July 7, 2008

Remedial Investigation Report

Environmental Restoration Project
Clean Water/Clean Air Bond Act
1996

ERP Site #E-447035
Lower Broadway Parking Lot/
312 Broadway - Adjacent Parcel Site

City of Schenectady
Schenectady County, New York

Prepared for:

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C.T. Male Project No: 05.5550

ENVIRONMENTAL RESTORATION PROJECT
SUPPLEMENTAL REMEDIAL INVESTIGATION REPORT
LOWER BROADWAY PARKING LOT/312 BROADWAY - ADJACENT PARCEL
CITY OF SCHENECTADY, SCHENECTADY COUNTY, NEW YORK

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CITY OF SCHENECTADY, SCHENECTADY COUNTY, NEW YORK

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APPENDICES

1.0 INTRODUCTION

1.1 General

This report presents the findings of remedial investigation (RI) activities conducted at the Lower Broadway Parking Lot/312 Broadway - Adjacent Parcel Site in the City of Schenectady, Schenectady County, New York. A site location map is included as Figure 1. The RI activities were conducted based on the expansion of the 312 Broadway site to include an adjacent parcel of land to the southwest of the site. The boundaries of the Adjacent Parcel Site are shown on Figure 2. The RI activities were performed in accordance with C.T. Male Associates, P.C.'s (C.T. Male) scope of work dated June 15, 2007, which was approved by the New York State Department of Environmental Conservation (NYSDEC) in January 2008.

1.2 Project Background

C.T. Male conducted a remedial investigation on the 312 Broadway site during 2006 under the NYSDEC's Environmental Restoration Program (ERP). The findings of the investigation were presented in C.T. Male's *Draft Remedial Investigation Report* dated January 2007. During the summer of 2007, the Schenectady Metroplex Development Authority (Metroplex) and the City of Schenectady (City) submitted an Amended ERP Application to the NYSDEC for including an adjacent City-owned parcel into the 312 Broadway ERP Remedial Investigation already completed. The approximate one-quarter acre parcel adjoins the southwestern portion of the 312 Broadway site (to the west-southwest of the Scale House structure). Based on review of historical Sanborn Fire Insurance Maps and aerial photographs, it appears that this parcel has historically been occupied by the Schenectady County Coal Company, and has also been utilized as a scrap yard and construction laydown area. The Amended ERP Application was approved by the NYSDEC in January 2008.

2.0 INVESTIGATION METHODS

Investigation activities consisted of the collection and laboratory analysis of near-surface soil samples, advancement of test borings, collection and laboratory analysis of subsurface soil samples, installation of groundwater monitoring wells, and collection and laboratory analysis of groundwater samples. Field activities were performed in accordance with the NYSDEC approved Field Sampling Plan and Quality Assurance Project Plan prepared for the 312 Broadway site.

2.1 Test Boring and Monitoring Well Locations

The test boring/monitoring well locations (GP/CTM-20 through GP/CTM-23) and near-surface soil sampling locations (SS-13 through SS-15) were selected to evaluate soil and groundwater conditions across the site, and are shown on Figure 2. Site topography to the west of the retaining wall prevented drilling equipment access to this area, and as a result, only near-surface soil sampling was conducted on this portion of the site. The scope of work was expanded at the time of drilling to include subsurface investigation at the location of GP/CTM-23, following consultation with the NYSDEC, based on observations of subjective evidence of soil contamination at the initial boring/well locations.

2.2 Drilling Methods and Subsurface Soil Sampling

The drilling activities were completed on January 28, 2008 by Precision Environmental Services, Inc. under the observation of a C.T. Male representative. Geoprobe (direct-push) drilling techniques were utilized to complete the test borings, collect soil samples and install the monitoring wells. At each test boring location a 2.25-inch diameter Macro-Core sampling barrel, containing a disposable acetate liner, was advanced at continuous 4-foot intervals to the termination depth of the boring. The recovered soil samples were visually classified, and their descriptions were recorded on individual Geoprobe Subsurface Exploration Logs, included in Appendix B.

Boring GP/CTM-20 was advanced to 16 feet below grade, approximately 9 feet into the observed water table. Borings GP/CTM-22 and GP/CTM-23 were advanced to a depth of 20 feet below grade, with the intent of further exploring subjective evidence of contamination observed at these locations at the time of drilling. However, sampling of the 16 to 20 foot interval at these locations was unsuccessful in recovering soil due to

subsurface conditions. Boring GP-21 was advanced to a depth of approximately 9 feet below grade, where refusal was encountered on concrete, based on observations of the shoe-piece of the sampling barrel. This boring was backfilled with bentonite and boring GP/CTM-22 was advanced approximately 5 feet to the northwest.

Following the recovery of each soil sample, a portion of the sample was placed in a plastic bag and sealed, and was subsequently screened for the presence of detectable volatile organic compounds with a MiniRAE 2000 photo-ionization detector (PID) equipped with a 10.6 eV lamp. The PID meter was calibrated according to manufacturer recommendations prior to use utilizing isobutylene standard gas (100 parts per million). The PID soil screening results are presented on the Organic Vapor Headspace Analysis Logs in Appendix C. Based on the PID soil screening results and field observations, one soil sample from each boring, exhibiting the highest PID reading, was retained for laboratory analysis for NYSDEC Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile compounds (SVOC), TCL Pesticides, TCL PCBs, TAL metals, and total cyanide. Samples submitted for laboratory analysis included: GP/CTM-20(2-2) (the 6 to 8 foot interval); GP/CTM-22(3-2) (the 10 to 12 foot interval); and GP/CTM-23(3-2) (the 10 to 12 foot interval). Quality Assurance/Quality Control (QA/QC) samples including a field duplicate of the GP/CTM-20(2-2) sample, an equipment blank (collected before sampling at GP/CTM-22), and matrix spike/matrix spike duplicate samples were submitted and analyzed for the same parameters. The subsurface soil and QA/QC samples were placed in a cooler with ice and later were shipped under chain-of-custody protocol via overnight courier to Chemtech of Mountainside, New Jersey for analysis.

Each soil sample was handled using a new pair of disposable nitrile gloves. The drilling tools and sampling equipment were decontaminated prior to the start of the drilling activities, and between test boring locations and individual samples, using a detergent/water wash and tap water rinse. The decontamination wash and rinse water were containerized in a labeled 55-gallon drum, stored on site for subsequent disposal.

2.3 Monitoring Well Installation

Upon completion of soil sampling at each boring location, a 1-inch diameter, PVC monitoring well was installed in the borehole to facilitate the collection of groundwater samples for laboratory analysis. Monitoring well GP/CTM-20 was installed to a depth

of 15 feet below grade, extending approximately 8 feet into the observed water table; and monitoring wells GP/CTM-22 and GP/CTM-23 were installed to a depth of 18 feet below grade, extending approximately 11 feet into the water table. The wells were constructed of slotted PVC well screen (.010-inch slot size) and PVC riser pipe above the screen. A graded silica sandpack was placed in the annulus around the well screen to approximately one foot above the screen, and a bentonite seal was placed above the sandpack. Flush-mounted curb boxes, set in concrete, were installed over each well. Monitoring Well Construction Logs are included in Appendix C.

Table 2.3-1 provides a summary of the boring and monitoring well identification numbers, boring depths, depths at which the monitoring wells were set, monitoring well screened interval depths, and the depth from which soil samples were collected for laboratory analysis.

TABLE 2.3-1: Soil Boring and Monitoring Well Summary

Boring ID	Monitoring Well ID	Boring Depth (bgs)	MW Depth (bgs)	MW Screened Interval	Laboratory Soil Sample Depth (bgs)
GP-20	CTM-20	16′	16′	6 to 16′	6 to 8′
GP-21	NA (No Well Installed)	9′	NA	NA	NA (No Sample)
GP-22	CTM-22	20′	15′	5 to 15′	10 to 12′
GP-23	CTM-23	20′	18′	3 to 18′	10 to 12′

Notes: bgs denotes below ground surface
NA denotes not applicable

At each new well location, the elevation of the top of the well casing was surveyed relative to an existing monitoring well, using differential leveling techniques to determine groundwater elevations and hydraulic gradient in the area of investigation.

C.T. Male visited the site the following day to perform well development activities to remove fine sediments from the wells and enhance the hydraulic connection between

the wells and the surrounding aquifer. The depth to groundwater at each well was measured using a water level indicator. The wells were then developed with new disposable polyethylene bailers using surging and bailing methods to remove a minimum of five well volumes of water from each well. Well development water was containerized in a 5-gallon bucket and transferred to a labeled 55-gallon drum stored on site for subsequent disposal.

2.4 Near-Surface Soil Sampling

On January 28, 2008, following completion of the test borings/monitoring well installation activities, near-surface soil samples were collected at three locations at the site (SS-13, SS-14, SS-15). Near-surface soil samples were collected from just below the vegetation root zone to a depth of approximately 1 foot below grade. Geoprobe methods were utilized to collect two of the three near-surface soil samples due to the thickness of the frost layer. At each Geoprobe near-surface soil sampling location a Macro-Core sampling barrel containing a disposable acetate liner was advanced to a depth of 1 foot below grade. The third near-surface soil sample was collected manually using a pick-axe and disposable nitrile gloves.

The drilling tools and sampling equipment were decontaminated prior to the start of the drilling/sampling activities, and between near-surface soil sampling locations, using a detergent/water wash and tap water rinse. Additionally, each sample was handled with a new pair of disposable sampling gloves.

Following the recovery of each near-surface soil sample, a portion of the sample was placed in a plastic bag and sealed, and subsequently screened for the presence of detectable volatile organic compounds with a MiniRAE 2000 photo-ionization detector (PID) equipped with a 10.6 eV lamp. The PID meter was calibrated according to manufacturer recommendations prior to use utilizing isobutylene standard gas (100 parts per million). The PID soil screening results are presented on the Organic Vapor Headspace Analysis Logs in Appendix C. The samples were retained for laboratory analysis for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals, and total cyanide. The samples were placed in a cooler with ice and were later shipped under chain-of-custody protocol via overnight courier to Chemtech of Mountainside, New Jersey for analysis.

2.5 Groundwater Sampling

On February 5, 2008, C.T. Male personnel visited the site to perform groundwater monitoring activities including measurement of water levels and collection of groundwater samples from the three new wells (GP/CTM-20, GP/CTM-22, GP/CTM-23). In addition, water levels were also measured at accessible wells previously installed on the 312 Broadway site (GP/CTM-1 through GP/CTM-10, GP/CTM-14, GP/CTM-15, MW-18, and MW-19) to develop a sitewide groundwater contour map.

Following measurement and documentation of water levels, each of the new wells was purged of a minimum of three well volumes of water using a peristaltic pump and disposable polyethylene tubing. Purge water was containerized and transferred to a labeled 55-gallon drum, stored on site for subsequent disposal. Field parameters including temperature, pH, conductivity, and turbidity were measured during purging and just before lab sample collection. Once the water levels were observed to recover to within 90 percent of static conditions, groundwater samples were collected from each well using the peristaltic pump with new disposable polyethylene tubing. The groundwater samples were placed into new laboratory-supplied glass containers, labeled, and stored in a cooler with ice. The groundwater samples, along with a laboratory-provided trip blank sample, were submitted under chain of custody protocol to Chemtech for analysis for TCL VOCs, SVOCs, pesticides, PCBs, TAL metals.

Following the submittal of the groundwater samples to the laboratory, C.T. Male consulted with the NYSDEC regarding analysis of the samples for cyanide, which was not part of the original scope of work. With the concurrence of the NYSDEC, C.T. Male returned to the site on February 8, 2008 and collected groundwater samples from the three new wells for total cyanide analysis. The groundwater samples were collected and submitted to Chemtech using the same protocols implemented during the initial sampling event.

3.0 FINDINGS

3.1 Soil

The soil within the depths explored consisted generally of fine- to medium-grained sand with trace amounts of gravel and fill material (coal, ash/cinders, glass) to depths of approximately 8 to 15 feet below grade, underlain by fine grained sand and silt. Soil descriptions are summarized on the individual Subsurface Exploration Logs in Appendix B.

Results of field screening using the PID showed that the near-surface soil samples collected at locations SS-13, SS-14 and SS-15 did not exhibit PID readings above background levels. Similarly, the subsurface soil samples collected at the locations of test borings GP/CTM-20 and GP/CTM-21 did not exhibit elevated PID readings, although petroleum and/or coal tar type odors were exhibited by soil samples at these locations, beginning at a depth of approximately 6 feet below grade. Soil samples from test borings GP/CTM-22 and GP/CTM-23 exhibited PID readings ranging from 0.8 to 207 parts per million (ppm) above background levels from depths of 6 to 16 feet below grade. The highest PID readings at these boring locations were 168 and 207 ppm, exhibited at the 10'-12' depth interval at both locations. Soil samples from 6 feet below grade to the boring termination depths at these locations exhibited black staining and either coal tar or petroleum odors. Organic Vapor Headspace Analysis Logs are included in Appendix C.

The soil sampling laboratory analytical results (detected compounds only) are summarized in Tables 1 through 5 in Appendix A. Concentrations of compounds/analytes that exceeded the applicable NYSDEC Part 375 Standards, Criteria and Guidance (SCG) values are shown in bold print in the tables, and are also shown on Figures 3 through 7 in Appendix B. Analytical results were subjected to data validation in accordance with NYSDEC Data Usability Summary Report (DUSR) requirements. No analytical data was rejected as a result of the data validation process. The results presented in Tables 1 through 5 (Appendix A) have been qualified where necessary, based on data validation. The DUSR, dated March 3, 2008, is included as Appendix D.

Analytical results showed that VOCs were not detected at concentrations above laboratory method detection limits in the subsurface soil samples submitted from test boring GP/CTM-20 and near-surface soil samples SS-13, SS-14 and SS-15. Multiple VOCs were detected in the soil sample from GP/CTM-22, but at concentrations below applicable SCG values. Similar VOCs were detected in the subsurface soil sample from GP/CTM-23. Only two of these compounds, benzene and m/p-xylenes, were at concentrations above the applicable SCG values.

Multiple SVOCs were detected at concentrations above laboratory method detection limits in each of the near-surface and subsurface soil samples submitted for analysis. Concentrations of SVOCs in the near-surface soil sample SS-15 were below the applicable SCG values. However, the other soil samples submitted for analysis contained one to fourteen SVOCs at concentrations above the applicable SCG values. The sample from the 10 to 12 foot interval boring GP/CTM-23 (near the southern boundary of the parcel) exhibited the highest total number and highest concentrations of SVOCs above SCG values.

Several TAL metals were detected above the laboratory method detection limits in each of the subsurface and near-surface soil samples submitted for analysis. Only one metal (lead) exceeded its applicable SCG in one sample. Lead was detected in the near-surface sample SS-13 at a concentration of 2,800 mg/Kg, exceeding its SCG value of 1,000 mg/Kg.

PCBs were not detected at concentrations above laboratory method detection limits in the three subsurface soil samples collected at the locations of the borings/monitoring wells. However, PCBs were detected at concentrations above laboratory method detection limits in the three near-surface soil samples collected. Detected concentrations were below the applicable SCG value of 1 mg/Kg in near-surface soil samples SS-14 and SS-15. In near-surface soil sample SS-13, PCBs (Aroclor-1260) were detected at a concentration of 65 mg/Kg, exceeding the applicable SCG value.

Cyanide was detected above the laboratory method detection limit in each of the subsurface and near-surface soil samples submitted for analysis. However, detected concentrations were below the applicable SCG value in five of the six samples. In surface soil sample SS-13, cyanide was detected at a concentration of 0.083 mg/Kg, exceeding the SCG value of 0.027 mg/Kg.

3.2 Groundwater

3.2.1 Groundwater Elevation Data

Based on water level measurements obtained on February 5, 2008 the depth to groundwater at the new well locations was approximately 7 feet below grade. Groundwater depths at the previously installed wells on the 312 Broadway site ranged from approximately 4 to 6 feet below grade. The groundwater elevation data are summarized below in table 3.2-1, and were used to develop a groundwater contour map, which is included as Figure 12 in Appendix B.

