6	25.1	25.1	26.1	26.1	1
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/L
Polychlorinated Biphenyls											
Aroclor-1016	25	0.19 U	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Aroclor-1221	25	0.38 U	0.088 U	0.079 U	0.077 U	0.073 U	0.089 UJ	0.089 UJ	0.091 UR	0.091 UJ	2.1 U
Aroclor-1232	25	0.19 U	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Aroclor-1242	25	0.19 U	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Aroclor-1248	25	0.19 U	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Aroclor-1254	25	0.19 U	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Aroclor-1260	25	1.6	0.043 U	0.039 U	0.038 U	0.036 U	0.044 UJ	0.044 UJ	0.045 UR	0.045 UJ	1.1 U
Total PCBs	25	1.6	ND	ND	ND	ND	ND J	ND J	ND R	ND J	ND

Notes:

U Compound not detected at reporting limit.

ND Non-Detect

J Estimated concentration.

R Rejected result see DUSR.

* QC parameter in non-compliance

**Table 3-4 Soil Analytical Summary - Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	NY-RSCO-INDUSTRIAL	SB-03 (0.5-1)	SB-03 (4.5-5)	SB-06 (0-0.5)	SB-06 (5.5-6)	SB-06 (10-10.5)	SB-08 (0.5-1)	SB-09 (0.5-1)
Sample Date		7/1/2010	7/1/2010	6/30/2010	6/30/2010	6/30/2010	7/1/2010	7/1/2010
Lab Sample ID		R1003506-011	R1003506-012	R1003506-001	R1003506-002	R1003506-003	R1003506-015	R1003506-026
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Percent Moisture		11.70	37.50	13.80	14.20	15.00	9.60	13.60
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

Metals

Antimony	NS	12.7 NJ	20.6 NJ	7 UNJ	6.9 UNJ	6.9 UNJ	6.5 UNJ	6.9 UNJ
Arsenic	16	26.4	835	5.6	5.6	1.2 U	4.2	11.5
Barium	10,000	144	702	49.6	149	43.1	37.8	59.8
Cadmium	60	1.2	2.3	0.58 U	0.651	0.577 U	0.542 U	0.844
Calcium	NS	31,200 J	55,900 J	5,350 J	76,400 J	38,900 J	26,200 J	12,600 J
Chromium (Total)	6,800	16.6	16.1	11.8	22.1	6.7	9.2	9.3
Cobalt	NS	6.5	7.9 U	7.4	5.8 U	5.8 U	5.4 U	5.9
Copper	10,000	888	301	17.5	39.6	9.7	78.4	547
Cyanide	10,000	15.5	2.15	0.14 U	1.07	0.59	0.13 U	0.56
Iron	NS	24,700 EJ	92,100 EJ	18,700 EJ	15,700 EJ	11,800 EJ	10,400 EJ	14,600
Lead	3,900	703	1,940	11.6	424	9.9	50	138 EJ
Magnesium	NS	11,200 J	2,040 J	4,250 J	10,100 J	9,170 J	5,920 J	2,320 EJ
Manganese	10,000	346	6,920	419	393	390	354	231
Mercury	5.7	5.7	1.6	0.036 U	0.149	0.046	0.162	0.197
Nickel	10,000	18.7	15.6	17.2	10.4	7	15.7	27.2
Selenium	6,800	1.4	7.5	1.2 U	1.2 U	1.2 U	1.1 U	1.5
Silver	6,800	83.3	6.8	1.2 U	1.2 U	1.2 U	1.1 U	1.6
Sodium	NS	215	499	116 U	1,050	289	108 U	151
Thallium	NS	1.1 U	31.7 U	2.3 U	1.8	1.2 U	1.1 U	1.2 U
Vanadium	NS	16.8	9.8	15.6	29.6	11.7	11.8	12.6
Zinc	10,000	531	468	50.1	186	21.3	88	680

Notes:

E Estimated Value

N Matrix Spike recovery was outside limits.

* Indicates Quality control parameter exceeds limits.

U Compound not detected at reporting limit.

**Table 3-4 Soil Analytical Summary - Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	NY-RSCO- INDUSTRIAL	SB-09 (2.5-3)	SB-11 (0-0.5)	SB-12 (0-0.5)	SB-12 (3.5-4)	SB-14 (0-0.5)	SB-14 (5-5.5)	SB-19 (0.5-1)
Sample Date		7/1/2010	6/30/2010	7/1/2010	7/1/2010	6/30/2010	6/30/2010	7/1/2010
Lab Sample ID		R1003506-027	R1003506-004	R1003506-016	R1003506-017	R1003506-005	R1003506-006	R1003506-028
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Percent Moisture		15.70	15.60	12.90	8.70	12.20	10.00	11.30
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Metals								
Antimony	NS	6.8 UJ	7.1 UJ	6.7 UJ	14.7 NJ	6.8 UJ	6.4 UNJ	29.6 J
Arsenic	16	11.9	5.1	6.6	321	16.3	1.6	9.1
Barium	10,000	46.1	47.8	64.9	8,090	97.8	32.1	92.6
Cadmium	60	0.57 U	0.592 U	0.557 U	1.4	0.749	0.534 U	0.564 U
Calcium	NS	44,300 J	18,600 J	13,200 J	28,500 J	8,690 J	59,500 J	64,900 J
Chromium (Total)	6,800	10.4	11.9	13.7	7.3	11.9	6.8	14.5
Cobalt	NS	8.2	6.4	7.5	5.4 U	5.6 U	5.3 U	5.6 U
Copper	10,000	34.3	16.5	25.4	36.6	262	14.1	79.4
Cyanide	10,000	0.13 U	0.14 U	1.1 U	0.13 U	11.2	0.23 U	0.13 U
Iron	NS	22,600	15,800 EJ	19,100 EJ	5,410 EJ	31,200	10,300 EJ	23,700
Lead	3,900	20.1 EJ	22	44.2	106,000	258 EJ	4.5	326 EJ
Magnesium	NS	7,450 EJ	7,440 J	6,680 J	4,810 J	3,520 EJ	12,600 J	7,550 EJ
Manganese	10,000	887	426	487	133	269	328	532
Mercury	5.7	0.037 U	0.039 U	0.036 U	0.815	0.503	0.036 U	0.361
Nickel	10,000	18.5	14.3	17.8	4.6	20.7	7.3	13.6
Selenium	6,800	1.1 U	1.2 U	1.1 U	1.1 U	1.2	1.1 U	1.1 U
Silver	6,800	1.1 U	1.2 U	1.1 U	1.1 U	2.7	1.1 U	1.1 U
Sodium	NS	114 U	118 U	111 U	144	209	107 U	113 U
Thallium	NS	1.1 U	1.2 U	2.2 U	3.1	1.1 U	1.1 U	1.1 U
Vanadium	NS	12.7	14.3	16.4	5.7	19.8	11.3	23
Zinc	10,000	49.8	59.1	71.4	720	214	24.3	109

Notes:

E Estimated Value

N Matrix Spike recovery was ok

* Indicates Quality control parameters

U Compound not detected at reporting level

**Table 3-4 Soil Analytical Summary - Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	NY-RSCO- INDUSTRIAL	SB-20 (0.5-1)	SB-20 (3.5-4)	SB-20 (6-6.5)	SB-22 (0.5-1)	SB-23 (0-0.5)	SB-23 (3-3.5)	SB-23 (5-5.5)
Sample Date		6/30/2010	6/30/2010	6/30/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010
Lab Sample ID		R1003506-007	R1003506-008	R1003506-009	R1003506-029	R1003506-018	R1003506-019	R1003506-020
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Percent Moisture		24.10	8.50	13.00	15.60	12.80	8.60	12.80
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

Metals

Antimony	NS	53.3 J	6.5 UNJ	6.8 UNJ	511	6.7 UNJ	165 NJ	6.7 UNJ
Arsenic	16	41.9	1.5	1.1 U	405	5.2	55	6.1
Barium	10,000	680	48.5	39.1	1,270	45.1	3,950	89.7
Cadmium	60	12.2	0.541 U	0.563 U	23.4	0.557 U	17.3	0.557 U
Calcium	NS	11,600 J	44,200 J	45,900 J	32,700 J	9,870 J	22,200 J	15,500 J
Chromium (Total)	6,800	43.6	6.7	6.4	15.7	11.9	15.4	12.8
Cobalt	NS	7.9	5.4 U	5.6 U	8.8	6.6	5.2 U	5.6 U
Copper	10,000	35,400	12	10.7	355	16.2	252	29.9
Cyanide	10,000	0.46	0.26 U	0.14 U	0.14 U	0.14 U	5.56	1.89
Iron	NS	99,500	10,800 EJ	10,500 EJ	100,000	16,900 EJ	12,600 EJ	17,800 EJ
Lead	3,900	5,930 EJ	10	7.9	6,340 EJ	21.1	2,840	48.2
Magnesium	NS	3,210 EJ	9,730 J	8,960 EJ	9,480 EJ	5,180 EJ	5,400 J	4,130 J
Manganese	10,000	537	309	338	383	402	267	412
Mercury	5.7	4.7	0.035 U	0.036 U	1.4	0.035 U	0.51	0.082
Nickel	10,000	203	7.4	7.3	42.7	15.6	13.7	11.4
Selenium	6,800	1.3 U	1.1 U	1.1 U	1.9	1.1 U	1.6	1.3
Silver	6,800	34.6	1.1 U	1.1 U	8.8	1.1 U	4.4	1.1 U
Sodium	NS	422	110	205	230	111 U	237	111 U
Thallium	NS	1.3 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U	1.1 U
Vanadium	NS	24.3	11.7	11.1	31.8	15.3	13.8	18.1
Zinc	10,000	14,200	20.9	19.7	4,250	52.7	886	53.3

Notes:

E Estimated Value

N Matrix Spike recovery was ok

* Indicates Quality control parameters

U Compound not detected at reporting level

**Table 3-4 Soil Analytical Summary - Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	NY-RSCO-INDUSTRIAL	SB-24 (0.5-1)	SB-25 (0.5-1)	SB-25 (2.5-3)	SB-26 (0.5-1)	FB-70110
Sample Date		7/1/2010	7/1/2010	7/1/2010	7/1/2010	7/1/2010
Lab Sample ID		R1003506-021	R1003506-022	R1003506-023	R1003506-024	R1003506-013
Matrix		Soil	Soil	Soil	Soil	QAQC
Percent Moisture		8.60	25.10	9.00	26.10	1.00
Units		mg/kg	mg/kg	mg/kg	mg/kg	ug/L

Metals

Antimony	NS	25.2 NJ	7.7 UNJ	6.6 UNJ	7.8 UJ	60 UJ
Arsenic	16	40.3	1.3 U	2.5	15	10 U
Barium	10,000	89.5	59.6	45.2	134	20 U
Cadmium	60	0.526 U	0.794	0.549 U	1.2	5 U
Calcium	NS	23,200 J	13,500 J	39,400 J	18,000 J	1,000 UJ
Chromium (Total)	6,800	90	21	8.8	32.4	10 U
Cobalt	NS	5.3 U	12.3	5.5 U	15	50 U
Copper	10,000	32.4	8.3	11.5	16.5	20 U
Cyanide	10,000	0.13	172	0.43	74	NA
Iron	NS	8,740 EJ	29,200 EJ	11,000 EJ	34,200	100 U
Lead	3,900	299	134	43.1	802 EJ	5 U
Magnesium	NS	3,650 J	242 J	11,400 J	768 EJ	1000 UJ
Manganese	10,000	251	102	363	230	10 U
Mercury	5.7	0.269	0.213	0.092	0.673	0.2 U
Nickel	10,000	11.9	18.7	9.3	20	40 U
Selenium	6,800	1.1 U	2.3	1.1 U	1.3 U	10 U
Silver	6,800	1.1 U	1.7	1.1 U	2	10 U
Sodium	NS	559	729	110 U	1,470	1,000 U
Thallium	NS	1.1 U	1.3 U	1.1 U	2.4	10 U
Vanadium	NS	17.3	32.8	12.9	40.7	50 U
Zinc	10,000	58	9.2	32.2	47	20 U

Notes:

E Estimated Value

N Matrix Spike recovery was ok

** Indicates Quality control parameters*

U Compound not detected at reporting level

Table 3-5 Lower River Terrace - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL	NY-RSCO - Protection of Ecological Resources	SED-AB R1004555-011 8/24/2010 9/2/2010 Soil 29.5 mg/kg	SED-C R1004555-012 8/24/2010 9/3/2010 Soil 31.4 mg/kg	SED-E* R1004555-013 8/24/2010 9/2/2010 Soil 30.7 mg/kg	SED-E* R1004555-013 8/24/2010 9/8/2010 Soil 30.7 mg/kg	SED-F R1004555-014 8/24/2010 9/2/2010 Soil 21 mg/kg
Semi-Volatile Organic Compounds							
2,4,5-Trichlorophenol	NS	4	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2,4,6-Trichlorophenol	NS	10	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2,4-Dichlorophenol	NS	20	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2,4-Dimethylphenol	NS	NS	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2,4-Dinitrophenol	NS	20	12 U	25 U	12 UR	12 UJ	11 U
2,4-Dinitrotoluene	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
2,6-Dinitrotoluene	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
2-Chloronaphthalene	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
2-Chlorophenol	NS	0.8	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2-Methylnaphthalene	NS	NS	2.3 U	4.8 U	1.2 J	0.43 J	0.24 J
2-Methylphenol	1,000	NS	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
2-Nitroaniline	NS	NS	12 U	25 U	12 U	12 UJ	11 U
2-Nitrophenol	NS	7	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
3,3-Dichlorobenzidine	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
3-Nitroaniline	NS	NS	12 U	25 U	12 U	12 UJ	11 U
4,6-Dinitro-2-methylphenol	NS	NS	12 U	25 U	12 UR	12 UJ	11 U
4-Bromophenyl Phenyl Ether	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
4-Chloro-3-Methylphenol	NS	NS	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
4-Chlorophenyl Phenyl Ether	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
4-Methylphenol	1,000	NS	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
4-Nitrophenol	NS	7	12 U	25 U	12 UR	12 UJ	11 U
Acenaphthene	1,000	20	0.6 J	2.8 J	4.4	1.3 J	2.1 U
Acenaphthylene	1,000	NS	0.55 J	0.68 J	0.72 J	0.41 J	0.76 J
Acetophenone	NS	NS	2.3 U	4.8 U	0.32 J	2.4 UJ	2.1 U
Anthracene	1,000	NS	2.4	7.4	3.6	2.1 J	0.57 J
Atrazine	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Benzaldehyde	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Benzo(a)Anthracene	11	NS	13	15	9.4	6.9	1.2 J
Benzo(a)Pyrene	1.1	2.6	15	15	9.4	7.7	1.6 J
Benzo(b)fluoranthene	11	NS	14	12	6.8	5	1 J
Benzo(g,h,i)Perylene	1,000	NS	14	10	7	5	1.8 J
Benzo(k)fluoranthene	110	NS	12	11	6.3	4.9	1.1 J
Benzyl Butyl Phthalate	NS	NS	9.1	4.8 U	2.4 U	2.4 UJ	2.1 U
Biphenyl	NS	NS	2.3 U	4.8 U	0.53 J	2.4 UJ	2.1 U
Bis(1-Chlorisopropyl) Ether	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Bis(2-Chloroethoxy) Methane	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Bis(2-Chloroethyl) Ether	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Bis(2-Ethylhexyl) Phthalate	NS	239	2.2 J	8.3	2.4 U	2.4 UJ	0.37 J
Caprolactam	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Carbazole	NS	NS	2.5	3.6 J	1.5 J	0.8 J	2.1 U
Chrysene	110	NS	16	16	11	7.7	1.3 J
dibenz(a,h)anthracene	1.1	NS	3.3	3.1 J	1.8 J	1.3 J	2.1 U
Dibenzofuran	1,000	NS	0.35 J	1.4 J	2.4	0.78 J	2.1 U
Diethyl Phthalate	NS	100	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Dimethyl Phthalate	NS	200	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Di-n-butyl phthalate	NS	0.014	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Di-n-octyl phthalate	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Fluoranthene	1,000	NS	36	40	22	13	1.7 J
Fluorene	1,000	30	0.64 J	3 J	3.7	1.2 J	2.1 U
Hexachloro-1,3-Butadiene	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Hexachlorobenzene	12	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Hexachlorocyclopentadiene	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Hexachloroethane	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Indeno(1,2,3-cd)Pyrene	11	NS	11	8.6	5.4	3.7	1.3 J
Isophorone	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Naphthalene	1,000	NS	2.3 U	1.2 J	2.5	0.73 J	0.35 J
Nitrobenzene	15	40	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
N-Nitroso-Di-n-propylamine	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
N-Nitrosodiphenylamine	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
p-Chloroaniline	NS	NS	2.3 U	4.8 U	2.4 U	2.4 UJ	2.1 U
Pentachlorophenol	55	0.8	12 U	25 U	12 UR	12 UJ	11 U
Phenanthrene	1,000	NS	13	29	19	10	1.2 J
Phenol	1,000	30	2.3 U	4.8 U	2.4 UR	2.4 UJ	2.1 U
p-Nitroaniline	NS	NS	12 U	25 U	12 U	12 UJ	11 U
Pyrene	1,000	NS	23	27	20	15	1.9 J

Notes:
J Estimated value below sample quantitation limit.
U: Analyte not detected.
Bold values indicate detected compounds
Shaded cells indicate exceedence Industrial RSCO.
R: Rejected result see DUSR
*** Quality control parameter exceeds criteria.

Table 3-5 Lower River Terrace - Semi-Volatile Organic Compounds (SVOCs)
Former Bausch Lomb Glass Plant
Rochester, New York

Sample Name Lab ID Sample Date Date Analyzed Matrix Percent Moisture Units	NY-RSCO - INDUSTRIAL	NY-RSCO - Protection of Ecological Resources	SED-1* R1004555-015 8/24/2010 9/2/2010 Soil 32 mg/kg	SED-1* R1004555-015 8/24/2010 9/8/2010 Soil 32 mg/kg	SED-L R1004555-016 8/24/2010 9/3/2010 Soil 30.1 mg/kg	FB082310 R1004555-008 8/24/2010 8/30/2010 Lab Water 1 ug/L
Semi-Volatile Organic Compounds						
2,4,5-Trichlorophenol	NS	4	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2,4,6-Trichlorophenol	NS	10	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2,4-Dichlorophenol	NS	20	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2,4-Dimethylphenol	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2,4-Dinitrophenol	NS	20	13 UJ	18 UJ	11 U	47 U
2,4-Dinitrotoluene	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2,6-Dinitrotoluene	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2-Chloronaphthalene	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2-Chlorophenol	NS	0.8	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2-Methylnaphthalene	NS	NS	2.4 UJ	3.4 UJ	0.44 J	9.4 U
2-Methylphenol	1,000	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
2-Nitroaniline	NS	NS	13 UJ	18 UJ	11 U	47 U
2-Nitrophenol	NS	7	2.4 UJ	3.4 UJ	2.1 U	9.4 U
3,3-Dichlorobenzidine	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
3-Nitroaniline	NS	NS	13 UJ	18 UJ	11 U	47 U
4,6-Dinitro-2-methylphenol	NS	NS	13 UJ	18 UJ	11 U	47 U
4-Bromophenyl Phenyl Ether	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
4-Chloro-3-Methylphenol	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
4-Chlorophenyl Phenyl Ether	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
4-Methylphenol	1,000	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
4-Nitrophenol	NS	7	13 UJ	18 UJ	11 U	47 U
Acenaphthene	1,000	20	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Acenaphthylene	1,000	NS	2.4 UJ	3.4 UJ	0.29 J	9.4 U
Acetophenone	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Anthracene	1,000	NS	2.4 UJ	3.4 UJ	0.68 J	9.4 U
Atrazine	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Benzaldehyde	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Benzo(a)Anthracene	11	NS	2.4 UJ	3.4 UJ	2.6	9.4 U
Benzo(a)Pyrene	1.1	2.6	2.4 UJ	3.4 UJ	3.4	9.4 U
Benzo(b)fluoranthene	11	NS	2.4 UJ	3.4 UJ	2.8	9.4 U
Benzo(g,h,i)Perylene	1,000	NS	2.4 UJ	3.4 UJ	3.3	9.4 U
Benzo(k)fluoranthene	110	NS	2.4 UJ	3.4 UJ	2.8	9.4 U
Benzyl Butyl Phthalate	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Biphenyl	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Bis(1-Chloroisopropyl) Ether	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Bis(2-Chloroethoxy) Methane	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Bis(2-Chloroethyl) Ether	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Bis(2-Ethylhexyl) Phthalate	NS	239	2.4 UJ	3.4 UJ	1.6 J	9.4 U
Caprolactam	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Carbazole	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Chrysene	110	NS	2.4 UJ	0.72 J	3.1	9.4 U
dibenz(a,h)anthracene	1.1	NS	2.4 UJ	3.4 UJ	0.77 J	9.4 U
Dibenzofuran	1,000	NS	2.4 UJ	3.4 UJ	0.21 J	9.4 U
Diethyl Phthalate	NS	100	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Dimethyl Phthalate	NS	200	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Di-n-butyl phthalate	NS	0.014	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Di-n-octyl phthalate	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Fluoranthene	1,000	NS	0.8 J	1 J	4.2	9.4 U
Fluorene	1,000	30	2.4 UJ	3.4 UJ	0.27 J	9.4 U
Hexachloro-1,3-Butadiene	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Hexachlorobenzene	12	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Hexachlorocyclopentadiene	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Hexachloroethane	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Indeno(1,2,3-cd)Pyrene	11	NS	2.4 UJ	3.4 UJ	2.4	9.4 U
Isophorone	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Naphthalene	1,000	NS	2.4 UJ	3.4 UJ	0.39 J	9.4 U
Nitrobenzene	15	40	2.4 UJ	3.4 UJ	2.1 U	9.4 U
N-Nitroso-Di-n-propylamine	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
N-Nitrosodiphenylamine	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
p-Chloroaniline	NS	NS	2.4 UJ	3.4 UJ	2.1 U	9.4 U
Pentachlorophenol	55	0.8	13 UJ	18 UJ	11 U	47 U
Phenanthrene	1,000	NS	2.4 UJ	0.68 J	2.8	9.4 U
Phenol	1,000	30	2.4 UJ	3.4 UJ	2.1 U	9.4 U
p-Nitroaniline	NS	NS	13 UJ	18 UJ	11 U	47 U
Pyrene	1,000	NS	0.46 J	0.75 J	4.7	9.4 U

Notes:
 J: Estimated value below sample quantitation limit.
 U: Analyte not detected.
 Bold values indicate detected compounds
 Shaded cells indicate exceedence Industrial RSCO.
 R: Rejected result see DUSR
 * Quality control parameter exceeds criteria.

**Table 3-6 Lower River Terrace Soil Analytical Summary - Polychlorinated Biphenyls (PCBs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	Sample Date	Lab Sample ID	Date Analyzed	Matrix	Percent Moisture	Units	SED-AB	SED-C	SED-E	SED-F	SED-I	SED-L		
		NY-RSCO-INDUSTRIAL		NY-RSCO-Protection of Ecological Resources			8/24/2010 R1004555-011 8/31/2010 Soil 29.5 mg/kg	8/24/2010 R1004555-012 8/31/2010 Soil 31.4 mg/kg	8/24/2010 R1004555-013 9/1/2010 Soil 30.7 mg/kg	8/24/2010 R1004555-014 8/31/2010 Soil 21 mg/kg	8/24/2010 R1004555-015 8/31/2010 Soil 32 mg/kg	8/24/2010 R1004555-016 8/31/2010 Soil 30.1 mg/kg		
Polychlorinated Biphenyls														
Aroclor-1016	25	1	0.047	U	0.048	U	0.24	U	0.042	U	0.049	U	0.041	U
Aroclor-1221	25	1	0.095	U	0.098	U	0.48	U	0.085	U	0.099	U	0.084	U
Aroclor-1232	25	1	0.047	U	0.048	U	0.24	U	0.042	U	0.049	U	0.041	U
Aroclor-1242	25	1	0.047	U	0.048	U	0.24	U	0.042	U	0.049	U	0.041	U
Aroclor-1248	25	1	0.047	U	0.3	J	1.8	J	0.087	J	0.049	U	0.21	J
Aroclor-1254	25	1	0.047	U	0.4	J	1.4	J	0.042	U	0.049	U	0.041	U
Aroclor-1260	25	1	0.37	J	0.23	J	0.24	U	0.3	J	0.42	J	0.38	J
Total PCBs	25	1	0.37	J	0.93	J	3.2	J	0.387	J	0.42	J	0.59	J

Notes:

- U Compound not detected at reporting limit.
- J Estimated value below sample quantitation limit.
- Bold values indicated detected compounds.

