Clinton South Parking Lot
314 Clinton Street
SCHENECTADY, NEW YORK

Site Management Plan

NYSDEC Site Number: E-447036

Prepared for:
Schenectady Metroplex Development Authority
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Schenectady, New York 12305

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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

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SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at Clinton Street South Parking Lot, 314 Clinton Street, Schenectady, New York (hereinafter referred to as the "Site") under the New York State (NYS), Environmental Restoration Program (ERP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with State Assistance Contract (SAC) #C302801, Site # E-447036, which was executed on June 6, 2005.

1.1.1 General

Schenectady Metroplex Development Authority and the City of Schenectady entered into a SAC with the NYSDEC to remediate a 2.41 acre property located in the City of Schenectady, New York. This SAC required the Remedial Party, Schenectady Metroplex Development Authority and the City of Schenectady to investigate and remediate contaminated media at the Site. A figure showing the Site location and boundaries of this 2.41 acre Site is provided in Figure 1. The boundaries of the Site are more fully described in the metes and bounds site description in Figure 1 and the Environmental Easement.

After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by C.T. Male Associates, P.C. (C.T. Male) on behalf of Schenectady Metroplex Development Authority ("SMDA"), in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated November 2009, and the guidelines provided by NYSDEC. On or about July 16, 2008, SMDA acquired exclusive title to the Site from the City of Schenectady. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the Site.

1.1.2 Purpose

The Site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the Site remedy to control exposure to remaining contamination during the use of the Site to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Schenectady County Clerk, will require compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for contamination that remains at the Site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the Site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports. To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs, and (2) a Monitoring Plan for implementation of Site Monitoring.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement;
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the SAC (Site #E-447036) for the Site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The Site is located in the City of Schenectady County of Schenectady, New York and is identified as Block 3and Lot 1.21 on the City of Schenectady Tax Map. The Site is an approximately 2.41 -acre area bounded by Broadway to the north, Clinton Street to the south, the former Smith Street to the east, and Hamilton Street to the west (see Figure 1). The boundaries of the Site are more fully described in the Metes and Bounds description in Figure 1.

1.2.2 Site History

According to historical sources, the Site was developed with multiple buildings associated with commercial and residential activities prior to its conversion into a parking lot in approximately 1970. Historical commercial land use activities have included warehouses, retail stores, a gasoline filling station (northeastern portion of Site) and a dry-cleaning facility (southern portion of Site). Currently there are no building structures within the Site. The Site consists of an asphalt paved parking lot with associated landscaped areas.

A Phase I ESA was performed for the Site in February 2004 by PSI. In April 2004, C.T. Male conducted a limited Phase II ESA on the Site (based on the information presented in PSI's Phase I ESA Report) including soil sampling, installation of six groundwater monitoring wells, and groundwater sampling. Laboratory analysis of soil and groundwater samples showed the presence of volatile organic compounds at

concentrations exceeding regulatory limits at sampling locations in the areas of the former gasoline filling station and the former dry cleaning facility. Soils encountered to a depth of 16 feet below grade were generally a mixture of silt and sand, with some fill materials consisting of silty-sand and gravel. Based on the findings of subsurface exploration conducted by C. T. Male and others on properties in the vicinity of the Site, most notably the adjacent property to the north, Broadway Center (currently occupied by the New York Lottery), the mixed sand and silt lithology encountered on the Site is expected to extend to a depth of approximately 70 to 80 feet below grade. These soils are expected to be underlain by lacustrine silt and clay, and glacial till. Depth to bedrock is expected to be in excess of 100 feet below grade. Overall, the site slopes gently from the southeast (Clinton Street) towards the northwest (Broadway)

1.2.3 Geologic Conditions

Based on a review of the Surficial Geologic Map of New York, Hudson-Mohawk Sheet, the surficial geology in the vicinity of the Site is mapped as recent deposits, generally confined to floodplains within a valley, consisting of oxidized, non-calcareous fine sand to gravel. As discussed herein, this is consistent with the Remedial Investigation findings.

According to the Geologic Map of New York, Hudson-Mohawk Sheet, bedrock in the vicinity of the Site is mapped as the Normanskill Shale, which consists of minor mudstone and sandstone.

The Site soils were explored through the advancement of fifteen soil borings that were later converted to monitoring wells. Twelve of the borings were advanced to depths of either 16 or 20 feet below grade. The remaining three (3) borings were advanced to depths ranging from 99 to 104 feet below grade. The Site soils consist of the following: fill material of variable composition (sand, silt, gravel, fragments of brick and concrete) from just below the asphalt subbase material to depths up to eight (8) feet below grade; fine to coarse sand and silt to a depth of approximately 80 to 85 feet below grade; silt with some fine sand to a depth of approximately 100 to 105 feet below grade, where silty-clay was encountered and the deep borings were terminated. Bedrock was not encountered within the depth range explored.

According to the map entitled "Potential Yields of Wells in Unconsolidated Aquifers in Upstate New York, Hudson-Mohawk Sheet" (Edward F. Bugliosi and Ruth A. Trudell, 1988), the subject Site is located within an area designated as an unconfined aquifer with the potential to yield more than 100 gallons per minute.

Groundwater conditions on the Site were assessed through the advancement of test borings and the subsequent installation of permanent monitoring wells. Based on the collected water level data, the water table across the Site at well locations CTM-1 to CTM-15 ranged in depth from approximately 4.5 to 14 feet below existing Site grades. Depth to water measurements within the deep wells, CTM-16, CTM-17 and CTM-18 (screened just above the silty-sand/silty-clay interface), ranged from approximately 18.5 to 21 feet below grade.

Based on the water level data obtained during the RI groundwater monitoring events, the overall shallow groundwater flow direction across the Site is toward the north and northwest, toward the Mohawk River which is generally consistent with the slope of the Site. A groundwater flow figure is shown in Figure 2.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the Site. The results of the RI are described in detail in the following reports:

Remedial Investigation Report, ERP Site #E-447036, Clinton South Parking Lot, 314 Clinton Street, City of Schenectady, Schenectady, New York. January 2007, prepared by C.T. Male Associates, P.C., Project Number 05.5551.

Interim Remedial Measures Report, ERP Site #E-447036, Clinton South Parking Lot, 314 Clinton Street, City of Schenectady, Schenectady, New York. August 28, 2007. Prepared by C.T. Male Associates, P.C., Project Number 05.5551.

Generally, the RI determined that poor housekeeping and inventory management at various commercial establishments resulted in the disposal of hazardous substance, including petroleum products and solvents. These hazardous substances contaminated soil and groundwater at the Site, and resulted in:

- A threat to human health associated with potential exposure to soil.

Below is a summary of Site conditions when the RI was performed in 2006 and 2007. A summary of the various chemical detections, both above and below the Restricted Residential Use SCGs are shown in Tables 1, 2, 3 and 7. :

Soil

There were no contaminants detected in the near surface soils above the SCG's for Restricted Residential Use SCGs, except at SS-4 and SS-10. These locations were remediated as a function of the IRM as discussed in Section 1.4 below..

Select semi-volatile organic compounds (SVOC) and two (2) metals (arsenic and lead) were detected above Restricted Residential Use SCG's in two (2) of the 12 near surface soil samples. The SVOCs above SCGs were detected at SS-4 and SS-10. Arsenic was detected above its SCG at SS-10 and lead was detected above its SCG at SS-9. See Tables 1 and 2 for a summary of the SVOC and metal detections in near surface soils.

Three (3) SVOCs were detected above their SCGs in subsurface soils at two (2) of the 16 soil boring locations (GP-7 and GP-11) within the four (4) to eight (8) foot sampling depth intervals. See Table 3 for a summary of the SVOC detections. Mercury was detected above its Restricted Residential SCG at GP-11 with the four (4) to eight (8) foot sampling depth interval and was remediated as a function of the IRM at GP-11.

Site-Related Groundwater

Groundwater was impacted by one or more of the following metals: aluminum, antimony, barium, chromium, cobalt, lead, iron, magnesium, manganese, and sodium detected above their respective SCGs at one (1) or more of the 14 monitoring well locations. Chloroform was detected above its SCG at one (1) of the 14 monitoring well locations. The VOC and metals results for groundwater are presented in Tables 4 and 5, respectively.

Site-Related Soil Vapor Intrusion

A vapor intrusion assessment of the Site was not performed due to the near non-existence of volatile organic compounds detected in surface soils, near surface soils, subsurface soils and groundwater.

Underground Storage Tanks

There were no underground storage tanks identified within the Site during the remedial investigation.

1.4 SUMMARY OF REMEDIAL ACTIONS

The Site was remediated in accordance with the NYSDEC- Interim Remedial Measure Work Plan dated March 12, 2007.

The following is a summary of the Interim Remedial Measures (IRMs) performed at the Site:

1. Excavation of soil/fill exceeding Restricted Residential, SCOs listed in Table 6 as discussed in Section 1.4.1 below.

2. Maintenance of the existing surface cover system consisting of asphalt and concrete pavement sections to prevent human exposure to remaining contaminated soil/fill remaining at the Site.

The Interim Remedial Measures were completed at the Site in August 2008.

1.4.1 Removal of Contaminated Materials from the Site

During the course of the investigation certain IRM actions were undertaken in response to the threats identified in Section 1.3. The IRM conducted at the Site included the removal of contaminated soil and historic fill from three (3) locations at the Site. The three (3) locations of soil and historical fill removal are shown in Figure 3.

The IRM involved the excavation, removal and off-site disposal of soils/fill material impacted by Benzo(a)pyrene from three (3) areas of the Site: the locations of SS-4, SS-10 and GP-11 and areas immediately surrounding these locations (see attached Figure 3), and abandonment of monitoring wells located within the proposed excavation areas.

At the location of SS-4 the soil/fill material beneath the asphalt pavement was removed to a depth of 2 feet below grade within an area approximately 16 by 12.5 feet horizontally.

At the location of SS-10 the soil/fill material beneath the asphalt pavement was removed to a depth of 2 feet below grade within an area approximately 15 by 18 feet horizontally.

In the area of GP-11, the soil/fill material from grade to approximately 2 feet was removed and stockpiled for reuse as excavation backfill. The soil/fill materials below

two feet were removed to a depth of approximately six (6) feet below grade within an area of approximately 22 by 20 feet horizontally.

A total of 123.59 tons of soil/fill material were removed from the excavation areas and treated at the Environmental Soils Management Inc. facility in Fort Edward, New York.

The excavations at SS-4 and SS-10 were restored with clean imported soil, subbase gravel and asphalt pavement. The area of GP-11 was backfilled with clean imported sand and topsoil.

The locations of the soil/fill material excavations are shown in Figure 3.

Post excavation sampling was performed at each excavation area. Based on the pre- and post-excavation samplings and analysis, the NYSDEC determined that residual concentrations of benzo(a)pyrene within the near-surface soil and subsurface soil/fill material in these areas were below the project SCGs, and further removal of soil/fill material in these areas was not required.

A list of the soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this Site is provided in Table 6.

1.4.2 Site-Related Treatment Systems

No long-term treatment systems were installed or required as part of the Site remedy.

1.4.3 Remaining Contamination

Contamination remaining within the Site following the IRM consists of low-level SVOCs, non-petroleum related VOCs and select metals within subsurface soils primarily beneath the Site's existing asphalt and concrete pavement sections and landscaped areas.

Based on the RI, potentially impacted materials may be found at depths ranging from two (2) to eight (8) feet across the Site consistent with the level of historically imported fill materials. Figure 4 provides the estimated thickness of the impacted soils and historic fill materials at each of the soil boring location.

Table 7 and Figure 5 summarize the results of all soil samples remaining at the Site after completion of Remedial Action (IRM) that exceed the Restricted Residential SCOs.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil exists beneath the Site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the Site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the Site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Surface Cover

The Site and any remaining contamination in soil/fill is beneath existing cover systems composed of asphalt and/or concrete pavement sections or imported soil used for landscaping. These components are currently an effective cover system and will be maintained per this SMP.

Any new work within the Site that compromises the existing cover system will be repaired or replaced with a comparable cover system comprised of a minimum of 12 inches of clean soil, or an equivalent thickness (minimum 6 inches) of asphalt pavement, concrete-covered sidewalks, or concrete building slabs if used for Commercial purposes, or a minimum of 24 inches of clean soil, or an equivalent thickness (minimum 6 inches) of asphalt pavement, concrete-covered sidewalks, or concrete building slabs if used for Residential purposes. The Excavation Work Plan that appears in Appendix A outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the Site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Surface Cover System

The surface cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to Restricted Residential, Commercial or Industrial uses only. Adherence to these Institutional Controls on the Site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

In addition to the foregoing the Site is also subject to a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for Restricted Residential, Commercial and Industrial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- Absent DEC approval of a change of use the Site may not be used for a higher level of use, such as unrestricted use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;

- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any future buildings developed within the Site , and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;
- The Site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Excavation Work Plan

The Site has been remediated for Restricted Residential use. Any future intrusive work that will penetrate the existing surface cover system , or encounter or disturb the remaining contamination, including any modifications or repairs to the existing surface cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix A to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A sample HASP is attached as Appendix B to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The Site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The Site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located within the Site a soil vapor intrusion (SVI) evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive Site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If Site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the Site owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in Site use that are required under the terms of the State Assistance Contract (SAC), 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the State Assistance Contract (SAC), and all approved work plans and reports, including this SMP
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 CONTINGENCY PLAN

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Site Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to qualified environmental professional. The site owner will be responsible for maintaining a list of emergency contacts.

Table 8: Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 9: Contact Numbers

- Kirk Moline	518 786.7502
Jayme Lahut.	518 337.1109 or 518 879.1133 (cell)

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 314 Clinton Street, City of Schenectady

Nearest Hospital Name: Ellis Hospital

Hospital Location: 600 McClellan Street

Hospital Telephone: 518.382.2222

Directions to the Hospital:

1. Turn left from Site onto Clinton Street and follow to State Street (Route 5).

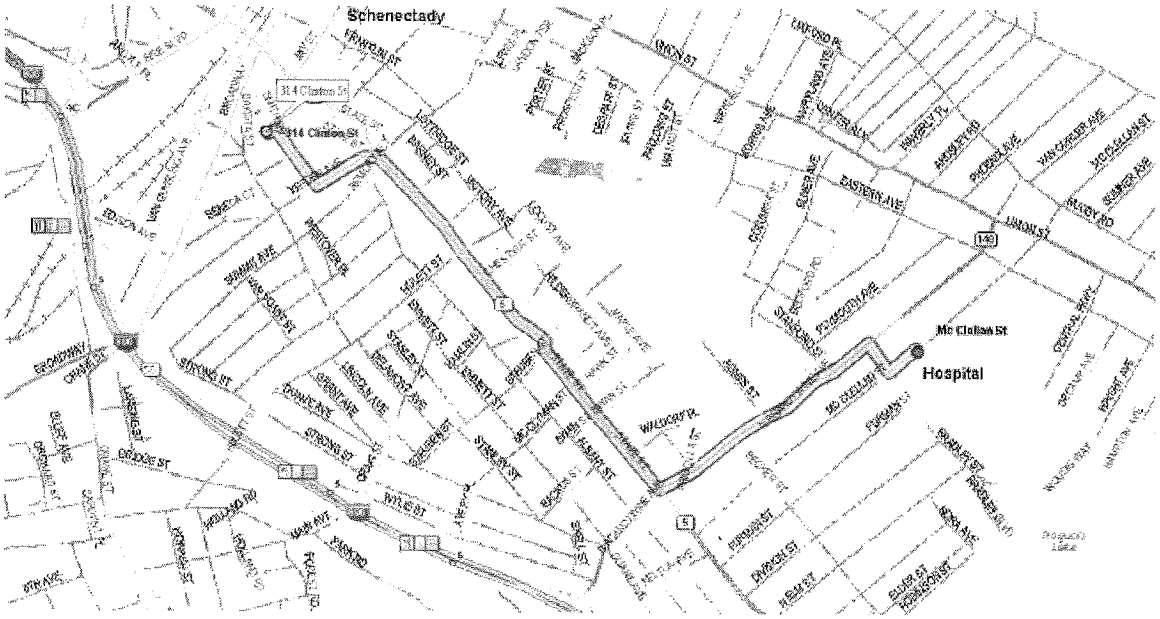
2. Turn right onto State Street and follow approximately one mile to McClellan Street.

3. Turn left onto McClellan Street and follow approximately one-half mile. Hospital will be on the right hand side of McClellan Street.

Total Distance: Approximately two (2) miles.

Total Estimated Time: 5 minutes.

Map Showing Route from the Site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 9). The site owner will also maintain an emergency contact list. The list will also be posted prominently at the Site and made readily available to all personnel at all time.

The HASP also addresses the procedures to follow regarding petroleum and chemical spills and other response actions in the event of a response incident.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness the surface cover system, and all affected Site media identified below. This Monitoring Plan may only be revised with the approval of NYSDEC. Since the remedy for the Site is No Further Action with environmental easement and institutional controls, there should be no media within the Site subject to monitoring other than when the surface cover system is penetrated to expose preexisting soil and fill materials. Evaluation, sampling and reporting, and other related requirements for exposure of materials beneath the surface cover system are presented in Appendix A, Excavation Work Plan.

Monitoring Program	Frequency*	Matrix	Analysis

3.2 SURFACE COVER SYSTEM MONITORING

A visual inspection of the complete system will be conducted during the monitoring event. The cover system components to be monitored include, but are not limited to, the following:

- Inspect the integrity of the soil cover system for evidence of erosion by natural elements such as wind and water;

- Inspect the soil cover system for evidence of manmade alterations such as excavations, utility repair and installation, modification to the landscaping features, etc.; and
- Inspect the integrity of asphalt and pavement systems for evidence of cracks, frost heaving, installation of subsurface utilities, and evidence of surface patching which may be indicative of excavation.

A complete list of components to be checked is provided in the Site Wide Inspection Checklist, presented in Appendix D. If the system is not performing within specifications, the NYSDEC will be notified and maintenance and repair of the cover system will be performed.

3.3 MEDIA MONITORING PROGRAM

There is no media within the Site that is required to be monitored. Site media that may be disturbed in the future, such as during maintenance or improvements of the Site which will penetrate the existing surface cover system are required to follow the requirements set forth in the Excavation Work Plan (Appendix A) of this SMP.

3.3.1 Groundwater Monitoring

Groundwater monitoring is not required, all Site groundwater monitoring wells have been properly abandoned.

3.4 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP. . The form(s) will compile sufficient information to assess the following:

- Compliance with all ICs, including Site usage;
- An evaluation of the condition and continued effectiveness of ECs;

- General Site conditions at the time of the inspection;
- The Site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Confirm that Site records are up to date.

3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the Site (Appendix C). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
    - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
    - Sample holding times will be in accordance with the NYSDEC ASP requirements.
    - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:
    - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
    - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data

packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.6 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. The report will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria (part 375 Soil Cleanup Objective Values) ;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and

- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized in Table 10 below.

Table 10: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Site Wide Inspection	Annual

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

The Site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/ soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP. If a subslab depressurization system is installed within any new occupied Site structure, an operation and maintenance plan will be prepared and submitted to the NYSDEC for review.

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms for their respective system. Additionally, a general site-wide inspection form will be completed during the site-wide inspection. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and Site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,

- The Site remedy continues to be protective of public health and the environment.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare the following certification:

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the Site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the Site remedial program and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.

- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Owner's Designated Site Representative: I have been authorized and designated by all site owners to sign this certification for the site.

The signed certification will be included in the Periodic Review Report described below.

For each institutional control identified for the site, I certify that all of the following statements are true:

- The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement.
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address, am certifying as Owner's Designated Site Representative (: and I have been authorized and designated by all site owners to sign this certification for the site.

5.3 PERIODIC REVIEW REPORT

A Periodic Review Report will be submitted to the Department every year, beginning eighteen months after the Environmental Easement is issued. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described in Appendix E (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results (if media samples have been collected and analyzed) will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedences highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific ROD;
    - Any new conclusions or observations regarding Site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and

- The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and in electronic format to NYSDEC Central Office, Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 CORRECTIVE MEASURES PLAN

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

APPENDIX A

EXCAVATION WORK PLAN

APPENDIX A – EXCAVATION WORK PLAN

A-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the Department. Currently, this notification will be made to:

Mr. Ian Beilby, P.E.

NYSDEC Central Offices
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7016

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix B of the SMP document,
- Identification of disposal facilities for potential waste streams,

- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

A-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

A-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

A-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are as follows: All trucks loaded with site materials will exit the vicinity of the Site using only these approved truck routes. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; [(g) community input [where necessary]]

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

A-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

A-7 MATERIALS REUSE ON-SITE

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table 6. The qualified environmental professional will ensure that

procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste (including asphalt pavement and concrete) derived from clearing and grubbing of the Site will not be reused on-site.

A-8 FLUIDS MANAGEMENT

All liquids to be removed from the Site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

A-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the Record of Decision. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface

will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

A-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in Table 6. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

A-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

A-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

A-13 COMMUNITY AIR MONITORING PLAN

A Community Air Monitoring Plan (CAMP) will be prepared and submitted to the NYSDEC for approval. The CAMP will be followed for any ground intrusive work in general accordance with the New York State Department of Health Generic CAMP dated June 2000, which is appended as Appendix A of this SMP.

Monitoring for particulate dust will be conducted during all ground intrusive activities. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. Additionally, a fixed dust monitoring station will be located along the Site's eastern property boundary as residences are located adjacent east of the Site.

Exceedences of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

A-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site. Specific odor control methods to be used on a routine basis will include organoleptic perception (i.e. sight and smell). If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils;. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

A-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

A-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX B

EXAMPLE HEALTH AND SAFETY PLAN & GENERIC COMMUNITY AIR MONITORING PLAN

SITE SPECIFIC HEALTH AND SAFETY PLAN
CLINTON SOUTH PARKING LOT
314 CLINTON STREET
CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

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SITE SPECIFIC HEALTH AND SAFETY PLAN
CLINTON SOUTH PARKING LOT
314 CLINTON STREET
CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

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1.0 GENERAL

1.1 Overview

This Health and Safety Plan (HASP) has been prepared for use during implementation of a site investigation of the Clinton South Parking Lot, 314 Clinton Street ("the site"), located in the City of Schenectady, Schenectady County, New York. This HASP has been developed as an integral part of the Remedial Investigation (RI) Work Plan as prepared by C.T. Male Associates, P.C. (CTM). The site investigation is being performed as part of the NYSDEC 1996 Clean Water/Clean Air Bond Act, Environmental Restoration Projects (Brownfield Program).

A designated Health and Safety Officer (HSO) will be responsible for implementing this HASP during the completion of the field work. All persons or parties who enter the work area (support, decontamination, exclusion zone) must review, sign and comply with this HASP. A list of individuals authorized to enter the exclusion zone at the site is presented in Section 13.0 of this HASP. A copy of this HASP will be maintained at the work area throughout the duration of the project. A complete description of the site investigation work scope is presented in the Site Investigation/Remediation Work Plan. The general scope of work is listed below:

Site Investigation:

- Site reconnaissance;
- Site wide subsurface/hydrogeologic evaluation;
- Near surface soil sampling and analysis; and
- Soil gas soil sampling and analysis.