TABLE 3.2-1: Summary of Groundwater Elevation Data – February 5, 2008

Well ID	TOC Elevation (feet amsl)	Depth to Water (feet)	Groundwater Elevation (feet amsl)
CTM-1	227.25	5.56	221.69
CTM-2	228.28	5.48	222.80
CTM-3	228.69	5.37	223.32
CTM-4	229.35	6.02	223.33
CTM-5	227.44	Not Measured	-
CTM-6	228.11	4.89	223.22
CTM-7	228.44	4.52	223.92
CTM-8	228.29	4.18	224.11
CTM-9	227.54	Not Measured	-
CTM-10	227.92	5.49	222.43
CTM-14	228.66	5.58	223.08
CTM-15	227.47	5.26	222.21
MW-18	228.01	5.56	222.45
MW-19	227.44	5.80	221.64
CTM-20	228.14	6.92	221.22
CTM-22	228.21	6.87	221.34
CTM-23	228.17	7.18	220.99

Wells CTM-5 and CTM-9 were not accessible for gauging on 02/05/08. (CTM-5 was beneath a large snow bank; CTM-9 was beneath construction equipment.)

The groundwater contour map developed based on the February 5, 2008 data indicates groundwater flow direction generally to the west and/or southwest across the western

portion of the 312 Broadway site, toward the Adjacent Parcel site. The map also indicates a southward component of groundwater flow on the eastern portion of 312 Broadway site.

Based on local surface topography, and historical groundwater elevation data collected from both the 312 Broadway site and the 314 Clinton Street ERP site to the east (across Broadway), groundwater flow direction in the vicinity is expected to be generally to the west, northwest and/or southwest toward the Mohawk River.

3.2.2 Groundwater Analytical Data Summary

The groundwater sampling laboratory analytical results (detected compounds only) are summarized in Tables 6 through 9 in Appendix A. Concentrations of compounds/analytes that exceeded the applicable NYSDEC Part 375 Standards, Criteria and Guidance (SCG) values are shown in bold print in the tables, and are also shown on Figures 8 through 11 in Appendix B. Analytical results were subjected to data validation in accordance with NYSDEC Data Usability Summary Report (DUSR) requirements. No analytical data was rejected as a result of the data validation process. The results presented in Tables 6 through 9 (Appendix A) have been qualified where necessary, based on data validation. The DUSR is included as Appendix D.

Laboratory analytical results showed that four VOCs (benzene, toluene, ethylbenzene and mixed xylenes) were detected at concentrations above the applicable SCG values in the groundwater sample collected at the location of GP/CTM-22. One VOC (benzene) was detected above the applicable SCG value in the groundwater sample at GP/CTM-23. VOCs (acetone and mixed xylenes) were detected at concentrations above laboratory method detection limits, but below applicable SCG values in the groundwater sample collected at GP/CTM-20.

One SVOC, acenaphthene, was detected at a concentration above the applicable SCG value in the groundwater sample collected at the location of GP/CTM-20. Two SVOCs, naphthalene and 2-methylnaphthalene, were detected at concentrations above the applicable SCG values in the groundwater sample collected at GP/CTM-23.

Several TAL metals were detected above the laboratory method detection limits in each of the groundwater samples submitted for analysis. Three metals, iron, manganese and

sodium, were detected at concentrations above the applicable SCG values in groundwater samples collected from the three new well locations. Aluminum was also detected above its SCG value in the groundwater sample collected at GP/CTM-20.

PCBs were not detected at concentrations above laboratory method detection limits in the groundwater samples collected at the three new well locations.

Cyanide was detected above its SCG value in groundwater samples collected at the locations of GP/CTM-22 and GP/CTM-23. Cyanide was detected above the laboratory method detection limit at the location of GP/CTM-20, but below its SCG value.

4.0 SUMMARY AND CONCLUSIONS

C.T. Male Associates, P.C. has completed remedial investigation activities at the 312 Broadway - Adjacent Parcel site, located in the City of Schenectady, Schenectady County, New York. The purpose of the RI activities was to evaluate near-surface soil, subsurface soil and groundwater conditions. The investigation activities consisted of advancement of four soil borings, three of which were converted to 1-inch diameter groundwater monitoring wells; the collection of near-surface and subsurface soil samples for field volatile organic compound vapor screening and laboratory analysis; and the collection of groundwater samples for laboratory analysis.

Subjective evidence of contamination, including black staining and petroleum and/or coal tar type odor, was noted in subsurface soil samples at the four test boring/monitoring well locations beginning at a depth of approximately 6 feet below grade and extending to the termination depths of the borings (9 to 20 feet below grade). Based on field screening of soil samples for the presence of volatile organic compounds, the highest PID readings were exhibited by soil samples collected from the 10-12 foot interval at the locations of GP/CTM-22 (located on the eastern portion of the parcel) and GP/CTM-23 (located near the southern boundary of the site).

Laboratory analytical results of near-surface soil samples showed that VOCs were not detected at concentrations above applicable SCG values. The near-surface soil sample collected at SS-13, on the western portion of the site (west of the retaining wall) contained multiple SVOCs, lead, PCBs and cyanide at concentrations above the applicable SCG values. One SVOC (benzo(a)pyrene) was also detected above the applicable SCG value in the near-surface sample collected at SS-14, on the central portion of the site.

Laboratory analytical results of subsurface soil samples showed that two VOCs (benzene, xylenes) were detected at concentrations above applicable SCG values in the 10-12' interval at the location of GP/CTM-23, near the southern boundary of the site. Numerous SVOCs were detected above applicable SCG values the three subsurface soil samples analyzed. The highest concentrations of SVOCs were detected in the 10-12' interval at the location of GP/CTM-23, and were generally one to two orders of magnitude above the applicable SCG values. Metals, pesticides, PCBs and cyanide

were not detected in the subsurface soil samples at concentrations exceeding applicable SCG values.

The depth to groundwater at the three new monitoring well locations (as measured on February 5, 2008) was approximately 7 feet below grade. Based on groundwater gauging data that included previously installed wells on the 312 Broadway site, groundwater flow direction in the vicinity of the Adjacent Parcel Site is generally toward the west and/or southwest.

Laboratory analytical results of groundwater samples showed that one or more VOCs (including benzene, toluene, ethylbenzene and xylenes) were detected above the applicable SCG values in samples from GP/CTM-22 and GP/CTM-23. One or more SVOCs (including acenaphthene, naphthalene and 2-methylnaphthalene) and one or more metals (including aluminum, antimony, iron, manganese and sodium) were detected above the applicable SCG values in samples from the three new wells. Cyanide was detected above the applicable SCG value in samples from GP/CTM-22 and GP/CTM-23. Pesticides and PCBs were not detected above laboratory method detection limits in any of the groundwater samples analyzed.

Based on field observations and laboratory analytical results of soil and groundwater samples collected during the RI activities, contamination has been identified in near-surface soil, subsurface soil and groundwater on the Adjacent Parcel Site at levels exceeding applicable regulatory cleanup criteria. Contaminants of concern include: SVOCs, metals (lead), PCBs and cyanide in surface soil; VOCs, SVOCs and metals in subsurface soil, and VOCs, SVOCs, metals and cyanide in groundwater.

The black staining and coal tar type odors noted in subsurface soil and groundwater were similar to staining and odors noted in some areas on the southern portion of the 312 Broadway site. Based on the subjective evidence observed and the analytical data indicating the presence of cyanide and numerous SVOCs typically associated with coal tar, the contamination is potentially related to the documented impacts to soil and groundwater from the former manufactured gas plant facility to the east of Broadway. The sources of the contaminants (SVOCs, PCBs, lead and cyanide) identified in surface soil on the western portion of the parcel are unknown.

The contamination identified on the Adjacent Parcel will be evaluated as part of the remedial activities being considered for implementation at the 312 Broadway site. C.T. Male will develop an Alternatives Analysis Report, inclusive of both properties, which will present and discuss various alternatives to remediate soil and groundwater in support of future property redevelopment.

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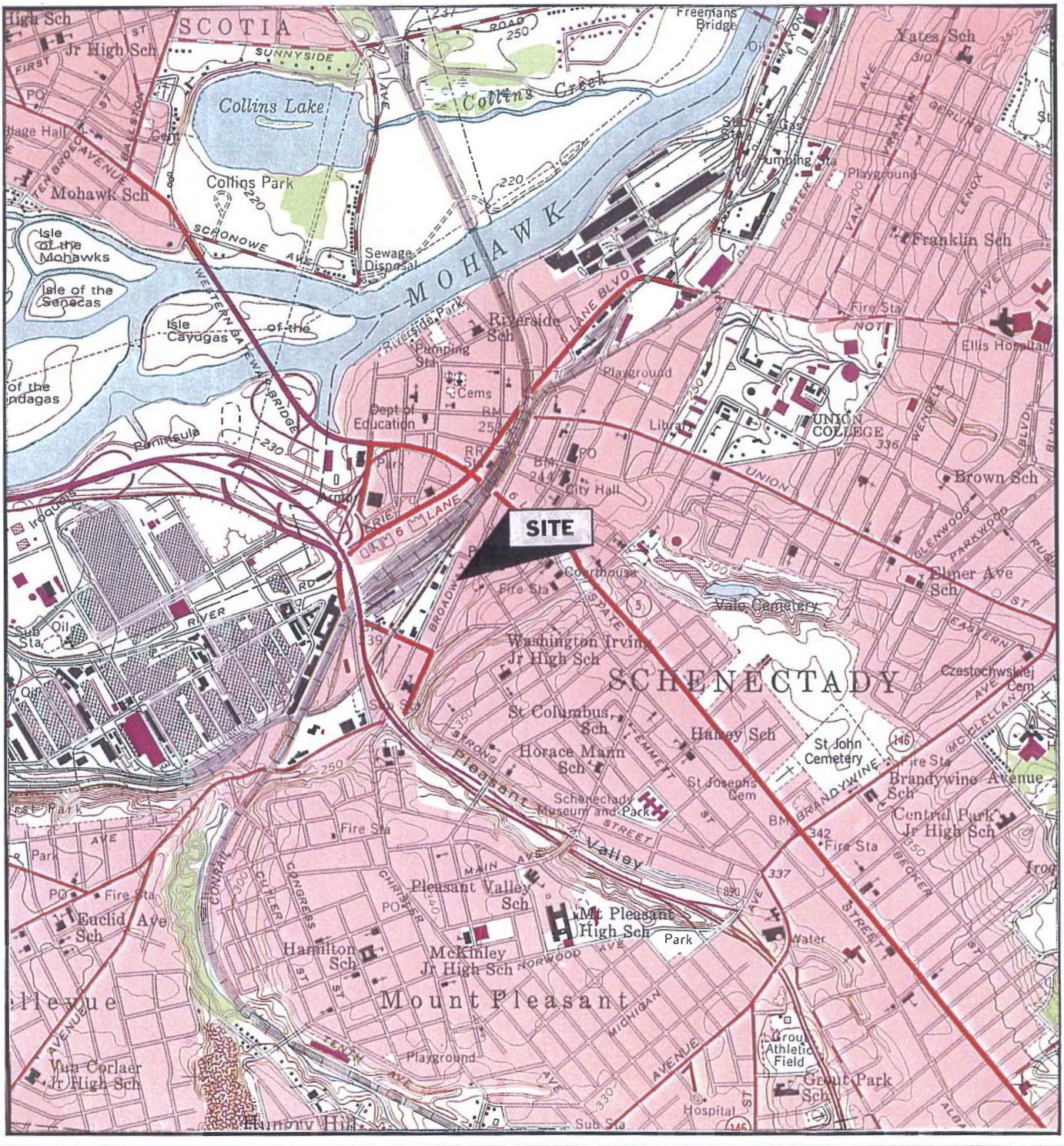
FIGURES



MAP REFERENCE
United States Geological Survey
7.5 Minute Series Topographic Map
Quadrangle: Schenectady, NY
Date: 1980

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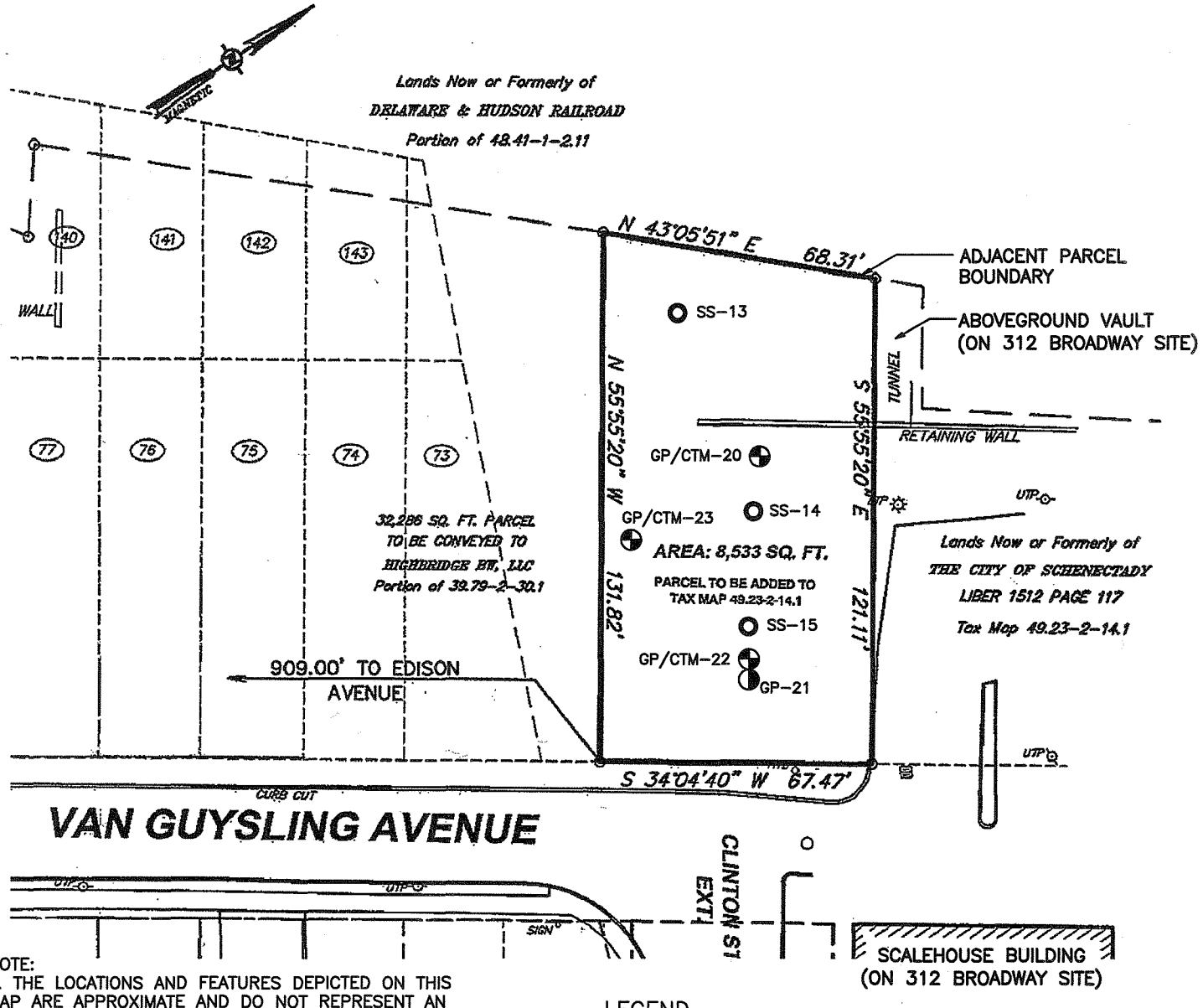
FIGURE 1 - SITE LOCATION MAP

LOWER BROADWAY PARKING LOT

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY
SCALE: 1"=2,000'	
DRAFTER: ASG	
PROJECT No. 04.9227	



NOTE:
1. THE LOCATIONS AND FEATURES DEPICTED ON THIS MAP ARE APPROXIMATE AND DO NOT REPRESENT AN ACTUAL FIELD SURVEY.

MAP REFERENCE:
1. MAP OF THE LANDS OF THE CITY OF SCHENECTADY TO BE CONVEYED TO SCHENECTADY METROPLEX, PREPARED BY CHAZEN ENGINEERING & LAND SURVEYING CO., P.C, SHEET NO. SP1, PROJECT NO. 50693.00.

BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

SB/MW	SOIL BORING/MONITORING WELL (APPROX.)
SS	SURFACE SOIL SAMPLING LOCATION (APPROX.)
GP-21	SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: S.WUNSCH | Checker: J.FAVREAU

Appr. by: | Proj. No. 05.5550

FIGURE 2
MONITORING WELL/SOIL SAMPLING LOCATIONS MAP
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

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Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'± | DATE: FEBRUARY 25, 2008

NONE :XREFS
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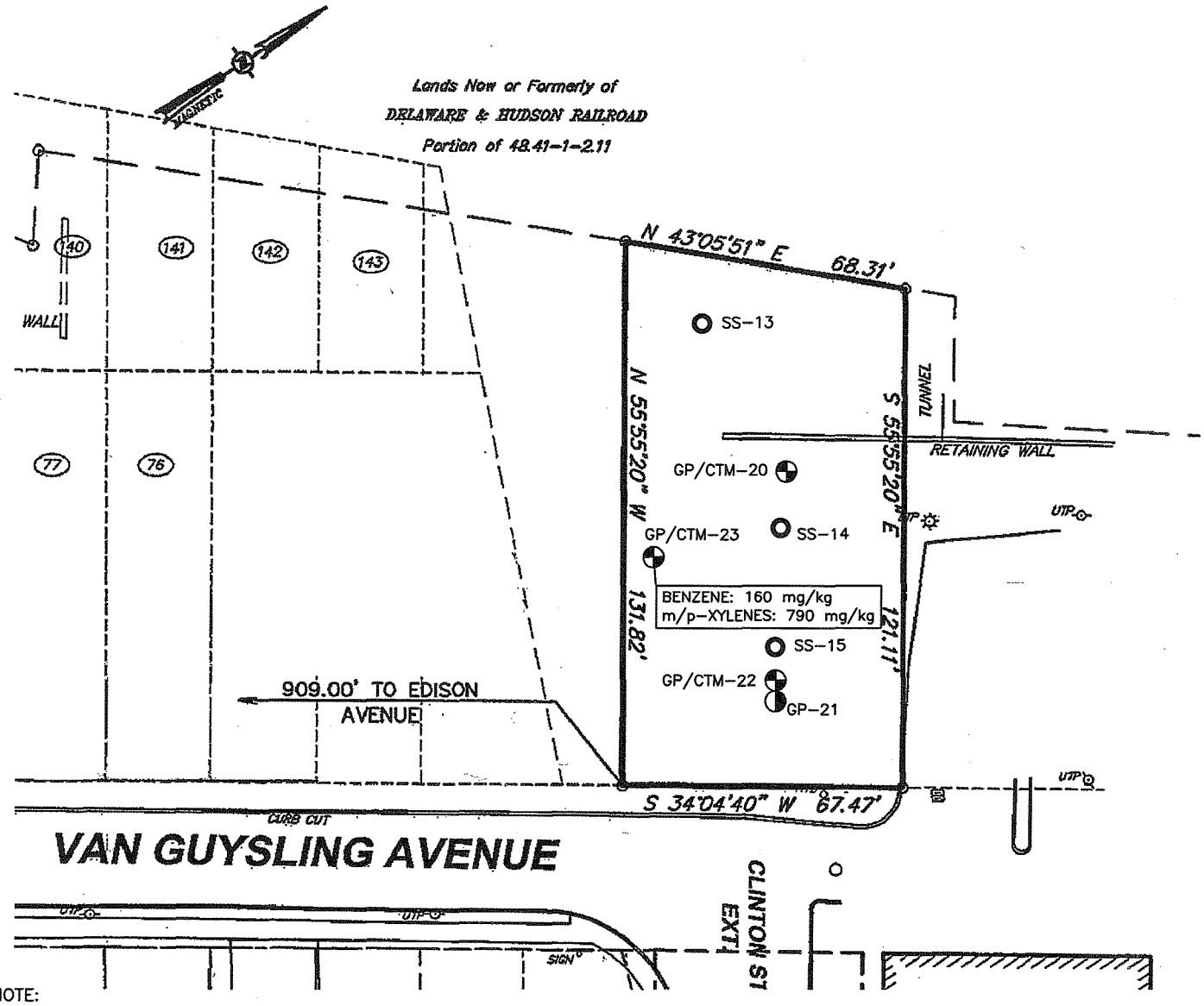

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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

SB/MW	SOIL BORING/MONITORING WELL (APPROX.)
SS	SURFACE SOIL SAMPLING LOCATION (APPROX.)
GP-21	SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB	Checker: J.FAVREAU
Appr. by:	Proj. No. 05.5550

FIGURE 3
VOCs ABOVE SCGs IN SOIL
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
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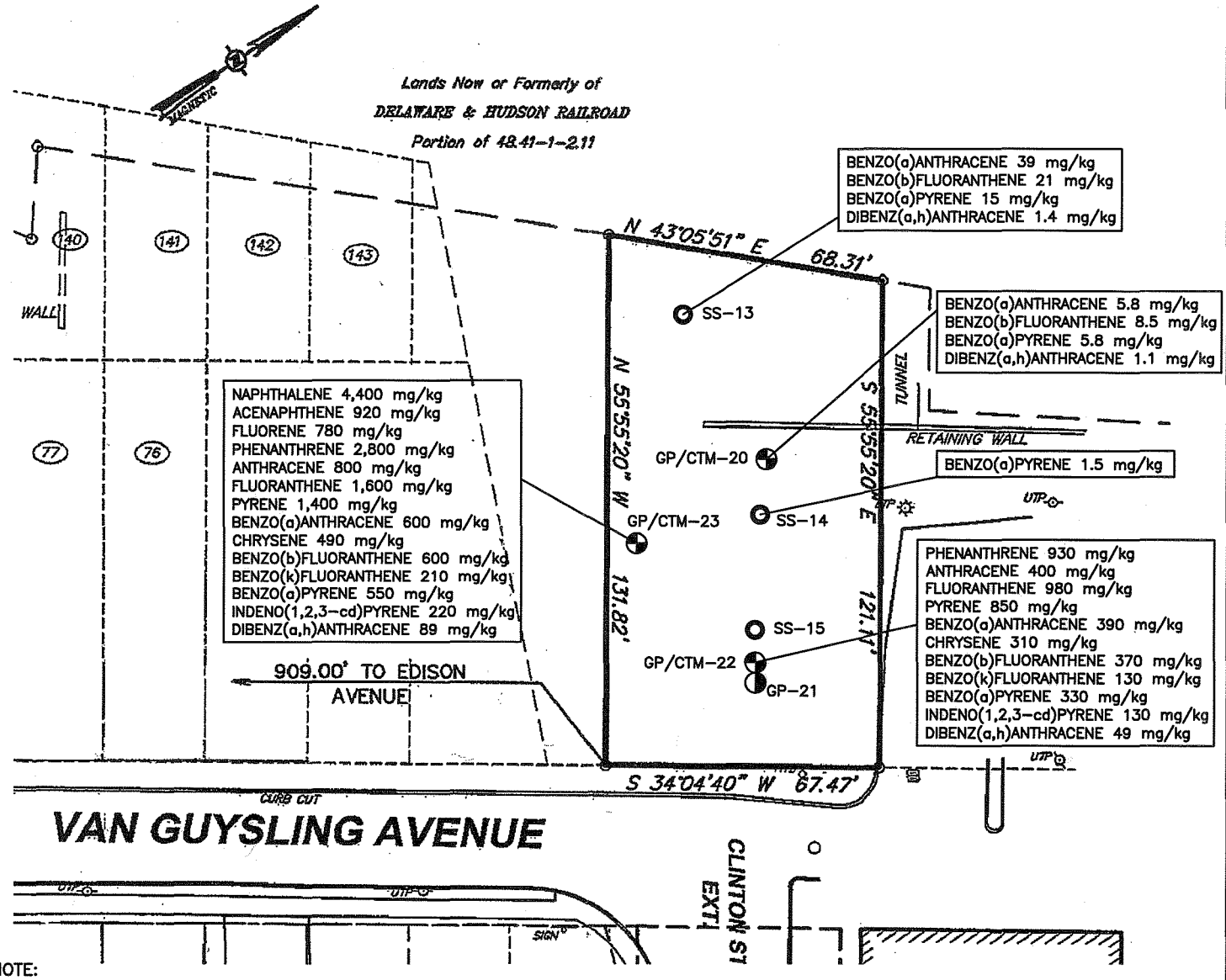
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'±	DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 2 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
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MAP REFERENCE:
1. MAP OF THE LANDS OF THE CITY OF SCHENECTADY TO BE CONVEYED TO SCHENECTADY METROPLEX, PREPARED BY CHAZEN ENGINEERING & LAND SURVEYING CO., P.C, SHEET NO. SP1, PROJECT NO. 50693.00.

BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB | Checker: J.FAVREAU

Appr. by: | Proj. No. 05.5550

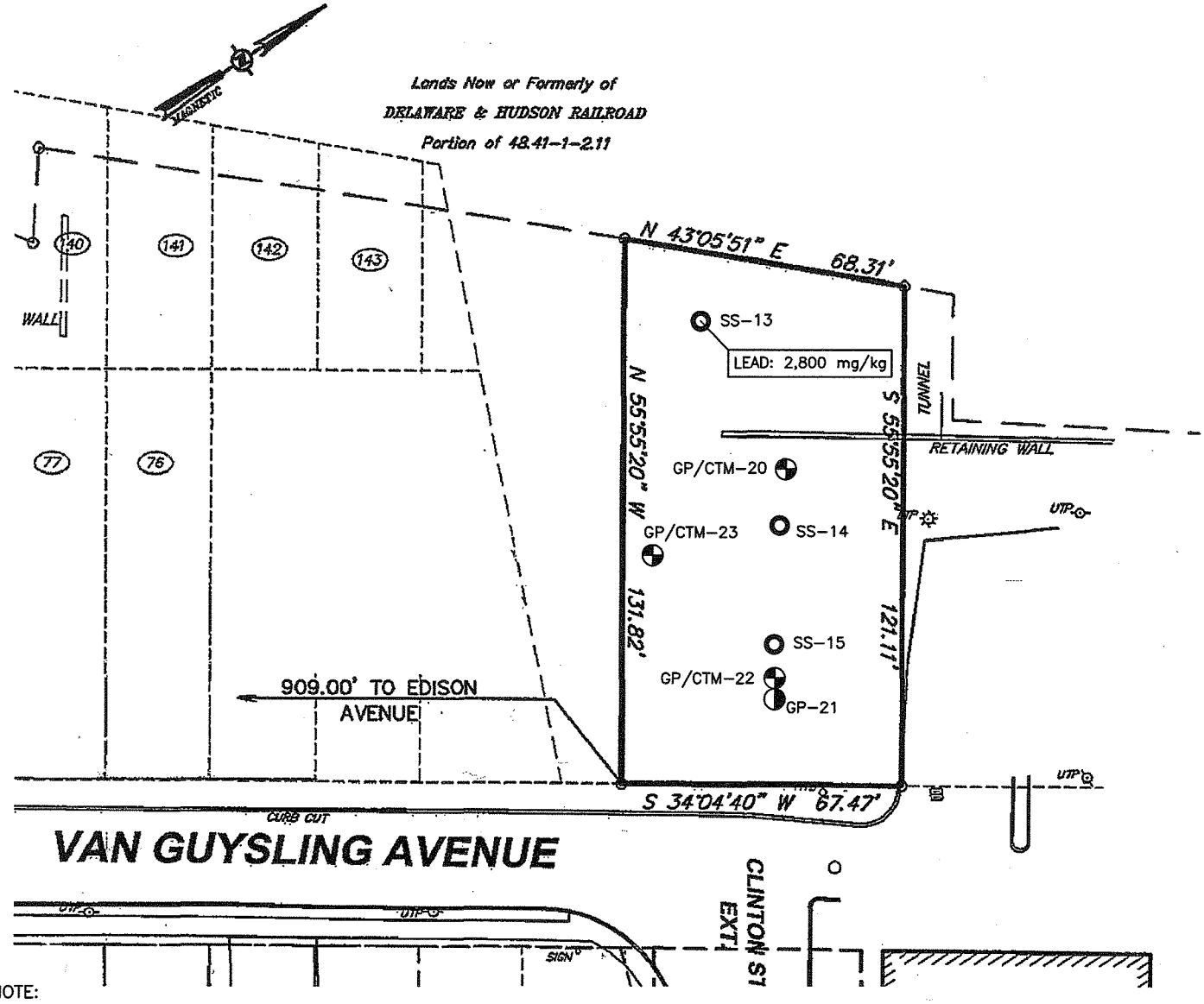
FIGURE 4
SVOCs ABOVE SCGs IN SOIL
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'± | DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 3 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

FIGURE 5
METALS ABOVE SCGs IN SOIL
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
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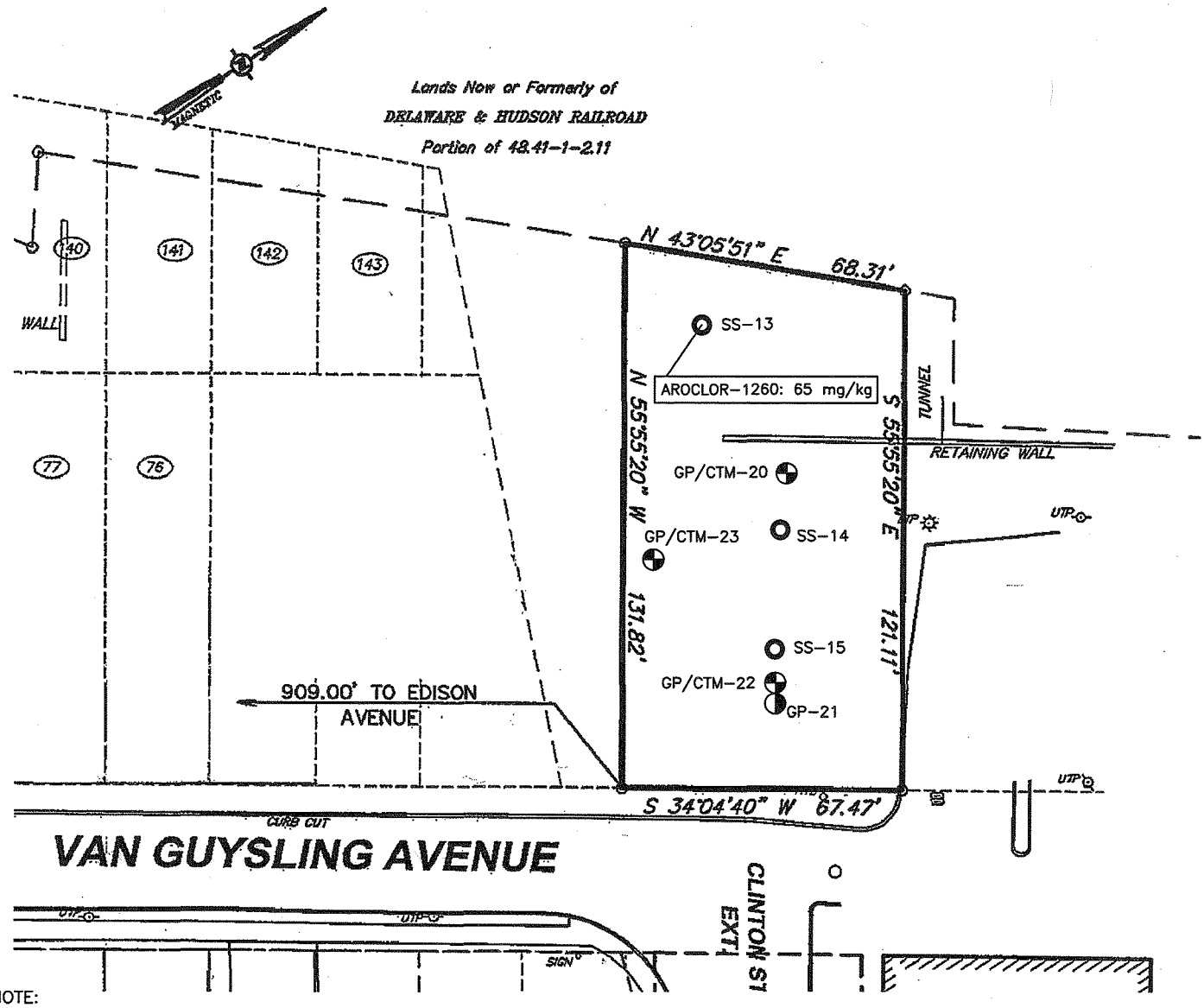
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

Drafter: TCB	Checker: J.FAVREAU
Appr. by:	Proj. No. 05.5550
SCALE: 1"=40'±	DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 4 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
1. THE LOCATIONS AND FEATURES DEPICTED ON THIS MAP ARE APPROXIMATE AND DO NOT REPRESENT AN ACTUAL FIELD SURVEY.