Exceeds RSCO PER criteria
Exceeds both RSCO PER and Industrial critical

**Table 3-7 Lower River Terrace - Soil Analytical Summary- Metals
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name Sample Date Lab Sample ID Matrix Percent Moisture Units	NY-RSCO- INDUSTRIAL mg/kg	NY-RSCO- Protection of Ecological Resources mg/kg	SED-AB 8/24/2010 R1004555-011 Soil 29.5 mg/kg	SED-C 8/24/2010 R1004555-012 Soil 31.4 mg/kg	SED-E 8/24/2010 R1004555-013 Soil 30.7 mg/kg	SED-F 8/24/2010 R1004555-014 Soil 21 mg/kg	SED-I 8/24/2010 R1004555-015 Soil 32 mg/kg	SED-L 8/24/2010 R1004555-016 Soil 30.1 mg/kg	FB082310 8/24/2010 R1004555-008 QAQC 1 ug/l
Metals									
Antimony	NS	12	131	242	123	74.1	66.4	33.8	60 U
Arsenic	16	13	103	175	105	56.4	58	20.2	10 U
Barium	10,000	433	275	617	432	1,500	211	83.5	20 U
Cadmium	60	4	5.9	14.8	10.7	3.3	63.3	3.3	5 U
Calcium	NS	NS	17,600	10,100	20,000	8,600	31,000	34,900	1000 U
Chromium (Total)	6,800	41	28.8	73.4	1,150	30.3	20.9	48.3	10 U
Cobalt	NS	20	9.8	7.6	7.8	8.6	15	6.8	50 U
Copper	10,000	50	206	526	471	558	1,490	152	20 U
Cyanide	10,000	27	0.28 U	0.29 U	0.29 U	0.58	0.27 U	0.39	NA
Iron	NS	NS	26,300	30,400	26,100	23,600	30,300	17,100	100 U
Lead	3,900	63	984	1,750	573	2,150	654	529	50 U
Magnesium	NS	NS	7,580	5,880	7,440	5,080	12,900	14,900	1000 U
Manganese	10,000	1,600	377	203	325	278	1,120	206	10 U
Mercury	5.7	0.18	0.608	0.759	0.204	0.65	0.175	0.722	0.2 U
Nickel	10,000	30	36.7	53	27.5	22.4	35.9	22.2	40 U
Selenium	6,800	3.9	3.9	3.3	2.1	2.1	5.9	1.5	10 U
Silver	6,800	2	18.1	32	1.8	461	12.3	5.2	10 U
Sodium	NS	NS	328	234	143 U	219	146	310	1000 U
Thallium	NS	NS	1.4 U	1.5 U	1.4 U	1.2 U	7.3 U	1.2 U	10 U
Vanadium	NS	39	44.4	59.1	25.2	15.8	39.4	19.7	50 U
Zinc	10,000	109	1,410	1,770	2,640	590	2,030	563	20 U

Notes:

E Estimated Value

N Matrix Spike recovery was outside limits.

* Indicates Quality control parameter exceeds limits.

U Compound not detected at reporting limit.

Exceeds RSCO PER criteria

Exceeds both RSCO PER and Industrial criteria

**Table 3-8 Water Level Elevations - August 2010
Former Bausch Lomb Glass Plant
Rochester, New York**

Monitoring Well ID	Fluid Level Gauging Date	Top of Casing Elevation (ft msl)	Ground Surface Elevation (ft msl)	Diameter (in)	Screened Interval (Nearest 0.5 ft)	Total Depth (ft)	Depth to Water (ft)	Water Level Elevation (ft msl)
MW-01	8/23/2010	399.1	396.711	1.5	5-15	15	9.09	390.0
MW-02	8/23/2010	401.5	399.4	1.5	10-20	20	11.37	390.2
MW-03	8/23/2010	405.6	402.8	1.5	12-17	17	8.81	396.8
MW-04	8/23/2010	402.2	400.971	1.5	8-13	13	10.72	391.5

Notes: Please note coordinates are in NAD 1983 NY State Plane West and elevations are reported to canal datum used on adjacent RG&E property.

**Table 3-9 Groundwater Analytical Summary
Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	New York State Groundwater Standards and Guidance Values April 2000 (ug/L)	GW-06 (16-18)	MW-1 3Q10	MW-2 3Q10	MW-2 3Q10 DUP
Sample Date		7/1/2010	8/24/2010	8/24/2010	8/24/2010
Lab Sample ID		R1003506-025	R1004555-001	R1004555-002	R1004555-003
Analysis Date		7/8/2010	8/30/2010	8/30/2010	8/30/2010
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution Factor		1	1	1	1
Units		ug/L	ug/L	ug/L	ug/L

Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	5 *	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 *	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 *	5 U	5 U	5 U	5 U
1,1-Dichloroethylene	5 *	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5 *	5 U	5 U	5 U	5 U
1,2-Dibromo-3-Chloropropane (DBCP)	0.04	5 U	5 U	5 U	5 U
1,2-Dibromomethane	6.00E-04	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	3	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U	5 U
1,2-Dichloropropane	1	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	5 U	5 U	5 U	5 U
2-Butanone	NS	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	NS	10 U	10 U	10 U	10 U
Acetone	NS	2 UJ	20 U	20 U	20 U
Benzene	1	5 U	5 U	5 U	5 U
Bromodichloromethane	NS	5 U	5 U	5 U	5 U
Bromomethane	5 *	5 U	5 U	5 U	5 U
Carbon Disulfide	60	10 U	10 U	10 U	10 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U
CFC-11	5 *	5 U	5 U	5 U	5 U
CFC-12	5	5 U	5 U	5 U	5 U
Chlorobenzene	5 *	5 U	5 U	5 U	5 U
Chlorodibromomethane	NS	5 U	5 U	5 U	5 U
Chloroethane	5 *	5 U	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U	5 U
Chloromethane	5 *	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5 *	0.72 J	3.5 J	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U	5 U
Cyclohexane	NS	10 U	10 U	10 U	10 U
Dichloromethane	5 *	5 U	5 U	5 U	5 U
Ethylbenzene	5 *	5 U	5 U	5 U	5 U
Freon 113	5 *	5 U	5 U	5 U	5 U
Isopropylbenzene	5 *	5 U	5 U	5 U	5 U
m&p-Xylenes	5 *	5 U	5 U	5 U	5 U
m-Dichlorobenzene	3	5 U	5 U	5 U	5 U
Methyl Acetate	NS	10 U	10 U	10 U	10 U
Methyl N-Butyl Ketone	NS	10 U	10 U	10 U	10 U
Methylcyclohexane	NS	10 U	10 U	10 U	10 U
Methyl-tert-Butyl Ether (MTBE)	10	5 U	5 U	5 U	5 U
o-Xylene	5 *	5 U	5 U	5 U	5 U
Styrene (Monomer)	5 *	5 U	5 U	5 U	5 U
Tetrachloroethene	5 *	5 U	5 U	5 U	5 U
Toluene	5 *	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5 *	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U	5 U
Tribromomethane	NS	5 U	5 U	5 U	5 U
Trichloroethylene	5 *	5 U	13	5 U	5 U
Vinyl Chloride	2	5 U	1.1 J	5 U	5 U

Notes:

- U Compound not detected at reporting limit.
- B Compound detected in blank
- J Estimated value below reporting limit.
- Bold values indicate detected compounds
- Highlighted values indicate exceedence of NY GW standard.
- * The Principal organic contaminant standard for groundwater of 5 ug/L applies to this compound.

**Table 3-9 Groundwater Analytical Summary
Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	New York State Groundwater Standards and Guidance Values April 2000 (ug/L)	MW-3 3Q10 A 8/24/2010 R1004555-005 Groundwater 1 ug/L	MW-3 3Q10 B 8/24/2010 R1004555-006 Groundwater 1 ug/L	MW-4 3Q10 8/24/2010 R1004555-004 Groundwater 1 ug/L	PIPE G 3Q10 8/23/2010 R1004555-007 Groundwater 1 ug/L	TB070110 7/1/2010 R1003506-014 Lab Water 1 ug/L
Volatile Organic Compounds (VOCs)						
1,1,1-Trichloroethane	5 *	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 *	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	5 *	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethylene	5 *	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5 *	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-Chloropropane (DBCP)	0.04	5 U	5 U	5 U	5 U	5 U
1,2-Dibromomethane	6.00E-04	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	3	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	1	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	5 U	5 U	5 U	5 U	5 U
2-Butanone	NS	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	NS	10 U	10 U	10 U	10 U	10 U
Acetone	NS	20 U	20 U	1.8 UJ	20 U	5.2 J
Benzene	1	150	170	1.3 J	5 U	5 U
Bromodichloromethane	NS	5 U	5 U	5 U	5 U	5 U
Bromomethane	5 *	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	60	10 U	0.64 J	0.44 J	10 U	10 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U
CFC-11	5 *	5 U	5 U	5 U	5 U	5 U
CFC-12	5	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5 *	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	NS	5 U	5 U	5 U	5 U	5 U
Chloroethane	5 *	5 U	5 U	5 U	5 U	5 U
Chloroform	7	5 U	5 U	5 U	5 U	5 U
Chloromethane	5 *	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5 *	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U	5 U	5 U
Cyclohexane	NS	5.7 J	6.5 J	10 U	10 U	10 U
Dichloromethane	5 *	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	5 *	4.2 J	6.6	2.2 J	5 U	5 U
Freon 113	5 *	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	5 *	2.9 J	4.4 J	5 U	5 U	5 U
m&p-Xylenes	5 *	3.2 J	3.9 J	5 U	5 U	5 U
m-Dichlorobenzene	3	5 U	5 U	5 U	5 U	5 U
Methyl Acetate	NS	10 U	10 U	10 U	10 U	10 U
Methyl N-Butyl Ketone	NS	10 U	10 U	10 U	10 U	10 U
Methylcyclohexane	NS	1.1 J	2.7 J	10 U	10 U	10 U
Methyl-tert-Butyl Ether (MTBE)	10	5 U	5 U	5 U	5 U	5 U
o-Xylene	5 *	3 J	3.3 J	5 U	5 U	5 U
Styrene (Monomer)	5 *	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5 *	5 U	5 U	5 U	5 U	5 U
Toluene	5 *	0.58 J	0.79 J	0.49 J	5 U	5 U
trans-1,2-Dichloroethene	5 *	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U	5 U	5 U
Tribromomethane	NS	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5 *	5 U	5 U	5 U	0.26 J	5 U
Vinyl Chloride	2	5 U	5 U	5 U	5 U	5 U

Notes:

- U Compound not detected at reporting limit.
- B Compound detected in blank
- J Estimated value below reporting limit.
- Bold values indicate detected compounds
- Highlighted values indicate exceedence of NY GW standard.
- * The Principal organic contaminant standard for groundwater of 5 ug/L applies to this compound.

**Table 3-9 Groundwater Analytical Summary
Volatile Organic Compounds (VOCs)
Former Bausch Lomb Glass Plant
Rochester, New York**

Sample Name	New York State Groundwater Standards and Guidance Values April Matrix Dilution Factor Units	TB082310 8/24/2010 R1004555-009 8/30/2010 Lab Water 1 ug/L	TB082310 8/24/2010 R1004555-010 8/31/2010 Lab Water 1 ug/L	FB070110 7/1/2010 R1003506-013 7/8/2010 Lab Water 1 ug/L	FB082310 8/24/2010 R1004555-008 8/30/2010 Lab Water 1 ug/L
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Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	5 *	5	U	5	U	5	U		
1,1,2,2-Tetrachloroethane	5 *	5	U	5	U	5	U		
1,1,2-Trichloroethane	1	5	U	5	U	5	U		
1,1-Dichloroethane	5 *	5	U	5	U	5	U		
1,1-Dichloroethylene	5 *	5	U	5	U	5	U		
1,2,4-Trichlorobenzene	5 *	5	U	5	U	5	U		
1,2-Dibromo-3-Chloropropane (DBCP)	0.04	5	U	5	U	5	U		
1,2-Dibromomethane	6.00E-04	5	U	5	U	5	U		
1,2-Dichlorobenzene	3	5	U	5	U	5	U		
1,2-Dichloroethane	0.6	5	U	5	U	5	U		
1,2-Dichloropropane	1	5	U	5	U	5	U		
1,4-Dichlorobenzene	3	5	U	5	U	5	U		
2-Butanone	NS	10	U	10	U	10	U		
4-Methyl-2-Pentanone	NS	10	U	10	U	10	U		
Acetone	NS	20	U	20	U	5	J	2.1	J
Benzene	1	5	U	5	U	5	U	5	U
Bromodichloromethane	NS	5	U	5	U	5	U	5	U
Bromomethane	5 *	5	U	5	U	5	U	5	U
Carbon Disulfide	60	10	U	10	U	10	U	10	U
Carbon Tetrachloride	5	5	U	5	U	5	U	5	U
CFC-11	5 *	5	U	5	U	5	U	5	U
CFC-12	5	5	U	5	U	5	U	5	U
Chlorobenzene	5 *	5	U	5	U	5	U	5	U
Chlorodibromomethane	NS	5	U	5	U	5	U	5	U
Chloroethane	5 *	5	U	5	U	5	U	5	U
Chloroform	7	5	U	5	U	0.33	J	5	U
Chloromethane	5 *	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5 *	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	0.4	5	U	5	U	5	U	5	U
Cyclohexane	NS	10	U	10	U	10	U	10	U
Dichloromethane	5 *	5	U	5	U	5	U	5	U
Ethylbenzene	5 *	5	U	5	U	5	U	5	U
Freon 113	5 *	5	U	5	U	5	U	5	U
Isopropylbenzene	5 *	5	U	5	U	5	U	5	U
m&p-Xylenes	5 *	5	U	5	U	5	U	5	U
m-Dichlorobenzene	3	5	U	5	U	5	U	5	U
Methyl Acetate	NS	10	U	10	U	10	U	10	U
Methyl N-Butyl Ketone	NS	10	U	10	U	10	U	10	U
Methylcyclohexane	NS	10	U	10	U	10	U	10	U
Methyl-tert-Butyl Ether (MTBE)	10	5	U	5	U	5	U	5	U
o-Xylene	5 *	5	U	5	U	5	U	5	U
Styrene (Monomer)	5 *	5	U	5	U	5	U	5	U
Tetrachloroethene	5 *	5	U	5	U	5	U	5	U
Toluene	5 *	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5 *	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	0.4	5	U	5	U	5	U	5	U
Tribromomethane	NS	5	U	5	U	5	U	5	U
Trichloroethylene	5 *	5	U	5	U	5	U	5	U
Vinyl Chloride	2	5	U	5	U	5	U	5	U

Notes:

- U Compound not detected at reporting limit.
- B Compound detected in blank
- J Estimated value below reporting limit.
- Bold values indicate detected compounds
- Highlighted values indicate exceedence of NY GW standard.
- * The Principal organic contaminant standard for groundwater of 5 ug/L applies to this compound.

Appendix A
Technical Approach

**Technical Approach – Phase II Site Investigation
Bausch & Lomb Former Glass Plant
Rochester, New York**

The following memorandum describes a technical approach for conducting a Phase II Site Investigation at the Former Glass Plant in Rochester, New York (Site). This approach has been prepared based on Leader Professional Services, Inc's Phase I Environmental Site Assessment (ESA) dated May 15, 2002 and subsequent conversations about the subject site. The purpose of this technical approach is to outline a scope of work that will provide an initial site evaluation of overburden soil and groundwater quality at the Site. This evaluation will not satisfy all requirements for remedial investigations as presented in New York Department of Conservation's Division of Environmental Remediation (DER) Draft Technical Guidance for Site Investigation and Remediation (DER-10); however data collected as part of this work will be collected in a manner that is consistent with requirements set forth in DER-10 for incorporation into a future documents for NYDEC approval.

Based on the ESA, a number of areas of environmental concerns (AOCs) were identified at the Site and include the following:

- Historic Fill associated with initial development of the Genesee River flats area prior to construction of the Glass Plant in 1914.
- Former Raceways – filled prior to construction of the Glass Plant
- Operation areas associated with the Former Glass Plant (operated from 1914 to mid-1980's).
 - Former Sand Blast Room/Dust Collectors
 - Former Laboratory
 - Former Septic Tank
 - Former Discharge Pipes to Genesee River
- Off-site sources including the coal gas production that occurred at the adjacent RG&E property.

In addition, recent site activities including the staging of a bio-cell for treatment of excavated soil related to the 690 St Paul Street site as well as potential off-site groundwater impacts from upgradient B&L properties are potential AOCs that will be addressed as part of this scope of work. Approximate locations of AOCs are illustrated on Figure 1. The scope of work presented below was designed to target the above AOCs within the unconsolidated material.

Electrical Conductivity Investigation/Geophysical Investigation

In order to determine the nature of historic fill and attempt to locate the former Raceway identified during the ESA, electrical conductivity (EC) pushes will be advanced at each soil sampling location. The electrical conductivity probe provides a real-time reading of

lithologic properties based on the electrical conductivity of the formation. Direct-Sensing EC is capable of accurately defining lithologic units such as clay confining layers, sand and gravel zones, as well as historic fill. Conductivity readings will be used to aid in targeting soil sampling zones for collection of analytical samples. In addition, it is likely that material used to fill the former raceways will have a distinct EC reading and thus allow for delineation of the former raceway.

In addition, a geophysical survey along the river bank and within the site can be completed to aid in the identification of existing pipes from the facility of the river as well as to assist locating the former raceways. A combination of Ground Penetrating Radar (GPR) and/or Electrical Conductivity using an EM-31 or similar device will be utilized to complete the survey.

Soil Investigation

Following completion of the conductivity borings, a total of eleven soil borings will be advanced at locations presented in Figure 2. Actual sample locations maybe modified based on results of the conductivity pushes, geophysical investigation results, as well as field observations. Soil borings will be advanced with a Geoprobe direct-push rig utilizing either enclosed macro-core or dual tube sampling systems. Soil borings will be advanced to a depth determined by the field geologist based on the following:

- Depth to groundwater,
- Fill/native interface depth,
- Observed contaminant distribution, and
- Refusal depths

If conditions allow, five of the eleven soil borings will be advanced to rock.

In addition to the above soil sampling locations, three surface soil samples will be collected along the western portion of the site along the lower Genesee River terrace. These samples will be collected by a large bore sampler advanced to approximately 2 feet below ground surface utilizing a hand held percussion hammer.

Soil cores will be logged by the field geologist and screened with a photo-ionization detector (PID) for the presence of volatile organic compounds (VOCs) following DER-10 requirements. Soil samples will be collected from the proposed borings biased to zones of highest impact based on field observations. Samples will be analyzed for VOCs, base neutral (BNs) semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs). Sampling frequency and analytical analysis requirements are summarized below:

- VOCs – Collected at unsaturated zone with highest PID reading or at water table interface if no elevated PID readings, collected at fill/native interface (~ 20 samples).
- BNs – Collected at near surface, within fill material, and at

fill/native interface. Surface soil samples (1 per boring), shallow soil borings (2 per boring), deep soil borings (3 per boring) (~30 total samples).

- Metals – Collected at near surface, within fill material, and at fill/native interface. Surface soil samples (1 per boring), shallow soil borings (2 per boring), deep soil borings (3 per boring) (~30 total samples).
- PCBs – Collected at near surface – all borings (~ 15 samples).

Groundwater Investigation

Following advancement of soil borings, groundwater samples will be collected at seven locations as shown on Figure 3. Groundwater sampling depths and locations will be determined based on observations made during the conductivity/geophysical and soil investigations. At a minimum, three shallow temporary groundwater wells will be installed to bisect the water table. If conditions allow for placement of deeper temporary groundwater wells, these temporary wells will be set with the screened intervals set above consolidated rock.

Temporary wells will be constructed using 1.5-inch pre-packs with 10-foot or 5-foot screens depending on field conditions. Pre-packs will be installed utilizing a 3.25-inch dual tube system. Temporary wells can be finished as permanent wells with PVC stick-up and protective steel casing, if requested. Following installation, all temporary wells will be developed using a submersible pump and surge block. Well development will continue until field parameters stabilize, well is purged dry, or five well volumes are removed. Following well development, all temporary wells will be gauged for water levels and presence of LNAPL/DNAPL and then sampled by low-flow sampling procedures. Samples will be collected and analyzed for VOCs, BNs and metals.

In addition to the installation of temporary wells, four groundwater vertical profile borings will be advanced along the southern boundary of the facility (Figure 3) to determine if manufactured gas plant (MGP) activities have impacted groundwater at the site. Groundwater samples will be collected by advancing an enclosed stainless steel screen to the sampling depth, exposing the screen, and collecting a groundwater sample from polyethylene tubing using a peristaltic pump and/or stainless steel check valve. Two to three depth discrete intervals will be attempted at each location depending on the saturated thickness observed during soil sampling and depth to bedrock.

All sample locations will be surveyed using a GPS with differential correction and auto-leveled with a construction grade laser level. If permanent wells are installed wells will be surveyed using a New York licensed survey.

Quality Assurance/Quality Control

All analytical samples will be analyzed by a NYSDOP ELAP certified laboratory utilizing analytical methods published in the most current NYSDEC Analytical Services Protocol. Field QA/QC will be collected as follows:

- One soil field duplicates for VOCs, BNs, metals and PCBs
- One groundwater field duplicate for VOCs, BNs, and metals
- One soil field blank for VOCs, BNs, metals and PCBs
- One groundwater field blank for VOCs, BNs, and metals
- One trip blank for VOCs per cooler.
- One Matrix Spike/Matrix Spike Duplicate per matrix.

Reporting

Following completion of the proposed investigation, all data will be incorporated into a project database and analyzed in a Geographic Information System (GIS) to develop a conceptual site model (CSM) for the site. A summary report will be prepared that will summarize field activities, methodologies, and analytical data. All data will be compared to NYSDEC standards and guidance values to determine overburden soil and groundwater conditions at the site.