1.2 Contact Names & Numbers

For this project, the following NYSDEC, Schenectady Metroplex Development Authority, NYSDOH, CTM, and Emergency Response names and telephone numbers are presented below as site contacts.

NYSDEC CONTACTS:

PROJECT MANAGER:	Ian Beilby, P.E. 625 Broadway, 12th Floor Albany, NY 12233	(518) 402-9818

SCHENECTADY METROPLEX DEVELOPMENT AUTHORITY CONTACTS:

EXECUTIVE DIRECTOR:	Jayme Lahut Executive Director 433 State Street, Schenectady NY 12305	(518) 377-1109

NYSDOH CONTACT:

TECHNICAL LEAD:	Ms. Tamara Girard NYSDOH Flanigan Square 547 River Street Troy, NY 12180	

CONSULTANT CONTACTS:

CONSULTING ENGINEER:	C.T. Male Associates, P.C. 50 Century Hill Drive Latham, NY 12110	(518) 786-7400
	David Roecker, Project Principal	(518) 786-7491
		Cell Phone: (518) 265-2117
	Kirk Moline, Project Manager	(518) 786-7502
		Cell Phone: (518) 265-1708
	Jeffrey Marx, Project Engineer	(518) 786-7548
		Beeper: (518) 437-2459
	John Favreau, Health & Safety Officer	(518) 786-7623
		Cell Phone: (518) 858-7068

EMERGENCY PHONE NUMBERS:

PERSONAL INJURY OR EMERGENCY:	St. Clare's Hospital 600 McClellan Street Schenectady, NY 12304	(518) 382-2222
FIRE DEPARTMENT:	Emergency	911

	Non-Emergency City of Schenectady Fire Department 360 Veeder Avenue Schenectady, NY 12305	(518) 382-5141
POLICE:	Emergency Non-emergency City of Schenectady Police Department Liberty and Lafayette Streets Schenectady, NY 12305	911 (518) 382-5264
HUDSON VALLEY REGIONAL POISON CONTROL CENTER:	Phelps Memorial Hospital Center 701 North Broadway Sleepy Hollow, NY 10591	(800) 336-6997
NATIONAL RESPONSE CENTER:	c/o United States Coast Guard (G-OPF) 2100 2nd Street, Southwest - Room 2611 Washington, DC 20593-0001	(800) 424-8802
NYSDEC SPILL HOTLINE:		(800) 457-7362

2.0 HEALTH AND SAFETY PERSONNEL

The Health and Safety Officer (HSO) will be responsible for implementation of the HASP and the delegation of health and safety duties. The HSO will coordinate the resolution of safety issues that arise during site work. When field operations require Level D protection, it will not be necessary for the HSO to be present on-site at all times. When the HSO is not present on-site, a designee will be authorized to perform the duties of the HSO. The designee will be responsible for implementation of the HASP.

The HSO or designee has stop work authorization which the HSO or designee will execute upon the HSO or designee's determination of an eminent safety hazard, emergency situation or other potentially dangerous situations (e.g. weather conditions), when this action is deemed appropriate. Authorization to resume work will be issued by the HSO.

3.0 SITE LOCATION AND DESCRIPTION

The Site is located in the City of Schenectady, Schenectady County, New York as depicted in Figure 1, Site Location Map. The Site consists of an irregular-shaped parcel, approximately 2.4 acres in size, located along the north side of Clinton Street, east of Hamilton Street. The Site is currently developed as a parking lot, with asphalt paved parking areas, landscaped areas, and a pedestrian mall. Access to the Site is from both Clinton and Hamilton Streets.

4.0 POTENTIAL SITE CONTAMINANTS

The existence of a former gasoline filling station and a former drycleaning operation on the Site suggests the potential presence of petroleum-related and drycleaning-related products, such that volatile organic compounds (both chlorinated and non-chlorinated) and semi-volatile organic compounds are potential contaminants of concern. Results of a 2004 investigation show low levels of volatile and semi-volatile organic compounds, some exceeding NYSDEC Standards and Guidance Values, in soils and groundwater on the Site.

5.0 HAZARD ASSESSMENT

5.1 General

The hazard assessment, use of specific protective equipment, and monitoring associated with each field work task of the investigation and remedial work to be conducted at the subject site are presented in following subsections.

For this project, CTM will be subcontracting portions of the site investigation and/or remedial activities. Each subcontractor will be responsible for developing and implementing a site-specific health and safety plan for their activities, for protection of their employees, and use of personal protective equipment. The subcontractor will also be responsible for developing and following their own Respiratory Protection Program, as applicable.

5.2 Site Survey

The site survey will be performed by a two-man crew and their work will not be intrusive. Therefore, exposure to potential site contaminants is considered remote. The potential hazards to the survey crew will include slip and fall hazards from potentially uneven terrain, and traffic-related hazards, as the Site is currently in active use as a parking lot. To protect against these potential hazards, any personnel completing this work should wear, at a minimum, steel-toe boots, reflective traffic vest and a bright-colored hard hat. Additionally, traffic cones should be used to delineate work areas.

5.3 Subsurface Work

Soil test borings (including the installation of monitoring wells) are planned to be advanced across the Site. The potential hazards to personnel during this work are dermal contact, low potential for vapor inhalation of potential site contaminants, and traffic-related hazards. Level D protection should be sufficient to protect against dermal contact during excavation of and/or handling of the subsurface soils and groundwater. If organic vapors are present at the action levels described in Section 5.6, on the basis of organic vapor monitoring of the area during the work, it may be necessary to upgrade to Level C respiratory protection. As the parking lot

will be in active use during work activities, traffic safety vests should be worn, and traffic cones, barriers and/or caution tape should be used to clearly delineate work areas.

5.5 Air Monitoring

Volatile and semi-volatile organic compounds have been identified on the Site during a past environmental investigation. These compounds have the potential to be released to the environment when disturbed. During the completion of test borings, the ambient air in the work area will be monitored with a photoionization detection meter (total volatile compounds - MiniRAE 2000), calibrated to an isobutylene standard, prior to the start of work and periodically as conditions warrant. If a concentration of 10 ppm (sustained for 5 minutes) of total volatile compounds is detected within the work area on the instrument, work will cease immediately and the workers shall shut down equipment and leave the area immediately. The level of personal protective equipment (PPE) will be evaluated prior to continuing work. If a PPE upgrade is required, Level C will include: half face air purifying respirator equipped with combination organic vapor and particulate cartridges for 10-15 ppm exposure levels and full-face air purifying respirator for greater than 15 ppm to less than 50 ppm exposure levels, prior to continuing work. If a concentration greater than 50 ppm, work will cease immediately and the situation will be evaluated prior to continuation of work. Table 1 summarizes the action levels relative to the required respiratory protection.

Table 1
CTM Action Levels & Required Respiratory Protection

Action Level	Level of PPE	Type of Respiratory Protection
0-10 parts per million	Level D	No respiratory protection
10-15 parts per million	Level C	Negative pressure half-face respirator
15-50 parts per million	Level C	Positive pressure full-face respirator
Greater than 50	Cease Work	Evaluate work procedures

-Facial hair is not permitted while wearing most respirators.

-Workers required to wear a respirator must have a minimum of OSHA 40 Hour training with current medical monitoring and fit test documentation.

5.7 Community Air Monitoring Plan

A site specific Community Air Monitoring Plan (CAMP), will be followed for the project on the basis of the New York State Department of Health Generic Community Air Monitoring Plan dated June 2000.

5.8 Hazard Identification and Control

The following table presents generalized hazards potentially involved with the tasks to be completed on this project. Table 2 identifies general procedures to follow to prevent or reduce accident, injury or illness. Any worker on-site who identifies a potential hazard must report the condition to the HSO or designee, and initiate control of the hazardous condition.

Table 2
Potential Hazards and Control

Potential Hazard	Control
Vehicular Traffic	1. Wear safety vest when vehicular hazards exist. 2. Use cones, flags, barricades, and caution tape to define work area. 3. Use vehicle to block work area. 4. Contact police for high traffic situations.
Slip, Trip, and Fall Protection	1. Assess work area to determine if there is a potential for falling. 2. Make sure work area is neat and tools are staged in one general area. 3. Wear steel-toe boots with adequate tread and always watch where the individual is walking. Carry flashlight when walking in poorly lighted areas.
Inclement Weather	1. Stop outdoor work during electrical storms and other extreme weather conditions such as extreme heat or cold temperatures. 2. Take cover indoors or in vehicle. 3. Listen to local forecasts for warnings about specific weather hazards such as tornadoes, hurricanes, and flash floods.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
Utility Lines Contact	1. Contact UFPO to have utility lines marked prior to any underground excavation, trenching or drilling. UFPO must be contact at least 48 hours prior to work. 2. Refer to site drawings for utility locations. 3. Manually dig 3 to 5 feet below grade and 5 feet on each side of utility marked to avoid breaking utility lines.
Noise	1. Wear hearing protection when equipment such as a drill rig, jackhammer, or other heavy equipment is operating on-site. 2. Wear hearing protection whenever you need to raise your voice above normal conversational speech due to a loud noise source; this much noise indicates the need for protection. 3. Hearing protection is required when measured sound exceeds 85 decibels (dB) where employees stand or conduct work.
Electrical Shock	1. Maintain appropriate distance between heavy equipment and overhead utilities; 20 foot minimum clearance from power lines; and 10 foot minimum clearance from shielded power lines. 2. Contact local underground utility locating service prior to penetrating the ground surface.
Physical Injury	1. Wear hard hats and safety glasses at all times when on-site. 2. Maintain visual contact with equipment operators and wear orange safety vest when heavy equipment is operating on-site. 3. Avoid loose clothing when working around rotary equipment. 4. Keep hands and feet away from drilling augers and excavation equipment tracks/tires. 5. Test emergency shut-off switches on drill rigs and excavation equipment regularly.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
Back Injury	1. Use a mechanical lifting device or a lifting aid where appropriate. 2. Make sure the route is free of obstructions. 3. Bend at the knees and use leg muscles when lifting. 4. Use the buddy system if lifting heavy or awkward objects. 5. Do not twist or jerk your body when lifting.
Heat Stress	1. Increase water intake while working. 2. Avoid excessive alcohol intake the night before working in heat stress situations. 3. Increase number of rest breaks, as necessary and rest in a shaded area. 4. Watch for signs and symptoms of heat exhaustion and fatigue. 5. Rest in cool, dry areas. 6. In the event of heat stress or heat stroke, bring the victim to a cool environment and call 911.
Fire Control	1. Smoke only in designated areas. 2. Keep flammable liquids in closed containers. 3. Isolate flammable and combustible materials from ignition sources. 4. Keep fire extinguisher nearby and use only if deemed safe.
Media Sampling (water, soil, sediment, sludge, building materials, product, etc.)	1. Wear appropriate PPE to avoid skin, eye, and inhalation contact with contaminated media. 2. Stand upwind to minimize possible inhalation exposure, especially when opening monitoring wells or closed containers/vessels. 3. Conduct air monitoring, whenever necessary to determine level of respiratory protection. 4. If necessary, employ engineering controls to assist in controlling chemical vapors.
Cleaning Equipment	1. Wear appropriate PPE to avoid skin and eye contact with isopropyl alcohol, alconox, or other cleaning materials.

Table 2 Potential Hazards and Control	
Potential Hazard	**Control**
	2. Stand upwind to minimize possible inhalation exposure. 3. Proper disposal of spent chemical cleaning solutions and rinse accordingly.
Poor Structural Building Condition	1. Assess building condition prior to entering and note where exit points are at all times. 2. Be cautious when walking inside the building. Always look for holes in the floors or hanging debris which could cause injury. 3. Carry a high power flashlight and use as necessary in low light areas. 4. If working in the building, make sure work area is neat and tools are staged in one general area. 5. Wear steel-toe boots with adequate tread. 6. Try to employ the buddy system so someone knows what part of the building individuals are in.
Note: A first aid kit and fire extinguisher will be located in the CTM company vehicle.	

Response actions to personal exposure from on-site contaminants include skin contact, eye contact, inhalation, ingestion, and puncture or laceration. The recommended response actions are presented in Section 11.2.

6.0 TRAINING

Site-specific training of workers and personnel will be conducted and provided by the HSO or designee prior to any on-site activity. The training will specifically address the activities, procedures, monitoring and equipment for the site operations. It will include area and facility layout, hazards, emergency services (police, hospital, fire, etc.), and review of this HASP. Questions by workers, field personnel, etc. will be addressed at this time.

Workers and personnel conducting and/or supervising the project must have attended and successfully completed a 40 Hour Health and Safety Training Course for Hazardous Waste Operations, an annual 8 hour Refresher Course, and take part in an employer medical surveillance program in accordance with OSHA 1910.120 requirements, specifically, that the workers have had a medical physical within one (1) year prior to the date the work begins and that they are physically able to wear a respirator.

Documentation of training and medical surveillance will be submitted to the HSO or designee prior to the start of any on-site work. A copy of the training certificates shall be inserted into the pocket of this HASP in Appendix A.

7.0 SITE ACCESS

The site investigation and remediation work will be generally performed within the boundaries of the Clinton Street parking lot. Due to the site location, it is likely that the general public and curious bystanders will be present at the time of the work. Since the parking lot will need to remain open and active during work activities, the work area will be considered as a 25-foot radius around the work activity being performed. Only OSHA trained individuals which are qualified to do the work and have read and signed this site specific HASP will be allowed within the 25-foot radius work zone. The work area will be secured with traffic cones and/or flagging to prevent unauthorized entry. The HSO or designee will be responsible for limiting access to unauthorized individuals.

During completion of the site investigation and remediation activities, a 50-foot circle around the immediate work area will be considered the Exclusion Zone (contaminated area where investigation/remedial work is to be conducted). The Contamination Reduction Zone (decontamination area), and Support Zone (clean area, everywhere else) will be established outside the Exclusion Zone, as necessary. The exclusion, contamination reduction, and support zone during investigation/remediation work have been identified and designated as follows:

Exclusion Zone - The location of the exclusion zone will be determined in the field prior to the start of work and will vary depending on the work activities conducted. For the most part, the exclusion zone is anticipated to be a 100 foot radius around the work area. The outside exclusion zones will be delineated with cones and yellow caution tape or equal method, where applicable. Only authorized persons with proper training and protective gear will be allowed to enter the exclusion zone. If the exclusion zones, as previously explained, changes orientation during the completion of the work, the HASP will be amended in the field to reflect the change.

Contamination Reduction Zone – If applicable, this zone will generally be a 10'± x 10'± area, marked off with stakes and blue and white colored flagging or equal method, containing the decontamination pad. The location will be determined in the field prior to the start of work and will vary depending on the area(s) the work is being conducted. This zone is where decontamination of personnel and

equipment will take place, as necessary, on the basis of the work being performed. It will be located upwind of the Exclusion Zone, if possible.

Support Zone - Area outside of contamination reduction zone and not including the exclusion zone. Unauthorized or untrained individuals must remain in this zone.

8.0 PERSONAL PROTECTION

8.1 Level of Protection

Based on evaluation of the potential hazards, the minimum level of protection to be worn by workers during implementation of the site remediation activities is defined as Level D protection, and will be controlled by the HSO or designee.

The minimum level D protective equipment will consist of field clothes, rubber gloves, hard hats, safety glasses, and safety boots (steel-toe preferred). As appropriate, this level of protection may be modified to include polylaminated Tyvek suits, coveralls, leg chaps, or face shield for additional protection. Both full-face and half-face air purifying respirators should be readily available. Appropriate combination organic vapor and particulate cartridge filters will be available at the site, to use, if necessary with the air purifying respirators.

If required, level C protective equipment will consist of the items listed for Level D protection with the added protection of full-face, air purifying (organic vapor and particulate) respirator, chemical resistant clothing, inner and outer chemically resistant gloves (i.e. solvent resistant nitrile, PVC/nitrile), and chemical resistant safety boots/shoes.

Level B is not anticipated, but if required, level B protective equipment will consist of the items listed for Level D protection except a self-contained breathing apparatus (SCBA) will be worn dependent on the level of contaminants present in the work zone, and polylaminated Tyvek suits will be required. When site conditions warrant the need for level B protective equipment, work will cease and the project will be re-evaluated to determine the necessity for employing engineering controls to reduce or eliminate the potential contaminants of concern.

8.2 Safety Equipment

Basic emergency and first aid equipment will be available at an area within the Support Zone clearly marked and available or within CTM's company vehicle. This shall include a first aid kit, fire extinguisher, supply of potable water, soap and towels. The HSO or designee shall be equipped with a cellular phone in case of emergencies. If the cellular phone is not available, or is inoperable, a pay phone in the immediate vicinity will be used.

9.0 COMMUNICATIONS

There are no existing phone services associated with the subject site. The HSO or designee shall be equipped with a cellular phone in case of emergencies. If the cellular phone is not available, or is inoperable, a pay phone in the immediate vicinity will be used. The HSO or designee shall notify the CTM project manager as soon as safely possible in the event of an accident, injury or emergency action.

Hand signals for certain work tasks will be employed, as necessary, and the buddy system will be employed during excavation, drilling and sampling activities.

10.0 DECONTAMINATION PROCEDURES

10.1 Personnel Decontamination Procedures

Decontamination procedures will be carried out by all personnel leaving the Exclusion Zone (except under emergency evacuation). The amount of decontamination performed will be dependent on the level of personal protection currently being worn within the exclusion zone.

1. Do not remove respiratory protection until all of steps have been completed.
2. Clean outer protective gloves and outer boots, if worn, with water (preferably with a pressurized washer) over designated wash tubs in the exclusion zone to remove the gross amount of contamination.
3. Deposit equipment used (tools, sampling devices, and containers) at designated drop stations - on plastic drop sheets or in plastic lined containers.
4. Rinse outer boots if worn and gloves with clean water in designated rinse tubs. Remove outer boots if worn and gloves and deposit in designated area to be determined in the field for use the next day or when necessary. If disposable outer boots are worn, remove and discard in designated container.
5. Remove hard hat & safety glasses, rinse with clean water as necessary and deposit in designated area for use the next day or when necessary.
6. Remove Tyvek suit, if worn, and discard in designated container. Remove respirator at this time, if used; wash and rinse with clean water. Organic vapor cartridges, when used, will be replaced daily. Used cartridges will be discarded in the designated waste container. Remove inner gloves and discard in designated container.

10.2 Equipment and Sample Containers Decontamination

All decontamination will be completed by personnel in protective gear appropriate for the level of protection determined by the site HSO or designee. Manual

sampling equipment including trowels, hand augers, shovels and sampling spoons which come into contact with the site's soils, will be cleaned with a tap water/detergent wash and a tap water rinse. The sampling equipment will be washed after each surface soil sample is collected and the wash and rinse water will be allowed to infiltrate the site's soils at each sampling point.

Larger excavation equipment (i.e., rubber-tire backhoe or track excavator) which comes into contact with the site's soils will be decontaminated with a high pressure/hot water wash. The decontamination procedure will focus on portions of the equipment that has come into contact with the site's soils such as the bucket. The cleaning will be performed at the completion of each test pit or trench so that the cleaning fluids will infiltrate the site's soils at the test pit/trench location were the digging was performed.

Drill rig equipment (i.e., augers) which comes into contact with the site's soils will be decontaminated with a high pressure/hot water wash. The decontamination procedure will focus on portions of the equipment that has come into contact with the site's soils such as the augers and drill bits. The cleaning will be performed at the completion of each boring location so that the cleaning fluids will infiltrate the site's soils at the boring location were the drilling was performed.

Exterior surfaces of sample containers will be wiped clean with disposable wipes in the decontamination zone and transferred to a clean cooler for transportation or shipment to the analytical laboratory. Sample identities will be noted and checked off against the chain-of-custody record. The disposable wipes will be placed in the designated disposal container and disposed of as solid waste.

11.0 EMERGENCY RESPONSE PROCEDURES

THE PROJECT EMERGENCY COORDINATOR IS:

Site Health and Safety Officer (HSO) John Favreau

The following standard emergency procedures will be used by on-site personnel. The Project Manager and HSO shall be notified of any on-site emergencies and be responsible for assuring that the appropriate procedures are followed.

11.1 Personal Injury

Emergency first aid shall be administered on-site as deemed necessary and only by a trained individual, if available at the site. If a trained individual is not available on-site, decontaminate, if feasible, and transport individual to nearest medical facility (St Clare's Hospital). The HSO will supply medical data sheets to appropriate medical personnel and be responsible for completing the incident report. If the HSO is injured or controlling the emergency situation, the medical data sheets are available in Appendix B of this Health and Safety Plan.

11.2 Personal Exposure

The recommended response to worker exposure from contaminants on-site includes the following:

SKIN CONTACT: Use generous amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention, as necessary.

EYE CONTACT: Wash eyes thoroughly with potable water supply provided on site. Eyes should be rinsed for at least 15 minutes subsequent to chemical contamination. Provide medical attention, as necessary.

INHALATION: Move worker to fresh air and outside of the work zone and/or, if necessary, decontaminate and transport to hospital (St. Clare's Hospital). If respirator use is implemented at the time

of inhalation, worker must not remove respirator until completely away from the work zone.

INGESTION: Decontaminate, if feasible, and transport to hospital (St. Clare's Hospital).

PUNCTURE WOUND OR LACERATION: Provide first aid at the site and if wound needs medical attention, decontaminate, if feasible, and transport to hospital (St. Clare's Hospital).

If the affected worker is exposed to contaminants on-site and the injury or accident prevents decontamination of the individual, the emergency responders must be notified of this condition and the exposure must be kept to a minimum.

11.3 Potential or Actual Fire or Explosion

Immediately evacuate area in the event of potential or actual fire or explosion. Notify the local fire and police departments, and other appropriate emergency response groups, as listed in Section 1.2. Perform off-site decontamination and contain wastes for proper disposal. If a fire or explosion occurs, all on-site personnel must meet in the designated area of the site (established by the HSO or designee) for an accurate head count.

11.4 Equipment Failure

Should there be any equipment failure, breakdown, etc. the Project Manager and HSO shall be contacted immediately. The Project Manager or the HSO will make every effort to replace or repair the equipment in a timely manner.

11.5 Spill Response

The site HSO or designee shall initiate a corrective action program with the subcontractors in the event of an accidental release of a hazardous material or suspected hazardous material. The HSO or designee will act as the Emergency Coordinator with the subcontractors for the purposes of: spill prevention; identifying releases; implementing clean up measures; and notification of appropriate personnel.

The corrective action program will be implemented by the HSO and subcontractor to effectively control and minimize any impact accidental releases may have to the environment.

Effective control measures will include:

- Preliminary assessment of the release
- Control of the release source
- Containment of the released material
- Effective clean-up of the released material

Potential sources of accidental releases include: hydraulic oil spills or petroleum leaks from heavy equipment; cooling oils (potentially PCB containing) for electrical equipment handling and cleaning; and spills from drums, vats, vessels, and tanks. The HSO/Emergency Coordinator in conjunction with the subcontractor shall respond to an accidental release in the following manner:

- Identify the character, source, amount and area affected by the release.
- Have subcontractor take all reasonable steps to control the release.
- Notify the NYSDEC Spill Hotline at 1-800-457-7362. Notify NYSDEC Project Manager Ian Beilby and Schenectady Metroplex Development Authority.
- Contain the release with sorbent material which should include speedi-dry, spill socks and sorbent pads.
- Prevent the release from entering sensitive receptors (i.e., catch basins and surface water) using the specified sorbent material or sandbags.
- Coordinate cleanup of the release material.
- Oversee proper handling and storage of contaminated material for disposal.