MAP REFERENCE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

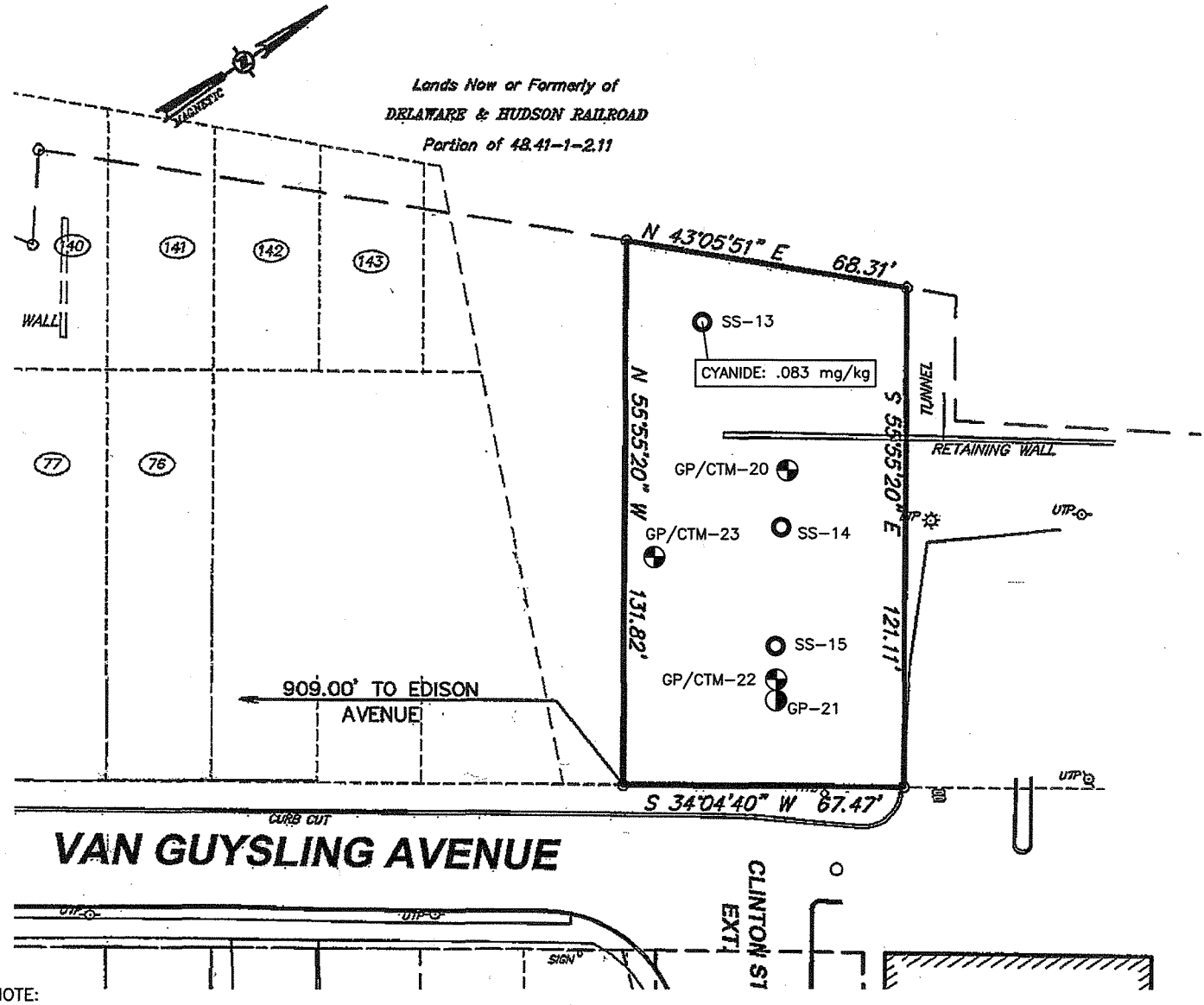
FIGURE 6
PCBs ABOVE SCGs IN SOIL
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

Drafter: TCB	Checker: J.FAVREAU
Appr. by:	Proj. No. 05.5550
SCALE: 1"=40'±	DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 5 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
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MAP REFERENCE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB | Checker: J.FAVREAU

Appr. by: | Proj. No. 05.5550

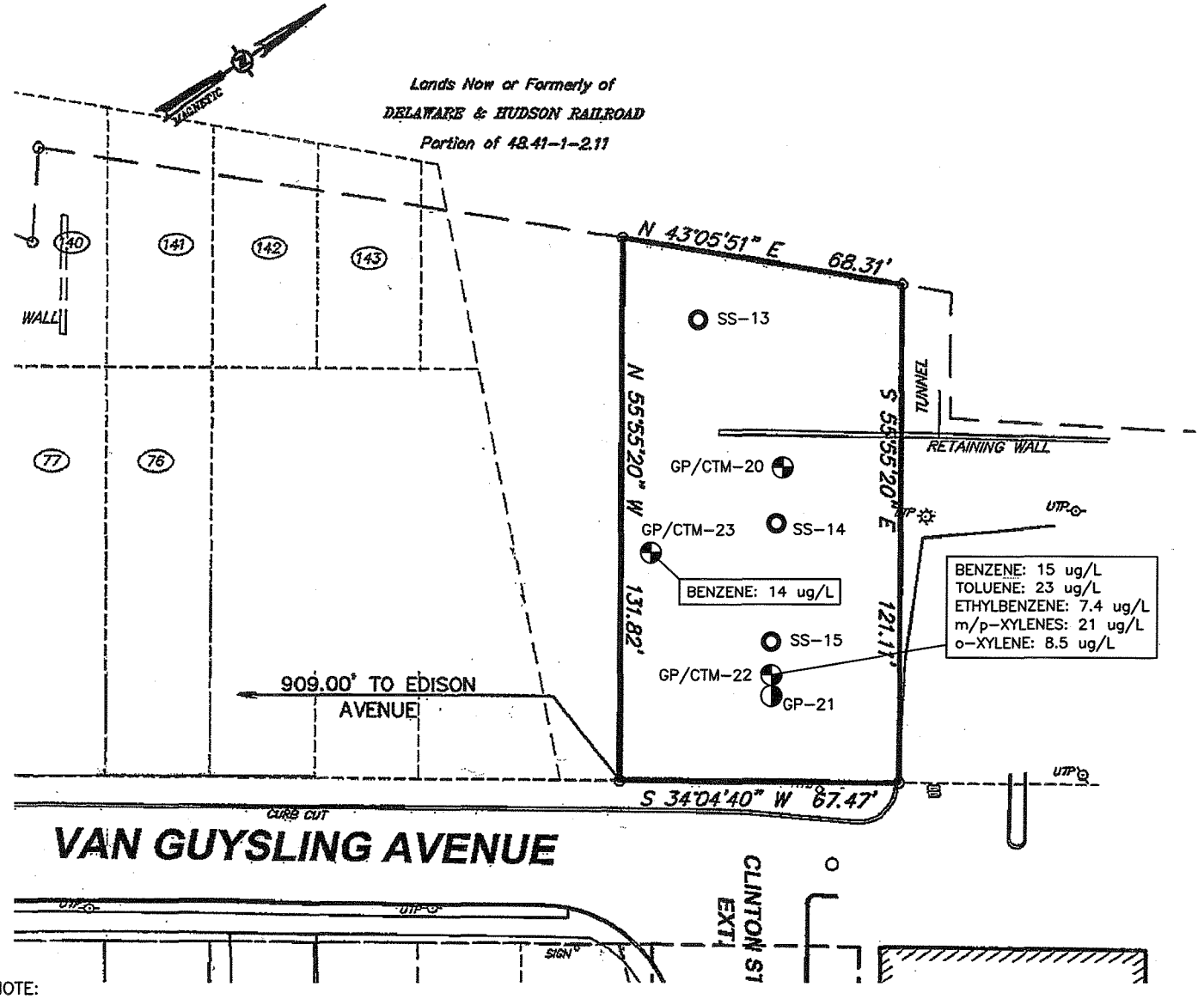
FIGURE 7
CYANIDE ABOVE SCG IN SOIL
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'± | DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 6 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
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MAP REFERENCE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB | Checker: J.FAVREAU

Appr. by: | Proj. No. 05.5550

FIGURE 8
VOCs ABOVE SCGs IN GROUNDWATER
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
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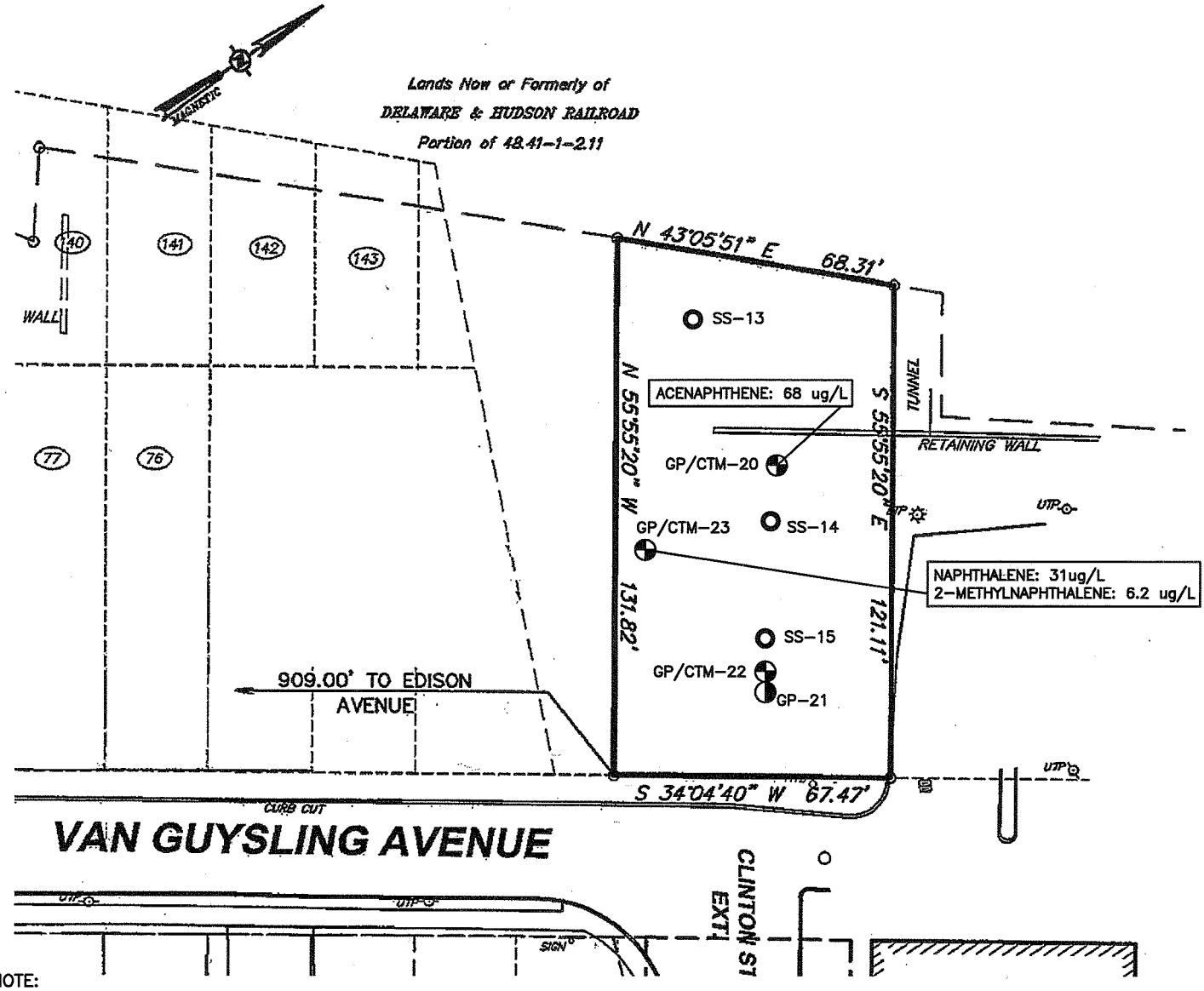
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'± | DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 7 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
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MAP REFERENCE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB	Checker: J.FAVREAU
Appr. by:	Proj. No. 05.5550

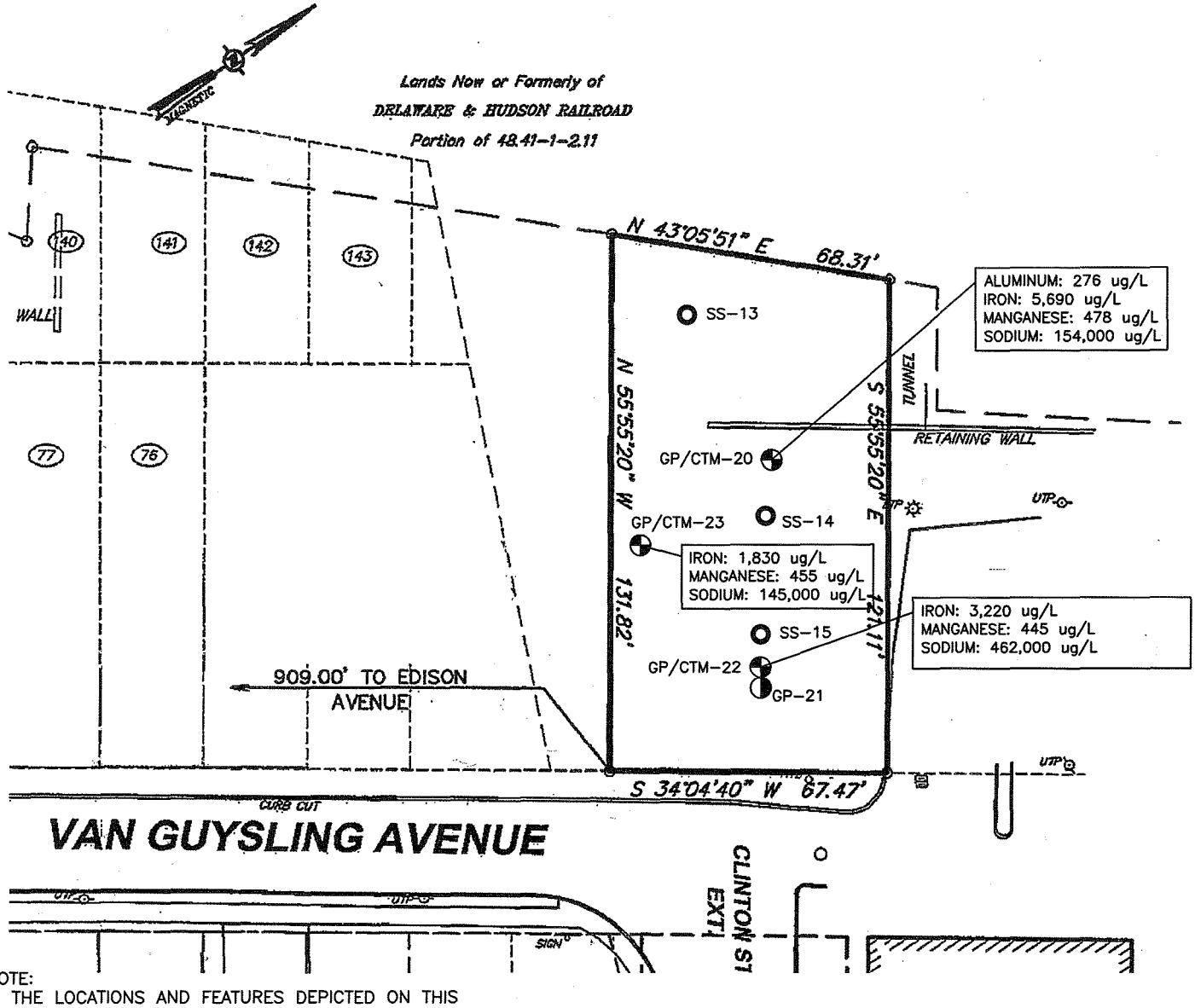
FIGURE 9
SVOCs ABOVE SCGs IN GROUNDWATER
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'±	DATE: JUNE 25, 2008

