Updated
Remedial Investigation Report

Congress Street Facility
Congress Street
Schenectady, New York

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1.0 INTRODUCTION

SI Group, Inc. (SI Group) owned and operated a chemical manufacturing facility located in Schenectady, New York at Congress Street and Tenth Avenue that has been referred to as the Congress Street facility (Figure 1). The Congress Street facility began operations in 1910 and expanded operations over the years by adding buildings and developing the Site. In 1996, the facility was producing wire enamels for electrical insulation, insulating varnishes for electrical motors, industrial enamels, and others resins for coatings and adhesives. In addition, the Site served as the corporate headquarters for SI Group's domestic and international operations.

During the facility's more than 85 years of operation, a number of spills occurred at the Site which resulted in chemical releases to the environment. During the period 1984 through late 1995, when the facility was still in operation, a number of investigations, including a formal Remedial Investigation (RI) were completed with the objective of defining any and all environmental concerns at the Site. However, due to the fact that the facility was in operation during this period, the previous investigations were constrained due to access issues within the process areas. As a result, there were a number of data gaps associated with the extent of potential subsurface impacts defined by the historical investigations.

Production ceased in 1997, and by 2004, SI Group removed all the process equipment, storage tanks, piping and buildings remaining on the Site. With the buildings removed, Site soils became accessible, thereby allowing investigation of the entire Site and evaluation of potential remedial alternatives. A "Work Plan to Update the Remedial Investigation/Feasibility Study" was prepared in August 2007 to describe the work that must be performed to update the Remedial Investigation and Supplemental Feasibility Study for the Congress Street Site. This report presents the results of the Updated Remedial Investigation.

1.1 Site Location and Physical Setting

The Congress Street Site is located in the City of Schenectady at Congress Street and Tenth Avenue as shown on Figure 1. The facility encompasses an area approximately 7 acres in size with approximately 5.1 acres having been developed. The area south and west of the Site consists of light industrial areas; commercial facilities are located east and northwest; and residential areas to the north and northeast. The Site is located on a steep slope that has been developed over the years. Figure 2 shows the Site as it was in the late 1990's with a number of buildings located on the Site. Some of the buildings were constructed such that the lower portion of the buildings acted as retaining structures for the upper slope area. The Cowhorn Creek is located at the bottom of the slope. Between the Cowhorn Creek and the Site is an active rail line owned by CSX Transportation. The rail line serves as one of the main rail lines between Albany and western New York.

Based on the Remedial Investigation (RI) completed in 1995 (Conestoga-Rovers and Associates [CRA], 1995), the Site is underlain by a sequence of glaciolacustrine deposits which consist of inter-bedded layers of sand, silt and clay. It was reported that the sand layers were comprised mostly of fine grained and fine to medium-grained sand with variable amounts of silt and clay. The thickness of the individual layers of sand, silt, and clay was thought to vary from a few inches to several feet. Although CRA reported that the thickness of the glaciolacustrine deposit was at least 132 feet based on one soil boring completed at the Site, more specific details regarding Site geology were unknown at the time of the RI.

According to the Hydrogeological Investigation Report completed in 1993 (CRA, 1993), one area of significant fill currently exists at the Site, which was previously identified in the vicinity of former Building 9. The fill material was reported to consist of construction rubble and other Site materials, and its potential as a source area was not entirely defined.

As noted above, nearby water bodies consist solely of the Cowhorn Creek, which discharges directly into the Mohawk River. The Site is situated on the side of the creek valley, which slopes down to the southwest to Cowhorn Creek. The relief across the Site is approximately 45 feet, but several relatively flat terraces are present where facility structures once existed. From the Site boundary and beyond the CSX rail-line, the topography drops an additional 35 feet to the Cowhorn Creek channel.

1.2 Regulatory Overview

Although some investigation activities were conducted at the Site between 1984 and 1993, the first major investigation activities to be performed at the Site were activities associated with the “Hydrogeologic Investigation Report” submitted to the New York State Department of Environmental Conservation (NYSDEC) by CRA in 1993 in compliance with the Multi-Media Consent Order (R-0888-90-12) signed on December 15, 1991. Between 1994 and 1995, a Remedial Investigation (RI) of the Congress Street Site was completed. The results of the RI were presented in the report entitled “Remedial Investigation Report” dated September 12, 1995 (CRA, 1995). The RI Report was revised and resubmitted to NYSDEC on January 22, 1996 following comments from NYSDEC. Subsequently, NYSDEC approved the RI Report in its letter dated March 5, 1996. The investigation was completed while the facility was in operation.

The results of the investigation were limited to specific areas of the Site due to the inaccessibility to the soils beneath the buildings located on the Site.

Based on results of the RI, a Feasibility Study (FS) was completed by CRA and submitted to NYSDEC in July 1996. On September 18, 1996, NYSDEC issued a letter containing concerns with the FS Report and comments. The major comments with the FS Report concerned the conclusions and the fact that the FS Report did not address elimination of on-Site contamination. As a result of NYSDEC comments, SI Group prepared an Addendum to the FS Report to address NYSDEC concerns and on-Site contamination. Revisions to the FS Report and Addendum I were submitted to NYSDEC on January 27, 1997 and subsequently approved by NYSDEC on February 28, 1997.

The FS recommended the control of groundwater migration from the Site and on-Site soil remediation, if and when practicable. An additional investigation was recommended to further delineate the extent of contamination in the vicinity of the buildings. At this time, the Congress Street facility was in operation with most of the Site covered with buildings, roads, utilities, and other structures that significantly restricted access to the contaminated soils. A Supplemental Remedial Investigation Work Plan was prepared and submitted to NYSDEC on April 18, 1997 to complete the investigation recommended in Addendum I of the FS. The Supplemental RI Work Plan was approved by NYSDEC in a letter dated September 24, 1997.

As a result of the RI and FS actions, NYSDEC issued a Record of Decision (ROD) on March 11, 1998. The ROD split the Site into two operable units. The first operable unit (OU1) addressed migration of contamination off-Site in the surface water and groundwater requiring the installation of a “french drain”. A discussion of the installation of this “french drain” is contained in Section 1.3 below. The second operable unit (OU2) was to address the on-Site soil contamination by completing the investigation proposed in the Supplemental Remedial Investigation Work Plan, as well as preparing a supplemental feasibility study.

The supplemental investigation was completed in January 1998 with the results of the investigation submitted to NYSDEC on April 27, 1998. The investigation concluded that significant soil contamination existed next to and beneath the buildings, and was inaccessible for remediation. The Supplemental Remedial Investigation Report was revised and resubmitted on July 30, 1998 following comments from NYSDEC. The Report was subsequently accepted by NYSDEC on August 31, 1998. With acceptance of the Report, NYSDEC required an annual review to identify any new or improved soil remediation technologies that may be appropriate for the Site.

As a result of the annual review submitted to NYSDEC in 1999, an updated feasibility study was required to be submitted in 2000 to address NYSDECs request for a more detailed annual evaluation that presents new remedial technologies or previously rejected remedial technologies that have been improved or become feasible. On December 15, 2000, a Supplemental Feasibility Study Report was submitted to NYSDEC. The Supplemental Feasibility Study Report was accepted by NYSDEC on April 13, 2001 and has been updated annually.

Since 1997, Site conditions have changed significantly. Manufacturing operations ceased at the Site in 1997, and the demolition of on-Site buildings was completed in January 2004. These actions resulted in the on-Site soils becoming accessible, thereby allowing investigation of the entire Site and evaluation of potential remedial alternatives. In addition, since completing the original RI/FS, potential remedial technologies have been tested at the Rotterdam Junction facility of SI Group that could potentially be used at the Congress Street Site.

As a result of these actions, a Work Plan to Update the Remedial Investigation/Feasibility Study was prepared in July 2007 describing the work to be performed to update the Remedial Investigation and Supplemental Feasibility Study for the Congress Street Site. The Work Plan was approved by NYSDEC in a letter August 16, 2007. The field activities associated with the approved Work Plan were completed during the period September through December, 2007. The following report presents the results of the investigation and includes a comprehensive description of the nature and extent of contamination at the Site, including the previously inaccessible areas. This Updated Remedial Investigation Report is expected to generate information sufficient to produce an updated Feasibility Study that will evaluate potential remedial technologies for the Site, including the technologies tested at Rotterdam Junction. Based on the results of the investigation as presented in this report, the Supplemental Feasibility Study for the Congress Street Site will be updated with a proposed plan to remediate the Site.

1.3 Site Operational History

As noted above, the Congress Street facility began operations in 1910 and expanded operations over the years by adding buildings and developing the Site. In 1996, the facility was producing wire enamels for electrical insulation, insulating varnishes for electrical motors, industrial enamels, and others resins for coatings and adhesives. In addition, the Site served as the corporate headquarters for SI Group’s domestic and international operations.

The products produced at the facility were sold to other manufacturing facilities. The manufacturing processes generated several hazardous waste streams. In addition, the facility applied for interim status under the hazardous waste regulations that allowed the facility to store hazardous waste in containers and storage tanks for more then 90-days. A Part 373 Permit Application for the waste management areas was submitted to DEC in 1988 but, as described below, the permit was never issued.

In 1994, the procedures for operation of the hazardous waste management areas were changed such that hazardous waste was no longer stored at the facility for more than 90 days. This enabled the Congress Street facility to be reclassified as only a generator of hazardous waste. A permit under New York State hazardous waste regulations was no longer required. Thus, a Part 373 Permit was never issued for the facility and the permit application was withdrawn from further consideration.

In the mid 90's, manufacturing operations were relocated to other SI Group facilities with manufacturing operations finally ceasing at the Site in December 1997. Administrative and warehousing activities continued at the Congress Street Site until October 2001 when these activities were also relocated. Since October 2001, the only activities that have been on going at the Congress Street Site have been related to the decommissioning and demolition of Site facilities, maintenance activities and remedial activities as described below.

With the cessation of manufacturing operations in 1997, SI Group initiated a program to clean and remove process equipment, storage tanks, and materials remaining at the facility. The storage tanks that were classified as Chemical Bulk Storage Tanks under 6 NYCRR Part 596 were cleaned along with other storage tanks in compliance with the regulations. In addition, some of the process equipment and material left at the Site was sent to other SI Group facilities for reuse or sent off-Site for disposal.

With issuance of the "Record of Decision" (ROD) by NYSDEC in March 1998, SI Group was required to install a remedial system consisting of a "french drain" and a sufficient number of vertical pumping wells to assure the capture of contaminated groundwater prior to leaving the Site. Vertical pumping wells were to be located in areas where installation of the "french drain" was not possible due to topography and access issues. The collected groundwater and seep water was to be properly treated along with any LNAPL collected.

In 2001, the groundwater collection and treatment system was installed at a cost of approximately $2.7 million. The collection system consists of a 700-foot long "french drain" connected to a wet-well and pump system, and four groundwater extraction wells as shown on Figure 3. The “french drain” was installed along the swale that parallels the southwestern property boundary, and consists of an 8-inch perforated HDPE collection pipe and drainage media. The collection pipe was placed at the bottom of the trench and was sloped in a northwesterly direction to allow the groundwater to flow to the wet well located at the end of the “french drain”. The collection pipe was installed at a depth of approximately 12 feet below grade at the southeast end of the Site and extends to a depth of approximately 28 feet below grade at the wet well, located at the northwest end of the Site. The groundwater collected in the wet well is pumped via force main to a groundwater treatment system.

The groundwater treatment system consists of an oil-water separator, feed tank, bag filters and carbon adsorption system. The groundwater is initially pumped to a coalescing oil-water separator. The purpose of the oil-water separator is to remove any liquid phase present in the groundwater. The separator is designed to remove liquid phases that are both lighter and heavier then water. The separated liquid phases are collected, containerized and sent off-Site for disposal. The effluent from the oil-water separator is sent to a 530-gallon, stainless steel feed tank.

The groundwater collected in the feed tank is pumped through four bag filters to the carbon adsorption units. The bag filters are used to remove any particulates that are contained in the groundwater. The groundwater is finally passed through two, 2,000-pound carbon adsorption units to remove the organic contamination contained in the groundwater. The treated groundwater is then discharged to the Cowhorn Creek through Outfall 001 as authorized under its SPDES Permit (NY- 0260525) and shown on Figure 3. With removal of the manufacturing buildings, the treatment system and discharge line has been relocated to a new building located on the northwestern portion of the Site.

In addition to the wet well, four vertical pumping wells were installed that also discharge to the groundwater treatment system. The pumping wells are located on the western end of the facility between the plant facility and Cowhorn Creek. The wells were located in areas where the collection trench could not be installed due to access constraints. The groundwater is pumped from each well by force main to the groundwater treatment system. The system has been operational since February 12, 2002. An Annual Operations and Maintenance Report has been submitted each year by SI Group, Inc. and approved by the NYSDEC.

In October 2003, SI Group removed the remaining process equipment, storage tanks, piping and other equipment remaining on the Site. Prior to removal, all equipment, piping, and vessels were characterized based on their past use and the materials potentially contained within the equipment. This characterization was used to determine how each item was to be removed and disposed. All plant buildings, equipment, and materials were properly characterized and sent off-Site for appropriate treatment and/or disposal.

Due to the age of the facility, a number of the buildings contained asbestos materials including roofing materials, transite, and asbestos insulation. These materials were identified and removed in conformance with an asbestos abatement plan. The asbestos material was contained and sent off-Site for disposal. Following removal of the process equipment, tanks, and asbestos materials, the buildings were then demolished. The steel and other metals contained within the buildings were separated from the building rubble and sent off-Site for metal recovery. The building rubble including the brick and concrete was collected and disposed off-Site.

Removal of the buildings was completed in January 2004. The buildings were demolished such that all structures above grade were removed. The bottom floors of the buildings, serving as part of the retaining structure, were left in-place. A number of the lower level walls in Buildings 3, 5 and 8 were also functioning as retaining walls for the hillside and were left in-place. The floors and walls that remained were cleaned to remove any visual contamination prior to removal of the buildings. The ground floors of the buildings, the on-Site roads and the outside storage areas were left in place. The intent of the demolition work was to remove all structures to grade level. The current Site conditions are shown in Figure 3 with the buildings removed and the groundwater treatment building located in the northwestern portion of the Site.

The Site was serviced by two sewer systems. The storm sewer system that serviced the eastern side of the facility was connected to the City of Schenectady sanitary sewer system along with the sanitary sewer system that serviced the buildings. This system was abandoned by disconnecting and removing the discharge points; and filling the manholes, catch basins, and floors drains connected to the sanitary sewer system. The storm sewer system that serviced the western portion of the facility was left in-service. This system collects storm water from the western side of the facility and discharges the collected water to the Cowhorn Creek through outfall 001 as shown in Figure 3. The discharge point is currently permitted under the existing SPDES permit.

1.4 Report Organization

This Updated Remedial Investigation Report is organized as follows:

- Section 2.0 presents the results of previous investigation activities;
- Section 3.0 presents the objectives to update the Remedial Investigation;
- Section 4.0 presents the details of field activities conducted as part of this investigation;
- Section 5.0 presents the Site geology as defined by this and previous investigations;
- Section 6.0 presents the nature and extent of contamination defined by this and previous investigations;
- Section 7.0 present a summary of data validation; and
- Section 8.0 presents the conclusions and recommendations.

2.0 PREVIOUS SITE INVESTIGATION ACTIVITIES

2.1 Hydrogeological Investigation Report

In September of 1993, CRA submitted a Hydrogeological Investigation Report (CRA, 1993) to NYSDEC. The main objectives of the investigation were to collect additional data to define the hydrogeologic conditions at the Site and to define the extent of contaminant migration from the Site. The following is a summary of the activities and results of this investigation; further details may be found in the Hydrogeological Investigation Report.

The first phase of the Hydrogeological Investigation included a soil gas survey, which was conducted to identify potential chemical source areas and migration pathways. The survey identified a number of potential sources areas, including the area surrounding Building 1 and the area west of Building 9, in the vicinity of the loading dock (refer to Figure 2 for Building locations). It was also noted in this report that several VOCs were present in soil gas samples near the Administration Building; however, no production or waste disposal activities were reported to have occurred in this area, which is also upgradient from the process area.

Following the soil gas survey, the Hydrogeological Investigation was designed to further explore potential source areas and to define the extent of contamination. A number of tasks were completed as part of the scope of the investigation. Ten monitoring wells were installed and sampled during two separate groundwater sampling events. In addition, in-situ hydraulic conductivity testing was completed at each well. Two rounds of surface water, seep, and sediment sampling were also conducted simultaneously with the groundwater sampling events.

Borehole logging during the monitoring well installation revealed that the overburden geology at the Site consists of a thick sequence of horizontally inter-bedded layers of sand, silt and clay. Thicknesses were estimated to range from a few inches to several feet; however, no continuous strata were identified between boreholes at the time of the Hydrogeological Investigation.

In-situ hydraulic conductivity testing indicated a range of hydraulic conductivity values from 2.6×10^{-6} cm/sec to 2.7×10^{-4} cm/s. In general, the off-Site wells had higher hydraulic conductivities, with the deeper wells exhibiting hydraulic conductivities one order of magnitude lower. On-Site, hydraulic conductivities in deep wells and shallow wells were generally consistent, ranging from 1.8×10^{-5} cm/sec to 8.7×10^{-5} cm/sec.

Groundwater elevation surface contour maps created from water level measurements revealed that groundwater generally flows across the Site in a southwesterly direction towards Cowhorn Creek. Depths to groundwater varied greatly across the Site; along the northeastern edge of the Site near Tenth Avenue, the water table was located approximately 30 to 35 feet below ground surface (bgs). Along the southwestern edge of the Site, near the railroad tracks, the water table was generally within 10 feet of the ground surface. Average horizontal velocity of groundwater at the Site was calculated to be approximately 14 ft/year. Nearly all vertical hydraulic gradients were calculated to be downward; the only exception was in the vicinity of Cowhorn Creek, where an upward gradient suggested that the creek serves as a discharge point for groundwater.

Groundwater analytical results indicated that the highest organic chemical concentrations were reported in shallow monitoring wells (OW3 and OW7a-92) in the western portion of the Site (Figure 2). This area, based on groundwater flow direction, is downgradient from the source area defined in the soil gas survey near Building 9. It was suggested that because only low levels of contaminants were detected in the deep well OW7b-92 and because an upward hydraulic gradient was identified at the well pair, that chemical migration into the deeper portion of the aquifer was unlikely.

Several organic parameters were also detected at OW1 and OW1b-87, located just downgradient from the second previously identified source area (Figure 2). However, the absence of detections at the downgradient well pair OW6 indicated minimal chemical migration from this area via groundwater. A number of inorganic parameters were detected in OW1, OW7a-92 and OW3 at concentrations in exceedance of NYS groundwater standards.

Analytical data from surface water samples collected from six locations indicated Cowhorn Creek was not influenced by on-Site contamination. However, a number of organic compounds were detected at high concentrations in the drainage swale on-Site (location shown on Figure 2). Lastly, several compounds were detected in both the outfall and the seep located in the vicinity of Cowhorn Creek.

Analytical results from sediment samples collected from both Cowhorn Creek and the on-Site swale revealed that both were slightly impacted.

2.2 Remedial Investigation Report

Following the Hydrogeological Investigation, a Remedial Investigation/Feasibility Study (RI/FS) Work Plan was developed in accordance with the Consent Order executed by the NYSDEC in 1991. The objective of the RI was to sufficiently define environmental conditions at the Site to permit an evaluation of potential risks to human health and the natural environment and allow an evaluation of potential remedial measures for the Site to be completed during the FS. CRA prepared the Remedial Investigation Report in 1995 and the FS in July 1996. Based on the results of the RI and FS, NYSDEC issued a ROD in March 1998. The ROD split the Site into two operable units (No. 1 and No. 2). Operable Unit No.1 addressed the migration of contamination off-Site. Operable Unit No. 2 addressed on-Site soil contamination requiring the completion of a Supplemental Remedial Investigation that was completed in 1998. The following is a summary of the activities and results of these investigations; further details may be found in the Remedial Investigation Report and the Supplemental Remedial Investigation Report.

Field activities associated with the RI included the installation and sampling of 31 soil borings (October to December 1994), collection and analysis of 18 surface soil samples (October and December 1994), installation of six shallow and one deep groundwater monitoring wells (October 1994), two rounds of groundwater sample collection and analyses (February and May 1995), two rounds of water level measurements for all existing wells (including those installed as part of the Hydrogeologic Investigation)(February and May 1995), collection and analysis of 4 surface water and sediment samples (May 1995), and completion of magnetometer survey over the northwestern area of the Site (November 1994).

In general, chemical contamination was exhibited in:

- surface water and sediment samples collected from the swale (Figure 2) along the western property boundary;
- groundwater samples collected in the northwestern corner of the Site, downgradient from Building 9;
- groundwater samples collected from shallow wells downgradient of Building 1;
- on-Site surface soil samples, with highest concentrations reported along the railroad spur west of Buildings 1, 10 and 6 and in the area west of Building 9;
- on-Site subsurface soil samples along the western edge of the Site;
- the seep located northwest of the Site adjacent to Cowhorn Creek;
- the discharge water from the outfall located northwest of the Site adjacent to Cowhorn Creek; and,

- soil testing results showed minimal levels of subsurface soil contamination detected east of Buildings 3, 5 and 7.

The main contaminants of concern that were detected in the on-Site soils were cresols, xylenes, phenols, and naphthalene-based compounds. All of these compounds were used in the manufacturing process. Cross-sections generated and presented in the 1998 Supplemental Remedial Investigation Report show contamination beneath Building 9, Building 7, and Building 2, generally extending to depths of 10 to 15 feet bgs beneath Building 9 and 7, and to 20 to 25 ft bgs beneath Building 2.

The soil samples taken during the RI were also analyzed for pesticides and PCBs. The cleanup objectives for the pesticides and PCBs as specified in TAGM 4046 were not exceeded in any of the soil samples. In addition, metal analyses were completed during the RI with the results generally consistent across the Site indicating no elevated levels of metal contamination.

As a result of the previous investigations, it was concluded that the contamination remaining on-Site was present primarily within the soils located under and west of the former manufacturing buildings. Similarly, the highest levels of groundwater contamination were also located in this area. In general, the Site contaminants consist of volatile and semi-volatile organic compounds that were historically used on Site. Although the RI generated significant data from the Site, the presence of the manufacturing buildings limited access during the previous investigations and prohibited fully defining the limits of the contamination.

2.3 Feasibility Study

Along with the RI, a Feasibility Study (FS) was conducted in accordance with the Order on Consent executed by the NYSDEC. The objective of the FS was to identify and evaluate alternatives for remedial action, if any, to eliminate or mitigate all significant threats to the public health or the environment posed by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site.

In general, the FS summarized the findings of the RI and evaluated a number of options for remedial design. Based on the evaluation presented in the FS, one alternative was selected as the preferred means to address the environmental and human health concerns at the Site. The chosen remedial action, Alternative 3, included:

- Groundwater hydraulic containment/source removal with on-Site treatment;

- LNAPL collection with off-Site treatment;
- Institutional controls; and,
- Surface water and groundwater monitoring program

The reasoning behind this alternative was that it would remove and treat the majority of the chemicals in the shallow groundwater and would provide hydraulic containment to mitigate the off-Site migration of chemicals in the groundwater. In addition, the effectiveness of the alternative would be monitored by the implementation of the surface and groundwater monitoring program.

Following submittal of the FS in 1996, NYSDEC requested an Addendum to the original FS that would address their concerns. The FS Addendum entitled “Addendum I, Feasibility Study Report” was submitted to NYSDEC in January 1997. In the FS Addendum, Alternative 3 was modified to include a provision to re-evaluate the effectiveness of the remedial program on a yearly basis and evaluate if other remedial programs should be considered.

As a result of the annual review submitted to NYSDEC in 1999, an updated feasibility study was required to be submitted in 2000 to address NYSDECs request for a more detailed annual evaluation that presents new remedial technologies or previously rejected remedial technologies that have been improved or become feasible. The Supplemental Feasibility Study Report was accepted by NYSDEC on April 13, 2001 and has been updated annually.

3.0 OBJECTIVES TO UPDATE THE REMEDIAL INVESTIGATION

The main objective of the recently completed remedial investigation was to adequately identify the nature and extent of contamination remaining on-Site. With the removal of the potential sources of contamination aboveground, the only sources of contamination remaining are those contained in the soils. Since the original remedial investigation was limited to those areas of the Site that were accessible, this remedial investigation focused primarily on completing the delineation and characterization of soil contamination in the previously inaccessible areas. A number of soil and groundwater sampling locations were also selected at representative locations across the Site to confirm the data presented in previous investigation reports, as well as to further characterize the historic fill area in the northern portion of the Site.

Two of the three objectives outlined in the Work Plan pertain to the remedial investigation activities. These two objectives are summarized in the following sections. The third objective is to use the information presented in this report to assess remedial options. These remedial options will be presented in the Updated Feasibility Study. It has been stated in the Annual Updates to the Supplemental Feasibility Study that the Site is not expected to be returned to pre-development conditions and these reports have been accepted by NYSDEC. Engineering controls and/or institutional controls will be required to assure potential exposure levels protective of public health and the environment. It is anticipated that future beneficial use may include commercial or industrial development.

3.1 Characterization and Delineation of On-Site Soil and Groundwater Contamination

The Site has changed in recent years with the demolition of all of the on-Site manufacturing buildings, which has allowed for a more thorough investigation of the subsurface conditions. It is well documented that high levels of contamination are present to the southwest of the former locations of the facility buildings. However, depth of the contamination even in the southwest portion as well as the extent of the contamination moving to the northeast beneath the former buildings are not well delineated. As part of this investigation, soil borings were installed on-Site to delineate and characterize the extent of soil contamination. The majority of the soil borings were installed in areas that were previously inaccessible due to building location or are areas that represent gaps in the historic data.

The borings were installed using Direct Push Technology (DPT) with a Membrane Interface Probe (MIP). The MIP was able to measure the soil conductivity and VOC contamination in the soil as the boring was advanced. . The SC log of the probing tool allows for an interpretation of lithology present while the membrane section is used to collect and screen the concentration of volatile organic compounds (VOCs) in the soils. The use of the DPT with the direct sensing probes allows the efficient real time interpretation of the data to delineate the contamination on Site. Soil borings for soil sample collection were also installed for MIP confirmation, contaminant characterization, and lithologic characterization. Discrete groundwater samples were also collected. Upon reduction and review of the initial data from the DPT probes and initial soil samples, a number of borings were installed with a conventional hollow-stem auger rig to allow for characterization of soils, the collection of additional soil samples for laboratory analysis, and to facilitate installation of fourteen new groundwater monitoring wells. The results of this investigation are detailed in Section 6.0 of this report.

3.2 Characterization of On-Site Soils for Stability

The soils on-Site consist of inter-bedded sand, silt and clay layers. Regionally, many natural slopes in the area of the Site are unstable and the disturbance of the slopes or unusual conditions such as heavy soaking rains can destabilize the slopes causing failure. Major slope failures have occurred west of the Congress Street Site along Broadway that resulted in major property loss in recent years. The project Site has similar topography and geology to the failure prone areas.

The instability of the Site soils was demonstrated during the excavation of the “french drain”. Shoring was installed on both sides of the excavation that was dug for installation of the “french drain”. A small section of the excavation was not shored due to the fact the excavation was not very deep and shoring was not considered to be necessary. During excavation, difficulties were encountered due to the sloughing of soils into the excavation. This movement of the soils also resulted in the undermining of the loading dock located at a higher elevation near the excavation.

The stability of the soils has been considered to allow for informed decision making regarding the feasibility of excavation activities. All historical documentation such as the Hydrogeological Investigation Report completed in September of 1993 and soil boring logs from previous investigation activities, as well as data from the current investigation, have been used to characterize the Site soil conditions and make a determination of the overall stability. The data collected and used includes both lithologic characterization and groundwater observation. The results of this investigation are detailed in Section 5.0 of this report.

4.0 REMEDIAL INVESTIGATION FIELD ACTIVITIES

Task 1 of the Remedial Investigation entailed the installation of 33 borings using a direct push technology (DPT) rig equipped with direct sensing capabilities. In conjunction with the direct sensing probes, soil samples and discrete groundwater samples were collected using Geoprobe™ technologies to confirm the results of the direct sensing probes. These initial activities enabled the efficient collection of a large amount of data that was used to further refine Task 2 of the investigation.

Task 2 of the remedial investigation involved the installation of soil borings and groundwater monitoring wells using a conventional hollow stem auger (HSA) drill rig. The borings were located in confirmed areas of subsurface contamination to allow for further delineation, as well as to further investigate the lithology of the Site and provide geotechnical data for the soils at each boring location. Continuous sampling was performed for the entire boring using a split spoon sampler. At select boring locations, a cluster of two monitoring wells were installed, one at a shallow depth at the groundwater interface and a second at a deeper depth below the observed contamination. This placement was designed to allow for a determination of the differences in the vertical contamination levels. In addition, a single shallow monitoring well was installed at two HSA boring locations in order to provide additional groundwater elevation data.

The specific field activities and methods are outlined in the following sections.

4.1 Membrane Interface Probe (MIP)/Soil Conductivity (SC) Survey

The MIP technology served as the primary screening tool for the delineation of the subsurface contamination. The MIP probe is semi-quantitative method to evaluate relative levels of contaminants in the subsurface. As the probe is advanced with the Geoprobe™, a carrier gas transports VOCs that diffuse through a semi-permeable membrane in the probe back to the detectors on the surface. The MIP can detect the presence of VOC contamination using multiple detectors. For this project, a Flame Ionization Detector (FID) and Photo Ionization Detector (PID) were used for screening of subsurface contamination. It should also be noted that an Electron Capture Device (ECD) was used simultaneously with the FID and PID; however, it was assumed prior to beginning field work that the ECD would not detect the type of contaminants present at the Site. The ECD is 10-1000 times more sensitive than an FID; however, it has a limited dynamic range and is most often used for the analysis of chlorinated solvents.

The MIP was used in conjunction with a DPT rig to characterize the horizontal and vertical limits of the subsurface contamination. A soil conductivity (SC) probe was also used in conjunction with the MIP in order to garner data relating to the lithology of the soils and to determine the different soil types present.

4.1.1 Rationale for MIP Grid Placement

A total of 37 MIP borings were installed at 33 locations (MIP-01 through MIP-33) to depths ranging between 30 and 50 feet below ground surface. Thirty-three locations were identified in the Work Plan; however, four extra MIP borings were installed at specific locations where there was a need to further clarify results. Further information is provided in Section 4.1.2. The MIP survey borings were located in a grid pattern at 60 foot spacing from northeast to southwest and 80 foot spacing from northwest to southeast. The northwestern most borings were placed along the top of the bank at the northwest side of the Site, just northeast of the groundwater collection trench. Borings were installed to confirm contamination levels present in these areas and to better define the vertical extent of the contamination at depth in this area. The remaining locations were spread across the Site, including those areas previously occupied by the Site buildings, to determine the horizontal and vertical extent of contamination across the Site. MIP borings were installed by Zebra Environmental Corporation (Zebra) on September 26th through September 28th, October 1st through October 3rd, October 5th, and October 8th through 10th. The MIP boring locations are presented on Figure 4.

4.1.2 MIP Installation

Typically, each boring was advanced at a rate of one foot per minute to allow for the carrier gas in the MIP to reach the detector on the surface and also to ensure that the heat plate located near the semi-permeable membrane does not drop in temperature. The readings from the FID and PID were logged on a laptop computer, as well as presented in a real time read-out. These real time readings were used in the field to determine potential locations for confirmatory sampling as well as to determine the final depth that the probes were driven.

On September 28th, after installing the first seven MIP borings, the FID component of the MIP began reading unusually high background values. Zebra attempted to remedy the problem by changing out trunklines on the MIP. However, the problem could not be corrected and Zebra recommended an overnight purge of the instrument. Between October 1st and October 3rd, the FID continued to have high backgrounds while installing the MIP borings. On October 3rd, Zebra diagnosed the problem to be associated with the FID. The equipment was repaired on October

4th and Zebra resumed the installation of MIP borings on October 5th. From that point on, FID backgrounds were low.

Following the installation of MIP borings at all 33 locations, CHA, SI Group and Zebra concurred that some of the MIP borings installed between September 28th and October 3rd should be re-installed as a result of the previously malfunctioning FID. As such, MIP-06, MIP-07, MIP-09, and MIP-24 we re-installed on October 10th. These MIP borings are presented with an "A" following the location designation (i.e. MIP-06A). Due to time and MIP equipment restraints, MIP-11 and MIP-08 were not re-installed. Data from MIP-11 is considered invalid as a result of the MIP not operating properly. As such, this data has been excluded from figures and discussion. Data from MIP-08 was confirmed using the PID log up to a depth of 15 feet, and this data is presented. However, data from 15 feet bgs to the end of the boring has been excluded. Although MIP-11 was not re-installed, the data collected as part of the subsequent field activities was sufficient to characterize the area in the vicinity of this MIP location.

Upon completion of each MIP boring, the boreholes were tremie grouted to seal the borehole and prevent movement of contaminants vertically at the boring location.

4.2 DPT Confirmatory Soil Sampling and Discrete Ground Water Sampling

4.2.1 Rationale for Boring Placement and Groundwater Sample Depth

A representative number of DPT soil borings (13 total) were installed directly adjacent to the MIP boring locations to allow for MIP/SC confirmation, contaminant characterization, and lithologic characterization. The locations of the confirmatory borings were based upon a review of the MIP survey results with the goal of analyzing soil and groundwater samples within zones of high or low MIP response and/or anomalous measurement zones. The borings were placed as close as possible to the MIP boring locations they were to confirm (generally within 12 to 18 inches).

4.2.2 DPT Installation

DPT soil borings were installed by Zebra Environmental Corporation on October 10th through 12th and October 15th. A total of 13 borings were installed to depths up to 35 feet below ground surface. DPT boring locations are presented on Figure 4.

The DPT soil borings and soil sampling activities were performed in conjunction with a dual tube sampling device, which allowed for the collection of continuous soil samples from the same boring without the need to re-push the DPT sampling rods at each sample collection interval. Soil samples were collected continuously over the depth of the boring and to confirm lithology and field characterize the soils.

Soil samples were collected with a macro-core sampling device which collects a five foot soil sample. Each soil sample was visually examined for the presence of contamination, screened with a photoionization detector (PID) or equivalent meter, and logged for geologic stratigraphy by a geologist. Boring logs are included as Appendix A.

At the location of each confirmatory soil boring, a discrete groundwater sample was also collected at the appropriate interval below the water table to confirm MIP readings with the exception of GP-17-07, GP-19-07 and GP-33-07. Groundwater was not encountered at these three locations and as such, a groundwater sample could not be collected. Discrete groundwater samples were collected using a Geoprobe™ Dual Tube Groundwater Profiler sampling device at select location and depth intervals with the DPT rig. The groundwater profiler is used in conjunction with the dual tube system and consists of a 0.75” diameter Schedule 40, 12” long, 10-slot PVC screen that is connected to a 0.75” diameter Schedule 40 riser that is extended down the outer tube of the dual tube system. The outer tube is then retracted 12” to expose the screen to the formation and allow collection of a groundwater sample.

Decontamination of the non-disposable down-hole boring equipment was performed following each boring by flushing and wiping the components to remove all visible sediments, followed by a thorough high pressure water wash. At the completion of each boring, the boreholes were grouted from the bottom up to prevent the vertical movement of contamination.

4.2.3 Analytical Soil and Groundwater Sampling

A single soil sample from each boring location was collected for third party laboratory analysis with the exception of GP-12-07, GP-18-07, GP-19-07, GP-24-07 and GP-33-07. A soil sample was not collected at locations GP-12-07 and GP-24-07 because the highest potential level of contamination was observed from MIP results to be beneath the groundwater table. Two soil samples were collected each at GP-18-07, GP-19-07, and GP-33-07. Soil samples were collected from the area above the groundwater table where the highest level of contamination was observed based on PID readings, visual/olfactory observation, or the MIP data previously gathered, as well as at a depth above contamination in order to better constrain the vertical extent of contamination. The soil samples were analyzed by TestAmerica Connecticut for VOCs using EPA Method 8260 and SVOCs using EPA Method 8270. TestAmerica Connecticut is a New York State Department of Health ELAP certified laboratory. A Geoprobe™ soil sampling summary is included as Table 1.

As noted previously, discrete groundwater samples were also collected from each DPT boring location. In general, the interval from which each sample was collected was determined from the MIP log. More specifically, the samples were collected from a depth at or just below the lower limit of groundwater contamination as suggested by the MIP log. The MIP log, as well as the discrete groundwater sample results, was ultimately used to evaluate the placement of the deep well screens associated with the permanent monitoring wells. The groundwater samples were analyzed by TestAmerica Connecticut for VOCs using EPA Method 8260 and SVOCs using EPA Method 8270. All analytical data from samples analyzed by TestAmerica Connecticut were validated by Alpha Geoscience. A Geoprobe™ grab groundwater sampling summary is included as Table 2.

4.2.4 Rapid Field Characterization Method Sampling

For each sample collected for laboratory analysis, a duplicate sample was collected and analyzed by the Rapid Field Characterization Method at SI Group's in-house laboratory. The Rapid Field Characterization Method (RFCM) Test Procedures are outlined in the May 2004 Soil Management Plan for the Rotterdam Junction and Congress Street Facilities. Up to three additional soil samples from each boring were collected and sent to the in-house laboratory for analysis. RFCM samples collected are detailed in the Geoprobe™ soil sampling summary, included as Table 1.

4.3 Hollow Stem Auger Soil Borings and Monitoring Well Installation

4.3.1 Rationale for Boring and Monitoring Well Placement and Depth

Analytical and field data generated during Task 1 was used to determine the location of hollow stem auger (HSA) borings and groundwater monitoring wells, installed during Task 2. The Work Plan stated that a total of seven borings would be installed, with four of those boring locations being converted to groundwater monitoring wells (two at each location). However, a review of preliminary data from the MIP and DPT effort indicated that it would be beneficial to install a number of additional wells to improve groundwater contour mapping and to allow for a more accurate delineation of contamination.