At no time should personal health or safety be compromised or jeopardized in an attempt to control a release. All health and safety measures as outlined in this HASP should be adhered to.

12.0 ADDITIONAL WORK PRACTICES

Workers will be expected to adhere to the established safety practices. Work on the project will be conducted according to established protocol and guidelines for the safety and health of all involved. The following will be adhered to:

- Employ the buddy system when possible, and for those work tasks which require it. Establish and maintain communications.
- Minimize contact with potentially contaminated soil and water.
- Employ disposable items when possible to minimize risks during decontamination and possible cross-contamination during sample handling.
- Smoking, eating, or drinking after entering the work zone and before decontamination will not be allowed (to prevent oral ingestion of potential on-site contaminants).
- Avoid heat and other work stress related to wearing personal protective equipment. Take breaks as necessary and drink plenty of fluids to prevent dehydration.
- Withdrawal from a suspected or actual hazardous situation to reassess procedures is the preferred course of action.
- The removal of facial hair (except mustaches) prior to working on-site will be required to allow for a proper respiratory face piece fit.
- The Project Manager, the HSO, and sampling personnel shall maintain records recording daily activities, meetings, facts, incidents, data, etc. relating to the project. These records will remain at the project site during the full duration of the project so that replacement personnel may add information while maintaining continuity. These daily records will become part of the permanent project file.

13.0 AUTHORIZATIONS

Personnel authorized to enter the exclusion zone at the Environmental Restoration Project being conducted at the Clinton South Parking Lot in the City of Schenectady, Schenectady County, New York while operations are being conducted must be certified by the HSO. Authorization will involve completion of appropriate training courses and review and sign off of this HASP.

Personnel authorized to perform work on-site are as follows:

1. John Favreau C.T. Male
2. Jeffrey Marx C.T. Male
3. Kirk Moline C.T. Male
4. Nathan Freeman C.T. Male
5. Megan Drosky C.T. Male
6. Dan Achtyl C.T. Male
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____

14.0 MEDICAL DATA SHEET

This medical data sheet will be completed by all on-site personnel and will be kept on-site during the duration of the project. This data sheet will accompany any personnel when medical assistance is needed or if transport to hospital facilities is required.

PROJECT: Environmental Restoration Project to be conducted at the Clinton South Parking Lot, 314 Clinton Street, Schenectady, New York.

Name _____ Home Telephone _____

Address _____

Emergency Contact _____

Drug or Other Allergies _____

Particular Sensitivities _____

Do You Wear Contact Lenses _____

Provide a Checklist of Previous Illness or Exposure to Hazardous Chemicals

_____

What Medications Are You Presently Using _____

_____

Do You Have Any Physical or Medical Restrictions _____

_____

Are You Qualified to Wear Respirator (Provide Fit Test Results)_____

Name, Address, and Telephone Number of Personal Physician:

_____

_____

_____

15.0 FIELD TEAM REVIEW

Each field team member shall sign this section after site specific training is completed and before being permitted to work on-site.

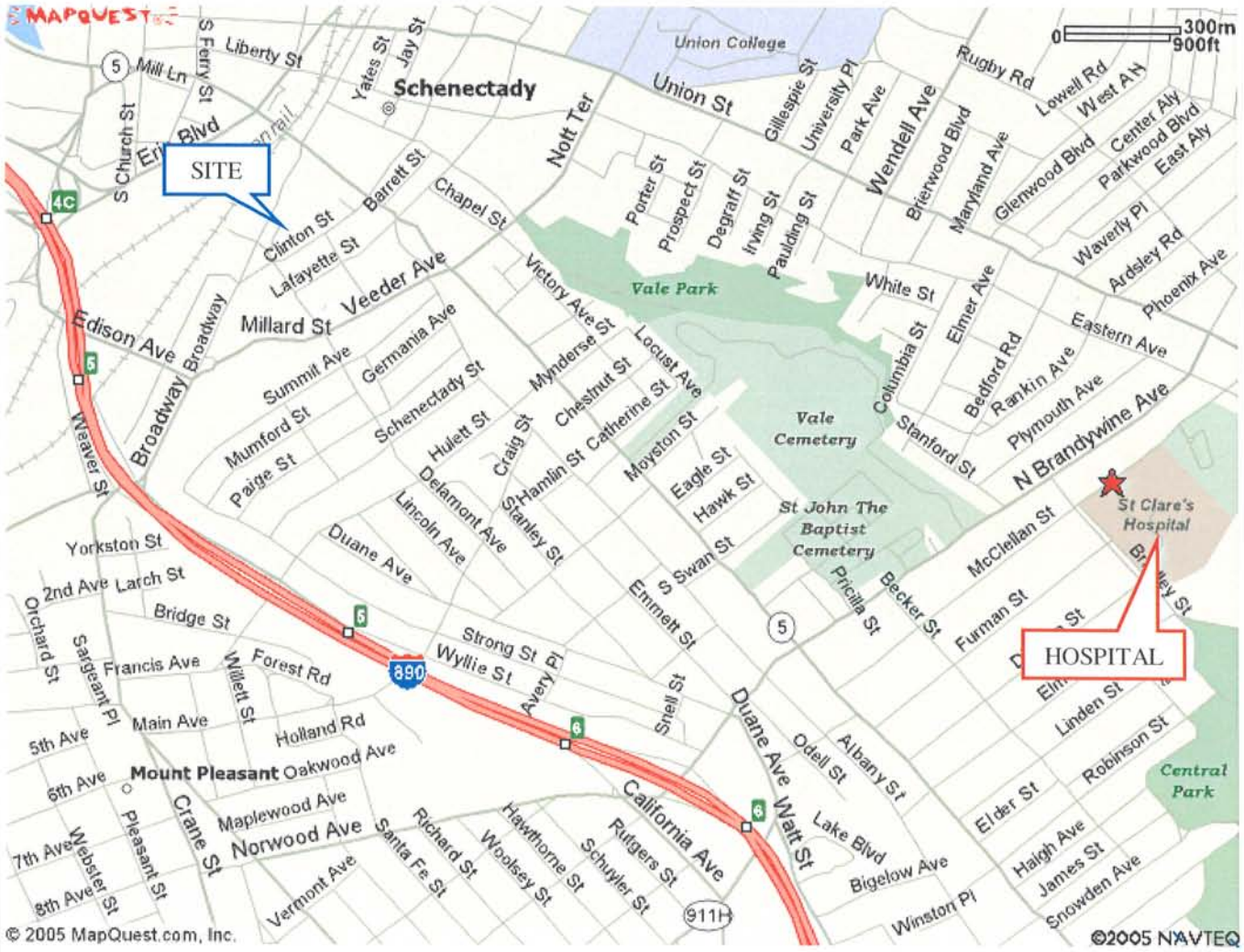
I have read and understood this Site Specific Health and Safety Plan, and I will comply with the provisions contained therein.

PROJECT: Environmental Restoration Project
Clinton South Parking Lot, 314 Clinton Street
City of Schenectady
Schenectady County, New York

Name: Printed	Signature	Date

FIGURE 1

MAP SHOWING ROUTE TO ST. CLARE'S HOSPITAL



Directions to St. Clare's Hospital

Turn left from site onto Clinton Street and follow to State Street (Route 5).
Turn right onto State Street (Route 5) and follow approximately one mile to McClellan Street.
Turn left onto McClellan Street and follow approximately one-half mile.
St. Clare's Hospital will be on the right.

MAP REFERENCE

www.mapquest.com

N W E

ENGINEERING
ENVIRONMENTAL SERVICES
SURVEYING
PHONE (518)786-7400
FAX (518) 786-7299

C.T.MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110

FIGURE 1
Map Showing Route to St. Clare's Hospital

CITY OF SCHENECTADY	SCHENECTADY COUNTY, NY
SCALE: As Shown	Clinton South Parking Lot 314 Clinton Street
DRAFTER: JLF	
PROJECT No. 05.5551	

APPENDIX A

TRAINING CERTIFICATES

APPENDIX B

MEDICAL DATA SHEETS

APPENDIX C

COMMUNITY AIR MONITORING PLAN

New York State Department of Health
Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring partculate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

H:\Southern\gCAMPr1.doc

APPENDIX C

EXAMPLE QUALITY ASSURANCE PLAN

NYS ENVIRONMENTAL RESTORATION PROGRAM
QUALITY ASSURANCE PROJECT PLAN
CLINTON SOUTH PARKING LOT
314 CLINTON STREET
CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

KEY PERSONNEL AND SIGNATURES

Approved: _____ Date: 4/7/06
Project Principal
David Roecker, P.E.
Vice President, Environmental Services Division
C.T. Male Associates, P.C.

Approved: _____ Date: 4/7/06
Project Manager
Kirk Moline
Hydrogeologist
C.T. Male Associates, P.C.

Approved: John L. Favreau Date: 4/7/06
Project Scientist & Health and Safety Coordinator
John Favreau
Environmental Scientist
C.T. Male Associates, P.C.

Approved: Elizabeth W. Rovers Date: 4/7/06
Quality Assurance Officer
Elizabeth Rovers, P.E.
Managing Engineer
C.T. Male Associates, P.C.

NYS ENVIRONMENTAL RESTORATION PROGRAM
QUALITY ASSURANCE PROJECT PLAN
CLINTON SOUTH PARKING LOT
314 CLINTON STREET
CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

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NYS ENVIRONMENTAL RESTORATION PROGRAM
QUALITY ASSURANCE PROJECT PLAN
CLINTON SOUTH PARKING LOT
314 CLINTON STREET
CITY OF SCHENECTADY
SCHENECTADY COUNTY, NEW YORK

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APPENDICES

1.0 PROJECT DESCRIPTION

1.1 Introduction

This Quality Assurance Project Plan (QAPP) has been prepared for the implementation of the site investigation activities at the Clinton South Parking Lot, 314 Clinton Street ("the site"), located in the City of Schenectady, Schenectady County, New York. It has been developed in conjunction with the Remedial Investigation (RI) Work Plan as prepared by C.T. Male Associates, P.C. (CTM). A description of the site, available background information, objectives and the proposed site remediation scope of work are presented in detail in the referenced RI Work Plan.

This QAPP presents the organizational structure and data quality objectives (DQOs) for the site investigation, and the quality assurance (management system) and quality control methods of checks and audits to be implemented to ensure that the quantity and quality of the data required for its intended use is obtained and documented (i.e., that DQOs are met). The measurement parameters used to determine the quality of the data are precision, accuracy, completeness, representativeness and comparability and are discussed further in this QAPP.

A Field Sampling Plan (FSP) has been prepared by CTM as a separate exhibit and forms an integral part of this QAPP. The field sampling and data gathering procedures are presented in the FSP and incorporated into the QAPP by reference. The QAPP and FSP document the laboratory quality assurance/quality control (QA/QC) procedures and field sampling and data gathering procedures that will be followed during implementation of the site investigation scope of work so that valid data of a known quality is generated.

The project specific field QA/QC procedures and the project specific laboratory QA/QC procedures are presented in the text of this QAPP. The general internal laboratory QA/QC procedures are presented in the subcontractor laboratory's Quality Manual which is retained at CTM's office. The subcontract laboratory for this project is Chemtech of Mountainside, New Jersey. The laboratory certifications are included in Appendix A.

The QAPP has been prepared in a manner consistent with the following guidance documents:

- Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, EPA/540/G-89/004, USEPA, October 1988.
- Data Quality Objectives for Remedial Response Activities: Development Process, EPA/540/G-87/003, USEPA, March 1987.
- Draft DER-10 Technical Guidance For Site Investigation and Remediation, NYSDEC, December 2002.

1.2 Objectives and Scope of Work

It is the objective of the RI and this QAPP to obtain and present representative data of a known quality and sufficient quantity. The primary goal is to perform soil and groundwater sampling through a variety of investigation tasks to evaluate the quality of the site's soils, groundwater and fill. The data will help document overall protection requirements for human health and the environment based on the site's contemplated use.

To achieve these objectives, the scope of work will include the following items as presented in the RI Work Plan, in this QAPP and in the FSP: a site reconnasissance to identify areas and conditions of concern not previously identified; and a site wide subsurface/hydrogeologic evaluation, which will include soil borings/monitoring wells, subsurface soil, surface soil, and groundwater sampling and laboratory analysis.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

CTM is responsible for the overall administration and the overall quality control/quality assurance of the site investigation and remedial activities. These will include project management, coordination and scheduling of activities in-house and with qualified subcontractors. The work tasks that will be performed by a subcontractor under CTM's supervision include: advancement of soil borings and installation of monitoring wells using direct-push and hollow-stem auger drilling methods, and analytical laboratory testing.

A project organizational chart listing key individuals of the project and their associated title is presented as Figure 1 at the end of this document. Personnel from CTM and the subcontracted laboratory can be reached at the following addresses:

- C.T. Male Associates, P.C.
  Contacts: Kirk Moline and John Favreau
  Megan Drosky (Data Validator)
  50 Century Hill Drive, P.O. Box 727, Latham, New York 12110
  Phone: (518) 786-7400
  Fax No.: (518) 786-7299
  Email: k.moline@ctmale.com
  j.favreau@ctmale.com
  m.drosky@ctmale.com

- Chemtech Analytical Laboratory
  Contact: Kurt Hummler
  Address: 284 Sheffield Street, Mountainside, New Jersey 07092
  Bus. Office: (908) 789-8900
  Bus. Fax No.: (908) 789-8922
  Email: www.chemtech.com

A description of the responsibilities by title of the key individuals is presented as follows:

Project Principal is responsible for the review of the RI/AAR activities and reports for their technical adequacy and conformance to the scope of work.

Quality Assurance Officer is responsible for the independent review of the RI/AAR documents and reports to check that the appropriate project documentation, of the

quality control activities performed, exist and are maintained; for conducting field and sampling audits. Analytical data will also be reviewed by this individual for accuracy and completeness.

Project Manager is responsible for the overall coordination and implementation of the project, the management of staff and resources, the implementation of schedules, the conformance by the technical staff and subcontractors to the scope of work, assessing the adequacy of the work being performed, implementing corrective action as necessary, interaction with the client and regulatory agencies, maintaining complete project documentation, and report preparation.

Health and Safety Coordinator is responsible for implementation of the project specific Health and Safety Plan, and resolution of safety issues which arise during the completion of the work. The Health and Safety Coordinator or designee will be present during the completion of the field work.

Laboratory Quality Assurance Officer is responsible for review of the laboratory data quality control procedures and documentation to determine if the QA objectives are being met; and to report non-conforming events to the laboratory technical staff and Project Manager and implement corrective action as necessary.

Laboratory Director is responsible for all activities within the laboratory, and for the performance of the laboratory work tasks in accordance with the project work plans, interactions with the Project Manager, and the adherence to project schedule.

Project Geologist/Engineer/Scientist is responsible for coordinating and conducting the field hydrogeologic activities and subcontractors, the adherence of activities to the QAPP and the FSP, evaluation of the collected data, soil classifications, report preparation and interaction with Project Manager and Project Team.

Project Team is responsible for adequately performing the work tasks in accordance with the project work plans so that the objectives of investigations and the project are achieved, notifying the Project Manager of any non-conformance to the work plan so that corrective actions can be taken as necessary, and notifying the Project Manager of unforeseen conditions so that modifications to the work plan, if necessary, can be approved and implemented.

Data Validator is responsible for review of all analytical data generated for this project. The data validator will review analytical data in accordance with New York State Department of Environmental Conservation Guidance for the Development of Data Usability Summary Reports and preparation of a report documenting if the analytical data is valid and usable. The report will also present data rejection and qualification, where necessary, based on laboratory performance.

3.0 QUALITY ASSURANCE OBJECTIVES FOR DATA MEASUREMENT

3.1 General

The Quality Assurance (QA) objective for this project is to produce data which is technically valid and of a known quality that meets the needs of its intended use. In this section the data quality objectives are defined by describing the intended use of the data; defining the type of data needed (i.e., physical or analytical); specifying the analytical levels, as established by EPA, appropriate to the data uses; specifying the quality control checks on field and laboratory procedures and frequency of checks; and presenting the quality control acceptance criteria.

Laboratory quality assurance objectives for data measurement are established for each measurement parameter in terms of precision, accuracy, completeness, representativeness and comparability. These terms form an integral part of the laboratory's quality assurance programs in that Data Quality Objectives (DQO's) are set for each parameter.

3.2 Data Uses and Types

The data to be generated during the proposed work will be used to evaluate site conditions and monitor health and safety during implementation of the field activities. Both physical data including air monitoring and analytical data from soil, groundwater and soil gas will be needed to provide the necessary information to complete the steps in the site investigation. The specific physical and analytical data proposed and their purposes are presented in the RI Work Plan.

3.3 Data Quality Needs

To support data collection activities in obtaining quality data, EPA has established a series of analytical levels that are appropriate to site investigation/remediation data uses. The analytical levels are defined as follows:

Level I - Field screening or analysis using portable instruments. Qualitative data.

Level II - Field analyses using more sophisticated portable analytical instruments. Qualitative and quantitative data can be obtained.

Level III - Laboratory analyses using standard EPA approved procedures.

Level IV - Laboratory analyses by NYSDEC ASP (Analytical Services Protocol) - Category B Deliverable with QA/QC protocols and documentation.

Level V - Analyses by non-standard methods.

The data collection activities, the environmental media, the intended use of the data and the corresponding analytical levels that will be used to produce the project data are summarized in Table 1.

Table 1
Summary of Work Tasks and Corresponding Analytical Levels

Data Collection Activities	Sample Media & Description	Data Use[a]	Analytical Level
Air Monitoring	Air/Ambient Air	2	I
Test Borings, Monitoring Wells, and Near Surface Soil Sampling; Soil Gas Sampling	Near Surface and Subsurface Soil, Groundwater and Soil Gas for Laboratory Analyses and/or Field Instrumentation	1, 3, & 4	IV

Note:
(a) Data Uses Key:
1 - Site Characterization.
2 - Health and Safety and Community Air Monitoring During Implementation of Field Activities.
3 - Risk Assessment.
4 - Evaluation of Remediation Alternatives.

Another consideration besides defining the Data Quality Needs is what level of cleanup will be required for the site. The applicable or relevant and appropriate requirements (ARARs) are related to defining satisfactory cleanup efforts. In order to be able to evaluate the data generated with respect to potential ARARs, the samples will need to be analyzed by analytical methods that can achieve detection limits below or at existing ARAR values. The analytical methods selected for this project are designed to achieve ARAR values.

3.4 Quality Control Checks and Acceptance Criteria

To monitor and document the integrity of such factors as sample variability, sampling equipment cleanliness, sampling technique, analytical reproducibility and sample handling which can affect data quality, several field quality control checks will be implemented. These will include taking equipment/field blanks after the sampling equipment has been decontaminated to check for cross contamination and equipment cleanliness; taking replicate samples to monitor analytical precision/ reproducibility and sampling technique; and preparing transport blanks to be transported with the sample containers for volatile analyses to monitor sample handling. For this project the field Quality Control (QC) checks will consist of one equipment/field blank, and one replicate sample during sampling activities for every twenty (20) analytical samples per media type (i.e. soil, groundwater, soil gas). A transport blank will be prepared for each sample set to be submitted for volatile analyses.

Laboratory quality control checks will be those specified in EPA Methods or in the NYSDEC ASP (Revised 2000) for the analytical method performed and could consist of some of the following:

- Blanks (method, preparation),
- initial and continuing calibrations,
- surrogate spikes,
- matrix spikes/matrix spike duplicates,
- duplicate samples, and
- control samples/matrix spike blanks.

The laboratory will be responsible for performing what is necessary for complying with appropriate standards and certifications of the selected EPA method and ASP requirements. The laboratory quality control acceptance criteria is method specific and will be the laboratory's responsibility to meet ASP (Revised 2000) criteria.

4.0 SAMPLING PROCEDURES

Procedures for sampling are presented in the Field Sampling Plan (FSP) and include the following:

- selection of sampling sites and media to be sampled;
- specific sampling procedures for each environmental media to be sampled, and for QC samples to be taken;
- field soil screening procedures;
- a description of the containers, procedures and equipment used for sample collection, preservation, transport and storage;
- procedures for preparing the sample containers and sampling equipment prior to sampling and decontamination of sampling equipment during sampling;
- chain of custody procedures and forms; and
- description of the procedures, forms and notebooks to be used to document sampling activities, sample conditions and field conditions.

5.0 SAMPLE CUSTODY

Proper chain of custody will be established and maintained through a series of steps, beginning in the field and ending with final disposition of the analyzed sample. At the time of the field sampling, an external chain of custody form will be utilized to track sample collection until delivery to the analytical laboratory. An internal or "intra-laboratory" chain of custody will be used by laboratory personnel to track the sample(s) from the point it is received/logged and passed through the laboratory process. Chain of custody procedures are discussed in detail in Section 8.0 of the FSP.

6.0 CALIBRATION PROCEDURES

Calibration procedures for field equipment including the photo-ionization detector (PID) meter, pH/conductivity/temperature meter and dust monitors are presented in Section 7.0 of the FSP. Calibration procedures for laboratory equipment/instrumentation consist of the production and use of current certifiable standards and the measurement/adjustment of the instrument response. The laboratory is responsible for maintaining records documenting use of current standards and acceptable instrument responses. The laboratory is required to flag analytical data that has had potential contamination or poor instrument calibration that may have occurred during the analytical process.

7.0 SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

The analytical parameters, sample preparation and analysis methods, acceptable holding times and required method detection limits are presented in Table 2. The analytical methods specified reflect the requirements of the NYSDEC ASP, Revised June 2000.

Table 2
Analytical Methods and Requirements

Analytical Parameters	EPA Method	Holding Times(2)	Contract Required Quantitative Limits (as noted)(1)
Volatile Organic Compounds	8260	Soil: 14 Days to Extraction, 40 Days to Analyze Water: 7 Days to Extraction, 40 Days to Analyze.	10-100 ug/Kg (Soil) 1 to 10 ug/L (Water)
Semi-volatile Organic Compounds	8270	5 Days to Extraction, 40 Days to Analyze	330 to 800 ug/Kg (Soil) 10-25 ug/L (Water)
Metals	6010/7000 Series	180 Days except for Mercury (30 Days)	0.3 to 500 mg/Kg (Soil) 3 to 5,000 ug/L (Water)
Pesticides	8081	Soil: 7 Days to Extraction, 40 Days to Analyze Water: 7 Days to Extraction, 14 Days to Anlayze	3 to 17 ug/Kg (Soil) 0.05 to 0.5 ug/L (Water)
PCBs	8082	Soil: 7 Days to Extraction, 40 Days to Analyze Water: 7 Days to Extraction, 14 Days to Anlayze	17 ug/Kg (Soil) 0.5 ug/L (Water)

Note:

1) The listed method detection limits are practical quantitation limits (PQLs). The method detection limit (MDL) is the best possible detection. Laboratories report PQLs which are typically 4 times the MDL for liquids and varies for solids depending on the quantity of contamination present. Efforts will be made to obtain the lowest possible detection limit. When the guidance value or standard value is below the detection limit, achieving the detection limit will be considered acceptable for meeting that guidance or standard value.