Appendix B
Electrical Conductivity Logs



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-01**

TOTAL DEPTH: **10.4**

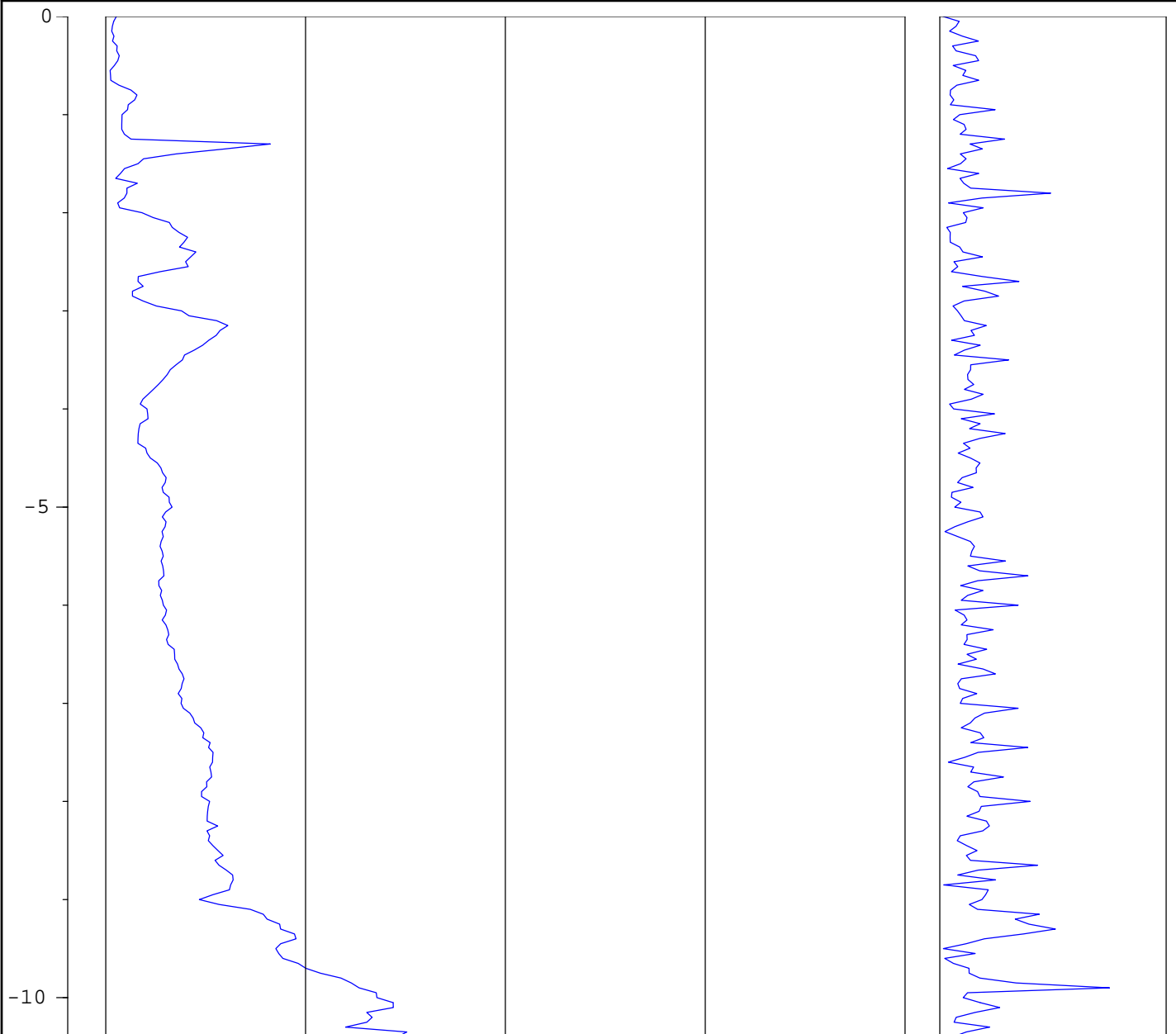
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156122.75** ELEVATION:
EASTING: **1405005.33**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-02**

TOTAL DEPTH: **10.45**

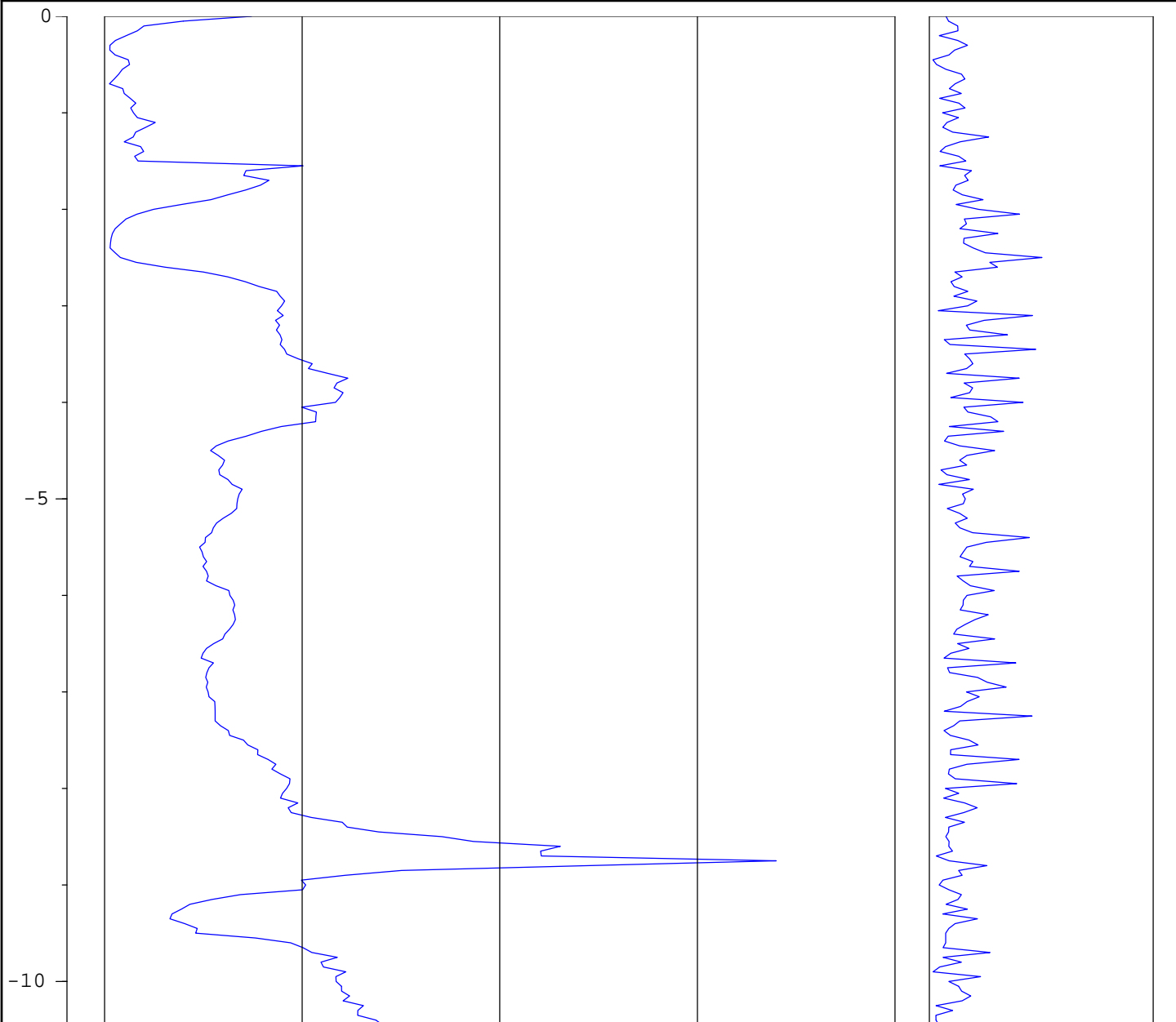
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156221.07** ELEVATION:
EASTING: **1405014.91**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-03**

TOTAL DEPTH: **12.85**

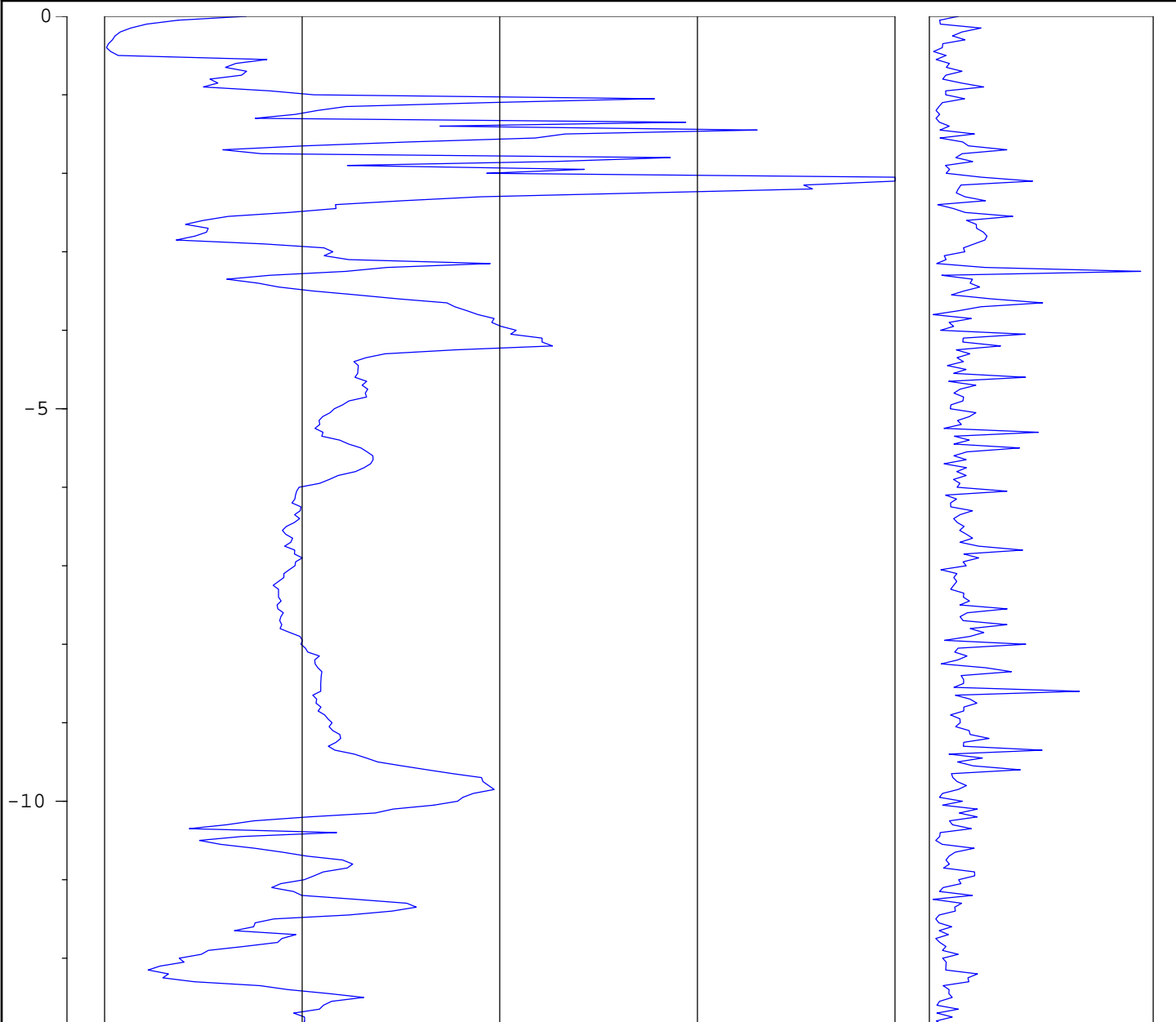
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156364.08** ELEVATION:
 EASTING: **1405114.83**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-04**

TOTAL DEPTH: **22.4**

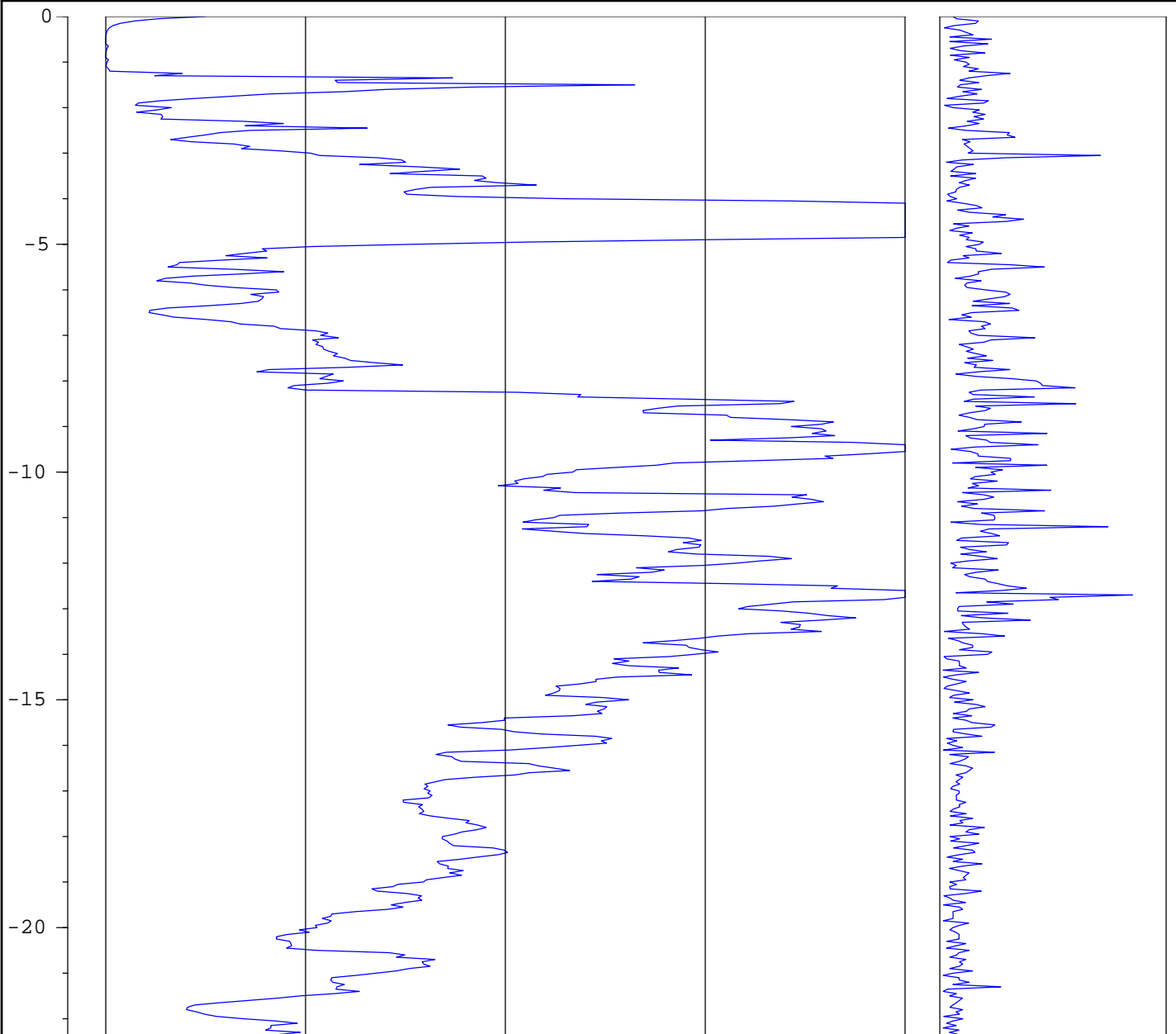
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156456.92** ELEVATION:
EASTING: **1404991.41**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-05**

TOTAL DEPTH: **25.65**

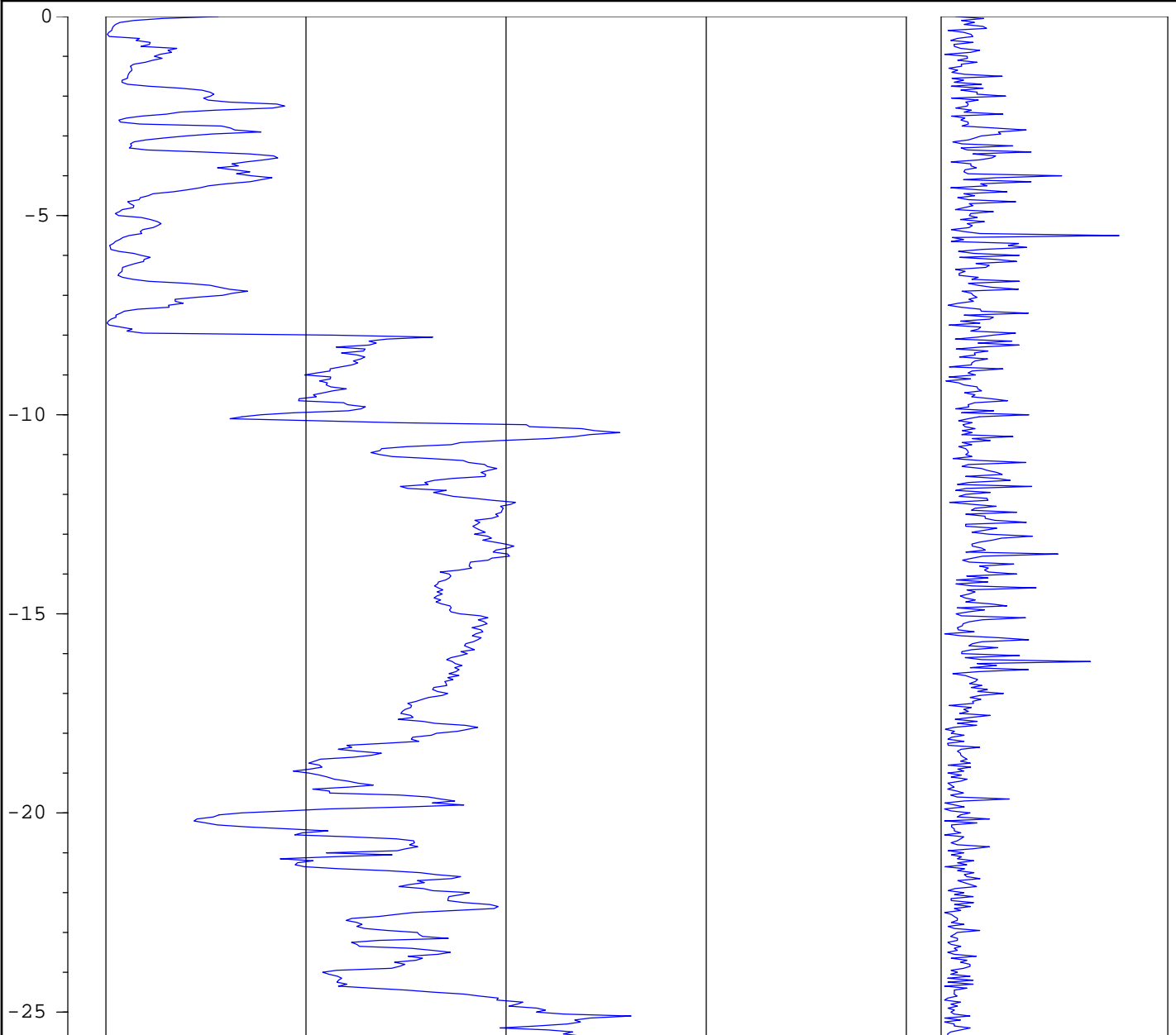
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156499.12** ELEVATION:
 EASTING: **1404903.01**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-06**

TOTAL DEPTH: **28.5**

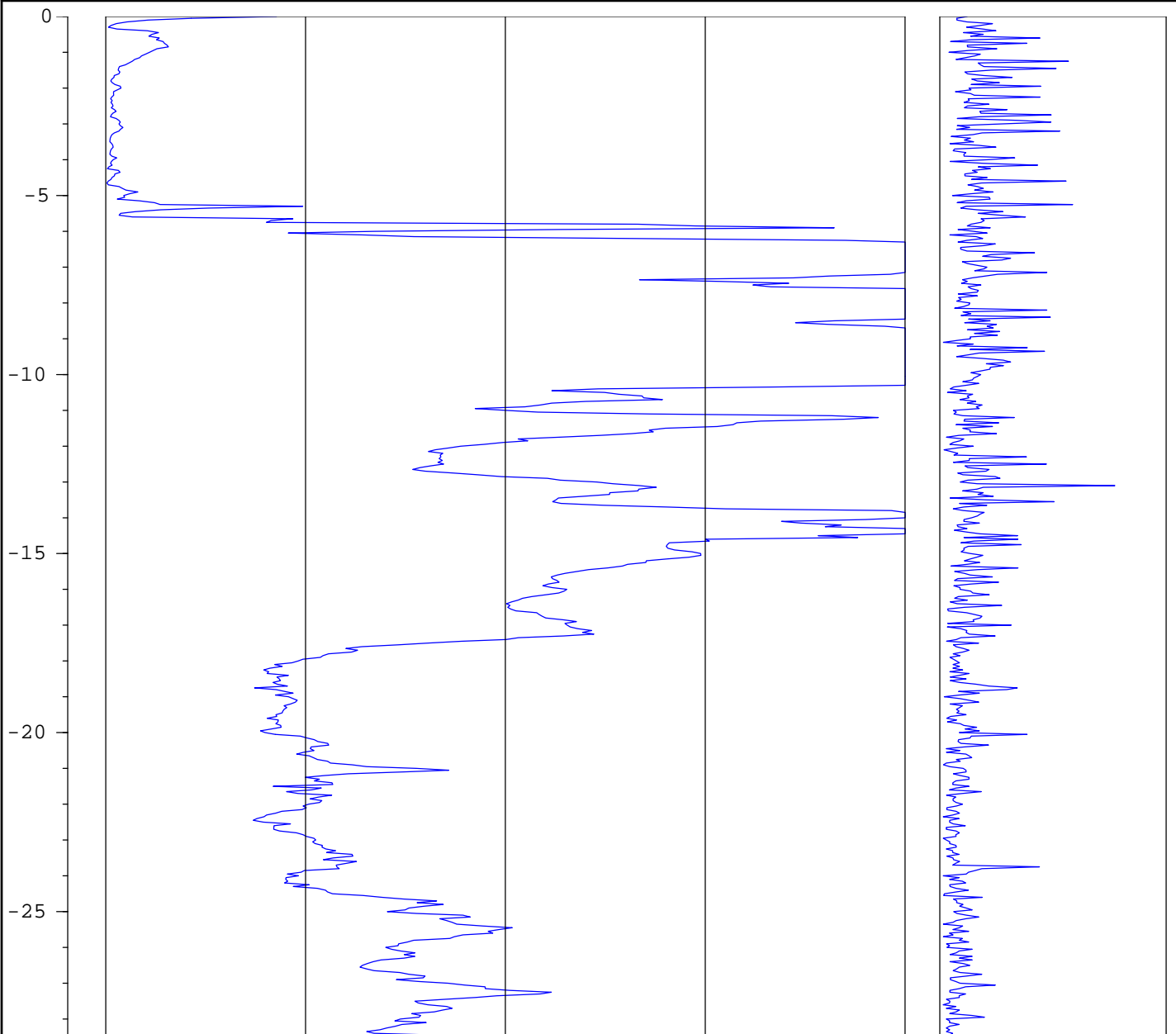
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156561.70** ELEVATION:
EASTING: **1404796.64**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	100	200	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-07**

TOTAL DEPTH: **2.55**

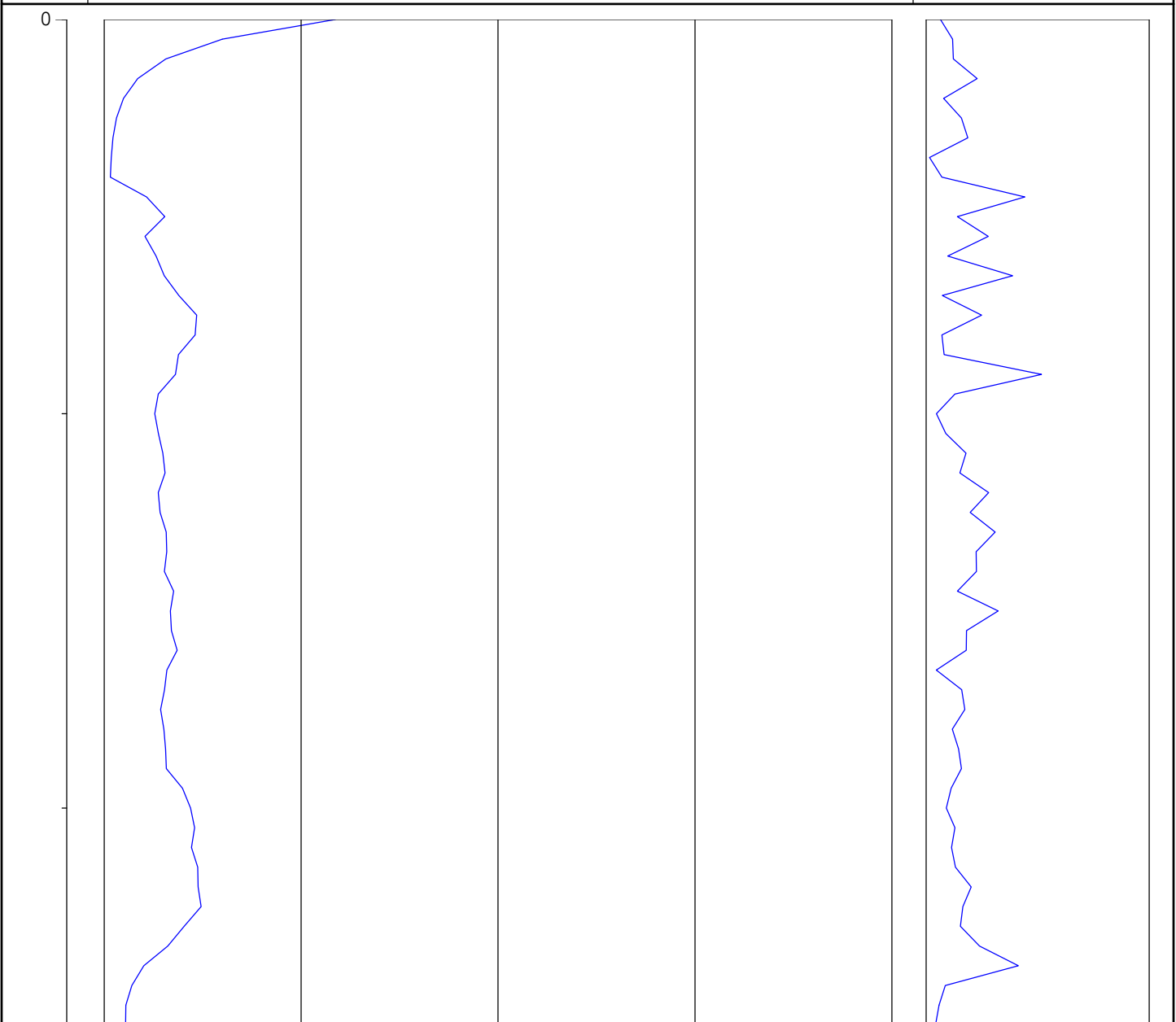
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156448.66** ELEVATION:
EASTING: **1404781.25**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-08**