The HSA borings and groundwater monitoring wells were generally placed in the areas expected to have the highest concentration and deepest contamination levels present (Figure 5). These wells include: OW16a/b-07, OW17a/b-07, OW20-07, OW18a/b-07, OW19a/b-07, OW22-07, and OW21a/b-07. Monitoring well pairs were installed at five locations as indicated by the OW#a/b-07 notation. The shallow wells were screened at the soil/groundwater interface to allow the measurement of the groundwater table at these locations, to improve groundwater contour mapping, and to determine the presence of LNAPL. The deep wells were installed to determine the potential depth of contamination and allow for a determination of the differences in vertical contamination levels across the Site.

In addition to the above wells, a pair of monitoring wells (OW15a-07 and OW15b-07) was installed in the southeast corner of the Site. This location was selected to allow for the placement of a monitoring well up-gradient of the main areas of contamination and allow for the determination of groundwater elevation at this location.

Lastly, one boring, B37-07 (shown on Figure 5), was installed north of former Building 9 to obtain lithologic data that would further delineate the fill area and provide information regarding the stability of the northern end of the Site. A well was not installed at this location and the boring was backfilled with a bentonite/grout slurry.

4.3.2 Soil Boring Installation

A total of fifteen HSA soil borings were installed during the soil boring program. Twelve borings were installed as pairs (one shallow and one deep) and the remaining three were installed as single borings. Of the fifteen borings, fourteen were converted to monitoring wells. Borings and monitoring wells were installed from October 22nd through November 6th. Soil borings were advanced to depths ranging from 30 feet to 50 feet. The boring and monitoring well locations are shown on Figure 5.

Continuous sampling was performed for the entire boring using a split spoon sampler. The split spoon sampling device allowed for the collection of continuous soil samples while also providing standard penetration values (N-values) for the soils at each boring location. Soil samples were collected continuously over the depth of the boring at two-foot intervals to confirm lithology and field characterize the soils. Each soil sample was visually examined for the presence of contamination, screened with a photoionization detector (PID) or equivalent meter, and logged for geologic stratigraphy by a geologist. Boring logs are included as Appendix A.

Decontamination of the non-disposable down-hole boring equipment was performed following each boring by flushing and wiping the components to remove all visible sediments, followed by a thorough high pressure water wash. For non-dedicated sampling equipment, including split spoon samplers used to collect samples for chemical analysis, the decontamination procedure for was as follows:

1. Wash and scrub with low phosphate detergent;
2. Tap water rinse;
3. Rinse with 10 percent nitric acid (HNO_3) solution;
4. Tap water rinse;
5. Methanol rinse;
6. Thoroughly rinse with distilled water; and
7. Air dry.

Each boring that was not converted to a groundwater monitoring well was tremie grouted to seal the borehole and prevent the vertical movement of contamination. All drill cuttings were containerized, characterized, and disposed at an appropriate permitted facility.

4.3.3 Analytical Soil Sampling

One soil sample was collected in each of the nine borings at the location above the groundwater table exhibiting the highest contamination level. This sample was sent to TestAmerica Connecticut for total VOC analysis by EPA Method 8260 and SVOC analysis by EPA Method 8270. All analytical data from samples analyzed by TestAmerica Connecticut were validated by Alpha Geoscience. All results were provided in an ASP Category B deliverable. Additional QA/QC samples including a blind duplicate, trip blank, equipment blanks, and matrix spike/matrix spike duplicate samples were collected for laboratory analysis by each of the methods listed above. A HSA soil sampling summary is included as Table 3.

4.3.4 Rapid Field Characterization Method Sampling

At each boring location of a laboratory sample, a duplicate sample was collected for analysis by Rapid Field Characterization Method (RFCM) at SI Group’s in-house laboratory at their Rotterdam Junction Facility. Up to three additional soil samples from each boring were collected and sent to the Rotterdam Junction Facility for analysis by RFCM. The collection of these samples was intended to create a base of information that will be used in determining clean levels of soil during future remedial measures.

4.3.5 Monitoring Well Construction

Monitoring wells were constructed using a ten (10) foot section of factory slotted, 0.010 inch (10 slot) well screen and flush threaded PVC riser. All well installation materials were new. At each cluster location, the shallow well screen was set to straddle the top of the groundwater table. The deep well screen was set just below the anticipated limits of the contamination based on the MIP logs and discrete groundwater sample results. Where the borehole was deeper than the desired depth of the bottom of the well screen, grout was placed at the bottom of the borehole extending upward to within one-foot of the base of the screened interval and allowed to set. A six to twelve inch layer of sand was then placed on top of the grout prior to the installation of the well screen. A sand filter pack consisting of #0 Morie sand was placed around the screen of each well from the base to a level of approximately two feet above the top of the screen. This includes the placement of approximately six inches of finer grained sand pack material placed at the top of the sand layer. A minimum of a one foot layer of bentonite pellets was placed on top of the filter pack. The remaining borehole annulus was grouted from the top of the sand pack to the bottom of the surface seal. The grout mixture consisted of a bentonite-cement mixture. The PVC riser on each well ranged from approximately 20 to 36 inches above the ground surface. A protective steel (4-inch minimum diameter) standpipe well cover was placed over the PVC well riser to protect the well. The well identification number was painted on exterior of the steel cover using a permanent paint pen. Duplicate keys for the monitoring well locks have been provided to SI Group.

All pertinent monitoring well construction information was recorded on well construction logs, included in Appendix B. A well construction detail summary is presented in Table 5. The location and elevation of each monitoring well was surveyed relative to mean sea level data on December 10, 2007. The elevation was surveyed to the nearest 0.01-foot and the survey point was marked on the riser so that all future water level data is measured from the same point. Monitoring well locations are shown on Figure 5.

4.3.6 Monitoring Well Development

The newly installed monitoring wells were developed in order to remove suspended fines and to allow for the collection of representative groundwater samples. Well development was completed November 14th through November 16th, and November 21st. Well development was conducted by performing several cycles of surging and pumping using a submersible pump.

Well development continued until it was determined in the field that the turbidity level was 50 NTUs or less, or for a maximum period of 1.5 hours. Turbidities greater than 50 NTUs were measured at the end of development in the following wells: OW15A-07, OW16B-07, OW18A-07, OW18B-07, and OW19B-07. During development, CHA monitored field indicator parameters including pH, temperature, Eh, turbidity, and conductivity to develop a preliminary water quality database and to verify that none of newly installed wells had been contaminated by grout placement. Well development logs are included in Appendix C.

4.4 Groundwater Sampling

4.4.1 Existing/New Wells Sampled

Groundwater samples were collected from the fourteen newly-installed monitoring wells approximately four weeks after the monitoring well installation activities were completed. In addition, eighteen of the previously installed monitoring and pumping wells (including the wet well) were sampled. Sampling protocols are outlined in the following sections. Groundwater samples were collected between November 26th and November 29th. Monitoring wells sampled during this event are shown on Figure 6.

Water level measurements were collected on November 26th, prior to well purging and sampling. The water levels were obtained by measuring the distance from the marked location on the top of the well riser to the top of the water column using an electronic water level indicator. Measurements were obtained to nearest hundredth of one foot accuracy. Water level measuring equipment that comes in contact with well water was decontaminated using an Alconox solution followed by a clean, potable-water rinse to ensure that cross-contamination does not occur.

4.4.1.1 Observations/Field Parameters

Prior to sample collection, monitoring wells were purged until a minimum of three well volumes were removed from the well, or until the well was purged dry. After each well volume was removed, a sample was collected and measured for field parameters including turbidity, pH, temperature, and conductivity to evaluate well stabilization. Purging was considered complete when three consecutive consistent readings of temperature, pH and conductivity were obtained and the turbidity was less than 50 NTUs, when possible. Readings were considered consistent when all of the readings were within 10 percent of the previous reading(s). In the event that recharge was insufficient to conduct the purging protocol described above, the well was bailed/pumped to dryness and a sample was collected when the well had sufficiently recovered.

Wells were purged using new polyethylene bailers. The only exception is groundwater samples from WW1, PW2, PW3, and PW4, which were collected from sampling ports on the discharge lines in the treatment facility. A summary of observations and field parameters are included in Appendix D.

All water extraction equipment was decontaminated using an Alconox solution followed by a clean, potable-water rinse to ensure that cross-contamination does not occur. All purge water was containerized during purging and sampling activities until the conclusion of the sampling of each well or at a time when the container was full. At that time, the purge water was discharged into the wet well located at the north end of the Site and treated in the on-Site treatment system prior to permitted discharge to Cowhorn Creek.

Groundwater samples were sent to TestAmerica Connecticut for analysis for VOCs by EPA Method 8260 and SVOCs by EPA Method 8270 following proper Chain of Custody (COC) procedures. Analyzed data was provided in an ASP Category B deliverable. Additional QA/QC samples including a blind duplicate, trip blank, and matrix spike/matrix spike duplicate sample were collected for laboratory analysis. A monitoring well groundwater sampling summary is included as Table 4.

4.5 Slug Tests

After installation of the monitoring wells, a slug test was performed on thirteen of the fourteen wells that were installed. A slug test was not performed on OW17A-07 due to the presence of LNAPL on the groundwater surface and the possibility of contamination of the slug-test equipment.

The slug test allows for a determination of the hydraulic conductivity of the soils at each of the well locations and depths. Slug tests were performed by dropping a solid PVC cylinder into the water column to displace a known volume of water and continuously monitoring the water level as the displaced water flows back into the formation. This was also performed in reverse, by removing the slug and monitoring the rising water level as formation water enters the well. Water levels were measured and recorded every 500 milliseconds using an In-Situ Inc. Level Troll 700. For some wells, slug tests were performed in duplicate to provide additional information about the reproducibility of the test.

Hydraulic conductivity was calculated with the software program Aqtesolv™ using the Bouwer and Rice Slug-Test Method (Bouwer and Rice, 1976; Bouwer, 1989.), which can be used to analyze slug test data collected from fully or partially penetrating wells in unconfined aquifers. The solution is based on the Theim equation and assumes negligible drawdown of the water table around the well and no flow above the water table. The solution is described by the following equation:

$$K = \frac{r_e^2 \ln(R_e/r_w) \ln(y_o/y_t)}{2 L_e t}$$

where:

K = hydraulic conductivity
r_c = radius of the well section where the water level is rising
R_e = effective radial distance over which the head difference y is dissipated
r_w = radial distance between well center and undisturbed aquifer (r_c plus thickness of gravel envelope or developed zone outside casing)
L_e = height of perforated, screened, uncased, or otherwise open section of well through which ground water enters
y_o = y at time zero
y_t = y at time t
t = time since y_o

Analysis was performed by matching a straight-line solution to water-level displacement data collected during the slug test. A graph of the slug test data was made by plotting the head difference (y) logarithmically on the Y-axis versus time (t) on the X-axis. The section of the graph which best approximates a straight line slope is used to determine y_o , y_t , and t. In accordance with the Bouwer and Rice method, the first (earlier) straight segment of the data was interpreted as drainage into/out of the well from the highly permeable sand pack. The second (later) straight portion of the data was considered indicative of true flow into/out of the well from the aquifer and was used in the equation above. For wells where slug-tests were performed in duplicate, slug test data indicate that the results were generally highly reproducible. Relative percent differences (RPDs) calculated for duplicates were between 0% and 18%. As such, the geometric mean for each set of duplicate measurements was reported. Calculated hydraulic conductivities are presented in Table 5. Aqtesolv™ worksheets, including graphs of the slug test data, are included in Appendix E.

5.0 SITE GEOLOGY

5.1 Boring Logs

The following description of the Site geology is based on the examination of continuous soil samples obtained during Geoprobe™ and HSA borings. Overburden stratigraphy is depicted on geologic cross-sections A-A’, B-B’ and C-C’ (Figures 8, 9 and 10, respectively). The locations of these cross-sections are shown on Figure 7.

In general, the Site is underlain by a sequence of glaciolacustrine deposits which consist of inter-bedded sand, silt and clay. A thin unit of fill is present across much of the Site, varying from a minimum depth of 0.5 feet to a maximum depth of 6 feet. In general, the fill is comprised of a mixture of displaced natural soils of fine to coarse-grained sands and silt, with trace amounts of brick, stone, concrete and/or asphalt. The only exception is a significant area of historic fill, located at the northwest end of the Site, which is discussed in detail in the following section (Section 5.2).

Underlying the fill is a unit of inter-bedded fine to medium sands and silt. This unit, continuous across the entire Site, is thickest on the eastern edge of the Site, with approximate thickness of 40-45 feet. This unit is thinnest in the area of the fill, with an approximate thickness of only 5-10 feet. For the most part, the sand layers are comprised of fine-grained and fine- to medium-grained sands with variable amounts of silt. The silt layers are comprised of brown to gray silt with variable amounts of fine sands. Based on local topography, it is likely that the surface of this unit is indicative of the historic topography, prior to both Site development and fill placement in the area of the Treatment Facility.

Boring logs which extend deeper into the substrata indicate that there is a continuous silt and clay unit underlying the inter-bedded sand and silt unit. Although there are some inter-bedded layers of silt and fine sand and the thickness of this unit is unknown, the surface of the unit appears to be relatively consistent in elevation. The unit is comprised of a mixture of gray silt and clay, ranging from moderately stiff to very stiff, with thin layers of silt or silt and fine sand.

Previous drilling activities at the Site that were conducted as part of the 1995 Remedial Investigation indicate that the thickness of the sequence of these glaciolacustrine deposits is at least 132 feet. Regional geologic conditions indicate that the average thickness of these deposits is approximately 150. Bedrock has not been encountered in any subsurface investigations conducted at the Site to date.

5.2 Extent of Fill Area

It was reported in the Hydrogeological Investigation Report completed in 1993 by CRA that an area of fill exists at the Site, which was previously placed in the vicinity of the former location of Building 9 (Figure 2). The fill material was reported to consist of construction rubble and other Site generated materials/debris.

During this investigation, three Geoprobe™ borings and three HSA borings were installed in the area previously identified as the fill area (Figures 4 and 5). Boring logs indicate that in the vicinity of GP-14-07, fill extends to a minimum depth of 11.5 feet bgs. Samples could not be collected beyond a depth of 11.5 feet due to a lack of recovery in the fill material. Observed fill materials in this area include brick fragments, cardboard, stone, carpet, and wood mixed with sand and silt. In addition, a yellow crystalline material with a slight chemical odor was present in this boring. No recovery from 11.5 feet bgs to 15 feet bgs suggests that fill may extend as deep as 15 feet bgs.

The boring log from GP-16-07, located closest to the Treatment Facility, indicates that fill extends to a minimum depth of 11.5 feet bgs. No recovery from 11.5 feet bgs to 30 feet bgs indicates that the absolute depth of fill is unknown at this location. Observed fill materials in this vicinity include fibers, brick, wood and crushed stone.

In the vicinity of GP-17-07 and OW18A/B-07, boring logs indicate that fill extends to a maximum depth range of 20 to 22 feet bgs. Observed fill materials include brick, black ash, concrete, rusted metal shards, stones and glass.

The boring log from OW19A/B-07 indicates that fill extends to a depth of 26 feet bgs in the area of the former loading dock. Recovered fill materials consisted of wood, brick, burlap fibers, silver color (non-rusted) metal, and a black tar/hardened resin material. Recovery was poor from approximately 18 feet bgs to 24 feet bgs, with only burlap, metals and the black tar/hardened resin material present in sampling equipment.

Based on materials encountered in the boreholes, the extent of the fill area has been estimated on Figure 11.

5.3 Stability of On-Site Soils

As noted in Section 5.1, the soils on-Site consist of inter-bedded sand, silt and clay layers. Regionally, many natural slopes in the area of the Site are often unstable and the disturbance of the slopes or unusual conditions such as heavy soaking rains that locally raise the water table can destabilize the slopes causing failure. Like this site, these soils are often in the form of steeply sloped bluffs overlooking stream and river valleys. These bluffs, historically, are marginally stable in their natural condition, and become unstable in situations such as when excavations are made near the base of the slopes, which will occur if the fill area in question is removed. Major slope failures have occurred west of the Congress Street Site along Broadway that resulted in major property loss in recent years. The project Site has similar topography and geology to the failure prone areas.

Instability of Site soils was previously demonstrated during the excavation of the “french drain”. Shoring was installed on both sides of the excavation that was dug for installation of the “french drain”. A small section of the excavation was not shored due to the fact the excavation was not very deep and shoring was not considered to be necessary. During excavation, difficulties were encountered due to the sloughing of soils into the excavation. This movement of the soils also resulted in the undermining of the loading dock located at a higher elevation near the excavation.

In order to allow for informed decision making regarding the feasibility of excavation and/or other remedial activities, the stability of the soils was considered as part of this RI and assessed by evaluating soil boring logs generated during this and previous investigations.

The stability of the fill material in itself can be difficult to predict due to the inherent variability associated with typical fill materials. Based on the soil borings completed in the fill area, significant void spaces as well as intervals with very low in-place densities were identified.

Standard Penetration Test (SPT) N-Values in the fill ranged from 3 to 81 indicative of a very loose to very compact material. N-Values can be misleading in materials containing significant volumes of gravel sized or larger particles, as particles larger than the sampler diameter can impede the penetration of the sampler. It is expected that the N-values that were often above 20 are a result of the nature of material contained in the fill layer, i.e. metal, bricks and concrete, among other materials. Some samples collected contained only non-soil materials and had N-Values between 25 and 81. Due to the nature of the fill materials, these N-values should not be considered indicative of actual in-place densities.

The natural sand and silt soil below the fill and adjacent to the fill area had N-Values between 2 and 32, although they were generally between 6 and 16 indicating a loose to medium compact soil. While the siltier layers of this stratum have an inherent stand-up time, that stand-up time during excavation is difficult to quantify, therefore requiring excavation support. Soils with N-values in this range often do not provide significant toe resistance for excavation support systems, so excavation support systems would likely need to be braced with either tiebacks, or rackers. Additionally, the debris within the fill can impede installation of excavation support systems.

In general, samples collected below about 10 feet below grade were wet indicating the presence of the groundwater below this depth. In particular, the sand layers with less than about 10 percent fines by weight are less likely to be stable in the presence of water, further complicating an excavation of the fill, which extends about 20 feet below the top of the groundwater table.

The extent of fill area shown in Figure 11 extends vertically to about 270 ft. AMSL, which would require an excavation in the fill area about 30 feet deep. Although in some areas, such as to the south/southeast, the excavation side wall could be sloped back to provide adequate stability and remain within the confines of the property, other portions of the excavation would need to substantial shoring to remain stable. It is further anticipated that excavation in the fill area would pose a significant safety risk to both people and adjacent property, including those homes located up slope from the excavation on 10th Avenue and the railroad tracks down slope from the fill area, which serve as the main rail line between Albany and Buffalo.

5.4 Groundwater Flow and Hydraulic Conductivity of Site Soils

Following monitoring well development and prior to sampling, depth to groundwater measurements were collected from the existing wells associated with the Site as well as the newly installed monitoring wells. Depth to groundwater was converted to groundwater elevations using survey data. A summary of groundwater elevation data is presented in Table 6.

Groundwater elevation surface contours are presented on Figure 12. The elevation of the groundwater table is depicted on the cross-sections presented in Figures 8, 9 and 10. It should be noted that Figure 12 is consistent with previous groundwater contours presented in the Hydrogeological Investigation Report (CRA, 1993) and the Remedial Investigation Report (CRA, 1995). Based on the groundwater contours presented in Figure 12, it is apparent that groundwater flow across the majority of the Site follows the Site topography in a southwesterly direction towards Cowhorn Creek. However, in the northwestern portion of the Site, the groundwater flow is predominately westward towards Cowhorn Creek and the wet well. Across Cowhorn Creek, a similar flow pattern exists with groundwater generally flowing in an easterly direction towards the Cowhorn Creek. Although the groundwater collection trench captures any contaminated groundwater flowing westward across the site, it is likely the Cowhorn Creek would also serve as a hydraulic barrier to prevent contamination from migrating across the Creek.

The horizontal hydraulic gradient across the southern part of the Site (i.e. from OW15A-07 to OW21A-07) is approximately 0.11 ft/ft. The horizontal hydraulic gradient across the northern part of the Site (i.e. from OW12-94 to OW7A-92) is approximately 0.19 ft/ft. Based on these data, the average horizontal hydraulic gradient across the Site is approximately 0.15 ft/ft.

It was previously reported in the Remedial Investigation Report (CRA, 1995) that, although the glaciolacustrine deposits underlying the Site are locally heterogeneous, it was expected that the stratrigraphic sequence behaved as a single hydrostatic unit on a macroscopic scale. Hydraulic conductivities calculated as part of the 1995 RI were approximately 1.4 x 10^{-4} cm/sec for the shallow wells and 3.0 x 10^{-5}cm/sec for the deeper wells.

Hydraulic conductivities measured on the newly installed shallow monitoring wells ranged from 2.23 x 10^{-5} cm/sec to 2.58 x 10^{-4} cm/sec. The geometric mean hydraulic conductivity value for the shallow monitoring wells is 1.25 x 10^{-4} cm/sec. Hydraulic conductivities measured on the newly installed deep monitoring wells ranged from 6.85 x 10^{-5} cm/sec to 4.31 x10^{-4} cm/sec. The geometric mean hydraulic conductivity value for the deep monitoring wells is 2.04 x 10^{-4}. However, only two of the wells installed during the current RI are screened in the lower silt/clay unit; all others are screened in the upper, inter-bedded sand and silt unit. Data collected during the current RI suggests that the upper sand and silt unit has a similar permeability as the deeper silt and clay unit, and that the stratigraphic sequence is behaving as a single hydrostatic unit.

These results are generally comparable to results obtained during the 1993 Hydrogeologic Investigation and the 1995 Remedial Investigation. Although the range of calculated hydraulic conductivities calculated during each investigation was similar, the geometric mean of previous hydraulic conductivities calculated for the Site was approximately one order of magnitude lower for the deep wells. The difference in hydraulic conductivities can be partially attributed to improved accuracy during the current RI due to the use of electronic data recording equipment, whereas water level measurements in 1995 were performed manually. In addition, hydraulic conductivities measured during the 1995 RI were made on a different stratigraphic interval; these wells were, on average, approximately 50’ deeper than the deep monitoring wells installed as part of the current RI. It is likely that the lower hydraulic conductivities measured during the 1995 RI are a result of both the difference in measurement technique and the difference in the stratigraphic unit that was tested.

6.0 NATURE AND EXTENT OF CONTAMINATION

6.1 General

Based on the historical investigations conducted at the Site and the data collected during this RI, three distinct areas at the site have been identified that exhibit different characteristics associated with the nature and extent of contamination. These differences generally correlate to the past use/operations within these areas and include the following:

- Historic Fill Area;
- Non-Process/Administration Area; and
- Former Process Areas.

Discussion of the extent of contamination has been divided into discussions related to these three distinct areas that were identified during the investigation. Discussion of each area focuses first on soil contamination and second on groundwater contamination. It should be noted that due to the fact that the MIP was used as a preliminary Site-wide screening tool, a general discussion of the MIP results, including a preliminary interpretation of the potential distribution of site contaminants, precedes the discussion of each distinct area. The MIP data, in conjunction with the historical Site data, helped in defining the limits in each of these specific areas of potential concern.

6.2 Determination of Soil and Groundwater Screening Levels

Overall, 49 groundwater and 94 soil samples were collected for analysis during this investigation. In addition, approximately 30 to 50 feet of qualitative data was collected using MIP technology at each of 33 locations across the Site. RFCM soil analytical data is presented in Table 7 and the Test America soil analytical data is presented in Table 8. For the purpose of comparison, soil data has been screened against New York State Department of Environmental Conservation, “Technical and Administrative Guidance Memorandum No. 4046: Determination of Soil Cleanup Objectives and Cleanup Levels” (TAGM 4046).

It should be noted that with the exception of the parameter ethylbenzene, the method detection limits associated with the RFCM analytical method are higher than the TAGM screening level. As a result, it is important to note that the original intent of the RFCM data was to supplement the results received from Test America and aid in evaluating the distribution of contaminants across the Site.

Groundwater analytical data is presented in Tables 9 and 10 and has been screened against New York State Department of Environmental Conservation, Division of Water, “Technical and Operational Guidance Series 1.1.1 : Ambient Water Quality Standards and Guidance Values” (TOGS 1.1.1). Complete copies of the laboratory analytical reports for RFCM and TestAmerica samples are included in Appendices G and H, respectively.

6.3 Discussion of MIP and SC Results

A comparison of MIP soil conductivity (SC) measurements with Geoprobe™ boring logs from the same locations indicate that, at this Site, SC measurements have limited value in interpreting changes in lithology. As such, it should be noted that SC measurements do not provide the data necessary to analyze changes in lithology over depth at this Site.

In addition to SC, the MIP measured relative changes in ECD at each borehole. As mentioned in Section 4.1, the ECD has a limited dynamic range and is most often used for the analysis of halogenated compounds (i.e. chlorinated solvents). ECD data collected at the Site show very little ECD response and it is assumed that this is a result of the nature of contamination, i.e. there are few if any chlorinated solvents present in soils and groundwater at the Site. The only locations where ECD response corresponds to either PID or FID measurements are MIP 18-07 and MIP 19-07, both located in the former fill area. This suggests that some contaminants present at this location may be halogenated compounds.

Because the MIP did not generally produce usable results with the SC and ECD, discussion of MIP results that follows is limited to FID and PID measurements. MIP locations are presented in Figure 4 and complete results from the MIP are included as Appendix F.

In general, the FID and PID showed similar response and often trended together. Locations where the FID showed a response and the PID did not respond are likely indicative of methane produced by organic material. This was confirmed by a number of confirmatory Geoprobe™ borings, with wood or other organic material present. It should be noted that the data generated by the MIP provides semi-qualitative data and is most useful as a screening tool to identify areas of potential contamination. Subsurface investigation data collected during the subsequent phases of the investigation were used to confirm the level and distribution of contaminants in the soil and groundwater.

A map of FID response across the Site was created to provide an estimate of the area(s) of highest contamination (Figure 13). The numbers listed beneath each MIP location on Figure 13 were determined by taking the maximum FID response throughout the entire depth of the borehole and dividing it by 1,000 to equalize all data. Data was then contoured at intervals of 995, 750, 500 and 250 to spatially represent different levels of contamination.

The FID response indicates that the highest levels of contamination, indicated by red shading, are present along the southeastern edge of the Site. Higher levels of contamination appear to extend inward on the Site in the areas of MIP 08-07 and MIP 14-07. Because groundwater generally flows in a southwesterly direction across the Site, these areas can be identified as potential source areas.

Figure 13 shows that the northern, eastern and southern portions of the Site have little to no potential contamination as suggested by FID response. As such, these MIP data, in conjunction with representative confirmatory sample data, can be used to adequately define the limits of contamination to the north, east and south. To the west, the groundwater collection trench serves as a barrier for migrating contaminants. Previously installed monitoring wells OW6A/6B and OW 5A/B confirm that soil and groundwater contamination is not present further to the west, across the CSX rail-line.

Of additional note is a clearly outlined area of low FID response at MIP 18-07 in the central part of the Site. While the area is surrounded by areas of higher response, low response at this location suggests relatively low levels of contamination.

Cross-sections of FID measurements are presented in Figures 14a through 14d. The locations of the cross-sections are represented on Figure 4. The cross-sections represent each of the four NW/SE transects of MIP borings that were installed and provide an initial assessment of the vertical limits of contamination. Figure 14a shows that there is very little FID response across the northeastern portion of the Site. This area, located on the topographically highest portion of the Site, is the area of the former administration buildings. As such, contamination is not expected in this area.

Figures 14b and 14c represent transects that span from the Treatment Facility, through the process areas and to the southern edge of the Site. Low FID response in the MIP borings closest to the Treatment Facility (MIP 15-07) suggests that soils and groundwater in this area are relatively clean. However, FID logs from the remaining borings in these transects initially indicate two distinct areas of contamination, one of which is within the apparent historic fill area, slightly to the south of the Treatment Facility, and the second area which is located beneath the former process buildings further to the south. High FID response in borings located in the historic fill area suggests that fill materials contain high levels of contamination that extend to depths of up to 25 to 30 feet bgs. There is a distinct area of cleaner soils/groundwater separating the fill area from the contamination present beneath the former process buildings to the south. FID logs of borings located in the area of former process buildings initially suggest that contamination extends to depths of 25 to 30 feet bgs.

Figure 14d represents a transect that spans from the loading dock near the Treatment Facility and along the rail siding and berm on the southwest portion of the Site. High FID measurements in these borings indicate that contamination is present along the entire transect. FID logs suggest that contamination is contained within the upper 20 feet of soil and groundwater to the south along the transect. However, the FID log of MIP 33-07, located in the historic fill area, suggests that contamination may extend to depths of up to 30 to 35 feet bgs in this area. There is some variability associated with FID measurements in the fill area and it is assumed to be a reflection of the variability of the fill material itself. It is anticipated that many small, isolated areas of contamination exist within the fill area, along with void space. Both FID logs and field screening of subsequently installed borings located in the fill area confirm this.

6.4 Extent of On-Site Contamination

6.4.1 Fill Area

As discussed in Section 5.2, an area of fill exists at the Site in the area directly to the southeast of the Treatment Facility (Figure 11). The fill material consists of construction rubble and other Site materials. The extent of the fill area has been estimated on Figure 11. The following sections discuss the nature and extent of contaminants in the fill area.

6.4.1.1 Soils

Field screening of fill materials using the MIP and a hand-held PID suggest that high levels of contaminants are present in fill materials in the vicinity of borings GP-14-07, GP-16-07, GP-17-07, GP-33-07, OW18A/B-07 and OW19A/B-07. Analytical data for soil samples collected from these locations are summarized in Tables 7 and 8.

Isoconcentration contours for total concentrations of RFCM analytes indicate that a distinct area of contamination exists in both shallow (Figure 15) and deep (Figure 16) soils at this location.

For the purpose of this discussion, the shallow soils are considered those soils within the surface to a depth of six feet bgs. Deep soils consist of the interval from six feet bgs to the saturated zone. It is important to note that as shown on the MIP log for MIP 33-07, there is high variability in the MIP response that is likely a result of the variability of fill materials themselves. Samples collected from DPT borings contained materials ranging from burlap to brick to a tar-like material, and are present in small intervals interspersed with void space. It is expected that contamination in the fill area is equally as variable and isoconcentration contours should be viewed as estimates only.

Isoconcentration contours show that while the eastern portion of the fill contains parameters detected at concentrations exceeding TAGM 4046 values in both shallow and deep soils, contamination on the western portion of the fill area appears to be limited to depths of 6 feet bgs or more (Figure 15). Benzene, toluene, chlorobenzene, ethylbenzene, total xylenes, phenol and total cresols were all detected at concentrations exceeding TAGM 4046 guidance values in one or more soils samples from all boring locations except GP-16-07. Despite a high FID response at this location, no parameters were detected in RFCM soil samples collected at GP-16-07. Deep soil samples from GP-33-07 contain the highest concentrations of RFCM contaminants across the Site.

In general, soil samples analyzed for VOCs and SVOCs by TestAmerica exhibit similar contamination as those samples analyzed by the RFCM. Isoconcentration contour maps of total VOCs and SVOCs (Figure 17), total VOCs (Figure 18), and total SVOCs (Figure 19) indicate that high concentrations of contaminants are present in the fill area. Similar to the RFCM data, boring location GP-33-07 contained the highest total VOCs and SVOCs. The only significant discrepancy between the two analytical methods was in soil samples from GP-16-07, where low concentrations of contaminants were detected in the TestAmerica sample from this location and results were below detection limits in the RFCM sample.

A comparison of Figures 18 and 19 suggests that SVOCs are the predominant contaminant type in the fill area. The following table lists the concentration for each major site contaminant in soil samples collected from the fill area and which had one or more parameters detected at concentrations exceeding TAGM 4046 guidance values:

	Sample Depth	*Benzene*	*Ethyl-benzene*	*Toluene*	*Total Xylenes*	*2-Methyl phenol*	*4-Methyl phenol*	*Naph-thalene*	*Phenol*
TAGM 4046		60	5,500	1,500	1,200	100 or MDL	900	13,000	30 or MDL
GP-14-07	6.9'– 7.3'	**890**	**14,000**	**2,000**	**100,000**	**18,000**	**130,000**	**53,000**	**6,200**
GP-17-07	19'-20'	6.6 U	6.6 U	6.6 U	6.6 U	1,700 U	**1,900**	730 J	1,700 U
GP-33-07	16.5'-17'	**780**	**81,000**	**130,000**	**710,000**	**100,000**	**580,000**	**19,000**	**210,000**
OW18A/B-07	20'-22'	3.1 J	160	3.1 U	330	2,100 U	2,100 U	9,500	**910**

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TAGM 4046 guidance values
All units are in µg/kg

These data are generally similar to data collected during previous investigations conducted at the Site. An area of SVOC contamination in the historic fill area was defined by subsurface soil samples collected as part of the 1995 remedial investigation. The 1995 remedial investigation identified the highest concentrations of SVOCs in the historic fill area, with maximum concentrations of primary contaminants ranging from 190,000 µg/kg to 2,500,000 µg/kg which are slightly higher than was identified during the current remedial investigation. Soil samples collected in the historic fill area, as well as a soil gas survey conducted as part of the Hydrogeological Investigation, also revealed high VOC concentrations in soils in the historic fill area, similar to those identified during the Supplemental RI.

6.4.1.2 Groundwater

Field screening of saturated soil in the area of historic fill indicates that contamination extends to depths ranging from 12 feet bgs to 40 feet bgs. Both MIP and field screening of saturated soil samples from GP-14-07 suggest that contamination does not extend into the groundwater table in the eastern portion of the fill area. However, MIP and field screening results suggest that contamination extends to depths ranging from 30 feet bgs (OW18A/B-07) to 40 feet bgs (OW19A/B-07) in the western portion of the fill area, just south of the Treatment Facility. Analytical data for groundwater samples collected from these locations are summarized in Tables 9 and 10.

Although groundwater samples could not be collected at most Geoprobe™ boring locations in the fill area, samples were collected at GP-14-07 and GP-16-07. Analytical data from the discrete samples collected at GP-14-07 and GP-16-07 indicate that low-level contamination extends to depths of at least 20 feet bgs at GP-14-07 and 15 ft bgs at GP-16-07. A number of parameters were detected at concentrations that exceeded TOGS 1.1.1 groundwater standards in one or both of these grab groundwater samples

Groundwater samples collected from shallow wells OW18A-07 and OW19A-07, located in the historic fill area also contained a number of parameters at concentrations exceeding TOGS 1.1.1 groundwater standards. However, the sample collected from deep monitoring well OW18B-07 did not contain any parameters detected at concentrations exceeding guidance values. The sample from deep monitoring well OW19B-07 contained only total xylenes and 2,4-dimethylphenol at concentrations exceeding guidance values. Collectively, however, these data suggest that only a limited number of contaminants are present in lower concentrations at depths greater than 35 feet bgs in the groundwater within the fill area. The following table lists the concentration for each major site contaminant in both shallow and deep groundwater samples collected from the fill area and which had one or more parameters detected at concentrations exceeding TOGS 1.1.1 standards:

	Sample Depth	*Benzene*	*Ethyl-benzene*	*Toluene*	*Total Xylenes*	*2-Methylphenol*	*4-Methylphenol*	*Naph-thalene*	*Phenol*
TOGS 1.1.1		1	5	5	5	1	1	10	1
GP-14-07	19’-20’	**7.2**	**23**	**6.3**	**200**	**88 J**	**730**	**10 J**	**29 J**
GP-16-07	13’-15’	5 U	**26**	0.77 J	**120**	**9.5 J**	**44**	2.7 J	**7.6 J**
OW18A-07	20’-30’	**1.3 J**	**7.7**	**4.3 J**	**68**	**1.9 J**	**4.2 J**	**28**	**1.8 J**
OW19A-07	17’-27’	**31 J**	**460**	**380**	**5,300**	**180**	**420**	**130**	**140**
OW19B-07	40’-50’	5 U	2.3 J	1 J	**35**	10 U	10 U	0.71 J	10 U

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TOGS 1.1.1 standards
All units are in µg/L

Groundwater analytical data collected during the 1995 remedial investigation are generally consistent with results of the current remedial investigation. The highest concentrations of contaminants were measured in samples collected just downgradient from the historic fill area, in wells OW3 and OW7A-92 (Figure 2), and contained both VOCs and SVOCs at concentrations exceeding groundwater standards. Low level detections in deeper wells suggest that groundwater contamination was generally confined to the upper strata and confirm the results of the current remedial investigation.

Consistent with the MIP data in the immediate vicinity of the Treatment Facility, groundwater analytical results from monitoring well OW13, located just north of the treatment building, indicate that there is no contamination in this area. There were no parameters detected at levels above the laboratory method detection limits in this well during this remedial investigation and historically, there were no detections in samples collected from this well during the 1995 remedial investigation.

6.4.2 Non-Process/Administrative Areas

The portion of the Site located along the northeastern most edge consists of a relatively flat area, sloping upwards to the east/northeast towards 10th Avenue (Figure 3). This area was historically used for driveways and the former administration buildings, and is at an elevation approximately 20 feet higher than the rest of the Site. In addition, this area is upgradient of all previously identified source areas and of all process areas. Soil and groundwater analytical data from this area have been used to define the limits of horizontal contamination in this area.

6.4.2.1 Soils

Field screening using MIP and a hand-held PID suggest that, in general, soil on the northeastern portion of the Site is not contaminated. Analytical results for total concentrations of RFCM analytes are summarized on Figures 15 and 16. Isoconcentration contours of total analytes indicate that shallow soils (0’ to 6’) are not impacted in this area. However, phenol was detected at a concentration exceeding TAGM 4046 guidance values (13,500 µg/kg) in a deep (9-10’ bgs interval) RFCM soil sample collected at GP-01-07. Since there were no field indicators of contamination in this area or FID response in the associated MIP boring (MIP 01-07), this detection appears to be an anomaly. In addition, there were no other detections in either shallow or deep RFCM soil samples collected from the top of the slope.