2) Holding times are relative to the verifiable time of receipt at the laboratory.

Where matrix interference is noted, analytical clean-ups will be required to be performed by the laboratory following the procedures specified in SW-846 or the NYSDEC ASP, as applicable. In general, samples shall not be diluted more than 1 to 5.

8.0 DATA REDUCTION, VALIDATION AND REPORTING

The field measurement data and the laboratory analyses results of detected parameters will be compiled and tabulated to facilitate comparison and evaluation, and will be included in the Final RI/AAR. The tabulated data will include at a minimum:

- soil analysis results;
- groundwater analysis results;
- soil gas analysis results; and
- quality control results (field blanks, duplicates, transport blanks).

Field logs will also be compiled and included, in part, in the text and appendices of the Final RI/AAR, and will consist of:

- monitoring well construction logs;
- test boring logs;
- organic vapor headspace analysis logs;
- groundwater services field logs;
- environmental services field logs; and
- water level records.

Any observations or problems encountered during field activities which could affect the quality of the data or its validity will be noted on the appropriate field log.

The laboratory will generate ASP Category B Data Deliverable Package(s) that may be submitted as a separate volume to the RI/AAR. It will include analytical results and quality control data deliverables as required by NYSDEC ASP (Revised 2000).

Internal data validation will be performed by the laboratory QA officer to ensure that the data package is complete and meets the criteria to the work plan and this QAPP. Any problems encountered in performing the analyses by the laboratory such as out of limits surrogate recoveries, and comments on the quality and limitations of specific data and the validity of the data will be described in the case narrative of the laboratory report.

External data validation will be performed by CTM's in-house data validator, who will utilize the USEPA National and Regional Validation Guidelines/Procedures and the NYSDEC Guidance in the Development of Data Usability Summary Reports to determine the applicable qualifications of the data. The validator will then prepare a NYSDEC Data Usability Summary Report (DUSR) in accordance with NYSDEC guidelines. Please note that the data validator will not be involved in any other portions of the project. The proposed data validator's qualifications and work experience is presented in Appendix B. The NYSDEC DUSR guidance is presented in Appendix C for reference.

9.0 INTERNAL QUALITY CONTROL

Field QC will consist of taking equipment/field blanks, replicate samples and having transport blanks with the appropriate volatile organic compound sample sets. Field instrumentation will also be calibrated prior to use and the calibration maintained as discussed in the FSP (Section 7.0).

Internal laboratory QC will generally consist of:

- Method (instrument) blanks;
- initial and continuing calibrations;
- surrogate spikes ;
- matrix spikes/matrix spike duplicates ;
- duplicate samples; and
- laboratory control samples/matrix spike blanks.

The QC samples will be run in accordance with the protocols and frequencies specified in the NYSDEC ASP, SW-846 and EPA Methods as applicable for the analyses being performed.

10.0 PERFORMANCE AND SYSTEMS AUDITS

10.1 Field Audits

Field performance audits will consist of taking replicate samples and equipment/field blanks and analyzing them for the same parameters as other samples.

Field system audits will be conducted during field operation to ensure that the field activities are being conducted correctly and in accordance with the RI Work Plan. The project field supervisor will check that the field instrumentation is calibrated prior to use, that field measurements are taken correctly, that equipment and sample containers are properly decontaminated, and that the field activities are properly documented. Any deficiencies will be reported to the project manager and discussed with the field staff immediately and corrective action taken. The person conducting the field audits will document the field system audits by use of a field report and submit the report to the project manager for review on a bi-weekly basis at a minimum. The project quality assurance officer, geologist/engineer or project manager will conduct system audits as appropriate or warranted.

The project manager will review the field system audit reports and the field documentation for completeness and correctness, and check that the work is proceeding on schedule and in accordance with the work plans.

10.2 Laboratory Audits

Laboratory system audits are not required, however, the laboratory is required to maintain New York State Department of Health (NYSDOH) ELAP certification. A copy of the laboratory NYSDOH ELAP certification documentation is provided in Appendix A. Part of this certification process typically includes periodic performance evaluations and on-site systems audits.

11.0 PREVENTATIVE MAINTENANCE

CTM keeps an inventory of all field equipment and it is kept locked in a designated area. The field equipment is signed out when in use and its condition checked upon its return. The equipment is kept in good working order and frequently checked and calibrated by qualified employees. Additionally, select equipment (i.e., PID) is routinely serviced for cleaning and calibration by an independent repair facility.

The project geologist/scientist/engineer and field sampler are responsible for assuring that the field equipment is tested, cleaned, charged and calibrated in accordance with the manufacturer's instructions prior to taking the equipment out into the field.

12.0 DATA ASSESSMENT PROCEDURES

The field and laboratory generated data will be assessed for precision, accuracy, representativeness, completeness, and comparability (PARCC parameters). Both quantitative and qualitative procedures will be used for these assessments.

The criteria for assessment of field measurements will be that the measurements were taken in accordance with the procedures specified in the FSP using calibrated instruments. Assessment of the sampling data with respect to field performance will be based on the criteria that the samples were properly collected and handled. Field replicate and equipment/field blank sample results will be used in assessing the sampling technique and representativeness of the samples collected.

The laboratory will calculate and report the precision, accuracy, and completeness of the analytical data. Precision will be expressed as the relative percent difference (RPD) between values of duplicate samples. Accuracy will be expressed as percent difference (PD) for surrogate standards and matrix spike compounds. Completeness is a measure of the amount of valid data derived from a set of samples based on the total amount expected to be derived under normal conditions. The precision and accuracy results will be compared to the QC acceptance criteria specified for each test method in the NYSDEC ASP (Revised June 2000).

The representativeness of the analysis is dictated primarily by the field sampling technique and sample location, as opposed to laboratory operations. The laboratory will take steps to ensure that the analysis is representative of the sample being submitted. The criteria for ensuring representativeness of the analysis are careful aliquot selection and proper compositing techniques. Laboratory performance will be based on the criteria that the samples were properly handled prior to submission to the laboratory, that the laboratory aliquots taken for analysis are representative (i.e. oversized particles discarded, sample thoroughly mixed except when dealing with volatile organics), that the samples were analyzed within holding times, and that no cross-contamination has occurred based on the method blank results. Data comparability will be assessed based on analyses being performed within required holding times, on consistent units of measure, and that analyses were performed in strict adherence with NYSDEC and EPA analytical methods/protocols.

13.0 CORRECTIVE ACTIONS

The site investigation will be performed in accordance with the approved work plan, the contents of the approved FSP and the approved QAPP. Any persons identifying unacceptable conditions or deficiencies in the work being performed such as deviation from or omission of health and safety procedures, sampling procedures or other field procedures, will immediately notify the project field supervisor, where applicable, and the project manager. The unacceptable conditions or deficiencies will be documented and submitted to the project manager. The project manager, with assistance from the technical quality review staff, if necessary, will be responsible for developing and initiating appropriate corrective action, documenting the corrective action and verifying that the corrective action has been effective.

Depending on the significance and potential impact of the problem or deficiency requiring corrective action, the NYSDEC and the Schenectady Metroplex Development Authority will be notified, as warranted, as soon as practical after becoming aware of the situation.

14.0 QUALITY ASSURANCE REPORTS TO MANAGEMENT

Field system audit/field reports from the project team, where applicable, will be submitted to the project manager on a weekly basis at a minimum. The field report will include the project name, location, time, date, weather, temperature range, work in progress, conformance with schedule, persons present at the site (arrival and departure times), observations, work start-up and stoppage, items to verify, information or action required any attachments identified, and the reporting persons signature. The field report notifies the management as to the progress, conformance with the work plan, and any problems that may affect quality control. Field personnel will also keep log books and field notebooks that will discuss day to day procedures followed, any problems encountered, etc. A copy of the field notes will be given to the project manager at least bi-weekly to keep the project manager informed of the project status and as a quality control check. The project manager will review the reports and field notes to assess the quality of the investigating data gathering efforts to make sure the objectives of the work are being met, to make sure the work is progressing on schedule, that the work is being conducted in accordance with the work plan, and that any problems encountered are addressed. These reports will be utilized in assessing the data quality with respect to field activities and the findings will be discussed in the RI/AAR where applicable.

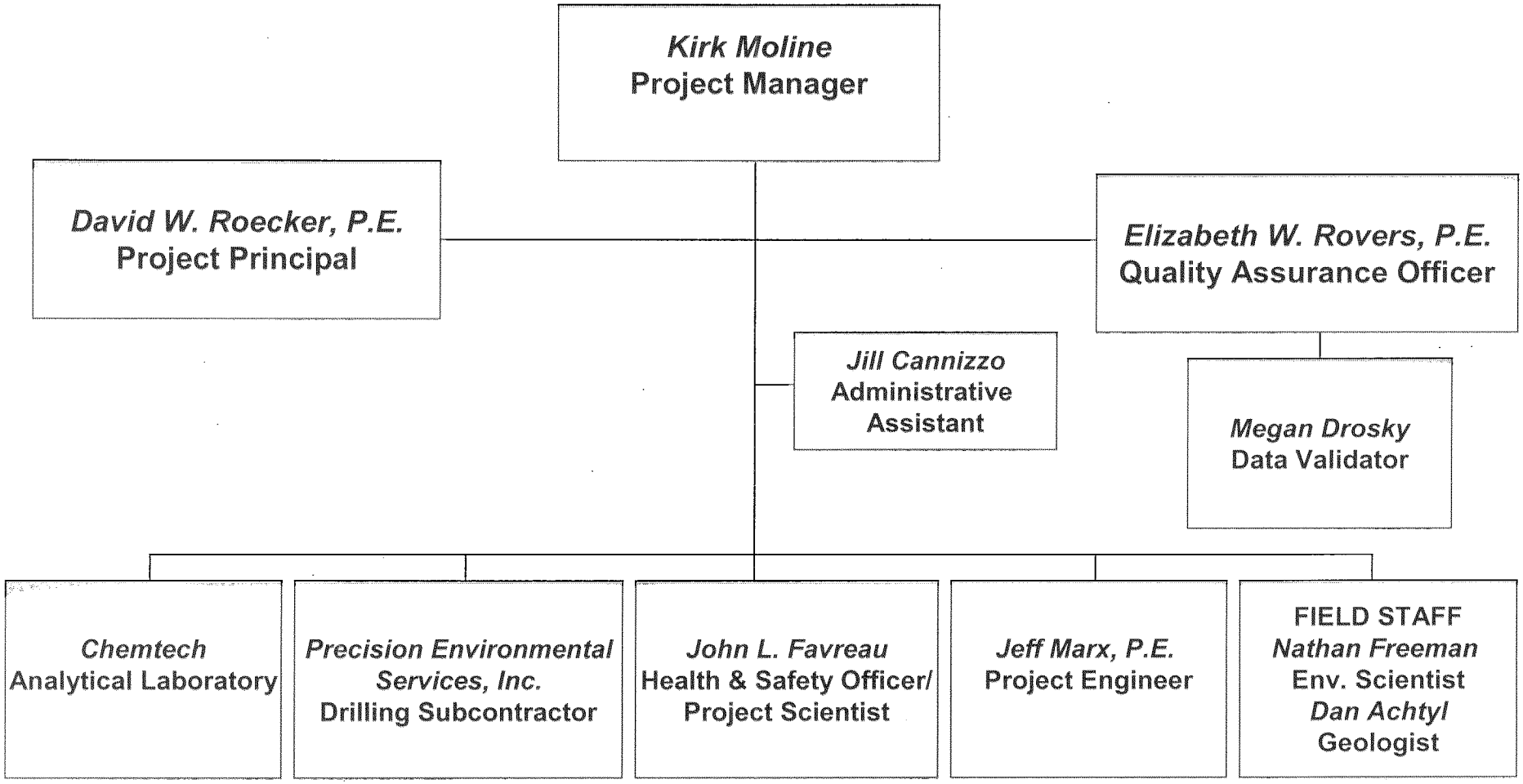
Documentation of each phase of the project and all work tasks performed are kept in the file on the project. The documentation is available at all times for review by the Quality Assurance Officer, who will randomly check files for their completeness.

If any occurrences or conditions are encountered during the course of work that may require a change in the scope of work or departure from the approved work plan, the NYSDEC will be notified and the situation reported as soon as possible.

FIGURE 1

Project Organizational Chart

C.T. MALE ASSOCIATES, P.C.



APPENDIX A
Laboratory Certification

Note: C.T. Male has requested that the laboratory (Chemtech) submit its updated certifications to replace the following certifications, which expired on April 1, 2006. C.T. Male will forward to the appropriate parties upon receipt.

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Wadsworth Center The Governor Nelson A. Rockefeller Empire State Plaza P.O. BOX 509 Albany, New York 12201-0509

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

LAB ID: 11376

April 01, 2005

MR. DIVYAJIT MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092
UNITED STATES

Certificate Expiration Date: April 01, 2006

Dear Mr. Mehta,

Enclosed are the ELAP and/or NELAP Certificate(s) of Approval issued to your environmental laboratory for the current permit year. The Certificate(s) supersede any previously issued and are in effect through the expiration date listed above. Please carefully examine the Certificate(s) to insure that the categories, subcategories, analytes and methods for which your laboratory is approved are listed correctly, as well as verifying your laboratory's name, address, lead technical director and identification number.

Pursuant to regulation (Part 55-2 NYCRR), original certificates must be posted conspicuously in the laboratory and shall, upon request, be made available to any client of the laboratory. Certificates remain the property of the New York State Department of Health and must be surrendered promptly on demand.

Please note, pursuant to Section 55-2.5(a) NYCRR, any misrepresentation of the Fields of Accreditation (Matrix - Method - Analyte) for which your laboratory is approved may result in denial, suspension, or revocation of your certification. Any use of the ELAP or NELAP name, reference to the laboratory's approval status and/or using the NELAC/NELAP logo in any catalogs, advertising, business solicitations, proposals, quotations, laboratory analytical reports or other materials must include the laboratory's ELAP identification number, and must distinguish between proposed testing for which the laboratory is approved and the proposed testing for which the laboratory is not approved.

Please notify the ELAP office of any changes you feel need to be made to your Certificate(s). We may be reached via email to elap@health.state.ny.us or by calling (518) 485-5570.

Sincerely,

Joyce Reilly

Program Administrator
Environmental Laboratory
Approval Program

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonia C. Novello, M.D., M.P.H., Dr.P.H.

Expires 12:01 AM April 01, 2006
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DIVYAJIT MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092 UNITED STATES

NY Lab Id No: 11376
EPA Lab Code:

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Drinking Water Metals I	
Arsenic, Total	EPA 200.7
Barium, Total	EPA 200.7
Cadmium, Total	EPA 200.7
Chromium, Total	EPA 200.7
Copper, Total	EPA 200.7
Iron, Total	EPA 200.7
Mercury, Total	EPA 245.1
Selenium, Total	EPA 200.9
Silver, Total	EPA 200.7
Zinc, Total	EPA 200.7
Drinking Water Metals II	
Antimony, Total	EPA 200.9
Beryllium, Total	EPA 200.7
Nickel, Total	EPA 200.7
Drinking Water Non-Metals	
Alkalinity	SM 18-20 2320B
Calcium Hardness	EPA 200.7
Chloride	EPA 300.0
Hydrogen Ion (pH)	SM 18-20 4500-H B
Solids, Total Dissolved	SM 18-20 2540C
Sulfate (as SO4)	EPA 300.0

Volatile Aromatics	
1,2,3-Trichlorobenzene	EPA 524.2
1,2,4-Trichlorobenzene	EPA 524.2
1,2,4-Trimethylbenzene	EPA 524.2
1,2-Dichlorobenzene	EPA 524.2
1,3,5-Trimethylbenzene	EPA 524.2
1,3-Dichlorobenzene	EPA 524.2
1,4-Dichlorobenzene	EPA 524.2
2-Chlorotoluene	EPA 524.2
4-Chlorotoluene	EPA 524.2
Benzene	EPA 524.2
Bromobenzene	EPA 524.2
Chlorobenzene	EPA 524.2
Ethyl benzene	EPA 524.2
Hexachlorobutadiene	EPA 524.2
n-Butylbenzene	EPA 524.2
n-Propylbenzene	EPA 524.2
p-Isopropyltoluene (P-Cymene)	EPA 524.2
sec-Butylbenzene	EPA 524.2
Styrene	EPA 524.2
tert-Butylbenzene	EPA 524.2
Toluene	EPA 524.2
Total Xylenes	EPA 524.2

Serial No.: 25447

Property of the New York State Department of Health. Valid only at the address shown. Must be conspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify laboratory's accreditation status.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonia C. Novello, M.D., M.P.H., Dr.P.H.

Expires 12:01 AM April 01, 2006
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DIVYAJIT MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092 UNITED STATES

NY Lab Id No: 11376
EPA Lab Code:

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards for the category ENVIRONMENTAL ANALYSES POTABLE WATER
All approved analytes are listed below:

Volatile Halocarbons	
1,1,1,2-Tetrachloroethane	EPA 524.2
1,1,1-Trichloroethane	EPA 524.2
1,1,2,2-Tetrachloroethane	EPA 524.2
1,1,2-Trichloroethane	EPA 524.2
1,1-Dichloroethane	EPA 524.2
1,1-Dichloroethene	EPA 524.2
1,1-Dichloropropene	EPA 524.2
1,2,3-Trichloropropane	EPA 524.2
1,2-Dichloroethane	EPA 524.2
1,2-Dichloropropane	EPA 524.2
1,3-Dichloropropane	EPA 524.2
2,2-Dichloropropane	EPA 524.2
Bromochloromethane	EPA 524.2
Bromomethane	EPA 524.2
Carbon tetrachloride	EPA 524.2
Chloroethane	EPA 524.2
Chloromethane	EPA 524.2
cis-1,2-Dichloroethene	EPA 524.2
cis-1,3-Dichloropropene	EPA 524.2
Dibromomethane	EPA 524.2
Dichlorodifluoromethane	EPA 524.2
Methylene chloride	EPA 524.2
Tetrachloroethene	EPA 524.2

Volatile Halocarbons	
trans-1,2-Dichloroethene	EPA 524.2
trans-1,3-Dichloropropene	EPA 524.2
Trichloroethene	EPA 524.2
Trichlorofluoromethane	EPA 524.2
Vinyl chloride	EPA 524.2

Serial No.: 25447

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Antonia C. Novello, M.D., M.P.H., Dr.P.H.

Expires 12:01 AM April 01, 2006
Issued April 01, 2005

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DIVYAJIT MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092 UNITED STATES

NY Lab Id No: 11376
EPA Lab Code:

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES POTABLE WATER
All approved subcategories and/or analytes are listed below:

Drinking Water Bacteriology	
Coliform, Total	SM 18-20 9222B
Standard Plate Count	SM 18 9215B
Drinking Water Metals I	
Lead, Total	EPA 200.9
Drinking Water Metals III	
Sodium, Total	EPA 200.7
Drinking Water Non-Metals	
Color	SM 18-20 2120B
Volatile Aromatics	
Isopropylbenzene	EPA 524.2

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All approved analytes are listed below:

Acrolein and Acrylonitrile	
Acrolein (Propenal)	EPA 8260B
Acrylonitrile	EPA 8260B
Amines	
Pyridine	EPA 8270C
Benzidines	
3,3' -Dichlorobenzidine	EPA 625
	EPA 8270C
Chlorinated Hydrocarbon Pesticides	
4,4'-DDD	EPA 608
	EPA 8081A
4,4'-DDE	EPA 608
	EPA 8081A
4,4'-DDT	EPA 608
	EPA 8081A
Aldrin	EPA 608
	EPA 8081A
alpha-BHC	EPA 608
	EPA 8081A
beta-BHC	EPA 608
	EPA 8081A
Chlordane Total	EPA 608
	EPA 8081A
Chlorinated Hydrocarbon Pesticides	
delta-BHC	EPA 608
	EPA 8081A
Dieldrin	EPA 608
	EPA 8081A
Endosulfan I	EPA 608
	EPA 8081A
Endosulfan II	EPA 608
	EPA 8081A
Endosulfan sulfate	EPA 608
	EPA 8081A
Endrin	EPA 608
	EPA 8081A
Endrin aldehyde	EPA 608
	EPA 8081A
Heptachlor	EPA 608
	EPA 8081A
Heptachlor epoxide	EPA 608
	EPA 8081A
Lindane	EPA 608
	EPA 8081A
Methoxychlor	EPA 608
	EPA 8081A
Toxaphene	EPA 608

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Chlorinated Hydrocarbon Pesticides	
Toxaphene	EPA 8081A
Chlorinated Hydrocarbons	
1,2,4-Trichlorobenzene	EPA 625
	EPA 8270C
2-Chloronaphthalene	EPA 625
	EPA 8270C
Hexachlorobenzene	EPA 625
	EPA 8270C
Hexachlorobutadiene	EPA 625
	EPA 8270C
Hexachloroethane	EPA 625
	EPA 8270C
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dicamba	EPA 8151A
Demand	
Biochemical Oxygen Demand	EPA 405.1
	SM 18-20 5210B
Chemical Oxygen Demand	EPA 410.1
	SM 18-20 5220D
Haloethers	
4-Bromophenylphenyl ether	EPA 625
	EPA 8270C
4-Chlorophenylphenyl ether	EPA 625
	EPA 8270C
Bis (2-chloroisopropyl) ether	EPA 625
	EPA 8270C
Bis(2-chloroethoxy)methane	EPA 625
	EPA 8270C
Bis(2-chloroethyl)ether	EPA 625
	EPA 8270C
Mineral	
Alkalinity	SM 18-20 2320B
Chloride	EPA 300.0
Fluoride, Total	EPA 300.0
	EPA 340.2
Hardness, Total	EPA 200.7
Sulfate (as SO4)	EPA 300.0
	EPA 375.4
Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 625
	EPA 8270C
2,6-Dinitrotoluene	EPA 625

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Nitroaromatics and Isophorone	
2,6-Dinitrotoluene	EPA 8270C
Isophorone	EPA 625
	EPA 8270C
Nitrobenzene	EPA 625
	EPA 8270C
Nitrosoamines	
N-Nitrosodimethylamine	EPA 625
N-Nitrosodi-n-propylamine	EPA 625
N-Nitrosodiphenylamine	EPA 625
	EPA 8270C
Nutrient	
Ammonia (as N)	EPA 350.2
Kjeldahl Nitrogen, Total	EPA 351.3
Nitrate (as N)	EPA 300.0
	EPA 353.1
	EPA 353.2
Nitrite (as N)	EPA 300.0
	EPA 354.1
Orthophosphate (as P)	EPA 300.0
	EPA 365.2
Phosphorus, Total	EPA 365.2

Phthalate Esters	
Benzyl butyl phthalate	EPA 625
	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 625
	EPA 8270C
Diethyl phthalate	EPA 625
	EPA 8270C
Dimethyl phthalate	EPA 625
	EPA 8270C
Di-n-butyl phthalate	EPA 625
	EPA 8270C
Di-n-octyl phthalate	EPA 625
	EPA 8270C
Polychlorinated Biphenyls	
PCB-1016	EPA 8082
PCB-1221	EPA 8082
PCB-1232	EPA 8082
PCB-1242	EPA 8082
PCB-1248	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082
Polynuclear Aromatics	
Acenaphthene	EPA 625