NONE :XREFS
DWG. NO.: 07-0161 SHEET 8 OF 10
CAD DWG. FILE NAME: SCG-EXCEEDENCES.DWG



NOTE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB | Checker: J.FAVREAU

Appr. by: | Proj. No. 05.5550

FIGURE 10
METALS ABOVE SCGs IN GROUNDWATER
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
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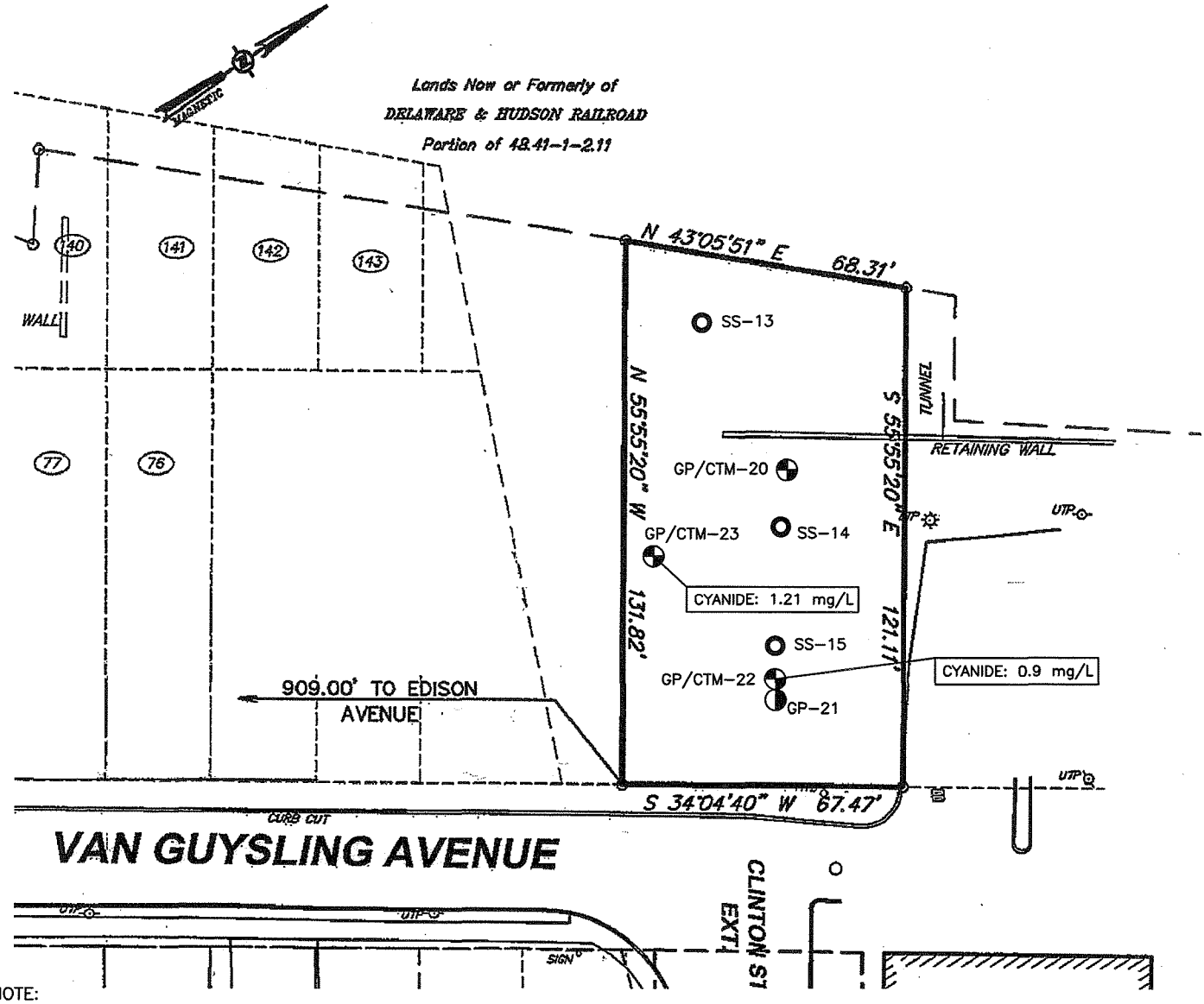
SCALE: 1"=40'± | DATE: JUNE 25, 2008



NOTE:
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BAR SCALE
40 0 20 40 80
1 inch = 40 ft.

LEGEND

- SB/MW — SOIL BORING/MONITORING WELL (APPROX.)
- SS — SURFACE SOIL SAMPLING LOCATION (APPROX.)
- GP-21 — SOIL BORING (APPROX.)

Date	RECORD OF WORK	Appr.

Drafter: TCB	Checker: J.FAVREAU
Appr. by:	Proj. No. 05.5550

FIGURE 11
CYANIDE ABOVE SCG IN GROUNDWATER
312 BROADWAY – ADJACENT PARCEL

CITY OF SCHENECTADY | SCHENECTADY COUNTY, NY

C.T. MALE ASSOCIATES, P.C.
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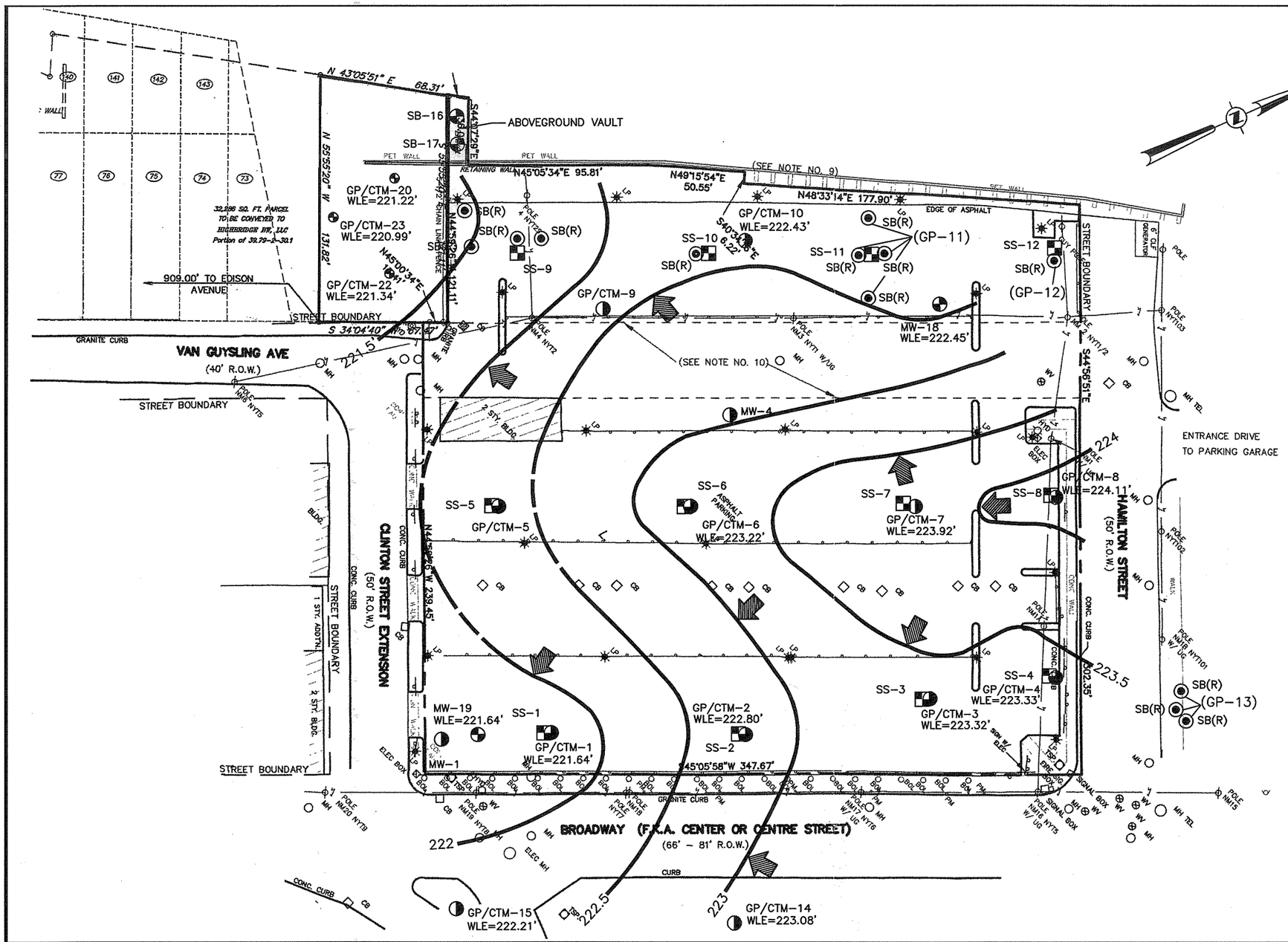
518.786.7400 * FAX 518.786.7299
Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=40'±

DATE: JUNE 25, 2008



LEGEND

○ BOL	BOLLARD
□ CB	CATCH BASIN
○ GV	GAS VALVE
◇ HYD	HYDRANT
✳ LP	LIGHT POLE
○ MH	MISCELLANEOUS MANHOLE
⌀ NM15	UTILITY POLE
○ WV	WATER VALVE
◑ CTM-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL 2006)
◑ MW-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL/MAY 2004)
◉ SB(R)	SOIL BORING WHERE REFUSAL WAS ENCOUNTERED AT APPROX. 4 FEET OR LESS (C.T. MALE MAY 2004)
▪ SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)
◑ MW-18	SOIL BORING/MONITORING WELL LOCATION (INSTALLED BY C.T. MALE MAY 29, 2007)
———	GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
WLE=223.33'	WATER LEVEL ELEVATION IN FEET

BAR SCALE
60 0 30 60 120
1 inch = 60 ft.

NOTE:
1. THE LOCATIONS AND FEATURES DEPICTED ON THIS MAP ARE APPROXIMATE AND DO NOT REPRESENT AN ACTUAL FIELD SURVEY.

MAP REFERENCE:
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2. FIGURE 1, MONITORING WELL LOCATIONS, SUPPLEMENTAL INVESTIGATION ACTIVITIES, DATED MAY 14, 2008, DWG. NO. 08-0341.

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				

DESIGNED :
DRAFTED : J.MARX
CHECKED : J.FAVREAU
PROJ. NO: 05.5550
SCALE : 1"=60'
DATE : JUNE 25, 2008

FIGURE 12
GROUNDWATER CONTOUR MAP (FEBRUARY 5, 2008)

ENVIRONMENTAL RESTORATION PROGRAM INVESTIGATION
LOWER BROADWAY PARKING LOT/312 BROADWAY

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
ARCHITECTURE & BUILDING SYSTEMS ENGINEERING * CIVIL ENGINEERING
ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO: 08-0412

CAD DWG. FILE NAME: 20508 GW CONTOUR.DWG

APPENDIX A

Analytical Data Summary Tables

TABLE 1
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02DL	Z1346-04	Z1346-10	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	10.0	50.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Acetone	500	0.1 UJ	0.11 UJ	0.12 J	17 U	0.098 UJ	0.091 UJ	0.092 UJ
Benzene	44	0.004 U	0.0049 U	6.8 J	**160**	0.0042 U	0.0038 U	0.0039 U
Toluene	500	0.0054 U	0.0059 U	8.2	260	0.0051 U	0.0047 U	0.0047 U
Ethyl Benzene	390	0.0049 U	0.0054 U	7.3 J	300 J	0.0046 U	0.0043 U	0.0043 U
m/p-Xylenes	500	0.011 U	0.0130 U	16.0 J	**790** J	0.011 U	0.0099 U	0.01 U
o-Xylene	500	0.0047 U	0.0051 U	6.4 J	290 J	0.0044 U	0.004 U	0.0041 U
Styrene	n/a	0.0038 U	0.0042 U	0.069 J	1.5 U	0.0036 U	0.0033 U	0.0033 U
Isopropylbenzene	n/a	0.0051 U	0.0055 U	0.26 J	49 J	0.0047 U	0.0044 U	0.0044 U
Total Confident Conc. VOC		0	0	45.149	1,849	0	0	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
n/a - Not Applicable (no established standard)
ug/Kg - Micrograms per Kilogram
Values in **BOLD** denote exceedence of SCG
Note: GPFD01 is a field duplicate sample of GP/CTM-20 (2-2)

TABLE 2
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02	Z1346-04DL2	Z1346-10DL2	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		20.0	125.0	100.0	500.0	125.0	5.0	10.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Naphthalene	500	3.3 J	34 J	370	**4,400**	37	1.1 J	1.3 J
2-Methylnaphthalene	n/a	0.94 J	21 J	83	1,000	20	0.26 J	0.1 U
1,1-Biphenyl	n/a	0.24 UJ	18 J	26 J	210	19	0.053 U	0.11 U
Acenaphthylene	500	1.1 J	2.8 J	110	240 J	3.3 J	0.24 J	0.054 U
Acenaphthene	500	0.88 J	110 J	180	**920**	110	0.34 J	0.079 U
Dibenzofuran	n/a	0.25 UJ	87 J	190	750	93	0.22 J	0.11 U
Fluorene	500	0.94 J	120 J	270	**780**	110	0.38 J	0.099 U
Phenanthrene	500	5.6 J	360 J	**930**	**2,800**	340	3.3	1.1 J
Anthracene	500	1.9 J	44 J	**400**	**800**	35	0.93 J	0.12 U
Carbazole	n/a	0.62 UJ	17 J	68	300 J	15	0.3 J	0.28 U
Fluoranthene	500	9.6 J	200 J	**980**	**1,600**	170	4.9	1 J
Pyrene	500	11.0 J	120 J	**850**	**1,400**	130	4.3	0.96 J
Benzo(a)anthracene	5.6	**5.8** J	**39** J	**390**	**600** J	**39**	2.1	0.45 J
Chrysene	56	4.7 J	30 J	**310**	**490** J	28	2	0.44 J
bis(2-Ethylhexyl)phthalate	n/a	0.31 U	0.017 UJ	1.6 U	1.6 UJ	0.22 U	0.11 U	0.14 U
Benzo(b)fluoranthene	5.6	**8.5** J	**21** J	**370**	**600**	**21**	2.1	0.61 J
Benzo(k)fluoranthene	56	2.5 J	9.5	**130**	**210** J	9.5 J	0.8 J	0.17 U
Benzo(a)pyrene	1	**5.8** J	**15** J	**330**	**550**	**15** J	**1.5** J	0.51 J
Indeno(1,2,3-cd)pyrene	5.6	3.5 J	3.3	**130**	**220** J	3 J	0.68 J	0.093 U
Dibenz(a,h)anthracene	0.56	**1.1** J	**1.2**	**49**	**89** J	**1.4** J	0.29 J	0.27 U
Benzo(g,h,i)perylene	500	4.8 J	3.6	150	270 J	3.4 J	1 J	0.46 J
Total Confident Conc. SVOC		71.96	1,256.4	6,316	17,780	1,181.5	26.74	6.83

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard)
ug/Kg - Micrograms per Kilogram
Note: GPFD01 is a field duplicate sample of GP/CTM-20 (2-2)

TABLE 3
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS - METALS
(DETECTED METALS ONLY)

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02	Z1346-04	Z1346-10	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Aluminum	n/a	4490	4270	2060	5460	5350	2930	3390
Arsenic	16	2.11 J	3.87 J	1.69	3.53	10.3	2.93	2.24
Barium	400	33.4 J	57.4 J	13.3	40.6 J	160	30.8	28.3
Beryllium	590	0.312	0.349	0.108 U	0.305	0.402 J	0.176 U	0.225
Cadmium	9.3	0.049 U	0.054 U	0.051 U	0.051 U	2.42 J	0.043 U	0.045 U
Calcium	n/a	2410 J	6000 J	15100	18900 J	18600 J	23500	28000
Chromium	1,900	6.4	6.95	2.96	8.17	20.8 J	9.69	5.69
Cobalt	n/a	4.4	5.27	1.47	3.84	7.03 J	2.86	2.39
Copper	270	28.7	28.2	3.32	12.7	178	15.7	9.24
Iron	n/a	7880	7600	5980	9680	28600 J	18500	6400
Lead	1,000	37.3 J	70.1 J	19.5	75.5 J	**2800** J	28.9	22.9
Magnesium	n/a	1080 J	760 J	1810	3250 J	7180	6350	7120
Manganese	10,000	74.6	72.4	95.8	236	306	329	157
Nickel	310	9.05 J	11.7 J	2.95	8.07	27.1 J	8.9	6.85
Potassium	N/A	655 J	500 J	414	1110 J	1120 J	583	663
Selenium	1,500	0.148 UJ	0.525 J	0.154 U	0.152 U	0.141 U	0.13 U	0.134 U
Vanadium	n/a	13 J	16.1 J	5.56	14.7	20.9 J	7.62	14
Zinc	10,000	116 J	95.1 J	18.3	47.7 J	1020 J	117	80.9