Analytical results for total VOCs and SVOCs in TestAmerica soil samples collected from the non-process area are summarized on Figures 17-19. Isoconcentration contours of total VOCs and SVOCs indicate an area of slightly impacted soil in the vicinity of OW15A/B-07. Parameters detected above TAGM 4046 guidance values consist only of SVOCs that include: benzo(A)anthracene, benzo(A)pyrene, chrysene, and dibenzo(A,H)anthracene. However, the parameters were detected at low concentrations relative to the remaining portions of the Site. There were no detections in the sample collected from GP-01-07. The following table lists the concentrations for each compound detected above TAGM 4046 guidance values in the soil sample collected from boring OW15A/B-07:

Parameter	***Concentration (µg/kg)***
Benzo(A)Anthracene	450
Benzo(A)Pyrene	320 J
Chrysene	400 J
Dibenzo(A,H)Anthracene	72 J

Notes
J: Indicates an estimated value

A soil gas survey conducted as part of the Hydrogeological Investigation in 1993 identified an isolated area of VOC-impacted soil near the Administration Building. However, these results were not substantiated in the 1995 RI, as no samples contained VOCs or SVOCs at concentrations greater than 20 µg/kg.

In general, impacts to soils in the vicinity of the former administration building are minimal. However, the detection of select parameters in samples from GP-01-07 and OW15A/B-07 suggest that there may be isolated portions of the upper slope with minor soil contamination. While the source of these detections is unknown at this time, concentrations are low relative to the rest of the Site, and are not considered to be associated with any significant source. In addition, the former administration/non-process area is upgradient from the process area. Similar to the 1995 RI, VOCs were not detected in samples collected from the area in the vicinity of the former administration building.

6.4.2.2 Groundwater

Field screening of saturated soil in the area formerly used for administration buildings indicates that groundwater is not impacted. Neither MIP nor hand-held PID readings of saturated soil showed any indication of groundwater contamination. Groundwater samples were collected in this area at GP-01-07, OW12-94, OW15A-07 and OW15B-07. Analytical data for groundwater samples collected from these locations are summarized in Tables 9 and 10.

No parameters were detected in any of the groundwater samples at concentrations that exceed TOGS 1.1.1 groundwater standards. Concentrations of compounds detected below TOGS 1.1.1 groundwater standards ranged from 0.59 J µg/L to 2.3 J µg/L. The following table lists the concentrations of compounds detected in groundwater samples collected from the non-process area:

Parameter	***Sample Locations***	***Concentration (µg/kg)***
Xylene	OW15A-07	0.59 J
Xylene	OW15B-07	1.6 J
Bis(2-ethylhexyl) phthalate	GP-01-07	2.3 J

<u>Notes</u>
J: Indicates an estimated value

Isoconcentration contours of both shallow (Figures 20-22) and deep (Figure 23) groundwater confirm that groundwater along the northeastern edge of the Site has not been impacted by Site activities. These data are generally consistent with the results of previous investigations conducted at the Site. Of the wells sampled in the non-process area during the 1995 remedial investigation (OW2a-97, OW2B-87 [Figure 2], and OW12-94), there were no detected parameters in samples collected from these wells. Results from groundwater monitoring performed as part of the 1995 Remedial Investigation support the results of this remedial investigation and further suggest that groundwater along the northeastern portion of the Site is not impacted.

Overall, groundwater in the vicinity of the former administration buildings does not appear to have been impacted by Site activities and indicates that remedial measures of groundwater are not necessary at this time.

6.4.3 Process Areas

The remaining portion of the Site consists primarily of an area that was historically used for chemical process, storage, and handling. In previous investigations, this area had been identified as most severely impacted and contained the major source areas at the Site. However, the nature and extent of contamination in the process areas had been poorly defined prior to this investigation. Soil and groundwater analytical data collected during this investigation confirm both the horizontal and the vertical extent of contamination. In addition, analytical data collected during this investigation allows for the characterization of the major area of contamination, beneath the former process areas, by the type of contaminant (VOCs versus SVOCs). Impacts to these areas are discussed in detail below.

6.4.3.1 Soils

Field screening of soils using MIP and a hand-held PID suggest that contamination exists in both shallow and deep soils in the process area (Figures 14b- 14d). Analytical results for total concentrations of RFCM analytes are summarized on Figures 15 and 16. Isoconcentration contours of total RFCM analytes show that highest concentrations of contaminants are present in the vicinity of GP-29-07. In fact, the soil sample from this location, collected from 0.7 to 1.3 feet bgs, contains the highest concentration of RFCM analytes across the entire process area. However, a deeper sample from this location shows that soil contamination is confined to the upper 4 to 6 feet of the subsurface soils. The isoconcentration contours (Figure 15) of shallow soils indicate that while the highest concentrations are in the vicinity of GP-29-07, shallow contamination extends eastward to GP-08-07 and as far south as OW21A/B-07. The isoconcentration contours of deep RFCM soil samples, however, suggest that contamination is more extensive in deep soils than in shallow soils. Because the RFCM is limited with respect to the number of analytes as well as the method detection limits, the TestAmerica soil analytical data was reviewed to further define the limits of soil contamination in the former process area.

Analytical results for total VOCs and SVOCs in TestAmerica soil samples collected from the process area are summarized on Figures 17-19. An isoconcentration contour map of total VOCs and SVOCs (Figure 17) indicates that impacted soils are present beneath the majority of the former process area. The only exception is soils in the area of GP-18-07; a soil sample collected at this location had no detected parameters. This area appears to separate highly-impacted soils to the southeast, presumably related to chemical process activities, from highly-impacted soils to the northwest associated with the historic fill area and provides further evidence that this location represents the edge of the fill area.

Isoconcentration contours of total VOCs (Figure 18) further define the two distinct areas of contamination, i.e. the historic fill area versus process area. The highest levels of total VOCs are present in a soil sample collected at OW22-07, suggesting that it may serve as a source area. Soil samples collected at GP-29-07, OW17A/B-07, GP-08-07, and OW16A/B-07 also have relatively higher levels of total VOCs than soil samples collected from other boring locations in the process area, and may suggest that these too are sources areas. The only VOCs that exceeded TAGM 4046 guidance values in soil samples from the process areas are ethylbenzene, toluene and total xylenes. The following table lists the concentration for each major VOC in soil samples collected from the process area and which had one or more parameters detected at concentrations exceeding TAGM 4046 guidance values:

	Sample Depth	Benzene	Ethylbenzene	Toluene	Total Xylenes
TAGM 4046		60	5,500	1,500	1,200
GP-08-07	5'-6'	1,300 U	**13,000**	1,300 U	**83,000**
GP-29-07	3'-4'	13,000 U	**54,000**	**240,000**	**150,000**
OW16A/B-07	10'-12'	1,500 U	**28,000**	**12,000**	**120,000**
OW17A/B-07	10'-12'	1,300 U	**25,000**	1,300 U	**84,000**
OW21A/B-07	2'-5'	620 U	250 J	620 U	**5,100**
OW22-07	8'-10'	12,000 U	**190,000**	**2,300 J**	**700,000**

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TAGM 4046 guidance values
All units are in µg/kg

The limit of VOC-impacted soils is generally defined to the north by GP-19-07, to the east by GP-09-07, to the south by GP-24-07, and to the west by OW20-07 and the groundwater collection trench. These data are generally comparable to previous investigations conducted at the Site. An area of VOC contamination in this area was initially defined by a soil gas survey performed as part of the Hydrogeological Investigation in 1993, and by subsurface soil samples collected as part of the 1995 RI. The primary contaminants identified included ethylbenzene, toluene and total xylenes. The primary area of VOC contamination was generally determined to be along the southwest side of the Site near former Building Nos. 1, 5, 9 and 10, which was historically a railroad tank car loading/unloading area, as well as a former raw material and tank area. It should be noted that the 1995 RI reported somewhat higher levels of VOCs than were detected during the current RI. The original RI was performed approximately 14 years ago, so one possible explanation for the decreased values may be natural attenuation.

Isoconcentration contours of total SVOCs (Figure 19) suggest that soils are more highly impacted by SVOCs in the vicinity of OW17A/B-07 and GP-29-07. In general, however, SVOCs are present at lower concentrations than VOCs in soils. Similarly, to the extent of VOC contamination, SVOCs are present in relatively higher concentrations in the vicinity of OW22-07, GP-08-07 and OW16A/B/-07. SVOCs were also detected at high concentrations in OW21A/B-07. SVOCs present in one or more process-area soil samples at concentrations exceeding TAGM 4046 guidance values are listed in the following table:

	Sample Depth	*2-Methylnaphthalene*	*2-Methylphenol*	*4-Methylphenol*	*Naphthalene*	*Phenol*
TAGM 4046		36,400	100 or MDL	900	13,000	30 or MDL
GP-29-07	3’-4’	**63,000**	20,000 U	20,000 U	**180,000**	20,000 U
OW16A/B-07	10’-12’	780	480 U	480 U	**1,300**	480 U
OW17A/B-07	10’-12’	22,000	2,100 U	2,100 U	**21,000**	8,600 U
OW20-07	2’-4’	2,800	**250**	**1,300**	2,400	**510**
OW22-07	8’-10’	98 J	400 U	400 U	220 J	**620**

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TAGM 4046 guidance values
All units are in µg/kg

These data are generally consistent with the results of previous investigations conducted at the Site. An area of SVOC contamination in this area was defined by subsurface soil samples collected as part of the 1995 RI, but was generally defined to be the same area as VOC contamination (i.e. the area near former Building Nos. 1, 5, 9 and 10). The primary contaminants of concern identified were phenolic and naphthalene compounds.

Overall, subsurface soils in much of the former process areas are highly impacted by both VOC and SVOC contamination. Analytical data suggest that source areas may be present in the vicinity of OW16A/B-07, GP-08-07, OW17A/B-07, and GP-29-07. While contamination in the vicinity of OW17A/B-07 and GP-29-07 appears to be mainly related to SVOC contamination, impacts to soil in the vicinity of GP-08-07 and OW16A/B-07 are mainly related to VOC contamination. These results are generally consistent with the findings of previous investigations. However, previous investigations did not identify the two areas of VOC and SVOC contamination that were delineated during the current remedial investigation.

6.4.3.2 Groundwater

Field screening of saturated soil in the process area indicates that groundwater is impacted at varying depths. Both MIP and hand-held PID readings of saturated soil showed evidence of groundwater contamination to depths of 15-20 feet in some samples. Shallow groundwater samples were collected in the process area at GP-09-07, GP-19-07, and from each of the shallow monitoring wells installed in the process area. Analytical data for groundwater samples collected from these locations are summarized in Tables 9 and 10.

Results from the samples collected at GP-09-07 and GP-19-07 indicate that shallow groundwater in these areas is not impacted, and aids in defining the limits of shallow groundwater contamination. Analytical results for total VOCs and SVOCs in shallow TestAmerica groundwater samples collected from the process area are summarized on Figures 20-22. An isoconcentration contour map of total VOCs and SVOCs (Figure 20) indicates that shallow groundwater is most impacted in the vicinity of OW16A-07, OW17A-07, and OW22-07.

Shallow Groundwater – Isoconcentration contours of total VOCs (Figure 21) further supports the distinction between the two distinct areas of contamination, i.e. the historic fill area and the process area. The highest levels of total VOCs are present in soil samples collected at OW16A-07 and OW22-07, suggesting that it may serve as a source area. Groundwater samples collected at these locations also had a relatively higher level of total VOCs than groundwater samples collected from other boring locations. These data further suggest that source areas are present in the vicinity of OW22-07 and OW16A-07. High concentrations of VOCs were also present in OW17A-07 and OW20-07. VOCs present in one or more process-area shallow groundwater samples at concentrations exceeding TOGS 1.1.1 standards are listed in the following table:

	Sample Depth	***Benzene***	***Ethylbenzene***	***Toluene***	***Total Xylenes***
TOGS 1.1.1		1	5	5	5
OW16A-07	8'-18'	400 U	**4,900**	**10,000**	**22,000**
OW17A-07	8'-18'	**6 J**	**2,100**	**21 J**	**6,700**
OW20-07	8'-18'	5 U	**440**	**120**	**3,600**
OW21A-07	8'-18'	**6.7 J**	**110**	**5.3 J**	**590**
OW22-07	8.5'-18.5'	500 U	**14,000**	**1,800**	**45,000**

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TOGS 1.1.1 standards
All units are in µg/L

The limit of VOC-impacted groundwater is generally defined to the north by GP-19-07, to the east by GP-09-07, and to the west by the groundwater collection trench.

An isoconcentration contour map of total SVOCs (Figure 22) indicates that the highest levels of total SVOCs are present in shallow groundwater samples collected at OW17A-07 and OW20-07, suggesting that it may serve as a source area. A layer of light non-aqeuous phase liquid (LNAPL) was observed on the water table surface in monitoring well OW17A-07 and extraction well EW-2. Measured thickness at OW17A-07 was approximately 0.5 ft and 2.25 ft at EW-2.

The approximate extent of LNAPL is presented on Figure 22 and suggests that the high levels of SVOCs are likely associated with the presence of LNAPL. Groundwater samples collected from OW17A-07 indicate that the major chemical constituents in the LNAPL are primarily SVOCs, including: ethylbenzene, xylene, 2-methylnaphthalene, naphthalene, and di-n-butylphthalate. As reported in the original Remedial Investigation (CRA, 1995), LNAPL had previously been observed in abandoned well OW10-94, located near OW17A-07 and EW-2. It is noted that LNAPL has not been observed in nearby wells OW21A-07 or OW20-07 or in boring GP-09-07, and therefore it is suggested that the distribution of LNAPL is confined to a relatively small area situated in the area of OW17A-07, EW-2 and former OW10-94. The estimated extent of LNAPL presence is outlined on Figure 22.

SVOCs present in one or more process-area shallow groundwater samples at concentrations exceeding TOGS 1.1.1 standards are listed in the following table:

	Sample Depth	***2-Methylnaphthalene***	***2-Methylphenol***	***4-Methylphenol***	***Naphthalene***	***Phenol***
TOGS 1.1.1		50	1	1	10	1
OW16A-07	8'-18'	1.4 J	**14**	**14**	**25**	**10 U**
OW17A-07	8'-18'	**1,700**	500 U	500 U	1,800	500 U
OW20-07	8'-18'	500 U	**420 J**	**2,500**	**80 J**	500 U
OW21A-07	8'-18'	200 U	**200 U**	**13 J**	200 U	200 U

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TOGS 1.1.1 standards
All units are in µg/L

The limits of SVOC contamination are generally defined to the north by GP-19-07, to the east by GP-09-07, to the south by OW21A-07 and to the west by the groundwater collection trench.

While groundwater analytical data that was generated during the 1995 remedial investigation is limited due to the on-Site buildings still being in place, the results are somewhat consistent with the results of the current remedial investigation. Contamination was reported to be present at that time in wells OW11-94 and abandoned well OW10-94 (Figure 2), located near the current well OW21A-07. Contamination in these wells was confirmed during the current remedial investigation. However, concentrations of total VOCs and SVOCs were reported at considerably higher concentrations during the 1995 remedial investigation. Of note is that a shallow groundwater sample collected at well OW4A-87 (Figure 2), located just south of the where the groundwater collection trench is currently located, had no detected parameters. This suggests that even prior to the installation of the groundwater collection trench, there was limited to no contamination extending southward off the Site.

Deep Groundwater – Deep groundwater samples were collected in the process area at boring locations GP-08-07, GP-12-07, GP-23-07, GP-24-07, GP-29-07 and in each of the deep monitoring wells installed in the process area. Analytical data for groundwater samples collected from these locations is summarized in Tables 9 and 10. An isoconcentration contour map of total VOCs and SVOCs in deep groundwater samples (Figure 23) indicates that the highest levels of contaminants are present in deep groundwater samples collected at OW16B-07 and OW21B-07. VOCs and SVOCs present in one or more process-area deep groundwater samples at concentrations exceeding TOGS 1.1.1 standards are listed in the following table:

	Sample Depth	***Ethylbenzene***	***Toluene***	***Total Xylenes***	***Phenol***
TOGS 1.1.1		5	5	5	1
OW16B-07	28'-38'	**82**	**47**	**340**	10 U
OW17B-07	23'-33'	1.1 J	5 U	**7.3**	**1.2 J**
OW21B-07	23'-33'	**8.3**	5 U	**41**	10 U

Notes
U: Compound was analyzed for but not detected above the reporting limit
J: Indicates an estimated value
BOLD indicates parameter detected at concentration exceeding TOGS 1.1.1 standards
All units are in µg/L

It is important to note that the extent of deep groundwater contamination is clearly defined by groundwater samples collected at GP-08-07, GP-24-07, and GP-29-07. Within the process area, deep groundwater contamination is generally confined to the southeast portion of the Site, and does not appear to be connected to shallow SVOC contamination associated with the presence of LNAPL.

The extent of deep groundwater contamination reported during the 1995 remedial investigation is consistent with the results of the current investigation. The highest concentrations of contaminants were detected in the southern portion of the Site in abandoned well OW1B-97 (Figure 2). Deep groundwater contamination was also reported for two groundwater samples collected in the fill area and just downgradient of the fill area, at wells OW3B-97 and OW7B-92. Although generally consistent, this historical data was limited and was not sufficient to fully delineate deep groundwater contamination.

In general, shallow groundwater contamination is present below much of the process area. However, this contamination is relatively well defined by non-detect groundwater samples to the north, south and east. Shallow groundwater contamination in the vicinity of OW17A-07 appears to be related to the presence of LNAPL. Within the process area, deep groundwater contamination is limited to the southeastern most portion of the Site, and is defined by non-detect groundwater samples to the north, south and east. Lastly, the groundwater collection trench serves to intercept groundwater to the west. A comparison of the data generated during the current investigation with historical data indicate that, although the data is relatively consistent, previous data was limited and did not provide sufficient information to delineate either shallow or deep groundwater contamination. This investigation has filled in numerous gaps in data, both horizontally and vertically, and has allowed for a thorough delineation of groundwater contamination in the former process areas.

7.0 DEVELOPMENTS REGARDING GROUNDWATER COLLECTION SYSTEM

The objective of the groundwater collection system (GWCS) was to minimize chemical migration from the Site by intercepting and collecting potentially impacted groundwater at the down gradient property boundary. The overall performance goal of the GWCS was to maintain continuous operation of the groundwater extraction system. Although there is occasionally some downtime for system maintenance and repairs, the performance objective for the operation of the GWCS, which is to maintain the groundwater elevation to within 10 ft of the bottom of the wet well for 90% of the time, has been evaluated on an annual basis since operation of the system began in 2002. In each Annual Operation and Maintenance Report issued to date, it was determined that the water level had been maintained to within 10 feet of the bottom of the wet well. In addition to the "french drain", four pumping wells are at the northwest corner of the Site to intercept groundwater from the western portion of the Site that is not contained by the "french drain". Groundwater and surface water quality monitoring has been conducted on a quarterly basis since the installation of the GWCS. Results of these monitoring events indicate that it does not appear that contaminants are migrating from the Site.

An analysis of data collected during this remedial investigation supports the fact that the groundwater collection system serves as a hydraulic boundary and is intercepting groundwater flowing southwest on the Site. A cross section aligned northeast/southwest (Figure 9) shows that in monitoring wells OW21A-07 and OW21B-07, major contamination extends to an elevation of approximately 287 ft AMSL. The collection trench in this area is at an elevation of approximately 282 ft AMSL, suggesting that the trench does in fact intercept the interval of major contamination.

Further to the north along the collection trench, groundwater elevation contours (Figure 12) suggest that the wet well is functioning similarly to a pumping well. The installation of the GWCS does not appear to have significantly drawn down groundwater elevations across the Site. However, groundwater elevations are significantly depressed in the immediate vicinity of the wet well, as evidenced by the lowered groundwater elevations measured in the wet well and in nearby OW19A-07. The fact that groundwater elevations across the Site do not appear to have been drawn down since the installation of the GWCS is likely attributable to the low hydraulic conductivities measured during this remedial investigation. From the data collected and observations made during this RI, it appears that the GWCS is achieving its design objective by effectively capturing groundwater and contamination along the southwestern property boundary, and the pumping wells are effectively capturing groundwater and contaminants along the northwestern portion of the Site.

8.0 SUMMARY OF DATA VALIDATION

All analytical data from samples analyzed by TestAmerica Connecticut were validated by Alpha Geoscience. Data usability summary reports and data validation summaries are included in Appendix H. Overall, the data were mostly acceptable with some issues that are identified and discussed below.

The "not detected" volatile results for bromomethane were qualified as unusable in samples S-101207-SDN-015, GW-101207-SDN-016, S-101507-SDN-023, S-101507-SDN-027, and the associated trip blank because the RRF50 for bromomethane was below the allowable minimum in the associated continuing calibration. However, these rejected data may be determined to be acceptable to the user based on additional information that is not contained in the data validation criteria.

All other data was considered usable; however, some data was flagged to represent a higher level of uncertainty associated with the data. Flags added during the validation have been added to the data summary tables included in this report. Each instance of flagged data is further discussed in the data usability summary reports included in Appendix I.

9.0 CONCLUSIONS/RECOMMENDATIONS

The main objectives of this investigation were to identify the nature and extent of contamination remaining on-Site and characterize the on-Site soils for stability. The Site has changed in recent years with the demolition of all on-Site manufacturing buildings, which has allowed for a thorough investigation of the subsurface conditions. Overall, 49 groundwater and 94 soil samples were collected for analysis during this investigation. In addition, approximately 30 to 50 feet of qualitative data was collected using MIP technology at each of 33 locations across the Site. Thirteen Geoprobe™ borings and nine HSA borings were installed, allowing for the characterization of Site soils to depths of up to 50 feet. The large number of samples and large amount of data produced has allowed for a complete delineation of the nature and extent of contamination and a determination of the stability of the Site soils.

Analytical data collected in the historic fill area indicate the presence of high concentrations of contaminants in the fill area. Isoconcentration maps of total VOCs and SVOCs in the fill area indicate that SVOCs are the predominant contaminant type, with cresols, phenol and naphthalene as the major contaminants. Major VOC contaminants include benzene, ethylbenzene, toluene and total xylenes. Data suggest that while shallow soils are impacted only in the eastern portion of the fill area, deeper soils are impacted throughout the fill area.

Analytical data from groundwater samples collected in the fill area indicate that low-level contamination extends to depths of at least 20 feet bgs. Isoconcentration contours of deep groundwater contamination suggest that deep groundwater is not contaminated in the fill area, with the exception of low-level detections in OW19B-07. Collectively, these data suggest that only a select few contaminants are present in minimal concentrations at depth greater than 35 feet bgs in groundwater in the fill area.

The RI suggest that there are no significant impacts to soils in the vicinity of the former administration building. However, there were minor detections of a limited number of parameters in samples from GP-01-07 and OW15A/B-07. Based on the field screening that was completed, there is no other evidence that these results suggest the presence of a source and no further action is anticipated.

No parameters were detected in any of the groundwater samples at concentrations that exceed TOGS 1.1.1 groundwater standards in groundwater samples collected from borings and wells in the vicinity of the former administration building. Concentrations of detected compounds ranged from 0.59 J µg/L to 2.3 J µg/L. Overall, groundwater in the vicinity of the former administration building does not appear to have been impacted by Site activities and indicates that remedial measures of groundwater in this area are not necessary at this time.

The RI suggest that soils in the former process areas are highly impacted by both VOC and SVOC contamination. Analytical data suggest that source areas are present in the vicinity of OW16A/B-07, GP-08-07, OW17A/B-07, and GP-29-07. While contamination in the vicinity of OW17A/B-07 and GP-29-07 appears to be mainly related to SVOC contamination, impacts to soil in the vicinity of GP-08-07 and OW16A/B-07 are mainly related to VOC contamination.

Shallow groundwater contamination is present below much of the process area. However, this contamination is relatively well defined by non-detect groundwater samples to the north, south and east. Shallow groundwater contamination in the vicinity of OW17A-07 appears to be related to the presence of LNAPL. The total VOC and total SVOC isoconcentration contour maps for shallow groundwater indicate that there are varying proportions of VOCs and SVOCs within the overall contaminant plume beneath the process area. Potential VOC source areas are located in the vicinity of wells OW16A-07 and OW22-07, whereas higher concentrations of SVOCs are noted in the vicinity of wells OW17A-07 and former extraction well EW-2. Deep groundwater contamination in the process area is limited to the southeastern most portion of the Site, and is defined by non-detect groundwater samples to the north, south and east. Total VOC and SVOC isoconcentration contour maps for deep groundwater suggest that the contaminant plume originating at OW16A-07 has a deep groundwater component, although it is far less extensive than the shallow groundwater component.

LNAPL was observed on the water table surface in monitoring well OW17A-07 and extraction well EW-2, both located within the process area. It is noted that LNAPL has not been observed in nearby wells OW21A-07 or OW20-07 or in nearby boring GP-09-07, and therefore it is suggested that the distribution of LNAPL is confined to a relatively small area situated in the area of OW17A-07, EW-2 and former OW10-94. It is likely that the groundwater contaminant plume originating in the vicinity of OW17-07 and comprised almost entirely of SVOCs is associated with the presence of LNAPL in this area.

The data presented in this report are generally consistent with the data generated during previous investigations. The most notable difference is that the increased spatial extent and increased amount of data collected during this investigation has confirmed previous results while better characterizing and delineating on-Site contamination.

An analysis of data collected during this remedial investigation supports the fact that the groundwater collection trench and pumping wells intercept groundwater flowing southwest on the Site. Groundwater elevation contours suggest that the wet well is functioning similarly to a pumping well and have depressed groundwater elevations locally. The fact that groundwater elevations across the remainder of the Site do not appear to have been drawn down since the installation of the GWCS is likely attributable to the low hydraulic conductivities measured during this remedial investigation. As such, it is further supported that the GWCS is effectively capturing groundwater and contamination along the southwestern property boundary, and the pumping wells are capturing groundwater and contaminants along the northwestern portion of the Site.

In order to allow for informed decision making regarding the feasibility of excavation and/or other remedial activities, the RI assessed the stability of the soils by evaluating soil boring data generated during this and previous investigations. Excavation of the contaminated materials in the historic fill area would require an excavation approximately 30 feet deep. Although in some areas, such as to the south/southeast, the excavation side wall could be sloped back to provide adequate stability and remain within the confines of the property, other portions of the excavation would need to substantial shoring to remain stable. It is further anticipated that excavation in the fill area would pose a significant safety risk to both people and adjacent property, including those homes located up slope from the excavation on 10th Avenue and the railroad tracks down slope from the fill area, which serve as the main rail line between Albany and Buffalo.

Further development and implementation of the remedial program will be based on the findings of this investigation and the review of the remedial options available as set forth in the Updated Supplemental Feasibility Study Report that will be submitted under separate cover. The updated feasibility study will involve first a determination of the remedial objectives for the site, which may include the removal of existing sources of contamination and the elimination or mitigation of all significant threats to public health and the environment. A determination of remedial action objectives will be made outlining the standards, criteria, and guidance (SCG) that are applicable to the contaminated media on-site and are the basis for the remedial goals set for the site, given potential re-use of the Site. Once the SCGs have been determined, a number of remedial response alternatives will be presented and analyzed. Each response will be evaluated on its effectiveness, implementability, and the cost, among other criteria, of each alternative. This analysis will determine the overall feasibility of each remedial response alternative and allows for a ranking of each alternative. Ultimately, a recommendation of the preferred remedial alternative will be presented in the Updated Supplemental Feasibility Study Report.

FIGURES

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SITE LOCATION

UPDATED REMEDIAL INVESTIGATION REPORT

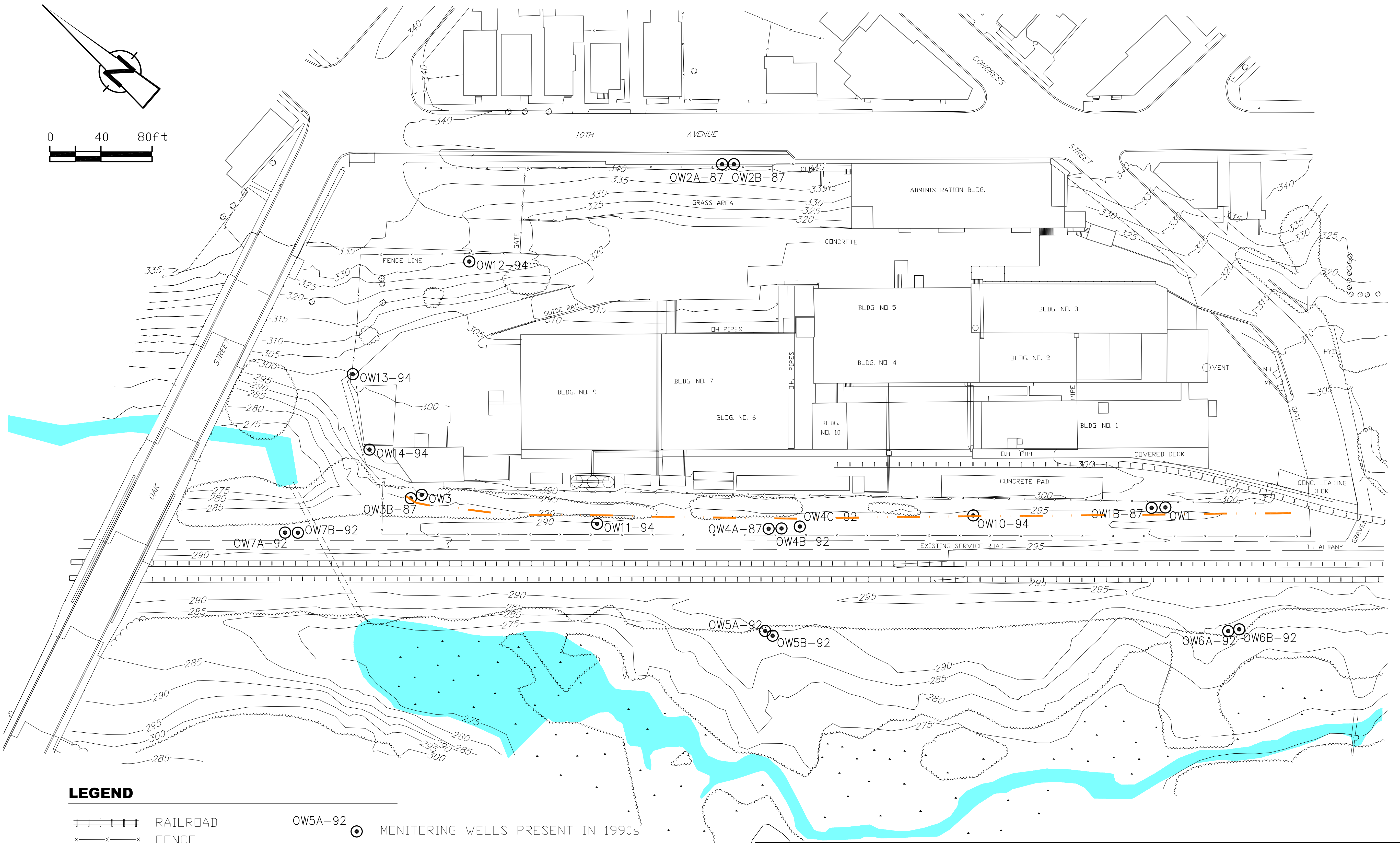
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 01/30/08

FIGURE 1

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 1.DWG Saved: 1/30/2008 12:26:27 PM PLotted: 1/30/2008 12:27:19 PM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼┼ RAILROAD

—x—x— FENCE

======= CULVERT

— · · — SWALE

—300— CONTOUR WITH ELEVATION

OW5A-92 ⊙ MONITORING WELLS PRESENT IN 1990s

CHA

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SITE PLAN (LATE 1990's)

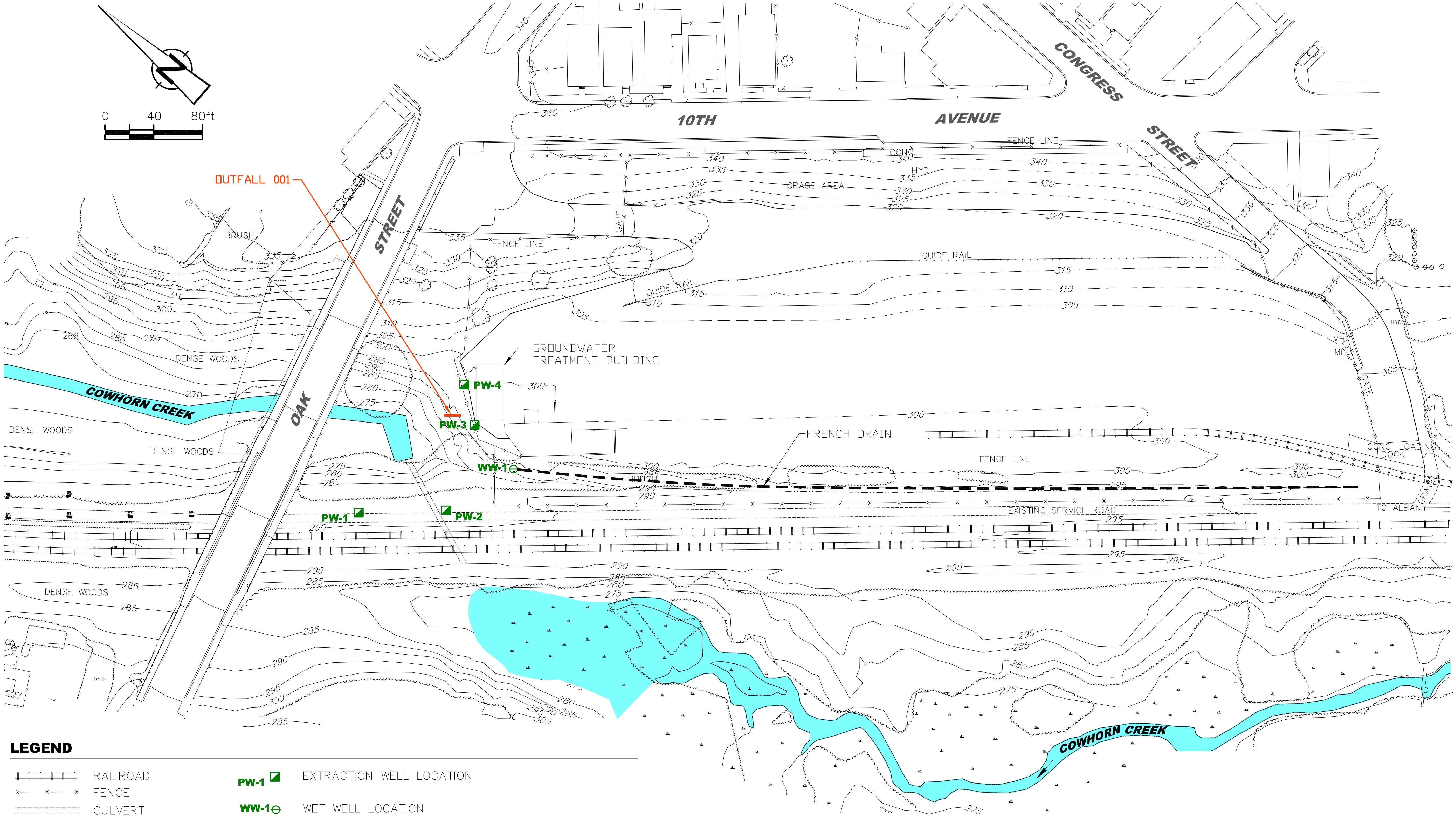
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO. 15091.2010.1102

DATE: 01/30/08

FIGURE 2

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 3.DWG Saved: 1/30/2008 12:43:21 PM Plotted: 1/30/2008 12:43:55 PM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼┼	RAILROAD
×——×——×	FENCE
═══	CULVERT
—·—·—	SWALE
——300——	CONTOUR WITH ELEVATION
— —300— —	INFERRED CONTOUR WITH ELEVATION
PW-1 ◪	EXTRACTION WELL LOCATION
WW-1 ⊖	WET WELL LOCATION
— — —	GROUNDWATER COLLECTION DRAIN

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SITE PLAN (2007)

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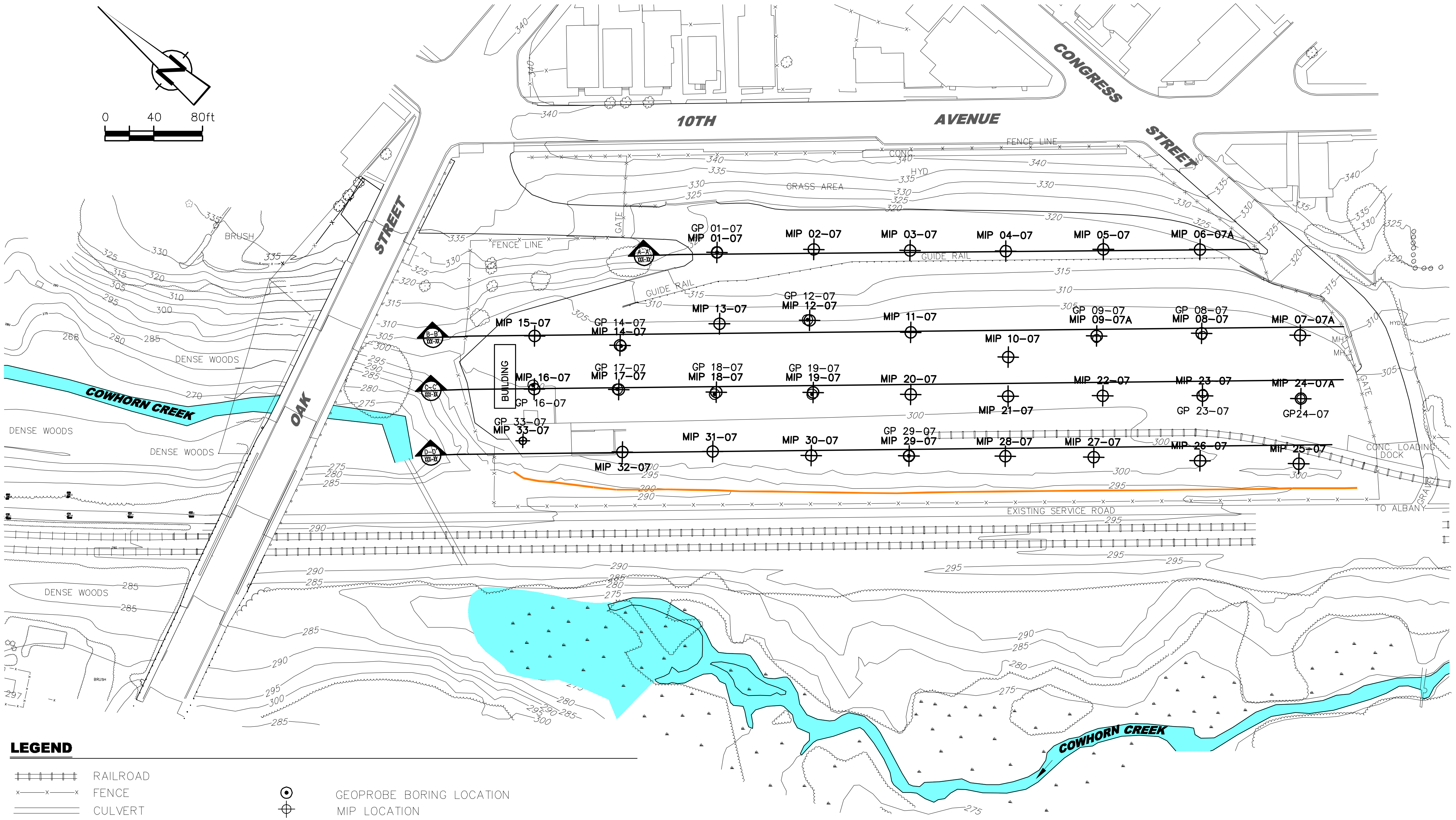
PROJECT NO.
15091.2010.1102
DATE: 01/30/08
FIGURE 3