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Polynuclear Aromatics	
Acenaphthene	EPA 8270C
Acenaphthylene	EPA 625
	EPA 8270C
Anthracene	EPA 625
	EPA 8270C
Benzo(a)anthracene	EPA 625
	EPA 8270C
Benzo(a)pyrene	EPA 625
	EPA 8270C
Benzo(b)fluoranthene	EPA 625
	EPA 8270C
Benzo(ghi)perylene	EPA 625
	EPA 8270C
Benzo(k)fluoranthene	EPA 625
	EPA 8270C
Chrysene	EPA 625
	EPA 8270C
Dibenzo(a,h)anthracene	EPA 625
	EPA 8270C
Fluoranthene	EPA 625
	EPA 8270C
Fluorene	EPA 625
	EPA 8270C

Polynuclear Aromatics	
Indeno(1,2,3-cd)pyrene	EPA 625
	EPA 8270C
Naphthalene	EPA 625
	EPA 8270C
Phenanthrene	EPA 625
	EPA 8270C
Pyrene	EPA 625
	EPA 8270C
Priority Pollutant Phenols	
2,4,5-Trichlorophenol	EPA 625
	EPA 8270C
2,4,6-Trichlorophenol	EPA 625
	EPA 8270C
2,4-Dichlorophenol	EPA 625
	EPA 8270C
2,4-Dimethylphenol	EPA 625
	EPA 8270C
2,4-Dinitrophenol	EPA 625
	EPA 8270C
2-Chlorophenol	EPA 625
	EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 625
	EPA 8270C

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Priority Pollutant Phenols	
2-Nitrophenol	EPA 625
	EPA 8270C
4-Chloro-3-methylphenol	EPA 625
	EPA 8270C
4-Nitrophenol	EPA 625
	EPA 8270C
Cresols, Total	EPA 8270C
Pentachlorophenol	EPA 625
	EPA 8270C
Phenol	EPA 625
	EPA 8270C
Purgeable Aromatics	
1,2-Dichlorobenzene	EPA 602
	EPA 8021B
	EPA 8260B
1,3-Dichlorobenzene	EPA 602
	EPA 8021B
	EPA 8260B
1,4-Dichlorobenzene	EPA 602
	EPA 8021B
	EPA 8260B
Benzene	EPA 602
	EPA 8021B

Purgeable Aromatics	
Benzene	EPA 8260B
Chlorobenzene	EPA 602
	EPA 8021B
	EPA 8260B
Ethyl benzene	EPA 602
	EPA 8021B
	EPA 8260B
Toluene	EPA 602
	EPA 8021B
	EPA 8260B
Total Xylenes	EPA 602
	EPA 8021B
	EPA 8260B
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA 601
	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 601
	EPA 8260B
1,1,2-Trichloroethane	EPA 601
	EPA 8260B
1,1-Dichloroethane	EPA 601
	EPA 8260B
1,1-Dichloroethene	EPA 601

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Purgeable Halocarbons	
1,1-Dichloroethene	EPA 8260B
1,2-Dichloroethane	EPA 601
	EPA 8260B
1,2-Dichloropropane	EPA 601
	EPA 8260B
2-Chloroethylvinyl ether	EPA 601
	EPA 8260B
Bromodichloromethane	EPA 601
	EPA 8260B
Bromoform	EPA 601
	EPA 8260B
Bromomethane	EPA 601
	EPA 8260B
Carbon tetrachloride	EPA 601
	EPA 8260B
Chloroethane	EPA 601
	EPA 8260B
Chloroform	EPA 601
	EPA 8260B
Chloromethane	EPA 601
	EPA 8260B
cis-1,3-Dichloropropene	EPA 8260B
Dibromochloromethane	EPA 601

Purgeable Halocarbons	
Dibromochloromethane	EPA 8260B
Dichlorodifluoromethane	EPA 601
	EPA 8260B
Methylene chloride	EPA 601
	EPA 8260B
Tetrachloroethene	EPA 601
	EPA 8260B
trans-1,2-Dichloroethene	EPA 601
	EPA 8260B
trans-1,3-Dichloropropene	EPA 601
	EPA 8260B
Trichloroethene	EPA 601
	EPA 8260B
Trichlorofluoromethane	EPA 601
	EPA 8260B
Vinyl chloride	EPA 601
	EPA 8260B
Residue	
Solids, Total	EPA 160.3
Solids, Total Dissolved	EPA 160.1
Solids, Total Suspended	EPA 160.2

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Wastewater Bacteriology	
Coliform, fecal	SM 18-20 9222D
Coliform, Total	SM 18-20 9222B
Wastewater Metals I	
Barium, Total	EPA 200.7
Cadmium, Total	EPA 200.7
Calcium, Total	EPA 200.7
Chromium, Total	EPA 200.7
Copper, Total	EPA 200.7
Iron, Total	EPA 200.7
Lead, Total	EPA 200.7
Magnesium, Total	EPA 200.7
Manganese, Total	EPA 200.7
Nickel, Total	EPA 200.7
Silver, Total	EPA 200.7
Sodium, Total	EPA 200.7
Wastewater Metals II	
Aluminum, Total	EPA 200.7
Antimony, Total	EPA 200.7
Arsenic, Total	EPA 200.7
Beryllium, Total	EPA 200.7
Chromium VI	EPA 7196A
Mercury, Total	EPA 245.1
Wastewater Metals II	
Selenium, Total	EPA 200.7
Vanadium, Total	EPA 200.7
Zinc, Total	EPA 200.7
Wastewater Metals III	
Cobalt, Total	EPA 200.7
Wastewater Miscellaneous	
Color	EPA 110.2
Cyanide, Total	EPA 335.1
	EPA 335.2
Hydrogen Ion (pH)	EPA 150.1
	EPA 9040B
Oil & Grease Total Recoverable	EPA 1664A
Organic Carbon, Total	EPA 415.1
Phenols	EPA 420.1
Silica, Dissolved	EPA 200.7
Specific Conductance	EPA 120.1
Sulfide (as S)	EPA 376.1
Surfactant (MBAS)	EPA 425.1

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ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved subcategories and/or analytes are listed below:

Acrolein and Acrylonitrile	
Acrolein (Propenal)	EPA 624
Acrylonitrile	EPA 624
Amines	
2-Nitroaniline	Method Not Specified
3-Nitroaniline	Method Not Specified
4-Chloroaniline	Method Not Specified
4-Nitroaniline	Method Not Specified
Carbazole	Method Not Specified
Benzidines	
Benzidine	EPA 625
	EPA 8270C
Chlorinated Hydrocarbon Pesticides	
alpha-Chlordane	Method Not Specified
Endrin Ketone	Method Not Specified
gamma-Chlordane	Method Not Specified
Chlorinated Hydrocarbons	
Hexachlorocyclopentadiene	EPA 625
	EPA 8270C
Demand	
Chemical Oxygen Demand	EPA 410.4
Mineral	
Alkalinity	EPA 310.1
Chloride	EPA 325.3
	SM 18-20 4500-Cl C
Fluoride, Total	SM 18-20 4500-F C
Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8330
2,6-Dinitrotoluene	EPA 8330
Nitrosoamines	
N-Nitrosodimethylamine	EPA 8270C
N-Nitrosodi-n-propylamine	EPA 8270C
Nutrient	
Ammonia (as N)	EPA 350.3
	SM 19-20 4500-NH3 D or E
Nitrate (as N)	EPA 353.3
	SM 18-20 4500-NO3 E
	SM 18-20 4500-NO3 F
Nitrite (as N)	SM 18-20 4500-NO2 B
Orthophosphate (as P)	EPA 365.3
	SM 18-20 4500-P E
Phosphorus, Total	SM 18-20 4500-P E

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Polychlorinated Biphenyls	
PCB-1016	EPA 608
PCB-1221	EPA 608
PCB-1232	EPA 608
PCB-1242	EPA 608
PCB-1248	EPA 608
PCB-1254	EPA 608
PCB-1260	EPA 608
Polynuclear Aromatics	
Benzo(b)fluoranthene	EPA 8310
Benzo(ghi)perylene	EPA 8310
Dibenzo(a,h)anthracene	EPA 8310
Indeno(1,2,3-cd)pyrene	EPA 8310
Naphthalene	EPA 8310
Priority Pollutant Phenols	
2,4,5-Trichlorophenol	OLM 4.2 BNA
2-Methylphenol	Method Not Specified
4-Methylphenol	Method Not Specified
Purgeable Aromatics	
1,2-Dichlorobenzene	EPA 601
	EPA 624
	EPA 625
	EPA 8270C
Purgeable Aromatics	
1,3-Dichlorobenzene	EPA 624
	EPA 625
1,4-Dichlorobenzene	EPA 601
	EPA 624
	EPA 625
Benzene	EPA 624
Chlorobenzene	EPA 601
	EPA 624
Ethyl benzene	EPA 624
Styrene	Method Not Specified
Toluene	EPA 624
Total Xylenes	EPA 624
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA 624
	EPA 8021B
1,1,2,2-Tetrachloroethane	EPA 624
	EPA 8021B
1,1,2-Trichloroethane	EPA 624
1,1-Dichloroethane	EPA 624
	EPA 8021B
1,1-Dichloroethene	EPA 624
	EPA 8021B
1,2-Dichloroethane	EPA 624

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Purgeable Halocarbons	
1,2-Dichloroethane	EPA 8021B
1,2-Dichloropropane	EPA 624
2-Chloroethylvinyl ether	EPA 624
	SM 18-19 6230B
Bromodichloromethane	EPA 624
	EPA 8021B
Bromoform	EPA 624
	EPA 8021B
Carbon tetrachloride	EPA 624
	EPA 8021B
Chloroethane	EPA 624
	EPA 8021B
Chloroform	EPA 624
Chloromethane	EPA 624
cis-1,3-Dichloropropene	EPA 624
	EPA 8021B
Dibromochloromethane	EPA 624
	EPA 8021B
Dichlorodifluoromethane	EPA 624
Methylene chloride	EPA 624
Tetrachloroethene	EPA 624
	EPA 8021B
trans-1,2-Dichloroethene	EPA 624

Purgeable Halocarbons	
trans-1,2-Dichloroethene	EPA 8021B
trans-1,3-Dichloropropene	EPA 624
	EPA 8021B
Trichloroethene	EPA 624
	EPA 8021B
Trichlorofluoromethane	EPA 624
	EPA 8021B
Vinyl chloride	EPA 624
	EPA 8021B
Purgeable Organics	
2-Butanone (Methylethyl ketone)	EPA 8015 B
	EPA 8260B
2-Hexanone	Method Not Specified
4-Methyl-2-Pentanone	Method Not Specified
Acetone	Method Not Specified
Carbon Disulfide	Method Not Specified
Vinyl acetate	Method Not Specified
Residue	
Solids, Total	SM 18-20 2540B
Solids, Total Dissolved	SM 18-20 2540C
Solids, Total Suspended	SM 18-20 2540D

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Semi-Volatile Organics	
2-Methylnaphthalene	Method Not Specified
Benzoic Acid	Method Not Specified
Benzyl alcohol	Method Not Specified
Dibenzofuran	Method Not Specified
Wastewater Bacteriology	
Coliform, fecal	SM 18-20 9221E
Coliform, Total	SM 18-20 9221B
Standard Plate Count	SM 18 9215B
Wastewater Metals I	
Barium, Total	ASTM D4382-91
	EPA 200.8
	EPA 3010A
	EPA 6010B
	SM 18-19 3111B
	SM 18-19 3113B
	SM 18-20 3120B
Cadmium, Total	EPA 213.2
	EPA 3010A
	EPA 6010B
	SM 18-19 3113B
	SM 18-20 3120B
Calcium, Total	EPA 3010A
Wastewater Metals I	
Calcium, Total	EPA 6010B
Chromium, Total	EPA 3010A
	EPA 6010B
	SM 18-19 3111C
	SM 18-20 3120B
Copper, Total	EPA 200.9
	EPA 220.2
	EPA 3010A
	EPA 6010B
	SM 18-19 3113B
	SM 18-20 3120B
Iron, Total	EPA 236.1
	EPA 236.2
	EPA 3010A
	EPA 6010B
	SM 18-19 3111B
	SM 18-19 3111C
	SM 18-19 3113B
	SM 18-20 3120B
Lead, Total	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Magnesium, Total	EPA 3010A

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CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. DIVYAJIT MEHTA
CHEMTECH CONSULTING GROUP
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092 UNITED STATES

NY Lab Id No: 11376
EPA Lab Code:

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES NON POTABLE WATER
All approved subcategories and/or analytes are listed below:

Wastewater Metals I	
Magnesium, Total	EPA 6010B
	SM 18-19 3111B
Manganese, Total	ASTM D858-90C
	EPA 243.2
	EPA 3010A
	EPA 6010B
	SM 18-19 3113B
	SM 18-20 3120B
Nickel, Total	EPA 249.1
	EPA 3010A
	EPA 6010B
	SM 18-19 3111B
	SM 18-19 3111C
	SM 18-20 3120B
Potassium, Total	EPA 3010A
	SM 18-19 3111B
Silver, Total	EPA 3005A
	EPA 6010B
	SM 18-19 3111B
	SM 18-19 3111C
	SM 18-20 3120B
Sodium, Total	EPA 3005A
	EPA 3010A

Wastewater Metals I	
Sodium, Total	EPA 6010B
	SM 18-20 3120B
Wastewater Metals II	
Aluminum, Total	EPA 202.1
	EPA 202.2
	EPA 3005A
	EPA 3010A
	EPA 6010B
	SM 18-19 3111B
	SM 18-20 3120B
Antimony, Total	EPA 204.1
	EPA 3005A
	EPA 6010B
	SM 18-19 3111B
	SM 18-20 3120B
Arsenic, Total	EPA 206.2
	EPA 206.5
	EPA 3010A
	EPA 6010B
	SM 18-19 3113B
	SM 18-20 3120B
Beryllium, Total	EPA 210.2
	EPA 3010A

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All approved subcategories and/or analytes are listed below:

Wastewater Metals II	
Beryllium, Total	EPA 6010B
	SM 18-19 3113B
	SM 18-20 3120B
Chromium VI	SM 18-19 3111C
Mercury, Total	EPA 7470A
	SM 18-19 3112B
Selenium, Total	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Vanadium, Total	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Zinc, Total	EPA 289.2
	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Wastewater Metals III	
Cobalt, Total	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Molybdenum, Total	EPA 200.7
	EPA 246.1
	EPA 3005A

Wastewater Metals III	
Molybdenum, Total	EPA 6010B
	SM 18-19 3111B
	SM 18-20 3120B
Thallium, Total	EPA 200.7
	EPA 3010A
	EPA 6010B
	SM 18-20 3120B
Wastewater Miscellaneous	
Boron, Total	EPA 200.7
	EPA 6010B
	SM 18-20 3120B
Bromide	EPA 300.0
	EPA 320.1
Cyanide, Total	EPA 9010B
	EPA 9012A
	SM 18-20 4500-CN D
	SM 18-20 4500-CN E
Hydrogen Ion (pH)	SM 18-20 4500-H B
Oil & Grease Total Recoverable	EPA 413.1
Organic Carbon, Total	SM 18-20 5310B
	SM 18-20 5310C
	SM 18-20 5310D
Specific Conductance	SM 18-20 2510B

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Wastewater Miscellaneous

Sulfide (as S)	EPA 9030B
	EPA 9034
	SM 18 4500-S E
Surfactant (MBAS)	SM 18-20 5540C
Temperature	EPA 170.1
	SM 18-20 2550B

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All approved analytes are listed below:

Acrolein and Acrylonitrile	
Acrolein (Propenal)	EPA 8260B
Acrylonitrile	EPA 8260B
Characteristic Testing	
Corrosivity	EPA 1110
	EPA 9040B
Ignitability	EPA 1010
Reactivity	SW-846 Ch7, Sec. 7.3
TCLP	EPA 1311
Chlorinated Hydrocarbon Pesticides	
4,4'-DDD	EPA 8081A
4,4'-DDE	EPA 8081A
4,4'-DDT	EPA 8081A
Aldrin	EPA 8081A
alpha-BHC	EPA 8081A
beta-BHC	EPA 8081A
Chlordane Total	EPA 8081A
delta-BHC	EPA 8081A
Dieldrin	EPA 8081A
Endosulfan I	EPA 8081A
Endosulfan II	EPA 8081A
Endosulfan sulfate	EPA 8081A
Endrin	EPA 8081A
Chlorinated Hydrocarbon Pesticides	
Heptachlor	EPA 8081A
Heptachlor epoxide	EPA 8081A
Lindane	EPA 8081A
Methoxychlor	EPA 8081A
Toxaphene	EPA 8081A
Chlorinated Hydrocarbons	
1,2,4-Trichlorobenzene	EPA 8270C
2-Chloronaphthalene	EPA 8270C
Hexachlorobenzene	EPA 8270C
Hexachlorobutadiene	EPA 8270C
Hexachlorocyclopentadiene	EPA 8270C
Hexachloroethane	EPA 8270C
Chlorophenoxy Acid Pesticides	
2,4,5-T	EPA 8151A
2,4,5-TP (Silvex)	EPA 8151A
2,4-D	EPA 8151A
Dicamba	EPA 8151A
Haloethers	
Bis (2-chloroisopropyl) ether	EPA 8270C
Bis(2-chloroethoxy)methane	EPA 8270C

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Metals I	
Barium, Total	EPA 6010B
Cadmium, Total	EPA 6010B
Chromium, Total	EPA 6010B
Lead, Total	EPA 6010B
Nickel, Total	EPA 6010B
Silver, Total	EPA 6010B
Metals II	
Antimony, Total	EPA 6010B
Arsenic, Total	EPA 6010B
Selenium, Total	EPA 6010B
Miscellaneous	
Cyanide, Total	EPA 9010B
	EPA 9012A
	EPA 9014
Hydrogen Ion (pH)	EPA 9040B
	EPA 9045C
Sulfide (as S)	EPA 9030B
	EPA 9034
Nitroaromatics and Isophorone	
2,4-Dinitrotoluene	EPA 8270C
2,6-Dinitrotoluene	EPA 8270C
Isophorone	EPA 8270C
Nitroaromatics and Isophorone	
Nitrobenzene	EPA 8270C
Phthalate Esters	
Benzyl butyl phthalate	EPA 8270C
Bis(2-ethylhexyl) phthalate	EPA 8270C
Diethyl phthalate	EPA 8270C
Dimethyl phthalate	EPA 8270C
Di-n-butyl phthalate	EPA 8270C
Di-n-octyl phthalate	EPA 8270C
Polychlorinated Biphenyls	
PCB-1016	EPA 8082
PCB-1221	EPA 8082
PCB-1232	EPA 8082
PCB-1242	EPA 8082
PCB-1248	EPA 8082
PCB-1254	EPA 8082
PCB-1260	EPA 8082
Polynuclear Aromatic Hydrocarbons	
Acenaphthene	EPA 8270C
Acenaphthylene	EPA 8270C
Anthracene	EPA 8270C
Benzo(a)anthracene	EPA 8270C
Benzo(a)pyrene	EPA 8270C

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Polynuclear Aromatic Hydrocarbons	
Benzo(b)fluoranthene	EPA 8270C
Benzo(ghi)perylene	EPA 8270C
Chrysene	EPA 8270C
Dibenzo(a,h)anthracene	EPA 8270C
Fluoranthene	EPA 8270C
Fluorene	EPA 8270C
Indeno(1,2,3-cd)pyrene	EPA 8270C
Naphthalene	EPA 8270C
Phenanthrene	EPA 8270C
Pyrene	EPA 8270C
Priority Pollutant Phenols	
2,4,5-Trichlorophenol	EPA 8270C
2,4,6-Trichlorophenol	EPA 8270C
2,4-Dichlorophenol	EPA 8270C
2,4-Dimethylphenol	EPA 8270C
2,4-Dinitrophenol	EPA 8270C
2-Chlorophenol	EPA 8270C
2-Methyl-4,6-dinitrophenol	EPA 8270C
2-Nitrophenol	EPA 8270C
4-Chloro-3-methylphenol	EPA 8270C
4-Nitrophenol	EPA 8270C
Pentachlorophenol	EPA 8270C
Phenol	EPA 8270C

Purgeable Aromatics	
1,2-Dichlorobenzene	EPA 8021B
	EPA 8260B
1,3-Dichlorobenzene	EPA 8021B
	EPA 8260B
1,4-Dichlorobenzene	EPA 8021B
	EPA 8260B
Benzene	EPA 8021B
	EPA 8260B
Chlorobenzene	EPA 8021B
	EPA 8260B
Ethyl benzene	EPA 8021B
	EPA 8260B
Toluene	EPA 8021B
	EPA 8260B
Total Xylenes	EPA 8021B
	EPA 8260B
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA 8021B
	EPA 8260B
1,1,2,2-Tetrachloroethane	EPA 8021B
	EPA 8260B
1,1,2-Trichloroethane	EPA 8021B
	EPA 8260B

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284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092 UNITED STATES

NY Lab Id No: 11376
EPA Lab Code:

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All approved analytes are listed below:

Purgeable Halocarbons	
1,1-Dichloroethane	EPA 8021B
	EPA 8260B
1,1-Dichloroethene	EPA 8021B
	EPA 8260B
1,2-Dichloroethane	EPA 8021B
	EPA 8260B
1,2-Dichloropropane	EPA 8021B
	EPA 8260B
2-Chloroethylvinyl ether	EPA 8021B
	EPA 8260B
Bromodichloromethane	EPA 8260B
Bromoform	EPA 8021B
	EPA 8260B
Bromomethane	EPA 8021B
	EPA 8260B
Carbon tetrachloride	EPA 8021B
	EPA 8260B
Chloroethane	EPA 8021B
	EPA 8260B
Chloroform	EPA 8021B
	EPA 8260B
Chloromethane	EPA 8021B
	EPA 8260B

Purgeable Halocarbons	
cis-1,3-Dichloropropene	EPA 8021B
	EPA 8260B
Dibromochloromethane	EPA 8021B
	EPA 8260B
Dichlorodifluoromethane	EPA 8021B
	EPA 8260B
Methylene chloride	EPA 8021B
	EPA 8260B
Tetrachloroethene	EPA 8021B
	EPA 8260B
trans-1,3-Dichloropropene	EPA 8021B
	EPA 8260B
Trichloroethene	EPA 8021B
	EPA 8260B
Trichlorofluoromethane	EPA 8021B
	EPA 8260B
Vinyl chloride	EPA 8021B
	EPA 8260B

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
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Amines	
2-Nitroaniline	Method Not Specified
3-Nitroaniline	Method Not Specified
4-Chloroaniline	Method Not Specified
4-Nitroaniline	Method Not Specified
Carbazole	Method Not Specified
Benzidines	
3,3' -Dichlorobenzidine	Method Not Specified
Characteristic Testing	
E.P. Toxicity	EPA 1310
Ignitability	EPA 1020
Chlorinated Hydrocarbon Pesticides	
alpha-Chlordane	Method Not Specified
Endrin Ketone	Method Not Specified
gamma-Chlordane	Method Not Specified
Haloethers	
4-Bromophenylphenyl ether	Method Not Specified
4-Chlorophenylphenyl ether	Method Not Specified
Bis(2-chloroethyl)ether	Method Not Specified
Metals I	
Barium, Total	EPA 6020
Cadmium, Total	EPA 6020

Metals I	
Calcium, Total	Method Not Specified
Chromium, Total	EPA 6020
Copper, Total	Method Not Specified
Iron, Total	Method Not Specified
Lead, Total	EPA 6020
Magnesium, Total	Method Not Specified
Manganese, Total	Method Not Specified
Nickel, Total	EPA 6020
Potassium, Total	Method Not Specified
Silver, Total	EPA 6020
Sodium, Total	Method Not Specified
Metals II	
Aluminum, Total	Method Not Specified
Antimony, Total	EPA 6020
Arsenic, Total	EPA 6020
Beryllium, Total	Method Not Specified
Chromium VI	EPA 7196A
Mercury, Total	EPA 7471A
Selenium, Total	EPA 6020
Vanadium, Total	Method Not Specified
Zinc, Total	Method Not Specified

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ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Metals III	
Cobalt, Total	Method Not Specified
Thallium, Total	Method Not Specified
Nitroaromatics and Isophorone	
Isophorone	OLM 4.2 BNA
Nitrosoamines	
N-Nitrosodi-n-propylamine	Method Not Specified
N-Nitrosodiphenylamine	Method Not Specified
Polynuclear Aromatic Hydrocarbons	
Benzo(k)fluoranthene	Method Not Specified
Priority Pollutant Phenols	
2-Methylphenol	Method Not Specified
4-Methylphenol	Method Not Specified
Purgeable Aromatics	
Styrene	Method Not Specified
Purgeable Organics	
2-Butanone (Methylethyl ketone)	Method Not Specified
2-Hexanone	Method Not Specified
4-Methyl-2-Pentanone	Method Not Specified
Acetone	Method Not Specified
Carbon Disulfide	Method Not Specified
Vinyl acetate	Method Not Specified
Semi-Volatile Organics	
2-Methylnaphthalene	Method Not Specified
Benzoic Acid	Method Not Specified
Benzyl alcohol	Method Not Specified
Dibenzofuran	Method Not Specified

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EPA Lab Code:

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ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved subcategories and/or analytes are listed below:

Purgeable Aromatics	
1,2-Dichlorobenzene	EPA TO-14A
	EPA TO-15
1,4-Dichlorobenzene	EPA TO-14A
	EPA TO-15
Benzene	EPA TO-14A
	EPA TO-15
Chlorobenzene	EPA TO-14A
	EPA TO-15
Ethyl benzene	EPA TO-14A
	EPA TO-15
Toluene	EPA TO-14A
	EPA TO-15
Total Xylenes	EPA TO-14A
	EPA TO-15
Purgeable Halocarbons	
1,1,2,2-Tetrachloroethane	EPA TO-14A
	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-14A
	EPA TO-15
1,2-Dichloroethane	EPA TO-14A
	EPA TO-15
1,2-Dichloropropane	EPA TO-14A

Purgeable Halocarbons	
Carbon tetrachloride	EPA TO-14A
	EPA TO-15
Chloroform	EPA TO-14A
	EPA TO-15
Methylene chloride	EPA TO-14A
	EPA TO-15
Tetrachloroethene	EPA TO-14A
	EPA TO-15
Vinyl chloride	EPA TO-14A
	EPA TO-15
Volatile Chlorinated Organics	
Benzyl chloride	EPA TO-15
Epichlorohydrin	EPA TO-15

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ENVIRONMENTAL ANALYSES ANALYTICAL SERVICES PROTOCOL
All approved subcategories and/or analytes are listed below:

CLP PCB/Pesticides
CLP Semi-Volatile Organics
CLP Volatile Organics
CLP Inorganics

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APPENDIX B

Data Validator Qualifications and Experience

Megan A. Drosky
Environmental Scientist/Data Validator

Ms. Drosky joined C.T. Male in 2005. Her duties include the data validation and preparation of Data Usability Summary Reports (DUSR) for New York State Department of Environmental Conservation (NYSDEC) Brownfields Sites and NYS Superfund Sites, and validation of data for Inactive Hazardous Waste Sites, Landfill Closure and Post Closure Monitoring, and other groundwater monitoring sites.

Data Validation Experience

Arthur Kill Correctional Facility Firing Range, Staten Island, New York. Performed data validation on Remedial Investigation lead soils samples following USEPA Region 2 Data Validation Guidelines and NYSDEC Appendix 2B of Draft DER-10 Guidelines, and prepared a DUSR for each data package.

Durkee Street – Parking Lot Site, Operable Units #1 and #2 Sites, Plattsburgh, New York. Performed data validation on Environmental Restoration Program Remedial Investigation soil vapor and soil samples following USEPA Region 2 Data Validation Guidelines and NYSDEC Appendix 2B of Draft DER-10 Guidelines, and prepared a DUSR for each data package.

Former CP Rail Yard, Plattsburgh, New York. Performed data validation on Brownfield Cleanup Program Remedial Investigation soil samples following USEPA Region 2 Data Validation Guidelines and NYSDEC Appendix 2B of Draft DER-10 Guidelines, and prepared a DUSR for each data package.

South Troy Industrial Park, Troy, New York. Performed data validation on Environmental Restoration Program Remedial Investigation soil samples following USEPA Region 2 Data Validation Guidelines and NYSDEC Appendix 2B of Draft DER-10 Guidelines, and prepared a DUSR for each data package.

BP, North Carolina. Performed validation of analytical data of various methods (e.g., volatile and semivolatile organics, metals, natural attenuation parameters, petroleum hydrocarbons, etc.) and matrices (soil, groundwater, waste, air) based on United States Environmental Protection Agency (USEPA)Contract Laboratory Program (CLP) in conformance with North Carolina Department of Environment and Natural Resources (NCDENR) Underground Storage Tank (UST) and Groundwater Protection Guidelines for more than 50 commercial and terminal sites in North Carolina.

NCDOT, North Carolina. Performed validation of analytical data of various methods (e.g., volatile and semivolatile organics, metals, natural attenuation parameters, petroleum hydrocarbons, etc.) and matrices (soil, groundwater, waste, air) based on USEPA CLP in conformance with NCDENR UST and Groundwater Protection Guidelines for five sites in North Carolina.

International Paper, Wilmington, North Carolina. Performed validation of analytical data of various methods (e.g., volatile and semivolatile organics, natural attenuation parameters, etc.) for groundwater based on USEPA CLP.

Plantation Pipeline, Virginia and North Carolina. Performed validation of analytical data of various methods (e.g., volatile and semivolatile organics, natural attenuation parameters, etc.) for groundwater based on USEPA CLP in conformance with NCDENR Groundwater Protection Guidelines and Virginia Department of Environmental Quality Petroleum Program Guidelines at four sites in North Carolina and one site in Virginia.

Kinder Morgan Terminal, Selma, North Carolina. Performed validation of analytical data of various methods (e.g., volatile and semivolatile organics, natural attenuation parameters, etc.) for groundwater based on USEPA CLP in conformance with NCDENR Groundwater Protection Guidelines.

Circuitron Superfund Site, East Farmingdale, New York. Performed data validation on the monthly process and quarterly monitoring well samples collected from the groundwater treatment system following USEPA CLP guidelines, and prepared a validation report for each data package.

FAA Technical Center, O&M Project, Atlantic City, New Jersey. Performed data validation on the monthly process and quarterly monitoring well samples collected from the groundwater treatment system following USEPA CLP guidelines, and prepared a validation report for each data package.

Pope Air Force Base, Fayetteville, North Carolina. Performed data validation on various site-specific projects based on Air Force Center for Environmental Excellence (AFCEE) and USEPA National Functional Guidelines for analytical data of various methods (e.g., volatile and semivolatile organics, metals, pesticides, and PCBs) and matrices (groundwater, soil, sediment, and surface water).

Professional Background

- Environmental Scientist/Data Validator, C. T. Male Associates, Latham, New York, September 2005 - Present
- Environmental Scientist, URS Corporation, Morrisville, North Carolina, November 2003 – September 2005.
- Laboratory Technician, Wearcheck USA, Cary, North Carolina, October 2002 – November 2003.
- B.S. in Environmental Science, Long Island University at Southampton College, Southampton, New York, 2002.

Certifications

- OSHA 40-Hour Health and Safety Training Course, 2004
- 8-Hour Health and Safety Refresher Training, 2005
- 3 years prior work experience

APPENDIX C

Guidance for the Development of Data Usability Summary Reports

APPENDIX 2B

Guidance for the Development of Data Usability Summary Reports

Background:

The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data without the costly and time consuming process of third party data validation. The primary objective of a DUSR is to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.

The DUSR and the data deliverables package will be reviewed by the DER Quality Assurance Unit. If data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later date on the same data package used for the development of the DUSR.

Personnel Requirements:

The Environmental Scientist preparing the DUSR must hold a Bachelors Degree in a relevant natural or physical science or field of engineering and must submit a resume to the Division's Quality Assurance Unit documenting experience in environmental sampling, analysis and data review.

Preparation of a DUSR:

The DUSR is developed by reviewing and evaluating the analytical data package. During the course of this review the following questions must be asked and answered:

1. Is the data package complete as defined under the requirements forthe NYSDEC ASP Category B or USEPA CLP deliverables?

2. Have all holding times been met?

3. Do all the QC data: blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?

4. Have all of the data been generated using established and agreed upon analytical protocols?

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

6. Have the correct data qualifiers been used?

Evaluation of NYSDEC ASP Matrix Spike Blank (MSB) data - If the MSB recovery is less that the ASP criteria, the positive results should be qualified as J, estimated biased low. If the MSB recovery is less than the ASP criteria, but greater than 10%, the nondetects should be qualified J, biased low. If the MSB recovery is less than 10%, the nondetect data must be rejected.

Any Quality Control exceedances must be numerically specified in the DUSR and the corresponding QC summary sheet from the data package should be attached to the DUSR. All data that would be rejected by the EPA Region 2 Data Validation Guidelines must also be rejected in the DUSR.

Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters. Data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed. The DUSR shall also include recommendations on resampling/reanalysis. All data qualifications must be documented following the NYSDEC ASP '95 Rev. guidelines.

APPENDIX D

SITE WIDE INSPECTION CHECKLIST

314 CLINTON STREET PARKING LOT ERP SITE
SMP Site Wide Inspection Form

Date:_____

Inspection Personnel:_____

Weather Conditions:_____

Near-surface and subsurface soil/fill at the Site is contaminated by semi-volatile organic compounds and metals at levels exceeding restricted residential SCOs. Currently, protection of public health and the environment to contaminated media is provided by the Site's existing asphalt and concrete covering, which is conducive with the Site's present and historic use as a parking lot.

The Site's Engineering Control consists of existing asphalt pavement and concrete, which serves as a protective barrier to underlying impacted soil and fill. The Site is currently being utilized as a public parking lot.

This SMP Site Wide Inspection Form will be utilized to inspect the 314 Clinton Street Parking Lot ERP Site to ensure that current site conditions remain protective to public health and the environment and the Engineering Controls are intact and are serving to protect public health and the environment from underlying contamination.

Attachments to this Inspection Form include a Site Plan.

Cover System Inspection

Has the overall condition of the cover system changed from the previous inspection (if first inspection, respond with N/A) Yes____ No___

If Yes, provide detail and identify on Site Plan

Is there evidence that the cover system has been eroded (i.e., visible cracks, potholes, pooling of water etc.) Yes____ No___

If Yes, identify locations and provide detail on attached Site Plan

Is there evidence that the cover system has been breached (i.e., areas where surface appears patched, signs of excavation) Yes____ No___

If Yes, identify locations and provide detail on attached Site Plan

Where any limitations experienced during the Site Inspection Yes____ No___

(i.e., snow cover, parked cars, etc.)

If Yes, identify locations and provide detail on attached Site Plan

Have photographs been taken of the cover system for inclusion in the site inspection report. Yes____ No___

If No, give reason

TABLES

TABLE 1: SUMMARY OF SVOCS IN NEAR SURFACE SOILS

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Sample ID		SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7
Lab Sample Number		X2608-01	X2608-02	X2608-03	X2608-04	X2608-06	X2608-07	X2608-08
Sampling Date		05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	5.0	2.0	10.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)							
Acenaphthene	100,000	64 U	66 U	65 U	900 J	130 U	640 U	71 U
Phenanthrene	100,000	76 J	300 J	460	8900	840	580 U	63 U
Anthracene	100,000	55 U	99 J	95 J	2000	200 J	550 U	60 U
Carbazole	No Standard	55 U	57 U	57 J	1000 J	120 U	550 U	60 U
Fluoranthene	100,000	220 J	120 J	1000	9900	1600	540 U	59 U
Pyrene	100,000	230 J	210 J	1300	11000	1700	640 U	70 U
Benzo(a)anthracene	1,000	120 J	76 J	590	**5400**	850	510 U	55 U
Chrysene	3,900	150 J	80 J	670	**5900**	900	650 U	71 U
bis(2-Ethylhexyl)phthalate	No Standard	69 U	71 U	70 U	360 U	150 U	690 U	76 U
Benzo(b)fluoranthene	1,000	160 J	41 U	840 J	**5500**	920	400 UJ	44 U
Benzo(k)fluoranthene	3,900	81 J	82 U	380 J	2600	420 J	800 UJ	87 U
Benzo(a)pyrene	1,000	100 J	59 U	500 J	**3900**	660 J	580 UJ	63 U
Indeno(1,2,3-cd)pyrene	500	46 U	47 U	46 U	**820** J	130 J	460 UJ	50 U
Benzo(g,h,i)perylene	100,000	60 U	61 U	140 J	960 J	170 J	600 UJ	65 U
Total Confident Conc. SVOC		1137	985	6032	60240	8390	0	0
Total TICs		2704	3575	3687	21440	3970	4450	2890

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.
SCG - Standards, Criteria & Guidance levels (Reference: Part 375 Restricted Residential Use Soil Cleanup Objectives)
Values in **bold** print denote exceedence of SCG.
Highlighted values denote exceedence of Part 375 Restricted Use (Commercial) Soil Cleanup Objective.
n/a - Not Applicable (no established standard)
ug/kg - Micrograms per kilogram

TABLE 1: SUMMARY OF SVOCS IN NEAR SURFACE SOILS

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Sample ID		SS-8	SS-9	DUP-2	SS-10	SS-11	SS-12	EQUIPBLANK-2
Lab Sample Number		X2608-09	X2608-12	X2608-13	X2608-14	X2608-15	X2608-16	X2608-05
Sampling Date		05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	10.0	10.0	10.0	10.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L
COMPOUND	Part 375 SCG (ug/Kg)							
Acenaphthene	100,000	71 U	660 U	670 U	650 U	750 U	68 U	1.4 U
Phenanthrene	100,000	260 J	590 U	600 U	770 J	670 U	270 J	1.5 U
Anthracene	100,000	60 U	560 U	560 U	550 U	640 U	58 U	1.4 U
Carbazole	No Standard	61 U	560 U	570 U	560 U	640 U	58 U	1.3 U
Fluoranthene	100,000	630	550 U	560 U	2800 J	630 U	590	1.2 U
Pyrene	100,000	790 UJ	650 U	660 U	5200	750 U	900	1.5 U
Benzo(a)anthracene	1,000	330 J	520 U	520 U	**1900** J	590 U	380 J	1.1 U
Chrysene	3,900	400 J	660 U	670 U	1700 J	760 U	410	1.7 U
bis(2-Ethylhexyl)phthalate	No Standard	150 J	710 U	720 U	700 U	810 U	230 J	1.6 U
Benzo(b)fluoranthene	1,000	460 J	410 UJ	410 UJ	**2600** J	460 UJ	590 J	0.770 UJ
Benzo(k)fluoranthene	3,900	240 J	810 UJ	820 UJ	1000 J	930 UJ	270 J	1.9 U
Benzo(a)pyrene	1,000	290 J	590 UJ	600 UJ	**1700** J	670 UJ	360 J	1.2 U
Indeno(1,2,3-cd)pyrene	500	51 UJ	470 UJ	470 UJ	460 U	540 UJ	49 U	0.850 UJ
Benzo(g,h,i)perylene	100,000	77 J	610 UJ	620 UJ	610 UJ	700 UJ	110 J	1.1 UJ
Total Confident Conc. SVOC		3627	0	0	17670	0	4110	0
Total TICs		8190	6200	3800	5860	6900	5855	197.8

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.
SCG - Standards, Criteria & Guidance levels (Reference: Part 375 Restricted Residential Use Soil Cleanup Objectives)
Values in **bold** print denote exceedence of SCG.
Highlighted values denote exceedence of Part 375 Restricted Use (Commercial) Soil Cleanup Objective.
n/a - Not Applicable (no established standard)
ug/kg - Micrograms per kilogram

TABLE 2: SUMMARY OF METALS IN NEAR SURFACE SOILS

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Sample ID		SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	DUP-2	SS-10	SS-11	SS-12	EQUIPBLANK-2
Lab Sample Number		X2608-01	X2608-02	X2608-03	X2608-04	X2608-06	X2608-07	X2608-08	X2608-09	X2608-12	X2608-13	X2608-14	X2608-15	X2608-16	X2608-05
Sampling Date		05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06	05/01/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	ug/L
COMPOUND	Part 375 SCG (mg/Kg)														
Aluminum	No Standard	9170	5760	5370	6490	8260	6340	7600	8050	5110	5580	6880	5170	4380	64.8 J
Antimony	No Standard	10.9	0.363 U	3.850 U	3.020 U	13.6	0.353 U	12.7	4.840 UJ	0.369 U	2.640 U	7.050	1.580 U	1.040 U	3.170 U
Arsenic	16	5.580	4.090	4.150	4.340	6.460	4.190	4.340	4.230	5.890	6.970	**23.0**	3.170	3.100	3.690 J
Barium	400	56.6	72.1	95.3	159	142	46.8	52.3	70.8	106	108	134	36.2	20.9 J	1.240 J
Beryllium	72	0.392 J	0.261 J	0.205 J	0.291 J	0.405 J	0.260 J	0.354 J	0.386 J	0.279 J	0.292 J	0.302 J	0.234 J	0.208 J	0.660 J
Cadmium	4.3	0.245 J	0.123 J	0.196 J	0.333 J	0.314 J	0.119 J	0.190 J	0.236 J	0.320 J	0.408 J	0.242 J	0.166 J	0.068 J	0.327 U
Calcium	No Standard	27300	40000	51200	5320	2840	10700	29900	4820	25100 J	19500 J	23800	8880	10500	1.170 U
Chromium	180	13.1	7.450	8.130	9.180	14.5	10.4	25.9	14.2	8.670	10.3	10.5	26.3	6.640	0.343 U
Cobalt	No Standard	8.220	3.550 J	3.620 J	4.320 J	5.830	4.380 J	7.270	7.820	4.550 J	4.670 J	4.790 J	4.230 J	3.220 J	0.370 U
Copper	270	25.2	10.4	29.4	21.0	35.2	12.6	18.4	18.5	69.1 J	35.6 J	20.2	17.7	12.4	3.640 U
Iron	No Standard	19500	8750	9050	10200	12300	8070	14900	17100	9700	9700	11000	10200	8890	27.0 U
Lead	400	22.6	245	239	237	306	98.9	13.4	27.2	**402**	**459**	327	34.3	13.8	2.180 U
Magnesium	No Standard	8390	3090	7580	1640	2300	4420	6380	3200	11000	7620	6510	3070	2270	8.300 U
Manganese	2,000	495	195	213	204	175	159	351	463	210	220	208	254	224	0.106 U
Mercury	0.81	0.047	0.683	0.428	0.547	0.435 J	0.221 J	0.056 J	0.053 J	0.453 J	0.542 J	0.508 J	0.08 J	0.09 J	0.03 U
Nickel	310	20.1	8.350	14.4	9.680	14.6	10.6	18.4	19.5	11.7	12.3	11.4	15.1	7.930	1.560 U
Potassium	No Standard	1180	893	906	602	1270	767	1120	1380 J	747	889	880	811	576 J	61.8 U
Sodium	No Standard	340 U	807 J	1600 J	1470 J	3270 J	534 J	1300 J	817 J	305 U	319 U	801 J	170 U	199 U	332 UJ
Vanadium	No Standard	18.6	12.7	16.3	12.2	18.0	13.3	18.0	19.4	14.6	16.5	16.3	12.6	10.9	0.701 U
Zinc	10,000	77.1	108	89.2	175	190	49.8	55.2	74.2	135	149	112	69.3	42.4	0.611 U

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
SCG - Standards, Criteria & Guidance levels (Reference: Part 375 Restricted Residential Use Soil Cleanup Objectives)
Values in **bold** print denote exceedence of SCG.
* - Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 - 61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 - 500 ppm. (TAGM
SB - Site Background
mg/Kg - Milligrams per kilogram (or parts per million)

TABLE 3: SUMMARY OF SVOCS IN SUBSURFACE SOILS

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Sample ID		GP-1(6-8)	GP-2(6-8)	GP-3(6-8)	GP-4(4-6)	GP-5(10-12)	GP-6(10-12)	GP-7(4-8)	GP-8(10-12)	DUP-1
Lab Sample Number		X2527-01	X2527-02	X2527-03	X2527-04	X2527-05	X2594-01	X2594-02	X2594-05	X2594-06
Sampling Date		04/25/06	04/25/06	04/25/06	04/25/06	04/25/06	04/27/06	04/27/06	04/27/06	04/27/06
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)									
Acenaphthylene	100,000	67 U	61 U	63 U	63 U	57 U	64 U	84 J	62 U	64 U
Acenaphthene	100,000	73 U	66 U	69 U	69 U	63 U	70 U	71 U	68 U	71 U
Dibenzofuran	No Standard	68 U	62 U	64 U	64 U	59 U	65 U	66 U	63 U	66 U
Fluorene	100,000	69 U	63 U	65 U	65 U	60 U	66 U	130 J	65 U	67 U
Phenanthrene	100,000	66 U	59 U	62 U	62 U	56 U	62 U	2400 J	61 U	63 U
Anthracene	100,000	62 U	56 U	59 U	58 U	53 U	59 U	390 J	58 U	60 U
Carbazole	No Standard	63 U	57 U	59 U	59 U	54 U	60 U	270 J	58 U	61 U
Fluoranthene	100,000	61 U	56 U	58 U	57 U	53 U	58 U	3200 J	57 U	59 U
Pyrene	100,000	73 U	66 U	69 U	68 U	63 U	69 U	2200 J	68 U	70 U
Benzo(a)anthracene	1,000	58 U	52 U	54 U	54 U	50 U	55 U	**1100 J**	54 U	55 U
Chrysene	3,900	74 U	67 U	70 U	69 U	64 U	70 U	970 J	69 U	71 U
Benzo(b)fluoranthene	1,000	45 UJ	41 UJ	43 UJ	42 UJ	39 UJ	43 UJ	**1100 J**	42 U	44 U
Benzo(k)fluoranthene	3,900	90 U	82 UJ	85 UJ	85 UJ	78 UJ	86 U	430 J	84 U	87 U
Benzo(a)pyrene	1,000	66 U	60 U	62 U	62 U	57 U	63 U	860 J	61 U	63 U
Indeno(1,2,3-cd)pyrene	500	52 UJ	47 UJ	49 UJ	49 UJ	45 UJ	50 UJ	320 J	49 U	50 U
Benzo(g,h,i)perylene	100,000	68 UJ	62 UJ	64 UJ	64 UJ	59 UJ	65 UJ	300 J	63 U	66 U
Total Confident Conc. SVOC		0	0	0	0	0	0	13754	0	0
Total TICs		2170	4300	3400	2420	2700	2850	5306	4340	3420