TOTAL DEPTH: **23.65**

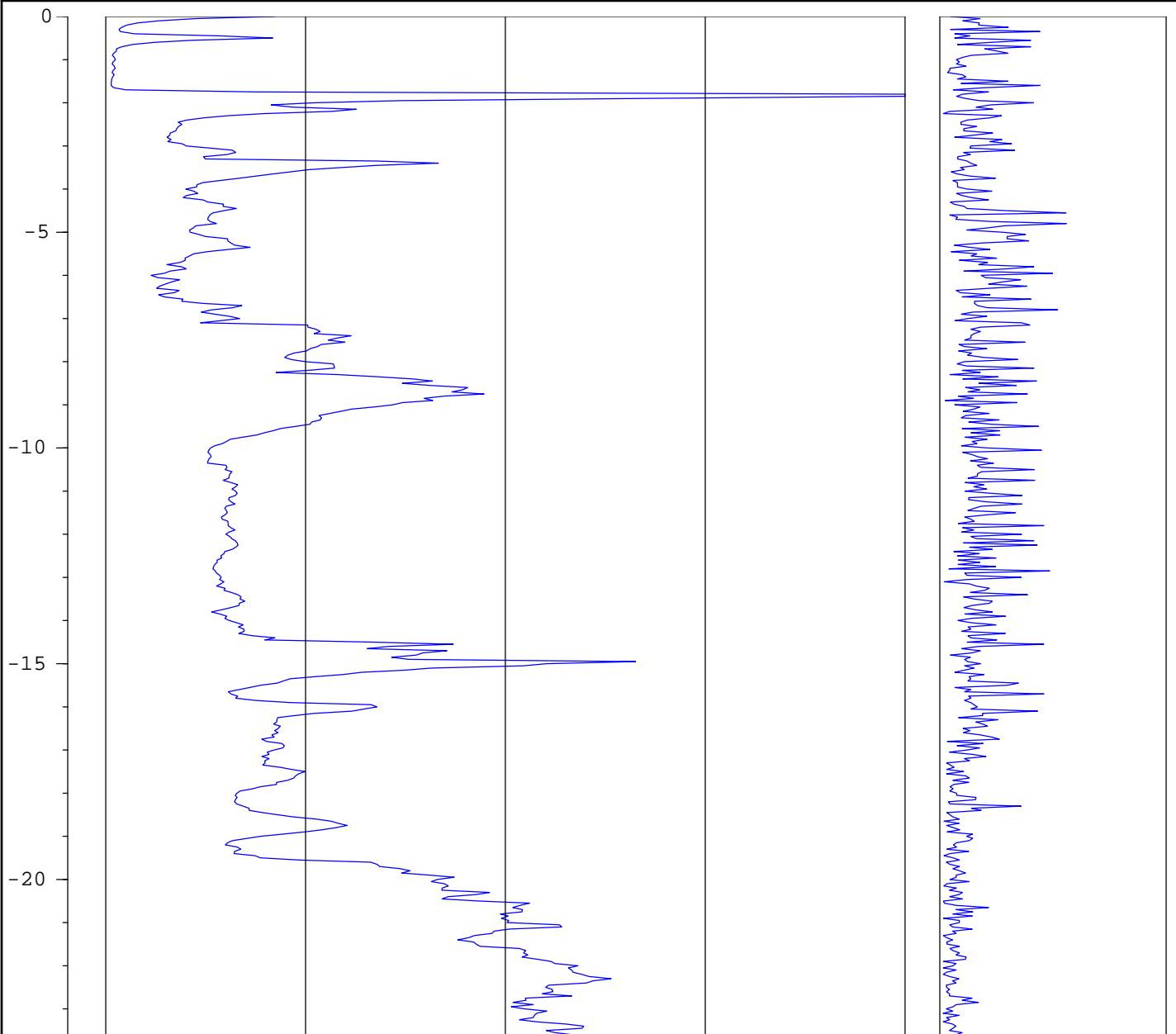
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156377.20** ELEVATION:
 EASTING: **1404863.75**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-09**

TOTAL DEPTH: **20.75**

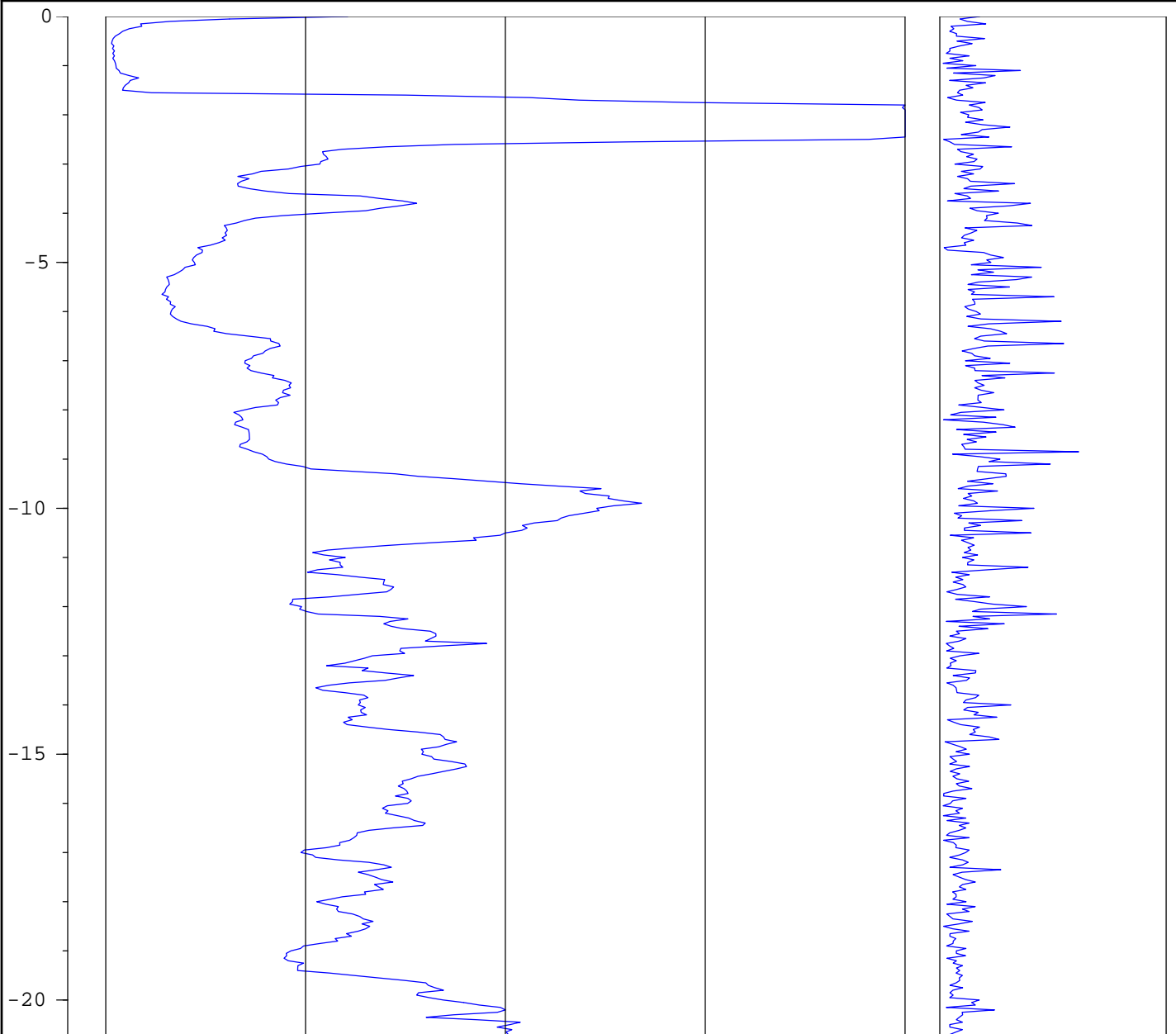
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156282.96** ELEVATION:
EASTING: **1404928.16**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-10**

TOTAL DEPTH: **24.9**

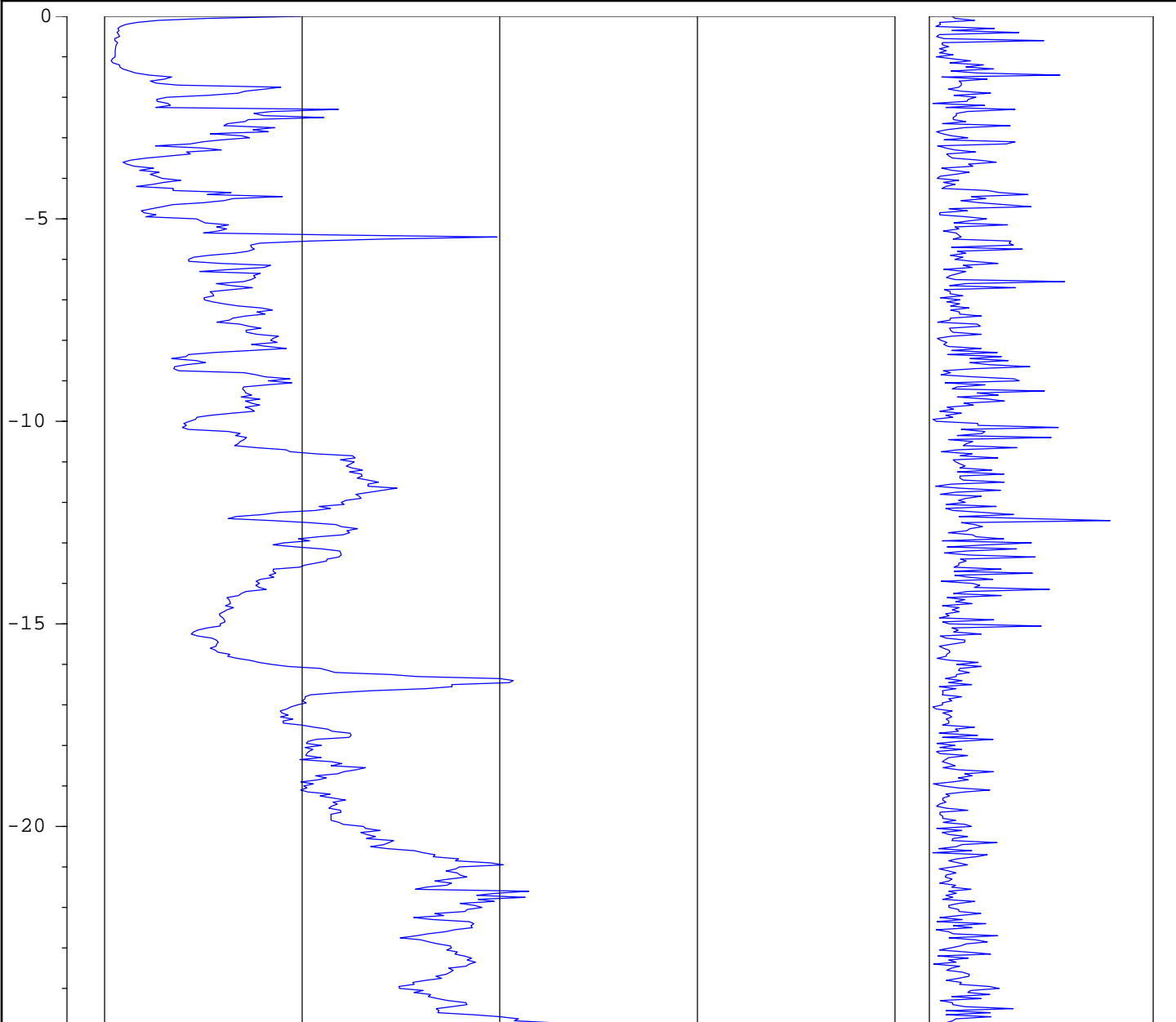
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156294.44** ELEVATION:
EASTING: **1404828.59**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-11**

TOTAL DEPTH: **25.85**

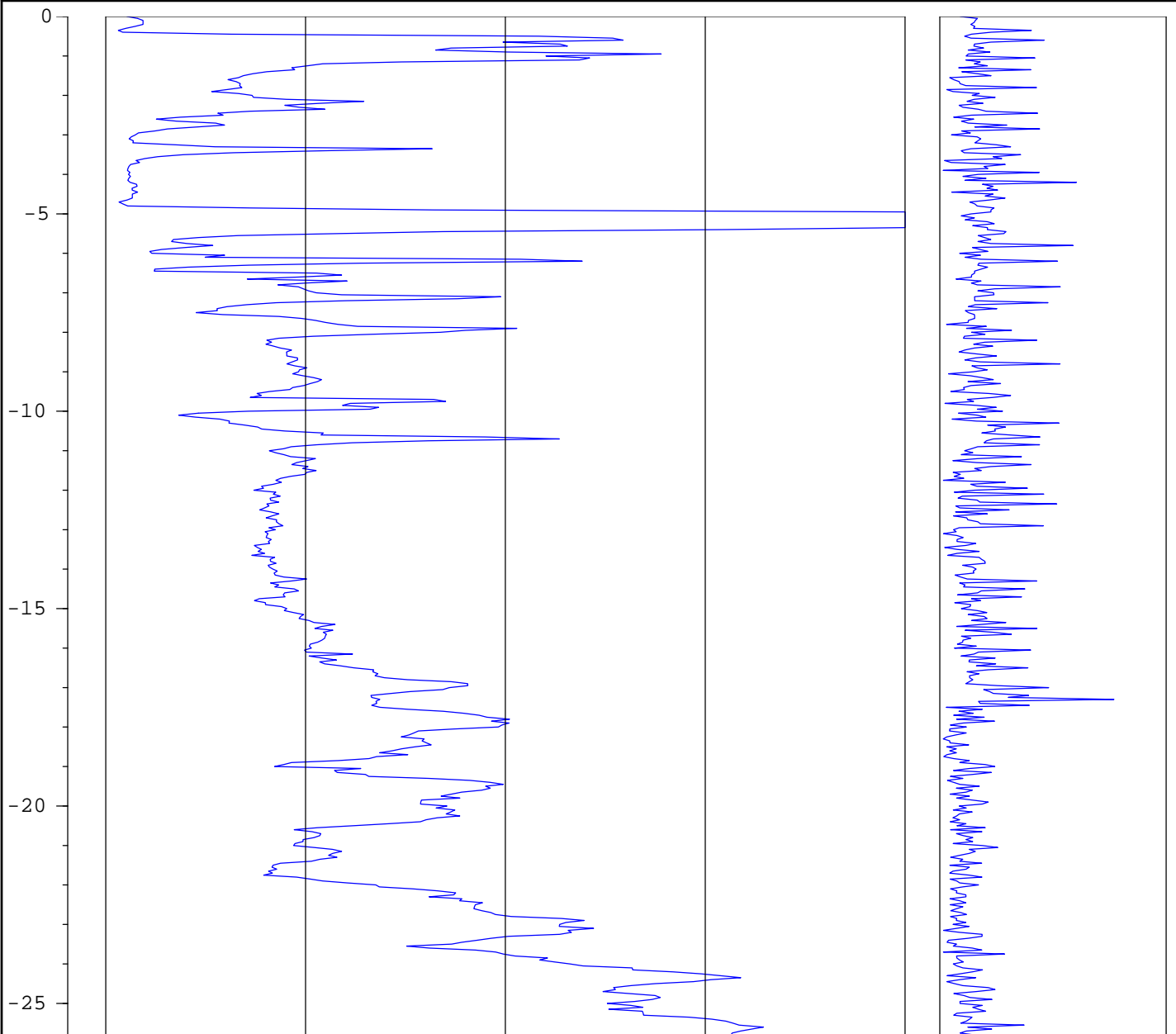
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156229.34** ELEVATION:
 EASTING: **1404750.30**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-12**

TOTAL DEPTH: **24.80**

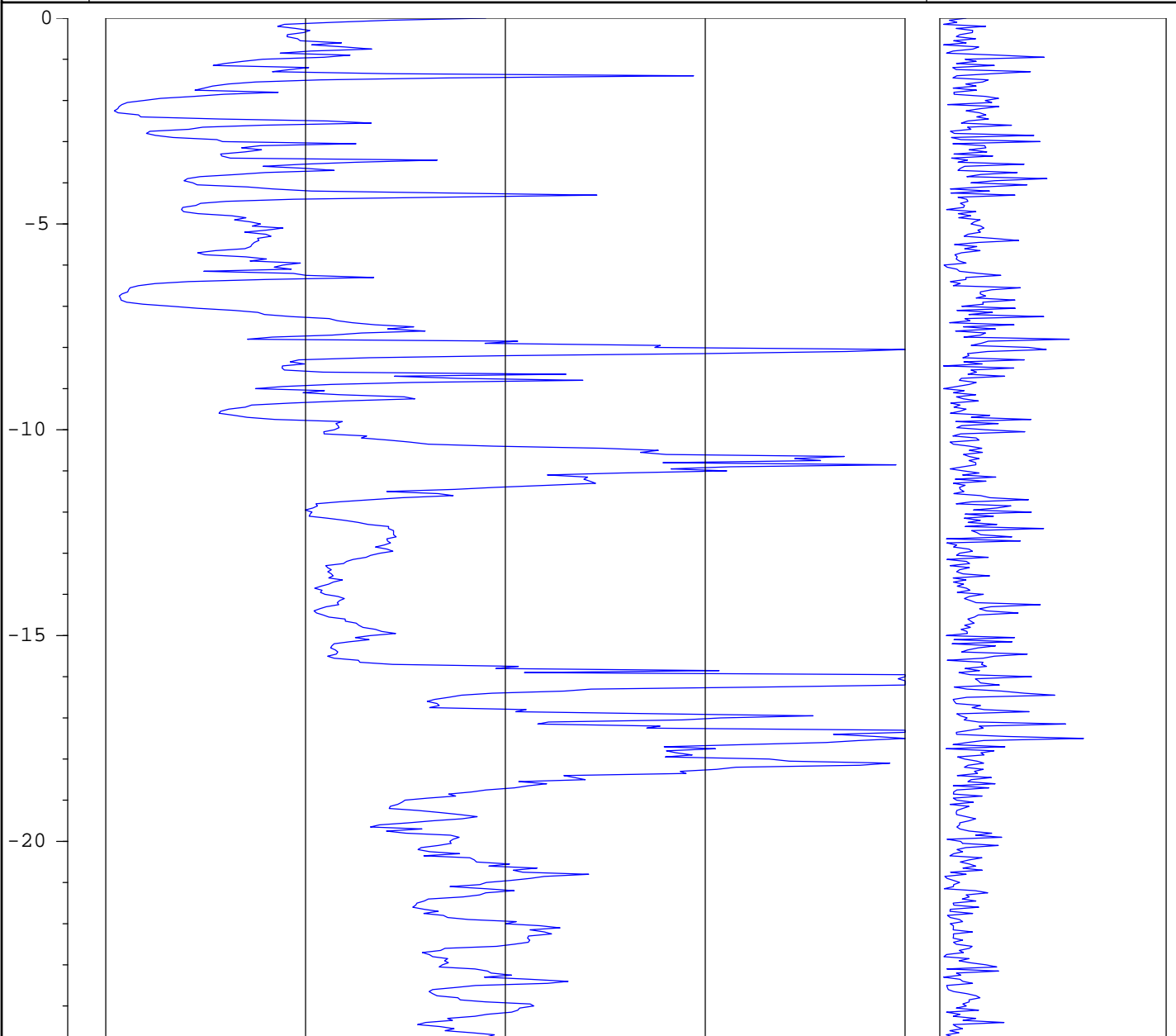
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156329.05** ELEVATION:
 EASTING: **1404752.60**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



NOTES:



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-13**

TOTAL DEPTH: **18.55**

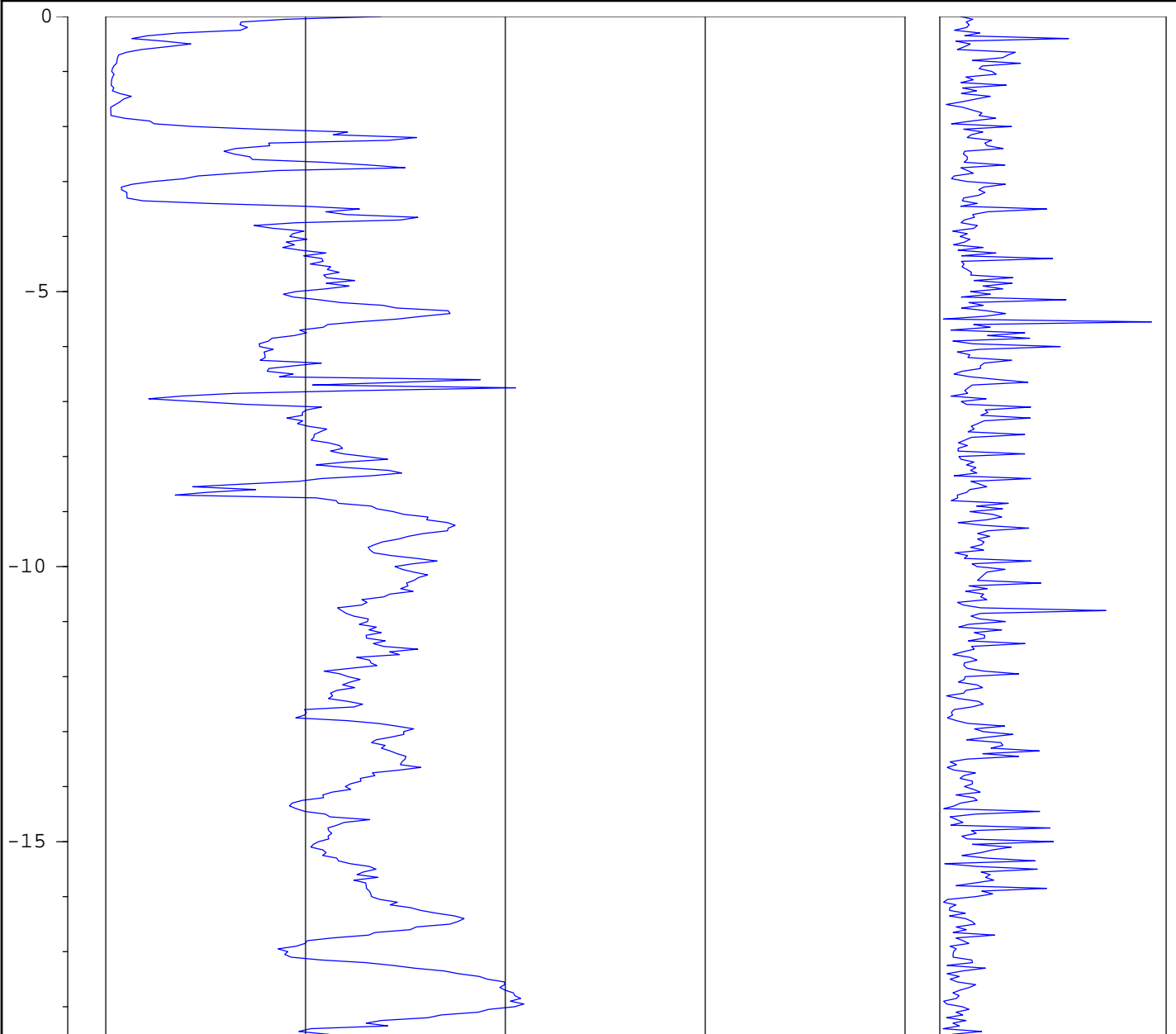
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156158.96** ELEVATION:
 EASTING: **1404847.12**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	75	150	0	25



NOTES:



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-14**

TOTAL DEPTH: **22.55**

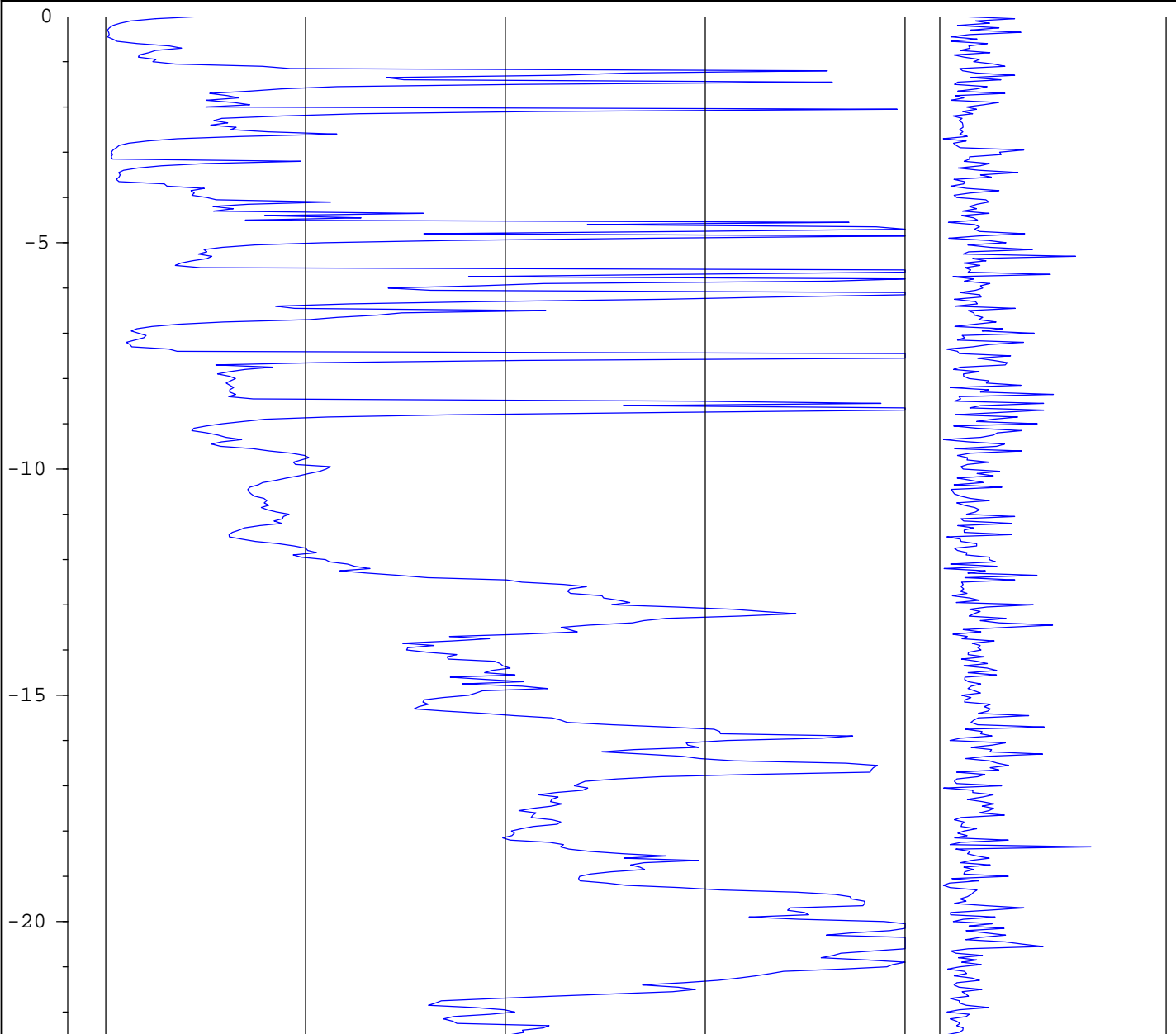
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156094.37** ELEVATION:
EASTING: **1404739.52**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	100	200	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-15**

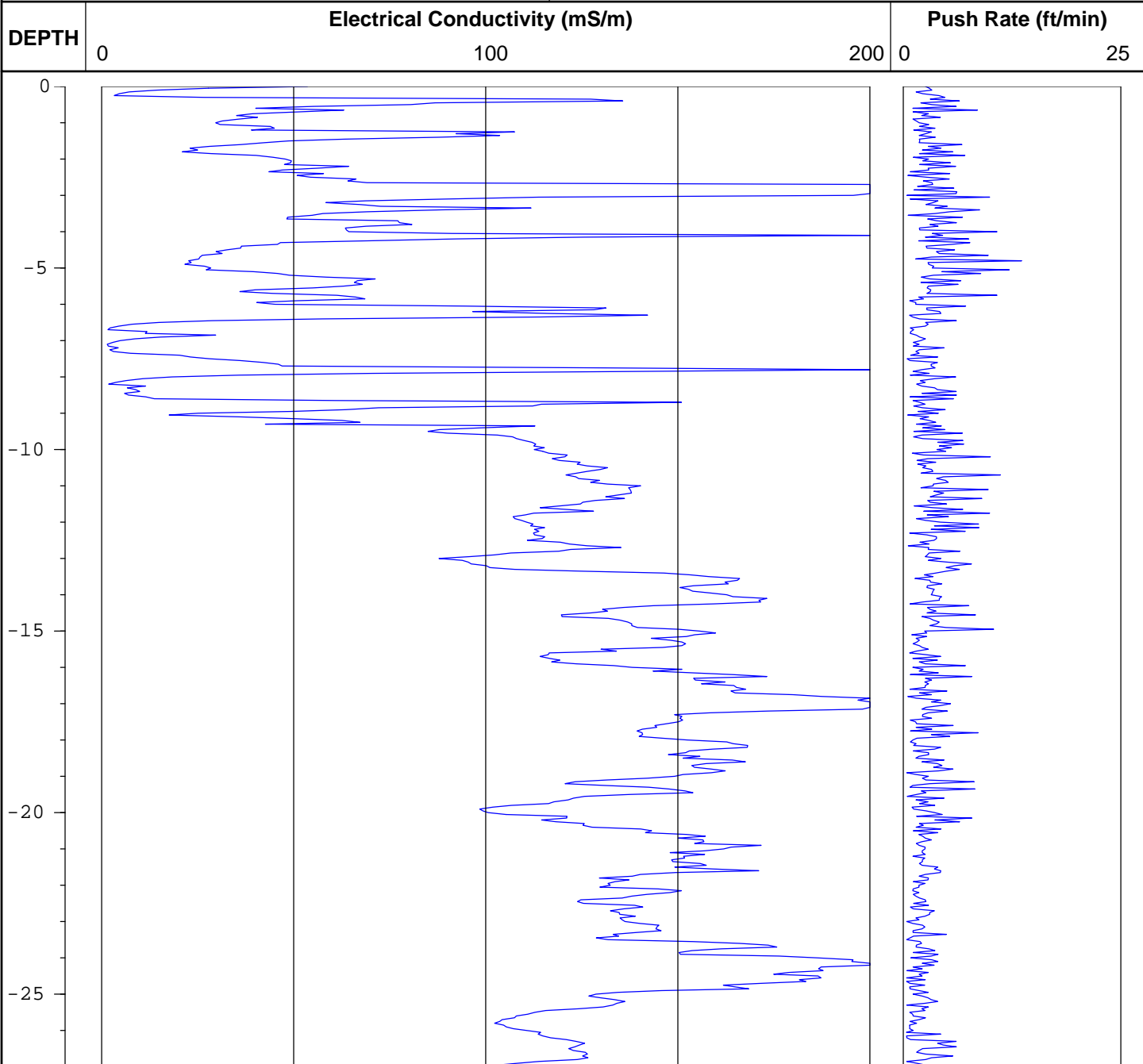
TOTAL DEPTH: **27**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1155998.86** ELEVATION:
 EASTING: **1404785.38**



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-16**

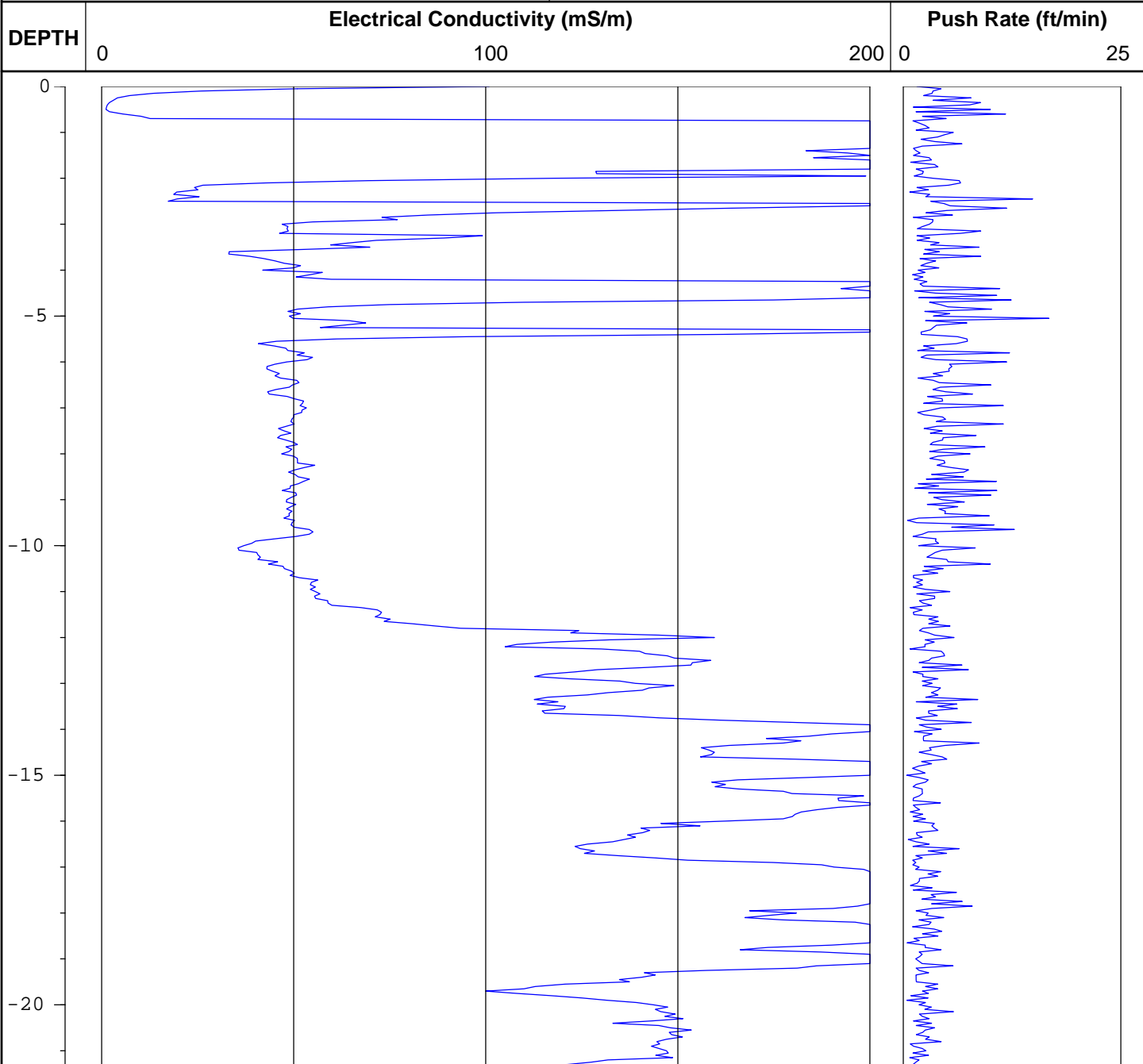
TOTAL DEPTH: **21.35**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156007.00** ELEVATION:
 EASTING: **1404894.36**



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-17**

TOTAL DEPTH: **21.35**

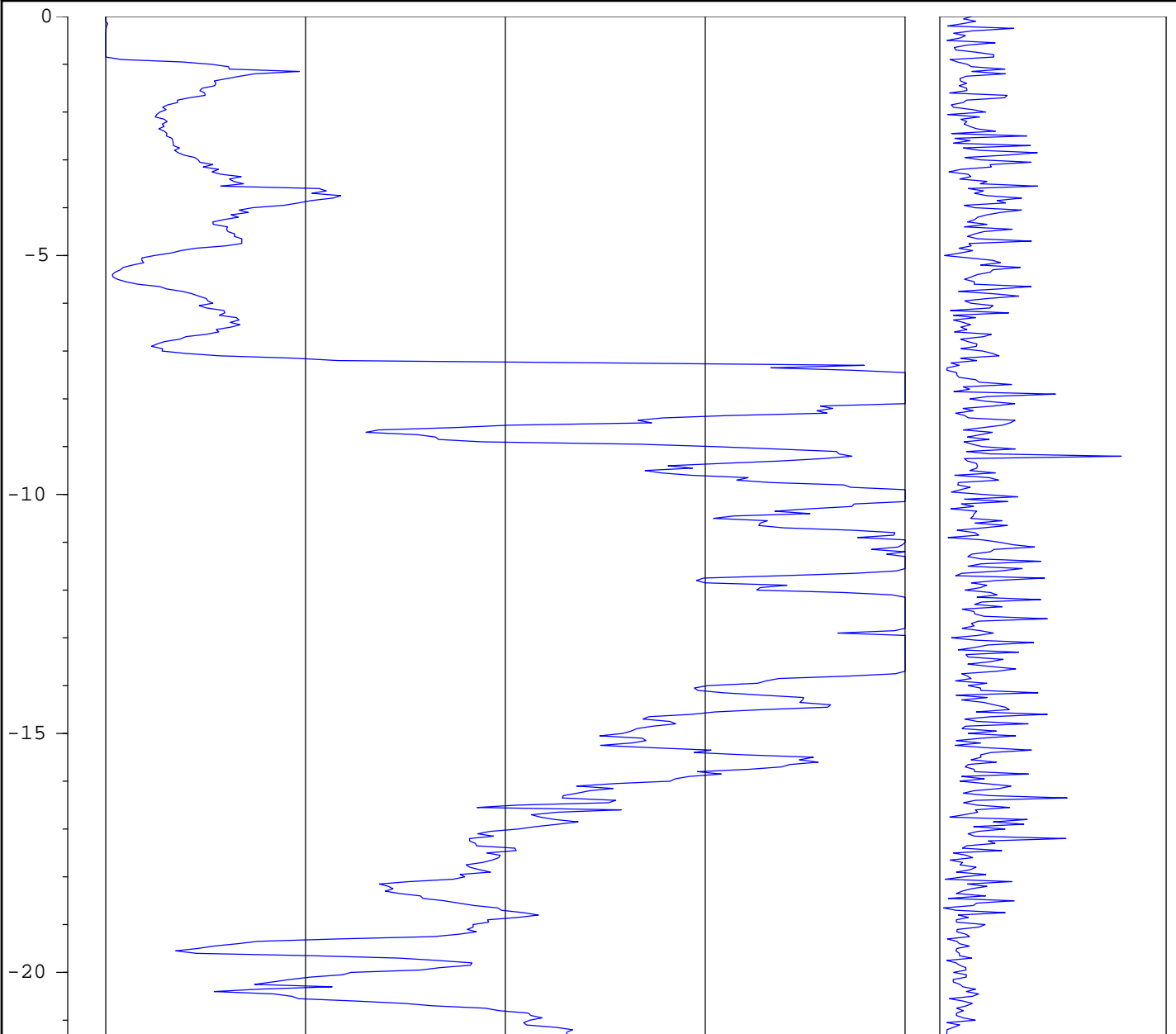
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1155986.90** ELEVATION:
 EASTING: **1405060.48**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	100	200	0	25



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-18**

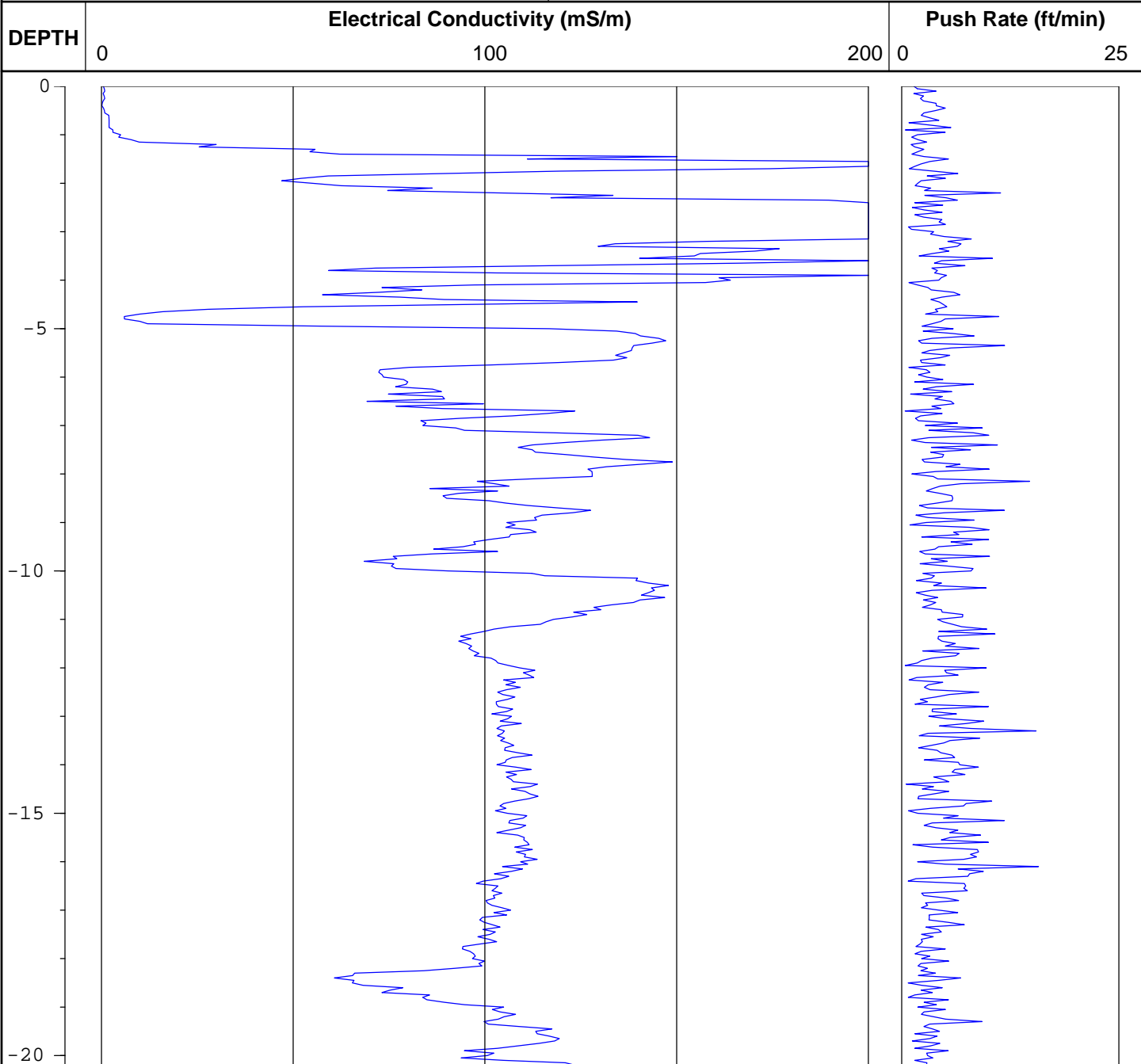
TOTAL DEPTH: **20.20**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1155998.99** ELEVATION:
 EASTING: **1405241.36**



NOTES:



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-19**

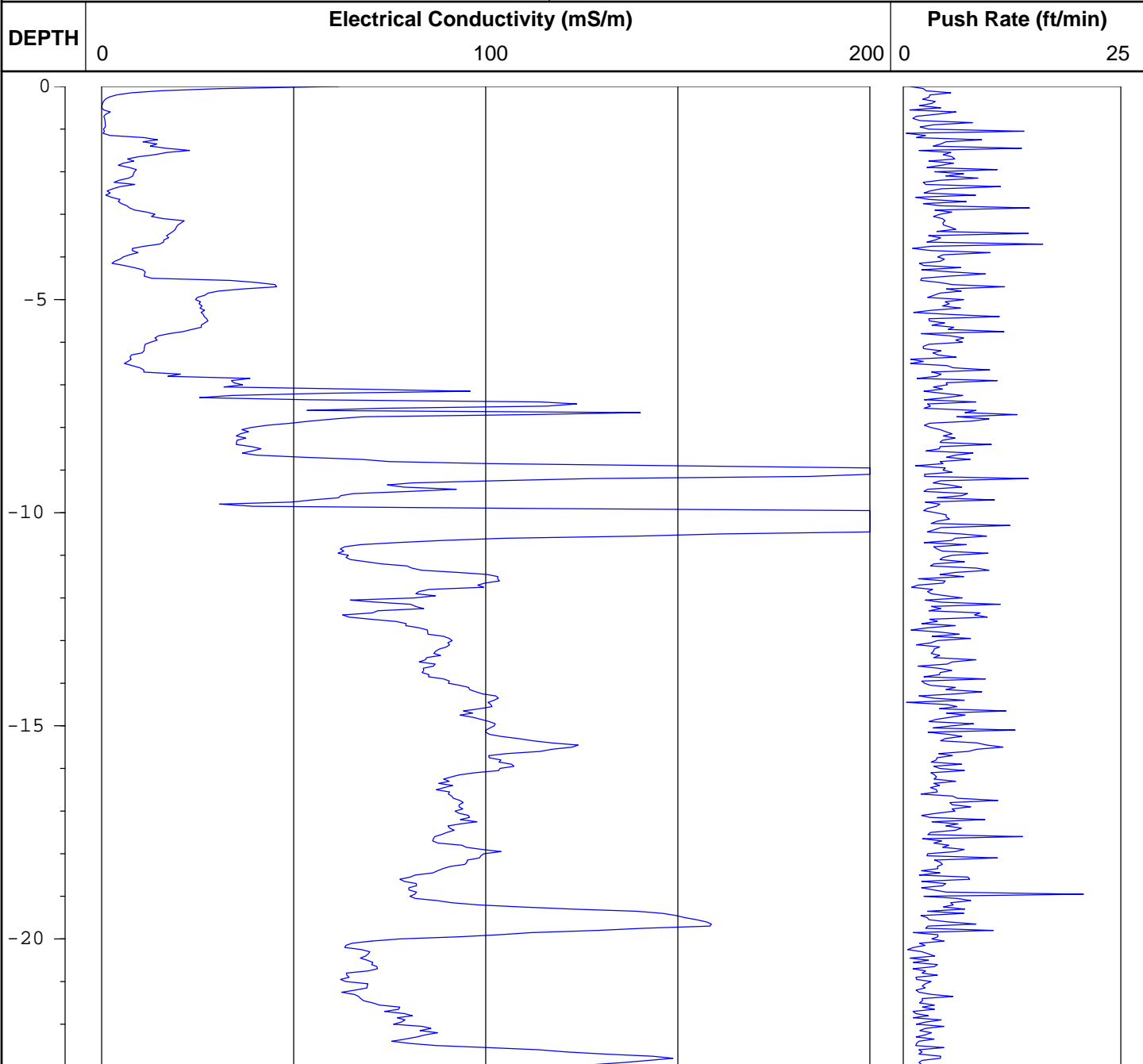
TOTAL DEPTH: **23**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
SITE LOCATION: **Rochester, New York**
JOB NO.: **NA**
LOGGED BY: **FC 5000**
PROJECT MANAGER: **Jason Ruf**
DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
RIG TYPE: **Geoprobe 6620DT**
METHOD OF DRILLING: **Direct Push**
SAMPLING METHOD: **Electrical Conductivity**
NORTHING: **1156099.84** ELEVATION:
EASTING: **1405164.75**



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-20**

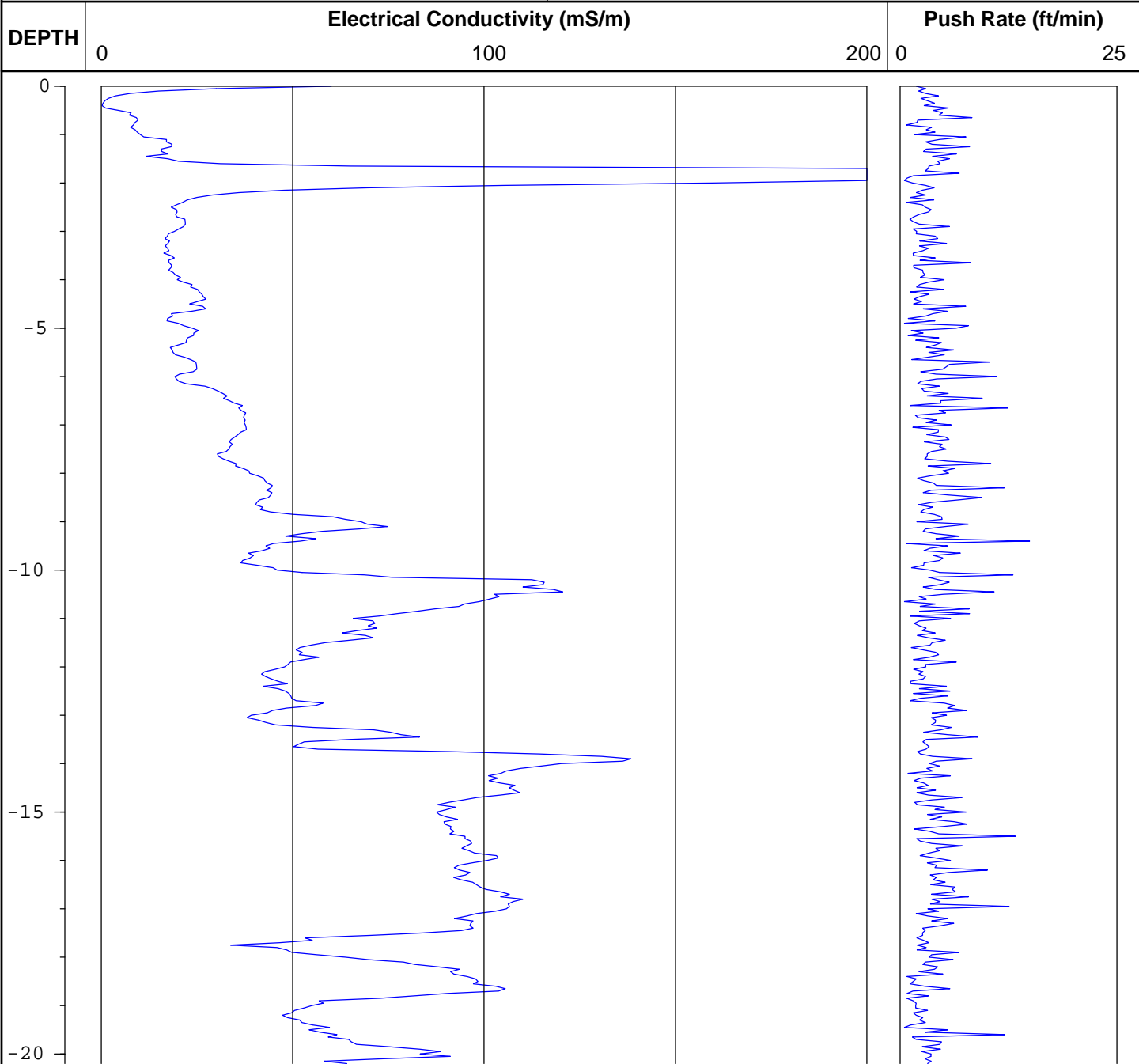
TOTAL DEPTH: **20.20**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156149.23** ELEVATION:
 EASTING: **1405071.96**