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02	Z1346-04	Z1346-10	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	5.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Mercury	2.8	0.134	0.135	0.051	0.113 J	1.1 J	0.064	0.115

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard)
mg/Kg - Milligrams per Kilogram
Note: GPFD01 is a field duplicate sample of GP/CTM-20 (2-2)

TABLE 4
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS - PCBs
(DETECTED PCBs ONLY)

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02	Z1346-04	Z1346-10DL	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		20.0	20.0	20.0	20.0	200.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Aroclor-1260	1	0.1 U	0.11 U	0.11 UJ	0.0053 UJ	**65**	0.28	0.2

TABLE 5
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
SOIL ANALYTICAL RESULTS - CYANIDE

Sample ID		GP/CTM-20 (2-2)	GPFD01	GP/CTM-22 (3-2)	GP/CTM-23 (3-2)	SS-13	SS-14	SS-15
Lab Sample Number		Z1346-01	Z1346-03	Z1346-02	Z1346-04	Z1346-10	Z1346-13	Z1346-14
Sampling Date		1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008	1/28/2008
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	10.0	1.0	1.0
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
COMPOUND	Part 375 SCG (mg/Kg)							
Cyanide	0.027	0.00177 J	0.00439 J	0.00387	0.00253	**0.083**	0.00531	0.00073

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6NYCRR Part 375 Restricted Use (Commercial) Soil Cleanup Objectives)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard)
ug/Kg - Micrograms per Kilogram
Note: GPFD01 is a field duplicate sample of GP/CTM-20 (2-2)

TABLE 6
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		GP/CTM-20	GP-CTM-22	GWFD020508	GP-CTM-23	GWEB020508	TRANSPORT BLANK
Lab Sample Number		Z1439-01	Z1439-02	Z1439-06	Z1439-03	Z1439-07	Z1439-08
Sampling Date		2/5/2008	2/5/2008	2/5/2008	2/5/2008	2/5/2008	2/5/2008
Matrix		WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	SCG (ug/L)						
Acetone	50*	12 J	2.2 U	2.2 UJ	8.3 J	2.2 U	2.2 U
Benzene	1	0.35 UJ	**15**	**8.2** J	**14**	0.35 U	0.35 U
Toluene	5	0.16 UJ	**23**	**15** J	0.16 U	0.16 U	0.16 U
Ethyl Benzene	5	0.05 UJ	**7.4**	**6.4** J	0.05 U	0.05 U	0.05 U
m/p-Xylenes	5	2.3 J	**21**	**18** J	0.47 U	0.47 U	0.47 U
o-Xylene	5	1.2 J	**8.5**	**7.3** J	0.16 U	0.16 U	0.16 U
Total Confident Conc. VOC		15.5	74.9	54.9	22.3	0	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
* - Indicates guidance value
SCG - Standards, Criteria & Guidance levels (Reference: 6 NYCRR part 703 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations)
Values in **BOLD** denote exceedence of SCG
ug/L - Micrograms per Liter
n/a - Not Appliable (no established standard)
Note: GWFD020508 is a field duplicate sample of GP/CTM-22

TABLE 7
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - SEMIVOLATILE ORGANIC COMPOUNDS
(DETECTED COMPOUNDS ONLY)

Sample ID		GP-CTM-20	GP-CTM-22	GWFD020508	GP-CTM-23	GWEB020508
Lab Sample Number		Z1439-01	Z1439-02	Z1439-06	Z1439-03	Z1439-07
Sampling Date		2/5/2008	2/5/2008	2/5/2008	2/5/2008	2/5/2008
Matrix		WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	**SCG (ug/L)**					
2-Methylphenol	n/a	0.38 UJ	0.36 U	2.3 J	0.37 U	0.37 U
3+4-Methylphenols	n/a	0.41 UJ	0.39 U	2.7 J	0.4 U	0.4 U
2,4-Dimethylphenol	n/a	0.8 UJ	2.6 J	6.8 J	0.78 U	0.78 U
Naphthalene	10	0.29 U	0.28 U	0.29 U	**31**	0.29 U
2-Methylnaphthalene	4.7*	0.39 UJ	0.37 U	1.7 J	**6.2** J	0.38 U
1,1-Biphenyl	5	0.34 UJ	0.32 U	2.7 J	1.4 J	0.33 U
Acenaphthylene	n/a	1.2 J	3.1 J	7.1 J	3.9 J	0.36 U
Acenaphthene	20*	**68** J	15	**25** J	13	0.33 U
Dibenzofuran	n/a	3.4 J	8.6 J	15 J	7.1 J	0.32 U
Fluorene	50*	39 J	11	19 J	6.2 J	0.29 U
Phenanthrene	50*	6.9 J	6.2 J	16 J	4.8 J	1.4 U
Anthracene	50*	1.5 UJ	2.2 J	3.9 J	1.4 U	1.5 U
Carbazole	n/a	1.6 J	5.3 J	12 J	8.6 J	0.25 U
Fluoranthene	50*	8.3 J	4.3 J	5.9 J	1.7 J	0.21 U
Pyrene	50*	4.6 J	3.4 J	4.3 J	1.4 U	1.5 U
Total Confident Conc. SVOC		133	61.7	124.4	83.9	0

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
* - Indicates guidance value
SCG - Standards, Criteria & Guidance levels (Reference: 6 NYCRR part 703 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard or guidance value)
Note: GWFD020508 is a field duplicate sample of GP/CTM-22

TABLE 8
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - TAL METALS
(DETECTED METALS ONLY)

Sample ID		GP-CTM-20	GP-CTM-22	GWFD020508	GP-CTM-23	GWEB020508
Lab Sample Number		Z1439-01	Z1439-02	Z1439-06	Z1439-03	Z1439-07
Sampling Date		2/5/2008	2/5/2008	2/5/2008	2/5/2008	2/5/2008
Matrix		WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0
Units		ug/L	ug/L	ug/L	ug/L	ug/L
COMPOUND	**SCG (ug/L)**					
Aluminum	100	**276** J	35.1 J	17.2 UJ	17.2 U	17.2 U
Antimony	3	3.1 UJ	3.1 U	**7.09** J	3.1 U	3.1 U
Arsenic	25	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
Barium	1,000	153 J	102	108 J	114	3.1 U
Beryllium	3	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Cadmium	5	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
Calcium	n/a	188,000	210,000	225,000	228,000	466 J
Chromium	50	0.6 UJ	26.7	31.6 J	0.6 U	0.6 U
Cobalt	5	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
Copper	200	1.81 J	0.5 U	2.83 J	0.5 U	0.5 U
Iron	300	**5,690** J	**3,220**	**3,310** J	**1,830**	47.7 U
Lead	25	1.98 J	1.9 U	1.9 UJ	1.9 U	1.9 U
Magnesium	35,000	10,100 J	14,300	15,500 J	20,000	34.3 J
Manganese	300	**478**	**445**	**473**	**455**	0.8 U
Mercury	0.7	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Nickel	100	1.8 UJ	9.85 J	16.5 J	1.8 U	1.8 U
Potassium	n/a	17,600	13,800	15,000	6,840	236 U
Selenium	10	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Silver	50	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
Sodium	20,000	**154,000** J	**462,000**	**498,000** J	**145,000**	1,240
Thallium	0.5*	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Vanadium	14	1 U	1 U	1 U	1 U	1 U
Zinc	2,000	33.2 U	23 U	25.8 U	22.6 U	27.7

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
* - Indicates guidance value
SCG - Standards, Criteria & Guidance levels (Reference: 6 NYCRR part 703 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard or guidance value)
ug/L - Micrograms per Liter
Note: GWFD020508 is a field duplicate sample of GP/CTM-22

TABLE 9
LOWER BROADWAY PARKING LOT (312 BROADWAY) - ADJACENT PARCEL
SCHENECTADY, NEW YORK

REMEDIAL INVESTIGATION
GROUNDWATER ANALYTICAL RESULTS - CYANIDE

Sample ID		GP-CTM-20	GP-CTM-22	GWFD020808	GP-CTM-23	GWEB020808
Lab Sample Number		Z1488-04	Z1488-05	Z1488-06	Z1488-01	Z1488-07
Sampling Date		2/8/2008	2/8/2008	2/8/2008	2/8/2008	2/8/2008
Matrix		WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	2.0	1.0	10.0	1.0
Units		mg/L	mg/L	mg/L	mg/L	mg/L
COMPOUND	**SCG (mg/L)**					
Cyanide	0.2	0.087 J	**0.9**	0.064 J	**1.21** J	0.01

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
UJ - Data indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
J - Indicates an estimated value
SCG - Standards, Criteria & Guidance levels (Reference: 6 NYCRR part 703 - Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.)
Values in **BOLD** denote exceedence of SCG
n/a - Not Applicable (no established standard or guidance value)
mg/L - Milligrams per Liter
Note: GWFD020508 is a field duplicate sample of GP/CTM-22

APPENDIX B

Subsurface Exploration Logs
&
Monitoring Well Construction Logs

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP/CTM - 20
ELEV.: DATUM:
START DATE: 1/28/08 FINISH DATE: 1/28/08
SHEET 1 OF 1

PROJECT: 312 Broadway - Adjacent Parcel | CTM PROJECT NO.: 05.5550

LOCATION: Schenectady, NY | CTM OBSERVER: Jonathan Dippert

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4	1	1	3	Fill: Brown very fine to fine SAND, little fine to medium gravel, trace coal	Damp to moist
		2			
8	2	1	2		Wet @ ~6' bgs
		2		7.0' Fill: Gray very fine to fine SAND, Some Coal Ash, little coal, trace glass 8.5'	
12	3	1	2.5	Brown fine to medium SAND	Sheen on water
		2			Faint coal tar odor
16	4	1	3.5		
		2		15.5' Black very fine SAND and SILT	Strong coal tar odor
20				Boring Terminated at 16' bgs	
24					
28					

DRILLING CONTRACTOR: Precision Env. Svcs. GEOPROBE TYPE: Bobcat-mounted
METHOD OF SAMPLING: 4' MacroCore

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: DIPPERT

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP-21
ELEV.: DATUM:
START DATE: 1/28/08 FINISH DATE: 1/28/08
SHEET 1 OF 1

PROJECT: 312 Broadway - Adjacent Parcel | CTM PROJECT NO.: 05.5550

LOCATION: Schenectady, NY | CTM OBSERVER: Jonathan Dippert

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4	1	1	3.2	Fill: Brown fine SAND, Some fine to medium Gravel, trace coal	Damp to moist
		2			
8	2	1	2	Fill: Brown and orange-brown fine to medium SAND, Some fine to medium Gravel, little coal	Moist
		2		8.5'	Wet @ 8' bgs
12	3	1	0.75	Black very fine SAND and SILT, petroleum odor 9.0'	
				Boring Terminated at 9' bgs - refusal	
16					
20					
24					
28					

DRILLING CONTRACTOR: Precision Env. Svcs. GEOPROBE TYPE: Bobcat-mounted
METHOD OF SAMPLING: 4' MacroCore

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: DIPPERT

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP/CTM - 22
ELEV.: DATUM:
START DATE: 1/28/08 FINISH DATE: 1/28/08
SHEET 1 OF 1

PROJECT: 312 Broadway - Adjacent Parcel | CTM PROJECT NO.: 05.5550

LOCATION: Schenectady, NY | CTM OBSERVER: Jonathan Dippert

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	SAMPLE RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
4	1	1	3	Fill: Brown fine SAND, some fine to medium gravel, little coal, trace white fine sand	Moist
		2			
8	2	1	1.5		
		2			
	3	1	2.8	9.0'	Wet @ 8' bgs
12		2		Black very fine SAND and SILT	Petroleum odor
	4	1	3	14.0'	
16		2		Gray SILT, trace organic material	Faint petroleum odor
	5		0		No recovery 16-20'
20					
24				Boring Terminated at 20' bgs	
28					

DRILLING CONTRACTOR: Precision Env. Svcs. GEOPROBE TYPE: Bobcat-mounted
METHOD OF SAMPLING: 4' MacroCore

GROUNDWATER LEVEL READINGS

DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: DIPPERT

C.T. MALE ASSOCIATES, P.C.

GEOPROBE SUBSURFACE EXPLORATION LOG

BORING NO.: GP/CTM-23
ELEV.: DATUM:
START DATE: 1/28/08 FINISH DATE: 1/28/08
SHEET 1 OF 1

PROJECT: 312 Broadway - Adjacent Parcel | CTM PROJECT NO.: 05.5550

LOCATION: Schenectady, NY | CTM OBSERVER: Jonathan Dippert

DEPTH (FT.)	SAMPLE INTERVAL	SAMPLE NO.	RECOVERY (FT)	SAMPLE CLASSIFICATION	NOTES
	1	1	2	Fill: Brown fine SAND, medium to coarse GRAVEL, trace pulverized rock	Moist
4		2		4.0'	
	2	1	1.6	Fill: Brown fine to medium SAND, Some medium to coarse Gravel, trace coal, glass pieces, and coal ash 6.0'	
8		2		Brown fine to medium SAND (Possible Fill) 8.0'	
	3	1	2		Wet @ 8' bgs Coal tar odor
12		2		Black very fine SAND and SILT, trace organic material	
	4		0		No recovery 12-16'
16					
	5		0		No recovery 16-20'
20					
24				Boring Terminated at 20' bgs	
28					

DRILLING CONTRACTOR: Precision Env. Svcs. GEOPROBE TYPE: Bobcat-mounted
METHOD OF SAMPLING: 4' MacroCore

GROUNDWATER LEVEL READINGS

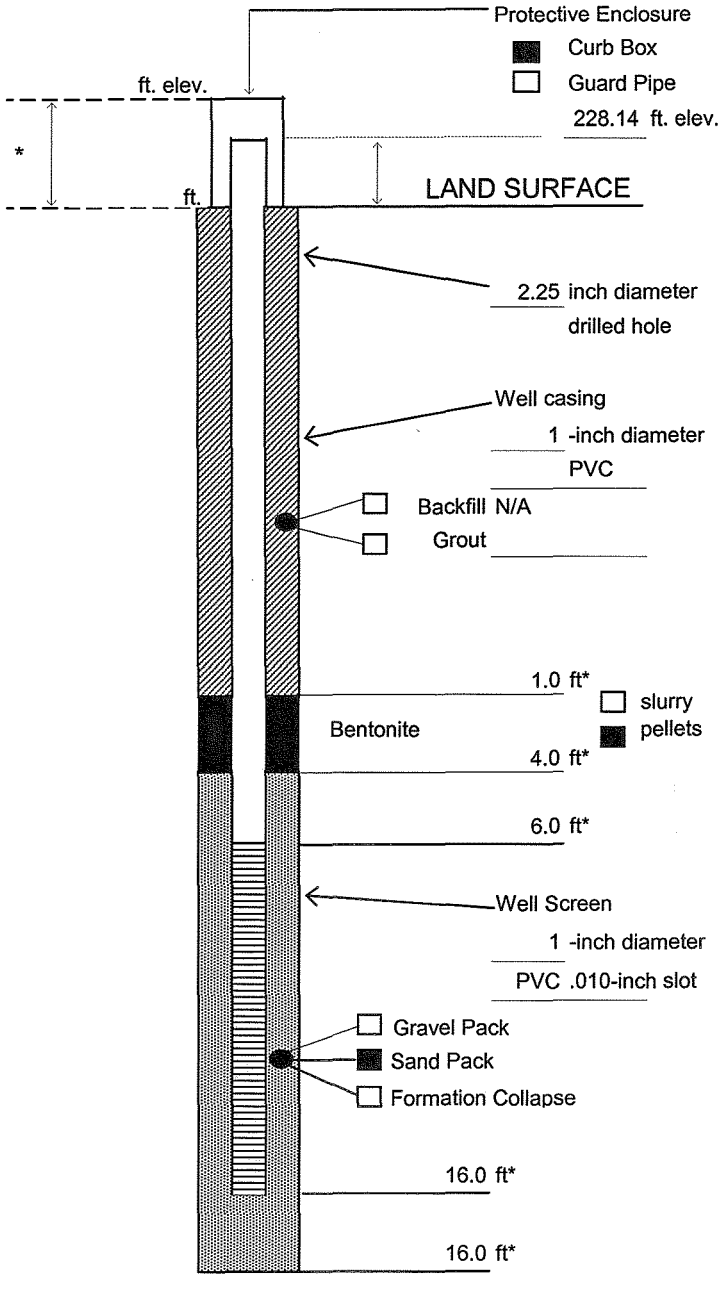
DATE	LEVEL	REFERENCE MEASURING POINT

SAMPLE CLASSIFICATION BY: DIPPERT

Well No. GP/CTM-20

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 05.5550

Project Name 312 Broadway - Adjacent Parcel

Well No. GP/CTM - 20 Boring No. GP/CTM - 20

Town/City Schenectady

County Schenectady State NY

Installation Date(s) 1/28/2008

Drilling Contractor Precision Env. Services, Inc.