Sample ID		GP-9(10-12)	GP-10(10-12)	GP-11(4-6)	GP-12(4-8)	EQUIPBLANK-1	GP-13(10-12)	GP-14(12-14)	GP-15(8-10)
Lab Sample Number		X2594-07	X2594-08	X2594-11	X2594-12	X2594-09	X2621-01	X2621-02	X2621-03
Sampling Date		04/27/06	04/27/06	04/28/06	04/28/06	04/28/06	05/02/06	05/02/06	05/02/06
Matrix		SOIL	SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL
Dilution Factor		1.0	1.0	10.0	1.0	1.0	1.0	1.0	1.0
Units		ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/L	ug/Kg	ug/Kg	ug/Kg
COMPOUND	Part 375 SCG (ug/Kg)								
Acenaphthylene	100,000	60 U	65 U	620 U	66 U	2.7 U	70 U	66 U	64 U
Acenaphthene	100,000	66 U	71 U	1100 J	72 U	2.8 U	77 U	72 U	70 U
Dibenzofuran	No Standard	61 U	66 U	740 J	67 U	2.7 U	71 U	67 U	65 U
Fluorene	100,000	62 U	68 U	950 J	69 U	2.9 U	73 U	69 U	67 U
Phenanthrene	100,000	59 U	64 U	10000	65 U	3.0 U	69 U	65 U	63 U
Anthracene	100,000	56 U	60 U	1900 J	61 U	2.9 U	65 U	61 U	60 U
Carbazole	No Standard	56 U	61 U	880 J	62 U	2.7 U	66 U	62 U	60 U
Fluoranthene	100,000	55 U	60 U	9700	61 U	2.5 U	64 U	61 U	59 U
Pyrene	100,000	65 U	71 U	9700	72 U	3.0 U	76 U	72 U	70 U
Benzo(a)anthracene	1,000	52 U	56 U	**3300 J**	57 U	2.3 U	61 U	57 U	55 U
Chrysene	3,900	66 U	72 U	2900 J	73 U	3.5 U	78 U	73 U	71 U
Benzo(b)fluoranthene	1,000	41 U	44 U	**3300 J**	45 UJ	1.6 UJ	48 U	57 J	44 U
Benzo(k)fluoranthene	3,900	81 U	88 U	1500 J	90 U	3.9 U	95 U	90 U	87 U
Benzo(a)pyrene	1,000	59 U	64 U	**2400 J**	65 U	2.4 U	69 U	65 U	63 U
Indeno(1,2,3-cd)pyrene	500	47 U	51 U	480 U	52 UJ	1.7 U	55 U	52 U	50 U
Benzo(g,h,i)perylene	100,000	61 U	66 U	630 UJ	67 UJ	2.3 U	71 U	67 U	65 U
Total Confident Conc. SVOC		0	0	49370	0	0	0	57	0
Total TICs		4280	3400	11360	2670	256	3810	2990	3550

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.
SCG - Standards, Criteria & Guidance levels (Reference: Part 375 Restricted Residential Use Soil Cleanup Objectives)
Values in **bold** print denote exceedence of TAGM 4046 SCG.
Highlighted values denote exceedence of Part 375 Restricted Use (Commercial) Soil Cleanup Objective
n/a - Not Applicable (no established standard)
ug/Kg - Micrograms per kilogram

TABLE 4: SUMMARY OF VOCS IN GROUNDWATER

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Sample ID		CTM-1	CTM-2	CTM-3	CTM-4	CTM-5	CTM-6	CTM-7	CTM-9	GW-DUP	CTM-10
Lab Sample Number		X3205-01	X3205-02	X3205-03	X3205-04	X3205-05	X3235-01	X3235-02	X3235-05	X3235-08	X3235-06
Sampling Date		06/08/06	06/08/06	06/08/06	06/08/06	06/08/06	06/09/06	06/09/06	06/09/06	06/09/06	06/09/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	1.0	1.0	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	ug/L	ug/L	ug/L	ug/L
COMPOUND	**SCG (ug/L)**										
Acetone	50	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
Methylene Chloride	5	0.43 UJ	0.43 UJ	0.43 UJ	0.43 UJ	0.43 UJ	0.43 UJ	0.43 U	0.43 U	0.43 U	0.43 U
cis-1,2-Dichloroethene	5	1.1 J	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 UJ	0.29 U	0.29 U
Chloroform	7	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	**7.2**	0.33 U	0.33 U	0.33 U
Methylcyclohexane	n/a	0.34 UJ	0.34 UJ	0.34 UJ	0.34 UJ	0.34 UJ	2.2 J	0.34 U	0.34 U	0.34 U	0.34 U
Bromodichloromethane	50	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	5.8 J	0.33 U	0.33 UJ	0.33 UJ
Dibromochloromethane	50	0.26 UJ	0.26 UJ	0.26 UJ	0.26 UJ	0.26 UJ	0.26 U	6.0	0.26 U	0.26 U	0.26 U
Tetrachloroethene	5	4.8 J	0.48 UJ	0.48 UJ	0.48 UJ	0.50 J	0.48 UJ	0.48 U	0.48 UJ	0.48 U	0.48 U
Total Confident Conc. VOC		5.9	0	0	0	0.5	2.2	19	0	0	0
Total TICs		0	0	0	0	0	6	0	0	0	0

Sample ID		CTM-11	CTM-12	CTM-13	CTM-14	CTM-15	CTM-16	CTM-17	CTM-18	GW-EQUIP.BLANK	
Lab Sample Number		X3247-03	X3247-04	X3247-05	X3247-07	X3247-06	X3164-02	X3164-01	X3164-05	X3247-01	
Sampling Date		06/12/06	06/12/06	06/12/06	06/12/06	06/12/06	06/07/06	06/07/06	06/07/06	06/12/06	
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
Dilution Factor		1.0	1.0	1.0	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	ug/L	ug/L	ug/L	
COMPOUND	**SCG (ug/L)**										
Acetone	50	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	25 J	
Methylene Chloride	5	0.43 U	0.43 U	0.43 UJ	0.43 UJ	0.43 UJ	0.43 UJ	0.43 U	0.43 U	3.6 J	
cis-1,2-Dichloroethene	5	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	
Chloroform	7	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	
Methylcyclohexane	n/a	0.34 U	0.34 U	0.34 UJ	0.34 UJ	0.34 UJ	0.34 UJ	0.34 UJ	0.34 UJ	0.34 U	
Bromodichloromethane	50	0.33 UJ	0.33 UJ	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 UJ	
Dibromochloromethane	50	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 UJ	0.26 UJ	0.26 UJ	0.26 U	
Tetrachloroethene	5	0.48 U	0.48 U	0.48 UJ	0.48 UJ	0.48 UJ	0.48 UJ	0.48 UJ	0.48 UJ	0.48 U	
Total Confident Conc. VOC		0	0	0	0	0	0	0	0	28.6	
Total TICs		0	0	0	0	0	0	0	0	0	

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
SCG - Standards, Criteria & Guidance level (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations,* June 1998)
Values in **bold** print denote exceedence of SCG.
n/a - Not Applicable (no established standard)
ug/L - Micrograms per Liter

TABLE 5
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

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

Sample ID		CTM-12	CTM-13	CTM-14	CTM-15	CTM-16	CTM-17	CTM-18	GW-EQUIP.BLANK
Lab Sample Number		X3247-04	X3247-05	X3247-07	X3247-06	X3164-02	X3164-01	X3164-05	X3247-01
Sampling Date		06/12/06	06/12/06	06/12/06	06/12/06	06/07/06	06/07/06	06/07/06	06/12/06
Matrix		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Dilution Factor		1.0	1.0	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	ug/L	ug/L
COMPOUND	SCG (ug/L)								
Aluminum	100	**434**	**432**	**32800**	**383**	**1040**	**9090**	**1160**	36.6 J
Antimony	3	3.170 U	3.170 U	3.170 U	3.170 U	3.170 U	3.170 U	3.170 U	3.170 U
Arsenic	25	3.320 U	5.060 J	**32.8**	3.320 U	3.320 U	3.320 U	3.320 U	3.320 U
Barium	1,000	74.3 J	430	476	539	26.3 J	120 J	67.3 J	0.723 U
Beryllium	3	0.090 U	0.090 U	1.760 J	0.090 U	0.090 U	0.400 J	0.090 U	0.090 U
Calcium	n/a	135000	273000	379000	328000	16600	95900	55900	54.8 J
Chromium	50	1.120 U	0.560 U	**66.7**	1.690 U	**73.7**	**93.4**	23.9	0.500 J
Cobalt	5	0.370 U	0.370 U	**31.8 J**	4.700 J	0.370 U	**7.540 J**	0.370 U	0.370 U
Copper	200	4.590 J	3.830 J	97.5	3.640 U	10.7 J	39.5	9.920 J	3.640 U
Iron	300	**1330**	**695**	**57300**	**521**	**1890**	**19000**	**2590**	27.0 U
Lead	25	2.180 U	2.180 U	**30.5**	2.180 U	2.180 U	8.690	2.180 U	2.180 U
Magnesium	35,000	14900	30100	**74700**	25700	4420 J	20900	16300	46.5 J
Manganese	300	**521**	41.0	**1680**	37.3	144	**810**	208	0.106 U
Mercury	0.7	0.05 U	0.03 U	0.26	0.06 U	0.03 U	0.03U	0.03 U	0.05 J
Nickel	100	1.560 U	1.560 U	68.6	4.440 J	34.3 J	53.3	8.520 J	1.560 U
Potassium	n/a	12800	24100	61200	20900	2180 J	5420	6180	467 J
Selenium	10	3.040 U	3.860 J	6.740 J	3.040 U	3.040 U	3.040 U	3.040 U	3.040 U
Sodium	20,000	14700	**979000**	**1320000**	**1510000**	**80300 J**	**94100**	**66800**	2840 J
Thallium	0.5	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U	3.050 U
Vanadium	14	3.420 U	2.110 U	**128**	4.310 U	0.701 U	**20.8 J**	1.100 J	1.230 J
Zinc	2,000	29.6 U	26.4 U	271	24.5 U	22.4	81.9	22.1	20.1

Qualifiers and Notes
U - The compound was not detected at the indicated concentration.
J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero.
The concentration given is an approximate value.
B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.
P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.
* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.
SCG - Standards, Criteria & Guidance level (Reference: NYSDEC *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations,* June 1998)
Values in **bold** print denote exceedence of SCG.
n/a - Not Applicable (no established standard)
ug/kg - Micrograms per kilogram

TABLE 6: PART 375 SCO VALUES
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39-3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41-7	14	72	590	2,700	10	47
Cadmium	7440-43-9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent[h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent[h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50-8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96-5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02-0	140	310	310	10,000 [d]	30	130
Selenium	7782-49-2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22-4	36	180	1,500	6,800	2	8.3
Zinc	7440-66-6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PCBs/Pesticides							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136

TABLE 6: PART 375 SCO VALUES
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
4,4'-DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71-9	0.91	4.2	24	47	1.3	2.9
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07-8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]

TABLE 6: PART 375 SCO VALUES
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b)fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i)perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k)fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h)anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68

TABLE 6: PART 375 SCO VALUES
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12
Methyl tert-butyl ether	1634-04-4	62	100[a]	500[b]	1,000[c]	NS	0.93

TABLE 6: PART 375 SCO VALUES
CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5-Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20-7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm). NS=Not specified. See Technical Support Document (TSD). Footnotes

[a] The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[c] The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

[d] The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

[g] This SCO is derived from data on mixed isomers of BHC.

[h] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[i] This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[j] This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

TABLE 7: REMAINING SOIL SAMPLES EXCEEDING RESTRICTED RESIDENTIAL SCOS

CLINTON SOUTH PARKING LOT / 314 CLINTON STREET
SCHENECTADY, NEW YORK

	Part 375	SS-9		GP-7(4-8)	
SVOCs	**SCO (ug/Kg)**				
Benzo(a)anthracene	1,000	Not Above SCO		1100	
Benzo(b)fluoranthene	1,000	Not Above SCO		1100	
	Part 375				
Metals	**SCO (mg/Kg)**				
Lead	400	459		Not Above SCO	

Qualifiers and Notes

U - The compound was not detected at the indicated concentration.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

SCG - Standards, Criteria & Guidance levels (Reference: Part 375 Restricted Residential Use Soil Cleanup Objectives).

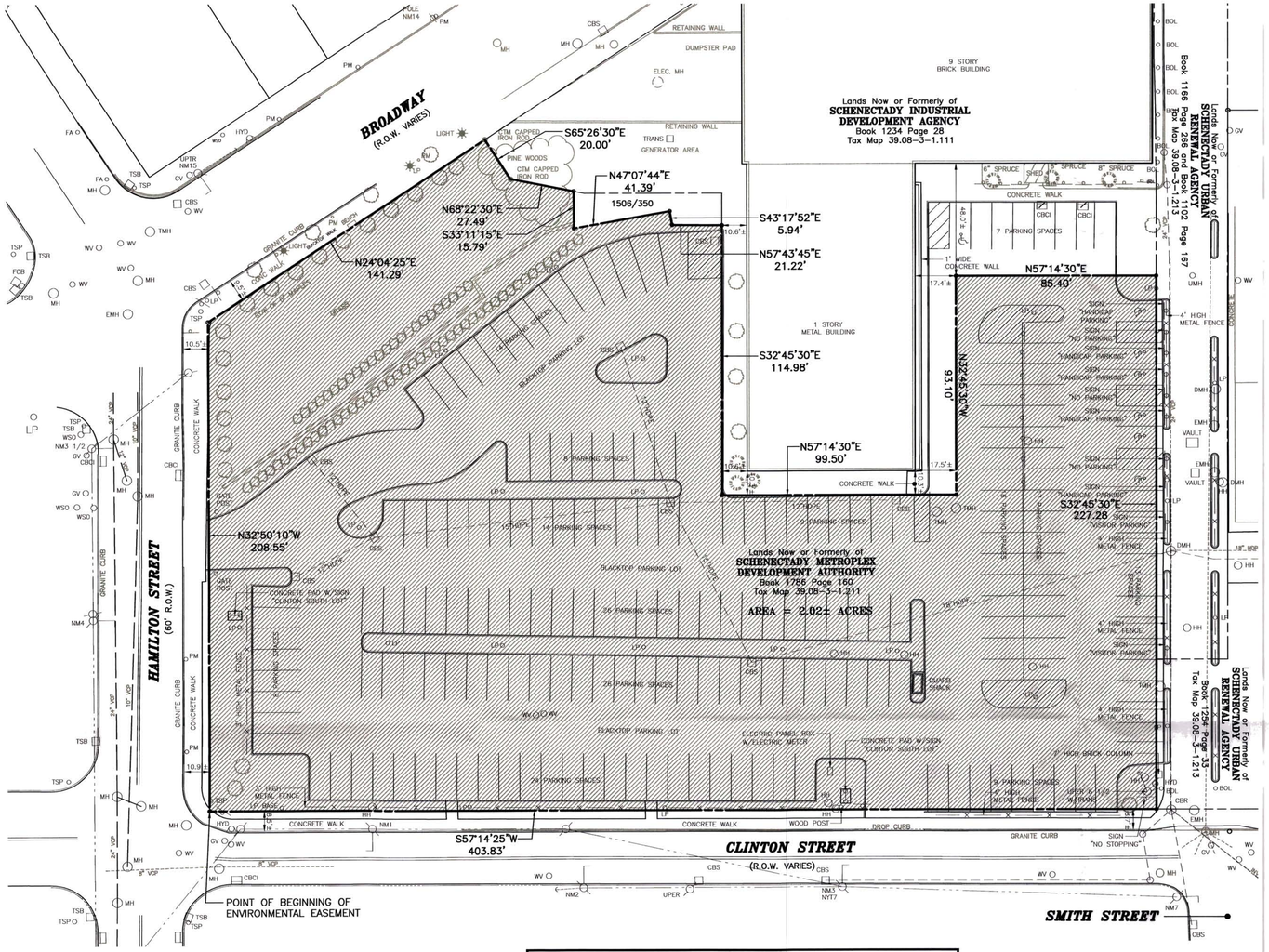
mg/kg denotes miligrams per kilogram or parts per million (ppm)

ug/kg denotes micrograms per kilogram or parts per billion (ppb)

FIGURES

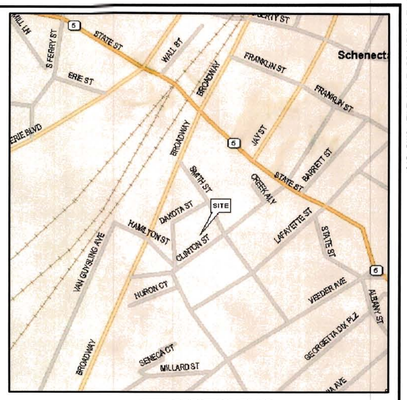
XREFS: NONE

PROJECT NUMBER: 05.5551



Legend

BOL	Bollard
CBCI	Catch Basin Curb Inlet
CBR	Catch Basin Round
CBS	Catch Basin Square
DMH	Darinage Manhole
EMH	Electric Manhole
GV	Gas Valve
HH	Hand Hole
HYD	Hydrant
LP	Light Pole
MH	Manhole
PM	Parking Meter
	Sign
TMH	Telephone Manhole
TSB	Traffic Signal Box
TSP	Traffic Signal Post
UMH	Unknown Manhole
	Utility Pole
UPER	Utility Pole W/Electric Riser
	Utility Pole W/Light
WSO	Water Shut Off
WV	Water Valve



SITE LOCATION PLAN
SCALE: 1"=500'±

EXHIBIT A
Deed Book 1786 Page 160
Doc No 2008-3020

All that certain tract, piece or parcel of land situate, lying and being in the City of Schenectady, County of Schenectady, State of New York, lying generally Northwesterly of Clinton Street, Northeasterly of Hamilton Street, Southeasterly of Broadway, Southwesterly of Stratton Plaza, and being more particularly bounded and described as follows:

BEGINNING at the point of intersection of the Northwesterly margin of Clinton Street with the Northeasterly margin of Hamilton Street and runs thence from said point of beginning along said Northeasterly margin North 32 deg. 50 min. 10 sec. West, a distance of 208.55 feet to a point; thence along the Southeasterly margin of Broadway North 24 deg. 04 min. 25 sec. East, a distance of 141.29 feet to a point; thence along the common line between the lands herein described on the Southwest and the lands now or formerly of Schenectady Industrial Development Agency on the Northeast, South 65 deg. 26 min. 30 sec. East, a distance of 20.00 feet to a point; thence along the common line between the lands herein described on the South and the said lands of Schenectady Industrial Development Agency on the North, North 68 deg. 22 min. 30 sec. East, a distance of 27.49 feet to a point; thence along the common line between the lands herein described on the Southwest and the said lands of Schenectady Industrial Development Agency on the Northeast, South 33 deg. 11 min. 15 sec. East, a distance of 15.79 feet to a point; thence along the common line between the lands herein described on the Southeast and the said lands of Schenectady Industrial Development Agency on the Northwest, North 47 deg. 07 min. 44 sec. East, a distance of 41.39 feet to a point; thence along the common line between the lands herein described on the Southwest and the said lands of Schenectady Industrial Development Agency on the Northeast, South 43 deg. 17 min. 52 sec. East, a distance of 5.94 feet to a point; thence along the common line between the lands herein described on the Southeast and the said lands of Schenectady Industrial Development Agency on the Northwest, North 57 deg. 43 min. 45 sec. East, a distance of 21.22 feet to a point; thence along the common line between the lands herein described on the Southwest and the said lands of Schenectady Industrial Development Agency on the Northeast, South 32 deg. 45 min. 30 sec. East, a distance of 114.98 feet to a point; thence along the common line between the lands herein described on the Southeast and the said lands of Schenectady Industrial Development Agency on the Northwest, North 57 deg. 14 min. 30 sec. East, a distance of 99.50 feet to a point; thence along the common line between the lands herein described on the Southwest and the said lands of Schenectady Industrial Development Agency on the Southwest, North 32 deg. 45 min. 30 sec. West, a distance of 93.10 feet to a point; thence along the common line between the lands herein described on the Southeast and the said lands of Schenectady Industrial Development Agency on the Northwest, North 57 deg. 14 min. 30 sec. East, a distance of 85.40 feet to a point; thence along the common line between the lands herein described on the Southwest and the lands now or formerly of Schenectady Urban Renewal Agency known as Stratton Plaza on the Northeast, South 32 deg. 45 min. 30 sec. East, a distance of 227.28 feet to a point; thence along the Northwesterly margin of Clinton Street South 57 deg. 14 min. 25 sec. West, a distance of 403.83 feet to the point or place of beginning and containing 2.02± acres of land.

Subject to any covenants, easements, or restrictions of record.

MAP REFERENCES:

1. "Survey of a Portion of Lands of N.C.B. Properties, Inc." Prepared by C.T. Male Associates PC., dated July 24, 1985, as Drawing No. 85-304.
2. "Survey of Lands for 400 Block Development Corp." Prepared by C.T. Male Associates PC., dated March 13, 1979 and last revised January 19, 1990, as Drawing No. 79-58R.
3. "Site Survey, Proposed Broadway Center" Prepared by C.T. Male Associates PC., dated May 27, 1988, last revised August 14, 1989, as Drawing No. 88-354R.
4. "Boundary Survey Lands Now or Formerly of Schenectady Urban Renewal Agency to be Conveyed to the City of Schenectady, Clinton Street" prepared by C.T. Male Associates, P.C. dated October 3, 2006 as Drawing No. 06-669.
5. "Boundary Survey Lands Now or Formerly of Schenectady Urban Renewal Agency to be Conveyed to the City of Schenectady, Broadway" prepared by C.T. Male Associates, P.C. dated October 3, 2006 as Drawing No. 06-670.
6. "Exhibit Plan Strattan Parking Lot Prepared for Schenetady Metroplex Development Authority" prepared by C.T. Male Associates, P.C. dated December 1, 2006, as Drawing No. 08-429.

DEED REFERENCE:

1. Deed dated July 16, 2008 between City of Schenectady to Schenectady Metroplex Development Authority as described in Book 1786 of Deeds at Page 160.

MAP NOTES:

1. North orientation and bearing base per deed reference no. 1.
2. Information shown hereon was compiled from an actual field survey during the month of November 2010.
3. Underground facilities, structures, and utilities have been plotted from data obtained from previous maps and record drawings. Surface features such as catch basin rims, manhole covers, water valves, gas valves, etc. are the result of field survey unless noted otherwise. There may be other underground utilities, the existence of which is not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. Dig Safely New York must be notified prior to conducting test borings, excavation and construction.
4. This survey does not constitute a record search by C.T. Male Associates, P.C. to determine ownership or easements of record. For all information regarding easements, rights of way and title of record, the surveyor relied upon title commitment number 9829.66, prepared by Stewart Title Insurance Company, dated December 8, 2010.
5. Parcel is subject to an unplottable easement to The City of Schenectady as described in Book 1026 of deeds at Page 224.
6. Per contractual agreement, property corners were not set.
7. Temporary easements described in Book 1234 of deeds at Page 28 and in Book 1238 of deeds at Page 325 are no longer in effect and were terminated 10 days after the issuance of the certificate of occupancy.
8. Permanent easement described in Book 1238 of deeds at Page 320 does not effect this parcel.
9. Environmental easement encumbers the entire parcel known as Schenectady Metroplex Development Authority, 314 Clinton Street.