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FIELD BOREHOLE LOG

BOREHOLE NO.: **CON-21**

TOTAL DEPTH: **17.1**

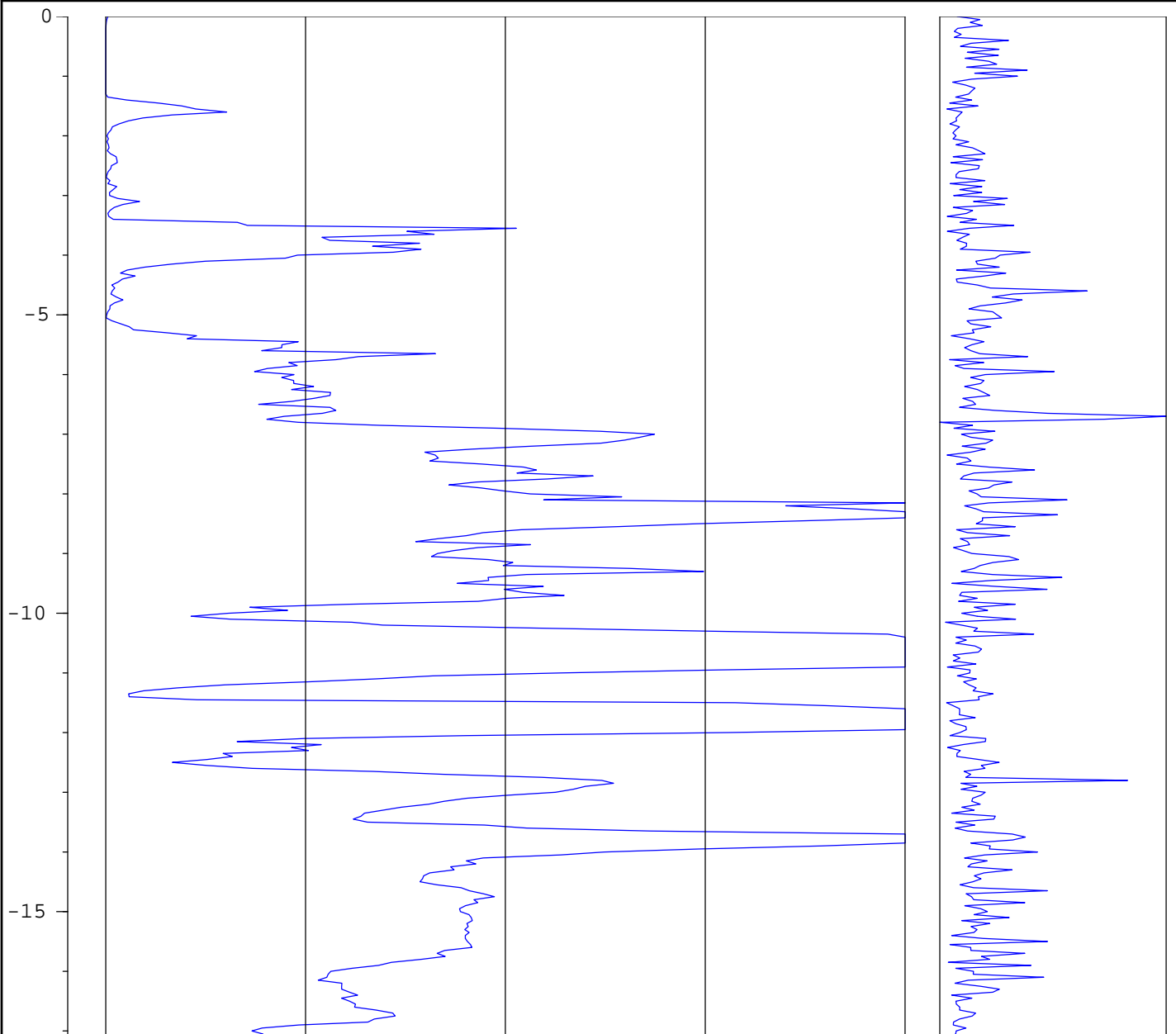
PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 JOB NO.: **NA**
 LOGGED BY: **FC 5000**
 PROJECT MANAGER: **Jason Ruf**
 DATES DRILLED: **6/29/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **Electrical Conductivity**
 NORTHING: **1156174.90** ELEVATION:
 EASTING: **1404982.59**

DEPTH	Electrical Conductivity (mS/m)			Push Rate (ft/min)	
	0	100	200	0	25



NOTES:

Appendix C

AMEC's EM Survey Report

90 B John Muir Drive
Amherst, New York 14228
(716) 565-0624 • Fax (716) 565-0625



July 30, 2010

Jason Ruf
Senior Geologist/Manager Data Visualization Services
S2C2 inc.
5 Johnson Drive
Suite 12
Raritan, New Jersey 08869

Transmitted via email to: Jason Ruf [jruf@s2c2inc.com]

Subject: Geophysical Survey Results
Glass Plant Site
Suntru Street, Rochester, NY

Dear Mr. Ruf:

1.0 INTRODUCTION

This letter report presents the results of the geophysical investigation performed for S2C2 Inc (S2C2) in support of their environmental investigation of a former Glass Plant Site located on Suntru Street in Rochester, NY (the Site).

The geophysical investigation was designed to geophysically characterize the subsurface and focus a follow-up intrusive investigation. The information provided herein is intended to assist S2C2 with their assessment of potential environmental concerns at the Site. The specific objective of the investigation was to explore for anomalies indicative of abandoned raceways and buried pipes trending from the former building foundation toward the river. AMEC Geomatrix, Inc. (AMEC) performed data acquisition on June 29, 2010. AMEC used frequency domain geophysical techniques to characterize the property.

The property is bounded to the west by the Genesee River. A retaining wall and fence is located between the main portion of the property and the river. A large building foundation is present in the central portion of the property. At the time of the geophysical survey significant vegetation was present across the survey area.

2.0 METHODOLOGY

The following sections present the geophysical methodology utilized for this investigation.

2.1 Reference Grid

The EM31 survey utilized a differential GPS system and the line spacing was approximately 10 ft.

2.2 Electromagnetic EM31 Survey Methodology

A Geonics EM31 Terrain Conductivity meter was used to measure and record the quadrature component (ground conductivity) and the inphase component of the EM field along the survey lines. The quadrature component of the EM field is a measurement of the apparent ground conductivity. The inphase component of the EM field



EM31 with GPS in use (photo not from this site)

is sensitive to metallic objects. Comparison of the quadrature component of the EM field data (expressed in units of milliSiemens per meter (mS/m)) and the inphase component data (expressed in units of parts per thousand (ppt)) results in increased anomaly definition. The character of the EM response, low or high, is partially dependent on the orientation of the buried target relative to the orientation of the EM31 device during data acquisition, and the survey direction. A buried metal pipe, for example, will exhibit a high valued response when the trend of the pipe is parallel to the survey direction. Alternatively, when a survey line crosses a buried metal pipe whose trend is perpendicular to the survey direction, it is characterized by a low response. Similarly, other complex buried metal anomalies are indicated by a coupling of a high and low response.

All readings were taken with the instrument oriented parallel to the direction of travel, in the vertical dipole mode and with the instrument at waist height. The depth of penetration with the instrument in this configuration is approximately 12 to 15 feet below ground surface. Data were collected and stored in a solid state memory data logger during the survey. The data logger was interfaced to a portable computer and the data were transferred to a floppy disk for subsequent processing and interpretation. A survey base station was established on-site and

was revisited throughout the survey to check for instrument drift and malfunction. No significant drift or malfunction was observed.

The terrain conductivity and inphase data were initially edited and then plotted as profile lines for interpretation. Contour maps of the data were then constructed and utilized for final interpretation. The geophysical data are presented in final form as a series of color contour maps. The color maps allow for an illustration of detected anomalies that are associated with conductive materials such as buried metals, wastes, fill, utilities, and changes in soil texture and/or moisture content.

3.0 EM31 Results

EM31 conductivity and inphase data for the site is shown in Figures 1 and 2. Surface features that were observed during the data acquisition are noted on the figures.

Conductivity values at the site were observed to range from 0 mS/m to over 100 mS/m. The variation in terrain conductivity may be related to any one or combination of the following conditions:

- A change in soil/fill type. For example, the presence of conductive fill material will often be expressed as short wavelength (high frequency) anomalies. Also, an increase in relative clay content may increase the measured conductivity and variations in fill type will cause associated anomalies;
- A change in soil moisture. Moisture content would be expected to increase in areas of low topographic elevation as more saturated sediments lie within the depth of investigation of the EM instrument;
- A change in pore fluid specific conductance. For example, the presence of salt-impacted water within the pore space of the shallow soil will increase the measured conductivity primarily due to the presence of chloride ions; or
- Interference from surface metallic anthropogenic features such as powerlines, fences, pipes, reinforced concrete and other metallic structures.

The inphase data set that is shown in Figure 2 exhibits a response that is similar to the conductivity data. The majority of the anomalies evident with both the Conductivity and Inphase data are likely related to surface or near surface anthropogenic features.

Jason Ruf
S2C2 Inc.
July 30, 2010
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Linear anomalies that may be related to buried pipes are noted on the figure with dashed red lines. There are no anomalies that are interpreted to represent underground raceways.

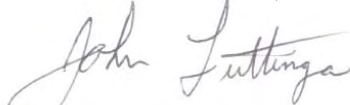
S2C2 visually observed pipes along the river side of the retaining wall. We used our GPS to note the positions of these pipes and their positions are plotted on the figures with red triangles. None of these known pipes are associated with a corresponding geophysical signature. The obvious implication is that the geophysical data, while able to detect some pipes at this site, is not reliable to exclude the presence of pipes in other locations.

4.0 LIMITATIONS

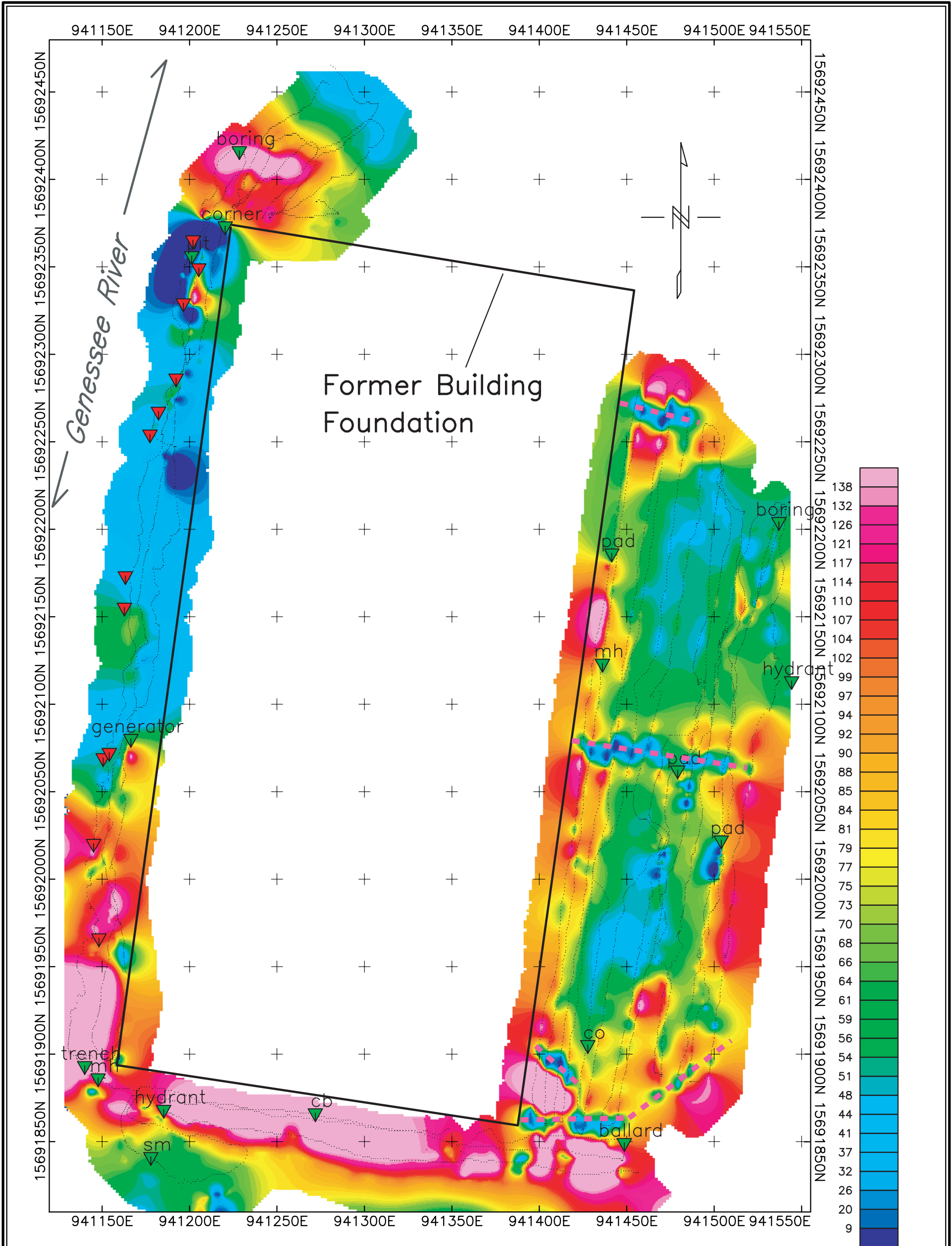
The geophysical methods used during this survey are established, indirect techniques for non-destructive subsurface reconnaissance exploration. As these instruments utilize indirect methods, they are subject to inherent limitations and ambiguities. Metallic surface features (electrical wires, scrap metal, 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 Geomatrix, Inc.

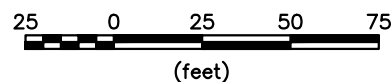


John Luttinger
Senior Geophysicist



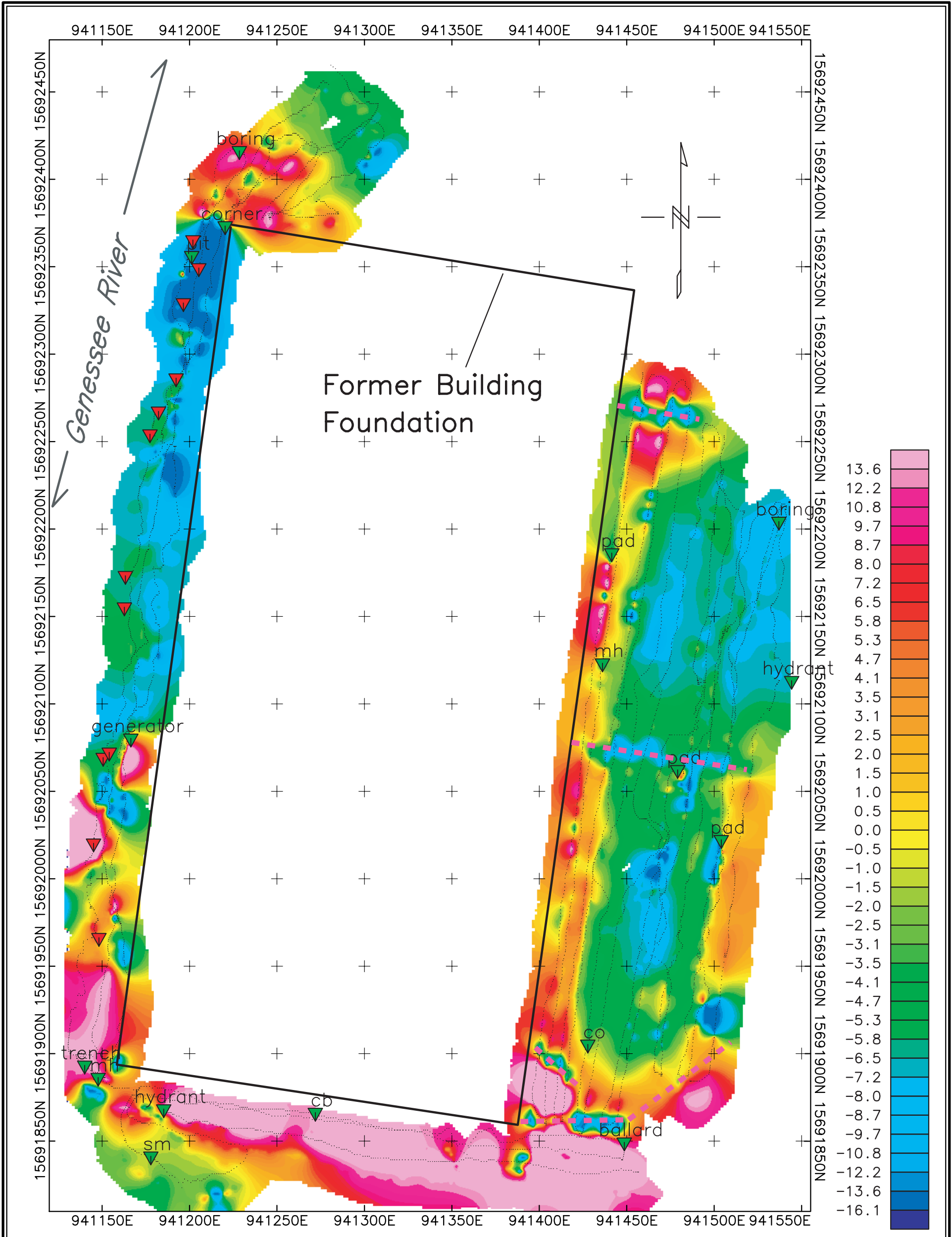
 Location of pipe observed extending to western retaining wall (visual observation)


 Interpreted location of linear anomaly possibly relating to subsurface piping.




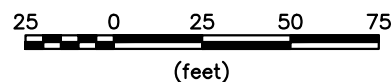
Terrain Conductivity (mS/m)

<p>Figure 1</p> <p>Geophysical Survey Results</p> <p>Color Contours of EM31 Data</p> <p>Terrain Conductivity (mS/m)</p> <p>Glass Plant Site</p> <p>Suntru St, Rochester, NY</p> <p>S2C2 Inc.</p> <p>AMEC Geomatrix (716)565-0624</p>
--



 Location of pipe observed extending to western retaining wall (visual observation)

 Interpreted location of linear anomaly possibly relating to subsurface piping.



Inphase Response (ppt)

<p>Figure 2</p> <p>Geophysical Survey Results</p> <p>Color Contours of EM31 Data</p> <p>Inphase Response (ppt)</p> <p>Glass Plant Site</p> <p>Suntru St, Rochester, NY</p> <p>S2C2 Inc.</p> <p>AMEC Geomatrix (716)565-0624</p>

Appendix D
Soil Boring Logs



5 Johnson Drive, Suite 12
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 (908) 253-3200

FIELD BOREHOLE LOG

BOREHOLE ID: **SB-03**

TOTAL DEPTH: **8.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1405114.833**

EASTING: **1156364.084**

ELEVATION **403.04**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-4 ft Fill; Dark to light brown fill with silt, sand, concrete, glass fragments and brick. Moist, no odor or visual contamination (OVC).</p> <p>4-5 ft Fill; Tan brown to white clayey debris-filled material, glass, white flakey material. Moist.</p> <p>5-8 ft Fill; Black silty clay and sand with glass and rock fragments. Strong coal tar-like odor. Saturated.</p>
			12.7		
-5			28.7		

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-06**

TOTAL DEPTH: **21.5'**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **6/30/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156561.701**

EASTING: **1404796.637**

ELEVATION **396.711**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0			0.2		0-4 ft Fill; Brick, silt, glass and concrete fragments. Dry, no odor or visual contamination (OVC). RAD: < 8uR/hr
-5					4-8 ft Fill; Brick, silt, glass and concrete fragments. Dry, no OVC. RAD: 18uR/hr
-10					8-12 ft Silt with very fine sand with clast of gravel (rounded). Wet. Light olive tan and dark gray to black at upper 4".
-15					12-16 ft Silty sand; dark gray very fine sand with silt and clay lenses. Saturated, slight hydrocarbon odor. Sand has small brick fragments (re-worked).
-20					16-20 ft Sand; Coarse sand with rounded gravel clasts and re-worked brick fragments. Saturated. Coarse sand with light coal tar-like odor at 17ft.
-21.5					20-21.5 ft Large gravel clast and weathered rock. No OVC.

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-08**

TOTAL DEPTH: **12.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156377.20**

EASTING: **1404863.75**

ELEVATION **401.414**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-4 ft Fill; Concrete from 0-0.5ft bgs. Black coal cinders, rock, silt, and brick. Moist, no odor or visual contamination (OVC). RAD: <10uR/hr</p> <p>4-8 ft Fill; Black coal cinders, rock, silt and brick. Dry, no OVC. RAD: <10uR/hr</p> <p>8-12 ft Silt; Light tan-brown silt with rounded gravel clasts and interbedded fine sand. Saturated, no OVC. RAD: <10uR/hr</p>
-5					
-10					

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-09**

TOTAL DEPTH: **4.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156278.929**

EASTING: **1404925.505**

ELEVATION **401.42**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					
					0-0.5 ft Fill; Concrete
					0.5-1.5 ft Fill; Dark brown to black silt with coal clinker and gravel.
					1.5-3 ft Fill; Brownish tan silt with rock fragments and gravel clasts. Moist, no odor or visual contamination.

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-12**

TOTAL DEPTH: **4.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156326.564**

EASTING: **1404751.108**

ELEVATION **401.089**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					
					0-1 ft Fill; Dark brown soil from 0-1.0ft bgs. Concrete, reddish-brown silt with layers of red fine material.
					3-3.5 ft Fill; Layer of crushed glass.
					3.5-4 ft Fill; Red powder and white powder with brown silt. No odor or visual contamination. RAD: 10-15uR/hr

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-14**

TOTAL DEPTH: **21.5'**

PROJECT INFORMATION

DRILLING INFORMATION



PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **6/30/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156094.366**

EASTING: **1404739.518**

ELEVATION **399.434**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					
					0-4 ft Fill; Dark gray-brown silt and sand. Brick, silt, glass and concrete fragments. Moist, no odor or visual contamination (OVC). RAD: < 10uR/hr
-5					4-8 ft Fill; Tan-brown silt with clasts of rounded gravel. Large brick fragment at 7.5ft bgs. Moist, no OVC. RAD: < 10uR/hr
-10					8-12 ft Fill; Tan-brown silt with clasts of rounded gravel. Large brick fragment at 9ft bgs. Wet at 9ft bgs, moist throughout rest of core. RAD: < 10uR/hr
-15					12-16 ft Fill; Light gray to dark gray gravel, silt with some clay. Rock fragments, bricks. Saturated, no OVC.
-20					16-20 ft Light gray rock fragments with clay and some silt. Saturated, no OVC.
					20-21.5 ft Light gray rock fragments with clay and some silt. Slight coal tar-like odor at 20.5ft bgs. Saturated.