Drilling Method Geoprobe

Water Depth From Top of Riser ____ ft ____
Date

C.T. Male Observer Jonathan Dippert

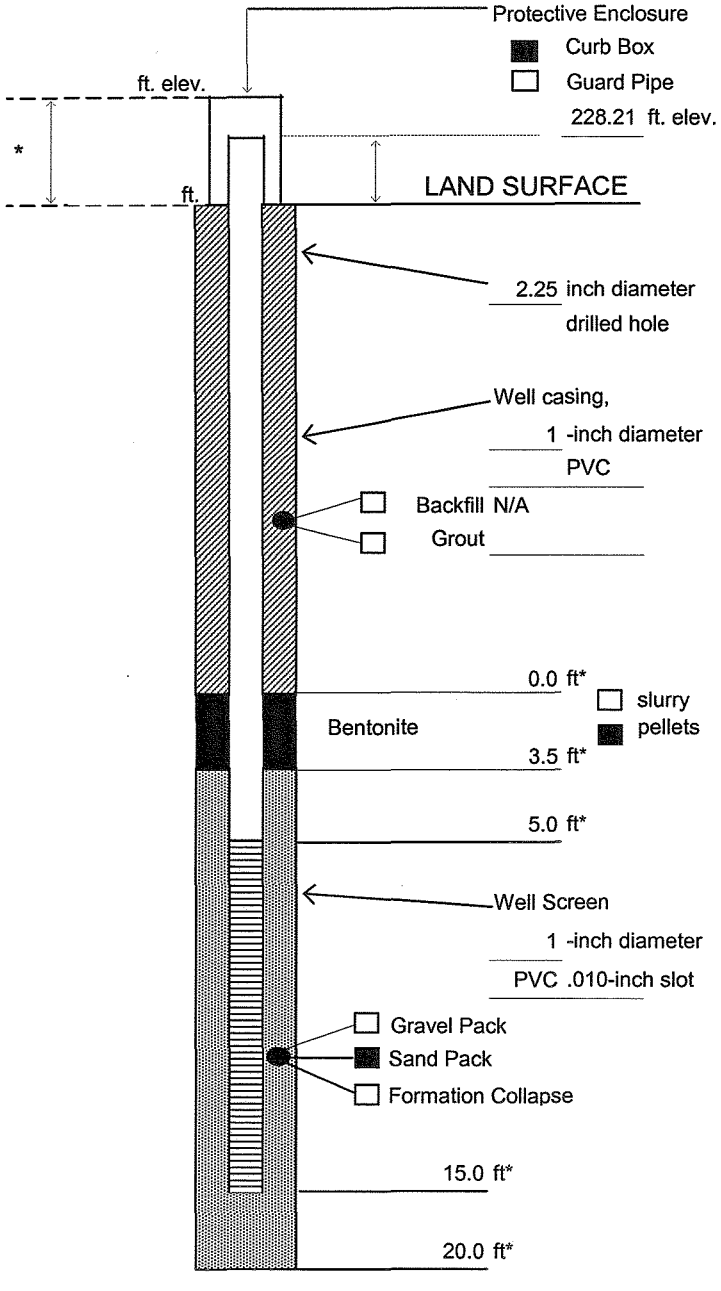
Notes:

#1 sand used in sand pack

Well No. GP/CTM-22

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 05.5550

Project Name 312 Broadway - Adjacent Parcel

Well No. GP/CTM - 22 Boring No. GP/CTM - 22

Town/City Schenectady

County Schenectady State NY

Installation Date(s) 1/28/2008

Drilling Contractor Precision Env. Services, Inc.

Drilling Method Geoprobe

Water Depth From Top of Riser ____ ft ____
Date

C.T. Male Observer Jonathan Dippert

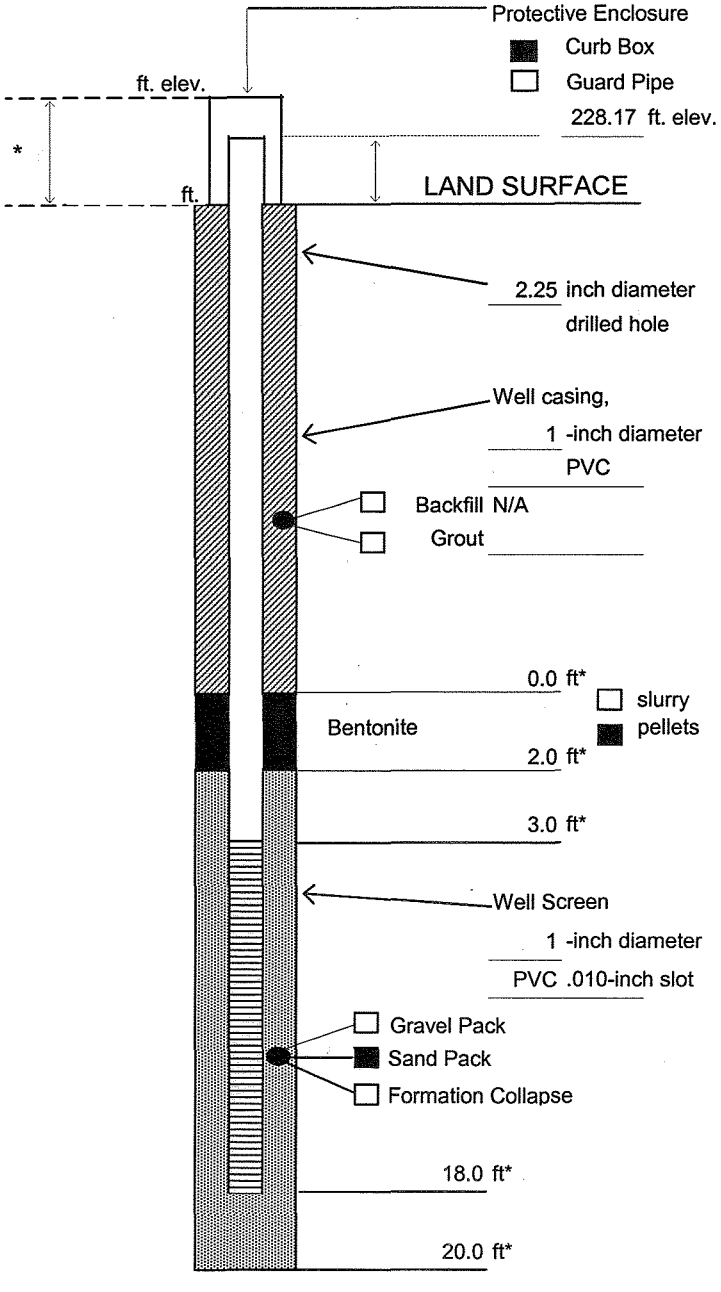
Notes:

#1 sand used in sand pack

Well No. GP/CTM-23

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 05.5550

Project Name 312 Broadway

Well No. GP/CTM - 23 Boring No. GP/CTM - 23

Town/City Schenectady

County Schenectady State NY

Installation Date(s) 1/28/2008

Drilling Contractor Precision Env. Services, Inc.

Drilling Method Geoprobe

Water Depth From Top of Riser _____ ft _____ Date

C.T. Male Observer Jonathan Dippert

Notes:

#1 sand used in sand pack

APPENDIX C

Organic Vapor Headspace Analysis Logs

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT:	312 Broadway - Adjacent Parcel		**PROJECT #:**	05.5550	**PAGE 2 OF 2**
CLIENT:	Schenectady Metroplex Development Authority				**DATE**
LOCATION:	Schenectady, NY				**COLLECTED: 1/28/08**
INSTRUMENT USED:	Mini Rae 2000	**LAMP**		**eV**	**DATE**
DATE INSTRUMENT CALIBRATED:	1/28/08	**BY:** JD			**ANALYZED: 1/28/08**
TEMPERATURE OF SOIL:	ambient				**ANALYST: Jonathan Dippert**

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)***	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
GP/CTM - 23	1-1	0-2	soil	0.0	0.0	NO/NS
	1-2	2-4	soil	0.0	0.0	NO/NS
	2-1	4-6	soil	0.0	0.0	NO/NS
	2-2	6-8	soil	1.0	0.0	some black staining, faint coal tar odor
	3-1	8-10	soil	5.4	0.0	Black staining, coal tar odor
	3-2	10-12	soil	207	0.0	Black staining, coal tar odor
SS - 13		0-.5	soil	0.0	0.0	NO/NS
SS - 14		0-.5	soil	0.0	0.0	NO/NS
SS - 15		0-.5	soil	0.0	0.0	NO/NS

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.
NO - No Odor
NS - No Staining

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT:	312 Broadway - Adjacent Parcel	**PROJECT #:** 05.5550	**PAGE 1 OF 2**
CLIENT:	Schenectady Metroplex Development Authority		**DATE**
LOCATION:	Schenectady, NY		**COLLECTED: 1/28/08**
INSTRUMENT USED:	Mini Rae 2000 **LAMP**	**eV**	**DATE**
DATE INSTRUMENT CALIBRATED:	1/28/08 **BY:** JD		**ANALYZED: 1/28/08**
TEMPERATURE OF SOIL:	ambient		**ANALYST: Jonathan Dippert**

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)***	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
GP/CTM - 20	1-1	0-2	soil	0.0	0.0	NO/NS
	1-2	2-4	soil	0.0	0.0	NO/NS
	2-1	4-6	soil	0.0	0.0	NO/NS
	2-2	6-8	soil	8.3	0.3	NS, strong coal tar odor
	3-1	8-10	soil	0.7	0.1	NS, faint coal tar odor
	3-2	10-12	soil	0.0	0.0	NS, faint coal tar odor
	4-1	12-14	soil	0.0	0.0	NS, faint coal tar odor
	4-2	14-16	soil	15.7	0.0	NS, strong coal tar odor
GP/CTM - 21	1-1	0-2	soil	0.1	0.1	NO, NS
	1-2	2-4	soil	0.1	0.1	NO, NS
	2-1	4-6	soil	0.1	0.1	NO, NS
	2-2	6-8	soil	1.0	0.0	some black staining, faint petroleum odor
	3-1	8-9	soil	6.1	0.0	Black staining, faint petroleum odor
GP/CTM - 22	1-1	0-2	soil	0.0	0.0	NO, NS
	1-2	2-4	soil	0.1	0.1	NO, NS
	2-1	4-6	soil	0.2	0.1	NO, NS
	2-2	6-8	soil	0.3	0.3	NO, NS
	3-1	8-10	soil	1.2	0.4	Black staining, petroleum odor
	3-2	10-12	soil	168	0.2	Black staining, petroleum odor
	4-1	12-14	soil	14.4	0.3	Black staining, petroleum odor
	4-2	14-16	soil	18.3	0.0	little black staining, faint petroleum odor

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.
NO - No Odor
NS - No Staining

APPENDIX D

Data Usability Summary Report

C.T. MALE ASSOCIATES, P.C.

SUBJECT: Data Usability Summary Report (DUSR)
Metroplex – 312 Broadway
Chemtech SDG Nos.: Z1346, Z1439 and Z1488
C.T. Male Project No.: 05.5550

DATE: March 3, 2008

On January 28, 2008, C.T. Male Associates, P.C. (C. T. Male) collected seven (7) soil samples, including one (1) sample duplicate. On February 5 and 8, 2008 C. T. Male collected four (4) groundwater samples, including one (1) sample duplicate, from the Metroplex site at 312 Broadway in the city of Schenectady, NY. The samples were submitted, along with three (3) equipment blanks and two (2) trip blanks to Chemtech Laboratories (Chemtech) in Mountainside, NJ for the following analyses:

Parameter	Sample Date	Matrix	VOC, SW-846 8260B	SVOC, SW-846 8270C	Pesticides, SW-846 8081A	PCBs, SW-846 8082	TAL Metals, SW-846 6010 and 7470/7471	Cyanide SW-846 9012B
Sample Ids								
GP/CTM-20(2-2)	1/28/2008	Solid	1	1	1	1	1	1
GP/CTM-22(3-2)	1/28/2008	Solid	1	1	1	1	1	1
GP/CTM-23(3-2)	1/28/2008	Solid	1	1	1	1	1	1
SS-13	1/28/2008	Solid	1	1	1	1	1	1
SS-14	1/28/2008	Solid	1	1	1	1	1	1
SS-15	1/28/2008	Solid	1	1	1	1	1	1
GPFD01[1]	1/28/2008	Solid	1	1	1	1	1	1
GPEB01	1/28/2008	Aqueous	1	1	1	1	1	1
SSEB01	1/28/2008	Aqueous	1	1	1	1	1	1
Transport Blank	-	Aqueous	1	0	0	0	0	0
GP/CTM-20	2/5/2008[2]	Aqueous	1	1	1	1	1	1
GP/CTM-22	2/5/2008[2]	Aqueous	1	1	1	1	1	1
GP/CTM-23	2/5/2008[2]	Aqueous	1	1	1	1	1	1
GWFD[3]	2/5/2008[2]	Aqueous	1	1	1	1	1	1
GWEB	2/5/2008[2]	Aqueous	1	1	1	1	1	1
Transport Blank	-	Aqueous	1	0	0	0	0	0
Total Samples			**16**	**14**	**14**	**14**	**14**	**14**

VOC – Volatile organic compounds
SVOC – Semi-volatile organic compounds
PCBs – Polychlorinated Biphenyls
TAL – Target analyte list

C. T. Male evaluated the data reported by the laboratory to determine usability per Appendix 2B of the *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC, December 2002), with guidance from the *USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review* (October 1999 and 2004, respectively). The following criteria were reviewed:

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[1] Field duplicate of GP/CTM-20(2-2)
[2] Samples for cyanide analysis were collected on 02/08/08
[3] Field duplicate of GP/CTM-20

- Completeness of data package as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables;
- Holding time compliance for chemical analysis;
- Protocol required limits and specification compliance for quality control (QC) data (e.g., instrument tuning, calibration standards, blank results, spike results, duplicate results, etc);
- Contract compliance for analytical protocols;
- Omissions and transcription errors; and
- Data qualification.

Data Completeness

Documentation required by the project was included in the data package. There were no discrepancies found between the raw data and summary forms. The laboratory Case Narratives (Attachment A) identified deviations from laboratory analytical specifications. C.T. Male reviewed these QC results to determine if sample results should be qualified based on the criteria provided in Appendix 2B of the *Technical Guidance for Site Investigation and Remediation*. QC exceedences and data qualification recommendations are presented in the Data Evaluation Checklists (Attachment B). Qualified sample results are presented in the laboratory summary forms, which are located in Attachment C.

QC exceedences and data qualification recommendations are summarized below. It is recommended that results from the initial analyses of each sample be reported as the representative results for that sample.

It is recommended that sample results which were reported by the laboratory as exceeding the calibration range (E-flagged), be reported from the analysis at the lowest dilution with results within calibration range.

Sample Condition upon Receipt and Holding Times

Chemtech received all the samples listed on the chain of custody (COC) records intact and in good condition.

The temperature of samples was within laboratory specification limits of 2 to 6°C upon receipt. Project samples were prepared and analyzed within EPA-established holding times.

Volatile Organic Analysis (VOA) by SW-846 8260B

All samples were analyzed within 12 hours of the performance check standard, BFB. Percent relative abundance of all ions met the criteria specified in Table 4 of the EPA SW-846 Method 8260B. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average relative response factor (RRF) was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The percent relative standard deviation (%RSD) between RRF was less than or equal to 30% during the initial calibration, and the percent difference (%D) between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes except the following:

- Initial Calibrations – Acetone during the initial calibration associated with the analyses of samples SS-13, SS-14, SS-15, GP/CTM-22(3-2) and GP/CTM-20(2-2). The associated results have been qualified as estimated (J/UJ) due to poor correlation in the initial calibration standards.