LEGEND

RAILROAD
FENCE
CULVERT
GROUNDWATER COLLECTION TRENCH
300 CONTOUR WITH ELEVATION
300 GROUNDWATER ELEVATION CONTOUR

⊙ GEOPROBE BORING LOCATION
⊕ MIP LOCATION
A-A' APPROXIMATE LOCATION OF MIP CROSS-SECTIONS (FIGURES 14a-14d)

REVISED – 9/16/08

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MIP AND GEOPROBE LOCATIONS
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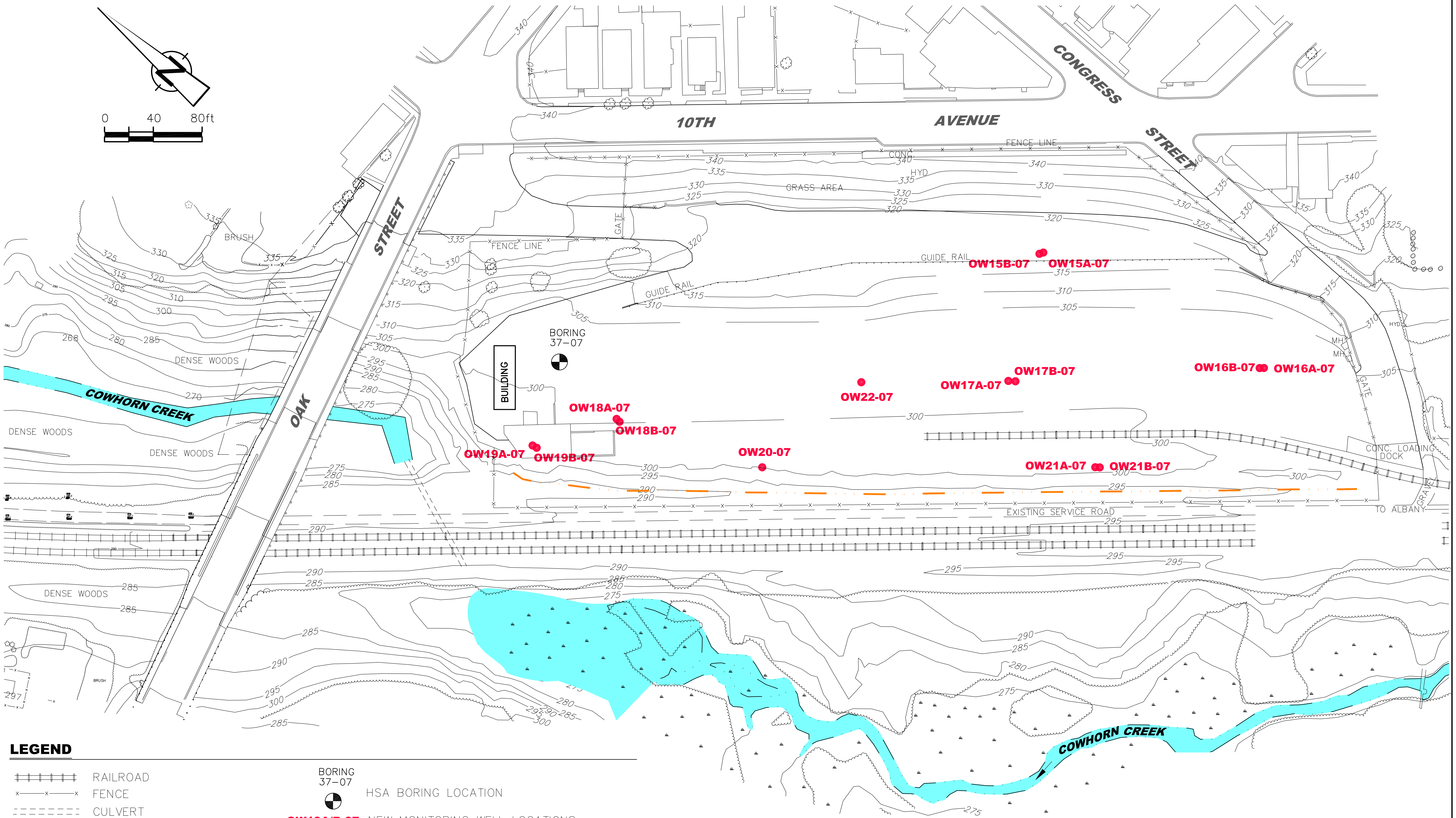
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/7/07

FIGURE 4

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 4_MIP AND GP LOCATIONS.DWG Saved: 9/17/2008 11:29:04 AM PLotted: 9/22/2008 9:18:06 AM User: Markham, Gary



LEGEND

- ┼┼┼┼┼┼┼ RAILROAD
- —x—x— FENCE
- = = = = CULVERT
- — · · — GROUNDWATER COLLECTION TRENCH
- —300— CONTOUR WITH ELEVATION

BORING
37–07
HSA BORING LOCATION

OW19A/B-07 ● NEW MONITORING WELL LOCATIONS

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SOIL BORING AND NEW MONITORING WELL LOCATIONS

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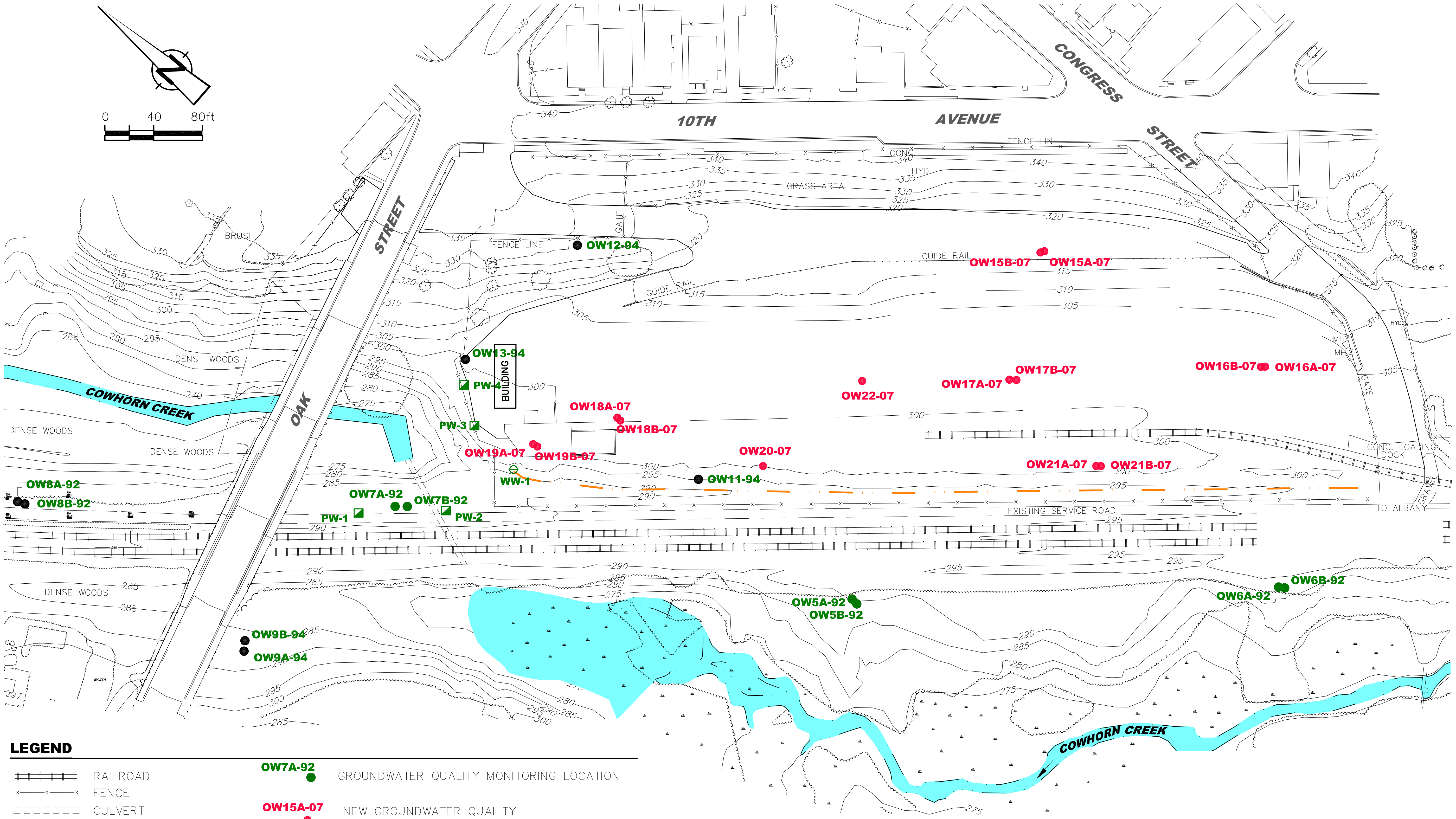
DATE: 1/7/07

FIGURE 5

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_BORING-MW LOCATIONS.DWG Saved: 2/11/2008 12:26:06 PM Plotted: 2/11/2008 12:26:17 PM User: Newell, Sarah



LEGEND

‡‡‡‡‡‡‡	RAILROAD	OW7A-92 ●	GROUNDWATER QUALITY MONITORING LOCATION
×—×—×	FENCE		
=======	CULVERT	OW15A-07 ●	NEW GROUNDWATER QUALITY MONITORING LOCATION
— · · · —	GROUNDWATER COLLECTION TRENCH		
—300—	CONTOUR WITH ELEVATION	PW-1 ◩	EXTRACTION WELL LOCATION
—300—	GROUNDWATER ELEVATION CONTOUR	WW-1 ⊖	WET WELL LOCATION

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GROUNDWATER MONITORING WELL LOCATIONS

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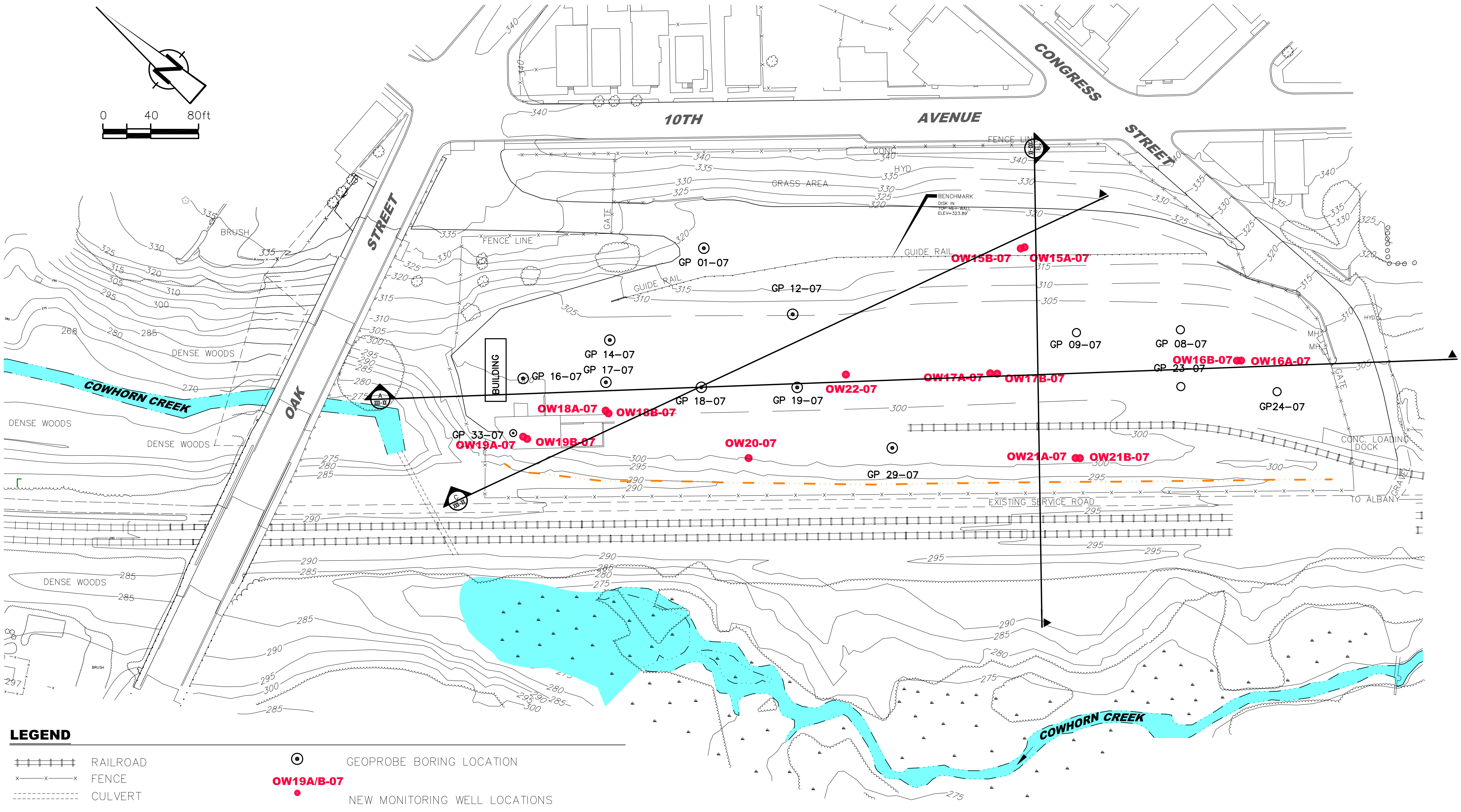
15091.2010.1102

DATE: 1/7/07

FIGURE 6

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 6_ MW LOCATIONS.DWG Saved: 2/11/2008 12:05:46 PM Plotted: 2/11/2008 12:06:04 PM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
┄┄┄┄	CULVERT
- · - · -	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
⊙	GEOPROBE BORING LOCATION
OW19A/B-07 ●	NEW MONITORING WELL LOCATIONS

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CROSS SECTION LOCATION MAP
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SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/7/07

FIGURE 7

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_XSEC LOCATIONS.DWG Saved: 2/4/2008 11:01:57 AM Plotted: 2/4/2008 11:05:47 AM User: Newell, Sarah

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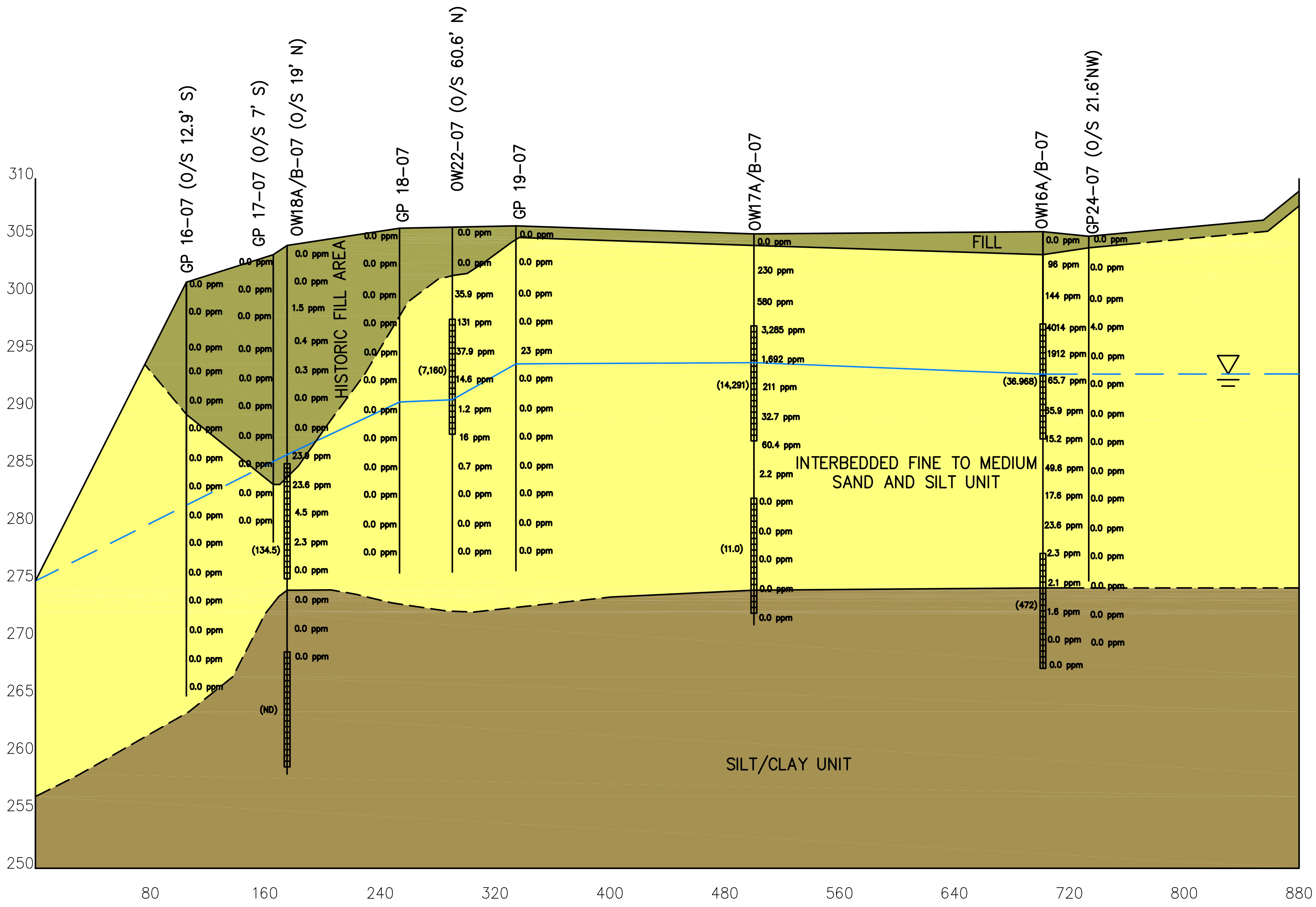
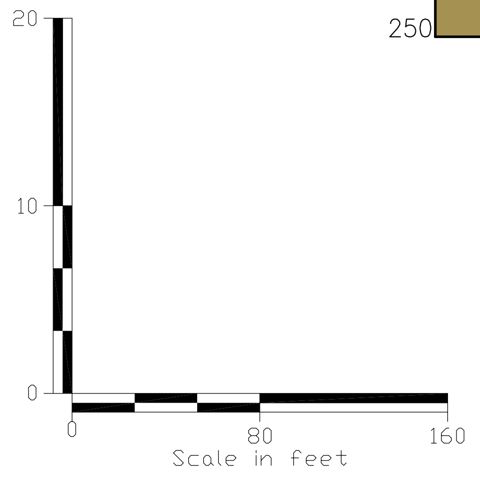
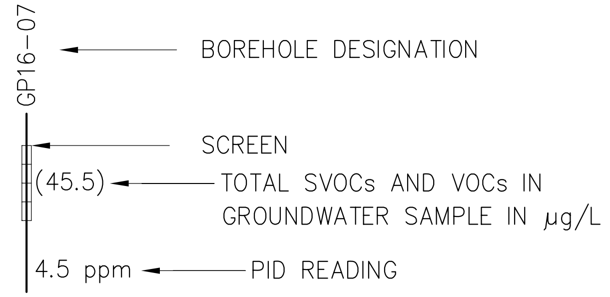




LEGEND



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CROSS SECTION A
CONGRESS STREET FACILITY
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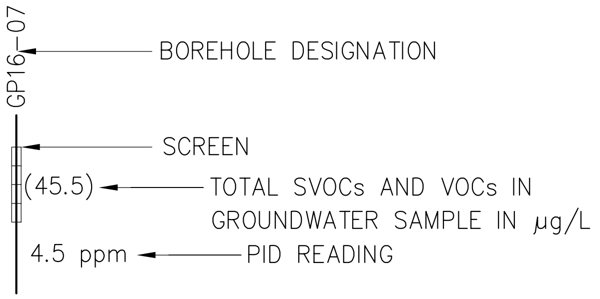
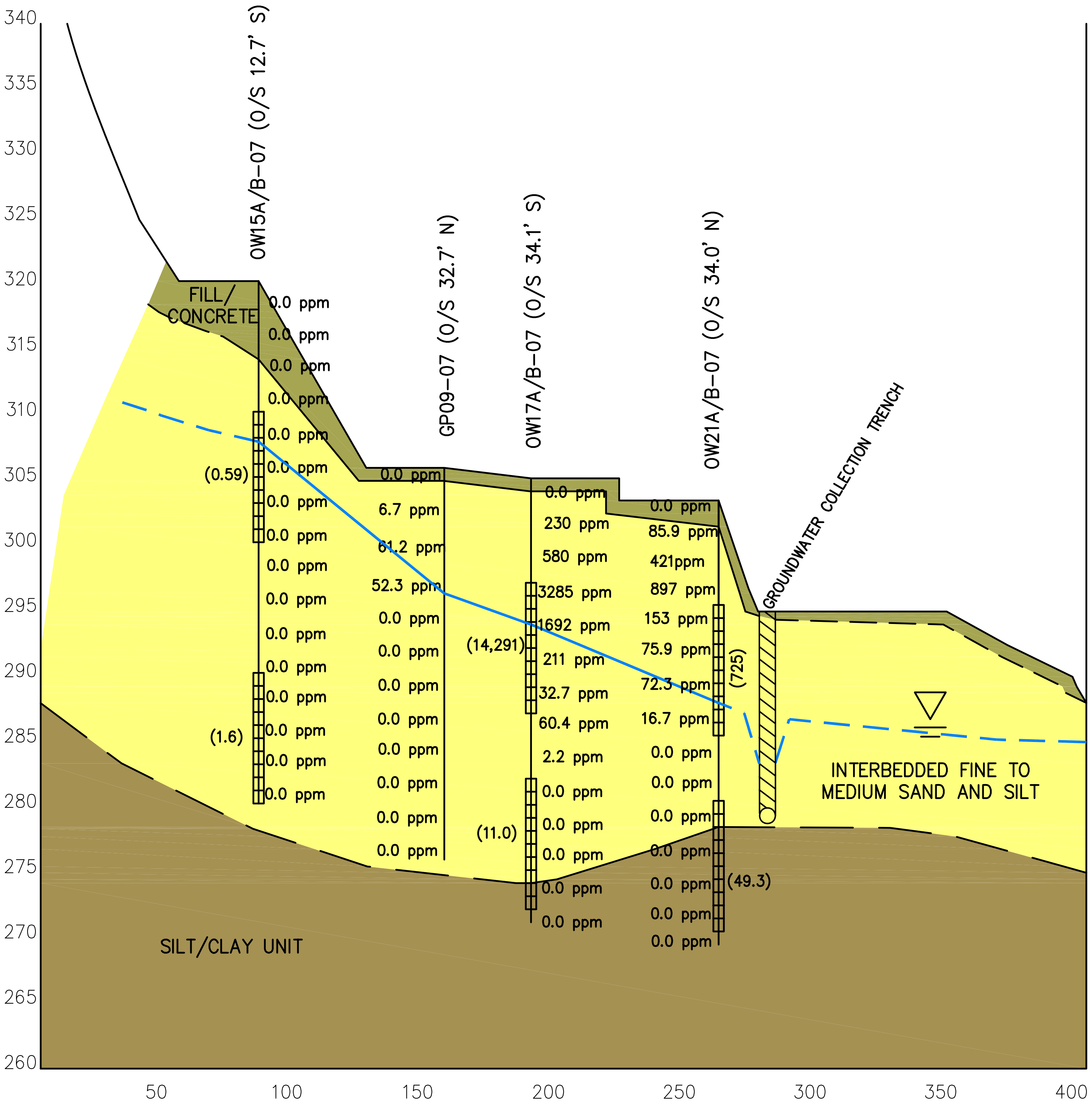
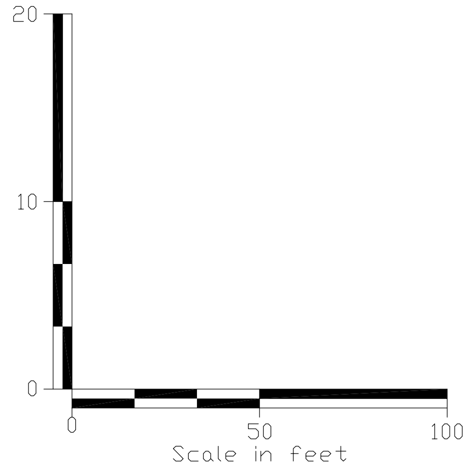
PROJECT NO.
15091.2010.1102
DATE: 1/7/07
FIGURE 8

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_XSEC LOCATIONS.DWG Saved: 2/4/2008 11:01:57 AM PLotted: 2/4/2008 11:16:48 AM User: Newell, Sarah

LEGEND







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CROSS SECTION B
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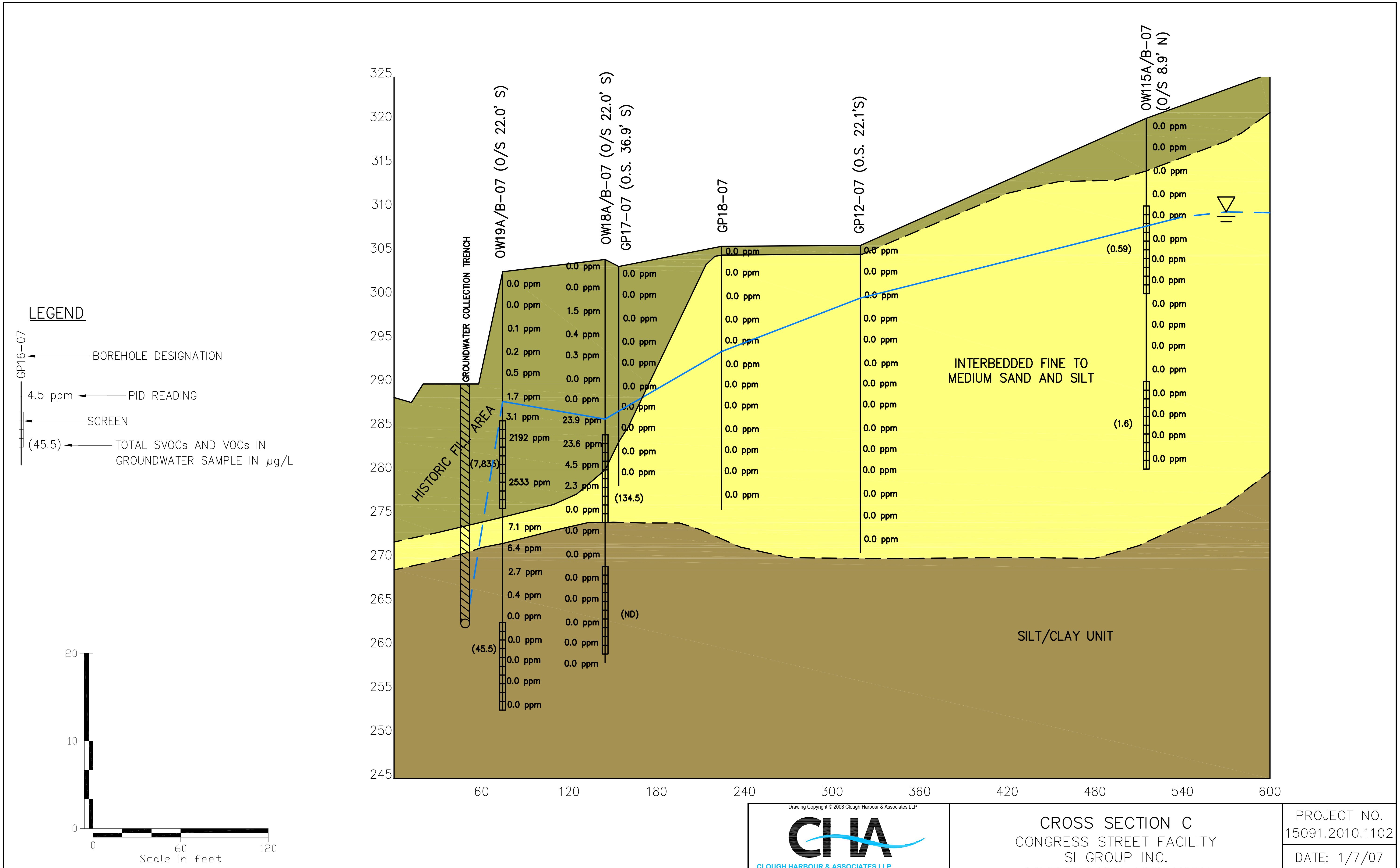
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/7/07

FIGURE 9

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_XSEC LOCATIONS.DWG Saved: 2/4/2008 11:01:57 AM Plotted: 2/4/2008 11:16:11 AM User: Newell, Sarah



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CROSS SECTION C
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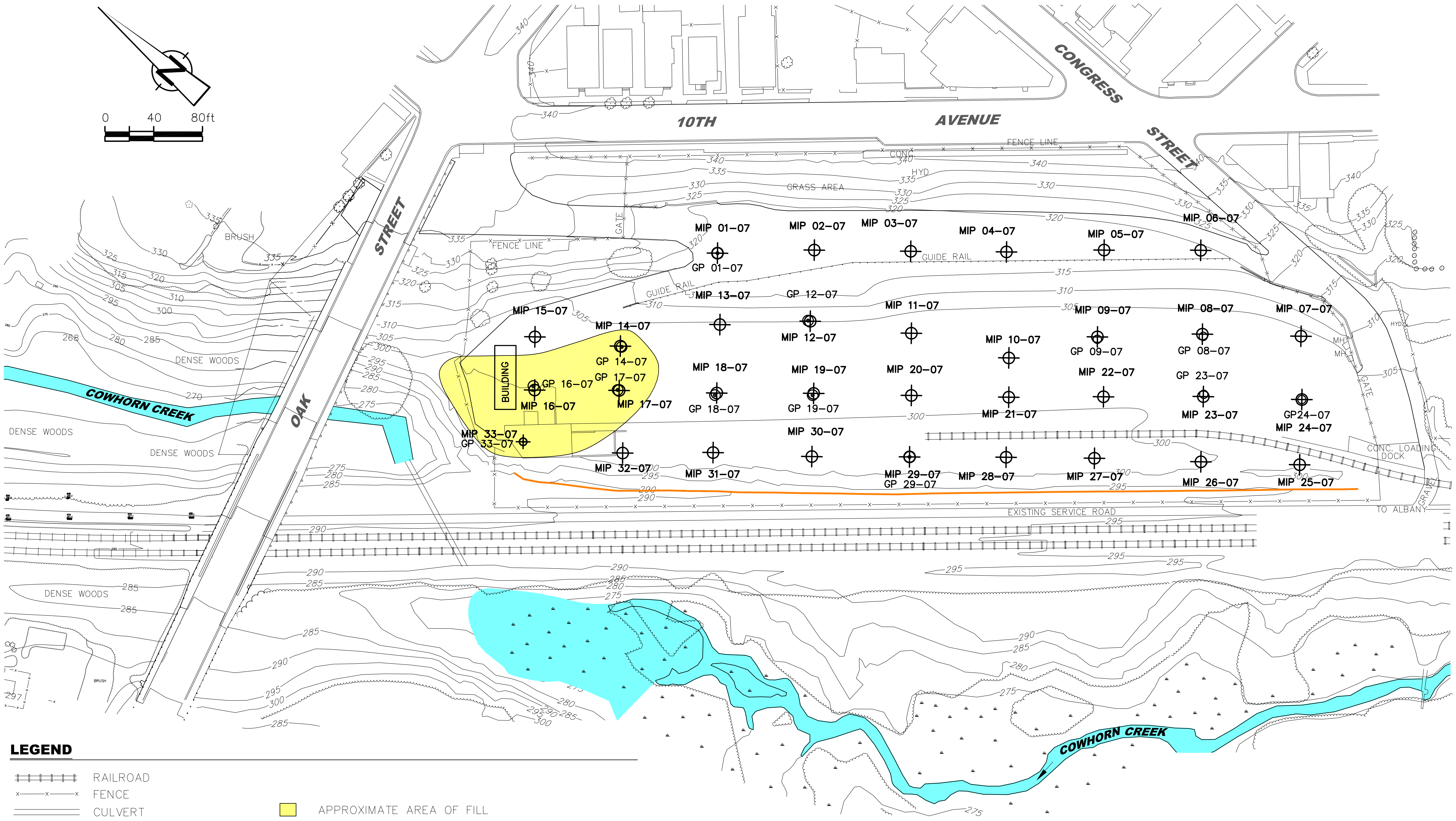
FIGURE 10

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 11_FILL AREA.DWG Saved: 1/31/2008 11:42:36 AM Plotted: 2/5/2008 1:11:26 PM User: Newell, Sarah



LEGEND

- ┼┼┼┼┼┼ RAILROAD
- —x—x— FENCE
- ═══ CULVERT
- ━━ GROUNDWATER COLLECTION TRENCH
- —300— CONTOUR WITH ELEVATION
- —300— GROUNDWATER ELEVATION CONTOUR
- 🟨 APPROXIMATE AREA OF FILL

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APPROXIMATE EXTENT OF FILL AREA
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
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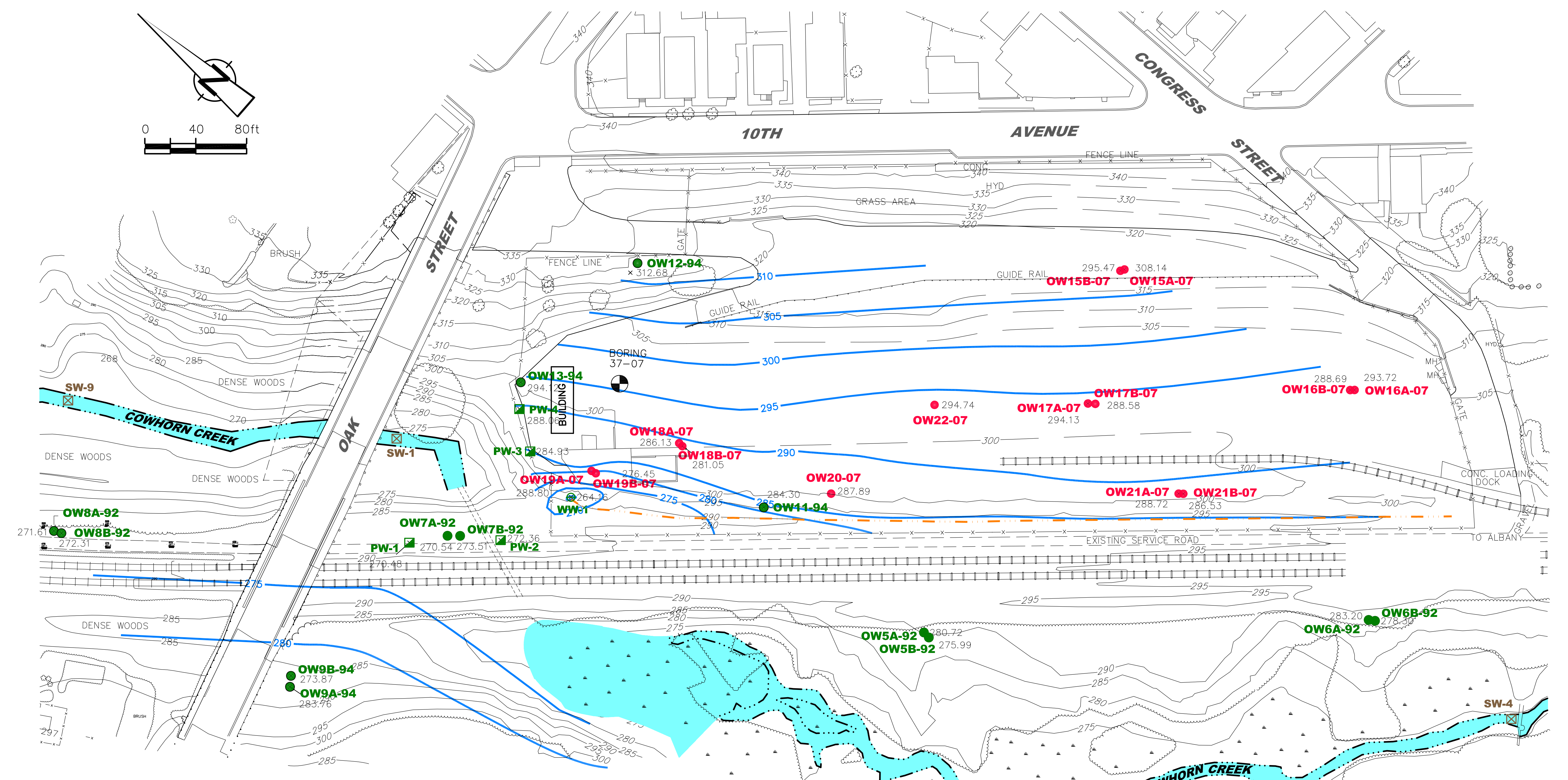
PROJECT NO.
15091.2010.1102

DATE: 1/7/07

FIGURE 11



LEGEND

- RAILROAD
- FENCE
- CULVERT
- GROUNDWATER COLLECTION TRENCH
- 300 CONTOUR WITH ELEVATION
- 300 GROUNDWATER ELEVATION CONTOUR
- OW7A-92 ● 294.13 GROUNDWATER QUALITY MONITORING LOCATION GROUNDWATER ELEVATION
- PW-1 ◪ EXTRACTION WELL LOCATION
- WW-1 ⊖ WET WELL LOCATION
- SW-1 ☒ SURFACE WATER QUALITY MONITORING LOCATION (CRA, 1992,1994)
- OW15A-07 ● 294.13 NEW GROUNDWATER QUALITY MONITORING LOCATION GROUNDWATER ELEVATION

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GROUNDWATER ELEVATION CONTOURS
(NOVEMBER 26, 2007)

CONGRESS STREET FACILITY
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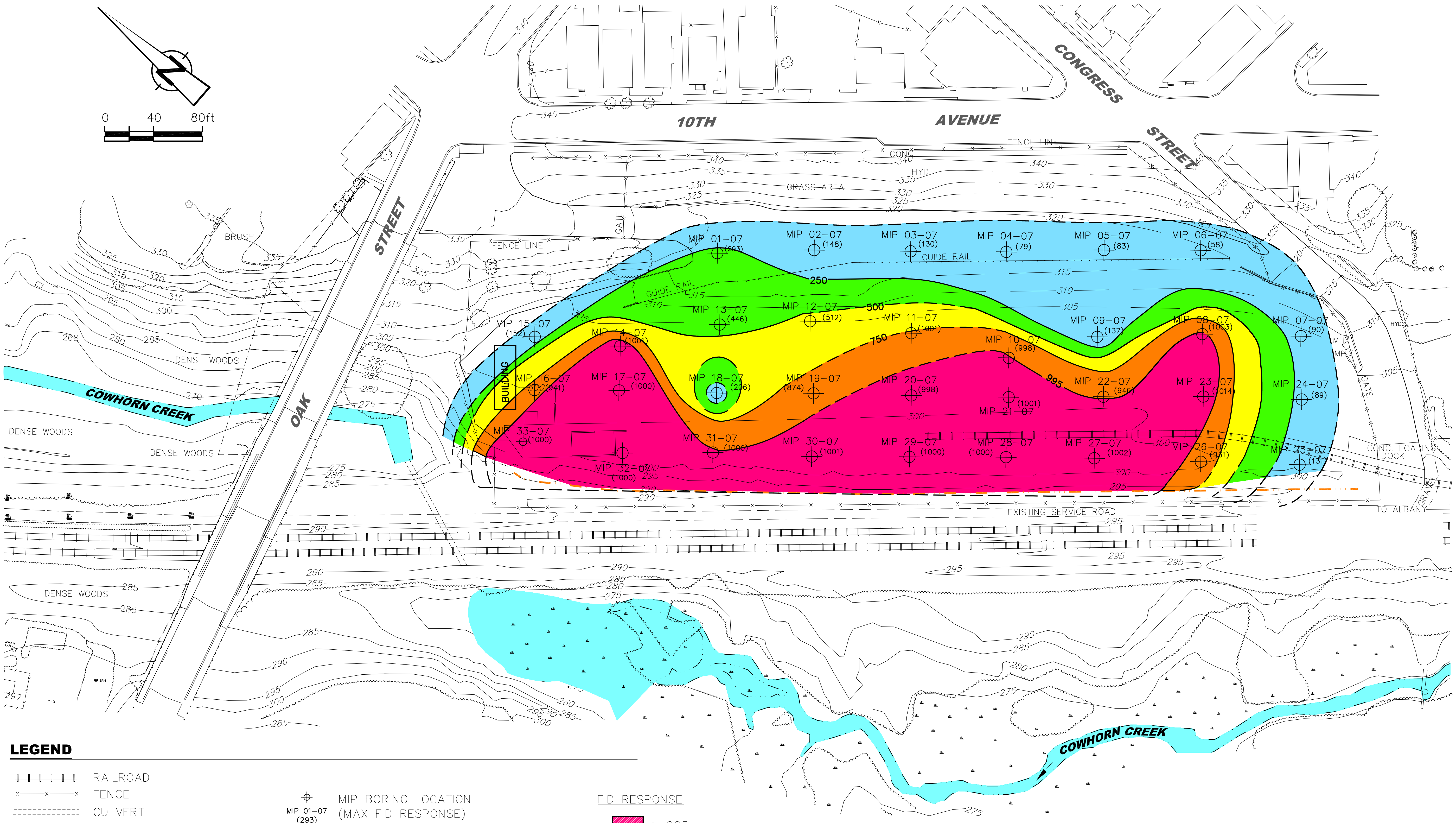
15091.2010.1102

DATE: 1/7/07

FIGURE 12

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 12_GW CONTOUR MAP.DWG Saved: 2/11/2008 11:21:15 AM Plotted: 2/11/2008 11:21:28 AM User: Newell, Sarah

File: \\CHA-LLP.COM\DIVDATA\CIVDATA\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURE 13_MIP RESPONSE.DWG Saved: 2/12/2008 2:21:05 PM Plotted: 2/15/2008 11:27:26 AM User: Newell, Sarah



LEGEND

ǂǂǂǂǂǂǂ RAILROAD

—x—x— FENCE

- - - - - CULVERT

— · · — GROUNDWATER COLLECTION TRENCH

—300— CONTOUR WITH ELEVATION

—300— MIP RESPONSE CONTOUR

⌖ MIP 01-07 (293) MIP BORING LOCATION (MAX FID RESPONSE)

FID RESPONSE

🟥 ≥ 995

🟧 ≥ 750, < 995

🟨 ≥ 500, <750

🟩 ≥ 250, <500

🟦 ≤ 250

NOTE: MIP-11-07 EXCLUDED DUE TO EQUIPMENT NOT OPERATING PROPERLY. REFER TO SECTION 4.1.2 FOR DETAILS.

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MIP RESPONSE
CONGRESS STREET FACILITY
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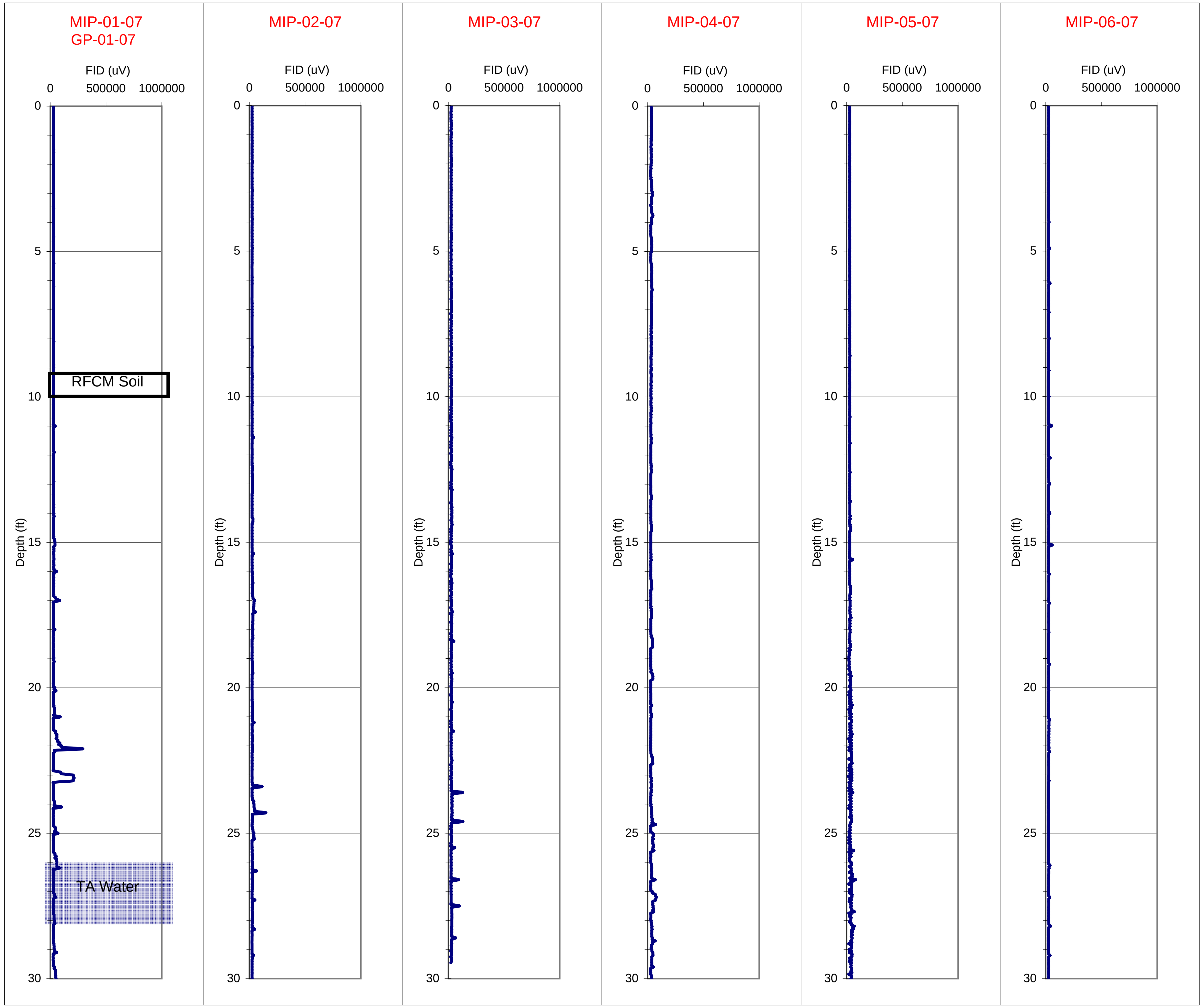
15091.2010.1102

DATE: 1/7/07

FIGURE 13

Figure 14a
MIP CROSS SECTION "A"
Updated Remedial Investigation Report
SI Group, INC.
Congress Street Facility
Schenectady, NY



🟦 Interval from which a TestAmerica sample was collected. Blue color indicates that no parameters in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.

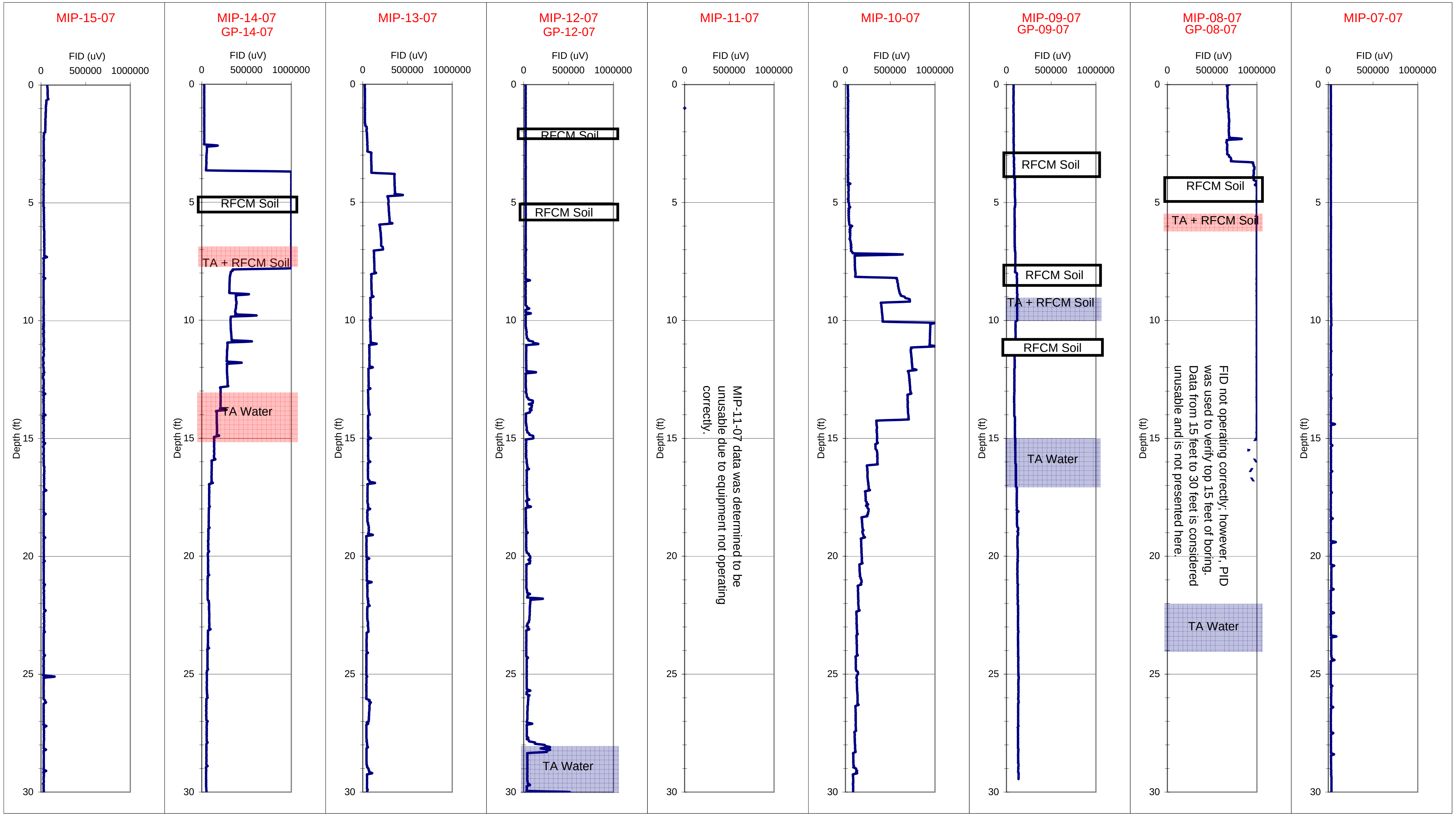
🟥 Interval from which a TestAmerica sample was collected. Red color indicates that one or more parameter in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard va

RFCM Soil Interval from which a Rapid Field Characterization Method soil sample was collected

Notes:
TA : TestAmerica
RFCM: Rapid Field Charactization Method

Figure 14b

MIP CROSS SECTION "B"
Updated Remedial Investigation Report
SI Group, INC.
Congress Street Facility
Schenectady, NY



MIP-11-07 data was determined to be unusable due to equipment not operating correctly.

FID not operating correctly; however, PID was used to verify top 15 feet of boring. Data from 15 feet to 30 feet is considered unusable and is not presented here.

🟦 Interval from which a TestAmerica sample was collected. Blue color indicates that no parameters in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.
🟥 Interval from which a TestAmerica sample was collected. Red color indicates that one or more parameter in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.
RFCM Soil Interval from which a Rapid Field Characterization Method soil sample was collected

Notes:
TA : TestAmerica
RFCM: Rapid Field Charactization Method

Figure 14c

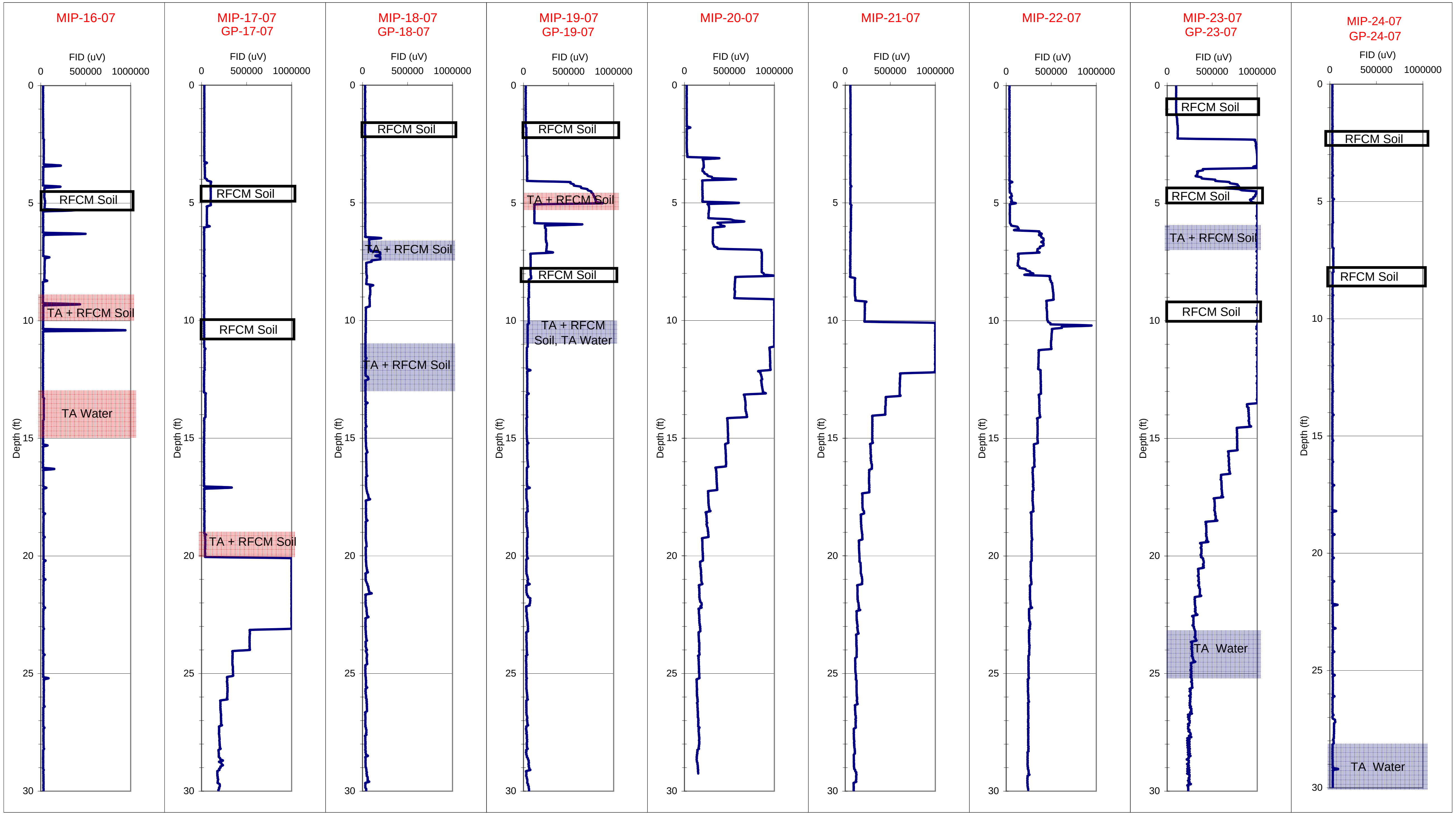
MIP CROSS SECTION "C"

Updated Remedial Investigation Report

SI Group, INC.

Congress Street Facility

Schenectady, NY



🟦 Interval from which a TestAmerica sample was collected. Blue color indicates that no parameters in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.

🟥 Interval from which a TestAmerica sample was collected. Red color indicates that one or more parameter in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.

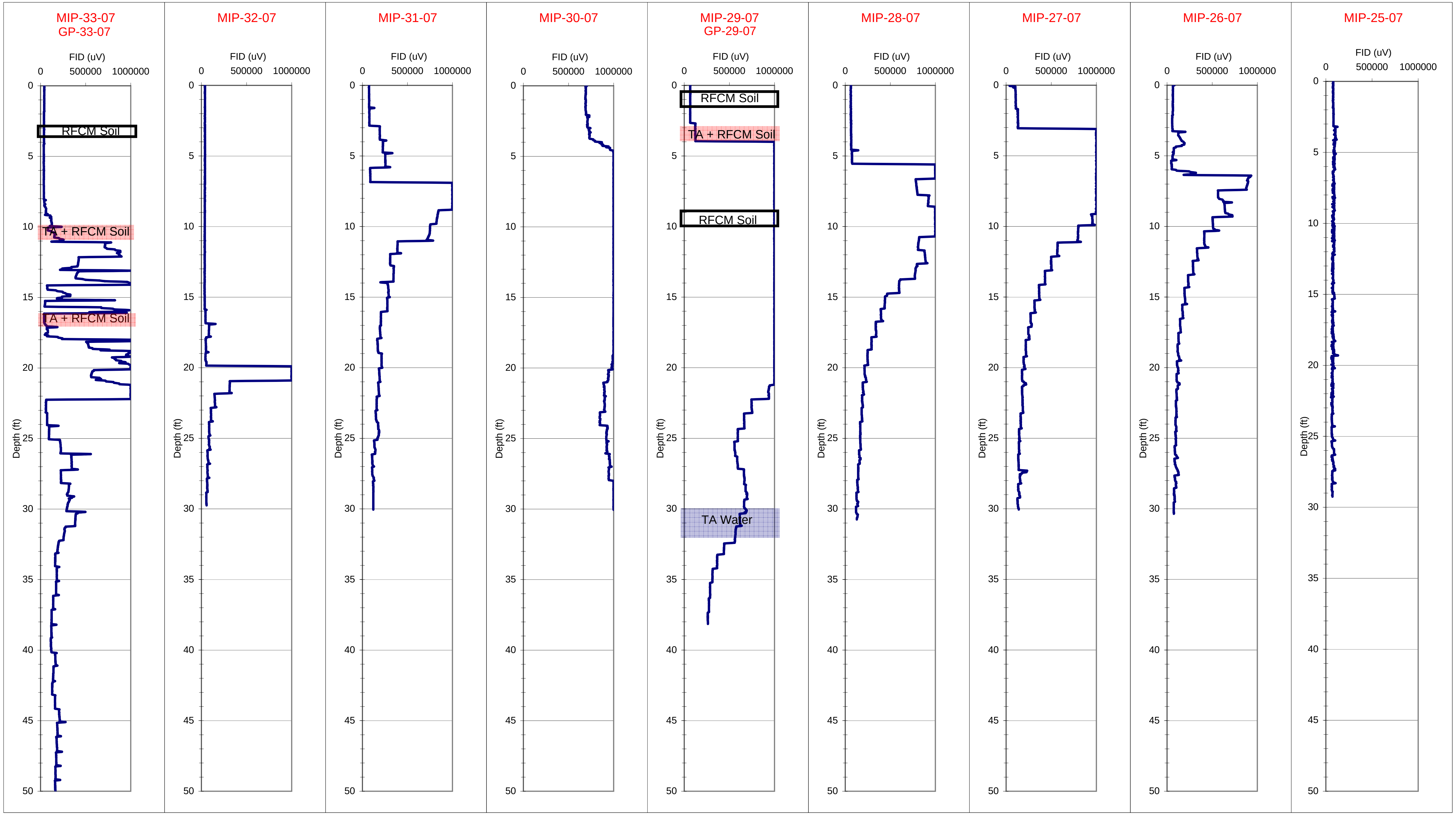
RFCM Soil Interval from which a Rapid Field Characterization Method soil sample was collected

Notes:

TA : TestAmerica

RFCM: Rapid Field Charactization Method

Figure 14d
MIP CROSS SECTION "D"
Updated Remedial Investigation Report
SI Group, INC.
Congress Street Facility
Schenectady, NY

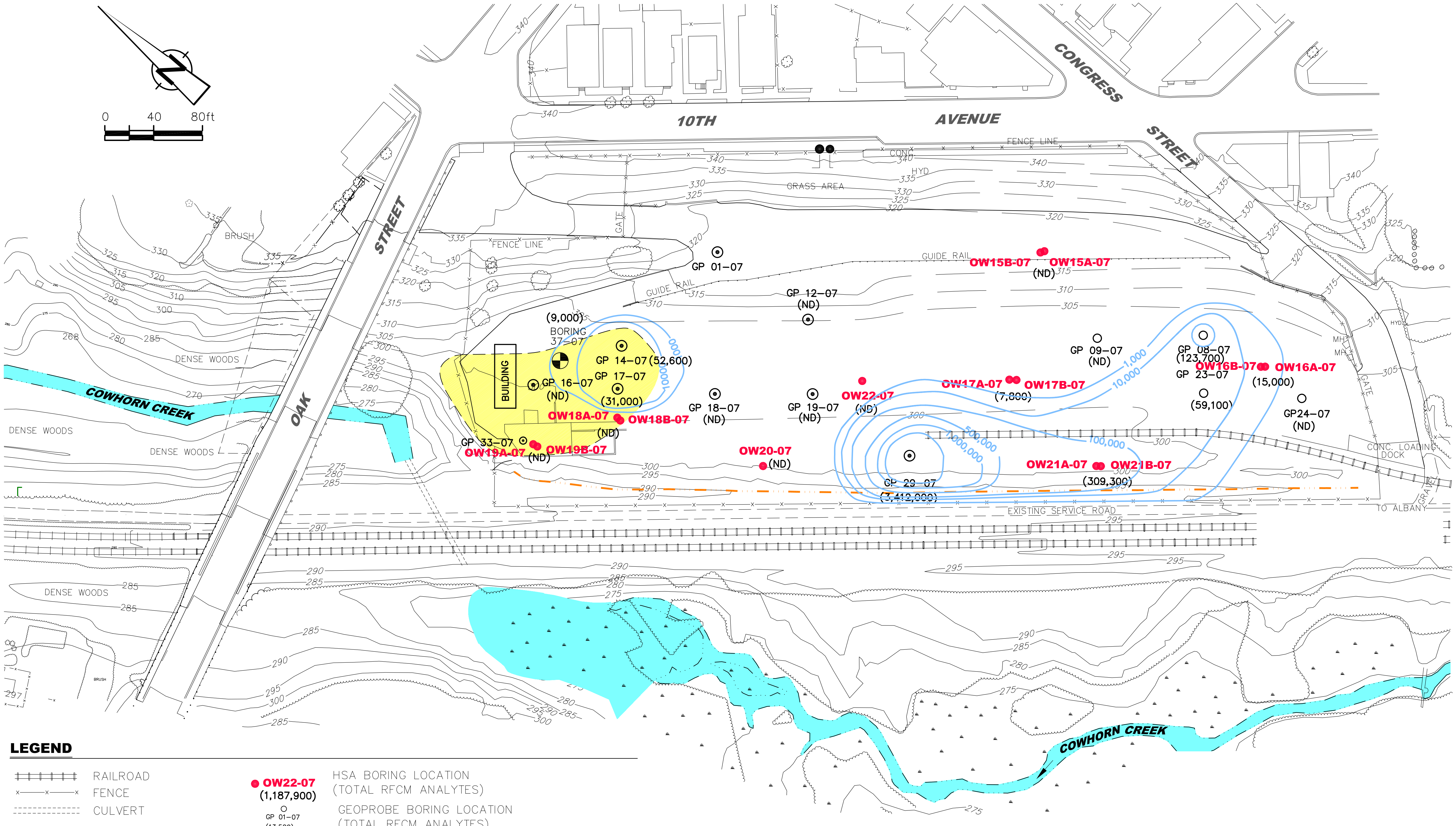


▦ Interval from which a TestAmerica sample was collected. Blue color indicates that no parameters in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.

🟥 Interval from which a TestAmerica sample was collected. Red color indicates that one or more parameter in the sample exceeded TAGM 4046 (soil) or TOGS 1.1.1 (water) standard values.

RFCM Soil Interval from which a Rapid Field Characterization Method soil sample was collected

Notes:
TA : TestAmerica
RFCM: Rapid Field Charactization Method



LEGEND

┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
- - - - -	CULVERT
— · · —	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
● OW22-07 (1,187,900)	HSA BORING LOCATION (TOTAL RFCM ANALYTES)
○ GP 01–07 (13,500)	GEOPROBE BORING LOCATION (TOTAL RFCM ANALYTES)
—2,000,000—	ISOCONCENTRATION CONTOUR (PPB)
🟨	APPROXIMATE AREA OF FILL

ALL UNITS ARE IN µg/Kg

NOTE: TOTAL ANALYTES DATA IS FROM RAPID FIELD CHARACTERIZATINO METHOD (RFCM) (SEE SEC. 4.2.4 OF TEXT FOR DETAILS). TOTAL ANALYTES IS A SUM OF BENZENE, TOLUENE, CHLOROBENZENE, ETHYLBENZENE, XYLENE, PHENOL AND CRESOL.

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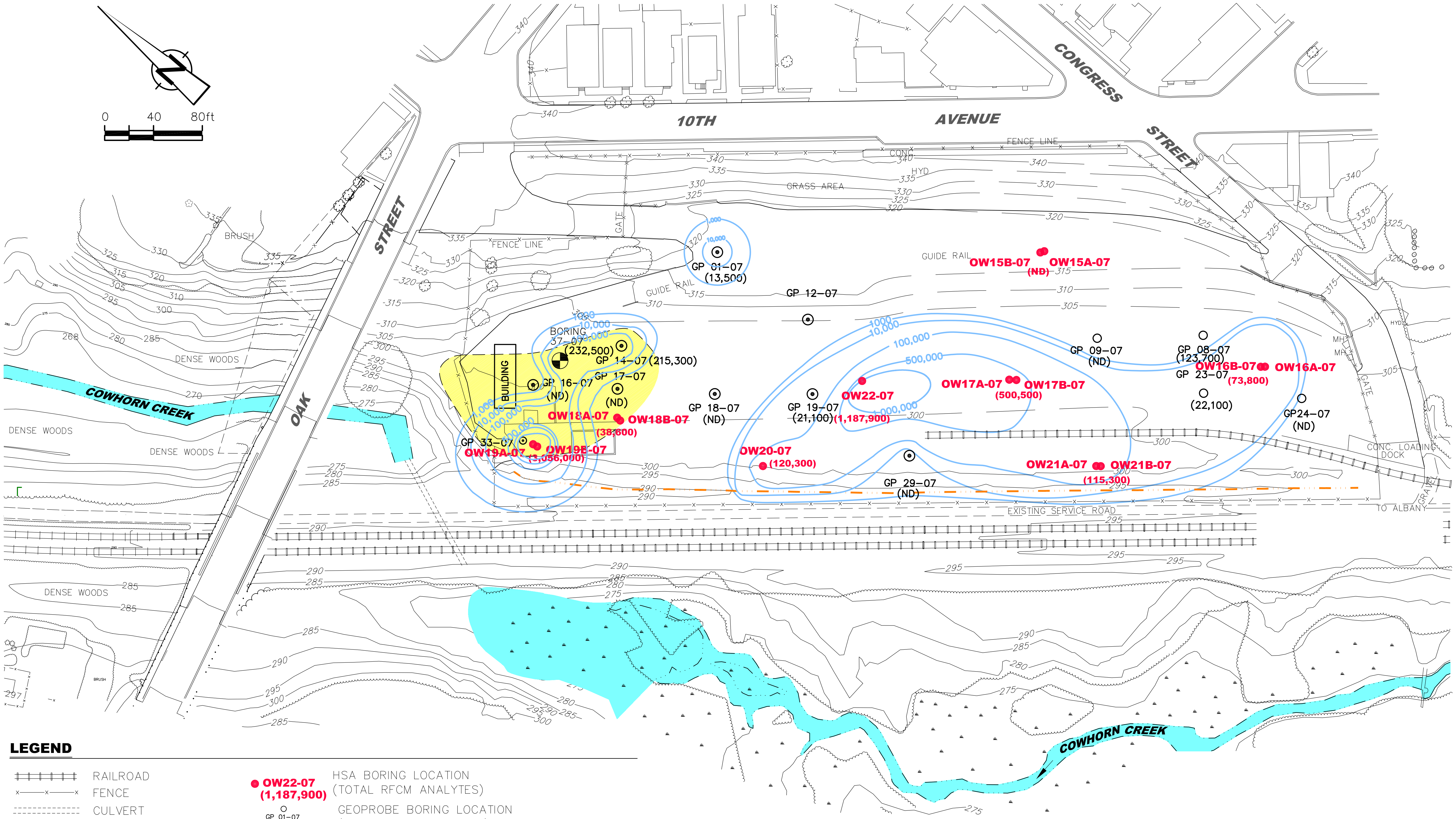
ISOCONCENTRATION CONTOURS FOR TOTAL CONCENTRATIONS OF RFCM ANALYTES IN SHALLOW SOIL SAMPLES (0' – 6')
REMEDIAL INVESTIGATION
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/7/07

FIGURE 15

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_RFCM SHALLOW CONTOURS.DWG Saved: 2/5/2008 11:20:14 AM PLotted: 2/5/2008 11:20:28 AM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
- - - - -	CULVERT
— · — · —	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
● OW22-07 (1,187,900)	HSA BORING LOCATION (TOTAL RFCM ANALYTES)
○ GP 01-07 (13,500)	GEOPROBE BORING LOCATION (TOTAL RFCM ANALYTES)
—2,000,000—	ISOCONCENTRATION CONTOUR (PPB)
🟨	APPROXIMATE AREA OF FILL

ALL UNITS ARE IN µg/Kg

NOTE: TOTAL ANALYTES DATA IS FROM RAPID FIELD CHARACTERIZATINO METHOD (RFCM) (SEE SEC. 4.2.4 OF TEXT FOR DETAILS). TOTAL ANALYTES IS A SUM OF BENZENE, TOLUENE, CHLOROBENZENE, ETHYLBENZENE, XYLENE, PHENOL AND CRESOL.

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ISOCONCENTRATION CONTOURS FOR TOTAL CONCENTRATIONS OF RFCM ANALYTES IN DEEP SOIL SAMPLES (6' TO SATURATED ZONE)
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

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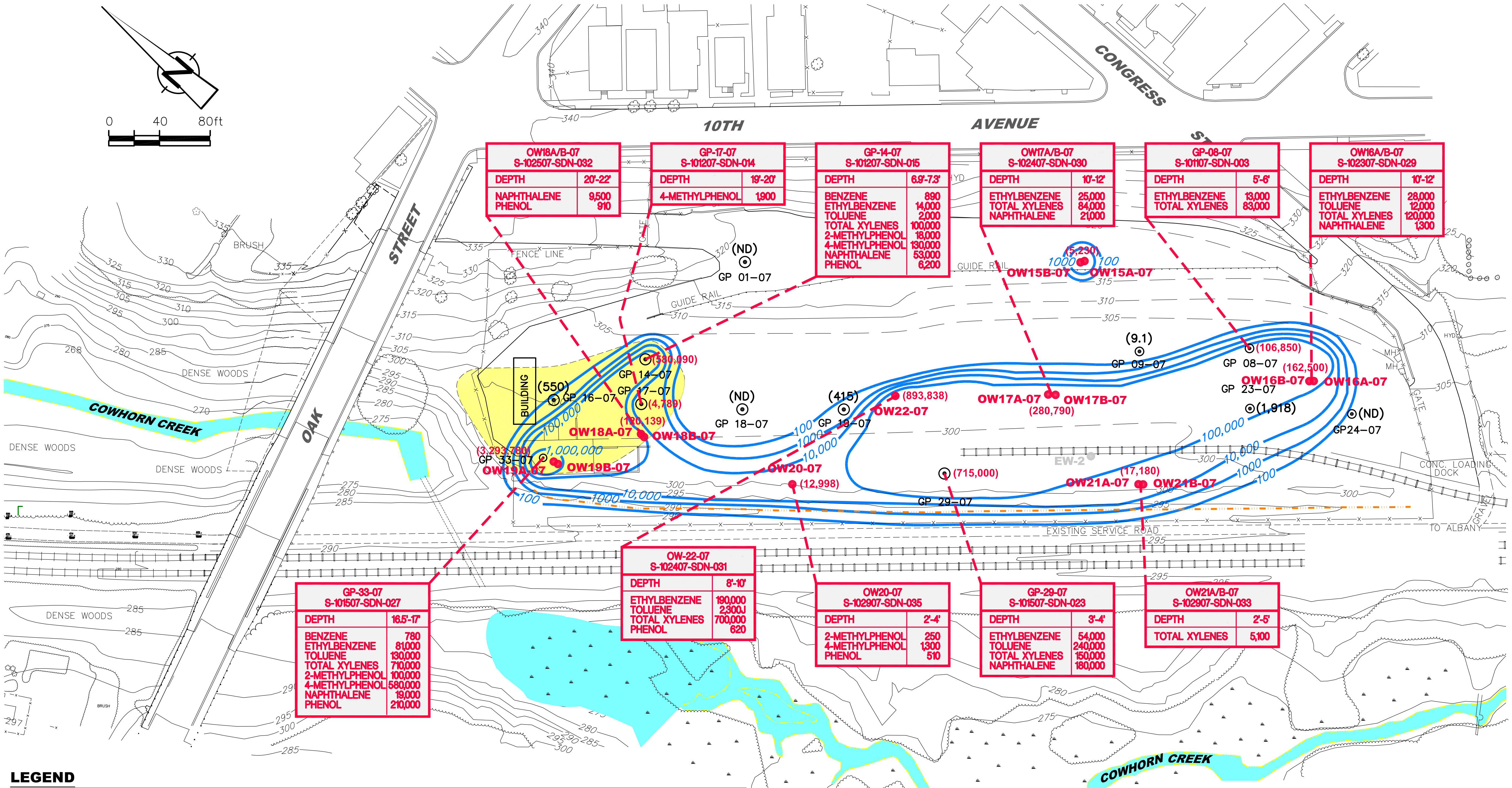
FIGURE 16

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\15091_RFCM DEEP CONTOURS.DWG Saved: 2/5/2008 11:17:57 AM Plotted: 2/5/2008 11:18:29 AM User: Newell, Sarah



OW18A/B-07 S-102507-SDN-032	
DEPTH	20'-22'
NAPHTHALENE PHENOL	9,500 910

GP-17-07 S-101207-SDN-014	
DEPTH	19'-20'
4-METHYLPHENOL	1,900

GP-14-07 S-101207-SDN-015	
DEPTH	6.9'-7.3'
BENZENE ETHYLBENZENE TOLUENE TOTAL XYLENES 2-METHYLPHENOL 4-METHYLPHENOL NAPHTHALENE PHENOL	890 14,000 2,000 100,000 18,000 130,000 53,000 6,200

OW17A/B-07 S-102407-SDN-030	
DEPTH	10'-12'
ETHYLBENZENE TOTAL XYLENES NAPHTHALENE	25,000 84,000 21,000

GP-08-07 S-101107-SDN-003	
DEPTH	5'-6'
ETHYLBENZENE TOTAL XYLENES	13,000 83,000

OW16A/B-07 S-102307-SDN-029	
DEPTH	10'-12'
ETHYLBENZENE TOLUENE TOTAL XYLENES NAPHTHALENE	28,000 12,000 120,000 1,300

OW-22-07 S-102407-SDN-031	
DEPTH	8'-10'
ETHYLBENZENE TOLUENE TOTAL XYLENES PHENOL	190,000 2,300J 700,000 620

GP-33-07 S-101507-SDN-027	
DEPTH	16.5'-17'
BENZENE ETHYLBENZENE TOLUENE TOTAL XYLENES 2-METHYLPHENOL 4-METHYLPHENOL NAPHTHALENE PHENOL	780 81,000 130,000 710,000 100,000 580,000 19,000 210,000

OW20-07 S-102907-SDN-035	
DEPTH	2'-4'
2-METHYLPHENOL 4-METHYLPHENOL PHENOL	250 1,300 510

GP-29-07 S-101507-SDN-023	
DEPTH	3'-4'
ETHYLBENZENE TOLUENE TOTAL XYLENES NAPHTHALENE	54,000 240,000 150,000 180,000

OW21A/B-07 S-102907-SDN-033	
DEPTH	2'-5'
TOTAL XYLENES	5,100

LEGEND

┼┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
┈┈┈┈	CULVERT
- · - · -	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
—100,000—	ISOCONCENTRATION CONTOUR
⊙ GP 14-07 (580,090)	GEOPROBE SOIL SAMPLE LOCATION (TOTAL VOCs AND SVOCs)
OW22A-07 (593,838) ●	HSA SOIL SAMPLE LOCATION (TOTAL VOCs AND SVOCs)

NOTES:

(1) All units are in µg/Kg

(2) Total VOC & SVOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the VOCs & SVOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 1 & 3.

(3) Parameters in boxes are select major Site contaminants only. Only those value exceeding TAGM 4046 guidance values are shown. Complete analytical data is provided in Table 8.

(4) A red total VOCs and SVOCs value indicates one or more parameters exceeded a TAGM 4046 guidance value.

🟨 Approximate Area of Fill

SAMPLE LOCATION AND ID

GP-17-07 S-101207-SDN-014	
DEPTH	19'-20'
4-METHYLPHENOL	1,900

SAMPLE DEPTH INTERVAL (FEET)

CHEMICAL CONCENTRATION

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ISOCONCENTRATION CONTOURS FOR
TOTAL VOCs AND SVOCs IN SOIL

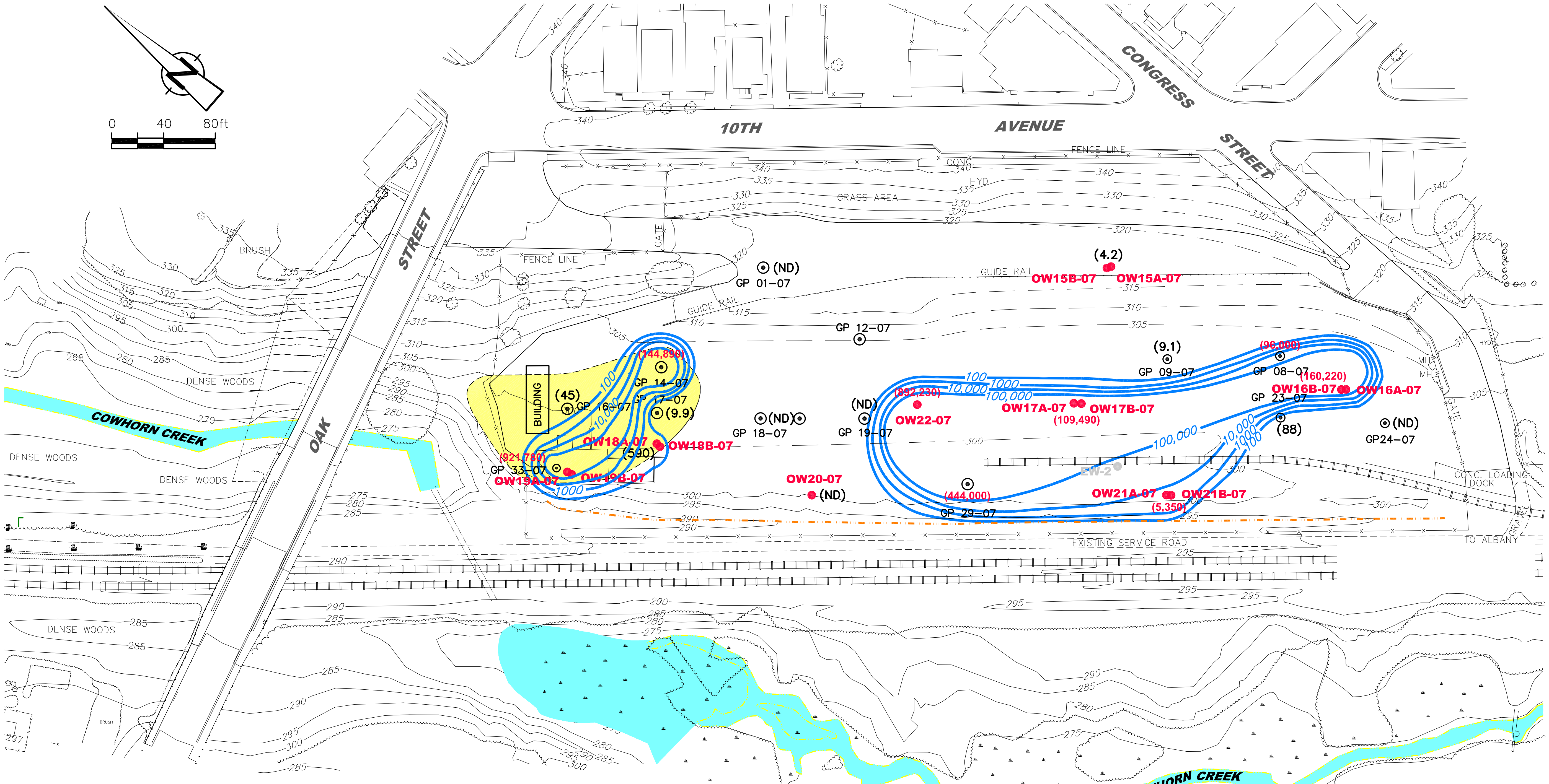
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/08

FIGURE 17

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURES\15091_FIG17.DWG Saved: 2/15/2008 2:31:13 PM PLotted: 2/18/2008 1:05:54 PM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼┼ RAILROAD

—x—x— FENCE

CULVERT

GROUNDWATER COLLECTION TRENCH

—300— CONTOUR WITH ELEVATION

—100,000— ISOCONCENTRATION CONTOUR

⊙ GP 14–07 (580,090) GEOPROBE SOIL SAMPLE LOCATION (TOTAL VOCs)

● OW20-07 (ND) HSA SOIL SAMPLE LOCATION (TOTAL VOCs)

NOTES:
(1) All units are in µg/Kg
(2) Total VOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the VOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 1 & 3.
(3) A red total VOCs value indicates one or more parameters exceeded a TAGM 4046 guidance value.

🟨 Approximate Area of Fill

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ISOCONCENTRATION CONTOURS FOR TOTAL VOCs IN SOIL

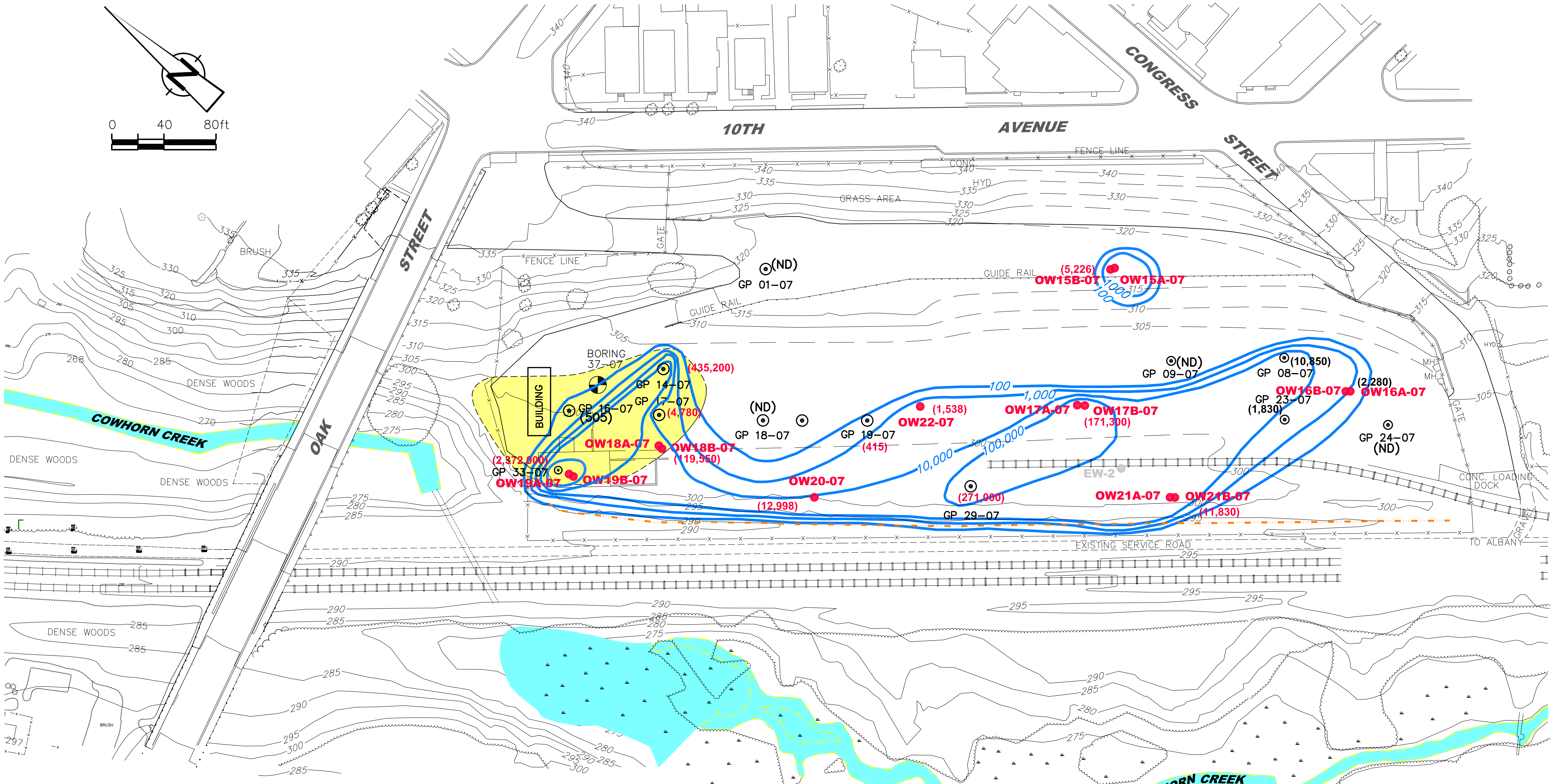
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/08

FIGURE 18

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURES\15091_FIG18.DWG Saved: 2/5/2008 4:06:35 PM Plotted: 2/18/2008 1:42:16 PM User: Newell, Sarah



LEGEND

╫╫╫╫╫╫ RAILROAD

—x—x— FENCE

┄┄┄┄┄┄ CULVERT

— · — · — GROUNDWATER COLLECTION TRENCH

—300— CONTOUR WITH ELEVATION

—100,000— ISOCONCENTRATION CONTOUR

⊙ GP 14–07 (580,090) GEOPROBE SOIL SAMPLE LOCATION (TOTAL SVOCs)

OW20-07 (ND) ● HSA SOIL SAMPLE LOCATION (TOTAL SVOCs)

NOTES:

(1) All units are in µg/Kg

(2) Total SVOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the SVOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 1 & 3.

(3) A red total SVOCs value indicates one or more parameters exceeded a TAGM 4046 guidance value.

🟨 Approximate Area of Fill

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ISOCONCENTRATION CONTOURS FOR
TOTAL SVOCs IN SOIL
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
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SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/08

FIGURE 19

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURES\15091_FIG19.DWG Saved: 2/18/2008 1:45:44 PM Plotted: 2/18/2008 1:45:56 PM User: Newell, Sarah

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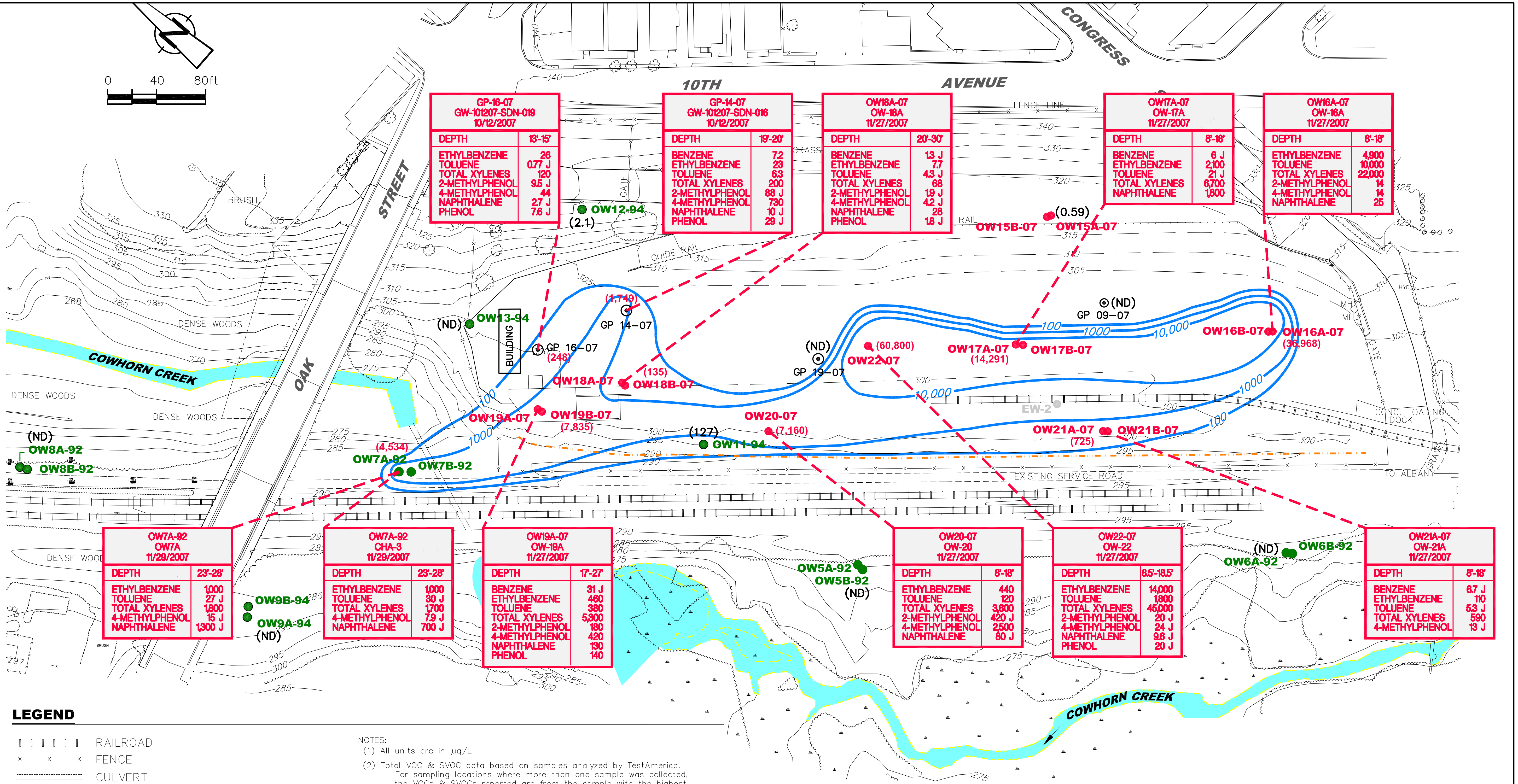

GP-16-07 GW-101207-SDN-019 10/12/2007	
DEPTH	13'-15'
ETHYLBENZENE	26
TOLUENE	0.77 J
TOTAL XYLENES	120
2-METHYLPHENOL	9.5 J
4-METHYLPHENOL	44
NAPHTHALENE	2.7 J
PHENOL	7.6 J

GP-14-07 GW-101207-SDN-016 10/12/2007	
DEPTH	19'-20'
BENZENE	7.2
ETHYLBENZENE	23
TOLUENE	6.3
TOTAL XYLENES	200
2-METHYLPHENOL	88 J
4-METHYLPHENOL	730
NAPHTHALENE	10 J
PHENOL	29 J

OW18A-07 OW-18A 11/27/2007	
DEPTH	20'-30'
BENZENE	1.3 J
ETHYLBENZENE	7.7
TOLUENE	4.3 J
TOTAL XYLENES	68
2-METHYLPHENOL	1.9 J
4-METHYLPHENOL	4.2 J
NAPHTHALENE	28
PHENOL	1.8 J

OW17A-07 OW-17A 11/27/2007	
DEPTH	8'-18'
BENZENE	6 J
ETHYLBENZENE	2,100
TOLUENE	21 J
TOTAL XYLENES	6,700
NAPHTHALENE	1,800

OW16A-07 OW-16A 11/27/2007	
DEPTH	8'-18'
ETHYLBENZENE	4,900
TOLUENE	10,000
TOTAL XYLENES	22,000
2-METHYLPHENOL	14
4-METHYLPHENOL	14
NAPHTHALENE	25

OW7A-92 OW7A 11/29/2007	
DEPTH	23'-28'
ETHYLBENZENE	1,000
TOLUENE	27 J
TOTAL XYLENES	1,800
4-METHYLPHENOL	15 J
NAPHTHALENE	1,300 J

OW7A-92 CHA-3 11/29/2007	
DEPTH	23'-28'
ETHYLBENZENE	1,000
TOLUENE	30 J
TOTAL XYLENES	1,700
4-METHYLPHENOL	7.9 J
NAPHTHALENE	700 J

OW19A-07 OW-19A 11/27/2007	
DEPTH	17'-27'
BENZENE	31 J
ETHYLBENZENE	460
TOLUENE	380
TOTAL XYLENES	5,300
2-METHYLPHENOL	180
4-METHYLPHENOL	420
NAPHTHALENE	130
PHENOL	140

OW20-07 OW-20 11/27/2007	
DEPTH	8'-18'
ETHYLBENZENE	440
TOLUENE	120
TOTAL XYLENES	3,600
2-METHYLPHENOL	420 J
4-METHYLPHENOL	2,500
NAPHTHALENE	80 J

OW22-07 OW-22 11/27/2007	
DEPTH	8.5'-18.5'
ETHYLBENZENE	14,000
TOLUENE	1,800
TOTAL XYLENES	45,000
2-METHYLPHENOL	20 J
4-METHYLPHENOL	24 J
NAPHTHALENE	9.6 J
PHENOL	20 J

OW21A-07 OW-21A 11/27/2007	
DEPTH	8'-18'
BENZENE	6.7 J
ETHYLBENZENE	110
TOLUENE	5.3 J
TOTAL XYLENES	590
4-METHYLPHENOL	13 J

LEGEND

┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
········	CULVERT
- · - · -	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
—300—	GROUNDWATER ELEVATION CONTOUR
OW7A-92 (4,534) ●	GROUNDWATER QUALITY MONITORING LOCATION (TOTAL VOCs AND SVOCs)
OW15A-07 (0.59) ●	NEW GROUNDWATER QUALITY MONITORING LOCATION (TOTAL VOCs AND SVOCs)
⊙ GP 14-07 (1,749)	WATER QUALITY SAMPLE LOCATION (TOTAL VOCs AND SVOCs)

NOTES:
(1) All units are in µg/L

(2) Total VOC & SVOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the VOCs & SVOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 2 & 4.

(3) Parameters in boxes are select major Site contaminants only. Only those value exceeding TOGS 1.1.1 standards are shown. Complete analytical data is provided in Tables 9 & 10.

(4) A red total VOCs and SVOCs value indicates one or more parameters exceeded a TOGS 1.1.1 standard.

SAMPLE LOCATION, ID AND DATE

GP-14-07 GW-101207-SDN-016 10/12/2007	
DEPTH	19'-20'
4-METHYLPHENOL	730

SAMPLE DEPTH INTERVAL (FEET)

CHEMICAL CONCENTRATION

CHA
CLOUGH HARBOUR & ASSOCIATES LLP
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Main: (518) 453-4500 · www.cloughharbour.com

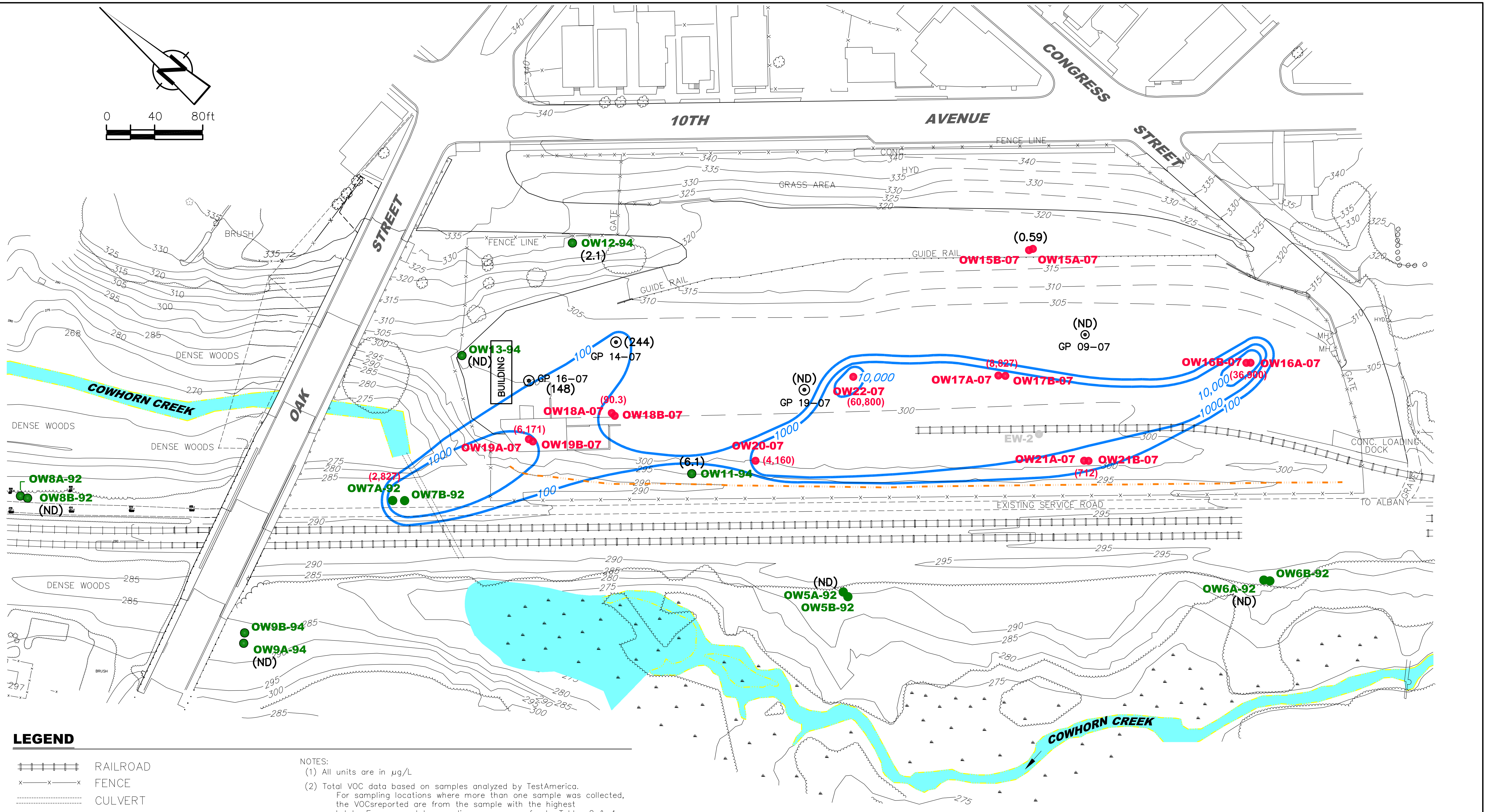
ISOCONCENTRATION CONTOURS FOR TOTAL VOCs AND SVOCs IN SHALLOW GROUNDWATER

UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO. 15091.2010.1102

DATE: 1/08

FIGURE 20



LEGEND

┼┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
- - - - - -	CULVERT
— · — · —	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
—300—	GROUNDWATER ELEVATION CONTOUR
OW7A-92 (2,827) ●	GROUNDWATER QUALITY MONITORING LOCATION (TOTAL VOCs)
OW15A-07 (ND) ●	NEW GROUNDWATER QUALITY MONITORING LOCATION

NOTES:

(1) All units are in μg/L

(2) Total VOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the VOCsreported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 2 & 4.

(3) A red total VOCs value indicates one or more parameters exceeded a TOGS 1.1.1 standard.

⊙ MIP 18–07	LOCATION WHERE MIP MAP DATA WAS USED TO DEFINE LIMITS OF CONTAMINATION
⊙ GP 14–07 (244)	WATER QUALITY SAMPLE LOCATION (TOTAL VOCs*)

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ISOCONCENTRATION CONTOURS FOR TOTAL VOCs IN SHALLOW GROUNDWATER

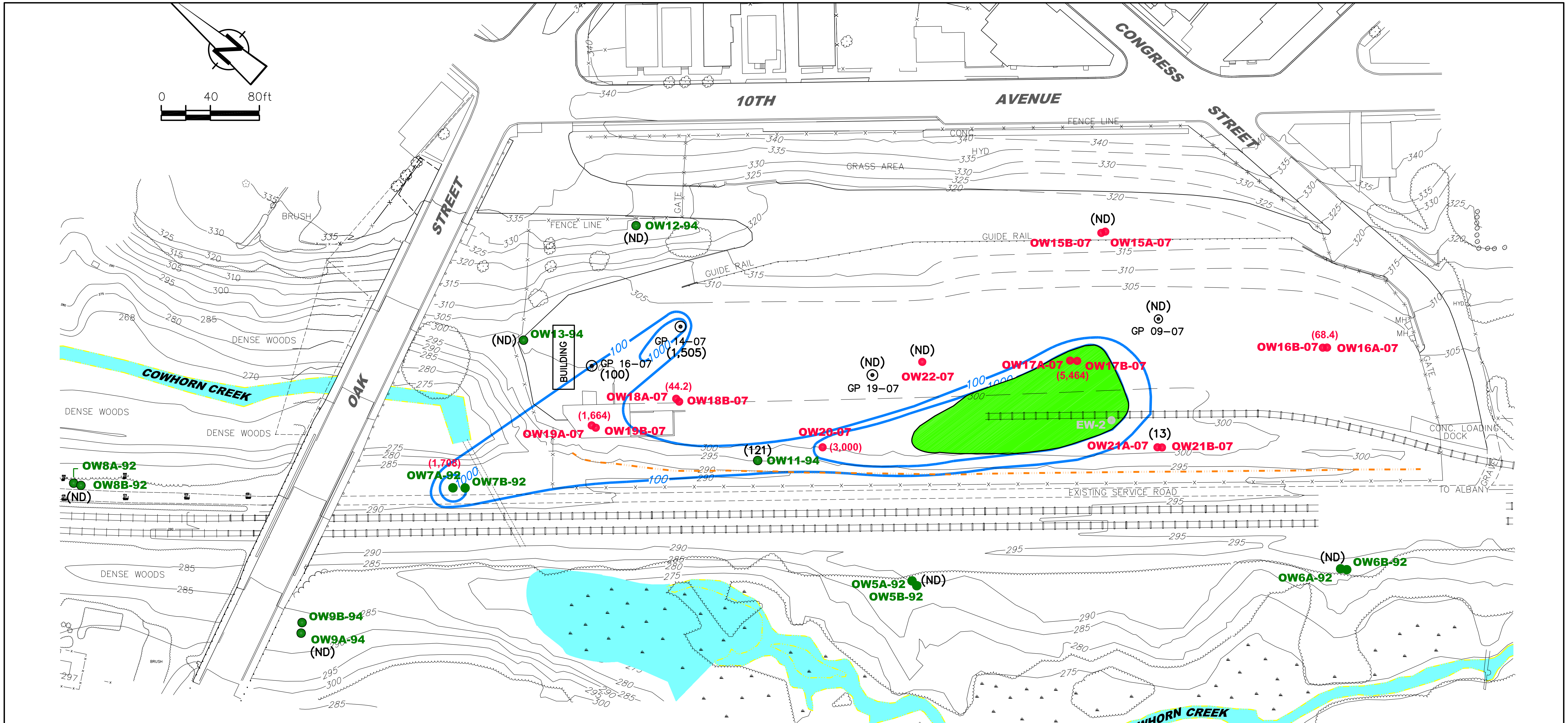
UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/08

FIGURE 21

File: M:\15091\CS\REMEDIAL INVESTIGATION\ACAD\FIGURES\15091_FIG21.DWG Saved: 2/22/2008 1:35:09 PM Plotted: 2/22/2008 1:35:22 PM User: Newell, Sarah



LEGEND

┼┼┼┼┼┼	RAILROAD
—x—x—	FENCE
········	CULVERT
-·-·-·-	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
—300—	GROUNDWATER ELEVATION CONTOUR
OW7A-92 (1,708) ●	GROUNDWATER QUALITY MONITORING LOCATION (TOTAL SVOCs)
OW15A-07 (ND) ●	NEW GROUNDWATER QUALITY MONITORING LOCATION (TOTAL SVOCs)
🟩	ESTIMATED AREA OF LNAPL
GP 14-07 (1,505) ⊙	WATER QUALITY SAMPLE LOCATION (TOTAL SVOCs)

NOTES:

(1) All units are in µg/L

(2) Total SVOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the SVOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 2 & 4.

(3) A red total SVOCs value indicates one or more parameters exceeded a TOGS 1.1.1 standard.

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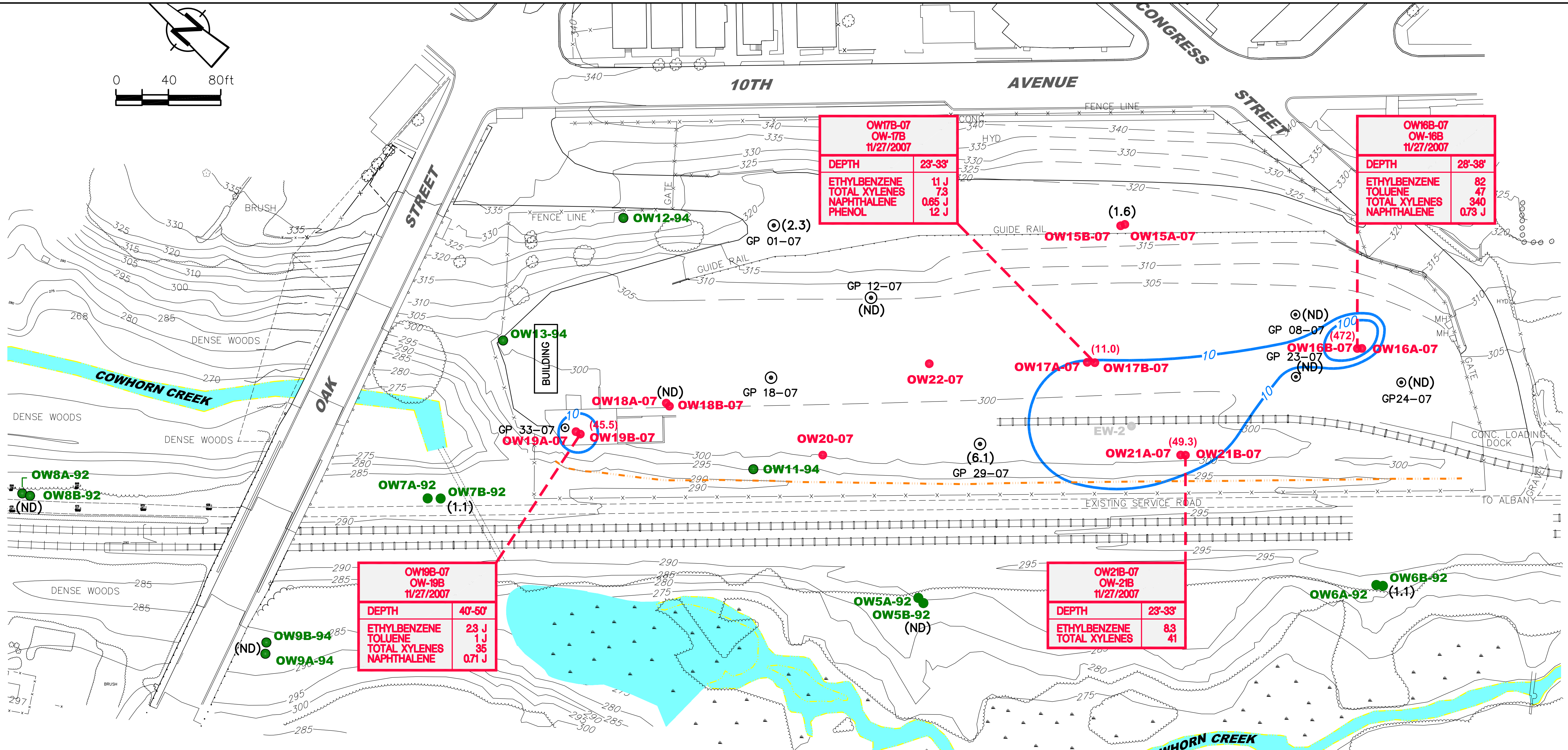
ISOCONCENTRATION CONTOURS FOR TOTAL SVOCs IN SHALLOW GROUNDWATER

UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO. 15091.2010.1102

DATE: 1/08

FIGURE 22



OW17B-07 OW-17B 11/27/2007	
DEPTH	23'-33'
ETHYLBENZENE	1.1 J
TOTAL XYLENES	7.3
NAPHTHALENE	0.65 J
PHENOL	1.2 J

OW16B-07 OW-16B 11/27/2007	
DEPTH	28'-38'
ETHYLBENZENE	82
TOLUENE	47
TOTAL XYLENES	340
NAPHTHALENE	0.73 J

OW19B-07 OW-19B 11/27/2007	
DEPTH	40'-50'
ETHYLBENZENE	2.3 J
TOLUENE	1 J
TOTAL XYLENES	35
NAPHTHALENE	0.71 J

OW21B-07 OW-21B 11/27/2007	
DEPTH	23'-33'
ETHYLBENZENE	8.3
TOTAL XYLENES	41

LEGEND

┼┼┼┼┼┼┼	RAILROAD
×——×——×	FENCE
┈┈┈┈┈	CULVERT
- - - - -	GROUNDWATER COLLECTION TRENCH
—300—	CONTOUR WITH ELEVATION
—300—	GROUNDWATER ELEVATION CONTOUR
OW7A-92 (1,708) ●	GROUNDWATER QUALITY MONITORING LOCATION (TOTAL VOCs AND SVOCs)
OW15A-07 (ND) ●	NEW GROUNDWATER QUALITY MONITORING LOCATION (TOTAL VOCs AND SVOCs)
⊙ GP 14-07 (1,505)	WATER QUALITY SAMPLE LOCATION (TOTAL VOCs AND SVOCs)

NOTES:

(1) All units are in µg/L

(2) Total VOC & SVOC data based on samples analyzed by TestAmerica. For sampling locations where more than one sample was collected, the VOCs & SVOCs reported are from the sample with the highest totals. For a complete sampling summary, refer to Tables 2 & 4.

(3) Parameters in boxes are select major Site contaminants only. Only those value exceeding TOGS 1.1.1 standards are shown. Complete analytical data is provided in Tables 9 & 10.

(4) A red total VOCs and SVOCs value indicates one or more parameters exceeded a TOGS 1.1.1 standard.

SAMPLE LOCATION, ID AND DATE

GP-14-07 GW-101207-SDN-016 10/12/2007	
DEPTH	19'-20'
4-METHYLPHENOL	730

SAMPLE DEPTH INTERVAL (FEET)

CHEMICAL CONCENTRATION

CHA

CLOUGH HARBOUR & ASSOCIATES LLP
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ISOCONCENTRATION CONTOURS FOR TOTAL VOCs AND SVOCs IN DEEP GROUNDWATER

UPDATED REMEDIAL INVESTIGATION REPORT
CONGRESS STREET FACILITY
SI GROUP INC.
SCHENECTADY, NEW YORK

PROJECT NO.
15091.2010.1102

DATE: 1/08

FIGURE 23

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TABLES

TABLE 1
GEOPROBE SOIL SAMPLING SUMMARY

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Sampling Location	CHA/TestAmerica Sampling ID[1]	RFCM[2] Sample ID	Sample Collection		Depth Interval (ft. bgs)	QA/QC	Volume	Analyses
			Date	Time				
GP-01-07	S-101007-SDN-001	000089	10/10/2007	0810	22 -23		(A), (B)	(D), (E)
GP-01-07		000138	10/10/2007	0800	9.5-10		(B)	(E)
GP-08-07		000099	10/11/2007	0755	4 to 5.5		(B)	(E)
GP-08-07	S-101107-SDN-003	000119	10/11/2007	0800	5 to 6		(A), (B)	(D), (E)
GP-09-07		000129	10/15/2007	0735	3 to 3.7		(B)	(E)
GP-09-07		000126	10/15/2007	0745	7.7 to 8.3		(B)	(E)
GP-09-07	S-101207-SDN-017	000134	10/15/2007	0750	9 to 10	MS/MSD	(A), (C)	(D), (E)
GP-09-07		000143	10/15/2007	0800	11		(B)	(E)
GP-12-07		000174	10/15/2007	0925	2		(B)	(E)
GP-12-07		000164	10/15/2007	0930	5 to 5.5		(B)	(E)
GP-14-07		000114	10/12/2007	1115	5		(B)	(E)
GP-14-07	S-101207-SDN-015	000160	10/12/2007	1120	6.9 to 7.3		(A), (B)	(D), (E)
GP-16-07		000135	10/12/2007	1340	5		(B)	(E)
GP-16-07	S-101207-SDN-018	000147	10/12/2007	1345	9 to 10		(A), (B)	(D), (E)
GP-17-07		000133	10/12/2007	0935	4 to 5.5		(B)	(E)
GP-17-07		000087	10/12/2007	0950	10 to 10.7		(B)	(E)
GP-17-07	S-101207-SDN-014	000091	10/12/2007	1000	19 to 20		(A), (B)	(D), (E)
GP-18-07		000142	10/12/2007	0740	2		(B)	(E)
GP-18-07	S-1012-07-SDN-011	000090	10/12/2007	0745	7		(A), (B)	(D), (E)
GP-18-07	S-1012-07-SDN-012	000130	10/12/2007	0800	11 to 13		(A), (B)	(D), (E)
GP-18-07	S-1012-07-SDN-013	000130	10/12/2007	0900	11 to 13	Duplicate	(A), (B)	(D), (E)
GP-19-07		000085	10/11/2007	1445	2		(B)	(E)
GP-19-07	S-101107-SDN-008	000132	10/11/2007	1455	5		(A), (B)	(D), (E)
GP-19-07		000120	10/11/2007	1500	8		(B)	(E)
GP-19-07	S-101107-SDN-010	000139	10/11/2007	1515	10 to 11		(A), (B)	(D), (E)
GP-23-07		000144	10/11/2007	0955	0.8 to 1.3		(B)	(E)
GP-23-07		000137	10/11/2007	1000	4.5 to 5		(B)	(E)
GP-23-07	S-101107-SDN-005	000145	10/11/2007	1005	6 to 7		(A), (B)	(D), (E)
GP-23-07		000141	10/11/2007	1010	9.3 to 10		(B)	(E)
GP-24-07		000140	10/11/2007	1235	2		(B)	(E)
GP-24-07		000163	10/11/2007	1245	8		(B)	(E)
GP-29-07		000092	10/15/2007	1255	0.7 to 1.5		(B)	(E)
GP-29-07	S-101507-SDN-023	000051	10/15/2007	1300	3 to 4		(A), (B)	(D), (E)
GP-29-07		000095	10/15/2007	1320	9 to 10		(B)	(E)
GP-33-07		000074	10/15/2007	1520	3 to 3.4		(B)	(E)
GP-33-07	S-101507-SDN-026	000075	10/15/2007	1530	10 to 11		(A), (B)	(D), (E)
GP-33-07	S-101507-SDN-027	000038	10/15/2007	1540	16.5 to 17		(A), (B)	(D), (E)

Notes:

(1) Only samples sent to TestAmerica Analytical Laboratory have CHA sample IDs. RFCM sample ID numbers were used for all other samples.
(2) RFCM = Rapid Field Characterization Method; see Section 4.2.4 of report for description
(A) = Volume: One 2-oz. glass jar w/ no preservatives, one 8-oz. glass jar w/ no preservatives.
(B) = Volume: One 10mL sample preserved in methanol.
(C) = Volume: Two 2-oz. glass jars w/ no preservatives, two 8-oz. glass jars w/ no preservatives.
(D) = Analyses: VOCs, SVOCs
(E) = Analyses: RFCM (Benzene, Toluene, Chlorobenzene, Ethylbenzene, Total Xylenes, Phenol, Cresol)
QA/QC = Quality Assurance/Quality Control

TABLE 2
GEOPROBE GROUNDWATER SAMPLING SUMMARY

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Sampling Location	Sampling ID	Sample Collection Date	Sample Collection Time	Depth Interval	QA/QC	Volume	Analyses
GP-01-07	GW-101007-SDN-002	10/10/2007	0830	26 to 28		(B)	(D)
GP-08-07	GW-101107-SDN-004	10/11/2007	0830	22 to 24		(B)	(D)
GP-09-07	GW-101207-SDN-020	10/15/2007	0800	15 to 17		(A)	(D)
GP-12-07	GW-101507-SDN-021	10/15/2007	0955	28 to 30		(A)	(D)
GP-12-07	GW-101507-SDN-022	10/15/2007	1040	33 to 35		(A)	(D)
GP-14-07	GW-101207-SDN-016	10/12/2007	1130	13 to 15		(A)	(D)
GP-16-07	GW-101207-SDN-019	10/12/2007	1400	13 to 15	MS/MSD	(C)	(D)
GP-19-07	GW-101107-SDN-009	10/11/2007	1510	10 to 11		(B)	(D)
GP-23-07	GW-101107-SDN-006	10/11/2007	1020	23 to 25		(B)	(D)
GP-24-07	GW-101107-SDN-007	10/11/2007	1310	28 to 30		(B)	(D)
GP-29-07	GW-101507-SDN-024	10/15/2007	1340	30 to 32		(A)	(D)
GP-29-07	GW-101507-SDN-025	10/15/2007	1400	30 to 32	Duplicate	(A)	(D)

Notes:

(A) = Volume: Two 40 mL w/ preservative HCL, two 1 L amber w/no preservatives
(B) = Volume: Two 40 mL w/ preservative HCL, one 1 L amber w/no preservatives
(C) = Volume: Four 40 mL w/preservative HCL, Four 1 L amber w/ no preservatives
(D) = Analyses: VOCs, SVOCs
QA/QC = Quality Assurance/Quality Control

TABLE 3
HOLLOW STEM AUGER SOIL SAMPLING SUMMARY

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Sampling Location	CHA/TestAmerica Sampling ID[1]	RFCM[2] Sample ID	Sample Collection		Depth Interval (ft. bgs)	QA/QC	Volume	Analyses
			Date	Time				
OW15A/B-04		000096	10/22/2007	1200	2 to 4		(B)	(E)
OW15A/B-05		000048	10/22/2007	1210	6 to 8		(B)	(E)
OW15A/B-06	S-102207-SDN-028	000097	10/22/2007	1220	10 to 12		(A), (B)	(D), (E)
OW16A/B-07		000066	10/23/2007	1345	6 to 8		(B)	(E)
OW16A/B-07		000042	10/23/2007	1355	8 to 10		(B)	(E)
OW16A/B-07	S-102307-SDN-029	000071	10/23/2007	1405	10 to 12		(A), (B)	(D), (E)
OW17A/B-07		000094	10/24/2007	950	2 to 4		(B)	(E)
OW17A/B-07		000110	10/24/2007	955	6 to 8		(B)	(E)
OW17A/B-07		000072	10/24/2007	1000	8 to 10		(B)	(E)
OW17A/B-07	S-102407-SDN-030	000069	10/24/2007	1010	10 to 12		(A), (B)	(D), (E)
OW18A/B-07		000041	10/25/2007	1300	4 to 6		(B)	(E)
OW18A/B-07		000047	10/25/2007	1320	10 to 12		(B)	(E)
OW18A/B-07		000084	10/25/2007	1340	16 to 18		(B)	(E)
OW18A/B-07	S-102507-SDN-032	000064	10/25/2007	1350	20 to 22		(A), (B)	(D), (E)
OW19A/B-07	S-103007-SDN-036	001653	10/30/2007	0900	6 to 8		(A), (B)	(D), (E)
OW19A/B-07		001134	10/30/2007	0920	10 to 12		(B)	(E)
OW19A/B-07		001139	10/30/2007	0940	14 to 16		(B)	(E)
OW19A/B-07		001140	10/30/2007	1000	18 to 20		(B)	(E)
OW19A/B-07		001138	10/30/2007	1100	20 to 22		(B)	(E)
OW20-07	S-102907-SDN-035	001208	10/29/2007	1115	2 to 4		(A), (B)	(D), (E)
OW20-07		001213	10/29/2007	1120	4 to 6		(B)	(E)
OW20-07		001185	10/29/2007	1130	6 to 8		(B)	(E)
OW20-07		001184	10/29/2007	1140	8 to 10		(B)	(E)
OW21A/B-07	S-102907-SDN-033	001135	10/29/2007	0910	2 to 5		(A), (B)	(D), (E)
OW21A/B-07	S-102907-SDN-034	001135	10/29/2007	0920	2 to 5	Duplicate	(A), (B)	(D), (E)
OW21A/B-07		001141	10/29/2007	0930	4 to 6		(B)	(E)
OW21A/B-07		001230	10/29/2007	0940	6 to 8		(B)	(E)
OW21A/B-07		001225	10/29/2007	0950	8 to 10		(B)	(E)
OW22-07		000088	10/24/2007	1350	4 to 6		(B)	(E)
OW22-07		000076	10/24/2007	1405	10 to 12		(B)	(E)
OW22-07	S-102407-SDN-031	000086	10/24/2007	1400	8 to 10	MS/MSD	(A), (C)	(D), (E)
B-37-07		000039	10/26/2007	0830	2 to 4		(B)	(E)
B-37-07		001136	10/26/2007	0840	8 to 10		(B)	(E)
B-37-07		001175	10/26/2007	0850	10 to 12		(B)	(E)

Notes:

(1) Only samples sent to TestAmerica Analytical Laboratory have CHA sample IDs. RFCM sample ID numbers were used for all other samples.
(2) RFCM = Rapid Field Characterization Method; see Section 4.2.4 of report for description
(A) = Volume: One 2-oz. glass jar w/ no preservatives, one 8-oz. glass jar w/ no preservatives.
(B) = Volume: One 10mL sample preserved in methanol.
(C) = Volume: Two 2-oz. glass jars w/ no preservatives, two 8-oz. glass jars w/ no preservatives.
(D) = Analyses: VOCs, SVOCs
(E) = Analyses: Rapid Field Characterization Method (Benzene, Toluene, Chlorobenzene, Ethylbenzene, Total Xylenes, Phenol, Cresol)
QA/QC = Quality Assurance/Quality Control

TABLE 4
MONITORING WELL GROUNDWATER SAMPLING SUMMARY

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Sample I.D.	Well I.D.	Sample Collection Date	Sample Collection Time	Sample Ship Date	QA/QC	Volume	Analysis
OW5A	OW5A	29-Nov-07	12:50	30-Nov-07		(A)	(C)
OW5B	OW5B	29-Nov-07	13:00	30-Nov-07		(A)	(C)
OW6A	OW6A	29-Nov-07	12:30	30-Nov-07	MS/MSD	(B)	(C)
OW6B	OW6B	29-Nov-07	12:40	30-Nov-07		(A)	(C)
OW7A	OW7A	29-Nov-07	13:10	30-Nov-07		(A)	(C)
OW7B	OW7B	29-Nov-07	13:20	30-Nov-07		(A)	(C)
OW8A	OW8A	28-Nov-07	14:40	28-Nov-07		(A)	(C)
OW8B	OW8B	28-Nov-07	14:50	28-Nov-07		(A)	(C)
OW9A	OW9A	28-Nov-07	15:00	28-Nov-07		(A)	(C)
OW9B	OW9B	28-Nov-07	15:10	28-Nov-07		(A)	(C)
OW11	OW11	28-Nov-07	15:20	28-Nov-07		(A)	(C)
OW12	OW12	28-Nov-07	14:30	28-Nov-07		(A)	(C)
OW13	OW13	28-Nov-07	14:20	28-Nov-07		(A)	(C)
OW15A	OW15A	27-Nov-07	14:30	28-Nov-07		(A)	(C)
OW15B	OW15B	27-Nov-07	14:40	28-Nov-07	MS/MSD	(B)	(C)
OW16A	OW16A	27-Nov-07	14:50	28-Nov-07		(A)	(C)
OW16B	OW16B	27-Nov-07	15:00	28-Nov-07		(A)	(C)
OW17A	OW17A	27-Nov-07	15:10	28-Nov-07		(A)	(C)
OW17B	OW17B	27-Nov-07	15:20	28-Nov-07		(A)	(C)
OW18A	OW18A	27-Nov-07	15:30	28-Nov-07		(A)	(C)
OW18B	OW18B	27-Nov-07	15:40	28-Nov-07		(A)	(C)
OW19A	OW19A	27-Nov-07	15:50	28-Nov-07		(A)	(C)
OW19B	OW19B	27-Nov-07	16:00	28-Nov-07		(A)	(C)
OW20	OW20	27-Nov-07	16:10	28-Nov-07		(A)	(C)
OW21A	OW21A	27-Nov-07	16:20	28-Nov-07		(A)	(C)
OW21B	OW21B	27-Nov-07	16:30	28-Nov-07		(A)	(C)
OW22	OW22	27-Nov-07	16:40	28-Nov-07		(A)	(C)
WW1	WW1	30-Nov-07	12:15	30-Nov-07		(A)	(C)
PW1	PW1	30-Nov-07	NS				
PW2	PW2	30-Nov-07	12:35	30-Nov-07		(A)	(C)
PW3	PW3	30-Nov-07	12:45	30-Nov-07		(A)	(C)
PW4	PW4	30-Nov-07	12:55	30-Nov-07		(A)	(C)
CHA-3	OW7A	29-Nov-07	13:30	30-Nov-07	Duplicate	(A)	(C)
CHA-4	OW19A	27-Nov-07	16:50	28-Nov-07	Duplicate	(A)	(C)

Notes:

(A) = Volume: Two 40 mL w/ preservative HCL, two 1 L amber w/no preservatives
(B) =Volume: Six 40 mL w/preservative HCL, six 1 L amber w/ no preservatives
(C) = Analyses: VOCs, SVOCs
QA/QC = Quality Assurance/Quality Control
NS: No sample due to pump not operating

TABLE 5
WELL DETAIL SUMMARY

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Well Location	Date Completed (D/M/Y)	Ground Elevation (ft. AMSL)	Total Depth (ft bgs)	Screened Interval ft bgs	Hydraulic Conductivity (cm/sec)
OW15A	10/23/2007	320.35	20.0	10.0 - 20.0	2.23E-05
OW15B	10/22/2007	320.26	40.0	30.0 - 40.0	3.28E-04
OW16A	10/23/2007	305.43	18.0	8.0 - 18.0	2.54E-04
OW16B	10/31/2007	305.43	38.0	28.0 - 38.0	3.39E-04
OW17A	10/31/2007	305.32	18.0	8.0 - 18.0	NM
OW17B	11/1/2007	305.19	33.0	23.0 - 33.0	4.31E-04
OW18A	10/25/2007	304.18	30.0	20.0 - 30.0	9.05E-05
OW18B	11/6/2007	304.43	45.0	35.0 - 45.0	6.85E-05
OW19A	10/30/2007	302.76	27.0	17.0 - 27.0	2.21E-04
OW19B	11/6/2007	302.76	50.0	40.0 - 50.0	1.25E-04
OW20	10/30/2007	305.74	18.0	8.0 - 18.0	2.58E-04
OW21A	10/29/2007	303.53	18.0	8.0 - 18.0	1.58E-04
OW21B	11/2/2007	303.67	33.0	23.0 - 33.0	1.46E-04
OW22	10/25/2007	302.62	18.5	8.5 - 18.5	1.26E-04

Notes:
NM = Not measured

TABLE 6
SUMMARY OF GROUNDWATER ELEVATION DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

Well / Location ID	*Reference Elevation TOC (ft)*	*Groundwater Elevation 11/26/2007*
WW1	292.96	264.16
PW1	290.68	270.48
PW2	290.66	272.36
PW3	302.83	284.93
PW4	303.73	288.06
OW5A-92	293.48	280.72
OW5B-92	292.08	275.99
OW6A-92	297.48	283.20
OW6B-92	298.01	278.30
OW7A-92	292.09	270.54
OW7B-92	291.61	273.51
OW8A-92	288.73	271.61
OW8B-92	289.11	272.31
OW9A-94	288.90	283.76
OW9B-94	288.30	273.87
OW11-94	293.90	284.30
OW12-94	332.10	312.68
OW13-94	303.50	294.12
EW2	303.37	293.92
OW15A-07*	323.34	308.14
OW15B-07*	323.37	295.47
OW16A-07*	307.37	293.72
OW16B-07*	307.17	288.69
OW17A-07*	307.33	294.13
OW17B-07*	307.97	288.58
OW18A-07*	307.03	286.13
OW18B-07*	307.65	281.05
OW19A-07*	305.8	288.80
OW19B-07*	305.65	276.45
OW20-07*	304.59	287.09
OW21A-07*	305.37	288.72
OW21B-07*	306.28	286.53
OW22-07*	307.59	294.74

Notes:

*Elevations based on record mapping provided by CRA.

TABLE 7
RAPID FIELD CHARACTERIZATION METHOD ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

			Parameter	*Benzene*	*Toluene*	*Chlorobenzene*	*Ethylbenzene*	*Total Xylene*	*Phenol*	*Total Cresol*[2]
			TAGM 4046 Guidance Values	60	1500	1700	5550	1200	30	100
Sampling Location:	*Sample Identification:*	*Sampling Date:*	*Depth Interval (ft. bgs):*							
B-37-07	000039	10/26/07	2 to 4	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	**9,000**
B-37-07	001136	10/26/07	8 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
B-37-07	001175	10/26/07	10 to 12	**2,800**	2900 U	3300 U	2300 U	4200 U	**28,300**	**201,400**
GP-01-07	000089	10/10/07	22 to 23	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-01-07	000138	10/10/07	9.5 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	**13,500**	3400 U
GP-08-07	000099	10/11/07	4 to 5.5	1600 U	2900 U	3300 U	**8,200**	4200 U	4700 U	3400 U
GP-08-07	000119	10/11/07	5 to 6	1600 U	2900 U	**6,000**	**17,800**	**83,100**	**8,200**	**8,600**
GP-09-07	000129	10/15/07	3 to 3.7	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-09-07	000126	10/15/07	7.7 to 8.3	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-09-07	000134	10/15/07	9 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-09-07	000143	10/15/07	11	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-12-07	000174	10/15/07	2	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-12-07	000164	10/15/07	5 to 5.5	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-14-07	000114	10/12/07	5	1600 U	2900 U	3300 U	**6,700**	**34,700**	**5,300**	**5,900**
GP-14-07	000160	10/12/07	6.9 to 7.3	1600 U	**8,400**	**5,800**	**16,600**	**100,500**	**20,600**	**63,400**
GP-16-07	000135	10/12/07	5	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-16-07	000147	10/12/07	9 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-17-07	000133	10/12/07	4 to 5.5	1600 U	2900 U	3300 U	2300 U	**31,100**	4700 U	3400 U
GP-17-07	000087	10/12/07	10 to 10.7	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-17-07	000091	10/12/07	19 to 20	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-18-07	000142	10/12/07	2	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-18-07	000090	10/12/07	7	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-18-07	000130	10/12/07	11 to 13	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-19-07	000085	10/11/07	2	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-19-07	000132	10/11/07	5	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-19-07	000120	10/11/07	8	1600 U	2900 U	**15,900**	2300 U	**5,200**	4700 U	3400 U
GP-19-07	000139	10/11/07	10 to 11	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-23-07	000144	10/11/07	0.8 to 1.3	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-23-07	000137	10/11/07	4.5 to 5	1600 U	2900 U	**8,800**	**5,200**	**2,800 J**	**8,100**	**37,000**
GP-23-07	000145	10/11/07	6 to 7	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	**3,200 J**
GP-23-07	000141	10/11/07	9.3 to 10	1600 U	**2,800 J**	3300 U	**3,900**	4200 U	**4,500 J**	**10,900**
GP-24-07	000163	10/11/07	8	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-29-07	000092	10/15/07	0.7 to 1.5	1600 U	**1,277,400**	3300 U	**371,000**	**1,315,900**	**88,500**	**359,200**
GP-29-07	000051	10/15/07	3 to 4	1600 U	**207,100**	**207,100**	**68,800**	**182,600**	**26,600**	**140,800**
GP-29-07	000095	10/15/07	9 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-33-07	000074	10/15/07	3 to 3.4	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-33-07	000075	10/15/07	10 to 11	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
GP-33-07	000038	10/15/07	16.5 to 17	1600 U	**22,100**	**7,900**	**57,900**	**419,700**	**58,800**	**33,700**
OW15A/B-04	000096	10/22/07	2 to 4	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW15A/B-05	000048	10/22/07	6 to 8	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW15A/B-06	000097	10/22/07	10 to 12	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW16A/B-07	000066	10/23/07	6 to 8	1600 U	2900 U	3300 U	2300 U	4200 U	**8,100**	**6,900**
OW16A/B-07	000042	10/23/07	8 to 10	1600 U	2900 U	3300 U	**35,700**	**13,600**	**6,800**	**17,700**
OW16A/B-07	000071	10/23/07	10 to 12	1600 U	**19,800**	3300 U	**24,700**	**27,900**	4700 U	3400 U
OW17A/B-07	000094	10/24/07	2 to 4	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW17A/B-07	000110	10/24/07	6 to 8	1600 U	**7,800**	3300 U	2300 U	4200 U	4700 U	3400 U
OW17A/B-07	000072	10/24/07	8 to 10	1600 U	**214,900**	**21,700**	**174,500**	**22,000**	**42,700**	**24,700**
OW17A/B-07	000069	10/24/07	10 to 12	1600 U	**2,100**	**6,900**	**15,300**	**39,400**	**4400 J**	**7,600**
OW18A/B-07	000041	10/25/07	4 to 6	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW18A/B-07	000047	10/25/07	10 to 12	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	**1,300 J**
OW18A/B-07	000084	10/25/07	16 to 18	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW18A/B-07	000064	10/25/07	20 to 22	1600 U	**3,700**	**7,300**	**4,500**	4200 U	**5,400**	**17,700**
OW19A/B-07	001653	10/30/07	6 to 8	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW19A/B-07	001134	10/30/07	10 to 12	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW19A/B-07	001139	10/30/07	14 to 16	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW19A/B-07	001140	10/30/07	18 to 20	**13,600**	**105,300**	**23,000**	**85,700**	**712,800**	**257,000**	**181,900**
OW19A/B-07	001138	10/30/07	20 to 22	**66,300**	**185,500**	**16,900**	**246,500**	**2,340,000**	**143,000**	**57,900**
OW20-07	001208	10/29/07	2 to 4	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW20-07	001213	10/29/07	4 to 6	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW20-07	001185	10/29/07	6 to 8	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW20-07	001184	10/29/07	8 to 10	1600 U	**9,700**	3300 U	**14,000**	**85,900**	4700 U	**10,700**
OW21A/B-07	001135	10/29/07	2 to 5	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW21A/B-07	001135	10/29/07	2 to 5	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW21A/B-07	001141	10/29/07	4 to 6	1600 U	2900 U	3300 U	2300 U	**17,000**	**47,600**	**244,700**
OW21A/B-07	001230	10/29/07	6 to 8	1600 U	**3,400**	3300 U	2300 U	**19,200**	**51,800**	**40,900**
OW21A/B-07	001225	10/29/07	8 to 10	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	**15,500**
OW22-07	000088	10/24/07	4 to 6	1600 U	2900 U	3300 U	2300 U	4200 U	4700 U	3400 U
OW22-07	000076	10/24/07	10 to 12	1600 U	**7,200**	3300 U	**259,800**	**917,100**	**3,800 J**	3400 U
OW22-07	000086	10/24/07	8 to 10	1600 U	**5,900**	**3,200 J**	**198,000**	**698,400**	**2,700**	3400 U

NOTES:
1. Units are shown as µg/Kg
2. NYSDEC Technical and Administrative Guidance Memorandum No. 4046
2. Guidance value based on TAGM 4046 Recommended Cleanup Objective for 2-Methylphenol (O-Cresol).

U - The compound was not detected at the indicated concentration.
J - Associated value is estimated.
Values in **BOLD** are detected compounds
▨ Indicates value exceeds TAGM 4046 Guidance Value.

TABLE 8
SOIL ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	GP-01-07	GP-08-07	GP-09-07	GP-14-07	GP-16-07	GP-17-07	GP-18-07	GP-18-07	GP-18-07	GP-19-07	GP-19-07	GP-23-07	GP-29-07
		Sample Identification	S-101007-SDN-001	S-101107-SDN-003	S-101507-SDN-017	S-101207-SDN-015	S-101207-SDN-018	S-101207-SDN-014	S-101207-SDN-011	S-101207-SDN-012	S-101207-SDN-013	S-101107-SDN-008	S-101107-SDN-010	S-101107-SDN-005	S-101507-SDN-023
		Sample Date	10/10/2007	10/11/2007	10/15/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/11/2007	10/11/2007	10/11/2007	10/15/2007
		Sample Start Depth	22	5	9	6.9	9	19	7	11	11	5	10	6	3
		Sample End Depth	23	6	10	7.3	10	20	7	13	13	5	11	7	4
PARAMETER	***UNITS***	***TAGM 4046 Guidance Values[1]***													
VOCs															
1,1,1-Trichloroethane	ug/kg	800	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,1,2,2-Tetrachloroethane	ug/kg	600	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,1,2-Trichloroethane	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,1-Dichloroethane	ug/kg	200	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,1-Dichloroethene	ug/kg	400	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,2-Dichloroethane	ug/kg	100	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
1,2-Dichloropropane	ug/kg	300	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
2-Butanone	ug/kg	300	12 U	1300 U	14 U	2500 U	12 U	**9.9 J**	12 U	13 U	14 U	13 U	13 U	13 U	13000 U
2-Hexanone	ug/kg	NA	12 U	1300 U	14 U	2500 U	12 U	13 U	12 U	13 U	14 U	13 U	13 U	13 U	13000 U
4-Methyl-2-Pentanone	ug/kg	1000	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Acetone	ug/kg	200	22 U	3300 U	**9.1 J**	**28000 J**	**28 J**	95 U	25 U	37 U	30 U	22 U	30 U	35 U	32000 U
Benzene	ug/kg	60	6.1 U	1300 U	6.8 U	**890 J**	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Bromodichloromethane	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Bromoform	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Bromomethane	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 UR	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 UR	13000 U
Carbon Disulfide	ug/kg	2700	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	**1.5 J**	6.4 U	13000 U
Carbon Tetrachloride	ug/kg	600	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Chlorobenzene	ug/kg	1700	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Chlorodibromomethane	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Chloroethane	ug/kg	1900	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Chloroform	ug/kg	300	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Chloromethane	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Cis-1,2-Dichloroethene	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Cis-1,3-Dichloropropene	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Ethylbenzene	ug/kg	5500	6.1 U	**13000**	6.8 U	**14000**	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	**64**	**76**	**54000**
Methylene Chloride	ug/kg	100	8.1 U	1300 U	2.6 U	2500 U	3.3 U	20 U	11 U	11 U	14 U	5.9 U	7 U	6.5 U	13000 U
Styrene	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Tetrachloroethene	ug/kg	1400	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Toluene	ug/kg	1500	6.1 U	1300 U	6.8 U	**2000 J**	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	**240000**
Total Xylenes	ug/kg	1200	6.1 U	**83000**	6.8 U	**100000**	**17**	6.6 U	6 U	6.6 U	6.8 U	6.4 U	**210**	**12**	**150000**
Trans-1,2-Dichloroethene	ug/kg	300	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Trans-1,3-Dichloropropene	ug/kg	NA	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Trichloroethylene	ug/kg	700	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
Vinyl Chloride	ug/kg	200	6.1 U	1300 U	6.8 U	2500 U	5.9 U	6.6 U	6 U	6.6 U	6.8 U	6.4 U	6.7 U	6.4 U	13000 U
SVOCs															
1,2,4-Trichlorobenzene	ug/kg	3400	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
1,2-Dichlorobenzene	ug/kg	7900	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
1,3-Dichlorobenzene	ug/kg	1600	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
1,4-Dichlorobenzene	ug/kg	8500	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2,2'-oxybis[1-chloropropane]	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2,4- Dichlorophenol	ug/kg	400	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2,4,5-Trichlorophenol	ug/kg	100	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
2,4,6-Trichlorophenol	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2,4-Dimethylphenol	ug/kg	50,000**	390 U	430 U	450 U	**200000**	**120 J**	**580 J**	390 U	430 U	440 U	400 U	440 U	420 U	**28000**
2,4-Dinitrophenol	ug/kg	200 or MDL	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
2,4-Dinitrotoluene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2,6-Dinitrotoluene	ug/kg	1000	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2-Chloronaphthalene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2-Chlorophenol	ug/kg	800	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
2-Methylnaphthalene	ug/kg	36400	390 U	**4400**	450 U	**17000 J**	**73 J**	**750 J**	390 U	430 U	440 U	400 U	440 U	**130 J**	**63000**
2-Methylphenol	ug/kg	100 or MDL	390 U	430 U	450 U	**18000 J**	370 U	1700 U	390 U	430 U	440 U	**110 J**	440 U	420 U	20000 U
2-Nitroaniline	ug/kg	430 or MDL	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
2-Nitrophenol	ug/kg	330 or MDL	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
3,3`-Dichlorobenzidine	ug/kg	50,000**	780 U	850 U	890 U	82000 U	750 U	3400 U	780 U	870 U	870 U	800 U	880 U	850 U	41000 U
3-Nitroaniline	ug/kg	500 or MDL	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
4,6-Dinitro-2-Methylphenol	ug/kg	50,000**	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
4-Bromophenyl Phenyl Ether	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
4-Chloro-3-Methylphenol	ug/kg	240	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U

TABLE 8
SOIL ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	GP-01-07	GP-08-07	GP-09-07	GP-14-07	GP-16-07	GP-17-07	GP-18-07	GP-18-07	GP-18-07	GP-19-07	GP-19-07	GP-23-07	GP-29-07
		Sample Identification	S-101007-SDN-001	S-101107-SDN-003	S-101507-SDN-017	S-101207-SDN-015	S-101207-SDN-018	S-101207-SDN-014	S-101207-SDN-011	S-101207-SDN-012	S-101207-SDN-013	S-101107-SDN-008	S-101107-SDN-010	S-101107-SDN-005	S-101507-SDN-023
		Sample Date	10/10/2007	10/11/2007	10/15/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/12/2007	10/11/2007	10/11/2007	10/11/2007	10/15/2007
		Sample Start Depth	22	5	9	6.9	9	19	7	11	11	5	10	6	3
		Sample End Depth	23	6	10	7.3	10	20	7	13	13	5	11	7	4
PARAMETER	***UNITS***	***TAGM 4046 Guidance Values***[1]													
SVOCs, con't															
4-Chloroaniline	ug/kg	220 or MDL	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
4-Chlorophenyl Phenylether	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
4-Methylphenol	ug/kg	900	390 U	430 U	450 U	**130000**	**57 J**	**1900**	390 U	430 U	440 U	**250 J**	440 U	420 U	20000 U
4-Nitroaniline	ug/kg	50,000**	780 U	850 U	890 U	82000 U	750 U	3400 U	780 U	870 U	870 U	800 U	880 U	850 U	41000 U
4-Nitrophenol	ug/kg	100 or MDL	1900 U	2100 U	2200 U	200000 U	1800 U	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
Acenaphthene	ug/kg	50,000**	390 U	**270 J**	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	**410 J**	20000 U
Acenaphthylene	ug/kg	41,000	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Anthracene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzo(A)Anthracene	ug/kg	224 or MDL	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzo(A)Pyrene	ug/kg	61 or MDL	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzo(B)Fluoranthene	ug/kg	1100	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzo(G,H,I)Perylene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzo(K)Fluoranthene	ug/kg	1100	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Benzyl Alcohol	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Bis(2-Chloroethoxy) Methane	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Bis(2-Chloroethyl) Ether	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Bis(2-Ethylhexyl) Phthalate	ug/kg	50,000**	390 U	**130 J**	450 U	41000 U	190 U	1700 U	390 U	430 U	440 U	**55 J**	440 U	420 U	20000 U
Butyl Benzyl Phthalate	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Carbazole	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Chrysene	ug/kg	400	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Dibenzo(A,H)Anthracene	ug/kg	14 or MDL	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Dibenzofuran	ug/kg	6200	390 U	**370 J**	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	**330 J**	20000 U
Diethylphthalate	ug/kg	7100	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Dimethylphthalate	ug/kg	2000	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Di-N-Butylphthalate	ug/kg	8100	390 U	430 U	450 U	**11000 J**	370 U	**350 J**	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Di-N-Octyl Phthalate	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Fluoranthene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Fluorene	ug/kg	50,000**	390 U	**250 J**	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	**340 J**	20000 U
Hexachlorobenzene	ug/kg	410	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Hexachlorobutadiene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Hexachlorocyclopentadiene	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Hexachloroethane	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Indeno(1,2,3-Cd)Pyrene	ug/kg	3200	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Isophorone	ug/kg	4400	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Naphthalene	ug/kg	13000	390 U	**5300**	450 U	**53000**	**93 J**	**730 J**	390 U	430 U	440 U	400 U	440 U	**340 J**	**180000**
Nitrobenzene	ug/kg	200	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
N-Nitroso-Di-N-Propylamine	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
N-Nitrosodiphenylamine	ug/kg	50,000**	390 U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Pentachlorophenol	ug/kg	1000 or MDL	1900 U	2100 U	2200 U	200000 U	**42 J**	8300 U	1900 U	2100 U	2100 U	1900 U	2100 U	2000 U	99000 U
Phenanthrene	ug/kg	50,000**	390 U	**130 J**	450 U	41000 U	370 U	**470 J**	390 U	430 U	440 U	400 U	440 U	**280 J**	20000 U
Phenol	ug/kg	30 or MDL	390 U	430 U	450 U	**6200 J**	**120 J**	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U
Pyrene	ug/kg	50,000**	U	430 U	450 U	41000 U	370 U	1700 U	390 U	430 U	440 U	400 U	440 U	420 U	20000 U

NOTES:
1. NYSDEC Technical and Administrative Guidance Memorandum No. 4046.
*** As per TAGM #4046, Total VOCs < 10 ppm.
** As per TAGM 4046, Individual SVOCs < 50,000 µg/kg.
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
R - Data qualified as unusable based on validation guidance criteria. The rejected data may be determined to be usable to the user based on additional information that is not contained in the data validation criteria.
M - Manual integrated compound.
NA - Guidance value not available
NR - Not analyzed
BOLD values are detected compounds
▨ Indicates associated value exceeds TAGM 4046 standard or guidance value.

TABLE 8
SOIL ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	GP-33-07	GP-33-07	OW15A/B-06	OW16A/B-07	OW17A/B-07	OW18A/B-07	OW19A/B-07	OW20-07	OW21A/B-07	OW21A/B-07_D	OW22-07
		Sample Identification	S-101507-SDN-026	S-101507-SDN-027	S-102207-SDN-028	S-102307-SDN-029	S-102407-SDN-030	S-102507-SDN-032	S-103007-SDN-036	S-102907-SDN-035	S-102907-SDN-033	S-102907-SDN-034	S-102407-SDN-031
		Sample Date	10/15/2007	10/15/2007	10/22/2007	10/23/2007	10/24/2007	10/25/2007	10/30/2007	10/29/2007	10/29/2007	10/29/2007	10/24/2007
		Sample Start Depth	10	16.5	10	10	10	20	6	2	2	2	8
		Sample End Depth	11	17	12	12	12	22	8	4	5	5	10
PARAMETER	***UNITS***	***TAGM 4046 Guidance Values***[1]											
VOCs													
1,1,1-Trichloroethane	ug/kg	800	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,1,2,2-Tetrachloroethane	ug/kg	600	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,1,2-Trichloroethane	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,1-Dichloroethane	ug/kg	200	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,1-Dichloroethene	ug/kg	400	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,2-Dichloroethane	ug/kg	100	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
1,2-Dichloropropane	ug/kg	300	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
2-Butanone	ug/kg	300	**7.9 J**	6500 U	13 U	1500 U	1300 U	**27**	12 U	12 U	620 U	610 U	12000 U
2-Hexanone	ug/kg	NA	12 U	6500 U	13 U	1500 U	1300 U	13 U	12 U	12 U	620 U	610 U	12000 U
4-Methyl-2-Pentanone	ug/kg	1000	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Acetone	ug/kg	200	**62 J**	**8400 J**	26 U	3600 U	3300 U	**61**	**75**	24 U	1500 U	1500 U	30000 U
Benzene	ug/kg	60	6 U	**780 J**	6.4 U	1500 U	1300 U	**3.1 J**	6.2 U	6.1 U	620 U	610 U	12000 U
Bromodichloromethane	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Bromoform	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Bromomethane	ug/kg	NA	6 U	6500 UR	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Carbon Disulfide	ug/kg	2700	6 U	6500 U	6.4 U	1500 U	1300 U	**1 J**	6.2 U	6.1 U	620 U	610 U	12000 U
Carbon Tetrachloride	ug/kg	600	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Chlorobenzene	ug/kg	1700	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Chlorodibromomethane	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Chloroethane	ug/kg	1900	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Chloroform	ug/kg	300	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Chloromethane	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Cis-1,2-Dichloroethene	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Cis-1,3-Dichloropropene	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Ethylbenzene	ug/kg	5500	6 U	**81000**	6.4 U	**28000**	**25000**	**160**	**2.3 J**	6.1 U	**250 J**	**310 J**	**190000**
Methylene Chloride	ug/kg	100	8.3 U	6500 U	**4.2 J**	**220 J**	1300 U	**7.7 J**	9.7 U	4.8 U	620 U	610 U	12000 U
Styrene	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Tetrachloroethene	ug/kg	1400	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Toluene	ug/kg	1500	6 U	**130000**	6.4 U	**12000**	1300 U	3.1 U	6.2 U	6.1 U	620 U	610 U	**2300 J**
Total Xylenes	ug/kg	1200	6 U	**710000**	6.4 U	**120000**	**84000**	**330**	**20**	6.1 U	**5100**	**5700**	**700000**
Trans-1,2-Dichloroethene	ug/kg	300	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Trans-1,3-Dichloropropene	ug/kg	NA	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Trichloroethylene	ug/kg	700	6 U	6500 U	6.4 U	1500 U	**490 J**	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
Vinyl Chloride	ug/kg	200	6 U	6500 U	6.4 U	1500 U	1300 U	6.4 U	6.2 U	6.1 U	620 U	610 U	12000 U
SVOCs													
1,2,4-Trichlorobenzene	ug/kg	3400	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
1,2-Dichlorobenzene	ug/kg	7900	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
1,3-Dichlorobenzene	ug/kg	1600	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
1,4-Dichlorobenzene	ug/kg	8500	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2,2'-oxybis[1-chloropropane]	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2,4- Dichlorophenol	ug/kg	400	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2,4,5-Trichlorophenol	ug/kg	100	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
2,4,6-Trichlorophenol	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2,4-Dimethylphenol	ug/kg	50,000**	390 U	**1300000**	400 U	**200 J**	8600 U	2100 U	410 U	**220 J**	810 U	3900 U	**400**
2,4-Dinitrophenol	ug/kg	200 or MDL	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
2,4-Dinitrotoluene	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2,6-Dinitrotoluene	ug/kg	1000	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2-Chloronaphthalene	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2-Chlorophenol	ug/kg	800	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
2-Methylnaphthalene	ug/kg	36400	390 U	83000 U	400 U	**780**	**22000**	**10000**	**78 J**	**2800**	**1400 J**	**4000 J**	**98 J**
2-Methylphenol	ug/kg	100 or MDL	390 U	**100000**	400 U	480 U	8600 U	2100 U	410 U	**250 J**	810 U	3900 U	400 U
2-Nitroaniline	ug/kg	430 or MDL	1900 U	**130000 J**	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
2-Nitrophenol	ug/kg	330 or MDL	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
3,3`-Dichlorobenzidine	ug/kg	50,000**	790 U	170000 U	800 U	960 U	17000 U	4200 U	820 U	790 U	1600 U	7700 U	800 U
3-Nitroaniline	ug/kg	500 or MDL	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
4,6-Dinitro-2-Methylphenol	ug/kg	50,000**	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
4-Bromophenyl Phenyl Ether	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
4-Chloro-3-Methylphenol	ug/kg	240	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U

TABLE 8
SOIL ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	GP-33-07	GP-33-07	OW15A/B-06	OW16A/B-07	OW17A/B-07	OW18A/B-07	OW19A/B-07	OW20-07	OW21A/B-07	OW21A/B-07_D	OW22-07
		Sample Identification	S-101507-SDN-026	S-101507-SDN-027	S-102207-SDN-028	S-102307-SDN-029	S-102407-SDN-030	S-102507-SDN-032	S-103007-SDN-036	S-102907-SDN-035	S-102907-SDN-033	S-102907-SDN-034	S-102407-SDN-031
		Sample Date	10/15/2007	10/15/2007	10/22/2007	10/23/2007	10/24/2007	10/25/2007	10/30/2007	10/29/2007	10/29/2007	10/29/2007	10/24/2007
		Sample Start Depth	10	16.5	10	10	10	20	6	2	2	2	8
		Sample End Depth	11	17	12	12	12	22	8	4	5	5	10
PARAMETER	***UNITS***	***TAGM 4046 Guidance Values[1]***											
SVOCs, con't													
4-Chloroaniline	ug/kg	220 or MDL	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
4-Chlorophenyl Phenylether	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
4-Methylphenol	ug/kg	900	390 U	**580000**	400 U	480 U	8600 U	2100 U	**70 J**	**1300**	810 U	3900 U	400 U
4-Nitroaniline	ug/kg	50,000**	790 U	170000 U	800 U	960 U	17000 U	**5900**	820 U	790 U	1600 U	7700 U	800 U
4-Nitrophenol	ug/kg	100 or MDL	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
Acenaphthene	ug/kg	50,000**	390 U	83000 U	400 U	480 U	**1900 J**	**3700**	410 U	**920**	810 U	3900 U	400 U
Acenaphthylene	ug/kg	41,000	390 U	83000 U	400 U	480 U	8600 U	**1400 J**	410 U	**180 J**	810 U	3900 U	400 U
Anthracene	ug/kg	50,000**	390 UM	83000 U	**160 J**	480 U	8600 UM	**2000 J**	410 UM	**110 J**	810 U	3900 U	400 U
Benzo(A)Anthracene	ug/kg	224 or MDL	**120 J**	83000 U	**450**	480 U	8600 U	**6100**	**150 J**	**190 J**	810 U	3900 U	400 U
Benzo(A)Pyrene	ug/kg	61 or MDL	**96 J**	83000 U	**320 J**	480 U	8600 U	**4100**	**140 J**	**150 J**	**120 J**	3900 U	400 U
Benzo(B)Fluoranthene	ug/kg	1100	**130 J**	83000 U	**390 J**	480 U	8600 U	**7100**	180 J	**270 J**	**230 J**	3900 U	400 U
Benzo(G,H,I)Perylene	ug/kg	50,000**	**79 J**	83000 U	**280 J**	480 U	8600 U	**5600**	**110 J**	**180 J**	**180 J**	3900 U	400 U
Benzo(K)Fluoranthene	ug/kg	1100	390 U	83000 U	**150 J**	480 U	8600 U	**2800**	410 UM	**78 J**	810 UM	3900 U	400 U
Benzyl Alcohol	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Bis(2-Chloroethoxy) Methane	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Bis(2-Chloroethyl) Ether	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Bis(2-Ethylhexyl) Phthalate	ug/kg	50,000**	**82 J**	**33000 JB**	99 U	480 U	8600 U	**940 J**	190 U	220 U	340 U	3900 U	**200 J**
Butyl Benzyl Phthalate	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Carbazole	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	**720 J**	410 U	400 U	810 U	3900 U	400 U
Chrysene	ug/kg	400	**130 J**	83000 U	**400 J**	480 U	8600 U	**6600**	190 J	**300 J**	810 U	3900 U	400 U
Dibenzo(A,H)Anthracene	ug/kg	14 or MDL	390 U	83000 U	**72 J**	480 U	8600 U	**2300**	**210 J**	**220 J**	810 U	3900 U	400 U
Dibenzofuran	ug/kg	6200	390 U	83000 U	400 U	480 U	**1900 J**	**4100**	410 U	**1000**	810 U	3900 U	400 U
Diethylphthalate	ug/kg	7100	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Dimethylphthalate	ug/kg	2000	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Di-N-Butylphthalate	ug/kg	8100	390 U	83000 U	400 U	480 U	**120000**	2100 U	410 U	**920**	810 U	3900 U	400 U
Di-N-Octyl Phthalate	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Fluoranthene	ug/kg	50,000**	**250 J**	83000 U	**870**	480 U	8600 U	**15000**	240 U	360 U	140 U	3900 U	400 U
Fluorene	ug/kg	50,000**	390 U	83000 U	**84 J**	480 U	**1700 J**	**3300**	410 U	**140 J**	810 U	3900 U	400 U
Hexachlorobenzene	ug/kg	410	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Hexachlorobutadiene	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Hexachlorocyclopentadiene	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Hexachloroethane	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Indeno(1,2,3-Cd)Pyrene	ug/kg	3200	**74 J**	83000 U	**290 J**	480 U	8600 U	**7000**	330 U	370 U	590 U	3900 U	400 U
Isophorone	ug/kg	4400	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Naphthalene	ug/kg	13000	390 U	**19000 J**	400 U	**1300**	**21000**	**9500**	**86 J**	**2400**	**9900 J**	**25000 J**	**220 J**
Nitrobenzene	ug/kg	200	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
N-Nitroso-Di-N-Propylamine	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
N-Nitrosodiphenylamine	ug/kg	50,000**	390 U	83000 U	400 U	480 U	8600 U	2100 U	410 U	400 U	810 U	3900 U	400 U
Pentachlorophenol	ug/kg	1000 or MDL	1900 U	400000 U	2000 U	2300 U	42000 U	10000 U	2000 U	1900 U	3900 U	19000 U	1900 U
Phenanthrene	ug/kg	50,000**	**170 J**	83000 U	**830**	480 U	**2800 J**	**8200**	**210 J**	**500**	810 U	3900 U	400 U
Phenol	ug/kg	30 or MDL	390 U	**210000**	400 U	480 U	8600 U	**910 J**	410 U	**510**	810 U	3900 U	**620**
Pyrene	ug/kg	50,000**	240 J	83000 U	**930**	480 U	8600 U	**13000**	270 U	**360 JB**	120 U	3900 U	400 U

NOTES:
1. NYSDEC Technical and Administrative Guidance Memorandum No. 4046.
*** As per TAGM #4046, Total VOCs < 10 ppm.
** As per TAGM 4046, Individual SVOCs < 50,000 µg/kg.
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
R - Data qualified as unusable based on validation guidance criteria. The rejected data may be determined to be usable to the user based on additional information that is not contained in the data validation criteria.
M - Manual integrated compound.
NA - Guidance value not available
NR - Not analyzed
BOLD values are detected compounds
▨ Indicates associated value exceeds TAGM 4046 standard or guidance value.

TABLE 9
GEOPROBE WATER SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	**GP-01-07**	**GP-08-07**	**GP-09-07**	**GP-12-07**	**GP-12-07**	**GP-14-07**	**GP-16-07**	**GP-19-07**	**GP-23-07**	**GP-24-07**	**GP-29-07**	**GP-29-07**
		Sample Identification	**GW-101007-SDN-002**	**GW-101107-SDN-004**	**GW-101507-SDN-020**	**GW-101507-SDN-021**	**GW-101507-SDN-022**	**GW-101207-SDN-016**	**GW-101207-SDN-019**	**GW-101107-SDN-009**	**GW-101107-SDN-006**	**GW-101107-SDN-007**	**GW-101507-SDN-024**	**GW-101507-SDN-025**
		Sample Date	**10/10/2007**	**10/11/2007**	**10/15/2007**	**10/15/2007**	**10/15/2007**	**10/12/2007**	**10/12/2007**	**10/11/2007**	**10/11/2007**	**10/11/2007**	**10/15/2007**	**10/15/2007**
		Sample Start Depth	**26**	**22**	**15**	**28**	**33**	**19**	**13**	**10**	**23**	**28**	**30**	**30**
		Sample End Depth	**28**	**24**	**17**	**30**	**35**	**20**	**15**	**11**	**25**	**30**	**32**	**32**
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***												
Volatiles														
1,1,1-Trichloroethane	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	0.6	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	1	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	µg/L	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	µg/L	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**7.6 J**	10 U	10 U	10 U	4.1 U	3.3 U	3.2 U
Benzene	µg/L	1	5 U	5 U	5 U	5 U	5 U	**7.2**	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	µg/L	50^{2}	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	µg/L	50^{2}	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 UR	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	µg/L	NA	5 U	5 U	5 U	5 U	5 U	5 U	**0.97 JM**	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	µg/L	50^{2}	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform	µg/L	7	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	µg/L	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cis-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cis-1,3-Dichloropropene	µg/L	0.4	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	µg/L	5	5 U	5 U	5 U	5 U	5 U	**23**	**26**	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UM	0.33 U	5 U	5 U
Styrene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene	µg/L	5	5 U	5 U	5 U	5 U	5 U	**6.3**	**0.77 J**	5 U	5 U	5 U	**0.87 J**	**2.4 J**
Total Xylenes	µg/L	5	5 U	5 U	5 U	5 U	5 U	**200**	**120**	5 U	5 U	5 U	5 U	5 U
Trans-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	µg/L	NA	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	µg/L	5	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	µg/L	2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
SVOCs														
1,2,4-Trichlorobenzene	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
1,2-Dichlorobenzene	µg/L	3	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
1,3-Dichlorobenzene	µg/L	3	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
1,4-Dichlorobenzene	µg/L	3	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2,2'-oxybis[1-chloropropane]	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2,4- Dichlorophenol	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2,4,5-Trichlorophenol	µg/L	1	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
2,4,6-Trichlorophenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2,4-Dimethylphenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	**610**	**34**	13 U	14 U	15 U	11 U	11 U
2,4-Dinitrophenol	µg/L	1^{3}	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
2,4-Dinitrotoluene	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2,6-Dinitrotoluene	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2-Chloronaphthalene	µg/L	10^{2}	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2-Chlorophenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
2-Methylnaphthalene	µg/L	50^{2}	12 U	17 U	10 U	10 U	10 U	100 U	**2.2 J**	13 U	14 U	15 U	11 U	11 U
2-Methylphenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	**88 J**	**9.5 J**	13 U	14 U	15 U	11 U	11 U
2-Nitroaniline	µg/L	5	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
2-Nitrophenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
3,3`-Dichlorobenzidine	µg/L	5	12 U	17 U	10 UJ	10 UJ	10 UJ	100 U	11 U	13 U	14 U	15 U	11 UJ	11 UJ
3-Nitroaniline	µg/L	5	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
4,6-Dinitro-2-Methylphenol	µg/L	1^{3}	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
4-Bromophenyl Phenyl Ether	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
4-Chloro-3-Methylphenol	µg/L	1^{3}	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U

TABLE 9
GEOPROBE WATER SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	**GP-01-07**	**GP-08-07**	**GP-09-07**	**GP-12-07**	**GP-12-07**	**GP-14-07**	**GP-16-07**	**GP-19-07**	**GP-23-07**	**GP-24-07**	**GP-29-07**	**GP-29-07**
		Sample Identification	**GW-101007-SDN-002**	**GW-101107-SDN-004**	**GW-101507-SDN-020**	**GW-101507-SDN-021**	**GW-101507-SDN-022**	**GW-101207-SDN-016**	**GW-101207-SDN-019**	**GW-101107-SDN-009**	**GW-101107-SDN-006**	**GW-101107-SDN-007**	**GW-101507-SDN-024**	**GW-101507-SDN-025**
		Sample Date	**10/10/2007**	**10/11/2007**	**10/15/2007**	**10/15/2007**	**10/15/2007**	**10/12/2007**	**10/12/2007**	**10/11/2007**	**10/11/2007**	**10/11/2007**	**10/15/2007**	**10/15/2007**
		Sample Start Depth	**26**	**22**	**15**	**28**	**33**	**19**	**13**	**10**	**23**	**28**	**30**	**30**
		Sample End Depth	**28**	**24**	**17**	**30**	**35**	**20**	**15**	**11**	**25**	**30**	**32**	**32**
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***												
SVOCs, con't														
4-Chloroaniline	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
4-Chlorophenyl Phenylether	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
4-Methylphenol	µg/L	1^3	12 U	17 U	10 U	10 U	10 U	**730**	**44**	13 U	14 U	15 U	11 U	**0.46 J**
4-Nitroaniline	µg/L	5	24 U	34 U	20 U	20 U	20 U	210 U	22 U	25 U	29 U	31 U	22 U	22 U
4-Nitrophenol	µg/L	1^3	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
Acenaphthene	µg/L	20^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Acenaphthylene	µg/L	20	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Anthracene	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzo(A)Anthracene	µg/L	0.002^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzo(A)Pyrene	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzo(B)Fluoranthene	µg/L	0.002^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzo(G,H,I)Perylene	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzo(K)Fluoranthene	µg/L	0.002^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Benzyl Alcohol	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Bis(2-Chloroethoxy) Methane	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Bis(2-Chloroethyl) Ether	µg/L	1	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Bis(2-Ethylhexyl) Phthalate	µg/L	5	**2.3 J**	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Butyl Benzyl Phthalate	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Carbazole	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Chrysene	µg/L	0.002^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Dibenzo(A,H)Anthracene	µg/L	50	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Dibenzofuran	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Diethylphthalate	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Dimethylphthalate	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Di-N-Butylphthalate	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	**38 J**	11 U	13 U	14 U	15 U	11 U	11 U
Di-N-Octyl Phthalate	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Fluoranthene	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Fluorene	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Hexachlorobenzene	µg/L	0.04	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Hexachlorobutadiene	µg/L	0.5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Hexachlorocyclopentadiene	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Hexachloroethane	µg/L	5	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Indeno(1,2,3-Cd)Pyrene	µg/L	0.002^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Isophorone	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Naphthalene	µg/L	10	12 U	17 U	10 U	10 U	10 U	**10 J**	**2.7 J**	13 U	14 U	15 U	11 U	11 U
Nitrobenzene	µg/L	0.4	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
N-Nitroso-Di-N-Propylamine	µg/L	NA	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
N-Nitrosodiphenylamine	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Pentachlorophenol	µg/L	1^3	61 U	85 U	50 U	50 U	50 U	520 U	56 U	63 U	71 U	77 U	56 U	56 U
Phenanthrene	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U
Phenol	µg/L	1^3	12 U	17 U	10 U	10 U	10 U	**29 J**	**7.6 J**	13 U	14 U	15 U	11 U	11 U
Pyrene	µg/L	50^2	12 U	17 U	10 U	10 U	10 U	100 U	11 U	13 U	14 U	15 U	11 U	11 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values")
2. Indicates value is a guidance value rather than a standard.
3. Applies to sum of all phenolic compounds

U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero
The concentration given is an approximate value.
R - Data qualified as unusable based on validation guidance criteria. The rejected data may be determined to be usable to the user based on additional information that is not contained in the data validation criteria
M - Manual integrated compound.
NA - Guidance value not available
BOLD values are detected compounds
▨ Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater.

TABLE 10
GROUNDWATER WELL SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	**OW5A-92**	**OW5B-92**	**OW6A-92**	**OW6B-92**	**OW7A-92**	**OW7A-92**	**OW7B-92**	**OW8A-92**	**OW8B-92**	**OW9A-94**	**OW9B-94**	**WW1**	**PW1**	**PW2**	**PW3**	**PW4**	**OW11-94**	**OW12-94**
		Sample Identification	**OW5A**	**OW5B**	**OW6A**	**OW6B**	**OW7A**	**CHA-3**	**OW7B**	**OW-8A**	**OW-8B**	**OW-9A**	**OW-9B**	**WW1**	**PW1**	**PW2**	**PW3**	**PW4**	**OW-11**	**OW-12**
		Sample Date	**11/29/07**	**11/29/07**	**11/29/07**	**11/29/07**	**11/29/07**	**11/29/07**	**11/29/07**	**11/28/07**	**11/28/07**	**11/28/07**	**11/28/07**	**11/30/07**	**11/30/07**	**11/30/07**	**11/30/07**	**11/30/07**	**11/28/07**	**11/28/07**
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***																		
Volatiles																				
1,1,1-Trichloroethane	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	1	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	0.6	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	1	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
2-Butanone	µg/L	NA	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U	20 U	NM	200 U	10 U	10 U	10 U	10 U
2-Hexanone	µg/L	50[2]	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U	20 U	NM	200 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	µg/L	NA	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U	20 U	NM	200 U	10 U	10 U	10 U	10 U
Acetone	µg/L	50[2]	10 U	10 U	10 U	10 U	100 U	100 U	10 U	10 U	10 U	10 U	10 U	20 U	NM	200 U	10 U	10 U	10 U	10 U
Benzene	µg/L	1	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	**2.2 J**	NM	**7.2 J**	**0.35 J**	**0.56 J**	**0.6 J**	5 U
Bromodichloromethane	µg/L	50[2]	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Bromoform	µg/L	50[2]	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Bromomethane	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Carbon Disulfide	µg/L	NA	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 UJ	5 UJ	5 U	5 U	5 U
Carbon Tetrachloride	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Chlorobenzene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	**1.7 J**	5 U	5 U	5 U
Chlorodibromomethane	µg/L	50[2]	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Chloroethane	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Chloroform	µg/L	7	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	**2.1 J**
Chloromethane	µg/L	NA	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Cis-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Cis-1,3-Dichloropropene	µg/L	0.4	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Ethylbenzene	µg/L	5	5 U	5 U	5 U	5 UM	**1000**	**1000**	5 U	5 U	5 U	5 U	5 U	**350**	NM	**1100**	5 U	**22**	**3.8 J**	5 U
Methylene Chloride	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Styrene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	**140**	5 U	5 U	5 U	5 U
Tetrachloroethene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Toluene	µg/L	5	5 U	5 U	5 U	5 U	**27 J**	**30 J**	5 U	5 U	5 U	5 U	5 U	**72**	NM	**7.6 J**	5 U	**2.8 J**	5 U	5 U
Total Xylenes	µg/L	5	5 U	5 U	5 U	**1.1 J**	**1800**	**1700**	5 U	5 U	5 U	5 U	5 U	**850**	NM	**4700**	**0.66 J**	**54**	**1.7 J**	5 U
Trans-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	µg/L	NA	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Trichloroethylene	µg/L	5	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Vinyl Chloride	µg/L	2	5 U	5 U	5 U	5 U	50 U	50 U	5 U	5 U	5 U	5 U	5 U	10 U	NM	100 U	5 U	5 U	5 U	5 U
Semi-Volatiles																				
1,2,4-Trichlorobenzene	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
1,2-Dichlorobenzene	µg/L	3	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
1,3-Dichlorobenzene	µg/L	3	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
1,4-Dichlorobenzene	µg/L	3	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2,2'-oxybis[1-chloropropane]	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2,4- Dichlorophenol	µg/L	5	50 U	53 U	55 U	50 U	1100 U	500 UJ	53 U	10 U	10 U	10 UHJ	10 U	570 U	NM	2700 U	52 U	56 U	20 U	10 U
2,4,5-Trichlorophenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	52 U	50 U	50 UHJ	50 U	110 U	NM	540 U	10 U	11 U	100 U	50 U
2,4,6-Trichlorophenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2,4-Dimethylphenol	µg/L	1[3]	10 U	11 U	11 U	10 U	**45 JM**	**26 J**	11 U	10 U	10 U	10 UHJ	10 U	**340 M**	NM	540 U	10 U	**9.9 J**	**120**	10 U
2,4-Dinitrophenol	µg/L	1[3]	50 U	53 U	55 U	50 U	1100 U	500 UJ	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
2,4-Dinitrotoluene	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2,6-Dinitrotoluene	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2-Chloronaphthalene	µg/L	10[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2-Chlorophenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
2-Methylnaphthalene	µg/L	50[2]	10 U	11 U	11 U	10 U	**180 J**	**110**	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	**390 J**	10 U	11 U	20 U	10 U
2-Methylphenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	**51 J**	NM	540 U	10 U	11 U	20 U	10 U
2-Nitroaniline	µg/L	5	50 U	53 U	55 U	50 U	1100 U	500 U	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
2-Nitrophenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
3,3`-Dichlorobenzidine	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
3-Nitroaniline	µg/L	5	50 U	53 U	55 U	50 U	1100 U	500 U	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
4,6-Dinitro-2-Methylphenol	µg/L	1[3]	50 U	53 U	55 U	50 U	1100 U	500 UJ	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
4-Bromophenyl Phenyl Ether	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
4-Chloro-3-Methylphenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U

TABLE 10
GROUNDWATER WELL SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

PARAMETER	Units	TOGS 1.1.1 Guidance Value	OW5A-92	OW5B-92	OW6A-92	OW6B-92	OW7A-92	OW7A-92	OW7B-92	OW8A-92	OW8B-92	OW9A-94	OW9B-94	WW1	PW1	PW2	PW3	PW4	OW11-94	OW12-94
		Sample Identification	OW5A	OW5B	OW6A	OW6B	OW7A	CHA-3	OW7B	OW-8A	OW-8B	OW-9A	OW-9B	WW1	PW1	PW2	PW3	PW4	OW-11	OW-12
		Sample Date	11/29/07	11/29/07	11/29/07	11/29/07	11/29/07	11/29/07	11/29/07	11/28/07	11/28/07	11/28/07	11/28/07	11/30/07	11/30/07	11/30/07	11/30/07	11/30/07	11/28/07	11/28/07
SVOCs, con't																				
4-Chloroaniline	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
4-Chlorophenyl Phenylether	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
4-Methylphenol	µg/L	1[3]	10 U	11 U	11 U	10 U	**15 J**	**7.9 J**	11 U	10 U	10 U	10 UHJ	10 U	**94 J**	NM	540 U	10 U	11 U	20 U	10 U
4-Nitroaniline	µg/L	5	20 U	21 U	22 U	20 U	430 U	200 U	21 U	21 U	20 U	20 UHJ	20 U	230 U	NM	1100 U	21 U	22 U	40 U	20 U
4-Nitrophenol	µg/L	1[3]	50 U	53 U	55 U	50 U	1100 U	500 UJ	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
Acenaphthene	µg/L	20[2]	10 U	11 U	11 U	10 U	**100 J**	**68 J**	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	**44 J**	**0.73 J**	**0.67 J**	**0.96 J**	10 U
Acenaphthylene	µg/L	20	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Anthracene	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzo(A)Anthracene	µg/L	0.002[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzo(A)Pyrene	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzo(B)Fluoranthene	µg/L	0.002[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzo(G,H,I)Perylene	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzo(K)Fluoranthene	µg/L	0.002[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Benzyl Alcohol	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Bis(2-Chloroethoxy) Methane	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	**11 J**	NM	540 U	10 U	11 U	20 U	10 U
Bis(2-Chloroethyl) Ether	µg/L	1	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Bis(2-Ethylhexyl) Phthalate	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Butyl Benzyl Phthalate	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Carbazole	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Chrysene	µg/L	0.002[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Dibenzo(A,H)Anthracene	µg/L	50	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Dibenzofuran	µg/L	NA	10 U	11 U	11 U	10 U	**58 J**	**41 J**	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Diethylphthalate	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Dimethylphthalate	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Di-N-Butylphthalate	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Di-N-Octyl Phthalate	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Fluoranthene	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Fluorene	µg/L	50[2]	10 U	11 U	11 U	10 U	**9.8 J**	**7.4 J**	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Hexachlorobenzene	µg/L	0.04	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Hexachlorobutadiene	µg/L	0.5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Hexachlorocyclopentadiene	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Hexachloroethane	µg/L	5	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Indeno(1,2,3-Cd)Pyrene	µg/L	0.002[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Isophorone	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Naphthalene	µg/L	10	10 U	11 U	11 U	10 U	**1300 J**	**700 J**	**1.1 J**	10 U	10 U	10 UHJ	10 U	**50 J**	NM	**3100**	10 U	**24**	20 U	10 U
Nitrobenzene	µg/L	0.4	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
N-Nitroso-Di-N-Propylamine	µg/L	NA	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
N-Nitrosodiphenylamine	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Pentachlorophenol	µg/L	1[3]	50 U	53 U	55 U	50 U	1100 U	500 UJ	53 U	52 U	50 U	50 UHJ	50 U	570 U	NM	2700 U	52 U	56 U	100 U	50 U
Phenanthrene	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U
Phenol	µg/L	1[3]	10 U	11 U	11 U	10 U	210 U	100 UJ	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	**0.89 J**	11 U	20 U	10 U
Pyrene	µg/L	50[2]	10 U	11 U	11 U	10 U	210 U	100 U	11 U	10 U	10 U	10 UHJ	10 U	110 U	NM	540 U	10 U	11 U	20 U	10 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values"
2. Indicates value is a guidance value rather than a standard.
3. Applies to sum of all phenolic compounds

U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero
The concentration given is an approximate value.
R - Data qualified as unusable based on validation guidance criteria. The rejected data may be determined to be usable to the user based on additional information that is not contained in the data validation criteria
M - Manual integrated compound.
NM - Well was dry and a sample could not be collected/analyzed.
NA - Guidance value not available
BOLD values are detected compounds
▨ Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater

TABLE 10
GROUNDWATER WELL SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
SI Group, Inc.
Congress Street Facility
Schenectady, NY

		Sampling Location	**OW13-94**	**OW15A-07**	**OW15B-07**	**OW16A-07**	**OW16B-07**	**OW17A-07**	**OW17B-07**	**OW18A-07**	**OW18B-07**	**OW19A-07**	**OW19A-07**	**OW19B-07**	**OW20-07**	**OW21A-07**	**OW21B-07**	**OW22-07**
		Sample Identification	**OW-13**	**OW-15A**	**OW-15B**	**OW-16A**	**OW-16B**	**OW-17A**	**OW-17B**	**OW-18A**	**OW-18B**	**OW-19A**	**CHA-4**	**OW-19B**	**OW-20**	**OW-21A**	**OW-21B**	**OW-22**
		Sample Date	**11/28/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/2007**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**	**11/27/07**
PARAMETER	***Units***	***TOGS 1.1.1 Guidance Value***																
Volatiles																		
1,1,1-Trichloroethane	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,1,2,2-Tetrachloroethane	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,1,2-Trichloroethane	µg/L	1	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,1-Dichloroethane	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,1-Dichloroethene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,2-Dichloroethane	µg/L	0.6	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
1,2-Dichloropropane	µg/L	1	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
2-Butanone	µg/L	NA	10 U	10 U	10 U	800 U	10 U	200 U	10 U	10 U	10 U	200 U	100 U	10 U	80 U	20 U	10 U	1000 U
2-Hexanone	µg/L	50[2]	10 U	10 U	10 U	800 U	10 U	200 U	10 U	10 U	10 U	200 U	100 U	10 U	80 U	20 U	10 U	1000 U
4-Methyl-2-Pentanone	µg/L	NA	10 U	10 U	10 U	800 U	10 U	200 U	10 U	10 U	10 U	200 U	100 U	10 U	80 U	20 U	10 U	1000 U
Acetone	µg/L	50[2]	10 U	10 U	10 U	800 U	10 U	200 U	10 U	**9 J**	10 U	200 U	100 U	10 U	80 U	20 U	10 U	1000 U
Benzene	µg/L	1	5 U	5 U	5 U	400 U	5 U	**6 J**	5 U	**1.3 J**	5 U	**31 J**	**31 J**	5 U	40 U	**6.7 J**	5 U	500 U
Bromodichloromethane	µg/L	50[2]	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Bromoform	µg/L	50[2]	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Bromomethane	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Carbon Disulfide	µg/L	NA	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Carbon Tetrachloride	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Chlorobenzene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Chlorodibromomethane	µg/L	50[2]	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Chloroethane	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Chloroform	µg/L	7	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Chloromethane	µg/L	NA	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Cis-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Cis-1,3-Dichloropropene	µg/L	0.4	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Ethylbenzene	µg/L	5	5 U	5 U	5 U	**4900**	**82**	**2100**	**1.1 J**	**7.7**	5 U	**460**	**460**	**2.3 J**	**440**	**110**	**8.3**	**14000**
Methylene Chloride	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Styrene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Tetrachloroethene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Toluene	µg/L	5	5 U	5 U	5 U	**10000**	**47**	**21 J**	5 U	**4.3 J**	5 U	**380**	**390**	**1 J**	**120**	**5.3 J**	5 U	**1800**
Total Xylenes	µg/L	5	5 U	**0.59 J**	**1.6 J**	**22000**	**340**	**6700**	**7.3**	**68**	5 U	**5300**	**5000**	**35**	**3600**	**590**	**41**	**45000**
Trans-1,2-Dichloroethene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Trans-1,3-Dichloropropene	µg/L	NA	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Trichloroethylene	µg/L	5	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Vinyl Chloride	µg/L	2	5 U	5 U	5 U	400 U	5 U	100 U	5 U	5 U	5 U	100 U	50 U	5 U	40 U	10 U	5 U	500 U
Semi-Volatiles																		
1,2,4-Trichlorobenzene	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
1,2-Dichlorobenzene	µg/L	3	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
1,3-Dichlorobenzene	µg/L	3	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
1,4-Dichlorobenzene	µg/L	3	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
2,2'-oxybis[1-chloropropane]	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
2,4- Dichlorophenol	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 UJ
2,4,5-Trichlorophenol	µg/L	1[3]	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 UJ
2,4,6-Trichlorophenol	µg/L	1[3]	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 UJ
2,4-Dimethylphenol	µg/L	1[3]	10 U	10 U	10 U	**14**	10 U	500 U	10 U	**1.8 J**	10 U	**760**	**790**	**6.5 J**	**530 M**	**990 M**	10 U	**110 J**
2,4-Dinitrophenol	µg/L	1[3]	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 UJ
2,4-Dinitrotoluene	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
2,6-Dinitrotoluene	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
2-Chloronaphthalene	µg/L	10[2]	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
2-Chlorophenol	µg/L	1[3]	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 UJ
2-Methylnaphthalene	µg/L	50[2]	10 U	10 U	10 U	**1.4 J**	10 U	**1700**	**0.78 J**	**4.2 J**	10 U	**34 J**	**36 J**	10 U	500 U	200 U	**13**	**2.7 J**
2-Methylphenol	µg/L	1[3]	10 U	10 U	10 U	**14**	10 U	500 U	10 U	**1.9 J**	10 U	**180**	**190**	10 U	**420 J**	200 U	10 U	**20 J**
2-Nitroaniline	µg/L	5	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 U
2-Nitrophenol	µg/L	1[3]	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 UJ
3,3`-Dichlorobenzidine	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
3-Nitroaniline	µg/L	5	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 U
4,6-Dinitro-2-Methylphenol	µg/L	1[3]	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 UJ
4-Bromophenyl Phenyl Ether	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
4-Chloro-3-Methylphenol	µg/L	1[3]	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 UJ

TABLE 10
GROUNDWATER WELL SAMPLE ANALYTICAL DATA

Updated Remedial Investigation Report
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Congress Street Facility
Schenectady, NY

		Sampling Location	OW13-94	OW15A-07	OW15B-07	OW16A-07	OW16B-07	OW17A-07	OW17B-07	OW18A-07	OW18B-07	OW19A-07	OW19A-07	OW19B-07	OW20-07	OW21A-07	OW21B-07	OW22-07
		Sample Identification	OW-13	OW-15A	OW-15B	OW-16A	OW-16B	OW-17A	OW-17B	OW-18A	OW-18B	OW-19A	CHA-4	OW-19B	OW-20	OW-21A	OW-21B	OW-22
		Sample Date	11/28/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07	11/27/2007	11/27/07	11/27/07	11/27/07	11/27/07	11/27/07
PARAMETER	*Units*	*TOGS 1.1.1 Guidance Value*																
SVOCs, con't																		
4-Chloroaniline	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
4-Chlorophenyl Phenylether	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
4-Methylphenol	µg/L	1^{3}	10 U	10 U	10 U	**14**	10 U	500 U	10 U	**4.2 J**	10 U	**420**	**430**	10 U	**2500**	**13 J**	10 U	**24 J**
4-Nitroaniline	µg/L	5	20 U	20 U	20 U	20 U	20 U	1000 U	20 U	20 U	20 U	200 U	200 U	20 U	1000 U	400 U	20 U	40 U
4-Nitrophenol	µg/L	1^{3}	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 UJ
Acenaphthene	µg/L	20^{2}	10 U	10 U	10 U	10 U	10 U	**190 J**	10 U	**0.63 J**	10 U	100 U	100 U	10 U	500 U	200 U	**1.1 J**	20 U
Acenaphthylene	µg/L	20	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Anthracene	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**46 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzo(A)Anthracene	µg/L	0.002^{2}	10 U	10 U	10 U	10 U	10 U	**36 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzo(A)Pyrene	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzo(B)Fluoranthene	µg/L	0.002^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzo(G,H,I)Perylene	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzo(K)Fluoranthene	µg/L	0.002^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Benzyl Alcohol	µg/L	NA	10 U	10 U	10 U	10 U	**2.5 J**	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Bis(2-Chloroethoxy) Methane	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Bis(2-Chloroethyl) Ether	µg/L	1	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Bis(2-Ethylhexyl) Phthalate	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Butyl Benzyl Phthalate	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Carbazole	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Chrysene	µg/L	0.002^{2}	10 U	10 U	10 U	10 U	10 U	500 UM	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Dibenzo(A,H)Anthracene	µg/L	50	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Dibenzofuran	µg/L	NA	10 U	10 U	10 U	10 U	10 U	**220 J**	10 U	**0.47 J**	10 U	100 U	100 U	10 U	500 U	200 U	**0.62 J**	20 U
Diethylphthalate	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	**1.2 J**	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Dimethylphthalate	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Di-N-Butylphthalate	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**1000**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Di-N-Octyl Phthalate	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**37 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Fluoranthene	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**52 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Fluorene	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**120 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	**1.2 J**	20 U
Hexachlorobenzene	µg/L	0.04	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Hexachlorobutadiene	µg/L	0.5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Hexachlorocyclopentadiene	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Hexachloroethane	µg/L	5	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Indeno(1,2,3-Cd)Pyrene	µg/L	0.002^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Isophorone	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Naphthalene	µg/L	10	10 U	10 U	10 U	**25**	**0.73 J**	**1800**	**0.65 J**	**28**	10 U	**130**	**130**	**0.71 J**	**80 J**	200 U	10 U	**9.6 J**
Nitrobenzene	µg/L	0.4	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
N-Nitroso-Di-N-Propylamine	µg/L	NA	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
N-Nitrosodiphenylamine	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	500 U	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U
Pentachlorophenol	µg/L	1^{3}	50 U	50 U	50 U	50 U	50 U	2500 U	50 U	50 U	50 U	500 U	500 U	50 U	2500 U	1000 U	50 U	100 UJ
Phenanthrene	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**200 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	**1.9 J**	20 U
Phenol	µg/L	1^{3}	10 U	10 U	10 U	10 U	10 U	500 U	**1.2 J**	**1.8 J**	10 U	**140**	**160**	10 U	500 U	200 U	10 U	**20 J**
Pyrene	µg/L	50^{2}	10 U	10 U	10 U	10 U	10 U	**63 J**	10 U	10 U	10 U	100 U	100 U	10 U	500 U	200 U	10 U	20 U

NOTES:
1. New York State Department of Environmental Conservation, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1, October 1993 "Ambient Water Quality Standards and Guidance Values"
2. Indicates value is a guidance value rather than a standard.
3. Applies to sum of all phenolic compounds

U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero
The concentration given is an approximate value.
R - Data qualified as unusable based on validation guidance criteria. The rejected data may be determined to be usable to the user based on additional information that is not contained in the data validation criteria
M - Manual integrated compound.
NM - Well was dry and a sample could not be collected/analyzed.
NA - Guidance value not available
BOLD values are detected compounds
▨ Indicates associated value exceeds TOGS 1.1.1 Standard or Guidance Value for Class GA Groundwater