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-19**

TOTAL DEPTH: **4.0'**

PROJECT INFORMATION

DRILLING INFORMATION

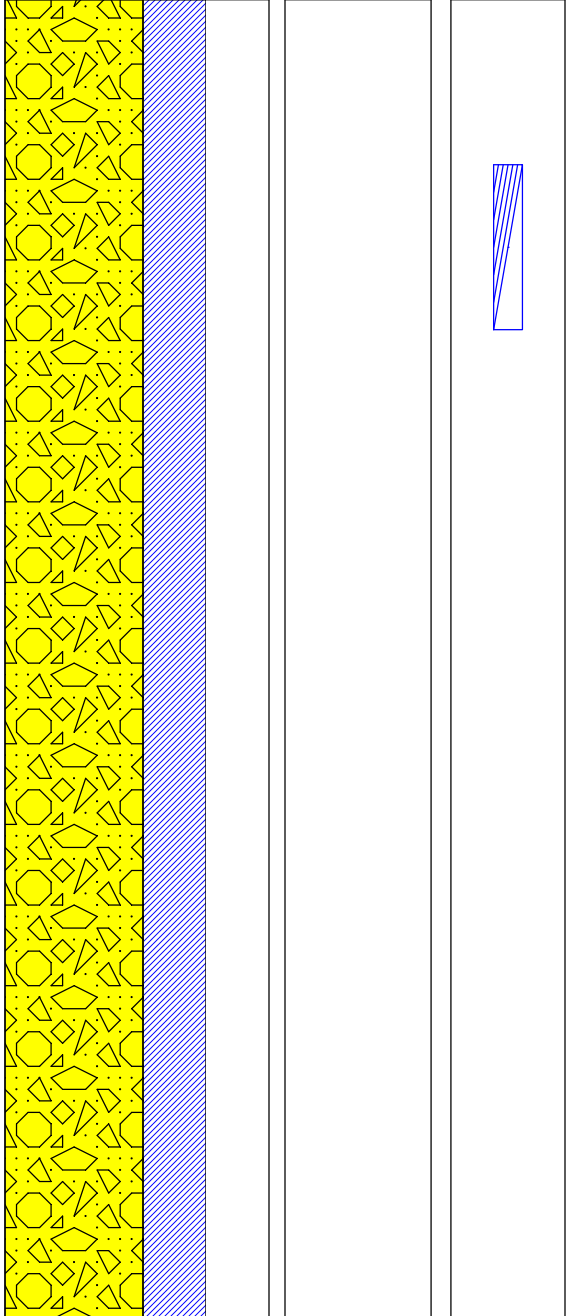
PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156097.389**

EASTING: **1405168.267**

ELEVATION **414.308**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-4 ft Fill; Brown to black silt with rock fragments, brick and coal clinker. Moist, no odor or visual contamination. RAD: <10uR/hr</p> 

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-20**

TOTAL DEPTH: **18.5'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **6/30/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156149.230**

EASTING: **1405071.962**

ELEVATION **402.772**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					
					0-4 ft Fill; Soil 0-0.5ft bgs. Reddish brick with glass and concrete fragments at 1.6ft bgs. Reddish brown silt with rock fragments from 2.9-3.2ft bgs. Till-like material at 3.2ft bgs. Moist, no odor or visual contamination (OVC). RAD: < 10uR/hr; 18uR/hr at brick
-4			35		4-5 ft Silt; Tannish brown silt with gravel clasts. Moist, no odor.
-6			135		5-8 ft Silt; Black to light gray brown. Stong coal tar-like odor.
-7			37		
-8			15		8-10 ft Silt; Tannish brown silt with gravel clasts. No OVC.
-10			1.2		10-12 ft Silt; Dark gray black silt with sand, gravel and rock fragments. Stong coal tar-like odor.
-12			0.5		12-13 ft Dark reddish-brown/gray rock fragments.
-13			23		13-16 ft Sand; Dark gray fine sand. Saturated with product, strong hydrocarbon (HC) odor.
-14			47		
-15			78		
-16			23		16-18.5 ft Sandy silt; Light tannish-yellow and olive silt with fine sand. No HC odor. Coal tar penetrating through silt on core and in the cutting shoe.

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-22**

TOTAL DEPTH: **4.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156477.498**

EASTING: **1404788.501**

ELEVATION **401.239**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-4 ft Fill; Concrete, silt, brick and black coal clinker. Dry to moist, no odor or visual contamination. RAD: <10uR/hr</p>

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-23**

TOTAL DEPTH: **12.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156165.681**

EASTING: **1404736.944**

ELEVATION **401.117**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					0-1.5 ft Fill; Brown silt with rock fragments, clay and some roots. RAD: <10ur/hr
					1.5-4 ft Fill; Dark gray-black silt, sand, rock and glass with some brick, coal clinker and hard white material. RAD: 15uR/hr
-5					4-8 ft Fill; Silt with clay and gravel clasts. Some concrete debris at 4ft and 7ft bgs. RAD: 15-20uR/hr

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-24**

TOTAL DEPTH: **8.0'**

PROJECT INFORMATION

DRILLING INFORMATION


PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156264.5**

EASTING: **1404807.764**

ELEVATION **401.75**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-0.5 ft Fill; Concrete.</p>
					<p>0.5-1 ft Fill; Yellow, red and white powder, dry. RAD: 19uR/hr</p>
					<p>1-4 ft Fill; Light reddish-tan weathered concrete-like material. Dry, no odor or visual contamination (OVC). RAD: 10-15uR/hr</p>
					<p>4-8 ft Fill; Light reddish-tan weathered concrete-like material. Dry, no OVC. Very difficult drilling; refusal. RAD: 10-15uR/hr</p>

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-25**

TOTAL DEPTH: **4.0'**

PROJECT INFORMATION

DRILLING INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156134.924**

EASTING: **1404778.406**

ELEVATION **401.33**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					
					0-0.5 ft Fill; Concrete
					0.5-1 ft Fill; Black sand, gravel, coal clinker, rock and brick. Slight coal tar-like odor. RAD: <10uR/hr
					1-3 ft Fill; Silt with gravel clasts and rock fragments. Moist, no odor or visual contamination. RAD: 13uR/hr

NOTES: PID values taken every 6". Only detections are reported.



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FIELD BOREHOLE LOG

BOREHOLE ID: **SB-26**

TOTAL DEPTH: **12.0'**

PROJECT INFORMATION

PROJECT: **B&L Glass Plant**
 SITE LOCATION: **Rochester, New York**
 LOGGED BY: **Jason Ruf**
 DATES DRILLED: **7/1/2010**

DRILLING INFORMATION

DRILLER: **Jason Ruf**
 RIG TYPE: **Geoprobe 6620DT**
 METHOD OF DRILLING: **Direct Push**
 SAMPLING METHOD: **DT325 Soil Sampler**

NORTHING: **1156195.716**

EASTING: **1404859.919**

ELEVATION **400.971**

DEPTH	USCS	Recovery	PID (ppm)	Sample	Lithology Discription
0					<p>0-0.5 ft Fill; Concrete</p>
					<p>0.5-3 ft Fill; Dark gray to black silt with sand, gravel, coal clinker and rock fragments. Dry to moist, slight coal tar-like odor. RAD: <10uR/hr</p>
-5					<p>4-8 ft Fill; Dark gray to black silt with sand, gravel, coal clinker and rock fragments. Saturated at bottom. RAD: <10uR/hr</p>
-10					<p>8-12 ft Fill; Gravel and coal clinker. Saturated, no odor or visual contamination.</p>

NOTES: PID values taken every 6". Only detections are reported.

Appendix E

Discharge Pipe Photographs



Description: Pipes A and B.



Description: Pipe C.



Description: Pipe D.



Description: Pipes E.



Description: Pipe G



Description: Pipe H



Description: Pipe I.



Description: Pipe J.



Description: Pipe K.

Appendix F

Low-Flow Groundwater Sampling Forms

S₂C₂ inc

LOW FLOW SAMPLING FORM

Site: <u>B&L Glass Plant</u>	Field Personnel: <u>JR/SG</u>
Date: <u>8/23/2010</u>	
Weather: <u>Sunny high 80 deg F</u>	

Well ID: <u>MW-01</u>	Well Depth: <u>15</u> feet	Screened Interval (TOC): <u>7-17</u>
Permit #: <u>NA</u>	Well Diameter: <u>1.5</u> inches	

PID Readings (ppm)	BACKGROUND: <u>0.0</u>	PUMP INTAKE DEPTH: <u>13.5</u> ft below TOC
	BENEATH OUTER CAP: <u>0.0</u>	DEPTH TO WATER : <u>9.78</u> ft below TOC
	BENEATH INNER CAP: <u>0.0</u>	

Time	Purging	Sampling	pH (pH units)		Specific Conductivity (mS/cm)		Redox Potential (mV)		Dissolved Oxygen (mg/l)		Turbidity (NTU)		Temperature (deg C)		Pumping Rate (ml/min)	Depth to Water (ft below TOC)
			Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
942	x		6.27	NA	2.976	NA	80.6	NA	6.17	NA	100	NA	15.92	NA	400	9.78
947	x		6.65	38	3.161	0.185	22.6	58	1.05	5.12	56.2	43.8	15.02	0.9	400	9.99
953	x		6.76	0.11	3.07	0.091	-2.8	25.4	0.78	0.27	33.8	22.4	14.71	0.31	400	10.13
1000	x		6.81	0.05	2.979	0.091	-14.5	11.7	0.77	0.01	18.6	15.2	15.05	0.34	300	9.62
1005	x		6.83	0.02	2.956	0.023	-22.9	8.4	0.69	0.08	13.3	5.3	15.25	0.2	300	9.65
1010		x														9.65

COMMENTS: Removed 2.5 gallons of purge water.

* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: +/- 0.1 pH; +/- 3% for Specific COnductivity and Tempreature; +/-10mV for ORP; and +/- 10% for DO.

S₂C₂ inc

LOW FLOW SAMPLING FORM

Site: B&L Glass Plant Field Personnel: JR/SG
 Date: 8/23/2010
 Weather: Sunny high 80 deg F

Well ID: MW-02 Well Depth: 20 feet Screened Interval (TOC): 12-22
 Permit #: NA Well Diameter: 1.5 inches

PID Readings (ppm) BACKGROUND: 0.0 PUMP INTAKE DEPTH: 17 ft below TOC
 BENEATH OUTER CAP: 0.0 DEPTH TO WATER : 11.37 ft below TOC
 BENEATH INNER CAP: 0.0

Time	Purging	Sampling	pH (pH units)		Specific Conductivity (mS/cm)		Redox Potential (mV)		Dissolved Oxygen (mg/l)		Turbidity (NTU)		Temperature (deg C)		Pumping Rate (ml/min)	Depth to Water (ft below TOC)
			Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1050	x		7.40	NA	2.725	NA	-14.4	NA	3.86	NA	-	NA	15.88	NA	400	11.39
1055	x		7.30	10	2.872	0.147	-94	79.6	0.55	3.31	16.2	NA	14.78	1.1	400	11.40
1100	x		7.30	0	2.936	0.064	-102.6	8.6	0.49	0.06	15.4	0.8	15.03	0.25	300	11.41
1105	x		7.29	0.01	2.916	0.02	-110.9	8.3	0.43	0.06	12	3.4	15.03	0	300	11.41
1110		x													300	11.41

COMMENTS: Removed 1.75 gallons of purge water, slight hydrocarbon odor to purge water.

* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: +/- 0.1 pH; +/- 3% for Specific COnductivity and Tempreature; +/-10mV for ORP; and +/- 10% for DO.

LOW FLOW SAMPLING FORM

Site: B&L Glass Plant Field Personnel: JR/SG
 Date: 8/23/2010
 Weather: Sunny high 80 deg F

Well ID: MW-02 Well Depth: 20 feet Screened Interval (TOC): 12-17
 Permit #: NA Well Diameter: 1.5 inches

PID Readings (ppm) BACKGROUND: 0.0 PUMP INTAKE DEPTH: 11 ft below TOC
 BENEATH OUTER CAP: 0.0 DEPTH TO WATER : 8.81 ft below TOC
 BENEATH INNER CAP: 0.0

Time	Purging	Sampling	pH (pH units)		Specific Conductivity (mS/cm)		Redox Potential (mV)		Dissolved Oxygen (mg/l)		Turbidity (NTU)		Temperature (deg C)		Pumping Rate (ml/min)	Depth to Water (ft below TOC)
			Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1535	x		6.90	NA	4.138	NA	-57.3	NA	1.79	NA	69.7	NA	16.47	NA	-	-
1540	x		7.22	32	4.245	0.107	-92.6	35.3	1.94	0.15	50.1	NA	15.35	1.12	-	-
1550	x		7.14	0.08	2.779	1.466	-113.5	20.9	0.58	1.36	35.9	14.2	15.63	0.28	310	10.69
1555	x		7.16	0.02	2.655	0.124	-136.9	23.4	0.39	0.19	25.5	10.4	15.59	0.04	310	10.74
1600	x		7.16	0	2.796	0.141	-140.3	3.4	0.38	0.01	17.1	8.4	15.50	0.09	310	10.74
1605	x		7.16	0	2.796	0	-147	6.7	0.35	0.03	10.63	6.47	15.47	0.03	310	10.74
1610		x														10.74

COMMENTS: Attempted to pump LNAPL from top of water table, no product was observed in purge water. Switched to low flow sampling at 1044. Following sampling upper interval, pump intake was set to the bottom of the well and the well was purged. Collected a bottom interval sample at 1615.

* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: +/- 0.1 pH; +/- 3% for Specific COnductivity and Tempreature; +/-10mV for ORP; and +/- 10% for DO.

S₂C₂ inc

LOW FLOW SAMPLING FORM

Site: <u>B&L Glass Plant</u>	Field Personnel: <u>JR/SG</u>
Date: <u>8/23/2010</u>	
Weather: <u>Sunny high 80 deg F</u>	

Well ID: <u>MW-04</u>	Well Depth: <u>20</u> feet	Screened Interval (TOC): <u>11-16</u>
Permit #: <u>NA</u>	Well Diameter: <u>1.5</u> inches	

PID Readings (ppm)	BACKGROUND: <u>0.0</u>	PUMP INTAKE DEPTH: <u>13.5</u> ft below TOC
	BENEATH OUTER CAP: <u>0.0</u>	DEPTH TO WATER : <u>10.72</u> ft below TOC
	BENEATH INNER CAP: <u>0.0</u>	

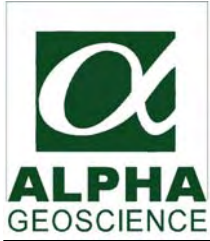
Time	Purging	Sampling	pH (pH units)		Specific Conductivity (mS/cm)		Redox Potential (mV)		Dissolved Oxygen (mg/l)		Turbidity (NTU)		Temperature (deg C)		Pumping Rate (ml/min)	Depth to Water (ft below TOC)
			Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change		
1200	x		5.97	NA	2.234	NA	-5	NA	1.48	NA	-	NA	16.46	NA	400	10.72
1205	x		4.91	106	1.811	0.423	139.9	144.9	0.88	0.6	109.6	NA	16.52	0.06	400	10.72
1215	x		3.72	1.19	1.299	0.512	378.3	238.4	0.92	0.04	82.6	27	16.30	0.22	400	10.72
220	x		3.49	0.23	1.154	0.145	405.9	27.6	0.75	0.17	48.5	34.1	16.49	0.19	200	10.72
1228	x		3.46	0.03	1.212	0.058	408	2.1	0.76	0.01	38.5	10	16.43	0.06	225	10.72
1233	x		3.43	0.03	1.189	0.023	411.6	3.6	0.76	0	28.3	10.2	16.45	0.02	225	10.72
1238	x		3.41	0.02	1.177	0.012	413.3	1.7	0.75	0.01	21.3	7	16.47	0.02	225	10.72
1240		x													225	10.72
1250		x									10.81				225	10.72

COMMENTS: Cleaned out flow cell at 1210. Collected samples for VOCs, and BNAs at 1240. Continued to purge an monitor turbidity until 1250 when metals sample was collected.

* INDICATOR PARAMETERS HAVE STABILIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: +/- 0.1 pH; +/- 3% for Specific COnductivity and Tempreature; +/-10mV for ORP; and +/- 10% for DO.

Appendix G

Laboratory Data Usability Summary Report



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October 20, 2010

Mr. Jason Ruf
S₂C₂, Inc.
5 Johnson Drive, Suite 12

Raritan, New Jersey 08869

Re: Data Validation Report
Rochester Glass
June-July 2010 Soil and Ground Water Sampling Events

Dear Mr. Ruf:

The data validation summaries and data usability summary reports (DUSR) are attached to this letter for the Rochester Glass, June-July 2010 soil sampling events. The data for Columbia Analytical Services, Lab Submission No. R1003506, were mostly acceptable with some issues that are identified and discussed in the validation summaries. There were semi-volatile results that were qualified as unusable (R) in the data pack. This was due to low surrogate recoveries in the sample. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

The discrepancy with the temperature was noted in the DUSR. No action was taken on the data for this. A list of common data qualifiers and data validation acronyms is attached to this letter to assist you interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist S₂C₂, Inc.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

attachments
DCA:dca

Z:\PROJECTS\2010\10621 - 10640\10621-ROCHESTER GLASS\ROCHESTER GLASS-102.LTR.WPD



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**Data Usability Summary Report for
Columbia Analytical Services
Lab Submission No. R1003506**

**1 Ground Water Sample, 26 Soil Samples,
1 Field Blank, and 1 Trip Blank
Collected June30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. The information appeared legible and complete. The data pack contained the results of 1 ground water sample, 6 soil samples, 1 field blank, and 1 trip blank analyzed for volatiles; 25 soil samples and 1 field blank analyzed for semi-volatiles; 1 ground water sample and 1 soil sample analyzed for low level semi-volatiles; 13 soil samples and 1 field blank analyzed PCBs; 25 soil sample and 1 field blank analyzed for metals; and 25 soil samples analyzed for cyanide.

The overall performances of the analyses are acceptable. Columbia Analytical Services (CAS) did fulfill the requirements of the analytical methods.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The volatile result for acetone was flagged as “not detected” (U) in samples SB-06(10-10.5), SB-14(5-5.5), SB-23(5-5.5), and GW-06(16-18) because the sample results were not significantly greater (more than 10 times) than the concentration detected in the highest associated blank.
- The “not detected” semi-volatile results for 12 acid extractable compounds in samples SB-24(0.5-1) and SB-24(0.5-1)RE were flagged as unusable (R) because 1 of 3 acid extractable surrogate recoveries for samples SB-24(0.5-1) and SB-24(0.5-1)RE was below control limits and 1 of 3 was below 10%.
- All positive and “not detected” semi-volatile results for samples SB-06(5.5-6)RE and SB-23(3-3.5) were flagged as estimated (J) because the samples were re-extracted beyond USEPA SW-846 holding times.

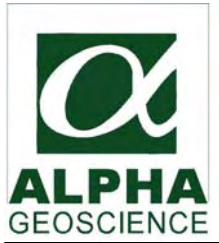
- All positive and “not detected” semi-volatile results for base/neutral compounds in sample SB-24(0.5-1)RE were flagged as estimated (J) because the sample was re-extracted beyond USEPA SW-846 holding times.
- Positive and “not detected” results for target aroclors in samples SB-11(0-0.5) and SB-14(0-0.5) were flagged as “estimated” (J) because 1 of 2 surrogate recoveries was below QC limits but was not below 10% in the samples.
- Positive and “not detected” results for target aroclors in sample SB-25(0.5-1) were flagged as “estimated” (J) because 2 of 2 surrogate recoveries were below QC limits but were not below 10% in the sample.
- Positive and “not detected” results for target aroclors in samples SB-11(0-0.5)RE, SB-14(0-0.5)RE, SB-25(0.5-1)RE, and SB-26(0.5-1)RE were flagged as “estimated” (J) because the samples were re-extracted beyond USEPA SW-846 holding times.
- The “not detected” results for target aroclors in sample SB-26(0.5-1) were flagged as “unusable” (R) because 2 of 2 surrogate recoveries was below QC limits and 1 of 2 was below 10% in the sample.
- Positive and “not detected” results for antimony all 25 soil samples were flagged as “estimated” (J) because the percent recovery for antimony was below control limits, but was not below 10% in the associated spike sample.
- Positive results for calcium and magnesium in all 25 soil samples were flagged as “estimated” (J) because the relative percent differences for calcium and magnesium were above the allowable maximum in the associated duplicate sample.
- Positive results for iron in the following samples were flagged as “estimated” (J) because the percent difference for iron was above the allowable maximum in the associated serial dilution sample and the result was greater than 50x the MDL

SB-06(0-0.5)	SB-06(5.5-6)	SB-06(10-10.5)	SB-11(0-0.5)
SB-14(5-5.5)	SB-20(3.5-4)	SB-20(6-6.5)	SB-03(0.5-1)
SB-03(4.5-5)	SB-08(0.5-1)	SB-12(0-0.5)	SB-12(3.5-4)
SB-23(0-0.5)	SB-23(3-3.5)	SB-23(5-5.5)	SB-24(0.5-1)
SB-25(0.5-1)	SB-25(2.5-3)		

- Positive results for lead in the following samples were flagged as “estimated” (J) because the percent difference for lead was above the allowable maximum in the associated serial dilution sample and the result was greater than 50x the MDL

SB-14(0-0.5)	SB-20(0.5-1)	SB-26(0.5-1)	SB-09(0.5-1)
SB-19(0.5-1)	SB-22(0.5-1)		

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.



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**QA/QC Review of Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Field Duplicate,
1 Pipe Sample, 1 Field Blank, and 2 Trip Blanks
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8260B criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8260B criteria.

The RRF50s for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: Method blank RQ1007356-01 contained a trace of bromomethane (0.72 ug/L). Field blank FB082310 contained a trace on acetone (2.1 ug/L). Positive results for acetone that are less than ten times the highest blank level should be reported as "not detected" (U) in associated samples. Positive results for bromomethane that are less than five times the highest blank level should be reported as "not detected" (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Laboratory Control Sample: The percent recoveries for target compounds were within QC limits for aqueous laboratory control samples RQ1007305-02 and RQ1007356-02.

Field Duplicates: The analyses of field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP reported target compounds as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC/MS quantitation and qualification limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of Semi-Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1003506**

**25 Soil Samples and 1 Field Blank
Collected June 30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

Holding Times: Samples SB-06(5.5-6)RE, SB-23(3-3.5)RE, and SB-24(0.5-1)RE were re-extracted beyond USEPA SW-846 holding times. Positive and “not detected” results for these 3 samples should be considered estimated (J).

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8270C criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8270C criteria.

The CCRFs for target compounds were above the allowable minimum (0.050), as required.

The %D for 2,4-dinitrophenol was above the allowable maximum (25%) on 07-08-10 (CE580.D). Positive results for 2,4-dinitrophenol should be considered estimates (J) in associated samples.

Blanks: Method blank RQ1005370-01 contained a trace of di-n-butylphthalate (1.1 ug/L). Positive results for di-n-butylphthalate that are less than ten times the highest blank level should be reported as “not detected” (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogates for samples SB-20(0.5-1), SB-03(4.5-5), SB-25(0.5-1), SB-26(0.5-1), and SB-22(0.5-1) were diluted beyond detection limits. No action is taken on surrogates diluted beyond detection limits.

One of three acid extractable and 1 of 3 base/neutral surrogate recoveries for sample SB-06(5.5-6) were below control limits, but were not below 10%. One of three base/neutral surrogate recoveries for sample SB-23(3-3.5) was below control limits, but was not below 10%. No action is taken on one surrogate per fraction outside control limits, provide no recovery is less than 10%.

One of three acid extractable surrogate recoveries for samples SB-24(0.5-1) and SB-24(0.5-1)RE was below control limits and was below 10%. Positive results for acid extractable compounds should be considered estimated (J) and "not detected" results unusable (R) in samples SB-24(0.5-1) and SB-24(0.5-1)RE.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within control limits for soil MS/MSD sample SB-12(3.5-4). The %Rs for target compounds were within control limits, but 1 of 65 RPDs was above the allowable maximum for soil MS/MSD sample SB-06(0-0.5). No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for aqueous samples RQ1007101-02 and RQ1007101-03, and soil samples RQ1005433-02 and RQ1005433-03.

The RPD for hexachlorocyclopentadiene was above the allowable maximum and 1 of 2 %Rs for 4-nitroaniline was above QC limits for soil samples RQ1005372-02 and RQ1005372-03. The RPD for target compounds were below the allowable maximum, but 1 of 2 %Rs for butylbenzylphthalate was above QC limits for soil samples RQ1005787-02 and RQ1005787-03. The %Rs for target compounds were within QC limits, but the RPD for hexachlorocyclopentadiene was above the allowable maximum for soil samples RQ1005847-02 and RQ1005847-03. Positive results for hexachlorocyclopentadiene, 4-nitroaniline, and butylbenzylphthalate should be considered estimated (J) in associated soil samples.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of Low Level Semi-Volatiles
Data for Columbia Analytical Services
Lab Submission No. R1003506**

**1 Ground Water Sample and 1 Soil Samples
Collected June 30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8270C criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8270C criteria.