- Continuing Calibrations – Dichlorofluoromethane and chloromethane during the continuing calibration associated with the analyses of samples Transport Blank, GPEB01 and SSEB01; methyl acetate and acetone during the continuing calibration associated with the analyses of samples SS-13, SS-14, SS-15, GP/CTM-22(3-2), GP/CTM-20(2-2) and GPFD01; and bromoform during the continuing calibration associated with the analysis of sample GP/CTM-23(3-2) and the diluted analysis of GP/CTM-22(3-2). The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recovery and internal standard results met laboratory specifications for project samples except the following:

- SS-13, Internal Standard – The internal standard recovery of 1,4-dichlorobenzene-d4 was below laboratory specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to analytical inaccuracy.
- SS-15, Internal Standard – The internal standard recovery of 1,4-dichlorobenzene-d4 was below laboratory specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to analytical inaccuracy.
- GP/CTM-22(3-2), Internal Standard – The internal standard recovery of pentafluorobenzene, 1,4-difluorobenzene, chlorobenzene-d5 and 1,4-dichlorobenzene-d4 were below laboratory specifications during the initial analysis. The associated results have been qualified as estimated (J/UJ) due to analytical inaccuracy.

The percent recovery (%R) results for laboratory control sample (LCS) analyses were within laboratory specifications for the target analytes except the following:

- The %R of carbon tetrachloride, trichloroethene, methylcyclohexane, 1,1,2-trichloroethene, tetrachloroethene, chlorobenzene, ethyl benzene, m&p-xylenes, o-xylene, styrene, isopropylbenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene and 1,2,4-trichlorobenzene exceeded specifications during the LCS analysis associated with the analysis of sample GP/CTM-23(3-2) and the diluted analysis of GP/CTM-22(3-2). Associated detected results have been qualified as estimated/biased high (J) due to analytical inaccuracy.
- The %R of 1,2-dibromoethane exceeded specifications during the LCS analysis associated with the analyses of samples GP/CTM-20, GP/CTM-22, GP/CTM-23, GWFD, GWEB and Transport Blank. Associated detected results have been qualified as estimated/biased high (J) due to analytical inaccuracy.

A method blank was reported for each analytical batch. Two transport blanks and three equipment blanks were also submitted to the laboratory for VOA. Target analytes and tentatively identified compounds (TICs) were not detected during the analyses of the method, transport or equipment blanks associated with the analyses of the solid and aqueous samples.

Criteria for accuracy and precision were met during the matrix spike (MS) and MS duplicate (MSD) analyses of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23 for target analytes except the following:

- GP/CTM-23(3-2) – The relative percent difference (%RPD) between MS and MSD exceeded laboratory specifications for ethyl benzene and m&p-xylenes. The associated results have been qualified as estimated (J) due to analytical imprecision.

- GP/CTM-23 – The %R was below laboratory specifications for the MS and MSD for dichlorodifluoromethane. The associated results have been qualified as estimated/biased low (UJ) due to analytical inaccuracy.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Refer to Attachment B-7 for the duplicate evaluation. Acetone, benzene, toluene, ethyl benzene, m&p-xylenes and o-xylene results have been qualified as estimated (J/UJ) due to analytical imprecision.

SVOA by SW-846 8270C

Project samples were analyzed within 12 hours of the performance check standard, DFTPP. Percent relative abundance of ions met the criteria specified in Table 3 of the EPA SW-846 Method 8270C. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average RRF was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %D between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes except the following:

- Continuing Calibrations – Benzaldehyde during the continuing calibration associated with the analyses of samples GPEB01 and SSEB01; and hexachlorocyclopentadiene during the continuing calibration associated with the diluted analyses of samples GP/CTM-22(3-2), GP/CTM-23(3-2) and SS-13. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recoveries and internal standard results met laboratory specifications for project samples except the following:

- GP/CTM-23(3-2), Surrogate Recoveries – The %R exceeded specifications for the base/neutral (B/N) surrogates nitrobenzene-d5, 2-fluorobiphenyl and terphenyl-d14. The associated B/N results have been qualified as estimated (J/UJ) due to analytical inaccuracy.
- GPFD01, Internal Standards – The internal standard recovery of phenanthrene-d10 and chrysene-d12 were below laboratory specifications during the initial and reanalysis. The associated results have been qualified as estimated (J/UJ) due to analytical inaccuracy

The %R results for LCS analyses were within laboratory specifications for target analytes except the following:

- The %R of benzaldehyde, hexachloroethane, hexachlorobutadiene, 2-methylnaphthalene, hexachlorocyclopentadiene, 1,1-biphenyl and 2-chloronaphthalene were below specifications during the LCS analysis associated with the analyses of samples SSEB01 and GPEB01. Associated results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy.
- The %R of hexachlorocyclopentadiene exceeded specifications and the %R of benzaldehyde was below specifications during the LCS analysis associated with the analyses of the soil samples.

Associated detected hexachlorocyclopentadiene results have been qualified as estimated/biased high (J) and associated benzaldehyde results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy.

- The %R of 4-chloroaniline and 1,1-biphenyl exceeded specifications and the %R of hexachloroethane was below specifications during the LCS analysis associated with the analyses of the groundwater samples. Associated detected 4-chloroaniline and 1,1-biphenyl results have been qualified as estimated/biased high (J) and associated hexachloroethane results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy.

A method blank was reported for each analytical batch. Three equipment blanks were also submitted to the laboratory for SVOA. Target analytes were not detected during the analyses of the associated equipment blanks. Bis(2-ethylhexyl)phthalate was detected during the analysis of a method blank associated with the analyses of the solid samples. Several TICs were detected during the analyses of the method blanks and equipment blanks associated with the analyses of the project samples. Action levels were developed by multiplying the highest concentration observed among the associated blank by a factor of 5. Results in the associated samples reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met for target analytes during the MS and MSD analyses of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23 for target analytes except the following:

- GP/CTM-23(3-2) – The %R was below laboratory specifications for the MS and MSD for phenol, bis(2-chloroethyl)ether, 2-chlorophenol, 2-methylphenol, 2,2-oxybis(1-chloropropane), n-nitroso-di-n-propylamine, hexachloroethane, nitrobenzene, isophrone, 2-nitrophenol, 2,4-dimethylphenol, bis(2-chloroethoxy)methane, 2,4-dichlorophenol, 4-chloroaniline, caprolactam, 4-chloro-3-methylphenol, hexachlorocyclopentadiene, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol, 1,1-biphenyl, 2-chloronaphthalene, 2-nitroaniline, dimethylphthalate, acenaphthylene, 2,6-dinitrotoluene, 3-nitroaniline, 2,4-dinitrophenol, 4-nitrophenol, 2,4-dinitrotoluene, diethylphthalate, 4-chlorophenyl-phenylether, 4-nitroaniline, 4,6-dinitro-2-methylphenol, 4-bromophenyl-phenylether, hexachlorobenzene, atrazine, pehtachlorophenol, carbazole, di-n-butylphthalate, butylbenzylphthalate 3,3-dichlorobenzidine, benzo(a)anthracene, chrysene, di-n-octyl phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene and benzo(g,h,i)perylene. The associated results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy. The %RPD between MS and MSD exceeded laboratory specifications for hexachloroethane, 4-chloroaniline, n-nitrosodiphenlyamine, 4-bromophenyl-phenylether, hexachlorobenzene and di-n-butylphthalate. The associated results have been qualified as estimated (J) due to analytical imprecision.
- SS-13 – The %R was below laboratory specifications for the MS and MSD for benzaldehyde, naphthalene, 2-methylnaphthalene, hexachlorocyclopentadiene, 1,1-biphenyl, acenaphthylene, acenaphthene, 2,4-dinitrophenol, dibenzofuran, fluorene, 4,6-dinitro-2-methylphenol, phenanthrene, anthracene, carbazole, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene and benzo(a)pyrene. The associated results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy. The %RPD between MS and MSD exceeded laboratory specifications for acenaphthylene, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, indeno(1,2,3-cd)pyrene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene and benzo(g,h,i)perylene. The associated results have been qualified as estimated (J/UJ) due to analytical imprecision.

- GP/CTM-23 – The %R exceeded laboratory specifications for the MS and MSD for dibenzofuran. The associated results have been qualified as estimated/biased high (J) due to analytical inaccuracy.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Refer to Attachment B-5 for the duplicate evaluation. Naphthalene, 2-methylnaphthalene, 1,1-biphenyl, acenaphthene, dibenzofuran, fluorine, phenanthrene, anthracene, carbazole, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene and benzo(a)pyrene results have been qualified as estimated (J/UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Refer to Attachment B-7 for the duplicate evaluation. 2-Methylphenol, 3&4-methylphenols, 2,4-dimethylphenol, 2-methylnaphthalene, 1,1-biphenyl, acenaphthylene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthracene, carbazole and fluoranthene results have been qualified as estimated (J/UJ) due to analytical imprecision.

Pesticide Analysis by SW-846 8081

Laboratory specifications were met during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %D between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes.

Surrogate recoveries met laboratory specifications for project samples.

The %R results for LCS analysis were within laboratory specifications for target analytes.

A method blank was reported for each analytical batch. Three equipment blanks were also submitted to the laboratory for pesticide analysis. Target compounds were not detected during the analysis of the method blanks or the equipment blanks.

Criteria for accuracy and precision were met during the MS and MSD analyses of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23 for target analytes except the following:

- GP/CTM-23(3-2) – The %R was below laboratory specifications for the MS and MSD for beta-BHC, delta-BHC, heptachlor epoxide, Endoslfan I, gamma-chlordane, 4,4'-DDE, dieldrin, Endosulfan II, endrin aldehyde, endosulfan sulfate, methoxychlor and endrin ketone. The associated results have been qualified as estimated/ biased low (J/UJ) due to analytical inaccuracy. The %RPD between MS and MSD exceeded laboratory specifications for heptachlor epoxide, alpha-chlordane, 4,4'-DDD and endrin aldehyde. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- SS-13 – The %R was below laboratory specifications for the MS and MSD for gamma-BHC, beta-BHC, delta-BHC, Endosulfan I, gamma-chlordane, alpha-chlordane, 4,4'-DDE, Endosulfan II, endosulfan sulfate and methoxychlor. The associated results have been qualified as estimated/biased low (J/UJ) due to analytical inaccuracy. The %RPD between MS and MSD exceeded laboratory specifications for alpha-BHC, gamma-BHC, heptachlor, delta-BHC, heptachlor epoxide, dieldrin, endrin, 4,4'-DDD, 4,4'-DDT, endrin aldehyde and endrin ketone. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

- GP/CTM-23 – The %RPD between MS and MSD exceeded laboratory specifications for beta-BHC. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Criteria for precision was achieved as target analytes were not detected in the associated samples.

PCB Analysis by SW-846 8082

Laboratory specifications were met during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %D between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes.

Surrogate recoveries met laboratory specifications for project samples except tetrachloro-m-xylene exceeded specifications and decachlorophenyl was below specifications during the analysis of sample GP/CTM-23(3-2). The associated results have been qualified as estimated (J/UJ) due to analytical inaccuracy.

The %R results for LCS analysis were within laboratory specifications for the target analytes Aroclor 1016 and Aroclor 1260.

A method blank was reported for each analytical batch. Three equipment blanks were also submitted to the laboratory for PCB analysis. Target compounds were not detected during the analysis of the method blanks or the equipment blanks.

Criteria for accuracy and precision were met during the MS/MSD analyses of samples SS-13, GP/CTM-22(3-2), GP/CTM-23(3-2) and GP/CTM-23 for target analytes Aroclor 1016 and Aroclor 1260 except the following:

- GP/CTM-22(3-2) – The %RPD between MS and MSD exceeded laboratory specifications for Aroclor 1260. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- GP/CTM-23(3-2) – The %RPD between MS and MSD exceeded laboratory specifications for Aroclor 1016 and Aroclor 1260. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Criteria for precision was achieved as target analytes were not detected in the associated samples.

Metals and Mercury Analysis by SW-846 6010B and 7470/7471A

The inductively coupled plasma (ICP) instrument was calibrated according to the SW-846 Methods 6010B and 7470/7471A. All samples were bracketed by ICV/CCV with recoveries that were within 80-120% for mercury and 90-110% of the true value for all other target metals.

Recovery of the ICP interference check sample (ICS) fell within 80-120% of the true standard concentration for target analytes.

Laboratory specifications (80-120%R) were met during the LCS analysis for target metals.

The %R of the contract required detection limit (CRDL) standard fell within 75-125% of the true value for target metals.

A method blank was reported for each batch, and a calibration blank was analyzed at the beginning, after every 10 samples, and at the end of each batch. Three equipment blanks were also submitted to the laboratory for metals analysis. Refer to Attachments B-1 and B-2 for evaluation of blank contamination associated with solid samples. Calcium, magnesium, potassium, silver, sodium and zinc were detected in the blanks associated with the analysis of the aqueous samples. Action levels were developed by multiplying the highest concentration observed among all associated blanks by a factor of 5. Samples with results reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met during the MS/MSD analyses of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23 for target metals except the following:

- SS-13 – The %R was below laboratory specifications for the MS and MSD for cadmium, chromium, cobalt, nickel and vanadium. The associated results have been qualified as estimated/biased low (J) due to analytical inaccuracy. The %R exceeded laboratory specifications for the MS and MSD for mercury and potassium. The associated detected results have been qualified as estimated/biased high (J) due to analytical inaccuracy.
- GP/CTM-23(3-2) – The %R was below laboratory specifications for the MS and MSD for barium, lead and zinc. The associated results have been qualified as estimated/biased low (J) due to analytical inaccuracy.

Chemical and matrix interference were observed during the serial dilution analysis of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23. The %D between initial and serially diluted results was less than 10% for those target metals with results greater than fifty times the detection limit except the following:

- SS-13 – Beryllium, cadmium, calcium, iron, lead, potassium and zinc results have been qualified as estimated (J) due to chemical and matrix interference.
- GP/CTM-23(3-2) – Calcium, magnesium, mercury and potassium results have been qualified as estimated (J) due to chemical and matrix interference.

A laboratory duplicate evaluation was performed on samples GP/CTM-23(3-2), SS-13 and GP/CTM-23. Refer to Attachments B-3, B-4 and B-6, respectively for the duplicate evaluations. Criteria for precision was achieved for detected results.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Refer to Attachment B-5 for the duplicate evaluation. Arsenic, barium, calcium, lead, magnesium, nickel, potassium, selenium, vanadium and zinc results have been qualified as estimated (J/UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Refer to Attachment B-7 for the duplicate evaluation. Aluminum, antimony, barium, chromium, copper, iron, lead, magnesium, nickel and sodium results have been qualified as estimated (J/UJ) due to analytical imprecision.

Cyanide Analysis by SW-846 9012B

Laboratory specifications were met during the initial and continuing calibrations. All samples were bracketed by ICV/CCV with recoveries that were within 90-110% of the true value.

Laboratory specifications were met during the LCS analysis for cyanide.

A method blank was reported for each batch, and a calibration blank was analyzed at the beginning, after every 10 samples, and at the end of each batch. Three equipment blanks were also submitted to the laboratory for cyanide analysis. Cyanide was not detected in the associated blanks.

Criteria for accuracy and precision were met during the MS analyses of samples SS-13, GP/CTM-23(3-2) and GP/CTM-23 for cyanide except the %R was below laboratory specifications during the MS analysis of sample GP/CTM-23. The associated results have been qualified as estimated/biased low (J) due to analytical inaccuracy.

A field duplicate evaluation was performed on samples GPFD01 (blind field duplicate) and GP/CTM-20(2-2). Refer to Attachment B-5 for the duplicate evaluation. Cyanide results have been qualified as estimated (J) due to analytical imprecision.

A field duplicate evaluation was performed on samples GWFD (blind field duplicate) and GP/CTM-20. Refer to Attachment B-7 for the duplicate evaluation. Cyanide results have been qualified as estimated (J) due to analytical imprecision.

Summary

Overall, data quality objectives for the Metroplex site at 312 Broadway in the city of Schenectady, NY were met, as there were no data deficiencies that would indicate the need for re-sampling. The analytical results are usable with the qualification of results as described in this DUSR. No analytical data has been rejected.

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