THE ENGINEERING AND INSTITUTIONAL CONTROLS for this Easement are set forth in the Site Management Plan (SMP). A copy of the SMP must be obtained by any party with an interest in the property. The SMP can be obtained from NYS Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us

This property is subject to an environmental easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

ENVIRONMENTAL EASEMENT AREA ACCESS
The DEC or their agent may access the Environmental Easement Area as shown hereon through any existing street access or building ingress/egress access point.

ENGINEERING CONTROLS

- ASPHALT/CONCRETE SURFACE COVER
- SOIL SURFACE COVER 12" FOR COMMERCIAL, 24" FOR RESIDENTIAL DEVELOPMENT
- ENVIRONMENTAL EASEMENT AREA

Institutional Controls

- The property may only be used for Restricted Residential, Commercial and Industrial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- Absent DEC approval of a change of use the Site may not be used for a higher level of use, such as unrestricted use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any future buildings developed within the Site , and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;
- The Site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

BAR SCALE
30 0 15 30 60
1 inch = 30 ft.
0 20 40 60 80 100 120 METERS

CERTIFIED TO:

SCHENECTADY METROPLEX DEVELOPMENT AUTHORITY
THE PEOPLE OF THE STATE OF NEW YORK, ACTING THROUGH THEIR COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STEWART TITLE INSURANCE COMPANY

This is to certify that this map or plat and the survey on which it is based were made in accordance with "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA and NSPS in 2005 and includes Items 2, 8, 9, 10, 11, 13, and 14 of Table A thereof. Pursuant to the Accuracy Standards as adopted by ALTA and NSPS and in effect on the date of this certification, undersigned further certifies that in my professional opinion, as a land surveyor registered in the State of New York, the Relative Positional Accuracy of this survey does not exceed that which is specified therein.

William J. Nettleton PLS No. 49513 12/13/10
William J. Nettleton PLS No. 49513 Date

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

WILLIAM J. NETTLETON
PLS NO. 49513
STATE OF NEW YORK
WILLIAM J. NETTLETON
LICENSED LAND SURVEYOR
49513

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
1/4/11	1	MISC. REVISIONS	MDD		
7/20/11	2	MISC. REVISIONS	MMB		
8/10/11	3	MISC. REVISIONS	SMW		
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UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.

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APPROVED: WJN
DRAFTED : SMW
CHECKED : JM
PROJ. NO: 05.5551
SCALE : 1"=30'
DATE : DEC. 13, 2010

ALTA/ACSM LAND TITLE BOUNDARY SURVEY
PREPARED FOR
SCHENECTADY METROPLEX DEVELOPMENT AUTHORITY
STRATTON PARKING LOT
314 CLINTON STREET

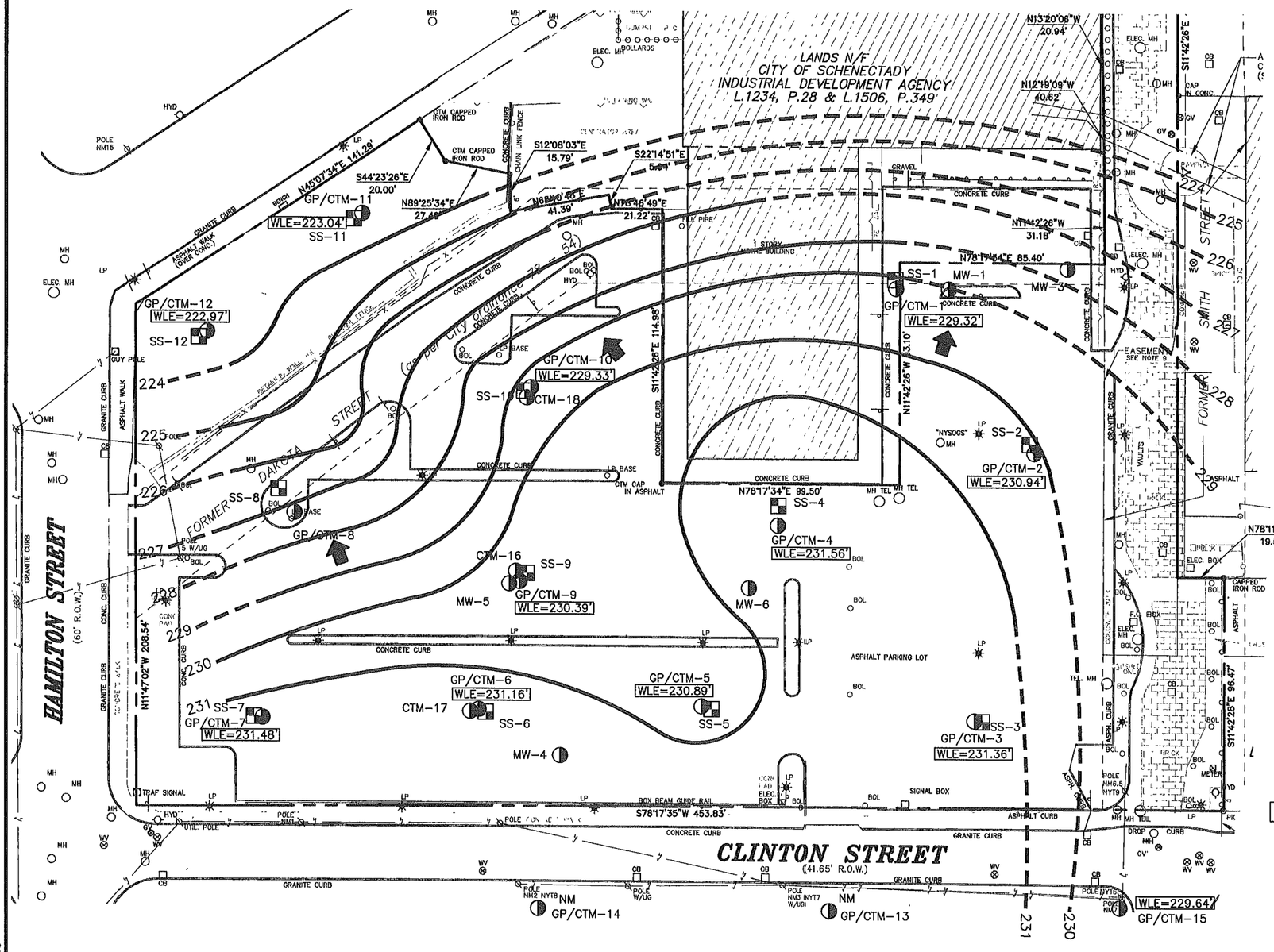
CITY OF SCHENECTADY — SCHENECTADY COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, 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: 10-711

DRAWING AND LOT FILES ARE FILED IN PROJECT NO. 02.8405
CAD DWG. FILE NAME: PROCTORS PARKING LOT.DWG

CAD DWG. FILE NAME: PROCTORS PARKING



MAP NOTES

1. North orientation and bearing base per map reference No. 1.
2. Boundary and planimetric features shown are images taken from map reference No. 1., not a result of an actual field survey.
3. Monitoring well locations and soil sample locations shown were a result of an actual field survey prepared by the undersigned.

MAP REFERENCE

1. "Plat of Survey of Lands Situate at Clinton St. & Hamilton St. Tax Map Reference: 039.80-3-1.21," City of Schenectady County of Schenectady, State of New York. Prepared by Clough Harbour & Associates LLP, dated February 26, 2004.

LEGEND

BOL	BOLLARD
CB	CATCH BASIN
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHT POLE
MH	MISCELLANEOUS MANHOLE
NM15	UTILITY POLE
WV	WATER VALVE
GP/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)
SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)
WLE= 230.84	DENOTES WATER LEVEL ELEVATION (FEET ABOVE MEAN SEA LEVEL)
— 231 —	GROUNDWATER CONTOUR (DASHED WHERE INFERRED)
NM	NOT MEASURED (WELL INACCESSIBLE)

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

NOTE: DATA FROM DEEP WELLS CTM-16, CTM-17, CTM-18 NOT USED IN DEVELOPING CONTOUR MAP

1. Data from deep wells CTM-16, CTM-17, CTM-18 not used in developing contour map.
2. Wells installed in 2004 (MW-1 through MW-6) not used for monitoring due to condition and/or location (proximity to new wells).

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APPROVED:
DRAFTED : LMB
CHECKED : K.MOLINE
PROJ. NO: 05.5551
SCALE : 1"=50'
DATE : MAY 10, 2011

FIGURE 2
GROUNDWATER CONTOUR MAP-AUGUST 2, 2006

ENVIRONMENTAL RESTORATION PROGRAM INVESTIGATION
CLINTON SOUTH PARKING LOT/314 CLINTON STREET

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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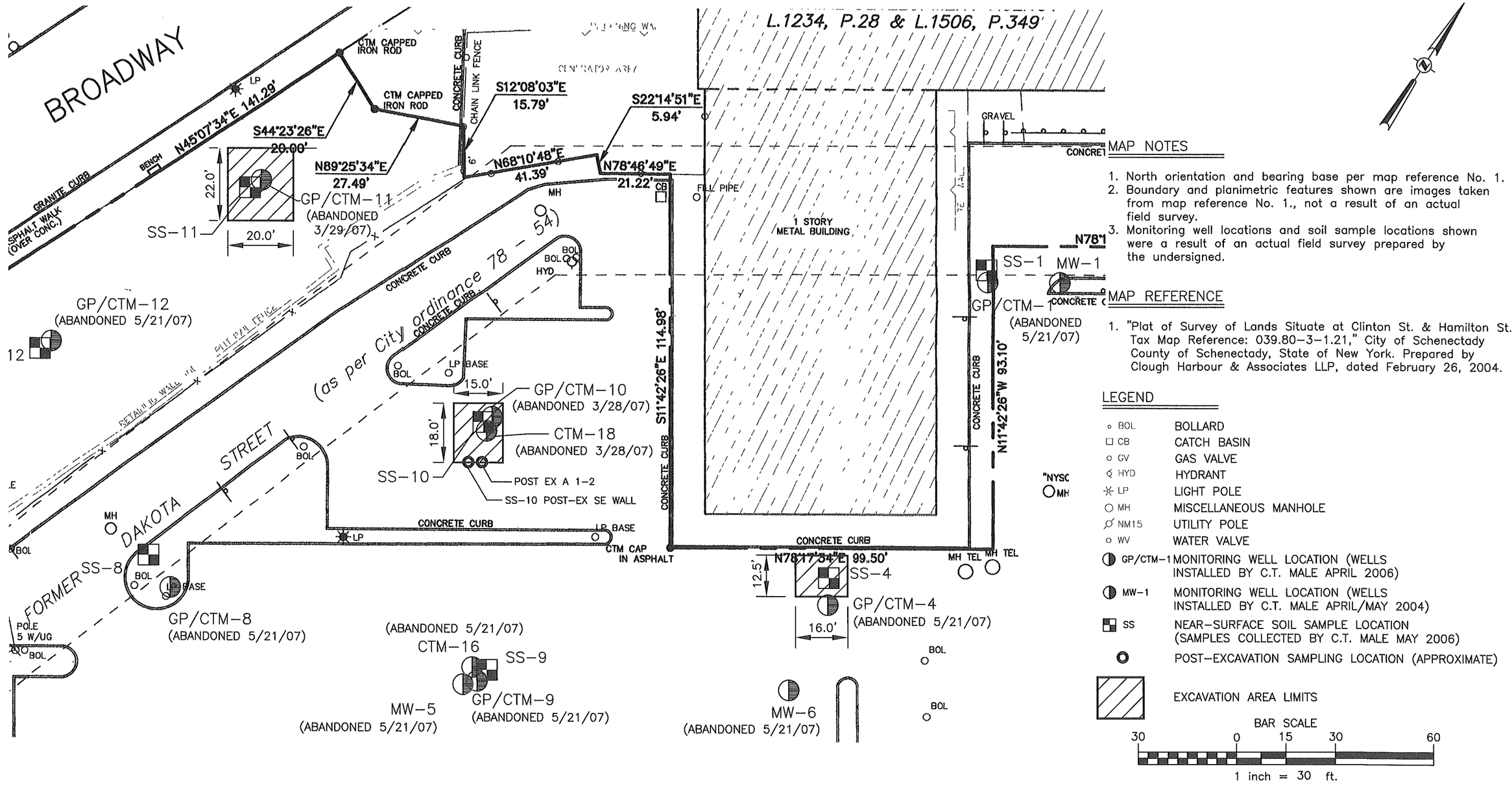
SHEET 1 OF 1
DWG. NO: 11-230

CAD DWG. FILE NAME: FIGURE_2_GNDWTR_CNTR_MAP.DWG



MAP NOTES

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MAP REFERENCE

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LEGEND

BOL	BOLLARD
CB	CATCH BASIN
GV	GAS VALVE
HYD	HYDRANT
LP	LIGHT POLE
MH	MISCELLANEOUS MANHOLE
NM15	UTILITY POLE
WV	WATER VALVE
GP/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)
SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)
	POST-EXCAVATION SAMPLING LOCATION (APPROXIMATE)
	EXCAVATION AREA LIMITS

BAR SCALE

30 0 15 30 60

1 inch = 30 ft.

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APPROVED:

DRAFTED : LMB

CHECKED : K.MOLINE

PROJ. NO: 05.5551

SCALE : 1"=30'

DATE : May 10, 2011

FIGURE 3
IRM EXCAVATION AREAS

ENVIRONMENTAL RESTORATION PROGRAM
CLINTON SOUTH PARKING LOT/314 CLINTON STREET

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

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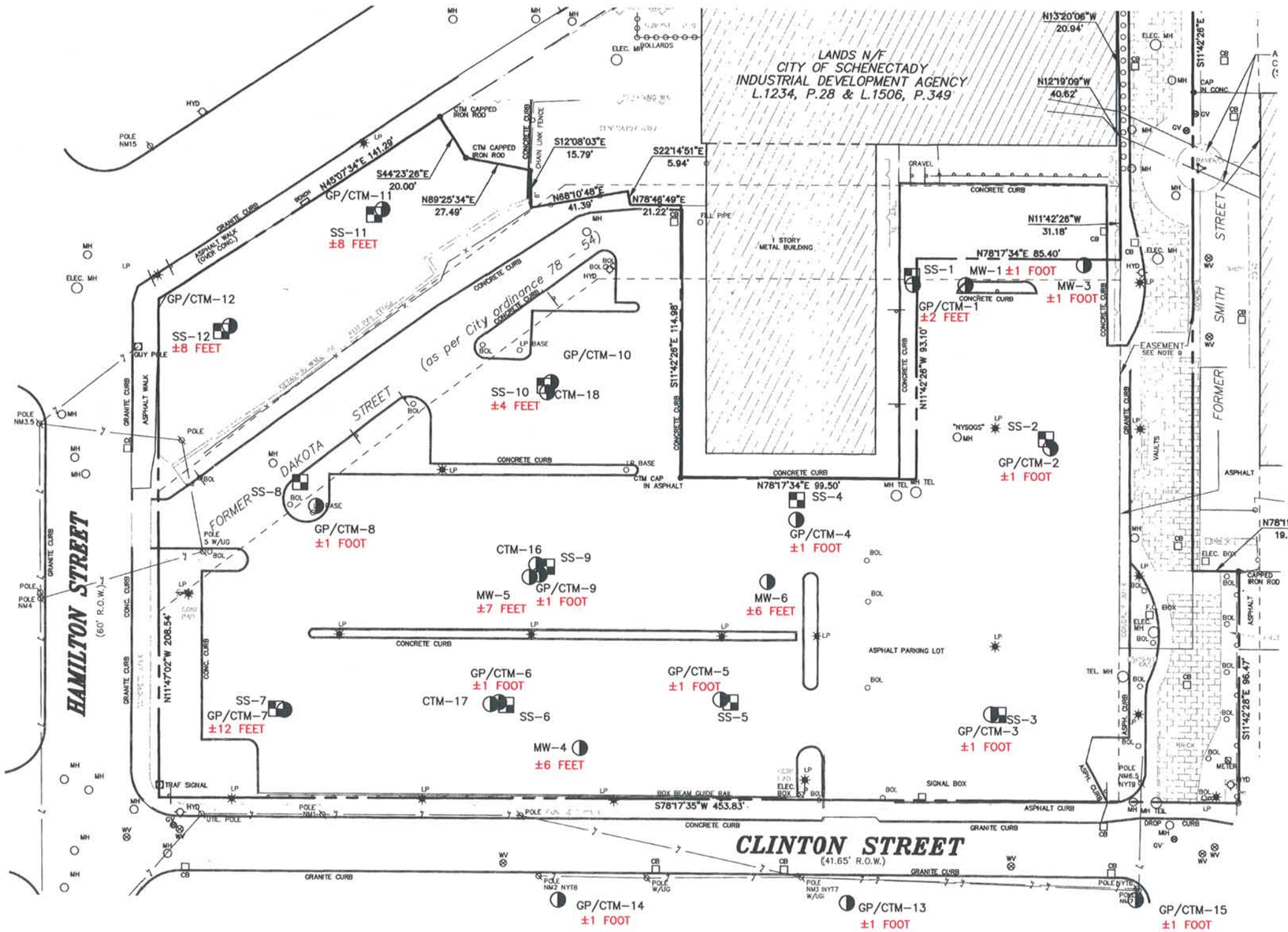
SHEET 1 OF 1

DWG. NO: 11-231

CAD DWG. FILE NAME\FIGURE_3_IRM_EXC_AREAS.DWG



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LEGEND

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SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)

BAR SCALE

50 0 25 50 100

1 inch = 50 ft.

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DRAFTED : LMB

CHECKED : K.MOLINE

PROJ. NO: 05.5551

SCALE : 1"=50'

DATE : MAY 10, 2011

FIGURE 4

APPROXIMATE THICKNESS OF REMAINING IMPACTED MATERIALS

ENVIRONMENTAL RESTORATION PROGRAM INVESTIGATION CLINTON SOUTH PARKING LOT/314 CLINTON STREET

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

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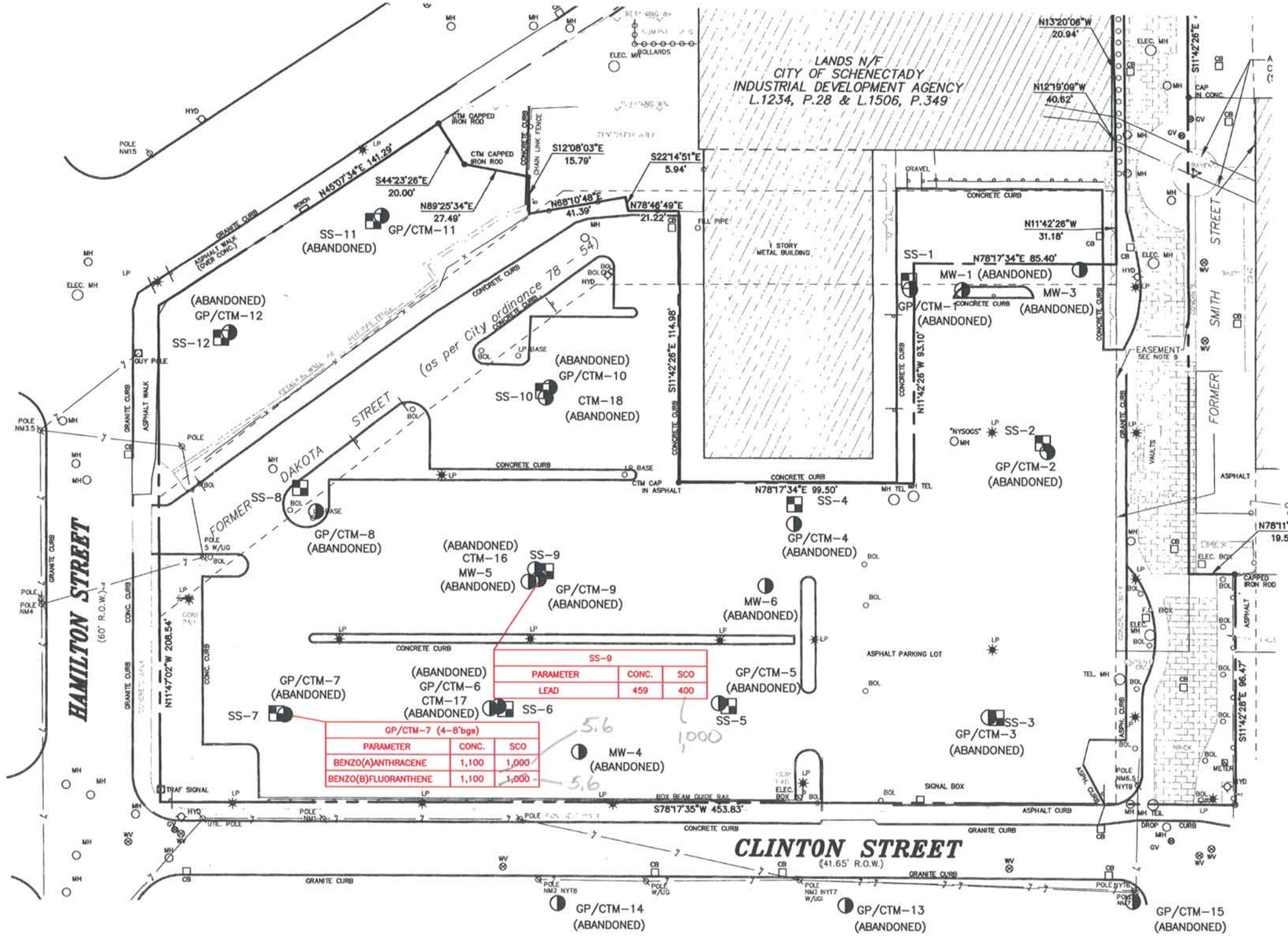
CAD DWG. FILE NAME:FIGURE_4_APPROX._THICKNESS.DWG



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MW-1	MONITORING WELL LOCATION (WELLS INSTALLED BY C.T. MALE APRIL/MAY 2004)
SS	NEAR-SURFACE SOIL SAMPLE LOCATION (SAMPLES COLLECTED BY C.T. MALE MAY 2006)

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
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APPROVED:
DRAFTED : LMB
CHECKED :
PROJ. NO: 05.5551
SCALE : 1"=50'
DATE : MAY 5, 2011

FIGURE 5

MAP OF REMAINING SOILS AND FILL MATERIALS ABOVE RESTRICTED RESIDENTIAL SCO'S

ENVIRONMENTAL RESTORATION PROGRAM INVESTIGATION
CLINTON SOUTH PARKING LOT/314 CLINTON STREET

CITY OF SCHENECTADY — SCHENECTADY COUNTY, NY.

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