The CCRFs for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: Method blank RQ1005549-01 contained traces of acenaphthene (3.7 ug/kg), fluorene (1.0 ug/kg), naphthalene (4.0 ug/kg), and phenanthrene (2.0 ug/kg). Positive results for these 4 compounds that are less than five times the highest blank level should be reported as "not detected" (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogates for sample SB-20(15.5-16) were diluted beyond detection limits. No action is taken on surrogates diluted beyond detection limits.

Matrix Spike/Matrix Spike Duplicate: Thirteen of sixteen relative percent differences were above the allowable maximum and 27 of 32 percent recoveries were outside control limits for soil MS/MSD sample SB-20(15.5-16). No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples RQ1005383-02 and RQ1005383-03, and soil samples RQ1005549-02 and RQ1005549-03.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of PCB Data for
Columbia Analytical Services
Lab Submission No. R1003506**

**13 Soil Samples and 1 Field Blank
Collected June 30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

Holding Times: Samples SB-11(0-0.5)RE, SB-14(0-0.5)RE, SB-25(0.5-1)RE, and SB-26(0.5-1)RE were re-extracted beyond USEPASW-846 holding times. Positive and “not detected” results for these samples should be considered estimated (J).

Blanks: The analyses of method and field blanks reported target PCBs as not detected.

Surrogate Recovery: One of two surrogate recoveries for samples SB-11(0-0.5), SB-14(0-0.5), and SB-14(0-0.5)RE was below QC limits, but was not below 10%. Two of two surrogate recoveries for sample SB-25(0.5-1) were below QC limits, but were not below 10%. Positive and “not detected” results for these samples should be considered estimated (J).

Two of two surrogate recoveries for sample SB-26(0.5-1) were below QC limits and 1 of 2 was below 10%. Positive results for sample SB-26(0.5-1) should be considered estimated (J) and “not detected” results unusable (R).

Matrix Spike/Matrix Spike Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum and the percent recoveries were within QC limits for soil MS/MSD sample SB-06(0-0.5).

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent differences for aroclor-1260 were below the allowable maximum and the percent recoveries were within QC limits for the following samples.

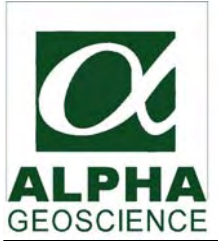
RQ1005459-02	RQ1005459-03	RQ1005500-02	RQ1005500-03
RQ1005652-02	RQ1005652-03	RQ1005792-02	RQ1005792-03

Initial Calibration: The %RSDs for applicable aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The average %Ds for applicable aroclors were below the allowable maximum (15%) on both columns, as required.

PCB Analytical Sequence: The retention times for TCX and DCB were within control limits on both columns for sediment samples.

PCB Identification Summary: The %Ds for dual column quantitation of detected aroclors were below the allowable maximum (25%) in samples.



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**QA/QC Review of TAL Metals Data
for Columbia Analytical Services
Lab Submission No. R1003506**

**25 Soil Samples and 1 Field Blank
Collected June 30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%).

CRDL Standard: The percent recoveries for applicable target metals were within laboratory QC limits (70-130%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, method, and field blanks reported target metals as not detected, as required.

ICP Interference Check Sample: The percent recoveries for applicable target metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery for antimony below control limits (75-125%), but was not less than 10% for soil spike sample SB-06(0-0.5)S. Positive and "not detected" results for antimony should be considered estimated (J) in associated soil samples.

Duplicates: The relative percent differences for calcium and magnesium were above the allowable maximum (35%) for soil duplicate sample SB-06(0-0.5)D. Positive results for calcium and magnesium should be considered estimated (J) in associated soil samples.

Laboratory Control Sample: The recoveries for target metals were within QC limits for the soil LCSs. The percent recoveries for target metals were within control limits (80-120%) for the aqueous LCS.

ICP Serial Dilution: The %D for iron was above the allowable maximum (10%) for serial dilution sample SB-06(0-0.5)L. The %Ds for lead and magnesium were above the allowable maximum (10%) for serial dilution sample SB-19(0.5-1)L. Positive results for these metals that are greater than 50x the MDLs should be considered estimated (J) in associated samples.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for soil samples were greater than 50%, as required.



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**QA/QC Review of Cyanide Data
for Columbia Analytical Services
Lab Submission No. R1003506**

**25 Soil Samples
Collected June 30-July 1, 2010**

Prepared by: Donald Anné
October 20, 2010

Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Blanks: The analyses method blanks reported cyanide as not detected, as required.

Spike Sample Recovery: The percent recovery for cyanide was within QC limits (46-159%) for soil spike sample SB-06(0-0.5)MS.

Laboratory Duplicates: The analysis of duplicate sample SB-06(0-0.5)DUP was acceptable.

Laboratory Control Sample: The percent recoveries for cyanide were within QC limits (85-115%) for soil samples R1003506-LCS1, R1003506-LCS2, R1003506-LCS3, and R1003506-LCS4.

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

- U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
- N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
- J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.



Geology

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October 1, 2010

Mr. Jason Ruf
S₂C₂, Inc.
5 Johnson Drive, Suite 12
Raritan, New Jersey 08869

Re: Data Validation Report
Rochester Glass
August 2010 Soil and Ground Water Sampling Events

Dear Mr. Ruf:

The data validation summaries and data usability summary reports (DUSR) are attached to this letter for the Rochester Glass, August 2010 soil sampling events. The data for Columbia Analytical Services, Lab Submission No. R1004555, were mostly acceptable with some issues that are identified and discussed in the validation summaries. There were semi-volatile results that were qualified as unusable (R) in the data pack. This was due to low surrogate recoveries in the sample. The data is rejected based solely on the validation guidance criteria. The rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

The discrepancy with the temperature was noted in the DUSR. No action was taken on the data for this. A list of common data qualifiers and data validation acronyms is attached to this letter to assist you interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist S₂C₂, Inc.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

attachments
DCA:dca

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October 1, 2010

Mr. Jason Ruf
S₂C₂, Inc.
5 Johnson Drive, Suite 12
Raritan, New Jersey 08869

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Rochester Glass
August 2010 Soil and Ground Water Sampling Events

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Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

attachments
DCA:dca

Z:\PROJECTS\2010\10621 - 10640\10621-ROCHESTER GLASS\ROCHESTER GLASS-101.LTR.WPD

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

- U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
- N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
- J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation



**Data Usability Summary Report for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Pipe Sample, 6 Sediment Samples,
1 Field Duplicate, 1 Field Blank, and 2 Trip Blanks
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

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The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. The information appeared legible and complete. The data pack contained the results of 5 ground water samples, 1 field duplicate, and 1 field blank analyzed for volatile, semi-volatiles, and metals; 6 sediment samples analyzed for semi-volatiles, PCBs, and metals; and 1 pipe sample and 2 trip blanks analyzed for volatiles only.

The overall performances of the analyses are acceptable. Columbia Analytical Services (CAS) did fulfill the requirements of the analytical methods. There was a discrepancy in the cooler temperatures received by the lab. The laboratory noted the cooler with the aqueous volatile samples was a 9 degrees C. The samples were kept on ice and refrigerated overnight before delivery. There was ice present in the cooler as noted by the laboratory on the Cooler Receipt and Preservation Check Form. Considering this information no action on the suspect cooler temperature is taken.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

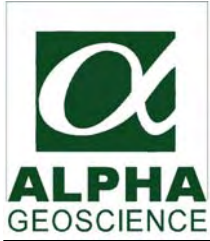
- The volatile result for acetone was flagged as “not detected” (U) in sample MW-4 3Q10 because the sample result was not significantly greater (more than 10 times) than the concentration detected in the highest associated blank.
- The “not detected” semi-volatile results for 12 acid extractable compounds in sample SED-E were flagged as unusable (R) because 2 of 3 acid extractable surrogate recoveries for sample SED-E were below control limits and 1 of 3 was below 10%.
- All positive and “not detected” semi-volatile results for sample SED-I were flagged as estimated (J) because 2 of 3 acid extractable and 2 of 3 base/neutral surrogate recoveries for sample SED-I were below control limits, but were not below 10%.

DUSR

Lab Submission No. R1004555

- All positive and “not detected” semi-volatile results for samples SED-ERE and SED-IRE were flagged as estimated (J) because the samples were re-extracted beyond USEPA SW-846 holding times.
- The results for aroclor-1254 in sample SED-C and aroclor-1248 in sample SED-F were flagged as “estimated” (J) because the %Ds for dual column quantitation were greater than 25%, but were less than 70%.

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.



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**QA/QC Review of PCB Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**6 Sediment Sample
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Sediment samples were extracted and analyzed within USEPASW-846 holding times.

Blanks: The analysis of the method blank reported TCLP pesticides as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for sample GP-57E.

Matrix Spike/Matrix Spike Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum and the percent recoveries were within QC limits for sediment MS/MSD sample SED-C.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum and the percent recoveries were within QC limits for samples RQ1007106-02 and RQ1007106-03.

Initial Calibration: The %RSDs for applicable aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The average %Ds for applicable aroclors were below the allowable maximum (15%) on both columns, as required.

PCB Analytical Sequence: The retention times for TCX and DCB were within control limits on both columns for sediment samples.

PCB Identification Summary: The %D for aroclor-1254 in sample SED-C was above the allowable maximum (25%), but was below 70%. The %D for aroclor-1248 in sample SED-F was above the allowable maximum (25%), but was below 70%. The results for aroclor-1254 in sample SED-C and aroclor-1248 in sample SED-F should be considered estimated (J).

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**QA/QC Review of Semi-Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Field Duplicate,
1 Field Blank, and 6 Sediment Samples
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples SED-ERE and SED-IRE were re-extracted beyond USEPA SW-846 holding times. Positive and “not detected” results for samples SED-ERE and SED-IRE should be considered estimated (J).

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8270C criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8270C criteria.

The CCRFs for target compounds were above the allowable minimum (0.050), as required.

The %D for atrazine was above the allowable maximum (25%) on 09-03-10 (CF500.D). Positive results for atrazine should be considered estimates (J) in associated samples.

Blanks: The analyses of the method and field blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: Two of three acid extractable and 2 of 3 base/neutral surrogate recoveries for sample SED-I were below control limits, but were not below 10%. Positive and “not detected” results for all compounds should be considered estimated (J) in sample SED-I.

Two of three acid extractable surrogate recoveries for sample SED-E were below control limits and 1 of 3 was below 10%. Positive results for acid extractable compounds should be considered estimated (J) and "not detected" results unusable (R) in sample SED-E.

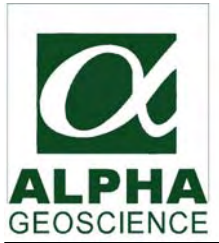
Matrix Spike/Matrix Spike Duplicate: Four of sixty-five relative percent differences were above the allowable maximum and 13 of 130 percent recoveries were outside control limits for sediment MS/MSD sample SED-AB. The RPDs were below the allowable maximums, but 1 of 18 %Rs was above control limits for both MS/MSD samples SBLK1 and SBLK2. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for aqueous samples RQ1007101-02 and RQ1007101-03, and soil samples RQ1007107-02 and RQ1007107-03.

The RPDs for target compounds were below the allowable maximum, but 2 of 2 %Rs for 2,4-dimethylphenol and hexachlorocyclopentadiene were below QC limits and 1 of 2 %Rs for biphenyl was above QC limits for soil samples RQ1007500-02 and RQ1007500-03. Positive results for biphenyl, hexachlorocyclopentadiene, and 2,4-dimethylphenol and "not detected" results for hexachlorocyclopentadiene and 2,4-dimethylphenol should be considered estimated (J) in associated soil/sediment samples.

Field Duplicates: The analyses of field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP reported target compounds as either not detected or below the lowest standard; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Field Duplicate,
1 Pipe Sample, 1 Field Blank, and 2 Trip Blanks
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8260B criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8260B criteria.

The RRF50s for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: Method blank RQ1007356-01 contained a trace of bromomethane (0.72 ug/L). Field blank FB082310 contained a trace on acetone (2.1 ug/L). Positive results for acetone that are less than ten times the highest blank level should be reported as “not detected” (U) in associated samples. Positive results for bromomethane that are less than five times the highest blank level should be reported as “not detected” (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Laboratory Control Sample: The percent recoveries for target compounds were within QC limits for aqueous laboratory control samples RQ1007305-02 and RQ1007356-02.

Field Duplicates: The analyses of field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP reported target compounds as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC/MS quantitation and qualification limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



**QA/QC Review of TAL Metals Data
for Columbia Analytical Services
Lab Submission No. R1004555**

**6 Sediment Samples
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

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Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%).

CRDL Standard: The percent recoveries for applicable target metals were within laboratory QC limits (70-130%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported target metals as not detected, as required.

ICP Interference Check Sample: The percent recoveries for applicable target metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery for mercury was within control limits (75-125%) for soil spike sample SED-ABS.

Duplicates: The relative percent difference for mercury was below the allowable maximum (35%) for soil duplicate sample SED-ABD, as required.

Laboratory Control Sample: The recoveries for target metals were within QC limits for the soil LCS.

ICP Serial Dilution: The %Ds for applicable target metals were below the allowable maximum (10%) for serial dilution sample SED-IL, as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for soil samples were greater than 50%, as required.

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**QA/QC Review of TAL Metals Data
for Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples,
1 Field Duplicate, and 1 Field Blank
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%).

CRDL Standard: The percent recoveries for applicable target metals were within laboratory QC limits (70-130%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, method, and field blanks reported target metals as not detected, as required.

ICP Interference Check Sample: The percent recoveries for applicable target metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery for mercury was within control limits (75-125%) for aqueous spike sample MW-1 3Q10S.

Laboratory Duplicates: The analysis of aqueous duplicate sample MW-1 3Q10D was acceptable.

Field Duplicates: The relative percent differences for applicable metals were below the allowable maximum (20%) in field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP (attached table), as required.

Laboratory Control Sample: The percent recoveries for target metals were within control limits (80-120%) for the aqueous LCS.

ICP Serial Dilution: The %Ds for applicable target metals were below the allowable maximum (10%) for serial dilution samples MW-1 3Q10L and MW-4 3Q10L, as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

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TAL Metals

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. RI004555

S1= mw-2 3q10

S2= mw-2 3q10 dup

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>
aluminum	223	238	7%
antimony	ND	ND	NC
arsenic	ND	ND	NC
barium	192	195	2%
beryllium	ND	ND	NC
cadmium	ND	ND	NC
calcium	121000	121000	0%
chromium	ND	ND	NC
cobalt	ND	ND	NC
copper	ND	ND	NC
iron	808	825	2%
lead	ND	ND	NC
magnesium	45900	46800	2%
manganese	349	355	2%
mercury	ND	ND	NC
nickel	ND	ND	NC
potassium	8570	8690	1%
selenium	ND	ND	NC
silver	ND	ND	NC
sodium	465000	467000	0%
thallium	ND	ND	NC
vanadium	ND	ND	NC
zinc	ND	ND	NC

Results are in units of mg/L.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.



**Data Usability Summary Report for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Pipe Sample, 6 Sediment Samples,
1 Field Duplicate, 1 Field Blank, and 2 Trip Blanks
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Geology
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Remediation
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The data packages contain the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. The information appeared legible and complete. The data pack contained the results of 5 ground water samples, 1 field duplicate, and 1 field blank analyzed for volatile, semi-volatiles, and metals; 6 sediment samples analyzed for semi-volatiles, PCBs, and metals; and 1 pipe sample and 2 trip blanks analyzed for volatiles only.

The overall performances of the analyses are acceptable. Columbia Analytical Services (CAS) did fulfill the requirements of the analytical methods. There was a discrepancy in the cooler temperatures received by the lab. The laboratory noted the cooler with the aqueous volatile samples was a 9 degrees C. The samples were kept on ice and refrigerated overnight before delivery. There was ice present in the cooler as noted by the laboratory on the Cooler Receipt and Preservation Check Form. Considering this information no action on the suspect cooler temperature is taken.

The majority of the data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were flagged:

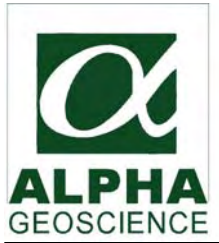
- The volatile result for acetone was flagged as “not detected” (U) in sample MW-4 3Q10 because the sample result was not significantly greater (more than 10 times) than the concentration detected in the highest associated blank.
- The “not detected” semi-volatile results for 12 acid extractable compounds in sample SED-E were flagged as unusable (R) because 2 of 3 acid extractable surrogate recoveries for sample SED-E were below control limits and 1 of 3 was below 10%.
- All positive and “not detected” semi-volatile results for sample SED-I were flagged as estimated (J) because 2 of 3 acid extractable and 2 of 3 base/neutral surrogate recoveries for sample SED-I were below control limits, but were not below 10%.

DUSR

Lab Submission No. R1004555

- All positive and “not detected” semi-volatile results for samples SED-ERE and SED-IRE were flagged as estimated (J) because the samples were re-extracted beyond USEPA SW-846 holding times.
- The results for aroclor-1254 in sample SED-C and aroclor-1248 in sample SED-F were flagged as “estimated” (J) because the %Ds for dual column quantitation were greater than 25%, but were less than 70%.

All data that are not flagged rejected (R) are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.



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**QA/QC Review of Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Field Duplicate,
1 Pipe Sample, 1 Field Blank, and 2 Trip Blanks
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8260B criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8260B criteria.

The RRF50s for target compounds were above the allowable minimum (0.050) and the %Ds were below the allowable maximum (25%), as required.

Blanks: Method blank RQ1007356-01 contained a trace of bromomethane (0.72 ug/L). Field blank FB082310 contained a trace on acetone (2.1 ug/L). Positive results for acetone that are less than ten times the highest blank level should be reported as "not detected" (U) in associated samples. Positive results for bromomethane that are less than five times the highest blank level should be reported as "not detected" (U) in associated samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for environmental samples.

Laboratory Control Sample: The percent recoveries for target compounds were within QC limits for aqueous laboratory control samples RQ1007305-02 and RQ1007356-02.

Field Duplicates: The analyses of field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP reported target compounds as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC/MS quantitation and qualification limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of Semi-Volatiles Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples, 1 Field Duplicate,
1 Field Blank, and 6 Sediment Samples
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples SED-ERE and SED-IRE were re-extracted beyond USEPA SW-846 holding times. Positive and “not detected” results for samples SED-ERE and SED-IRE should be considered estimated (J).

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8270C criteria.

The average RRFs for target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8270C criteria.

The CCRFs for target compounds were above the allowable minimum (0.050), as required.

The %D for atrazine was above the allowable maximum (25%) on 09-03-10 (CF500.D). Positive results for atrazine should be considered estimates (J) in associated samples.

Blanks: The analyses of the method and field blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: Two of three acid extractable and 2 of 3 base/neutral surrogate recoveries for sample SED-I were below control limits, but were not below 10%. Positive and “not detected” results for all compounds should be considered estimated (J) in sample SED-I.

Two of three acid extractable surrogate recoveries for sample SED-E were below control limits and 1 of 3 was below 10%. Positive results for acid extractable compounds should be considered estimated (J) and "not detected" results unusable (R) in sample SED-E.

Matrix Spike/Matrix Spike Duplicate: Four of sixty-five relative percent differences were above the allowable maximum and 13 of 130 percent recoveries were outside control limits for sediment MS/MSD sample SED-AB. The RPDs were below the allowable maximums, but 1 of 18 %Rs was above control limits for both MS/MSD samples SBLK1 and SBLK2. No action is taken on MS/MSD data alone to qualify or reject an entire set of samples.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for aqueous samples RQ1007101-02 and RQ1007101-03, and soil samples RQ1007107-02 and RQ1007107-03.

The RPDs for target compounds were below the allowable maximum, but 2 of 2 %Rs for 2,4-dimethylphenol and hexachlorocyclopentadiene were below QC limits and 1 of 2 %Rs for biphenyl was above QC limits for soil samples RQ1007500-02 and RQ1007500-03. Positive results for biphenyl, hexachlorocyclopentadiene, and 2,4-dimethylphenol and "not detected" results for hexachlorocyclopentadiene and 2,4-dimethylphenol should be considered estimated (J) in associated soil/sediment samples.

Field Duplicates: The analyses of field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP reported target compounds as either not detected or below the lowest standard; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in SW846.



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**QA/QC Review of PCB Data for
Columbia Analytical Services
Lab Submission No. R1004555**

**6 Sediment Sample
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Sediment samples were extracted and analyzed within USEPASW-846 holding times.

Blanks: The analysis of the method blank reported TCLP pesticides as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits for sample GP-57E.

Matrix Spike/Matrix Spike Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum and the percent recoveries were within QC limits for sediment MS/MSD sample SED-C.

Laboratory Control Sample/Laboratory Control Sample Duplicate: The relative percent difference for aroclor-1260 was below the allowable maximum and the percent recoveries were within QC limits for samples RQ1007106-02 and RQ1007106-03.

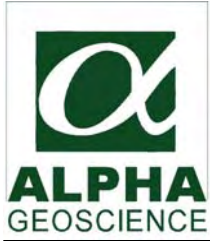
Initial Calibration: The %RSDs for applicable aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The average %Ds for applicable aroclors were below the allowable maximum (15%) on both columns, as required.

PCB Analytical Sequence: The retention times for TCX and DCB were within control limits on both columns for sediment samples.

PCB Identification Summary: The %D for aroclor-1254 in sample SED-C was above the allowable maximum (25%), but was below 70%. The %D for aroclor-1248 in sample SED-F was above the allowable maximum (25%), but was below 70%. The results for aroclor-1254 in sample SED-C and aroclor-1248 in sample SED-F should be considered estimated (J).

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**QA/QC Review of TAL Metals Data
for Columbia Analytical Services
Lab Submission No. R1004555**

**6 Sediment Samples
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%).

CRDL Standard: The percent recoveries for applicable target metals were within laboratory QC limits (70-130%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, and method blanks reported target metals as not detected, as required.

ICP Interference Check Sample: The percent recoveries for applicable target metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery for mercury was within control limits (75-125%) for soil spike sample SED-ABS.

Duplicates: The relative percent difference for mercury was below the allowable maximum (35%) for soil duplicate sample SED-ABD, as required.

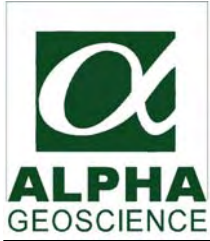
Laboratory Control Sample: The recoveries for target metals were within QC limits for the soil LCS.

ICP Serial Dilution: The %Ds for applicable target metals were below the allowable maximum (10%) for serial dilution sample SED-IL, as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

Percent Solids: The percent solids for soil samples were greater than 50%, as required.

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**QA/QC Review of TAL Metals Data
for Columbia Analytical Services
Lab Submission No. R1004555**

**5 Ground Water Samples,
1 Field Duplicate, and 1 Field Blank
Collected August 23, 2010**

Prepared by: Donald Anné
October 1, 2010

Holding Times: Samples were analyzed within the USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%).

CRDL Standard: The percent recoveries for applicable target metals were within laboratory QC limits (70-130%) for CRDL standards.

Blanks: The analyses for initial and continuing calibration, method, and field blanks reported target metals as not detected, as required.

ICP Interference Check Sample: The percent recoveries for applicable target metals were within control limits (80-120%).

Spike Sample Recovery: The percent recovery for mercury was within control limits (75-125%) for aqueous spike sample MW-1 3Q10S.

Laboratory Duplicates: The analysis of aqueous duplicate sample MW-1 3Q10D was acceptable.

Field Duplicates: The relative percent differences for applicable metals were below the allowable maximum (20%) in field duplicate pair MW-2 3Q10/MW-2 3Q10 DUP (attached table), as required.

Laboratory Control Sample: The percent recoveries for target metals were within control limits (80-120%) for the aqueous LCS.

ICP Serial Dilution: The %Ds for applicable target metals were below the allowable maximum (10%) for serial dilution samples MW-1 3Q10L and MW-4 3Q10L, as required.

Instrument Detection Limits: The IDLs were at or below CRDLs, as required.

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TAL Metals

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. RI004555

S1= mw-2 3q10

S2= mw-2 3q10 dup

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>
aluminum	223	238	7%
antimony	ND	ND	NC
arsenic	ND	ND	NC
barium	192	195	2%
beryllium	ND	ND	NC
cadmium	ND	ND	NC
calcium	121000	121000	0%
chromium	ND	ND	NC
cobalt	ND	ND	NC
copper	ND	ND	NC
iron	808	825	2%
lead	ND	ND	NC
magnesium	45900	46800	2%
manganese	349	355	2%
mercury	ND	ND	NC
nickel	ND	ND	NC
potassium	8570	8690	1%
selenium	ND	ND	NC
silver	ND	ND	NC
sodium	465000	467000	0%
thallium	ND	ND	NC
vanadium	ND	ND	NC
zinc	ND	ND	NC

Results are in units of mg/L.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

- U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
- R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
- N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
- J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation