

399 Gregory Street
MONROE COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: C828091

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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 399 Gregory Street (hereinafter referred to as the “Site”) under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index# B8-0444-93-12, Site # C828091, which was executed on April 12, 2005.

1.1.1 General

City of Rochester entered into a BCA with the NYSDEC to remediate a 0.46 acre property located in City of Rochester, Monroe County, New York. This BCA required the Remedial Party, the City of Rochester, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this 0.46-acre “site” is provided in Figure 1. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement.

After completion of the remedial work described in the Remedial Action Work Plan, any unidentified contamination left in the subsurface at this site, which is hereafter referred to as ‘previously unidentified contamination.’ This Site Management Plan (SMP) was prepared to manage previously unidentified 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 Stantec Consulting Services Inc (Stantec), on behalf of the City of Rochester, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated December 2002, and the SMP template provided by NYSDEC dated April 2009. 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

Engineering Controls have been incorporated into the site remedy to control exposure to known and previously unidentified 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 Monroe 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 known and previously unidentified contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) an Excavation Work Plan (EWP) to define procedures during future excavations (Appendix A); (4) operation and maintenance of all treatment, collection, containment, or recovery systems; (5) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (6) defining criteria for termination of treatment system operations.

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, which is grounds for revocation of the Certificate of Completion (COC); and
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index # B8-0444-93-12, Site # C828091) 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 (Appendix B), 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 Rochester, County of Monroe, New York and is identified as S Hamilton Subdivision Lots 6, 7 & Pt 5, 8 & 9 on the City of Rochester Tax Map (County of Monroe Tax Identification Number 121-650-0001.053.000). The site is an approximately 0.46-acre area bounded by Gregory Street and residential structures to the north, the vacant parcel at 10 Cayuga Street, a residential house and associated garage to the south, residential properties and a distribution facility to the east, and Cayuga Street, residential properties and a combination four story commercial and residential building to the west (see Figure 1). The boundaries of the site are more fully described in Appendix C – Metes and Bounds.

1.2.2 Site History

The former Davidson Collision Site (Site No. C828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision; however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- A September 1991 Phase II Investigation;
- An August 1995 Preliminary Site Assessment Report;
- A March 2003 Site Investigation Report;
- A September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008); and
- A December 2007 Remedial Design Investigation Report.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated; however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information

regarding the nature and extent of contamination at the site and to determine if the site represented a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) (see Tables 1-6) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs included the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by Stantec during review of the NYSDEC 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

1.2.3 Geologic Conditions

Based on the penetrative investigations completed, the site geology consists of unconsolidated sandy silt glacial till deposits that overlie Silurian age dolomite bedrock assigned to the Lockport Group. A thin veneer (1-6 ft.) of compacted silty sand and gravel fill and/or miscellaneous fill and/or miscellaneous fill with brick, cinders, and concrete fragments overlies native surficial deposits. Miscellaneous fill thicknesses ranged from 0.0 to 6.4 ft. thick and averaged 2.5 ft. Based upon previous site investigations, the depth to bedrock within the area of the investigation ranges between 18.8 ft. and 19.1 ft. below ground surface. A stratigraphic summary of overburden units for the RI borings is presented in Table 7.

Measured groundwater elevations are presented in Table 4. The average groundwater depth is 10 feet below the ground surface. Groundwater flow occurs radially to the north, east, south and west from the area of MW-208 in AOC 1 and MW-217 near the trench drain in AOC2. The average depth to water corresponds to the

average depth to the top of the glacial till layer and may represent a perched condition. The highest groundwater elevation was measured at MW-208. The lowest groundwater elevation was historically measured in AOC 1 at MW-101 and this area appeared to be acting as a groundwater sink. This depression may indicate a link between the overburden well and the upper bedrock zone. 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:

- A September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008); and
- A December 2007 Remedial Design Investigation Report.

Generally, the RI determined that three RAOCs were present and included the former waste paint disposal area (RAOC1), the former vehicle maintenance/trench drain area (RAOC2), and an area of metals impacts (RAOC3).

Below is a summary of site conditions when the RI was performed in 2005-2007.

Soil

The following summary of RI analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies (see Tables 8-11).

RAOC1

Results from previous site investigations indicated no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicated exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

RAOC2

Within RAOC2, soil samples collected in B 213, B 216/MW 216 and B 217/MW 217 (Figure 3) exceeded Restricted Residential SCO for metals. Cadmium exceeded its SCO in B 213 from ground surface to a depth of 4 feet, lead exceeded its SCO in B 217/MW 217 from 0 to 4 ft. bgs, while copper and lead exceeded their respective SCOs in B 216/MW 216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B 213 and B 217/MW 217, and RAOC2B to the south, which includes B 216/MW 216.

RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW 105.

Site-Related Groundwater

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium (see historical analytical results, Tables 12-15). These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its NYSDEC Technical and Operational Guidance Series 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations dated June 1998, revised June 2004 (GSGVs) in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater did not warrant further investigation or remedial measures.

RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above GSGVs.

During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW 101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appeared to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

Site-Related Soil Vapor Intrusion

A sub-slab soil vapor survey was performed at the 395 Gregory Street building in August and December 2005. Sub-slab, basement, first floor and background (outdoor) air were sampled and low levels of VOCs were reported in the air samples (Tables 16a - 16d). There was no evidence to suggest there is a soil vapor intrusion issue at 395 Gregory Street that would be attributable to the Davidson Collision site.

A perimeter soil vapor survey was carried out as part of the RDI. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Tables 16e and 16f for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor did they indicate significant sources of subsurface vapor contamination that would present a

significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may have been that the concrete slab and the asphalt parking surface were acting as a cap for capturing and containing residual volatile organic vapors.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the Remedial Action Work Plan that was approved by NYSDEC in July 2008.

The following is a summary of the Remedial Actions performed at the site:

1. Removal of the former building's concrete floor slab, most footers, and select portions of the adjacent asphalt parking lot.
2. Excavation of soil/fill exceeding restricted residential SCO's listed in Tables 8 and 10, to a depth of 11.5 feet at RAOC1, 4 feet at RAOC2, and 8 feet at RAOC3. Collection of confirmatory soil samples demonstrated that the remedial soil cleanup objectives had been achieved (Table 17).
3. Direct application of 250-lbs. of bioremediation agent to the open excavation following removal of impacted soils.
4. A soil cover consisting of backfill overlain by crushed stone in areas where the concrete slab was removed and in areas where remedial excavations occurred to complete restoration activities and for aesthetic purposes.
5. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any potential unidentified contamination at the site.
6. Development and implementation of a Site Management Plan for long term management of unidentified contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting. Included in the SMP is an excavation plan, groundwater monitoring plan, site

flagging system, and concept design for a sub-slab depressurization system for future building construction should it be deemed necessary.

Remedial activities were completed at the site in June 2009.

1.4.1 Removal of Contaminated Materials from the Site

The removal of contaminated soils occurred during March and April 2009. The maximum excavation depths were 11.5 ft. bgs at RAOC1, 4 ft. bgs at RAOC2A and RAOC2B, and 8 ft. bgs at RAOC3. Areas where excavations were performed are shown in Figure 4. The total excavation quantity at RAOC1 was estimated at 690[±] in-situ CY (with 220[±] in-situ CY being VOC-impacted and requiring off-site disposal, and 470 in-situ CY being non-impacted and reusable on-site). This volume was larger than anticipated due to impacts which extended laterally beyond the anticipated excavation limits. The total metal impacted soil excavation quantity was 160[±] in-situ CY at RAOC2A, 86[±] in-situ CY at RAOC2B, and 34[±] in-situ CY at RAOC3, all requiring off-site disposal. Based on the results of the waste characterization, the impacted soils were found to be non-hazardous and were loaded onto dump trucks and transported and disposed of at Mill Seat Landfill, located in Riga, New York.

Initially, a PID reading of 5 parts per million (ppm) was used to delineate the excavation limits at RAOC1. However, based on laboratory data from initial confirmatory soil samples, upward adjustments to the 5 ppm PID field screening criteria were made, as supported by laboratory results and with concurrence from the DEC. A list of the soil cleanup objectives (SCOs) for the contaminants of concern (COCs) and the applicable Restricted Residential land use for this site is provided in Table 17.

An abandoned hydraulic lift was located in the southeast section of the concrete slab, between RAOC2A and RAOC2B. On March 19, 2009, water from the bottom of the hydraulic lift vault was pumped to 55 gallon drums. A sheen was noted on the water. Hydraulic fluid was evident in the lift cylinder and in lift piping that was cut when the southern lift cylinder was pulled out; this oil was drained into 5-gallon buckets and the empty cylinder was placed with the other metal waste generated at the site for disposal at a metal scrap yard. The more northerly cylinder of the lift was pulled partially up, but

hydraulic fluid was noted and the cylinder was left in place for later removal. On March 24, 2009, the northern lift cylinder was pulled and drained of its hydraulic oil. The cylinder was then put in the dumpster for metal recycling. On March 26, 2009, the lift pit was removed. The pit was pumped out prior to removal. Some non-impacted soil was removed in order to reach the bottom of the pit and was staged to the side. The concrete pit was removed and set aside. An estimated 3-5 CY of soil and concrete showed evidence of hydraulic oil and was staged on polyethylene sheeting for disposal with the RAOC1 soils. Oil from the lift cylinders was sampled for PCBs by Op-Tech and the laboratory analytical results were non-detect for PCBs. The oil, water and sediment from the lift cylinders and lift pit were transported to Op-Tech's Part 360 facility in Waverly, NY. The lift pit area was backfilled with the clean overburden material that had been excavated during the lift pit removal.

A former air handling pit was located at the southern edge of the concrete slab, to the east of RAOC1. On April 1, 2009, concrete and cinder block walls in the area of the former air handling pit were removed along with a 15 ft by 15 ft 6"-thick slab located at a depth of approximately 7 ft bgs. A concrete sump extending to 9 ft bgs was observed at the south west corner of the air handling pit. A small volume (<1 CY) of stained sediment and concrete was removed from the sump and staged with the remaining RAOC1 material for disposal.

1.4.2 Site-Related Treatment Systems

In-situ treatment of groundwater in RAOC1 is being used to further reduce VOC contaminant concentrations to groundwater standards and guidance levels or acceptable health-risk levels. The in-situ treatment involves bioremediation with an oxygen-releasing compound, EHC-O™, which is a product manufactured by Adventus Americas. This product promotes in-situ bioremediation through stimulation of aerobic biodegradation of groundwater contaminants through controlled release oxygen delivery and accelerates the rate of natural attenuation. The EHC-O™ Bioremediation technology is CaO₂ based with trace nutrients added to further support microbial activity, and a pH buffering agent to prevent self-encapsulation and a shorter period of effectiveness, which can occur with other products. The in-situ groundwater treatment consisted of the direct

application of 250-lbs. of the bioremediation agent to the open excavation following removal of impacted soils. Six groundwater monitoring wells are being used to monitor the effectiveness of the VOC remedial measures. The initial round of quarterly groundwater monitoring showed that five of the six wells were non-detect for VOCs with only low level detections reported at the former on-site source area (Table 18).

1.4.3 Unidentified Remaining Contamination

Soils at the side and bottom boundaries of the excavations met Restricted Residential SCOs as per the confirmatory sampling results. No significant residual soil contamination remains. The Department approved termination of the excavation activities based on the laboratory analytical results. However, variability in the Site fill may occur and care should be taken to characterize any soils disturbed in future development efforts. Table 17 summarizes the results of the sidewall and bottom soil samples that were collected following completion of the Remedial Action and which met the SCOs for Restricted Residential use of the site. Based on the removal of the source, and the initial round of quarterly groundwater monitoring, on-site contamination is not expected to migrate off-site at concentrations that adversely impact the ability of off-site groundwater to meet applicable SCGs.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil and groundwater/soil vapor may potentially exist 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 unidentified 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

2.2.1.2 Sub-slab Depressurization System

An active sub-slab depressurization system may be required for proposed structures to minimize the potential for volatile organic vapors and nuisance odors, associated with residual impacted soil or groundwater, to enter the building, as per NYSDOH Guidance.

Two approaches may be employed to address this requirement: (1) a sub-slab depressurization system, of a design approved by the NYSDEC and NYSDOH, may be installed during the construction of any proposed building or structure, or (2) if a sub-slab depressurization system is not installed during construction of a new building or structure, then a soil vapor intrusion evaluation needs to be conducted at the newly constructed building or structure.

Specifically, a soil vapor intrusion evaluation should be conducted at newly constructed buildings in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. Procedures and methods for conducting a soil vapor intrusion evaluation should be submitted in a work plan for State Agency review and approval. The results of a soil vapor intrusion evaluation should be provided to the State Agencies for data review and interpretation. The State Agencies will provide a determination based on the review of the data and will make appropriate recommendations to address exposures, if any.

If a sub-slab depressurization system is recommended based on the results of a soil vapor intrusion evaluation, the design of this system will be the responsibility of the new owner and/or developer. Generally, a typical system would consist of a clean stone layer with slotted piping to facilitate collection of sub-slab vapors; a vapor retarding liner (such as 6 mil polyethylene sheeting or a spray-on liner such as Liquid Boot) to trap vapors in the stone layer and to prevent vapors from escaping through cracks and joints in the floor; header piping to connect horizontal piping to a depressurization fan; and a vent to the exterior above the building roof elevation/air intakes (see Figure 5 – a typical

system). Post-installation sampling should be conducted to ensure that the system is operating effectively in reducing/minimizing exposures. System installation, post confirmation sampling, and monitoring shall be conducted in accordance with Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006.

Typical procedures for operating and maintaining the Sub-slab Depressurization System are documented in the Operation and Maintenance Plan (Section 4 of this SMP). The typical procedures for monitoring the system are included in the Monitoring Plan (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.

2.2.2.2 Sub-slab Depressurization System (SSDS)

If a SSDS is installed, the SSDS will not be discontinued unless prior written approval is granted by the NYSDEC and NYSDOH. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and NYSDOH.

2.2.2.3 Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Quarterly groundwater monitoring will continue for one year with the possibility of additional monitoring during a second year, until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels

become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the RAWP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to unidentified contamination by controlling disturbances of the subsurface; and, (3) limit the use and development of the site to restricted residential 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 include:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and 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.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP; and
- 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.

The site has 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 use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.

- The property may not be used for a higher level of use, unrestricted and residential use, without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb any previously unidentified contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited;
- The potential for vapor intrusion must be evaluated for any buildings developed on the property, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens, single family homes, and farming on the property are prohibited;
- The site owner or remedial party 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; and
- The property will appropriately flagged on the City of Rochester Building Information System such that all future permit applications will need to be reviewed by the City Division of Environmental Quality for compliance with the conditions herein, and in accordance with the requirements of ECL 71-3607, the NYSDEC will be notified by the City of such permit applications because the parcel is subject to an environmental easement.

2.3.1 Excavation Work Plan

The site has been remediated for restricted residential use. Any future intrusive work encounter or disturb any unidentified contamination will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix A to this SMP.

The previous investigations have shown that the materials present at the Site appear to consist of non-hazardous solid waste. More specifically, prior to the remedial action, the subject property contained soil impacted above restricted residential SCO's by VOCs, arsenic, cadmium, lead, copper and selenium. The subject property also contains groundwater impacted by VOCs. The possibility that hazardous materials exist on Site cannot be ruled out. Any soil/fill material that is excavated during construction or Site development must therefore be properly characterized and managed. The development process can be simplified by pre-planning how the soil/fill material will be handled during necessary excavation and construction.

If hazardous waste is encountered as part of the excavation program, it cannot be replaced on the Site and must be properly characterized, managed and disposed of off-site at a permitted facility. Management of impacted materials is discussed in Appendix A of this SMP.

As the project progresses, developers and design engineers for the planned development will need to consider that the following construction elements may be affected by soil/fill management and waste characterization:

- Schedules: Scheduling of construction will need to allow for management of soil/fill material that is excavated during the course of construction. Should unanticipated materials or conditions be observed during excavation work, sampling may be required. Sampling will entail laboratory analysis, which typically takes from several days to several weeks to be completed. Therefore, construction schedules and design plans should allow for adequate flexibility for sampling, segregation, and temporary stockpiling of unanticipated soil/fill materials on-site.
- Soil/Fill and Subsurface Variability: Construction schedules should also provide both contingency time and measures to address variability in soil/fill conditions and the presence of groundwater. For example if hazardous conditions are encountered, additional safety measures and use of personal protection gear may

be required. Excavation dewatering and work stoppage could also affect construction schedules and costs.

Measures designed to address these situations are described in further detail in Appendix A of 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 (Appendix D). A sample HASP is attached as Appendix E 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 need to be updated and re-submitted by the involved contractors and environmental professionals for their specific work activities with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, contractor-specific HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

Past investigations have shown that fill materials will be encountered during construction activities. Based on the historical uses of the Site, hazardous materials may potentially be encountered. These include materials that could be associated with the fill as well as materials that may be present in groundwater.

General groups of chemicals that are associated with the fill and are considered as potentially hazardous materials subject to health and safety planning include:

- Volatile organic compounds (VOCs) – related to the former painting operations;
- Semi-volatile organic compounds (SVOCs)- these include polycyclic aromatic hydrocarbons (PAHs) which commonly result from the incomplete combustion of organic matter including fossil fuels, such as coal or fuel oil, and are often found in ash, cinders and soot, and coal tar pitch; and
- Metals - Review of the metals analysis revealed that arsenic, cadmium, copper, lead and selenium were found in some samples prior to implementation of the Remedial Action at concentrations higher than Restricted Residential SCOs.

VOCs are also associated with the groundwater and are considered potentially hazardous materials subject to health and safety planning.

Health and safety planning should also give consideration to other construction-related issues, such as use of heavy equipment, weather conditions, confined space entry, excavation safety and other construction-related OSHA regulations.

Health and safety planning should be performed prior to construction activities. This should include the preparation of a written Health and Safety Plan (HASP) for construction activities. The HASP would be based on the results of the previous chemical analyses, information specific to the proposed development, specific construction tasks to be completed and the potential for exposure of Site workers to the Site contaminants.

The use of OSHA-trained hazardous waste site workers during earthwork activities should be considered. Previous investigations show that overall the potential for worker exposure exists, but is relatively low. However, all contractors and developers involved in earth moving and excavation activities should consider the need for health and safety planning relative to their specific tasks and planned activities.

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 water, control of runoff from open excavations into potential remaining contamination, and for structures that may be affected by excavations (such as building foundations). 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 at the Site, an SVI mitigation system may be installed as an element of the building foundation without first conducting a SVI investigation. This mitigation system will include a vapor barrier and active sub-slab depressurization 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.

2.3.3 Flagging System

The City of Rochester has established a procedure for “flagging” the tax account numbers of properties that require special environmental reviews as a result of current or previous hazardous waste or hazardous substance contamination. The reviews are conducted as referrals to the City’s Division of Environmental Quality (DEQ) for any permit applications for properties where soil management plans or environmental contingency plans need to be established and followed during construction activities.

Once the Site Management Plan is approved by the NYSDEC, the City will “flag” the parcels that comprise the Site and they will be subject to a special environmental review prior to issuance of a permit. A special notation will be added to the City’s mainframe computer database of property information for County of Monroe Tax ID No. 121-650-0001.053.000.

The notation will appear as a “flag” to City staff that receive various building and site preparation permit applications. The flag will require a referral to the City’s DEQ before the application can be processed for approval. DEQ staff will review the permit application for consistency with the Site Management Plan, limited-use areas and land-use restrictions. A notification to the NYSDEC may be included at the time the permit is reviewed if warranted given the scope of the proposed work and other Site-specific factors.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed 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 occurs, such as a natural disaster or an unforeseen failure of any of the ECs, 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 property 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 Brownfield Cleanup Agreement (BCA), 6NYCRR Part 375, and/or Environmental Conservation Law.
- 15-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.
- Notice within 48-hours 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, including 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 Brownfield Cleanup Agreement (BCA), 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 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 Mr. Mark Gregor. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 19: 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 20: Contact Numbers

Ms. Charlotte Theobald, NYSDEC Project Manager	585-226-5354
Mr. Mark Gregor, City of Rochester Project Manager	585-428-5978
Mr. Mike Storonsky, Stantec Consulting Project Manager	585-413-5620

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

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 399 Gregory Street

Nearest Hospital Name: Highland Hospital

Hospital Location: 1000 South Avenue, Rochester New York 14620

Hospital Telephone: 585-341-6880

Directions to the Hospital (See attached map – Figure 6):

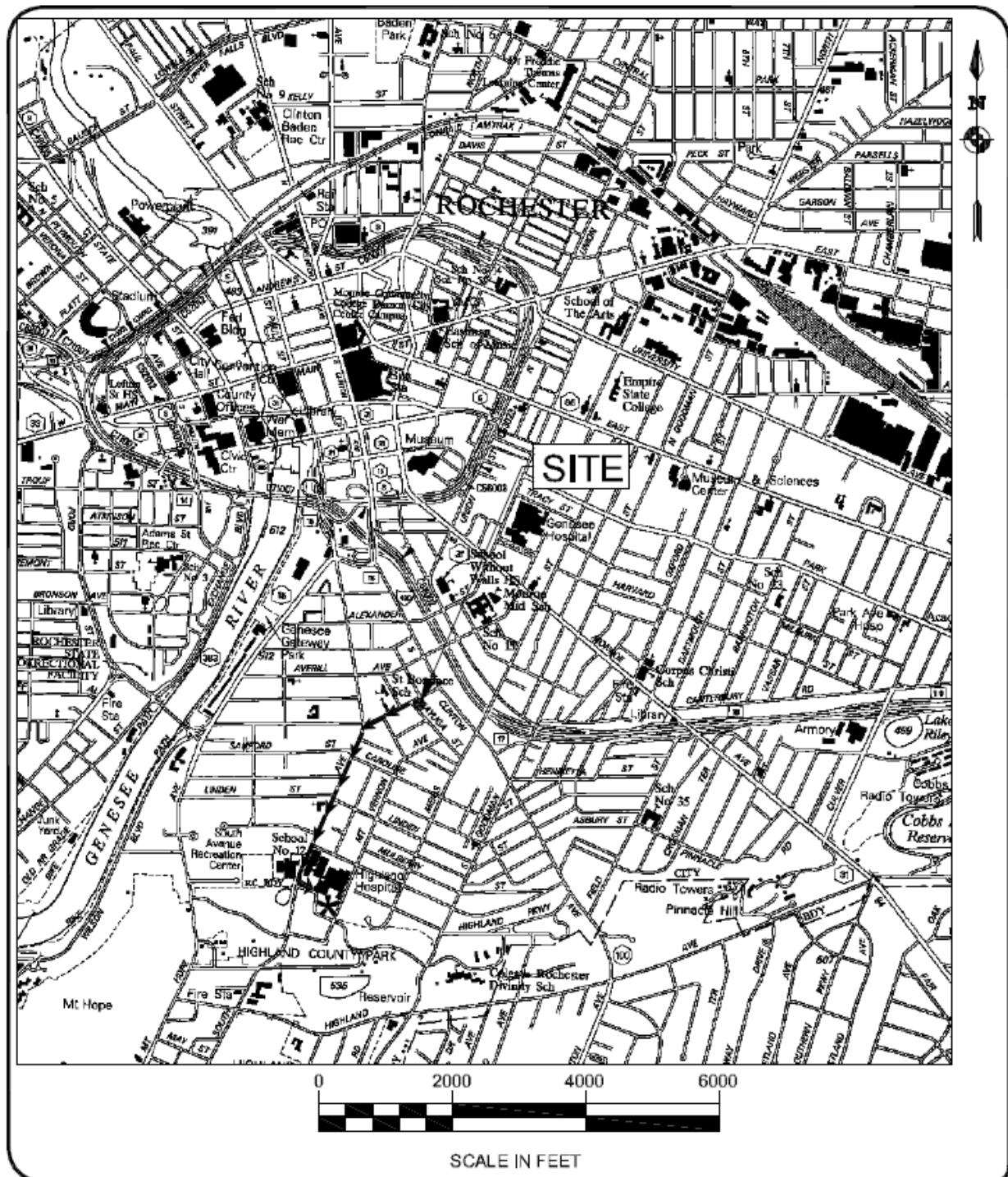
1. Head southwest on Gregory Street.
2. Turn left onto South Avenue.
3. Turn left onto Bellevue Drive.

4. Arrive at Highland Hospital.

Total Distance: 0.8 miles

Total Estimated Time: 2 minutes

Figure 6: 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 19). The list will also be made readily available to all personnel at all times.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the soil cover system, and all affected site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCO's for soil;
- Assessing achievement of the remedial performance criteria;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;

- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Quarterly monitoring of the performance of the remedy and overall reduction in contamination on-site and off-site will be conducted for the first one to two years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in air, soil, and/or groundwater in the affected areas will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in Table 21 and outlined in detail in Sections 3.2 and 3.3 below.

Table 21: Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater well monitoring	Quarterly	Groundwater	TCL VOCs + TICs by OLM 4.3
Annual inspection	Annually	--	--

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

3.3 MEDIA MONITORING PROGRAM

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. The network of monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the site. The network of on-site and off-site wells has been designed based on proximity to the RAOC1 source area. Monitoring well locations are found in Figure 3. Depths range from 12 to 19.5 feet below ground surface. Monitoring well construction logs are included in Appendix F.

One year of quarterly post-excavation groundwater monitoring will be conducted in RAOC1 to evaluate the effectiveness of the remedial program in addressing VOCs in groundwater. The results will be reviewed by the DEC to determine if a second year of groundwater monitoring may be needed. Stantec will use the following six (6) monitoring wells for sampling: MW-101R, MW-116R, MW-107, MW-108, MW-113 and MW-211. The first post-remedial round of groundwater sampling occurred in May 2009. Results for five of the six wells monitored were non-detect. The sample collected from MW-101R, the replacement well for MW-101, which was installed in close proximity to the source area, was reported to contain slightly elevated concentrations of the following VOCs: acetone, ethylbenzene, toluene, m/p-xylene, and o-xylene. No tentatively identified compounds (TICs) were identified in any of the samples analyzed during the May 2009 sampling event.

The sampling frequency may be modified with approval from NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC.

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in Appendix G. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

Groundwater monitoring wells will be developed prior to purging and sampling using disposable polyethylene bailers, dedicated Waterra inertial pumps or dedicated peristaltic pump tubing. Prior to development, wells will be allowed to equilibrate for at least 48-hours following installation. All development water will be collected and stored on site in 55-gallon drums. All drums will be labeled with paint markers according to matrix, location and date of generation. Turbidity readings and the number of consecutive well volumes removed will be recorded during well development. The wells will be developed to reduce sediment and turbidity to the maximum extent practical.

Following well development, each well will be allowed to equilibrate for at least two weeks prior to purging and sampling. Purging of each new and existing well will be

performed with a low flow peristaltic pump and dedicated polyethylene tubing or disposable polyethylene bailers. Purging of each well, by low flow methods if using a peristaltic pump or for at least three consecutive well volumes or until dry if using bailers, will allow representative formation water to enter the well prior to sample collection. Water quality field parameters (turbidity, pH, specific conductance, temperature, and oxidation-reduction potential) will be recorded during purging and sampling.

Immediately following the completion of purging and monitoring well recovery, groundwater samples will be collected using a dedicated disposable polyethylene bailer or dedicated polyethylene tubing. The groundwater sample will be collected from the middle portion of the water column. New sampling gloves will be used for collection of each sample. Samples will be shipped to a certified laboratory to be analyzed for TCL VOCs plus TICs by OLM 4.3 or current standard.

3.3.1.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

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, inspection notes will be completed. The notes 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;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- 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 H). 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; and
- 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. 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;
- 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.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

At this time, 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. A sub-slab depressurization system will be designed, installed, and operated in accordance with the NYSDOH guidance document at the time an occupied structure is constructed on the site, if warranted. An operation, maintenance and monitoring plan to monitor the effectiveness of the sub-slab depressurization system will to be submitted and amended to the Site Management Plan.

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 and Section 4 Operation and Maintenance 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. The periodic review inspections would also involve the structure if and when one is constructed.

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 and is performing as designed in the RAWP and FER.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional 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 Stantec Consulting Services Inc., 61 Commercial Street, Rochester, New York 14614, am certifying as Owner’s Designated Site Representative for the site.

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

5.3 PERIODIC REVIEW REPORT

A Periodic Review Report will be submitted to the Department every year, beginning eighteen months after the Certificate of Completion 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 C (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 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;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (e.g., groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances 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 RAWP, ROD or Decision Document;
 - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
 - 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 Regional Office in which the site is located, 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.

FIGURES



Geographic Information Systems

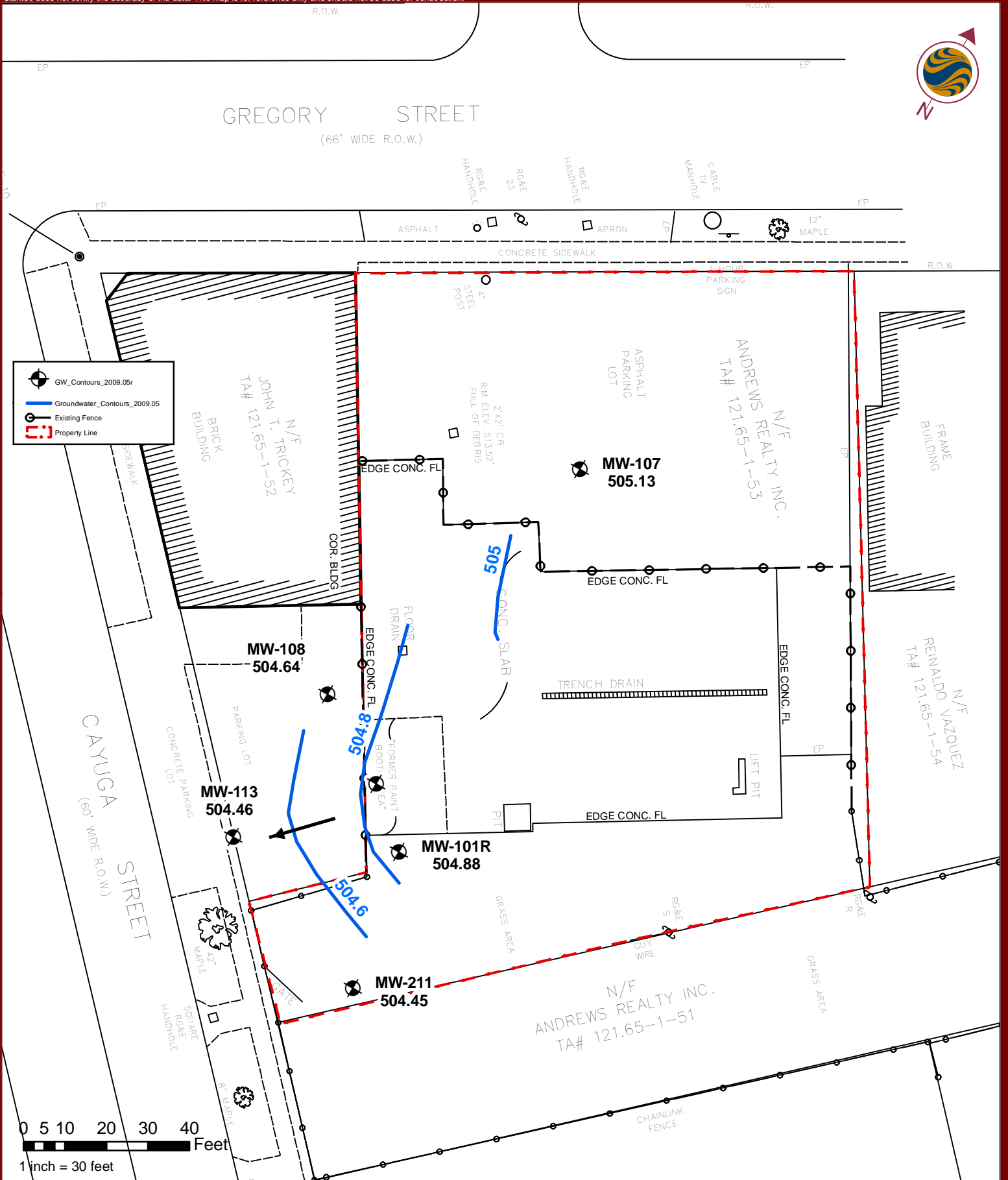
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2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
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Stantec

Figure 1 - Site Location
Site Management Plan
Brownfield Assessment Site
399 Gregory Street, Rochester, New York



Geographic Information Systems

Cartographic Design By: Marc Bouchard

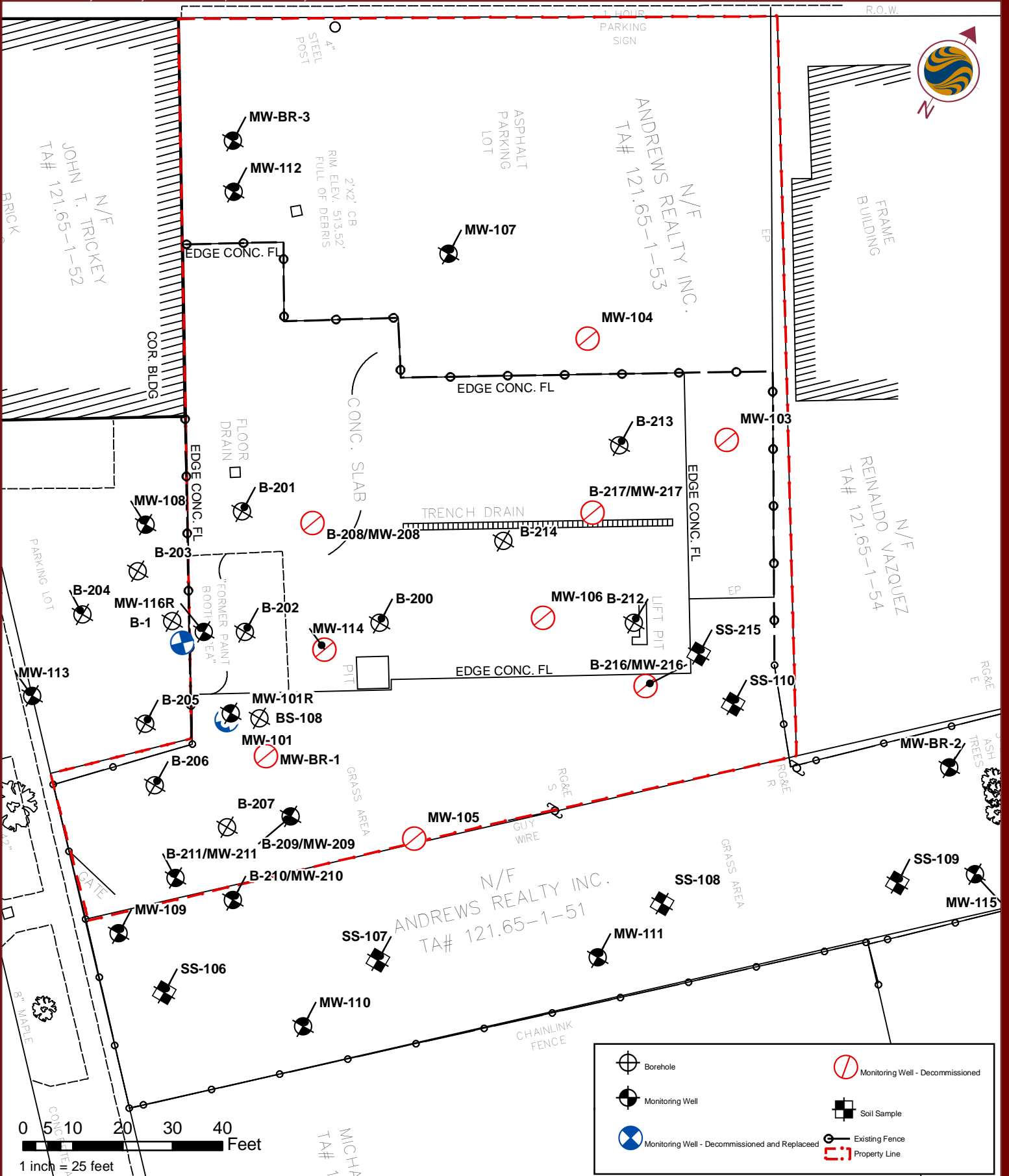
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Figure 2 - May 2009 Groundwater Monitoring
Site Management Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY



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Geographic Information Systems

Cartographic Design By: Marc Bouchard

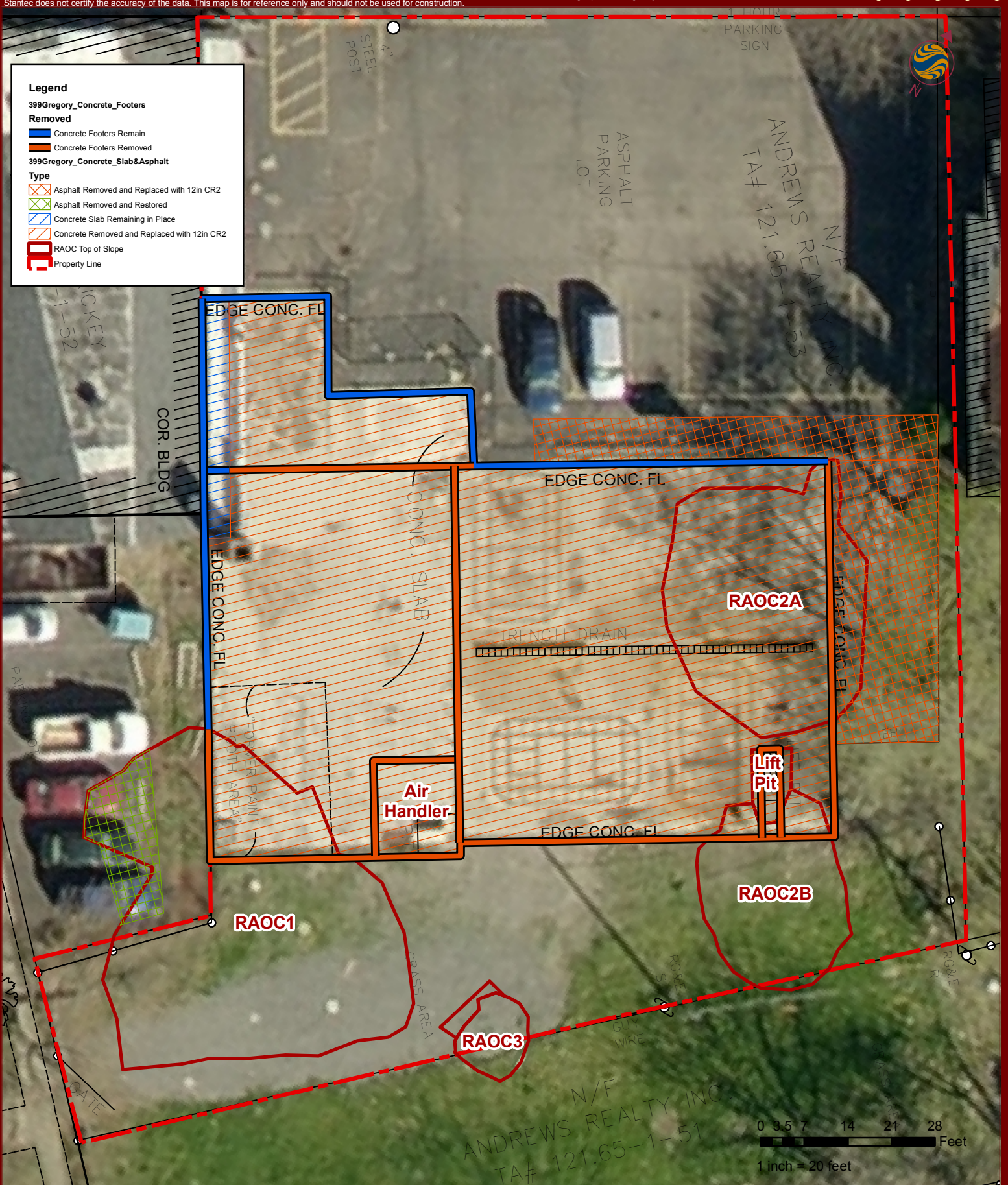
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Figure 3 - Soil Boring and Monitoring Well Locations

Site Management Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

Stantec



Geographic Information Systems

Wednesday, September 16, 2009 3:46:37 PM
 U:\190500196\GIS\GIS\Remedial_Construction\MXD\Fig4_SMP_Concrete&Asphalt_Removal.mxd

Figure 4 - Extent of Remedial Excavation Performed

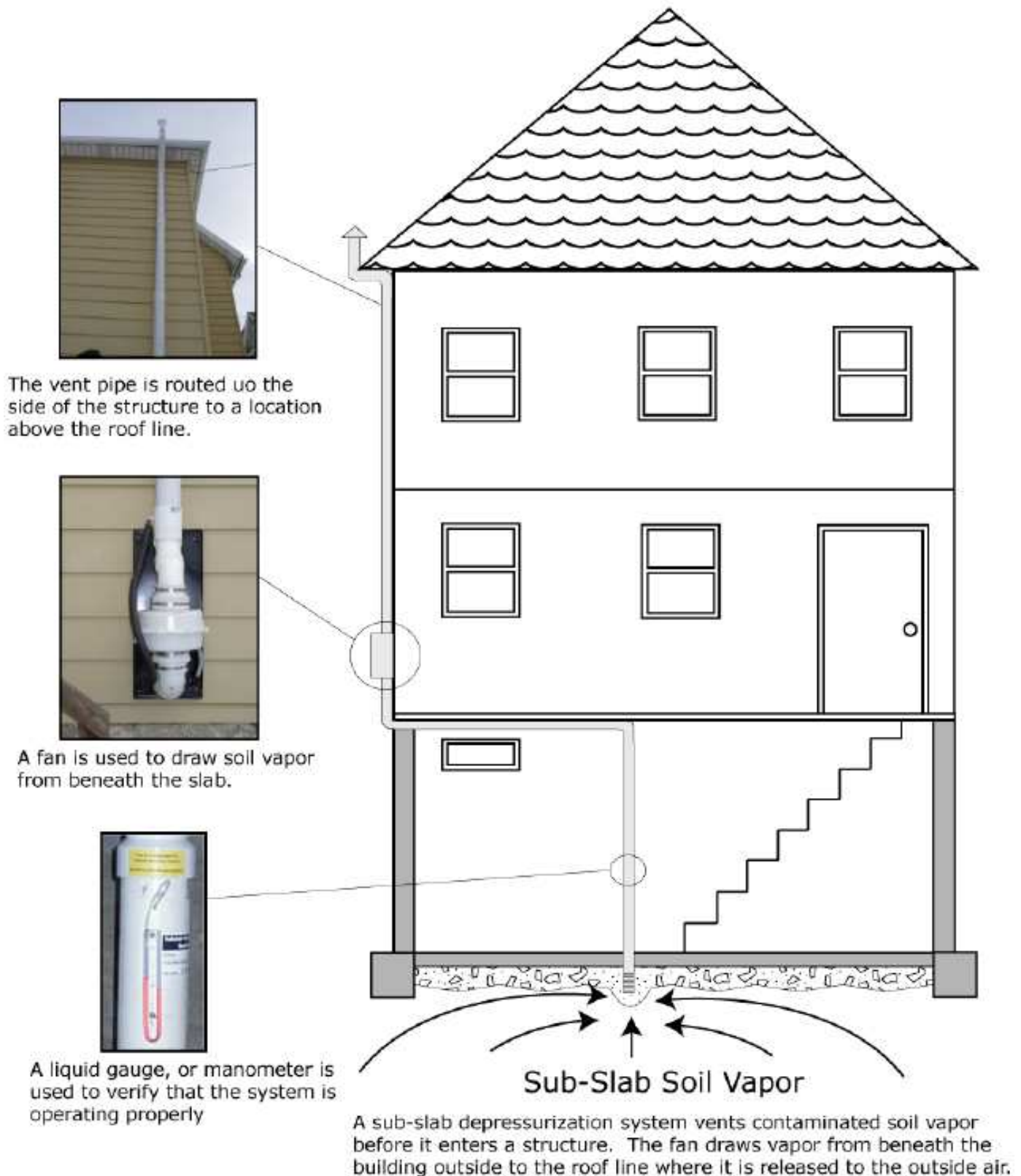
Site Management Plan
 399 Gregory Street, Rochester NY

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Sub-Slab Depressurization System

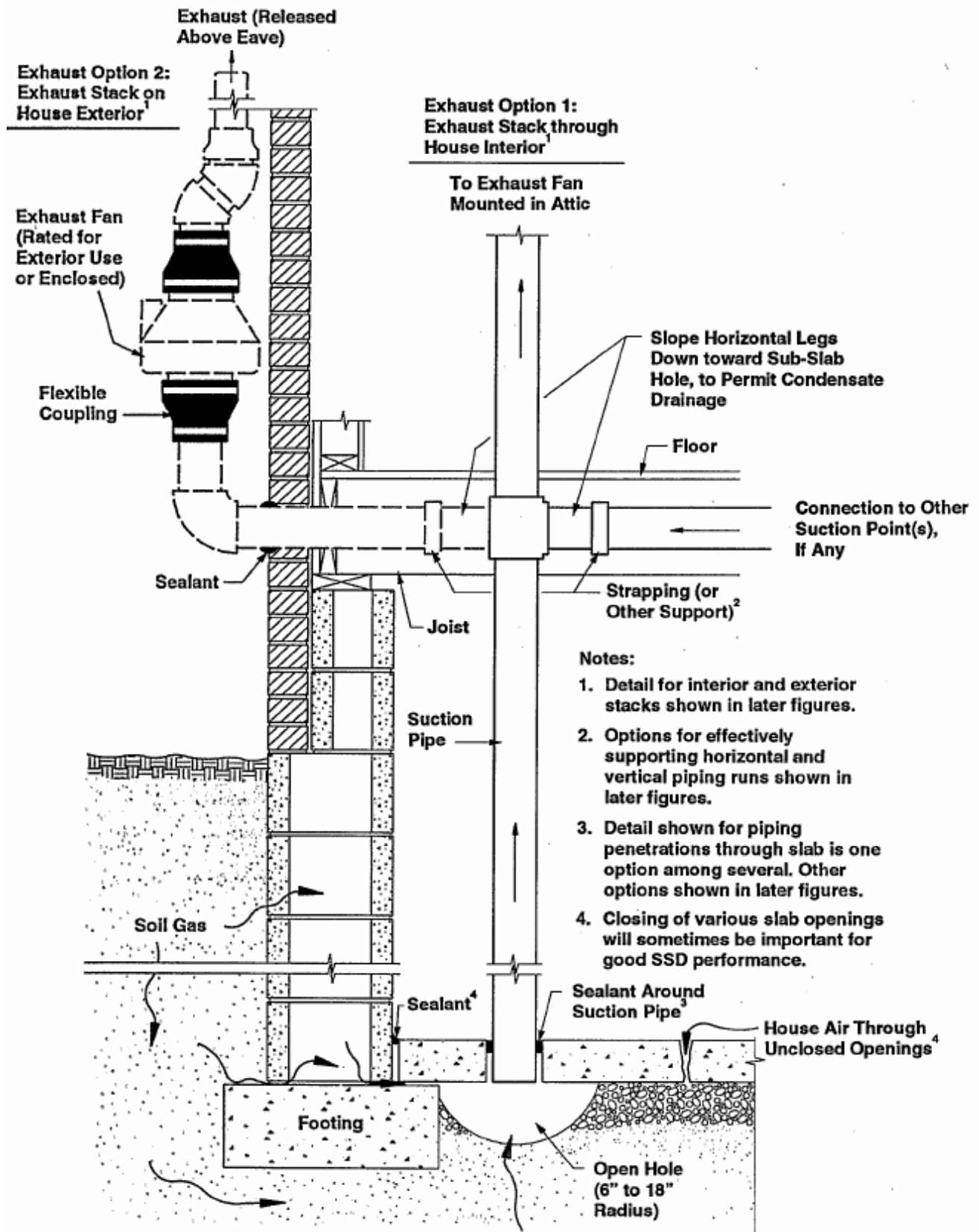
(commonly called a radon mitigation system)



Example of an illustration showing how a SSD system works.

Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, Figure 5.2. Prepared by New York State Department Of Health, October 2006

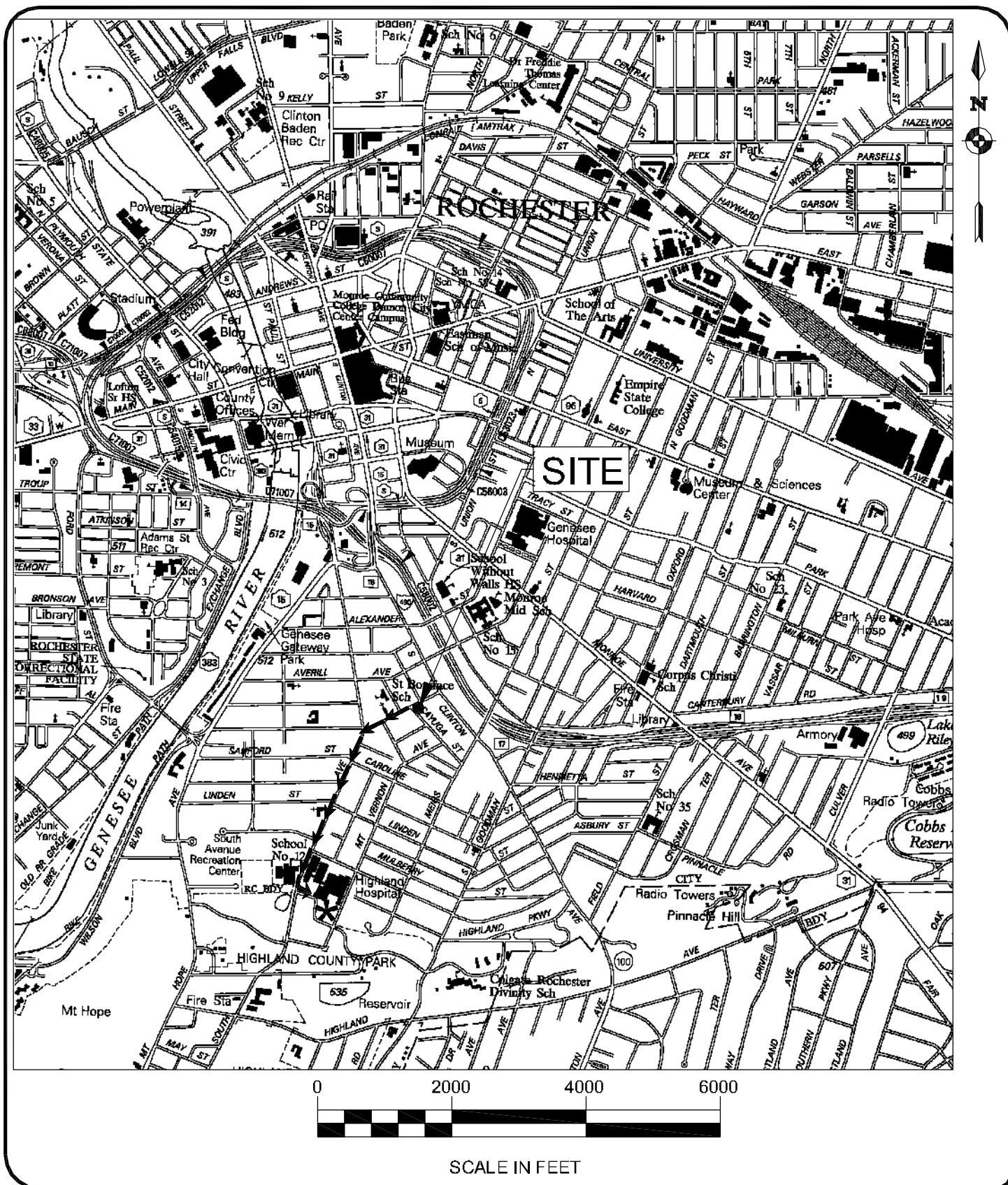
Figure 5.1 – Schematic Sub-Slab Depressurization System



Sub-slab depressurization (SSD) using pipes inserted down through the slab from indoors.

Radon Reduction Techniques for Existing Detached Houses. Technical Guidance (Third Edition) for Active Soil Depressurization Systems, Figure 1. Prepared by United States Environmental Protection Agency, October 1993.

Figure 5.2 – Schematic Sub-Slab Depressurization System



SCALE IN FEET

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TABLES

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)

399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings	
		Peak (ppm)	Background (ppm)
<u>AOC - 1</u>			
B-200	0-4	0.8	0.0
	4-8	0.0	0.0
	8-12	0.0	0.0
	12-15	0.0	0.0
B-201	0-4	0.6	0.0
	4-8	0.5	0.0
	8-12	0.4	0.0
B-202	0-4	1.2	0.0
	4-8	0.7	0.0
	8-12	0.4	0.0
	12-15	0.2	0.0
B-203	0-4	1.3	0.0
	4-8	0.8	0.0
	8-12	0.6	0.0
	12-15	0.6	0.0
B-204	0-4	0.8	0.0
	4-8	0.8	0.0
	8-12	0.6	0.0
	12-15	0.6	0.0
B-205	0-4	1.0	0.0
	4-8	89.1	0.0
	8-12	13.1	0.0
	12-15	0.7	0.0
B-206	0-4	1.5	0.0
	4-8	1.2	0.0
	8-12	1.1	0.0
B-207	0-4	1.5	0.0
	4-6	0.8	0.0
B-208	0-4	0.5	0.0
	4-8	0.4	0.0
	8-12	0.3	0.0
	12-15	0.4	0.0
B-209	0-4	0.4	0.0
	4-8	0.0	0.0
	8-12	0.0	0.0
	12-15	0.0	0.0

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)

399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings	
		Peak (ppm)	Background (ppm)
B-210	0-4	10.0	0.0
	4-8	9.4	0.0
	8-12	1.1	0.0
	12-15	0.4	0.0
B-211	0-4	0.4	0.0
	4-8	34.1	0.0
	8-12	0.0	0.0
	12-15		
<u>RAOC1</u>			
EB-001	11	3.1	0.0
EB-002	11	1.7	0.0
ES-001	9 - 10	3	0.0
ES-002	8 - 10	79	0.0
ES-003	7 - 10	101	0.0
ES-004	8 - 8.5	213	0.0
ES-005.1.A	7.5 - 9	61	0.0
ES-005.1.B	7.5 - 9	2	0.0
ES-006	8 - 8.5	0	0.0
<u>AOC - 2</u>			
B-212	0-4	0.9	0.0
	4-8	1.4	0.0
	8-12	1.3	0.0
B-213	0-4	6.5	0.0
	4-8	0.5	0.0
	8-12	0.2	0.0
	12-15	0.4	0.0
B-214	0-4	27.1	0.0
	4-8	0.7	0.0
	8-12	0.5	0.0
	12-15	0.7	0.0
B-215	0-4	1.0	0.0
	4-8	1.3	0.0
	8-12	0.5	0.0

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)

399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings	
		Peak (ppm)	Background (ppm)
B-216	0-4	0.7	0.0
	4-8	0.8	0.0
	8-12	0.3	0.0
	12-15	0.3	0.0
B-217	0-4	22.5	0.0
	4-8	1.0	0.0
	8-12	0.5	0.0
	12-15	0.0	0.0
<u>RAOC2A</u>			
EB-005	4	0.1	0.0
ES-015	0 - 4	0.3	0.0
ES-016	0 - 4	0.1	0.0
ES-017	0 - 4	0.1	0.0
ES-018	0 - 4	0.1	0.0
<u>RAOC2B</u>			
EB-004	4	5.3	0.0
ES-011	0 - 4	4.1	0.0
ES-012	0 - 4	5.1	0.0
ES-013.1.A	0 - 4	4.0	0.0
ES-013.1.B	0 - 4	0.1	0.0
ES-014	0 - 4	4.6	0.0
<u>RAOC - 3</u>			
B-212-07	0-4	0.2	0.1
	4-8	0.2	0.1
B-213-07	0-4	0.4	0.3
	4-8	0.3	0.3

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)

399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings	
		Peak (ppm)	Background (ppm)
B-214-07	0-4	0.6	0.3
	4-8	0.5	0.4
B-215-07	0-4	0.7	0.4
	4-8	1.0	0.4
B-216-07	0-4	0.5	0.4
	4-8	0.5	0.4
B-217-07	0-4	0.7	0.5
	4-8	0.6	0.5
B-218-07	0-4	0.5	0.4
	4-8	0.6	0.4
B-219-07	0-4	0.5	0.4
	4-8	0.6	0.4
<u>RAOC3</u>			
EB-003	8	2.1	0.0
ES-007	0 - 8**	0.9	0.0
ES-008	0 - 8**	3.1	0.0
ES-009	0 - 8**	5.5	0.0
ES-010.1.A	0 - 8**	3.7	0.0
ES-010.1.B	0 - 4	0.1	0.0
<u>Soil Pile</u>			
SP-001		0.0	0.0

Notes:

1. ft. bgs = feet below ground surface.
2. ppm = parts per million.
3. PID data collected with Mini-Rae 2000 equipped with 10.6 eV lamp.
4. ** Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 2
SOIL SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
<u>AOC - 1</u>				
GR-B200-S	B-200	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B201-S	B-201	8/3/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B202-S ms/msd	B-202	8/3/2005	12-15	TCL VOCs plus TICs by OLM 4.2
GR-B203-S	B-203	8/3/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B204-S	B-204	8/3/2005	12-16	TCL VOCs plus TICs by OLM 4.2
GR-B205-S	B-205	8/3/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B206-S	B-206	8/3/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B207-S	B-207	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2
GR-B208-S	B-208	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B209-S	B-209	8/5/2005	12-15	TCL VOCs plus TICs by OLM 4.2
GR-B210-S	B-210	8/4/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B211-S	B-211	8/5/2005	4-8	TCL VOCs plus TICs by OLM 4.2
<u>RAOC1</u>				
GR-EB-001.A-S	EB-001	3/17/2009	11	TCL VOCs plus TICs by OLM 4.3
GR-001-S-DU	EB-001	3/17/2009	11	TCL VOCs plus TICs by OLM 4.3
GR-EB-002.A-S	EB-002	3/25/2009	11	TCL VOCs plus TICs by OLM 4.3
GR-ES-001.1.A-S	ES-001	3/16/2009	9 - 10	TCL VOCs plus TICs by OLM 4.3
GR-ES-002-1.1.A-S	ES-002	3/18/2009	8 - 10	TCL VOCs plus TICs by OLM 4.3
GR-ES-003-1.1.A-S	ES-003	3/18/2009	7 - 10	TCL VOCs plus TICs by OLM 4.3
GR-ES-004.1.A-S	ES-004	3/23/2009	8 - 8.5	TCL VOCs plus TICs by OLM 4.3
GR-ES-005.1.A-S	ES-005.1.A	3/23/2009	7.5 - 9	TCL VOCs plus TICs by OLM 4.3
GR-ES-005.1.B-S	ES-005.1.B	3/26/2009	7.5 - 9	TCL VOCs plus TICs by OLM 4.3
GR-ES-006.1.A-S	ES-006	3/24/2009	8 - 8.5	TCL VOCs plus TICs by OLM 4.3

TABLE 2
SOIL SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
<u>AOC - 2</u>				
GR-B212-S	B-212	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B213-S	B-213	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B214-S	B-214	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-XX-S-DUP	duplicate of GR-B214-S	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B215-S	B-215	8/4/2005	4-8	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B216-S	B-216	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 MSMSD-TCL SVOCs plus TICs by OLM 4.2 MS/MSD-PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B217-S	B-217	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 MS/MSD-TAL Metals by ILM 5.1
GS-B212-07 (0-4)	B-212-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B212-07 (4-8)	B-212-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B213-07 (0-4)	B-213-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B213-07 (4-8)	B-213-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3

TABLE 2
SOIL SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
GS-B214-07 (0-4)	B-214-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-DUP	duplicate of B-214-07 (0-4)	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B214-07 (4-8)	B-214-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (0-4) MS/MSD	B-215-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (0-4)	B-215-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (4-8)	B-215-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B216-07 (0-4)	B-216-07	6/7/2007	0-4	Not analyzed (see notes)
GS-B216-07 (4-8)	B-216-07	6/7/2007	4-8	Not analyzed (see notes)
GS-B217-07 (0-4)	B-217-07	6/7/2007	0-4	Not analyzed (see notes)
GS-B217-07 (4-8)	B-217-07	6/7/2007	4-8	Not analyzed (see notes)
GS-B218-07 (0-4)	B-218-07	6/7/2007	0-4	Not analyzed (see notes)
GS-B218-07 (4-8)	B-218-07	6/7/2007	4-8	Not analyzed (see notes)
GS-B219-07 (0-4)	B-219-07	6/7/2007	0-4	Not analyzed (see notes)
GS-B219-07 (4-8)	B-219-07	6/7/2007	4-8	Not analyzed (see notes)
<u>RAOC2A</u>				
GR-EB-005.1.A-S	EB-005	4/2/2009	4	TAL Metals by ILM05.4
GR-ES-015.1.A-S	ES-015	4/2/2009	0 - 4	TAL Metals by ILM05.4
GR-ES-016.1.A-S	ES-016	4/2/2009	0 - 4	TAL Metals by ILM05.4
GR-ES-017.1.A-S	ES-017	4/2/2009	0 - 4	TAL Metals by ILM05.4
GR-ES-018.1.A-S	ES-018	4/2/2009	0 - 4	TAL Metals by ILM05.4

TABLE 2
SOIL SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
<u>RAOC2B</u>				
GR-EB-004.A-S	EB-004	3/25/2009	4	TAL Metals by ILM05.4
GR-011.1.A-S	ES-011	3/25/2009	0 - 4	TAL Metals by ILM05.4
GR-012.1.A-S	ES-012	3/25/2009	0 - 4	TAL Metals by ILM05.4
GR-013.1.A-S	ES-013.1.A	3/25/2009	0 - 4	TAL Metals by ILM05.4
GR-ES-013.1.B-S	ES-013.1.B	4/2/2009	0 - 4	TAL Metals by ILM05.4
GR-014.1.A-S	ES-014	3/25/2009	0 - 4	TAL Metals by ILM05.4
GR-002-S-DU	ES-014	3/25/2009	0 - 4	TAL Metals by ILM05.4
<u>RAOC3</u>				
GR-EB-003.A-S	EB-003	3/25/2009	8	TAL Metals by ILM05.4
GR-ES-007.1.A-S	ES-007	3/25/2009	0 - 8**	TAL Metals by ILM05.4
GR-ES-008.1.A-S	ES-008	3/25/2009	0 - 8**	TAL Metals by ILM05.4
GR-ES-009.1.A-S	ES-009	3/25/2009	0 - 8**	TAL Metals by ILM05.4
GR-ES-010.1.A-S	ES-010.1.A	3/25/2009	0 - 8**	TAL Metals by ILM05.4
GR-ES-010.1.B-S	ES-010.1.B	4/2/2009	0 - 4	TAL Metals by ILM05.4
<u>Soil Pile</u>				
GR-SP-001-S	SP-001	3/17/2009	--	TCL VOCs plus TICs by OLM 4.3

Notes:

1. ft. bgs = feet below ground surface.
2. GR-XX-S-DUP is a duplicate of GR-B214-S.
3. Samples from B-216-07, B-217-07, B-218-07, and B-219-07 were submitted to the laboratory but placed on hold pending results from B-212-07, B-213-07, B-214-07, and B-215-07. No analysis was performed on these samples.
4. ** Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 3
WELL COMPLETION SUMMARY

399 Gregory Street
Rochester, NY

Well	Northing	Easting	Reference Elevation	Ground Elevation	Well Diameter (in.)	Bentonite Seal (ft. bgs)	Sandpack Interval (ft. bgs)	Screened(3) Interval (ft. bgs)	Total Depth (ft. bgs)
<u>Existing Wells</u>									
MW-101	1146597.652	1410450.095	512.74	513.2	2.0	5-7	7-19.5	9.1-19.1	19.5
MW-103	1146696.876	1410508.056	512.32	513.0	2.0	4.9-6.9	6.9-18.9	8.9-18.9	18.9
MW-104	1146700.312	1410473.75	513.01	513.3	2.0	5-7	7-19.2	9.2-19.2	19.2
MW-105	1146596.225	1410494.472	512.00	512.4	2.0	1.5-4	4-16	6-16	16
MW-106	1146647.445	1410494.407	512.98	513.1	1.0	3-5.5	5.5-12.5	7.5-12.5	12.5
MW-107	1146700.74	1410441.062	512.68	513.3	2.0	1.5-4	4-16	6-16	16
MW-108	1146623.149	1410416.138	515.29	512.5	2.0	2-4	4-16.5	6-16	16.5
MW-109	1146549.725	1410452.941	511.40	511.8	2.0	1.5-4	4-16.5	6.5-16.5	16.5
MW-110	1146552.389	1410494.258	511.60	512.1	2.0	1.5-4	4-16.5	6-16	16.5
MW-111	1146594.16	1410538.25	511.80	512.2	2.0	1.5-3.5	3.5-16	6-16	16
MW-112	1146689.696	1410397.639	513.08	510.5	2.0	1.5-4	4-16	6-16	16
MW-113	1146582.014	1410413.948	511.81	512.4	2.0	1.5-4	4-16.5	6.5-16.5	16.5
MW-114	1146619.797	1410459.77	513.00	513.4	1.0	3-5	5-12.5	7.3-12.3	12.5
MW-115	1146646.857	1410595.146	515.64	513.2	2.0	3-4	4-16	6-16	16
MW-116	1146606.522	1410434.54	516.16	513.7	1.0	3-6	6-18	8-18	18
MW-BR-1	1146595.46	1410460.481	512.72	513.1	4.0	0-21	NA	21-31.3	31.3
MW-BR-2	1146662.759	1410579.78	512.98	513.5	4.0	0-21	NA	21-30.7	30.7
MW-BR-3	1146698.398	1410392.329	513.23	513.5	4.0	0-21	NA	21-30.8	30.8
<u>RI Wells</u>									
MW-208	1146640.385	1410444.935	512.93	513.3	1.0	1-4	4-15	5-15	15
MW-209	1146587.456	1410470.834	512.62	513.0	1.0	1-4	4-15	5-15	15
MW-210	1146567.133	1410469.357	511.66	512.0	1.0	1-3	3-15	5-15	15
MW-211	1146565.14	1410457.17	511.90	512.1	1.0	1-4	4-11.9	6.9-11.9	11.9
MW-216	1146646.113	1410519.009	512.20	512.7	1.0	1-3	3-15	5-15	15
MW-217	1146670.628	1410492.255	512.92	513.1	1.0	1-3.5	3.5-15	5-15	15
<u>Replacement Wells</u>									
MW-101R	1146599.17	1410450.04	512.53	512.7	2.0	3.8-7	7-19.5	9.5-19.5	19.5
MW-116R	1146610.49	1410437.1	512.23	512.8	2.0	3.2-6	6-18	8-18	18

Notes:

- Reference elevations based upon August 10,2005 survey performed by Stantec.
Horizontal datum is referenced to NYS Plane Coordinate System NAD 83, Vertical datum is referenced to North American Vertical Datum of 1988.
- ft. bgs = feet below ground surface.
- Screened Interval in MW-BR-1 to MW-BR-3 equals the open corehole interval

**TABLE 4
WATER LEVEL SUMMARY**

399 Gregory Street
Rochester, NY

Well	Northing	Easting	Reference Elevation	August 16, 2005		October 27, 2005		November 4, 2005	
				Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)
<u>Existing Wells</u>									
MW-101	1146597.652	1410450.095	512.74	11.12	501.62	8.38	504.36	NM	-
MW-103	1146696.876	1410508.056	512.32	9.33	502.99	7.75	504.57	NM	-
MW-104	1146700.312	1410473.750	513.01	10.12	502.89	8.34	504.67	NM	-
MW-105	1146596.225	1410494.472	512.00	9.35	502.65	5.59	506.41	NM	-
MW-106	1146647.445	1410494.407	512.98	NM	-	7.82	505.16	NM	-
MW-107	1146700.740	1410441.062	512.68	9.68	503.00	7.23	505.45	NM	-
MW-108	1146623.149	1410416.138	515.29	12.68	502.61	10.87	504.42	NM	-
MW-109	1146549.725	1410452.941	511.40	9.32	502.08	8.08	503.32	NM	-
MW-110	1146552.389	1410494.258	511.60	9.56	502.04	7.70	503.90	NM	-
MW-111	1146594.160	1410538.250	511.80	9.29	502.51	6.98	504.82	NM	-
MW-112	1146689.696	1410397.639	513.08	10.41	502.67	8.57	504.51	NM	-
MW-113	1146582.014	1410413.948	511.81	9.26	502.55	8.89	502.92	NM	-
MW-114	1146619.797	1410459.770	513.00	10.47	502.53	6.74	506.26	NM	-
MW-115	1146646.857	1410595.146	515.64	13.45	502.19	11.71	503.93	NM	-
MW-116	1146606.522	1410434.540	516.16	14.00	502.16	11.18	504.98	NM	-
MW-BR-1	1146595.460	1410460.481	512.72	11.50	501.22	9.55	503.17	NM	-
MW-BR-2	1146662.759	1410579.780	512.98	13.10	499.88	11.80	501.18	NM	-
MW-BR-3	1146698.398	1410392.329	513.23	11.00	502.23	9.25	503.98	NM	-
<u>RI Wells</u>									
MW-208	1146640.385	1410444.935	512.93	9.45	503.48	7.53	505.40	8.10	504.83
MW-209	1146587.456	1410470.834	512.62	10.65	501.97	6.74	505.88	8.13	504.49
MW-210	1146567.133	1410469.357	511.66	9.65	502.01	7.45	504.21	8.00	503.66
MW-211	1146565.140	1410457.168	512.09	10.08	502.01	8.29	503.80	8.54	503.55
MW-216	1146646.113	1410519.009	512.20	9.21	502.99	6.54	505.66	7.06	505.14
MW-217	1146670.628	1410492.255	512.92	9.61	503.31	NM	-	7.77	505.15
<u>Replacement Wells</u>									
MW-101R	1146599.17	1410450.04	512.53	-	-	-	-	-	-
MW-116R	1146610.49	1410437.1	512.23	-	-	-	-	-	-

Notes:

- Reference elevations based upon the August 10, 2005 survey performed by licensed Stantec survey crew.
Horizontal datum is referenced to NYS Plane Coordinate System NAD 83; Vertical datum NAVD 1988.
- ft. btoc = feet below top of casing.
- NM = not measured.

**TABLE 4
WATER LEVEL SUMMARY**

399 Gregory Street
Rochester, NY

Well	Northing	Easting	Reference Elevation	May 23, 2006		May 8, 2009	
				Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)
<u>Existing Wells</u>							
MW-101	1146597.652	1410450.095	512.74	8.79	503.95	NM	-
MW-103	1146696.876	1410508.056	512.32	7.51	504.81	NM	-
MW-104	1146700.312	1410473.750	513.01	8.32	504.69	NM	-
MW-105	1146596.225	1410494.472	512.00	7.08	504.92	NM	-
MW-106	1146647.445	1410494.407	512.98	7.94	505.04	NM	-
MW-107	1146700.740	1410441.062	512.68	7.89	504.79	7.55	505.13
MW-108	1146623.149	1410416.138	515.29	11.17	504.12	10.65	504.64
MW-109	1146549.725	1410452.941	511.40	8.05	503.35	NM	-
MW-110	1146552.389	1410494.258	511.60	8.07	503.53	NM	-
MW-111	1146594.160	1410538.250	511.80	7.14	504.66	NM	-
MW-112	1146689.696	1410397.639	513.08	8.85	504.23	NM	-
MW-113	1146582.014	1410413.948	511.81	7.84	503.97	7.35	504.46
MW-114	1146619.797	1410459.770	513.00	8.38	504.62	NM	-
MW-115	1146646.857	1410595.146	515.64	10.75	504.89	NM	-
MW-116	1146606.522	1410434.540	516.16	12.00	504.16	NM	-
MW-BR-1	1146595.460	1410460.481	512.72	9.95	502.77	NM	-
MW-BR-2	1146662.759	1410579.780	512.98	11.40	501.58	NM	-
MW-BR-3	1146698.398	1410392.329	513.23	9.41	503.82	NM	-
<u>RI Wells</u>							
MW-208	1146640.385	1410444.935	512.93	7.53	505.40	NM	-
MW-209	1146587.456	1410470.834	512.62	6.74	505.88	NM	-
MW-210	1146567.133	1410469.357	511.66	7.45	504.21	NM	-
MW-211	1146565.140	1410457.168	512.09	8.29	503.80	7.64	504.45
MW-216	1146646.113	1410519.009	512.20	6.54	505.66	NM	-
MW-217	1146670.628	1410492.255	512.92	NM	-	NM	-
<u>Replacement Wells</u>							
MW-101R	1146599.17	1410450.04	512.53	-	-	7.65	504.88
MW-116R	1146610.49	1410437.1	512.23	-	-	7.38	504.85

Notes:

1. Reference elevations based upon the August 10,2005 survey performed. Horizontal datum is referenced to NYS Plane Coordinate System NAD 83.
2. ft. btoc = feet below top of casing.
3. NM = not measured.

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
August 2005 MW-101	08/08/05	10.81	17:02	1.25	6.32	786.4	13.9	44.8	-223	NM
			17:06	2.5	8.44	789.1	13.7	22.4	-219	NM
			17:10	3.75	8.64	804.7	13.3	11.6	-232	NM
MW-104	08/09/05	9.89	14:12	1.5	6.25	1094	16.7	1000+	-193	NM
			14:16	3	7.21	1083	15.8	1000+	-139	NM
			14:20	4.5	7.71	1073	15.1	1000+	-175	NM
MW-105	08/08/05	8.75	16:17	0.75	7.05	751	16.5	1000+	-164	NM
			16:23	1.5	7.25	723.1	17.5	1000+	-107	NM
			16:32	2.25	7.23	602.1	17.8	1000+	-37	NM
MW-106	08/09/05	9.50	8:10	0.11 dry at 0.11 gallons	7.03	747.9	15.6	1000+	-167	NM
MW-108	08/05/05	12.34	16:18	1.0	6.75	1189	15.6	1000+	-283	NM
			16:22	2.0	7.71	1195	15.4	1000+	-165	NM
			16:25	3.0	6.89	1186	14.7	1000+	-146	NM
MW-110	08/08/05	9.32	16:00	1.0	6.81	983.5	15.9	1000+	-246	NM
			16:02	2.0	7.24	990.8	14.6	1000+	-185	NM
			16:05	3.0	7.36	990.1	14.8	1000+	-141	NM
MW-111	08/09/05	9.10	15:20	1.0	6.27	809.7	14.7	1000+	-256	NM
			15:22	2.0	6.31	868.6	13.6	1000+	-143	NM
			15:25	3.0	6.29	921.8	12.9	1000+	-63	NM
MW-113	08/09/05	9.08	13:16	1.0	6.62	2774	16.3	1000+	-110	NM
			13:25	2.0	7.79	2754	16.4	841.0	-136	NM
			13:34	3.0	7.08	2731	16.1	1000.0	-115	NM
MW-114	08/09/05	10.31	8:30	0.02 dry @ 0.02 gallons	7.30	863.6	16.6	1000+	-228	NM

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-116	08/05/05	13.58	15:55 16:01	0.25 0.50 dry @ 0.5 gallons	6.56 6.59	1015 1050	16.9 20.3	1000+ 1000+	-246 -289	NM NM
MW-208 development	08/08/05	9.30	8:49 8:53 8:56 8:59 9:01	0.17 0.34 0.51 0.68 0.85	6.89 7.46 8.00 8.21 8.05	789.2 783.7 791.7 812.3 810.3	14.8 14.3 14.0 13.9 14.6	1000+ 1000+ 1000+ 1000+ 1000+	-198 -218 -233 -225 -190	NM NM NM NM NM
sampling	08/09/05	9.32	8:50 8:53 8:57	0.17 0.34 0.51	7.55 7.38 7.46	826.9 823.7 830.2	14.5 14.4 14.7	1000+ 1000+ 1000+	-221 -231 -227	NM NM NM
MW-209 development	08/08/05	10.38	8:27 8:31 8:36	0.14 0.28 0.42 dry @ 0.42 gallons	7.32 7.45 7.48	716.8 982.9 1036	16.6 16.0 16.2	1000+ 1000+ 1000+	-242 -202 -176	NM NM NM
sampling	08/09/05	10.40	9:20 9:25 9:33	0.14 0.28 0.42	6.65 6.77 6.69	1070 1055 1046	16.7 17.0 17.4	1000+ 1000+ 1000+	-47 -49 -55	NM NM NM
MW-210 development	08/08/05	9.51	7:50 7:54 7:59	0.16 0.32 0.48	7.36 7.49 7.72	1000 904.7 763.7	15.5 15.2 15.8	1000+ 1000+ 1000+	-355 -433 -484	NM NM NM
sampling	08/09/05	9.45	9:46 9:54 10:00	0.16 0.32 0.48	6.71 6.83 6.82	1168 1198 1201	16.5 17.4 17.6	1000+ 1000+ 1000+	-38 -69 -77	NM NM NM
MW-211 development	08/08/05	9.90	7:30	0.1 dry @ 0.1 gallons	7.39	1315	16.8	1000+	-265	NM

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-211 (cont.) sampling	08/09/05	9.91	12:57	0.06	6.95	1268	21.6	100.0	-77	NM
			13:00	0.12	7.31	1276	19.8	1000+	-121	NM
			13:02	0.18	7.30	1274	19.4	1000+	-135	NM
MW-216 development	08/08/05	8.92	11:46	0.18	6.85	693	14.8	1000+	-667	NM
			11:49	0.36	7.23	420.1	16.1	1000+	-385	NM
			11:54	0.54	7.44	704.6	18.4	1000+	-135	NM
sampling	08/09/05	9.02		dry @ 0.54 gallons						
			7:30	0.18	7.32	827.5	14.2	1000+	-192	NM
			7:33	0.36	7.33	815.1	14.1	1000+	-212	NM
			7:38	0.54	7.43	812.4	14.2	1000+	-204	NM
MW-217 development	08/08/05	9.41	12:12	0.18	6.19	1282	15.7	1000+	-121	NM
			12:14	0.36	6.63	1363	16.2	1000+	-86	NM
			12:16	0.54	6.91	1284	15.5	1000+	-90	NM
			12:18	0.72	6.93	1312	14.9	1000+	-51	NM
			12:21	0.90	6.62	1326	15.1	1000+	-54	NM
sampling	08/09/05	9.44	7:52	0.18	7.08	1243	15.1	1000+	-181	NM
			7:58	0.36	7.44	1355	14.4	1000+	-198	NM
			8:01	0.54	7.47	1356	14.6	1000+	-201	NM
November 2005										
MW-208	11/04/05	8.40	10:10	0.24	6.05	1206	16.0	200+	211	NM
			10:16	0.48	6.24	1165	15.5	200+	128	NM
			10:22	0.72	6.50	1155	15.4	200+	168	NM
MW-209	11/04/05	8.40	10:54	0.26	6.27	1735	15.2	200+	154	NM
			11:08	0.52	6.67	1748	15.1	200+	156	NM
			11:22	0.78	6.94	1750	15.2	200+	152	NM
MW-210	11/04/05	8.00	12:04	0.26	5.55	1125	15.9	200+	62	NM
			12:10	0.52	6.42	1152	16.0	200+	36	NM
				dry @ 0.52 gallons						

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-211	11/04/05	8.54	12:30 12:34	0.11 0.22 dry @ 0.22 gallons	6.52 6.62	1281 1287	16.4 16.2	200+ 200+	-29 -26	NM NM
MW-216 low stress 150 ml/min	11/04/05	7.06 7.44 7.44 7.46 7.45 7.44 7.44 7.44 7.44	10:45 10:50 10:55 11:00 11:05 11:10 11:15 11:20 11:25	- - - - - - - - -	 5.64 5.63 5.65 5.68 5.70 5.71 5.71 5.71	 970 970 970 960 960 960 960 960	 15.2 15.5 15.5 15.5 15.6 15.7 15.7 15.7	105.0 49.5 24.8 <1 <1 <1 <1 <1	183 180 177 176 176 177 177 178	8.56 5.48 4.69 3.91 3.61 3.42 3.37 3.19
MW-217 low stress 140 ml/min	11/04/05	7.77 7.92 7.92 7.92 7.92 7.92 7.92 7.92 7.92 7.92 7.92	9:20 9:25 9:30 9:35 9:40 9:45 9:50 9:55 10:00 10:05 10:10	- - - - - - - - - - -	 5.15 5.47 5.82 6.05 6.14 6.16 6.19 6.21 6.21 6.22	 1370 1330 1320 1320 1320 1320 1320 1320 1320 1320	 15.4 15.5 15.4 15.5 15.7 15.7 15.6 15.7 15.7 15.6	99.0 <10 <10 <10 <10 <10 <10 <10 <10 <10	266 220 140 94 67 59 49 41 37 34	10.42 4.51 2.02 1.65 1.28 1.14 0.78 0.47 0.3 0.08
May 2009										
MW-101R development	04/21/09	7.03	10:53 11:03 11:07 11:15 11:24 11:30	0.0 1.8 3.6 5.4 7.2 9.0	7.28 7.33 7.29 7.29 7.29 7.26	1712 1589 1620 1617 1643 1552	11.2 9.9 9.4 9.4 9.5 9.5	700.0 >1100 >1100 >1100 >1100 >1100	-38 -44 -53 -55 -49 -39	NM NM NM NM NM NM

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-101R sampling low stress	05/08/09	7.65	14:15	0.0	7.33	68.5	13.4	363.0	-43	3.82
			14:20	0.4	7.21	9.5	12.6	288.0	-19	0.06
			14:25	0.2	7.22	2.34	12.7	211.0	-1	0
			14:30	0.3	7.23	1.98	12.8	188.0	5	0
			14:35	0.5	7.25	1.88	12.1	190.0	14	0
			14:41	0.7	7.25	1.85	12.1	155.0	20	0
			14:45	0.8	7.25	1.84	12.2	137.0	21	0
			14:50	1.0	7.26	1.84	12.3	129.0	23	0
MW-116R development	04/21/09	7.12								NM
			9:05	0.0	7.39	793.4	12.5	>1100	142	NM
			9:14	1.7	7.28	896.7	10.8	>1100	135	NM
			9:23	3.4	7.28	967.9	10.8	>1100	133	NM
			9:33	5.0	7.23	1074	11.2	>1100	129	NM
			9:50	6.7	7.19	1080	11.7	>1100	108	NM
			9:58	8.4	7.19	1120	11.2	>1100	105	NM
			10:03	10.1	7.19	1140	11.1	>1100	96	NM
sampling low stress	05/08/09	7.38	13:00	0.0	7.67	99.9	14.2	275	81	0.16
			13:05	0.1	7.58	63.5	12.4	200	82	3.11
			13:10	0.2	7.46	99.9	12.6	173	84	0
			13:15	0.3	7.48	99.9	13	172	82	0
			13:21	0.5	7.48	99.9	12.8	163	82	0
			13:25	0.6	7.47	99.9	12.8	165	82	0
			13:30	0.7	7.45	99.9	13.5	231	81	0
			13:35	0.8	7.45	99.9	13.5	178	81	0
MW-107 sampling low stress	05/08/09	7.55	8:30	0.0	6.32	4.21	11.6	199	80	9.44
			8:36	0.3	6.76	4.19	11.5	97	82	4.67
			8:41	0.5	6.86	6.32	11.6	57.3	83	4.38
			8:45	0.8	6.91	6.3	11.5	51.3	83	4.07
			8:50	1.0	6.96	9.11	11.7	41.5	82	4.05
			8:55	1.2	6.99	20.6	11.7	34.3	82	3.7
			9:00	1.4	7	21	11.8	31.8	81	3.68
			9:05	1.5	7.01	15	11.6	35.0	81	3.76
			9:10	1.7	7.01	15.7	11.6	27.4	81	3.81
			9:15	1.8	7.02	16.8	11.7	28.6	81	3.8

TABLE 5
FIELD PARAMETER SUMMARY

399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (°C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-108 sampling low stress	05/08/09	10.65	11:50	0.0	7.15	99.9	12.0	137.0	78	3.14
			11:55	0.1	7.11	42.9	12.1	121.0	79	2.58
			12:00	0.3	7.02	47.5	12.6	94.0	79	0.54
			12:05	0.4	7.02	15.7	13.5	55.5	78	0
			12:10	0.5	7.02	15.9	13.1	58.5	78	0
			12:15	0.7	7.02	19.8	12.8	46.4	78	0
			12:20	0.9	7.02	18.4	13.2	38.8	78	0
			12:25	1.2	7.03	18.2	12.9	34.8	78	0
MW-113 sampling low stress	05/08/09	7.35	10:00	0.0	6.98	99.9	12.5	806.0	82	3.37
			10:05	0.2	6.89	94.7	11.8	346.0	83	128
			10:10	0.4	6.91	97.1	11.7	143.0	82	0.99
			10:16	0.8	6.93	71.7	11.6	46.8	81	0.8
			10:21	1.0	6.94	63.3	11.9	48.9	81	0.67
			10:32	1.4	6.96	61.2	12.0	34.2	80	0.51
			10:36	1.5	6.96	57.8	12.0	33.5	80	0.49
			10:41	1.7	6.95	42.4	12.0	24.1	80	0.5
			10:47	1.9	6.96	66.1	12.2	18.1	79	0.32
			10:53	2.0	6.96	65.8	12.6	16.8	79	0.24
			10:57	2.1	6.95	67.6	12.3	18.6	79	0.21
			11:01	2.2	6.95	67.2	12.2	109.0	79	0.2
			11:05	2.3	6.96	67.9	12.3	99.1	79	0.22
MW-211 sampling low stress	05/08/09	7.64	15:19	0.0	7.03	3.46	13.0	234.0	61	3.5
			15:25	0.1	6.87	26.3	12.3	613.0	54	0
			15:30	0.2	6.84	92.1	14.8	401.0	47	0
				dry @ 0.2 gallons						

Notes:

1. ft btor = feet below top of riser.
2. SU = standard units.
3. us/cm = microsiemens per centimeter.
4. (°C) = degrees Celsius.
5. NTU = Nephelometric Turbidity Units.
6. eV = electrovolts.
7. Mg/l= milligramper liter

TABLE 6
GROUNDWATER SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Method	Parameters
<u>August 2005</u>				
GR-XX-GW-RB-GW	Rinse blank	8/8/2005	NA	TCL VOCs plus TICs by OLM 4.2
GR-MW101-GW	MW-101	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW101-LNAPL	MW-101	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TPH by NYSDOH Method 310.13
GR-MW104-GW (MS/MSD)	MW-104	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW105-GW	MW-105	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW106-GW	MW-106	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW108-GW	MW-108	8/5/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW110-GW	MW-110	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW111-GW	MW-106	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW113-GW	MW-110	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW114-GW	MW-110	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW116-GW	MW-116	8/5/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW208-GW	MW-208	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW209-GW	MW-209	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW210-GW	MW-210	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2

TABLE 6
GROUNDWATER SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Method	Parameters
GR-MW211-GW	MW-211	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW216-GW	MW-216	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW217-GW	MW-217	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-XX-DUP	MW-217	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
Trip Blank	NA	8/9/2005	NA	TCL VOCs plus TICs by OLM 4.2
<u>November 2005</u>				
GR-MW208-GW	MW-208	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW209-GW	MW-209	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW210-GW	MW-210	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW211-GW	MW-211	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW216-GW	MW-216	11/4/2005	low stress	TCL VOCs plus TICs by EPA 8260 TAL Metals by ILM 5.1
GR-DUP-GW	MW-216	11/4/2005	low stress	TAL Metals by ILM 5.1
GR-MW217-GW (MS/MSD- TAL Metals only)	MW-217	11/4/2005	low stress	TCL VOCs plus TICs by EPA 8260 TAL Metals by ILM 5.1
Trip Blank	NA	11/4/2005	NA	TCL VOCs plus TICs by OLM 4.2

TABLE 6
GROUNDWATER SAMPLE SUMMARY

399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Method	Parameters
<u>May 2009</u>				
GR-MW-101R-GW	MW-101R	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-MW-107-GW	MW-107	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-MW-108-GW	MW-108	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-MW-113-GW	MW-113	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-MW-116R-GW	MW-116R	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-003-GW-DU	MW-116R	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-MW-211-GW	MW-211	5/8/2009	low stress	TCL VOCs plus TICs by OLM 4.3
GR-002-TB	NA	5/8/2009	NA	TCL VOCs plus TICs by OLM 4.3

Notes:

1. GR-XX-DUP is a duplicate sample of GR-MW217-GW collected on 8/9/2005.
2. GR-Dup-GW is a duplicate sample of GR-MW216-GW collected on 11/4/2005.
3. GR-003-GW-DUP is a duplicate sample of GR-MW-116R-GW collected on 5/8/2009.

TABLE 7
STRATIGRAPHIC SUMMARY

399 Gregory Street
Rochester, NY

Boring Number	Misc. Fill	Fill	Native Sand	Silt/Clay	Till
AOC-1					
B-200	-	0 - 8.3	8.3 - 9.5	-	9.5 - 15.0
B-201	0 - 1.2	1.2 - 4.3	4.3 - 8.4	-	8.4 - 12.0
B-202	0 - 6.4	-	6.4 - 8.0	-	8.0 - 15.0
B-203	0 - 1.7	1.7 - 3.7	3.7 - 10.0	-	10.0 - 15.0
B-204	0 - 3.3	3.3 - 4.0	4.0 - 6.5	6.5 - 10.3	10.3 - 16.0
B-205	-	0.0 - 7.4	7.4 - 10.0	-	10.0 - 15.0
B-206	0 - 4.0	4.0 - 6.5	6.5 - 9.8	-	9.8 - 12.0
B-207	0 - 1.5	1.5 - 4.0	4.0 - 6.0	-	-
B-208	0 - 1.3	-	1.3 - 9.0	-	9.0 - 15.0
B-209	-	0.0 - 4.1	4.1 - 9.3	7.8 - 8.0	9.3 - 15.0
B-210	0 - 2.7	-	2.7 - 9.0	-	9.0 - 15.0
B-211	0 - 2.7	2.7 - 4.4	4.4 - 7.7	-	7.7 - 11.9
AOC-2					
B-212	0 - 1.8	-	1.8 - 5.5	5.5 - 9.5	9.5 - 12.0
B-213	0 - 3.6	-	3.6 - 10.0	-	10.0 - 15.0
B-214	-	0.0 - 2.2	2.2 - 10.4	10.4 - 11.2	11.2 - 15.0
B-215	0 - 1.5	-	1.5 - 6.6	6.6 - 7.2	9.0 - 10.3
B-216	0 - 1.0	-	1.0 - 6.5	6.5 - 8.7	9.7 - 15.0
B-217	0 - 1.6	-	1.6 - 3.0	3.0 - 6.6	11.5 - 15.0

Notes:

1. Stratigraphic depth intervals interpreted from individual boring logs. See boring logs for soil descriptions.

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			2000-2002	2000-2002	B-1	2000-2002	2000-2002	B-4	B-200	B-201	B-202	B-203	B-204	B-205	B-206	B-207
Sample Date			B-1	B-1	B-1	B-1	B-1 (dup)	2000-2002	4-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05
Sample ID			01	02	03	04	03	01	GR-B200-S	GR-B201-S	GR-B202-S	GR-B203-S	GR-B204-S	GR-B205-S	GR-B206-S	GR-B207-S
Sample Depth			9 - 10 ft	10 - 11 ft	12 - 14 ft	16 - 17.5 ft	12 - 14 ft	6 - 8 ft	8 - 12 ft	8 - 12 ft	12 - 15 ft	4 - 8 ft	12 - 16 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	T4080-12	T4080-09	T4080-06	T4080-03	T4080-01	T4080-02	T4080-04	T4080-05
Sample Type	Units	6NYCRR					Field Duplicate									
TCL/STARs VOC Compounds																
1,1,1-Trichloroethane	µg/kg	100000 ^b ^A 500000 ^c ^B 680 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,1,2,2-Tetrachloroethane	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,1-Dichloroethane	µg/kg	19000 ^A 240000 ^B 270 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,1-Dichloroethene	µg/kg	100000 ^b ^A 500000 ^c ^B 330 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,2,4-trichlorobenzene	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,2,4-Trimethylbenzene	µg/kg	47000 ^A 190000 ^B 3600 ^C	U	U	U	U	U	U	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	100000 ^b ^A 500000 ^c ^B 1100 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,2-Dichloroethane	µg/kg	2300 ^A 30000 ^B 20 ^c ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,2-Dichloropropane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,3-Dichlorobenzene	µg/kg	17000 ^A 280000 ^B 2400 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
1,4-Dichlorobenzene	µg/kg	9800 ^A 130000 ^B 1800 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
2-Butanone	µg/kg	100000 ^b ^A 500000 ^c ^B 120 ^C	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U
2-Hexanone	µg/kg	n/v	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U
4-Methyl-2-Pentanone	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U
Acetone	µg/kg	100000 ^b ^A 500000 ^c ^B 50 ^C	U	U	U	18	U	U	11 J	57 U	59 U	57 U	11 J	27 J	18 J	55 U
Benzene	µg/kg	2900 ^A 44000 ^B 60 ^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Bromodichloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Bromoform	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Bromomethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Carbon Disulfide	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	1.3 J	11 U J	12 U J	11 U J	12 U	12 U	1.3 J	11 U J
Carbon Tetrachloride	µg/kg	1400 ^A 22000 ^B 760 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Chlorobenzene	µg/kg	100000 ^b ^A 500000 ^c ^B 1100 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Chloroethane	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Chloroform	µg/kg	10000 ^A 350000 ^B 370 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Chloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
cis-1,2-Dichloroethene	µg/kg	59000 ^A 500000 ^c ^B 250 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
cis-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Dibromochloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Dibromoethane, 1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Dichlorodifluoromethane	µg/kg	n/v	-	-	-	-	-	-	11 U J	11 U J	12 U J	11 U J	12 U	12 U	11 U J	11 U J
Ethylbenzene	µg/kg	30000 ^A 390000 ^B 1000 ^C	50 J	U	U	10 J	U	U	1.4 J	11 U	12 U	11 U	12 U	12 U	11 U	11 U

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			2000-2002	2000-2002	B-1	2000-2002	2000-2002	B-4	B-200	B-201	B-202	B-203	B-204	B-205	B-206	B-207
Sample Date			B-1	B-1	B-1	B-1	B-1 (dup)	2000-2002	4-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05
Sample ID			01	02	03	04	03	01	GR-B200-S	GR-B201-S	GR-B202-S	GR-B203-S	GR-B204-S	GR-B205-S	GR-B206-S	GR-B207-S
Sample Depth			9 - 10 ft	10 - 11 ft	12 - 14 ft	16 - 17.5 ft	12 - 14 ft	6 - 8 ft	8 - 12 ft	8 - 12 ft	12 - 15 ft	4 - 8 ft	12 - 16 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	T4080-12	T4080-09	T4080-06	T4080-03	T4080-01	T4080-02	T4080-04	T4080-05
Sample Type	Units	6NYCRR					Field Duplicate									
Isopropylbenzene	µg/kg	y ^A y ^B y ^C	11 J	U	U	2 J	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
m/p-Xylenes	µg/kg	b _{s1} ^A c _{s1} ^B s ¹ ^C	U	U	U	12	U	U	2.1 J	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Methylene chloride	µg/kg	51000 ^A 500000 ^B 50 ^C	55 JB ^C	48 JB	U	U	47 JB	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Methyl-Tert-Butyl-Ether(MTBE)	µg/kg	62000 ^A 500000 ^B 930 ^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
o-Xylene	µg/kg	b _{s1} ^A c _{s1} ^B	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Styrene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Tetrachloroethene	µg/kg	5500 ^A 150000 ^B 1300 ^C	-	-	-	-	-	-	1.5 J	11 U J	12 U J	11 U J	12 U	1.3 J	11 U J	11 U J
Toluene	µg/kg	100000 ^b ^A 500000 ^c ^B 700 ^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
trans-1,2-Dichloroethene	µg/kg	100000 ^b ^A 500000 ^c ^B 190 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
trans-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Trichloroethane, 1,1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Trichloroethene	µg/kg	10000 ^A 200000 ^B 470 ^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Trichlorofluoromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
Vinyl chloride	µg/kg	210 ^A 13000 ^B 20 ^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U
TCL/STARs VOC Tentatively Identified Compounds																
Total TICs	µg/kg	n/v	7550	10640	139	1064	5510	6	0	0	0	6.6 JN	0	3080	0	0

Notes:

- 6NYCRRNYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
- A
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
- B
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
- C
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
- 6.5^AConcentration exceeds the indicated criteria
- 0.50 ULaboratory estimated quantitation limit exceeded criteria
- 0.03 UThe analyte was not detected above the laboratory estimated quantation limit
- n/vNo criteria/guideline value
- Parameter not analyzed / not available
- bThe SCOs for residential, restricted-residential and ecological resources were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
- y^AThere is no standard currently listed under part 375 for this parameter.
- b s1The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- c
y^BThe SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. There is no standard currently listed under part 375 for this parameter.
- c s1The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- y^CThere is no standard currently listed under part 375 for this parameter.
- gFor 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 SCO value for this use of the site.
- s1The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- JIndicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- NIndicates presumptive evidence of a compound. It applies to all TIC results.
- BCompound is identified in the associated blank.

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			B-208	B-209	B-210	B-211	B-212	B-213	B-214		B-215	B-216	B-217	MW-105	MW-107	
Sample Date			4-Aug-05	5-Aug-05	4-Aug-05	5-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002
Sample ID			GR-B208-S	GR-B209-S	GR-B210-S	GR-B211-S	GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S	MW-105	MW-107	MW-107
			01	01	01	01	01	01	01	01	01	01	01	01	01	02
Sample Depth			8 - 12 ft	12 - 15 ft	4 - 8 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	8 - 10 ft	12 - 14 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-13	T4091-01	T4080-19	T4091-02	T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type		Units	6NYCRR							Field Duplicate						
TCL/STARs VOC Compounds																
1,1,1-Trichloroethane	µg/kg	100000 ^A 500000 ^B 680 ^C	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	y ^A y ^B y ^C	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,1-Dichloroethane	µg/kg	19000 ^A 240000 ^B 270 ^C	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,1-Dichloroethene	µg/kg	100000 ^A 500000 ^B 330 ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,2,4-trichlorobenzene	µg/kg	y ^A y ^B y ^C	12 U	11 U	11 U	1.7 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,2,4-Trimethylbenzene	µg/kg	47000 ^A 190000 ^B 3600 ^C	-	-	-	-	-	-	-	-	-	-	-	U	U	U
1,2-Dichlorobenzene	µg/kg	100000 ^A 500000 ^B 1100 ^C	12 U	11 U	27	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,2-Dichloroethane	µg/kg	2300 ^A 30000 ^B 20 ^a ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,2-Dichloropropane	µg/kg	n/v	12 U	11 U	11 U	0.93 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,3-Dichlorobenzene	µg/kg	17000 ^A 280000 ^B 2400 ^C	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
1,4-Dichlorobenzene	µg/kg	9800 ^A 130000 ^B 1800 ^C	12 U	11 U	11 U	1.0 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	µg/kg	y ^A y ^B y ^C	12 U	11 U	11 U	1.4 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
2-Butanone	µg/kg	100000 ^A 500000 ^B 120 ^C	59 U	55 U	53 U	6.4 U	59 U	59 U	18 J	33 J	62 U	60 U	56 U	-	-	-
2-Hexanone	µg/kg	n/v	59 U	55 U	53 U	7.1 U	59 U	59 U	59 U	58 U	62 U	60 U	56 U	-	-	-
4-Methyl-2-Pentanone	µg/kg	y ^A y ^B y ^C	59 U	55 U	53 U	4.8 U	59 U	59 U	59 U	58 U	62 U	60 U	56 U	-	-	-
Acetone	µg/kg	100000 ^A 500000 ^B 50 ^C	15 J	55 U	11 U	12 U	1.4 J	59 U	130 ^C	230 ^C	62 U	60 U	56 U	21 BJ	16 BJ	13 BJ
Benzene	µg/kg	2900 ^A 44000 ^B 60 ^C	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U
Bromodichloromethane	µg/kg	n/v	12 U	11 U	11 U	0.97 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Bromoform	µg/kg	n/v	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Bromomethane	µg/kg	n/v	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Carbon Disulfide	µg/kg	y ^A y ^B y ^C	3.6 J	11 U J	11 U J	1.5 U	12 U J	1.9 J	4.0 J	5.1 J	12 U J	12 U J	1.8 J	-	-	-
Carbon Tetrachloride	µg/kg	1400 ^A 22000 ^B 760 ^C	12 U	11 U	11 U	2.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Chlorobenzene	µg/kg	100000 ^A 500000 ^B 1100 ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Chloroethane	µg/kg	y ^A y ^B y ^C	12 U	11 U	11 U	1.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Chloroform	µg/kg	10000 ^A 350000 ^B 370 ^C	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Chloromethane	µg/kg	n/v	12 U	11 U	11 U	2.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
cis-1,2-Dichloroethene	µg/kg	59000 ^A 500000 ^B 250 ^C	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
cis-1,3-Dichloropropene	µg/kg	n/v	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Cyclohexane	µg/kg	n/v	12 U	11 U	11 U	1.6 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Dibromochloromethane	µg/kg	n/v	12 U	11 U	11 U	1.0 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Dibromoethane, 1,2-	µg/kg	n/v	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Dichlorodifluoromethane	µg/kg	n/v	12 U J	11 U	11 U J	1.0 U	12 U J	12 U J	12 U J	12 U J	12 U J	12 U J	11 U J	-	-	-
Ethylbenzene	µg/kg	30000 ^A 390000 ^B 1000 ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			B-208	B-209	B-210	B-211	B-212	B-213	B-214		B-215	B-216	B-217	MW-105	MW-107	
Sample Date			4-Aug-05	5-Aug-05	4-Aug-05	5-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002
Sample ID			GR-B208-S	GR-B209-S	GR-B210-S	GR-B211-S	GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S	MW-105	MW-107	MW-107
			01	01	01	01	01	01	01	01	01	01	01	01	01	02
Sample Depth			8 - 12 ft	12 - 15 ft	4 - 8 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	8 - 10 ft	12 - 14 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-13	T4091-01	T4080-19	T4091-02	T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR								Field Duplicate						
Isopropylbenzene	µg/kg	y ^A y ^B y ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U
m/p-Xylenes	µg/kg	b _{s1} ^A c _{s1} ^B s1 ^C	12 U	11 U	11 U	3.3 U	12 U	12 U	12 U	12 U	12 U	12 U	1.3 J	U	9 J	U
Methyl Acetate	µg/kg	n/v	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Methylcyclohexane	µg/kg	n/v	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Methylene chloride	µg/kg	51000 ^A 500000 ^C 50 ^C	12 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U
Methyl-Tert-Butyl-Ether(MTBE)	µg/kg	62000 ^A 500000 ^C 930 ^C	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U
o-Xylene	µg/kg	b _{s1} ^A c _{s1} ^B	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Styrene	µg/kg	n/v	12 U	11 U	11 U	1.7 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Tetrachloroethene	µg/kg	5500 ^A 150000 ^B 1300 ^C	12 U J	11 U	11 U J	1.4 U	12 U J	12 U J	1.9 J	12 U J	12 U J	12 U	2.0 J	-	-	-
Toluene	µg/kg	100000 ^b ^A 500000 ^C 700 ^C	12 U	11 U	11 U	1.3 U	12 U	1.3 J	1.3 J	12 U	12 U	4.3 J	1.2 J	U	U	U
trans-1,2-Dichloroethene	µg/kg	100000 ^b ^A 500000 ^C 190 ^C	12 U	11 U	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
trans-1,3-Dichloropropene	µg/kg	n/v	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Trichloroethane, 1,1,2-	µg/kg	n/v	12 U	11 U	11 U	1.4 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Trichloroethene	µg/kg	10000 ^A 200000 ^B 470 ^C	12 U	11 U	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10 J	U	U
Trichlorofluoromethane	µg/kg	n/v	12 U	11 U	11 U	1.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
Vinyl chloride	µg/kg	210 ^A 13000 ^B 20 ^C	12 U	11 U	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-
TCL/STARs VOC Tentatively Identified Compounds																
Total TICs	µg/kg	n/v	0	0	799	78.6	29.5	1621	2290	1990	0	0	1930	4	U	U

Notes:

- 6NYCRRNYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
- A
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
- B
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
- C
NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
- 6.5^AConcentration exceeds the indicated criteria
- 0.50 ULaboratory estimated quantitation limit exceeded criteria
- 0.03 UThe analyte was not detected above the laboratory estimated quantation limit
- n/vNo criteria/guideline value
- Parameter not analyzed / not available
- bThe SCOs for residential, restricted-residential and ecological resources were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
- y^AThere is no standard currently listed under part 375 for this parameter.
- b s1The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- c
y^BThe SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. There is no standard currently listed under part 375 for this parameter.
- c s1The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- y^CThere is no standard currently listed under part 375 for this parameter.
- gFor 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 SCO value for this use of the site.
- s1The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- JIndicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- NIndicates presumptive evidence of a compound. It applies to all TIC results.
- BCompound is identified in the associated blank.

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL
PART 375 SCOs

399 Gregory Street
Rochester, NY

Sample Location			MW-108	MW-109	MW-110	MW-111	MW-112		MW-113	MW-115
Sample Date			2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			MW-108	MW-109	MW-110	MW-111	MW-112	MW-112	MW-113	MW-115
			01	01	02	01	01	02	01	01
Sample Depth			6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	12 - 14 ft	6 - 8 ft	6 - 8 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR								
TCL/STARs VOC Compounds										
1,1,1-Trichloroethane	µg/kg	100000 _b ^A 500000 _c ^B 680 ^C	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/kg	19000 ^A 240000 ^B 270 ^C	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/kg	100000 _b ^A 500000 _c ^B 330 ^C	-	-	-	-	-	-	-	-
1,2,4-trichlorobenzene	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	47000 ^A 190000 ^B 3600 ^C	U	U	U	4 J	U	U	U	4 J
1,2-Dichlorobenzene	µg/kg	100000 _b ^A 500000 _c ^B 1100 ^C	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/kg	2300 ^A 30000 ^B 20 _a ^C	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/kg	n/v	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	17000 ^A 280000 ^B 2400 ^C	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	9800 ^A 130000 ^B 1800 ^C	-	-	-	-	-	-	-	-
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
2-Butanone	µg/kg	100000 _b ^A 500000 _c ^B 120 ^C	-	-	-	-	-	-	-	-
2-Hexanone	µg/kg	n/v	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
Acetone	µg/kg	100000 _b ^A 500000 _c ^B 50 ^C	5	9 BJ	12 BJ	6 BJ	25 B	15 B	6	4 JB
Benzene	µg/kg	2900 ^A 44000 ^B 60 ^C	U	U	U	U	U	U	U	4 J
Bromodichloromethane	µg/kg	n/v	-	-	-	-	-	-	-	-
Bromoform	µg/kg	n/v	-	-	-	-	-	-	-	-
Bromomethane	µg/kg	n/v	-	-	-	-	-	-	-	-
Carbon Disulfide	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
Carbon Tetrachloride	µg/kg	1400 ^A 22000 ^B 760 ^C	-	-	-	-	-	-	-	-
Chlorobenzene	µg/kg	100000 _b ^A 500000 _c ^B 1100 ^C	-	-	-	-	-	-	-	-
Chloroethane	µg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-
Chloroform	µg/kg	10000 ^A 350000 ^B 370 ^C	-	-	-	-	-	-	-	-
Chloromethane	µg/kg	n/v	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/kg	59000 ^A 500000 _c ^B 250 ^C	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	-	-
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/kg	n/v	-	-	-	-	-	-	-	-
Dibromoethane, 1,2-	µg/kg	n/v	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	µg/kg	n/v	-	-	-	-	-	-	-	-
Ethylbenzene	µg/kg	30000 ^A 390000 ^B 1000 ^C	U	U	U	U	U	U	U	U

TABLE 8
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL VOCs IN SOIL

PART 375 SCOs

399 Gregory Street
Rochester, NY

Sample Location			MW-108	MW-109	MW-110	MW-111	MW-112		MW-113	MW-115
Sample Date			2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			MW-108	MW-109	MW-110	MW-111	MW-112	MW-112	MW-113	MW-115
			01	01	02	01	01	02	01	01
Sample Depth			6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	12 - 14 ft	6 - 8 ft	6 - 8 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR								
Isopropylbenzene	µg/kg	y ^A y ^B y ^C	U	U	U	U	U	U	U	U
m/p-Xylenes	µg/kg	b _{s1} ^A c _{s1} ^B s1 ^C	U	U	U	43 J	U	U	U	39 J
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	-	-
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-
Methylene chloride	µg/kg	51000 ^A 500000 ^C 50 ^C	U	U	U	U	U	U	U	U
Methyl-Tert-Butyl-Ether(MTBE)	µg/kg	62000 ^A 500000 ^C 930 ^C	U	U	U	U	U	U	U	8 J
o-Xylene	µg/kg	b _{s1} ^A c _{s1} ^B	-	-	-	-	-	-	-	-
Styrene	µg/kg	n/v	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/kg	5500 ^A 150000 ^B 1300 ^C	-	-	-	-	-	-	-	-
Toluene	µg/kg	100000 _b ^A 500000 ^C 700 ^C	U	U	U	31 J	U	U	U	29 J
trans-1,2-Dichloroethene	µg/kg	100000 _b ^A 500000 ^C 190 ^C	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,2-	µg/kg	n/v	-	-	-	-	-	-	-	-
Trichloroethene	µg/kg	10000 ^A 200000 ^B 470 ^C	6	U	U	U	U	U	U	U
Trichlorofluoromethane	µg/kg	n/v	-	-	-	-	-	-	-	-
Vinyl chloride	µg/kg	210 ^A 13000 ^B 20 ^C	-	-	-	-	-	-	-	-
TCL/STARs VOC Tentatively Identified Compounds										
Total TICs	µg/kg	n/v	U	U	U	7	U	15	U	U

Notes:

- 6NYCRR
- NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
- A
- NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
- B
- NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
- C
- NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
- 6.5^A
- Concentration exceeds the indicated criteria
- 0.50 U
- Laboratory estimated quantitation limit exceeded criteria
- 0.03 U
- The analyte was not detected above the laboratory estimated quantation limit
- n/v
- No criteria/guideline value
-
- Parameter not analyzed / not available
- b
- The SCOs for residential, restricted-residential and ecological resources were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
- y^A
- There is no standard currently listed under part 375 for this parameter.
- b s1
- The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- c
- The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
- y^B
- There is no standard currently listed under part 375 for this parameter.
- c s1
- The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- y^C
- There is no standard currently listed under part 375 for this parameter.
- g
- 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 SCO value for this use of the site.
- s1
- The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
- J
- Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N
- Indicates presumptive evidence of a compound. It applies to all TIC results.
- B
- Compound is identified in the associated blank.

TABLE 9
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL SVOCs IN SOIL
PART 375 SC0s
399 Gregory Street
Rochester, NY

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217	MW-109	MW-110		MW-111	MW-115	MW-116
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S	MW-109	MW-110	MW-110	MW-111	MW-115	MW-116
			01	01	01	01	01	01	01	01	01	02	01	01	01
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR				Field Duplicate									
TCL/STARs SVBN Compounds															
2,2-oxybis(1-Chloropropane)	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/kg	y ^A y ^B y ^C	980 U	970 U	970 U	960 U	1000 U	940 U	940 U	-	-	-	-	-	-
2,4-Dichlorophenol	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2,6 Dinitrotoluene	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2-Chlorophenol	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2-methylnaphthalene	µg/kg	y ^A y ^B y ^C	390 U	50 J	92 J	91 J	410 U	400 U	79 J	-	-	-	-	-	-
2-Methylphenol	µg/kg	100000 _a ^A 500000 _c ^B 330 _f ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
4- Chloroaniline	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
4-Chloro-3-methylphenol	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acenaphthene	µg/kg	100000 _a ^A 500000 _c ^B 98000 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acenaphthylene	µg/kg	100000 _a ^A 500000 _c ^B 107000 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acetophenone	µg/kg	n/v	390 U	81 J	120 J	92 J	410 U	65 J	63 J	-	-	-	-	-	-
Anthracene	µg/kg	100000 _a ^A 500000 _c ^B 1000000 _d ^C	390 U	48 J	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Atrazine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzaldehyde	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzo (a) anthracene	µg/kg	1000 _a ^A 5600 ^B 1000 _d ^C	390 U	160 J	83 J	65 J	410 U	100 J	130 J	U	U	U	U	U	119 J
Benzo (a) pyrene	µg/kg	1000 _a ^A 1000 _a ^B 22000 ^C	390 U	170 J	96 J	64 J	410 U	110 J	110 J	-	-	-	-	-	-
Benzo (b) fluoranthene	µg/kg	1000 _a ^A 5600 ^B 1700 ^C	390 U	270 J	170 J	110 J	410 U	140 J	170 J	-	-	-	-	-	-
Benzo (g,h,i) perylene	µg/kg	100000 _a ^A 500000 _c ^B 1000000 _d ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzo (k) fluoranthene	µg/kg	1000 ^A 56000 ^B 1700 ^C	390 U	110 J	52 J	47 J	410 U	81 J	86 J	-	-	-	-	-	-
Biphenyl	µg/kg	n/v	390 U	390 U	390 U	46 J	410 U	400 U	44 J	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Bis(2-Chloroethyl)ether	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
bis(2-ethylhexyl)phthalate	µg/kg	y ^A y ^B y ^C	390 U	45 J	62 J	65 J	410 U	47 J	370 U	150 B	480 B	450 B	340 B	520 B	457
Bromophenyl Phenyl Ether, 4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Butylbenzylphthlate	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	110 J	370 U	-	-	-	-	-	-
Caprolactam	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Carbazole	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chloronaphthalene, 2-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chlorophenyl Phenyl Ether, 4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chrysene	µg/kg	1000 _a ^A 56000 ^B 1000 _d ^C	390 U	150 J	86 J	69 J	410 U	96 J	130 J	U	U	U	U	U	134 J
Dibenzo(a,h)anthracene	µg/kg	330 _a ^A 560 ^B 1000000 _d ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dibenzofuran	µg/kg	14000 ^A 350000 ^B 210000 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dichlorobenzidine, 3,3'-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Diethylphthlate	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dimethylphenol, 2,4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dimethylphthlate	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Di-n-butyl phthalate	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dinitro-o-cresol, 4,6-	µg/kg	n/v	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Dinitrophenol, 2,4-	µg/kg	y ^A y ^B y ^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Dinitrotoluene, 2,4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Di-n-octyl phthlate	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Fluoranthene	µg/kg	100000 _a ^A 500000 _c ^B 1000000 _d ^C	390 U	370 J	220 J	170 J	410 U	190 J	290 J	U	U	U	U	U	201
Fluorene	µg/kg	100000 _b ^A 500000 _c ^B 386000 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Hexachlorobenzene	µg/kg	330 _f ^A 6000 ^B 3200 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Hexachlorobutadiene	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Hexachlorocyclopentadiene	µg/kg	n/v	390 U J	390 U J	390 U J	380 U J	410 U J	400 U J	370 U J	-	-	-	-	-	-
Hexachloroethane	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/kg	500 _a ^A 5600 ^B 8200 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Isophorone	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
m & p-Cresol	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Naphthalene	µg/kg	100000 _b ^A 500000 _c ^B 12000 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	U	U	U	U	U	17372 ^C
Nitroaniline, 2-	µg/kg	y ^A y ^B y ^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitroaniline, 3-	µg/kg	y ^A y ^B y ^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitroaniline, 4-	µg/kg	n/v	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitrobenzene	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Nitrophenol, 2-	µg/kg	y ^A y ^B y ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-

TABLE 9
HISTORICAL ANALYTICAL RESULTS SUMMARY
TCL SVOCs IN SOIL
PART 375 SC0s
399 Gregory Street
Rochester, NY

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217	MW-109	MW-110		MW-111	MW-115	MW-116
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S	MW-109	MW-110	MW-110	MW-111	MW-115	MW-116
			01	01	01	01	01	01	01	01	01	02	01	01	01
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR				Field Duplicate									
Nitrophenol, 4-	µg/kg	y ^A y ^B y ^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
N-Nitrosodi-n-Propylamine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
n-Nitrosodiphenylamine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Pentachlorophenol	µg/kg	2400 ^A 6700 ^B 800 ^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Phenanthrene	µg/kg	100000 _b ^A 500000 _c ^B 1000000 _d ^C	390 U	210 J	250 J	220 J	410 U	88 J	350 J	U	U	U	U	U	366
Phenol	µg/kg	100000 _b ^A 500000 _c ^B 330 ^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Pyrene	µg/kg	100000 _b ^A 500000 _c ^B 1000000 _d ^C	390 U	270 J	160 J	120 J	410 U	160 J	180 J	U	U	U	U	U	237
Trichlorophenol, 2,4,6-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
TCL/STARs SVBN Tentatively Identified Compounds															
Total TICs	µg/kg	n/v	2500	12590	18880	19240	2692	1014	22470	-	-	-	-	-	-

Notes:

6NYCRR NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives

^A NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential

^B NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial

^C NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater

6.5^A Concentration exceeds the indicated criteria

0.50 U Laboratory estimated quantitation limit exceeded criteria

0.03 U The analyte was not detected above the laboratory estimated quantation limit

n/v No criteria/guideline value

- Parameter not analyzed / not available

^A There is no standard currently listed under part 375 for this parameter.

^b The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.

^A For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.

^A For constituents where the calculated SCO was lower than the Contract Required Quantitation Limit (CRQL), the CRQL is used as the SCO value.

^B There is no standard currently listed under part 375 for this parameter.

^c The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.

^B For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.

^C There is no standard currently listed under part 375 for this parameter.

^f For constituents where the calculated SCO was lower than the Contract Required Quantitation Limit (CRQL), the CRQL is used as the SCO value.

^d The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.

^C 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 SCO value for this use of the site.

^g

J Indicates an estimated value.

B Indicates the analyte was found in the blank as well as the sample.

TABLE 10
HISTORICAL ANALYTICAL RESULTS SUMMARY
INORGANICS IN SOIL

PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			B-212-07		B-213-07		B-214-07			B-215-07		B-212	B-213	B-214		B-215	B-216	B-217	MW-105		MW-106	MW-107
Sample Date			7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GS-B212(0-4)	GS-B212(4-8)	GS-B213(0-4)	GS-B213(4-8)	GS-B214(0-4)	GS-B214(4-8)	GS-DUP	GS-B215(0-4)	GS-B215(4-8)	GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S	MW-105	MW-105D	MW-106	MW-107
Sample Depth			0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	12 - 14 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE
Laboratory Work Order			Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012
Laboratory Sample ID			Y3012-01	Y3012-02	Y3012-03	Y3012-04	Y3012-05	Y3012-06	Y3012-19	Y3012-07	Y3012-10	T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR							Field Duplicate						Field Duplicate					Field Duplicate		
RCRA Metals																						
Aluminum	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	1920	7390	5930	5260	3310	7630	4940	3860	3890	5670	2050
Antimony	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	14.0 NJ	13.9 NJ	1.2 NJ	14.0 NJ	14.5 NJ	14.4 NJ	13.6 NJ	45.8 J	45.5 J	U	3.55 BJ
Arsenic	mg/kg	16 _a ^A 16 _a ^B 16 _a ^C	3.520	1.830 J	5.450	3.640	3.510	5.050	5.470	3.460	3.240	0.51 NEJ	5.8 NEJ	10.6 NEJ	10.1 NEJ	1.7 NEJ	11.0 NEJ	8.3 NEJ	110 ^{ABC}	112 ^{ABC}	2.3	1.2
Barium	mg/kg	350 _a ^A 400 ^B 820 ^C	-	-	-	-	-	-	-	-	-	14.8 NJ	130 NJ	157 NJ	135 NJ	26.5 NJ	165 NJ	125 NJ	166	169	44.8	16.8
Beryllium	mg/kg	14 ^A 590 ^B 47 ^C	0.295 J	0.228 J	0.316 J	0.223 J	0.226 J	0.193 J	0.260 J	0.222 J	0.320 J	0.09 NJ	0.39 NJ	0.60 NJ	0.38 NJ	0.17 NJ	0.55 NJ	0.31 NJ	3.2	3.26	0.26 B	0.127 B
Cadmium	mg/kg	2.5 _a ^A 9.3 ^B 7.5 ^C	1.110 U *	1.170 U *	0.252 J*	1.150 U *	0.116 J*	1.100 U *	0.310 J*	0.260 J*	0.701 J*	1.2 NJ	7.3 NJ ^A	0.26 NJ	0.47 NJ	1.2 NJ	1.0 NJ	0.25 NJ	4.29 ^A	4.19 ^A	0.385 B	0.954
Calcium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	28800	13800	17600	25100	29300	8990	19800	92500	94500	26500 EJ	86600
Chromium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	2.8 NJ	9.9 NJ	10.6 NJ	8.3 NJ	5.0 NJ	11.0 NJ	7.7 NJ	16.9	17	8.3	4.51
Cobalt	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	1.9 NJ	5.1 NJ	6.8 NJ	5.4 NJ	4.1 NJ	5.9 NJ	5.1 NJ	42.9 J	41.7 J	6.1 J	2.19 BJ
Copper	mg/kg	270 ^A 270 ^B 1720 ^C	-	-	-	-	-	-	-	-	-	7.8	37.8	87.5	231	10.5	905 ^{AB}	99.9	31.4 J	32.3 J	16	11.7 J
Iron	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	4440	11500	17200	10900	8300	13700	10800	8320	8170	11300	4980
Lead	mg/kg	400 ^A 1000 ^B 450 ^C	-	-	-	-	-	-	-	-	-	3.1	238	295	306	5.4	402 ^A	588 ^{AC}	46.6 J	46.3 J	6.38 J	4.91 J
Magnesium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	6430	4990	6070	12900	9390	2840	6660	20900	20800	8380	27800
Manganese	mg/kg	2000 _a ^A 10000 ^B 2000 _a ^C	-	-	-	-	-	-	-	-	-	170	197	347	307	234	269	254	511	516	313	295
Mercury	mg/kg	0.81 _k ^A 2.8 _k ^B 0.73 ^C	-	-	-	-	-	-	-	-	-	0.118 NJ	0.316 NJ	0.363 NJ	0.365 NJ	0.123 NJ	0.787 NJ ^C	0.185 NJ	U	U	0.044 J	U
Nickel	mg/kg	140 ^A 310 ^B 130 ^C	9.000	10.600	10.200	11.100	7.500 J	9.030	8.480 J	7.530 J	6.120 J	3.4 NJ	9.6 NJ	10.9 NJ	10.2 NJ	8.2 NJ	13.0 NJ	8.8 NJ	44 J	43.3 J	13.1 J	4.94 J
Potassium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	497 EJ	709 EJ	762 EJ	771 EJ	624 EJ	722 EJ	757 EJ	2530 EJ	2510 EJ	1260	610 EJ
Selenium	mg/kg	36 ^A 1500 ^B 4 _a ^C	7.800 U	8.180 U	7.490 U	8.080 U	7.970 U	7.720 U	7.570 U	7.750 U	8.780 U	8.2 NJ ^C	1.2 NJ	1.4 NJ	0.98 NJ	8.4 NJ ^C	1.4 NJ	1.1 NJ	91.6 EJ ^{AC}	94.5 EJ ^{AC}	U	U
Silver	mg/kg	36 ^A 1500 ^B 8.3 ^C	-	-	-	-	-	-	-	-	-	2.3 NJ	2.3 NJ	2.3 NJ	2.3 NJ	2.4 NJ	2.4 NJ	2.3 NJ	2.94 J	3 J	U	U
Sodium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	1160	265	309	335	1210	132	686	1290 J	1340 J	118 B	187 BJ
Thallium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	5.8 NJ	5.8 NJ	5.8 NJ	5.8 NJ	6 NJ	6 NJ	5.7 NJ	119	117	U	6.62
Vanadium	mg/kg	y ^A y ^B y ^C	-	-	-	-	-	-	-	-	-	4.6 NJ	17.6 NJ	29.2 NJ	16.7 NJ	7.3 NJ	24.6 NJ	13.3 NJ	39.2	39.2	11.3	5.03 B
Zinc	mg/kg	2200 ^A 10000 ^B 2480 ^C	-	-	-	-	-	-	-	-	-	17.7 NJ	121 NJ	183 NJ	187 NJ	30.0 NJ	395 NJ	220 NJ	50.5	49.1	27.1	14.9

Notes:

6NYCRR

NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives

A

NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential

B

NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial

C

NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater

6.5^A

Concentration exceeds the indicated criteria

0.50 U

Laboratory estimated quantitation limit exceeded criteria

0.03 U

The analyte was not detected above the laboratory estimated quantation limit

n/v

No criteria/guideline value

-

Parameter not analyzed / not available

A

There is no standard currently listed under part 375 for this parameter.

y

For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.

g

This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.

A

k

There is no standard currently listed under part 375 for this parameter.

B

y

For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.

g

The SCOs for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.

e

This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.

B

k

There is no standard currently listed under part 375 for this parameter.

C

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 SCO value for this use of the site.

y

Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.

J

Spiked sample recovery not within control limits.

E

The reported value is estimated because of the presence of interference.

B

Analyte is present in associated blank.

TABLE 10
HISTORICAL ANALYTICAL RESULTS SUMMARY
INORGANICS IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			MW-108		MW-109	MW-110		MW-111	MW-112		MW-113	MW-114	MW-115		MW-116		
Sample Date			2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			MW-108	MW-108D	MW-109	MW-110	MW-110	MW-111	MW-112	MW-112	MW-113	MW-114	MW-115	MW-115D	MW116	MW-116	MW116D
Sample Depth			6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	12 - 14 ft	6 - 8 ft	8 - 11 ft	6 - 8 ft	6 - 8 ft	8 - 11 ft	12 - 14 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory																	
Laboratory Work Order																	
Laboratory Sample ID																	
Sample Type	Units	6NYCRR	UNKNOWN	UNKNOWN Field Duplicate	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN Field Duplicate	UNKNOWN	UNKNOWN	UNKNOWN Field Duplicate
RCRA Metals																	
Aluminum	mg/kg	y ^A y ^B y ^C	5950 J	5870	1710	2180	2240	2320	3350	3150	2110 J	2310	3250	3630	6640	2300	6230
Antimony	mg/kg	y ^A y ^B y ^C	3.44 BJ	3.45	0.349 BJ	U	U	0.364 BJ	0.415 BJ	U	0.556 BJ	U	0.392 J	U	U	U	U
Arsenic	mg/kg	16 _a ^A 16 _a ^B 16 _a ^C	12.4	12.5	3.4	6.63	3.13	1.6	1.87	3.4	1.77	1.92	2.86	2.75	1.97	1.52	1.86
Barium	mg/kg	350 _a ^A 400 ^B 820 ^C	33.1	32.1	26.3	116	22.6	13.1 B	24.5	25.6	12 B	17.3	25.1	28	60.9	16.1	56.8
Beryllium	mg/kg	14 ^A 590 ^B 47 ^C	0.566	0.543	0.676	0.154 B	0.195 B	0.108 B	0.179 B	0.173 B	U	0.125 B	0.167 B	0.185 B	0.337 B	0.119 B	0.295 B
Cadmium	mg/kg	2.5 _a ^A 9.3 ^B 7.5 ^C	0.511 B	0.351	U	1.42	1.4	0.778	0.157 B	1.15	U	0.302 B	1.2	1.25	0.642	0.258 B	0.52
Calcium	mg/kg	y ^A y ^B y ^C	40300	41300	28600 EJ	59400 EJ	27600 EJ	25100 EJ	24300	51400	20500	53000 EJ	35100 EJ	37200 EJ	47400 EJ	65100 EJ	44300 EJ
Chromium	mg/kg	y ^A y ^B y ^C	14.8	14.5	5.24	4.18	4.84	4.46	5.06	4.99	4.02	3.87	5.81	6.4	11	4.53	10.2
Cobalt	mg/kg	y ^A y ^B y ^C	8.74 J	8.79	1.95 BJ	3.09 BJ	3.13 BJ	2.59 BJ	3.8 BJ	3.27 BJ	2.2 BJ	2.35 BJ	3.55 BJ	3.99 BJ	5.67 J	2.17 BJ	5.19 J
Copper	mg/kg	270 ^A 270 ^B 1720 ^C	11.9	11.9	16.7	13	13.8	10.5	16.9 J	15 J	9.79	9.52	15.4	16.4	15.9	10.7	15
Iron	mg/kg	y ^A y ^B y ^C	12100 EJ	12300 EJ	4640 EJ	9460 EJ	8010 EJ	5310 EJ	7060	6320	5360 EJ	6600	7580 EJ	8000 EJ	13400	7340	12400
Lead	mg/kg	400 ^A 1000 ^B 450 ^C	14.6 J	14.2	3.24 J	5.91 J	10.6 J	3.67 J	7.98 J	7.77 J	6.58 J	5.87 J	6.42 J	7.12 J	7.45 J	4.99 J	7 J
Magnesium	mg/kg	y ^A y ^B y ^C	18900 EJ	19000 EJ	5490 EJ	13300 EJ	28600 EJ	6890 EJ	8600	15400	5200 EJ	20100	8760 EJ	9580 EJ	11150	17200	10700
Manganese	mg/kg	2000 _a ^A 10000 _a ^B 2000 _a ^C	296 EJ	296 EJ	246	487	298	204	239	282	178 EJ	232	256	293	283	243	268
Mercury	mg/kg	0.81 _k ^A 2.8 _k ^B 0.73 ^C	U	U	U	U	6.37 J ^{ABC}	U	U	U	U	0.062 J	U	U	0.058 J	0.041 J	0.05 J
Nickel	mg/kg	140 ^A 310 ^B 130 ^C	13.3 J	12.5	4.58 J	5.62 J	U	5.47 J	8.63 J	6.76 J	4.31 J	5.29 J	7.88 J	8.62 J	12.9 J	4.47 J	11.8 J
Potassium	mg/kg	y ^A y ^B y ^C	1160	1130	426	847	1500	485	589 EJ	806 EJ	401 B	797	612	675	1660	738	1540
Selenium	mg/kg	36 ^A 1500 ^B 4 _a ^C	9 J ^C	9.24 ^C	U	U	U	U	U	U	U	U	U	U	U	U	U
Silver	mg/kg	36 ^A 1500 ^B 8.3 ^C	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Sodium	mg/kg	y ^A y ^B y ^C	358 B	351	122 B	163 B	186 B	121 B	150 BJ	162 BJ	248 B	141 B	129 B	142 B	163 B	151 B	155 B
Thallium	mg/kg	y ^A y ^B y ^C	12	10.9	5.83	12.5	11.1	5.84	8.74	7.98	U	1.09	10.2	10.3	2.42	1.5	1.81
Vanadium	mg/kg	y ^A y ^B y ^C	13.5	13.4	3.87 B	4.99 B	4.65 B	5.31	6.68	6.73	6.13	5.47	6.26	6.7	14.5	6.5	13.5
Zinc	mg/kg	2200 ^A 10000 _a ^B 2480 ^C	37.4 EJ	37.7 EJ	13.7 EJ	13.2 EJ	16.7 EJ	12.5 EJ	21.4	155	14.6 EJ	11.9	20.7 EJ	22.8 EJ	24.1	12.8	23.3

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5 ^A	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available
A	There is no standard currently listed under part 375 for this parameter.
y ^A	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
g ^A	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
k ^A	There is no standard currently listed under part 375 for this parameter.
y ^B	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
g ^B	The SCOs for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
e ^B	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
k ^B	There is no standard currently listed under part 375 for this parameter.
y ^C	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
y ^C	background concentration is used as the SCO value for this use of the site.
g ^C	
J	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Spiked sample recovery not within control limits.
E	The reported value is estimated because of the presence of interference.
B	Analyte is present in associated blank.

TABLE 11
HISTORICAL ANALYTICAL RESULTS SUMMARY
PCBs IN SOIL
PART 375 SCOs
399 Gregory Street
Rochester, NY

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05
Sample ID			GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15
Sample Type	Units	6NYCRR				Field Duplicate			
Polychlorinated Biphenyls									
Aroclor 1016	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor 1242	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1221	µg/kg	n/v	79 U	79 U	79 U	78 U	83 U	81 U	76 U
Aroclor-1232	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1248	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1254	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1260	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U

Notes:

6NYCRR NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives

- A NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
- B NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
- C NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
- D NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001. SCOs 1,000 (Surface); 10,000 (Subsurface)

6.5^A Concentration exceeds the indicated criteria

0.50 U Laboratory estimated quantitation limit exceeded criteria

0.03 U The analyte was not detected above the laboratory estimated quantitation limit

n/v No criteria/guideline value

- Parameter not analyzed / not available

There is criteria for Total PCBs, but the lab did not report Total PCB.

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	AOC1								NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
		GR-MW101-GW	GR-MW101-LNAPL	GR-MW105-GW	GR-MW108-GW	GR-MW110-GW	GR-MW113-GW	GR-MW114-GW	GR-MW116-GW	
		T4138-03	T4138-02	T4138-04	T4091-03	T4138-05	T4138-14	T4138-10	T4091-04	
		08/08/05	08/08/05	08/08/05	08/05/05	08/08/05	08/09/05	08/09/05	08/05/05	
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	71-55-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1,2-Trichloroethane	79-00-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1-Dichloroethane	75-34-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1-Dichloroethene	75-35-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,2,4-Trichlorobenzene	120-82-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,2,4-Trimethylbenzene	95-63-6									5
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.04
1,2-Dibromoethane	106-93-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
1,2-Dichlorobenzene	95-50-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
1,2-Dichloroethane	107-06-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
1,2-Dichloropropane	78-87-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
1,3-Dichlorobenzene	541-73-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
1,3,5-Trimethylbenzene	108-67-8									5
1,4-Dichlorobenzene	106-46-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
2-Butanone	78-93-3	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 (G)
2-Hexanone	591-78-6	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 (G)
4-Isopropyltoluene	99-87-6									5
4-Methyl-2-Pentanone	108-10-1	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	NS
Acetone	67-64-1	50 U	50 U	50 U	10 U	50 U	50 U	50 U	50 U	50 (G)
Benzene	71-43-2	<u>3.7</u> J	<u>3.5</u> J	10 U	10 U	10 U	10 U	10 U	<u>2.1</u> J	1
Bromodichloromethane	75-27-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
Bromoform	75-25-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
Bromomethane	74-83-9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Carbon Disulfide	75-15-0	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.91 J	60 (G)
Carbon Tetrachloride	56-23-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Chlorobenzene	108-90-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Chloroethane	75-00-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Chloroform	67-66-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	7
Chloromethane	74-87-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
cis-1,2-Dichloroethene	156-59-2	1.8 J	2.0 J	10 U	10 U	10 U	10 U	10 U	1.0 J	5
cis-1,3-Dichloropropene	10061-01-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.4 (-cis and -trans)
Cyclohexane	110-82-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
Dibromochloromethane	124-48-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
Dichlorodifluoromethane	75-71-8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Ethyl Benzene	100-41-4	<u>6.2</u> J	1.0 J	10 U	10 U	10 U	10 U	10 U	1.9 J	5
Isopropylbenzene	98-82-8	3.5 J	10 U	10 U	10 U	10 U	10 U	10 U	<u>22</u>	5
m/p-Xylenes	136777-61-2	<u>60</u>	<u>16</u>	10 U	10 U	10 U	10 U	10 U	<u>190</u>	5

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units		AOC1								
		GR-MW101-GW	GR-MW101-LNAPL	GR-MW105-GW	GR-MW108-GW	GR-MW110-GW	GR-MW113-GW	GR-MW114-GW	GR-MW116-GW	NYSDEC Groundwater
		T4138-03	T4138-02	T4138-04	T4091-03	T4138-05	T4138-14	T4138-10	T4091-04	Standards and Guidance
		08/08/05	08/08/05	08/08/05	08/05/05	08/08/05	08/09/05	08/09/05	08/05/05	Values ⁽¹⁾
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	CAS #	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Methyl Acetate	79-20-9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
Methyl tert-butyl Ether	1634-04-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 (G)
Methylcyclohexane	108-87-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.8 J	NS
Methylene Chloride	75-09-2	10 U	8.0 J	10 U	10 U	10 U	10 U	10 U	10 U	5
Naphthalene	91-20-3									10
n-Propylbenzene	103-65-1									5
o-Xylene	95-47-6	57	1.7 J	10 U	10 U	10 U	10 U	10 U	2.4 J	5
sec-Butylbenzene	135-98-8									5
Styrene	100-42-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.4 (-cis and -trans)
tert-Butylbenzene	98-06-6									5
Tetrachloroethene	127-18-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Toluene	108-88-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Trichloroethene	79-01-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Trichlorofluoromethane	75-69-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Vinyl Chloride	75-01-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2
Xylenes (total)	1330-20-7									
Total TICs		12.2	0	0	0	0	0	0	989	NS

- Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
 2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard has been established by NYSDEC.
 7. GR-XX-Dup is a duplicate of GR-MW217-GW.
 8. "U" = Compound was analyzed but was not detected.
 9. "J" = Indicates an estimated value.

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units		AOC1								NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
		GR-MW208-GW	GR-MW208-GW	GR-MW209-GW	GR-MW209-GW	GR-MW210-GW	GR-MW210-GW	GR-MW211-GW	GR-MW211-GW	
		T4138-11	T5588-01	T4138-12	T5588-02	T4138-13	T5588-03	T4138-15	T5588-04	
		08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	11/04/05	
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
	CAS #	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
1,1,1-Trichloroethane	71-55-6	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	5
1,1,2-Trichloroethane	79-00-5	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	1
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	5
1,1-Dichloroethane	75-34-3	10 U	0.17 U	10 U	0.17 U	10 U	0.17 U	10 U	0.17 U	5
1,1-Dichloroethene	75-35-4	10 U	0.19 U	10 U	0.19 U	10 U	0.19 U	10 U	0.19 U	5
1,2,4-Trichlorobenzene	120-82-1	10 U	0.08 UJ	10 UJ	0.08 U	10 UJ	0.08 U	10 UJ	0.08 U	5
1,2,4-Trimethylbenzene	95-63-6									5
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	0.20 U	10 U	0.20 U	10 U	0.20 U	10 U	0.20 U	0.04
1,2-Dibromoethane	106-93-4	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	NS
1,2-Dichlorobenzene	95-50-1	10 U	0.08 UJ	10 UJ	0.08 U	10 UJ	0.08 U	10 UJ	0.08 U	3
1,2-Dichloroethane	107-06-2	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	1
1,2-Dichloropropane	78-87-5	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	1
1,3-Dichlorobenzene	541-73-1	10 U	0.10 UJ	10 UJ	0.10 U	10 UJ	0.10 U	10 UJ	0.10 U	3
1,3,5-Trimethylbenzene	108-67-8									5
1,4-Dichlorobenzene	106-46-7	10 U	0.12 UJ	10 UJ	0.12 U	10 UJ	0.12 U	10 UJ	0.12 U	3
2-Butanone	78-93-3	50 U	0.23 U	50 U	0.23 U	50 U	0.23 U	50 U	0.23 U	50 (G)
2-Hexanone	591-78-6	50 U	0.57 U	50 U	0.57 U	50 U	0.57 U	50 U	0.57 U	50 (G)
4-Isopropyltoluene	99-87-6									5
4-Methyl-2-Pentanone	108-10-1	50 U	0.46 U	50 U	0.46 U	50 U	0.46 U	50 U	0.46 U	NS
Acetone	67-64-1	50 U	1.6 U	50 U	1.6 U	50 U	1.6 U	50 U	1.6 U	50 (G)
Benzene	71-43-2	10 U	0.15 UJ	10 UJ	0.15 U	10 UJ	0.15 U	10 UJ	0.15 U	1
Bromodichloromethane	75-27-4	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	50 (G)
Bromoform	75-25-2	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	50 (G)
Bromomethane	74-83-9	10 U	0.18 U	10 U	0.18 U	10 U	0.18 U	10 U	0.18 U	5
Carbon Disulfide	75-15-0	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	60 (G)
Carbon Tetrachloride	56-23-5	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	5
Chlorobenzene	108-90-7	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
Chloroethane	75-00-3	10 U	0.46 U	10 U	0.46 U	10 U	0.46 U	10 U	0.46 U	5
Chloroform	67-66-3	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	7
Chloromethane	74-87-3	10 U	0.08 U	10 U	0.08 U	10 U	0.08 U	10 U	0.08 U	NS
cis-1,2-Dichloroethene	156-59-2	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	5
cis-1,3-Dichloropropene	10061-01-5	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	0.4 (-cis and -trans)
Cyclohexane	110-82-7	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	NS
Dibromochloromethane	124-48-1	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	50 (G)
Dichlorodifluoromethane	75-71-8	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5
Ethyl Benzene	100-41-4	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
Isopropylbenzene	98-82-8	10 U	0.12 UJ	10 UJ	0.12 U	10 UJ	0.12 U	10 UJ	0.12 U	5
m/p-Xylenes	136777-61-2	10 U	0.24 UJ	10 UJ	0.24 U	10 UJ	0.24 U	10 UJ	0.24 U	5

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units		AOC1								
		GR-MW208-GW	GR-MW208-GW	GR-MW209-GW	GR-MW209-GW	GR-MW210-GW	GR-MW210-GW	GR-MW211-GW	GR-MW211-GW	NYSDEC Groundwater
		T4138-11	T5588-01	T4138-12	T5588-02	T4138-13	T5588-03	T4138-15	T5588-04	Standards and Guidance
		08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	11/04/05	Values ⁽¹⁾
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0		
	CAS #	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Methyl Acetate	79-20-9	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	NS
Methyl tert-butyl Ether	1634-04-4	10 U	0.22 U	10 U	0.22 U	10 U	0.22 U	10 U	0.22 U	10 (G)
Methylcyclohexane	108-87-2	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	NS
Methylene Chloride	75-09-2	10 U	0.42 U	10 U	0.42 U	10 U	0.42 U	10 U	0.42 U	5
Naphthalene	91-20-3									10
n-Propylbenzene	103-65-1									5
o-Xylene	95-47-6	10 U	0.13 UJ	10 UJ	0.13 U	10 UJ	0.13 U	10 UJ	0.13 U	5
sec-Butylbenzene	135-98-8									5
Styrene	100-42-5	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	0.4 (-cis and -trans)
tert-Butylbenzene	98-06-6									5
Tetrachloroethene	127-18-4	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5
Toluene	108-88-3	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	5
Trichloroethene	79-01-6	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5
Trichlorofluoromethane	75-69-4	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	5
Vinyl Chloride	75-01-4	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	2
Xylenes (total)	1330-20-7									
Total TICs		0	0	0	0	0	0	0	0	NS

- Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
 2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard has been established by NYSDEC.
 7. GR-XX-Dup is a duplicate of GR-MW217-GW.
 8. "U" = Compound was analyzed but was not detected.
 9. "J" = Indicates an estimated value.

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	AOC 2								NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
		GR-MW104-GW	GR-MW106-GW	GR-MW111-GW	GR-MW216-GW	GR-MW216-GW	T4138-07	GR-MW217-GW	GR-XX-DUP	
		T4138-16	T4138-08	T4138-19	T4138-06	T5588-05	T4138-07	T5588-07	T4138-09	
		08/09/05	08/09/05	08/09/05	08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
1,1,1-Trichloroethane	71-55-6	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	5
1,1,2-Trichloroethane	79-00-5	10 U	10 U	10 U	10 U	0.11 U	10 U	0.11 U	10 U	1
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	5
1,1-Dichloroethane	75-34-3	10 U	10 U	10 U	10 U	0.17 U	10 U	0.17 U	10 U	5
1,1-Dichloroethene	75-35-4	10 U	10 U	10 U	10 U	0.19 U	10 U	0.19 U	10 U	5
1,2,4-Trichlorobenzene	120-82-1	10 U	10 U	10 U	10 UJ	0.08 U	10 U	0.08 U	10 U	5
1,2,4-Trimethylbenzene	95-63-6									5
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	10 U	10 U	10 U	0.20 U	10 U	0.20 U	10 U	0.04
1,2-Dibromoethane	106-93-4	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	NS
1,2-Dichlorobenzene	95-50-1	10 U	10 U	10 U	10 UJ	0.08 U	10 U	0.08 U	10 U	3
1,2-Dichloroethane	107-06-2	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	1
1,2-Dichloropropane	78-87-5	10 U	10 U	10 U	10 U	0.15 U	10 U	0.15 U	10 U	1
1,3-Dichlorobenzene	541-73-1	10 U	10 U	10 U	10 UJ	0.10 U	10 U	0.10 U	10 U	3
1,3,5-Trimethylbenzene	108-67-8									5
1,4-Dichlorobenzene	106-46-7	10 U	10 U	10 U	10 UJ	0.12 U	10 U	0.12 U	10 U	3
2-Butanone	78-93-3	50 U	50 U	50 U	50 U	0.23 U	50 U	0.23 U	50 U	50 (G)
2-Hexanone	591-78-6	50 U	50 U	50 U	50 U	0.57 U	50 U	0.57 U	50 U	50 (G)
4-Isopropyltoluene	99-87-6									5
4-Methyl-2-Pentanone	108-10-1	50 U	50 U	50 U	50 U	0.46 U	50 U	0.46 U	50 U	NS
Acetone	67-64-1	50 U	50 U	50 U	50 U	1.6 U	50 U	1.6 U	10 U	50 (G)
Benzene	71-43-2	10 U	10 U	10 U	10 UJ	0.15 U	10 U	0.15 U	10 U	1
Bromodichloromethane	75-27-4	10 U	10 U	10 U	10 U	0.14 U	10 U	0.14 U	10 U	50 (G)
Bromoform	75-25-2	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	50 (G)
Bromomethane	74-83-9	10 U	10 U	10 U	10 U	0.18 U	10 U	0.18 U	10 U	5
Carbon Disulfide	75-15-0	10 U	10 U	10 U	10 U	0.11 U	10 U	0.11 U	10 U	60 (G)
Carbon Tetrachloride	56-23-5	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	5
Chlorobenzene	108-90-7	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
Chloroethane	75-00-3	10 U	10 U	10 U	10 U	0.46 U	10 U	0.46 U	10 U	5
Chloroform	67-66-3	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	7
Chloromethane	74-87-3	10 U	10 U	10 U	10 U	0.08 U	10 U	0.08 U	10 U	NS
cis-1,2-Dichloroethene	156-59-2	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	5
cis-1,3-Dichloropropene	10061-01-5	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	0.4 (-cis and -trans)
Cyclohexane	110-82-7	10 U	10 U	10 U	10 U	0.15 U	10 U	0.15 U	10 U	NS
Dibromochloromethane	124-48-1	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	50 (G)
Dichlorodifluoromethane	75-71-8	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5
Ethyl Benzene	100-41-4	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
Isopropylbenzene	98-82-8	10 U	10 U	10 U	10 UJ	0.12 U	10 U	0.12 U	10 U	5
m/p-Xylenes	136777-61-2	10 U	10 U	10 U	10 UJ	0.24 U	10 U	0.24 U	10 U	5

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	AOC 2								
		GR-MW104-GW	GR-MW106-GW	GR-MW111-GW	GR-MW216-GW	GR-MW216-GW		GR-MW217-GW	GR-XX-DUP	NYSDEC Groundwater
		T4138-16	T4138-08	T4138-19	T4138-06	T5588-05	T4138-07	T5588-07	T4138-09	Standards and Guidance
		08/09/05	08/09/05	08/09/05	08/09/05	11/04/05	08/09/05	11/04/05	08/09/05	Values ⁽¹⁾
		WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	1.0	1.0	1.0		
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Methyl Acetate	79-20-9	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	NS
Methyl tert-butyl Ether	1634-04-4	10 U	10 U	10 U	10 U	0.22 U	10 U	1.5	10 U	10 (G)
Methylcyclohexane	108-87-2	10 U	10 U	10 U	10 U	0.14 U	10 U	0.14 U	10 U	NS
Methylene Chloride	75-09-2	10 U	10 U	10 U	10 U	0.42 U	10 U	0.42 U	10 U	5
Naphthalene	91-20-3									10
n-Propylbenzene	103-65-1									5
o-Xylene	95-47-6	10 U	10 U	10 U	10 UJ	0.13 U	10 U	0.13 U	10 U	5
sec-Butylbenzene	135-98-8									5
Styrene	100-42-5	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.4 (-cis and -trans)
tert-Butylbenzene	98-06-6									5
Tetrachloroethene	127-18-4	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5
Toluene	108-88-3	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	5
Trichloroethene	79-01-6	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5
Trichlorofluoromethane	75-69-4	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	5
Vinyl Chloride	75-01-4	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	2
Xylenes (total)	1330-20-7									
Total TICs		0	0	0	0	0	0	0	0	NS

- Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
 2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard has been established by NYSDEC.
 7. GR-XX-Dup is a duplicate of GR-MW217-GW.
 8. "U" = Compound was analyzed but was not detected.
 9. "J" = Indicates an estimated value.

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)								
		AOC 1								
		MW-101 11/6/2000 WATER	MW-101 3/27/2001 WATER	MW-101 9/12/2001 WATER	MW-108 3/27/2001 WATER	MW-108 1/29/2002 WATER	MW-109 3/8/2001 WATER	MW-109 9/12/2001 WATER	MW-110 3/8/2001 WATER	Standards and Guidance Values ⁽¹⁾
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	71-55-6									5
1,1,2,2-Tetrachloroethane	79-34-5									5
1,1,2-Trichloroethane	79-00-5									1
1,1,2-Trichlorotrifluoroethane	76-13-1									5
1,1-Dichloroethane	75-34-3									5
1,1-Dichloroethene	75-35-4									5
1,2,4-Trichlorobenzene	120-82-1									5
1,2,4-Trimethylbenzene	95-63-6		<u>21.3</u>							5
1,2-Dibromo-3-Chloropropane	96-12-8									0.04
1,2-Dibromoethane	106-93-4									NS
1,2-Dichlorobenzene	95-50-1									3
1,2-Dichloroethane	107-06-2									1
1,2-Dichloropropane	78-87-5									1
1,3-Dichlorobenzene	541-73-1									3
1,3,5-Trimethylbenzene	108-67-8		<u>24.5</u>							5
1,4-Dichlorobenzene	106-46-7									3
2-Butanone	78-93-3									50 (G)
2-Hexanone	591-78-6									50 (G)
4-Isopropyltoluene	99-87-6									5
4-Methyl-2-Pentanone	108-10-1									NS
Acetone	67-64-1									50 (G)
Benzene	71-43-2		<u>7.2</u>	<u>15</u>				<u>10.8</u>		1
Bromodichloromethane	75-27-4									50 (G)
Bromoform	75-25-2									50 (G)
Bromomethane	74-83-9									5
Carbon Disulfide	75-15-0									60 (G)
Carbon Tetrachloride	56-23-5									5
Chlorobenzene	108-90-7									5
Chloroethane	75-00-3									5
Chloroform	67-66-3									7
Chloromethane	74-87-3									NS
cis-1,2-Dichloroethene	156-59-2									5
cis-1,3-Dichloropropene	10061-01-5									0.4 (-cis and -trans)
Cyclohexane	110-82-7									NS
Dibromochloromethane	124-48-1									50 (G)
Dichlorodifluoromethane	75-71-8									5
Ethyl Benzene	100-41-4	<u>400</u>								5
Isopropylbenzene	98-82-8									5
m/p-Xylenes	136777-61-2									5

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)								
		AOC 1								
		MW-101 11/6/2000 WATER	MW-101 3/27/2001 WATER	MW-101 9/12/2001 WATER	MW-108 3/27/2001 WATER	MW-108 1/29/2002 WATER	MW-109 3/8/2001 WATER	MW-109 9/12/2001 WATER	MW-110 3/8/2001 WATER	Standards and Guidance Values ⁽¹⁾
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Methyl Acetate	79-20-9									NS
Methyl tert-butyl Ether	1634-04-4				<u>19.1</u>	<u>16</u>				10 (G)
Methylcyclohexane	108-87-2									NS
Methylene Chloride	75-09-2						<u>24</u> B		<u>10</u> B	5
Naphthalene	91-20-3		<u>15.3</u>							10
n-Propylbenzene	103-65-1									5
o-Xylene	95-47-6									5
sec-Butylbenzene	135-98-8									5
Styrene	100-42-5									5
t-1,3-Dichloropropene	10061-02-6									0.4 (-cis and -trans)
tert-Butylbenzene	98-06-6									5
Tetrachloroethene	127-18-4									5
Toluene	108-88-3	<u>1,400</u>	<u>471.3</u>	<u>7.7</u>						5
trans-1,2-Dichloroethene	156-60-5									5
Trichloroethene	79-01-6									5
Trichlorofluoromethane	75-69-4									5
Vinyl Chloride	75-01-4									2
Xylenes (total)	1330-20-7	<u>2,420</u>	<u>1,183</u>	<u>13.8</u>						
Total TICs										NS

- Notes:
- 1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
 - 2. ug/l = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
 - 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 - 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 - 5. (G) = guidance value.
 - 6. "NS" = No Standard has been established by NYSDEC.
 - 7. Blank space = not detected.
 - 8. "E" = Exceeds calibration limits.
 - 9. "B" = Present in associated blank.

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)								NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾
		AOC 1						AOC 2		
		MW-116 3/29/2001 WATER	MW-116 9/11/2001 WATER	MW-116 9/12/2001 WATER	MW-116 1/30/2002 WATER	MW-BR1 3/27/2001 WATER	MW-BR1 9/12/2001 WATER	MW-106 1/29/2002 WATER	MW-111 3/8/2001 WATER	
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
1,1,1-Trichloroethane	71-55-6									5
1,1,2,2-Tetrachloroethane	79-34-5									5
1,1,2-Trichloroethane	79-00-5									1
1,1,2-Trichlorotrifluoroethane	76-13-1									5
1,1-Dichloroethane	75-34-3									5
1,1-Dichloroethene	75-35-4									5
1,2,4-Trichlorobenzene	120-82-1									5
1,2,4-Trimethylbenzene	95-63-6	<u>424.3</u>	<u>2,393</u> E	<u>903.2</u>		<u>14.5</u>				5
1,2-Dibromo-3-Chloropropane	96-12-8									0.04
1,2-Dibromoethane	106-93-4									NS
1,2-Dichlorobenzene	95-50-1									3
1,2-Dichloroethane	107-06-2									1
1,2-Dichloropropane	78-87-5									1
1,3-Dichlorobenzene	541-73-1									3
1,3,5-Trimethylbenzene	108-67-8	<u>159.6</u>	<u>833.6</u>	<u>393.4</u>		<u>5.1</u>				5
1,4-Dichlorobenzene	106-46-7									3
2-Butanone	78-93-3									50 (G)
2-Hexanone	591-78-6									50 (G)
4-Isopropyltoluene	99-87-6	<u>52.7</u>	<u>108.9</u>	<u>51.9</u>						5
4-Methyl-2-Pentanone	108-10-1									NS
Acetone	67-64-1									50 (G)
Benzene	71-43-2		<u>545.9</u>	<u>42.8</u>			<u>8.7</u>			1
Bromodichloromethane	75-27-4									50 (G)
Bromoform	75-25-2									50 (G)
Bromomethane	74-83-9									5
Carbon Disulfide	75-15-0									60 (G)
Carbon Tetrachloride	56-23-5									5
Chlorobenzene	108-90-7									5
Chloroethane	75-00-3									5
Chloroform	67-66-3	<u>7.8</u>								7
Chloromethane	74-87-3									NS
cis-1,2-Dichloroethene	156-59-2									5
cis-1,3-Dichloropropene	10061-01-5									0.4 (-cis and -trans)
Cyclohexane	110-82-7									NS
Dibromochloromethane	124-48-1									50 (G)
Dichlorodifluoromethane	75-71-8									5
Ethyl Benzene	100-41-4	<u>1751</u>	<u>3,910</u> E	<u>1,201</u>	<u>3,700</u>	2.3		2.5		5
Isopropylbenzene	98-82-8	<u>95.3</u>	<u>84.5</u>	<u>25.2</u>	<u>180</u>					5
m/p-Xylenes	136777-61-2									5

TABLE 12
HISTORICAL SUMMARY OF TCL VOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)								NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾
		AOC 1						AOC 2		
		MW-116 3/29/2001 WATER	MW-116 9/11/2001 WATER	MW-116 9/12/2001 WATER	MW-116 1/30/2002 WATER	MW-BR1 3/27/2001 WATER	MW-BR1 9/12/2001 WATER	MW-106 1/29/2002 WATER	MW-111 3/8/2001 WATER	
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Methyl Acetate	79-20-9									NS
Methyl tert-butyl Ether	1634-04-4		<u>46</u>		280					10 (G)
Methylcyclohexane	108-87-2									NS
Methylene Chloride	75-09-2								<u>16</u> B	5
Naphthalene	91-20-3	<u>204.5</u>	<u>178.1</u>			7.6		5.3		10
n-Propylbenzene	103-65-1	<u>92.4</u>	<u>60.1</u>							5
o-Xylene	95-47-6									5
sec-Butylbenzene	135-98-8	<u>66</u>	<u>114.8</u>	<u>39.8</u>						5
Styrene	100-42-5									5
t-1,3-Dichloropropene	10061-02-6									0.4 (-cis and -trans)
tert-Butylbenzene	98-06-6		<u>26.3</u>							5
Tetrachloroethene	127-18-4									5
Toluene	108-88-3	<u>237.7</u>	95.3			<u>5.7</u>				5
trans-1,2-Dichloroethene	156-60-5									5
Trichloroethene	79-01-6									5
Trichlorofluoromethane	75-69-4									5
Vinyl Chloride	75-01-4									2
Xylenes (total)	1330-20-7	<u>2,974</u>	<u>128,487</u> E	<u>70,767</u>	<u>14,770</u>	<u>29.2</u>		<u>14.5</u>		
Total TICs					12,580					NS

- Notes:
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 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard has been established by NYSDEC.
 7. Blank space = not detected.
 8. "E" = Exceeds calibration limits.
 9. "B" = Present in associated blank.

TABLE 13
HISTORICAL SUMMARY OF TCL SVOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC INVESTIG ATIONS (ug/L) AOC 1 MW-101	AOC 2						NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
			GR-MW104-GW	GR-MW106-GW	GR-MW111-GW	GR-MW216-GW	GR-MW217-GW	GR-XX-DUP	
			T4138-16	T4138-08	T4138-19	T4138-06	T4138-07	T4138-09	
			08/09/05	08/09/05	08/09/05	08/09/05	08/09/05	08/09/05	
			WATER	WATER	WATER	WATER	WATER	WATER	
1.0	1.0	1.0	1.0	1.0	1.0				
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L			
1,1-Biphenyl	92-52-4	<u>18</u> 4.4	10 U	10 U	10 U	10 U	10 U	10 U	5
2,2-oxybis(1-Chloropropane)	108-60-1		10 U	10 U	10 U	10 U	10 U	10 U	NS
2,4,5-Trichlorophenol	95-95-4		10 U	10 U	10 U	10 U	10 U	10 U	NS
2,4,6-Trichlorophenol	88-06-2		10 U	10 U	10 U	10 U	10 U	10 U	NS
2,4-Dichlorophenol	120-83-2		10 U	10 U	10 U	10 U	10 U	10 U	50
2,4-Dimethylphenol	105-67-9		10 U	10 U	10 U	10 U	10 U	10 U	50
2,4-Dinitrophenol	51-28-5		21 U	21 U	20 U	20 U	20 U	21 U	5
2,4-Dinitrotoluene	121-14-2		10 U	10 U	10 U	10 U	10 U	10 U	5
2,6-Dinitrotoluene	606-20-2		10 U	10 U	10 U	10 U	10 U	10 U	5
2-Chloronaphthalene	91-58-7		10 U	10 U	10 U	10 U	10 U	10 U	10
2-Chlorophenol	95-57-8		10 U	10 U	10 U	10 U	10 U	10 U	1
2-Methylnaphthalene	91-57-6		10 U	10 U	10 U	10 U	10 U	10 U	4.7
2-Methylphenol	95-48-7		10 U	10 U	10 U	10 U	10 U	10 U	5
2-Nitroaniline	88-74-4		10 U	10 U	10 U	10 U	10 U	10 U	5
2-Nitrophenol	88-75-5		10 U	10 U	10 U	10 U	10 U	10 U	5
3,3-Dichlorobenzidine	91-94-1		21 U	21 U	20 U	20 U	20 U	21 U	5
3+4-Methylphenols	106-44-5		10 U	10 U	10 U	10 U	10 U	10 U	NS
3-Nitroaniline	99-09-2		10 U	10 U	10 U	10 U	10 U	10 U	5
4,6-Dinitro-2-methylphenol	534-52-1	21 U	21 U	20 U	20 U	20 U	21 U	NS	
4-Bromophenyl-phenylether	101-55-3	10 U	10 U	10 U	10 U	10 U	10 U	NS	
4-Chloro-3-methylphenol	59-50-7	10 U	10 U	10 U	10 U	10 U	10 U	5	
4-Chloroaniline	106-47-8	10 U	10 U	10 U	10 U	10 U	10 U	5	
4-Chlorophenyl-phenylether	7005-72-3	10 U	10 U	10 U	10 U	10 U	10 U	NS	
4-Nitroaniline	100-01-6	10 U	10 U	10 U	10 U	10 U	10 U	5	
4-Nitrophenol	100-02-7	21 U	21 U	20 U	20 U	20 U	21 U	5	
Acenaphthene	83-32-9	10 U	10 U	10 U	10 U	10 U	10 U	20	
Acenaphthylene	208-96-8	10 U	10 U	10 U	10 U	10 U	10 U	NS	
Acetophenone	98-86-2	10 U	10 U	10 U	10 U	10 U	10 U	NS	
Anthracene	120-12-7	10 U	10 U	10 U	10 U	10 U	10 U	50	
Atrazine	1912-24-9	10 U	10 U	10 U	10 U	10 U	10 U	3	
Benzaldehyde	100-52-7	10 U	10 U	10 U	10 U	10 U	10 U	NS	
Benzo(a)anthracene	56-55-3	10 U	10 U	10 U	10 U	10 U	10 U	0.002	
Benzo(a)pyrene	50-32-8	10 U	10 U	10 U	10 U	10 U	10 U	0.002	
Benzo(b)fluoranthene	205-99-2	10 U	10 U	10 U	10 U	10 U	10 U	0.002	
Benzo(g,h,i)perylene	191-24-2	10 U	10 U	10 U	10 U	10 U	10 U	NS	
Benzo(k)fluoranthene	207-08-9	10 U	10 U	10 U	10 U	10 U	10 U	0.002	
Benzyl Alcohol	100-51-6	38						NS	
bis(2-Chloroethoxy)methane	111-91-1		10 U	10 U	10 U	10 U	10 U	5	
bis(2-Chloroethyl)ether	111-44-4		10 U	10 U	10 U	10 U	10 U	1	
bis(2-Ethylhexyl)phthalate	117-81-7	<u>28</u>	10 U	10 U	10 U	10 U	10 U	5	
Butylbenzylphthalate	85-68-7	2.6	10 U	2.0 J	10 U	10 U	10 U	50	
Caprolactam	105-60-2		2.7 J	380 D	31	320 D	260 D	320 D	NS

TABLE 13
HISTORICAL SUMMARY OF TCL SVOCs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	2000-2002 NYSDEC INVESTIG ATIONS (ug/L) AOC 1 MW-101	AOC 2						NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
			GR-MW104-GW T4138-16 08/09/05 WATER 1.0 ug/L	GR-MW106-GW T4138-08 08/09/05 WATER 1.0 ug/L	GR-MW111-GW T4138-19 08/09/05 WATER 1.0 ug/L	GR-MW216-GW T4138-06 08/09/05 WATER 1.0 ug/L	GR-MW217-GW T4138-07 08/09/05 WATER 1.0 ug/L	GR-XX-DUP T4138-09 08/09/05 WATER 1.0 ug/L	
Carbazole	86-74-8	1.5	10 U	10 U	10 U	10 U	10 U	10 U	NS
Chrysene	218-01-9		10 U	10 U	10 U	10 U	10 U	10 U	0.002
Dibenz(a,h)anthracene	53-70-3		10 U	10 U	10 U	10 U	10 U	10 U	NS
Dibenzofuran	132-64-9		10 U	10 U	10 U	10 U	10 U	10 U	NS
Diethylphthalate	84-66-2		10 U	10 U	10 U	10 U	10 U	10 U	50
Dimethylphthalate	131-11-3	2.2	10 U	10 U	10 U	10 U	10 U	10 U	50
Di-n-butylphthalate	84-74-2		1.2 J	10 U	2.8 J	10 U	10 U	10 U	NS
Di-n-octyl phthalate	117-84-0		10 U	10 U	10 U	10 U	10 U	10 U	50
Fluoranthene	206-44-0		10 U	10 U	10 U	10 U	10 U	10 U	50
Fluorene	86-73-7		10 U	10 U	10 U	10 U	10 U	10 U	50
Hexachlorobenzene	118-74-1	12	10 U	10 U	10 U	10 U	10 U	10 U	0.04
Hexachlorobutadiene	87-68-3		10 U	10 U	10 U	10 U	10 U	10 U	0.5
Hexachlorocyclopentadiene	77-47-4		10 U	10 U	10 U	10 U	10 U	10 U	5
Hexachloroethane	67-72-1		10 U	10 U	10 U	10 U	10 U	10 U	5
Indeno(1,2,3-cd)pyrene	193-39-5		10 U	10 U	10 U	10 U	10 U	10 U	0.002
Isophorone	78-59-1	2.7	10 U	10 U	10 U	10 U	10 U	10 U	50
Naphthalene	91-20-3		10 U	10 U	10 U	10 U	10 U	10 U	10
Nitrobenzene	98-95-3		10 U	10 U	10 U	10 U	10 U	10 U	0.4
N-Nitroso-di-n-propylamine	621-64-7		10 U	10 U	10 U	10 U	10 U	10 U	NS
N-Nitrosodiphenylamine	86-30-6		10 U	10 U	10 U	10 U	10 U	10 U	50
Pentachlorophenol	87-86-5	2.7	21 U	21 U	20 U	20 U	20 U	21 U	1
Phenanthrene	85-01-8		10 U	10 U	10 U	10 U	10 U	10 U	50
Phenol	108-95-2		10 U	10 U	10 U	10 U	10 U	10 U	1
Pyrene	129-00-0		10 U	10 U	10 U	10 U	10 U	10 U	50
Total TICs			20	220.5	37.3	170	0	156	NS

- Notes:
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 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 4. **Bold-faced**, Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard has been established by NYSDEC.
 7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
 8. "U" = Compound was analyzed but was not detected.
 9. "J" = Indicates an estimated value.
 10. "D" = All compounds identified in an analysis at a secondary dilution factor.

TABLE 14
HISTORICAL SUMMARY OF TAL METALS IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Sampling Date	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)										NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾
	AOC 1						AOC 2				
	MW-101 03/28/01	MW-105 03/28/01	MW-108 03/28/01	MW-108 09/12/01	MW--109 03/28/01	MW-110 03/28/01	MW-103 03/28/01	MW-104 03/26/01	MW-107 03/26/01	MW-111 03/28/01	
Aluminum	123	199	841	338	1,350	789	95	279	203	1,710	NS
Arsenic				5							25
Barium	191	94	87	75	137	90	103	105	76	92	1,000
Beryllium											3 (G)
Cadmium				1				1			5
Calcium	150,000	84,800	127,000	146,000	171,000	117,000	104,000	98,800	81,900	139,000	NS
Chromium				3	8					3	50
Cobalt											NS
Copper	81	80	88	54	91	74	38	7	5	71	200
Iron	<u>13,800</u>	250	<u>1,540</u>	<u>2,640</u>	<u>2,370</u>	<u>1,430</u>	<u>347</u>	299	<u>530</u>	<u>2,920</u>	300
Lead				8	8						25
Magnesium	<u>41,700</u>	16,100	<u>45,100</u>	<u>55,100</u>	<u>40,800</u>	24,100	23,000	18,400	33,600	23,300	35,000 (G)
Manganese	<u>664</u>	14	124	135	130	47	8	21	24	86	300
Nickel	3		3	32	7					3	100
Potassium	7,340	2,860	19,700	19,100	2,170	2,720	4,260	2,780	5,690	2,900	NS
Selenium											10
Sodium	10,500	3,190	<u>62,300</u>	<u>50,400</u>	13,000	<u>3,880</u>	<u>40,700</u>	10,200	11,200	11,900	20,000
Vanadium					4					4	NS
Zinc	25	13	20	21	20	18	15	35	19	17	2,000 (G)

- Notes:
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 3. **Bolded** values are concentrations that have been reported above the detection limits..
 4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard or guidance value as been established by NYSDEC.
 7. Blank space = not detected.

TABLE 14
HISTORICAL SUMMARY OF TAL METALS IN GROUNDWATER
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)										NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾
	AOC 1							AOC 2			
Sample ID Sampling Date	MW-112 03/26/01	MW-113 03/28/01	MW-113 Dup 03/28/01	MW-113 09/12/01	MW-BR1 03/27/01	MW-BR3 03/26/01	Weider Hall 395 Gregory Street 03/15/01	MW-115 03/28/01	MW-BR2 03/28/01	MW-BR2 Dup 03/28/01	
Aluminum	1,370	120	2,800	179	169	98	73	3,030	451	325	NS
Arsenic											25
Barium	53	188	260	189	123	71	128	79	81	82	1,000
Beryllium											3 (G)
Cadmium	2			2		<u>16</u>					5
Calcium	106,000	238,000	239,000	150,000	93,600	97,800	143,000	126,000	119,000	128,000	NS
Chromium								5			50
Cobalt										75	NS
Copper	6	98	104	61	19	16	63	95	178		200
Iron	<u>1,540</u>	<u>360</u>	<u>545</u>		<u>3,640</u>	<u>4,740</u>	47	<u>5,050</u>	<u>3,360</u>	<u>2610</u>	300
Lead				12				7	18		25
Magnesium	<u>54,600</u>	<u>64,700</u>	<u>65,600</u>	<u>47,200</u>	24,800	30,900	34,600	20,600	<u>36,500</u>	<u>38400</u>	35,000 (G)
Manganese	130	34	66	259	<u>394</u>	248		113	86	86	300
Nickel	4			35				4	4		100
Potassium	5,240	19,900	20,300	25,300	10,400	10,700	9,210	6,450	18,200	19500	NS
Selenium							<u>18</u>				10
Sodium	<u>53,800</u>	<u>365,000</u>	<u>368,000</u>	<u>77,300</u>	8,560	<u>39,200</u>	<u>42,600</u>	8,460	<u>41,400</u>	<u>45300</u>	20,000
Vanadium				48				8			NS
Zinc	51	14	17	54	33	41	55	22	24	21	2,000 (G)

- Notes:
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 3. **Bolded** values are concentrations that have been reported above the detection limits..
 4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
 5. (G) = guidance value.
 6. "NS" = No Standard or guidance value as been established by NYSDEC.
 7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
 8. Blank space = not detected.

TABLE 14
HISTORICAL SUMMARY OF TAL METALS IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Sampling Date	2005 REMEDIAL INVESTIGATION (ug/L)									NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾
	AOC 2									
	GR-MW104-GW 08/09/05	GR-MW106-GW 08/09/05	GR-MW111-GW 08/09/05	GR-MW216-GW 08/09/05	GR-MW216-GW 11/4/2005	GR-DUP-GW 11/4/2005	GR-MW217-GW 08/09/05	GR-XX-DUP 08/09/05	GR-MW217-GW 11/4/2005	
Aluminum	12,100	15,000	21,900	28,700	74.1 J	71.7 J	12,300	11500*	72.4 J	NS
Arsenic	8.1 J	25.6	19.1	11.1	10.0 U	10.0 U	9.5 J	13.3	4.6 J	25
Barium	399	404	412	543	108 J	111 J	720	714 NJ	278	1,000
Beryllium	0.56 J	0.88 J	1.1 J	1.4 J	5.0 U	5.0 U	0.69 J	0.69 J	5.0 U	3 (G)
Cadmium	4.0 J	3.2 J	2.7 J	1.5 J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5
Calcium	229,000	182,000	484,000	514,000	149,000 J	153,000 J	287,000	275000*	193,000 J	NS
Chromium	17.0	34.5	33.0	50.0	10.0 U	10.0 U	24.7	22.5	1.6 J	50
Cobalt	38.2 J	26.3 J	28.1 J	23.7 J	50.0 U	50.0 U	15.5 J	14.3 J	50.0 U	NS
Copper	61.3	88.6	76.3	80.0	25.0 U	25.0 U	55.2	52.4	2.7 J	200
Iron	20,300	35,900	42,600	46,600	100 U	100 U	25,900	24600*	30.8 J	300
Lead	50.7	66.6	49.0	70.9	10.0 UN	10.0 U	31.9 NJ	31.7* NJ	10.0 UN	25
Magnesium	67,300	51,000	114,000	122,000	22,100 *	22,400	73,600	72500*	40,100	35,000 (G)
Manganese	7,230	1,200	6,280	2,660	63.4 J	66.8 J	1,750	1,650 *	2,100 J	300
Mercury	0.200 U	0.200 U	0.200 U	0.200 U	.200 *U	0.054 *J	.200 *U	.200 U	0.078 J	1
Nickel	77.9	53.9	75.0	56.5	40.0 U	3.0 J	29.8 J	29.5 J	6.5 J	100
Potassium	8,930	18,400	15,400	14,900	6,180 J	6,400 J	14,700 EJ	14,500 EJ	13,500 J	NS
Selenium	35.0 U	35.0 U	35.0 U	35.0 U	35.0 UN	35.0 UN	31.9 J	29.8 J	35.0 U	10
Sodium	27,900	7,540	8,820	7,120	2,580 J	2,320 J	85,800	86,700 *J	29,300	20,000
Vanadium	19.5 J	27.6 J	40.0 J	47.5 J	50.0 U	50.0 U	22.5 J	21.7 J	50.0 U	NS
Zinc	385	316	371	731	30.0 J	27.3 J	151* J	147 *	26.4 J	2,000 (G)

1. NYSDEC. October 22, 1993. Ambient Water Quality Standards Guidance Series (TOGS 1.1.1). Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bolded** values are concentrations that have been reported above the detection limits.
4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard or guidance value as been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. GR-DUP-GW is a duplicate of sample GR-MW216-GW (11/4/05).
9. Turbidity for each 8/9/05 groundwater sample exceeded 200 NTUs and were not filtered at the request of the NYSDEC representative. Turbidity for samples collected on 11/4/05 were below 50 NTUs.
10. " U " = The analyte was analyzed for, but not detected.
11. "J" = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
12. "N" = Spiked sample recovery not within control limits.
13. "E" = The reported value is estimated because of the presence of interference.
14. "R" = The sample results are rejected.
15. (*) = Duplicate analysis not within control limits.

TABLE 15
HISTORICAL SUMMARY OF TCL PCBs
IN GROUNDWATER
399 Gregory Street
Rochester, NY

Sample ID Lab Sample Number Sampling Date Matrix Dilution Factor Units	CAS #	AOC 2				NYSDEC Groundwater Standards and Guidance Values ⁽¹⁾ ug/L
		GR-MW104-GW	GR-MW111-GW	GR-MW216-GW	GR-MW217-GW	
		T4138-16	T4138-19	T4138-06	T4138-07	
		08/09/05	08/09/05	08/09/05	08/09/05	
		WATER	WATER	WATER	WATER	
		1.0	1.0	1.0	1.0	
		ug/L	ug/L	ug/L	ug/L	
Aroclor-1016	12674-11-2	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1221	11104-28-2	2.1 U	2.0 U	2.0 U	2.1 U	0.09
Aroclor-1232	11141-16-5	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1242	53469-21-9	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1248	12672-29-6	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1254	11097-69-1	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1260	11096-82-5	1.0 U	1.0 U	1.0 U	1.0 U	0.09

- Notes:
- 1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
 - 2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb)
 - 3. **Bold-faced** values are concentrations that have been reported above the detection limits.
 - 4. **Bold-faced**, Underlined, and Italicized values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
 - 5. "U" = Analyte was analyzed by not detected.

TABLE 16a
SUMMARY OF DETECTED VOCs IN AIR - 2005
Remedial Investigation
395 Gregory Street
Rochester, NY

<i>TO-15 VOCs (ug/m³)</i>	Sub-Slab Soil Vapor	Indoor Building Air				Background	
	GR-SG1-A	GR-BA1-A		GR-BA2-A		GR-BK1-A	
	8/30/05	8/30/05	12/20/05	8/30/05	12/20/05	8/30/05	12/20/05
Acetone	18	76	28 MJ	110	50	23	14 MJ
Benzene			0.87				0.98
2-Butanone (MEK)	2.9	8.2	2.5	9.3	3.2	2.6	1.8
Carbon Disulfide	0.85						
Chloroform	21						
Chloromethane		1.0	0.77	1.1		0.96	0.89
Ethylbenzene		0.97		0.90			
2-Hexanone	0.96	0.87					
Methylene chloride		0.93		0.96			
4-Methyl-2-pentanone	1.3	1.1		1.2			
Tetrachloroethene	32						
Toluene	2.9	7.4	2.2	7.7	5.7	1.8	3.5
1,1,1-Trichloroethane	7.6						
Trichloroethene		0.94		1.2			
Trichlorofluoromethane	1.3	1.1	1.2	1.1	1.5	0.94	1.2
Vinyl Acetate	4.3	9.7		11		5.9	
m,p-Xylenes		3.7		2.6			1.5
o-Xylene		1.4		1.0			

Notes:

1. All results expressed in µg/m³ (micrograms per cubic meter).
2. Blank space = not detected above laboratory reporting limit.
3. M = matrix interference; results may be biased high.
4. J = estimated quantity; possible high bias due to interferences.

TABLE 16b
SUMMARY OF DETECTED VOCs IN SUB-SLAB SOIL VAPOR - 2005

Remedial Investigation
395 Gregory Street
Rochester, New York

TO-15 VOCs	GR-SG1-A	
	8/30/05	
	Result ($\mu\text{g}/\text{m}^3$)	MRL ($\mu\text{g}/\text{m}^3$)
Acetone	18	7.6
2-Butanone (MEK)	2.9	0.76
Carbon Disulfide	0.85	0.76
Chloroform	21	0.76
2-Hexanone	0.96	0.76
4-Methyl-2-pentanone	1.3	0.76
Tetrachloroethene	32	0.76
Toluene	2.9	0.76
1,1,1-Trichloroethane	7.6	0.76
Trichlorofluoromethane	1.3	0.76
Vinyl Acetate	4.3	1.5

Notes:

1. All results expressed in $\mu\text{g}/\text{m}^3$ (micrograms per cubic meter).
2. MRL = method reporting limit.

TABLE 16c
SUMMARY OF DETECTED VOCs
IN INDOOR BUILDING AIR - 2005

Remedial Investigation
395 Gregory Street
Rochester, New York

TO-15 VOCs (ug/m ³)	Indoor Building Air								USEPA BASE ⁽³⁾ Data (background levels)	NYSDOH Air Guideline Value ⁽⁴⁾	USEPA Target Indoor Air Concentration ⁽⁵⁾
	GR-BA1-A				GR-BA2-A						
	8/30/05		12/20/05		8/30/05		12/20/05				
	Result	MRL	Result	MRL	Result	MRL	Result	MRL			
									Indoor (µg/m³)	Indoor (µg/m³)	(µg/m³)
Acetone	76	0.73	28 MJ	6.5	110	8.0	50	1.5	32 - 60	NA	350
Benzene		0.73	0.87	0.65		0.80		1.5	2.1 - 5.1	NA	31
2-Butanone (MEK)	8.2	0.73	2.5	0.65	9.3	0.80	3.2	1.5	NA	NA	NA
Chloromethane	1	0.73	0.77	0.65	1.1	0.80		1.5	NA	NA	NA
Ethylbenzene	0.97	0.73		0.65	0.90	0.80		1.5	<1.6 - 3.4	NA	220
2-Hexanone	0.87	0.73		0.65		0.80		1.5	NA	NA	NA
Methylene chloride	0.93	0.73		0.65	0.96	0.80		1.5	<1.7 - 5.0	60	520
4-Methyl-2-pentanone	1.1	0.73		0.65	1.2	0.80		1.5	NA	NA	NA
Toluene	7.4	0.73	2.2	0.65	7.7	0.80	5.7	1.5	10.7 - 26	NA	400
Trichloroethene	0.94	0.73		0.65	1.2	0.80		1.5	<1.2 - 1.2	5	2.2
Trichlorofluoromethane	1.1	0.73	1.2	0.65	1.1	0.80	1.5	1.5	NA	NA	700
Vinyl Acetate	9.7	0.73		0.65	11	1.6		1.5	NA	NA	200
m,p-Xylenes	3.7	1.5		1.3	2.6	1.6		1.5	4.1 - 12	NA	7,000
o-Xylene	1.4	0.73		0.65	1.0	0.80		1.5	<2.4 - 4.4	NA	7,000

Notes:

1. All results expressed in ug/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE '94-'98); Unpublished; Indoor Environments Division, United States Environmental Protection Agency (USEPA).
4. Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Public Comment Draft, February 2005. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
5. Draft Guidance For Evaluating The Vapor Intrusion To Indoor Air Pathway From Groundwater And Soils (Subsurface Vapor Intrusion Guidance). United States Environmental Protection Agency (USEPA), Office of Solid Waste and Emergency Response (OSWER), November 2002.
6. N/A = not available.
7. Blank space = not detected above laboratory reporting limit.
8. M = matrix interference; results may be biased high.

TABLE 16d
SUMMARY OF DETECTED VOCs IN OUTDOOR AIR - 2005

Remedial Investigation

395 Gregory Street
Rochester, New York

TO-15 VOCs (ug/m ³)	Outdoor Air				EPA BASE ⁽³⁾ Data (background levels)	NYSDOH Air Guideline Value ⁽⁴⁾	NYSDEC Air	
	GR-BK1-A						Guideline Value ⁽⁵⁾	
	8/30/05		12/20/05				SCG	ACG
	Result	MRL	Result	MRL			(µg/m³)	(µg/m³)
Acetone	23	7.6	14 MJ	6.6	15 - 32	NA	180,000	28,000
Benzene		0.76	0.98	0.66	1.2 - 3.7	NA	1,300	13
2-Butanone (MEK)	2.6	0.76	1.8	0.66	NA	NA	NA	NA
Chloromethane	0.96	0.76	0.89	0.66	NA	NA	22,000	90
Toluene	1.8	0.76	3.5	0.66	5.9 - 16	NA	37,000	400
Trichlorofluoromethane	0.94	0.76	1.2	0.66	NA	NA	560,000	NA
Vinyl Acetate	5.9	1.5		0.66	NA	NA	5,300	200
m.p -xylenes		0.76	1.5	0.66	<3.6 - 7.3	NA	4,300	100

Notes:

1. All results expressed in ug/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE '94-'98); Unpublished;
United States Environmental Protection Agency (USEPA), Indoor Environments Division.
4. Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Public Comment
Draft, February 2005. New York State Department of Health (NYSDOH), Center for
Environmental Health, Bureau of Environmental Exposure.
5. DAR-1 AGC/SCG Tables, New York State Department of Environmental Conservation (NYSDEC), Division of Air Resources,
Air Toxics Section, December 22, 2003.
6. SCG = short term guidance concentrations.
7. ACG = annual guidance concentrations.
8. Blank space = not detected above laboratory reporting limit.
9. N/A = not available.
10. M = matrix interference; results may be biased high.

TABLE 16e
SUMMARY OF DETECTED VOCs IN PERIMETER SOIL VAPOR - 2007
Remedial Design Investigation
399 Gregory Street
Rochester, New York

Site sample names: Sample dates:	Perimeter Soil Vapor Samples, June 2007						Site Background, Outdoor Air	NYSEDOH Final SVI Guidance ⁽⁹⁾		USEPA Draft SVI Guidance ⁽¹⁰⁾
	SV2	SV3	SV4	SV5	SV6	SV7	Ambient-1	Reference background levels for outdoor air (EPA BASE 2001)	SVI Decision Matrix Soil Vapor Screening Value	Deep Soil Gas Generic Screening Levels ⁽¹¹⁾
	6/12/07	6/12/07	6/12/07	6/12/07	6/12/07	6/12/07	6/12/07	Conc. range (and mean)		
TO-15 VOCs	Concentrations in micrograms per cubic meter (µg/m³)									
Benzene	2.29J	1.25J	1.75NJ	8.39J	0.976J	2.64J	0.702J	<1.2 - 13 (3.2)	NA	31 - 3,100
Ethylbenzene	3.92NJ	ND <1.42	5.85J	16.0NJ	2.08J	4.17NJ	ND <0.7	<0.8 - 7.8 (1.4)	NA	220 - 22,000
Toluene	12.2J	6.36J	9.07J	33.9J	6.92J	22.0J	2.35J	2.1 - 93 (15.4)	NA	40,000
m,p-xylene	13.3J	7.07J	14.0J	24.8J	7.41J	14.9J	0.884J	<1.4 - 26.8 (5.6)	NA	70,000
o-xylene	4.10J	ND <1.42	5.25J	7.72NJ	2.48J	4.32J	ND <0.7	<0.6 - 11.1 (2.0)	NA	70,000
Tetrachloroethene	6.07J	39.6J	11.6J	9.26J	1.99NJ	ND <1.72	ND <1.1	<0.8 - 27.6 (2.7)	100 (Matrix 2)	81 - 8,100
Trichloroethene	ND <1.14	4.51NJ	ND <1.55	ND <2.20	ND <1.69	ND <1.64	ND <0.88	<0.6 - 13.5 (1)	5 (Matrix 1)	2.2 - 220
cis-1,2-Dichloroethene	62.4E	3.27NJ	ND <0.919	ND <1.60	ND <0.899	ND <1.01	0.726J	<0.6 - 1.1 (0.5)	100 (Matrix 2)	3,500
trans-1,2-Dichloroethene	1.32J	ND <1.29	ND <0.919	ND <1.60	ND <0.899	ND <1.01	ND <0.64	NA	NA	7,000
1,1,1-Trichloroethane	ND <1.14	ND <1.77	20.1J	ND <2.20	ND <1.24	ND <1.38	ND <0.88	<0.4 - 8.7 (1.3)	100 (Matrix 2)	220,000
Chloroform	1.90J	ND <1.58	ND <1.21	11.0J	ND <1.11	ND <1.24	ND <0.78	<0.2 - 14 (0.5)	NA	11 - 1,100
Chloromethane	ND <0.43	ND <0.67	ND <0.48	ND <0.83	ND <0.47	ND <0.52	0.924J	0.9 - 10.6 (2.6)	NA	NA
Trichlorofluoromethane (Freon 11)	1.27J	2.15J	ND <1.30	ND <2.27	ND <1.27	ND <1.42	1.16J	<2.0 - 133 (3.6)	NA	70,000
Acetone	ND <31.1	ND <51.5	ND <48.9	ND <59.5	ND <81.8	ND <55.3	ND <28.7	<1.8 - 104 (26.8)	NA	35,000
2-Butanone (MEK)	3.5NJ	ND <6.33	ND <5.57	9.01NJ	ND <3.36	8.54NJ	3.15J	<1.2 - 43.1 (5.2)	NA	100,000
2-Hexanone	ND <4.29	ND <6.71	ND <4.79	ND <8.34	ND <4.66	ND <5.24	ND <3.3	NA	NA	NA
4-Methyl-2-pentanone	ND <4.29	ND <6.71	ND <4.79	ND <8.34	ND <4.66	ND <5.24	ND <3.3	<0.8 - 21 (1.3)	NA	8,000
Carbon Disulfide	ND <9.54	ND <11.7	ND <10.8	ND <27.0	ND <3.09	ND <10.8	ND <0.50	<0.6 - 22 (2.1)	NA	70,000

Notes:

1. All results and guidance values expressed in µg/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. ND = Not detected at the method reporting limit shown.
4. J = The analyte was positively identified;
the associated numerical value is the approximate concentration of the analyte in the sample.
5. NJ = The analysis indicates the presence of an analyte that has been "tentatively identified,"
the value represents its approximate concentration.
6. E = The analyte was positively identified at an estimated concentration
that is above the linear range of the instrument calibration.

7. NA = Not analyzed.
8. M = matrix interference; results may be biased high.
9. Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York.
October 2006. New York State Department of Health (NYSEDOH), Center for
Environmental Health, Bureau of Environmental Exposure.
10. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway
from Groundwater and Soils (Subsurface Vapor Intrusion Guidance),
U. S. EPA, November 2002 (EPA530-D-02-004).
11. Target deep (> 5 ft. below foundation level) soil gas concentrations
for risk levels ranging from 1x10⁻⁴ to 1x10⁻⁶.

TABLE 16f
SUMMARY OF DETECTED VOCs IN OUTDOOR AIR - 2007
Remedial Design Investigation
399 Gregory Street
Rochester, New York

<i>TO-15 VOCs (ug/m³)</i>	Outdoor Air	Reference background levels for outdoor air	NYSDOH Air Guideline Value ⁽⁴⁾	NYSDEC Air Guideline Value ⁽⁵⁾	
	Ambient-1	EPA BASE 2001 ⁽³⁾			
	6/12/07	Conc. range (and mean)			
	Result (ug/m ³)	(ug/m ³)		SCG (ug/m ³)	ACG (ug/m ³)
Benzene	0.702J	<1.2 - 13 (3.2)	NA	1,300	13
2-Butanone (MEK)	3.15J	<1.2 - 43.1 (5.2)	NA	NA	NA
Chloromethane	0.924J	0.9 - 10.6 (2.6)	NA	22,000	90
cis-1,2-Dichloroethene	0.726J	<0.6 - 1.1 (0.5)	100 ⁽¹⁰⁾	NA	NA
Toluene	2.35J	2.1 - 93 (15.4)	NA	37,000	400
Trichlorofluoromethane	1.16J	<2.0 - 133 (3.6)	NA	560,000	NA
m,p -xylenes	0.884J	<1.4 - 26.8 (5.6)	NA	4,300	100

Notes:

1. All results expressed in ug/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE) 2001; United States Environmental Protection Agency (USEPA), Indoor Environments Division.
4. Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
5. DAR-1 AGC/SCG Tables, New York State Department of Environmental Conservation (NYSDEC), Division of Air Resources, Air Toxics Section, December 22, 2003.
6. SCG = short term guidance concentrations.
7. ACG = annual guidance concentrations.
8. NA = not available.
9. J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
10. Assumes the same value as the NYSDOH Air Guideline Value for Tetrachloroethene.

TABLE 17
CONFIRMATORY SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
399 GREGORY STREET
ROCHESTER, NY

Remedial Area of Concern Sample Location Sample Date Sample ID Sample Depth Sampling Company Laboratory Laboratory Work Order Laboratory Sample ID Sample Type			RAOC1							
			EB-001		EB-002	ES-001	ES-002		ES-003	
			17-Mar-09	17-Mar-09	25-Mar-09	16-Mar-09	18-Mar-09	18-Mar-09	18-Mar-09	18-Mar-09
			GR-EB-001.A-S	GR-001-S-DU	GR-EB-002.A-S	GR-ES-001.1.A-S	GR-ES-002-1.1.A-S	GR-ES-002-1.1.A-S	GR-ES-003-1.1.A-S	GR-ES-003-1.1.A-S
			11 ft	11 ft	11 ft	9 - 10 ft	8 - 10 ft	8 - 10 ft	7 - 10 ft	7 - 10 ft
			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
			CHEM A1891 A1891-01	CHEM A1891 A1891-02	CHEM A2016 A2016-02	CHEM A1870 A1870-01	CHEM A1918 A1918-01	CHEM A1918 A1918-01RE	CHEM A1918 A1918-02	CHEM A1918 A1918-02RE
Units	6NYCRR			Field Duplicate						
Field Parameters										
PID Reading	ppm	n/v	3.1	3.1	1.7	3	79	79	101	101
Metals										
Aluminum	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Antimony	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Arsenic	mg/kg	16 _g ^A	-	-	-	-	-	-	-	-
Barium	mg/kg	400 ^A	-	-	-	-	-	-	-	-
Beryllium	mg/kg	72 ^A	-	-	-	-	-	-	-	-
Cadmium	mg/kg	4.3 ^A	-	-	-	-	-	-	-	-
Calcium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Chromium (Total)	mg/kg	NS,q ^A	-	-	-	-	-	-	-	-
Cobalt	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Copper	mg/kg	270 ^A	-	-	-	-	-	-	-	-
Iron	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Lead	mg/kg	400 ^A	-	-	-	-	-	-	-	-
Magnesium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Manganese	mg/kg	2000 _g ^A	-	-	-	-	-	-	-	-
Mercury	mg/kg	0.81 _k ^A	-	-	-	-	-	-	-	-
Nickel	mg/kg	310 ^A	-	-	-	-	-	-	-	-
Potassium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Selenium	mg/kg	180 ^A	-	-	-	-	-	-	-	-
Silver	mg/kg	180 ^A	-	-	-	-	-	-	-	-
Sodium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Thallium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Vanadium	mg/kg	n/v ^A	-	-	-	-	-	-	-	-
Zinc	mg/kg	10000 _g ^A	-	-	-	-	-	-	-	-
Volatile Organic Compounds										
Acetone	µg/kg	100000 _g ^A	57 U	56 U	57 U	59 U	56 U	57 U J	22 J	26 J
Benzene	µg/kg	4800 ^A	11 U	11 U	11 U	8.6 J	11 U	11 U J	12 U J	12 U J
Bromodichloromethane	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Bromoform	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Bromomethane	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Carbon Disulfide	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Chlorinated Fluorocarbon (Freon 113)	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Chloroethane	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Chloroform	µg/kg	49000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Chloromethane	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Cyclohexane	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	11 U	11 U	11 U J	12 U	11 U	11 U J	12 U J	12 U J
Dibromochloromethane	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichlorobenzene, 1,2-	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichlorobenzene, 1,3-	µg/kg	49000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichlorobenzene, 1,4-	µg/kg	13000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichlorodifluoromethane	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloroethane, 1,1-	µg/kg	26000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloroethane, 1,2-	µg/kg	3100 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloroethylene, 1,1-	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloroethylene, cis-1,2-	µg/kg	100000 _g ^A	11 U	11 U	11 U	1.9 J	11 U	11 U J	12 U J	12 U J
Dichloroethylene, trans-1,2-	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloropropane, 1,2-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloropropene, cis-1,3-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Dichloropropene, trans-1,3-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Ethylbenzene	µg/kg	41000 ^A	15	11 U	11 U	240	11 U	11 U J	12 U J	12 U J
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Hexanone, 2-	µg/kg	n/v ^A	57 U	56 U	57 U	59 U	56 U	57 U J	59 U J	59 U J
Isopropylbenzene	µg/kg	n/v ^A	11 U	11 U	11 U	4.4 J	7.8 J	5.2 J	190 J	150 J
Methyl Acetate	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Methyl Ethyl Ketone (MEK)	µg/kg	100000 _g ^A	57 U	56 U	57 U	59 U	56 U	57 U J	59 U J	59 U J
Methyl Isobutyl Ketone (MIBK)	µg/kg	n/v ^A	57 U	56 U	57 U	59 U	56 U	57 U J	59 U J	59 U J
Methyl tert-butyl ether (MTBE)	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Methylcyclohexane	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Methylene Chloride (Dichloromethane)	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Styrene	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Tetrachloroethane, 1,1,2,2-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Tetrachloroethylene	µg/kg	19000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Toluene	µg/kg	100000 _g ^A	34	11 U	11 U	3.4 J	11 U	11 U J	12 U J	12 U J
Trichlorobenzene, 1,2,4-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Trichloroethane, 1,1,1-	µg/kg	100000 _g ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Trichloroethane, 1,1,2-	µg/kg	n/v ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Trichloroethylene	µg/kg	21000 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Vinyl chloride	µg/kg	900 ^A	11 U	11 U	11 U	12 U	11 U	11 U J	12 U J	12 U J
Xylene, m & p-	µg/kg	100000 _{g,p} ^A	62	11 U	11 U	78	8.2 J	4.4 J	12 U J	12 U J
Xylene, o-	µg/kg	100000 _{g,p} ^A	22	11 U	11 U	1.9 J	11 U	11 U J	3.8 J	4.0 J
Volatile Tentatively Identified Compounds										
Total VOC TICs	µg/kg	n/v ^A	252	235	-	56.3	2924	2632	1077	1020

Notes:

6NYCRR NYSDEC 6 NYCRR Part 375

^A NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Restricted Residential

6.5^A Concentration exceeds the indicated standard.

15.2 Concentration was detected but did not exceed applicable standards.

0.50 U Laboratory estimated quantitation limit exceeded standard.

0.03 U The analyte was not detected above the laboratory estimated quantation limit.

n/v No standard/guideline value.

- Parameter not analyzed / not available.

NS,q No SCO has been established for this compound. No SCO has been established for total chromium; however, see standards for trivalent and hexavalent chromium.

b The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

e The SCOS for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

g For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

k This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 TSD Table 5.6-1.

p The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.

nsv No value.

D Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.

E Compound was over the calibration range.

J Indicates estimated value.

N Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.

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** Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 17
CONFIRMATORY SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
399 GREGORY STREET
ROCHESTER, NY

Remedial Area of Concern Sample Location Sample Date Sample ID Sample Depth Sampling Company Laboratory Laboratory Work Order Laboratory Sample ID Sample Type	Units	6NYCRR	ES-004		RAOC1 ES-005.1.A		ES-005.1.B	ES-006	EB-005	RAOC2A ES-015	ES-016	
			23-Mar-09	23-Mar-09	23-Mar-09	23-Mar-09	26-Mar-09	24-Mar-09	2-Apr-09	2-Apr-09	2-Apr-09	
			GR-ES-004.1.A-S	GR-ES-004.1.A-S	GR-ES-005.1.A-S	GR-ES-005.1.A-S	GR-ES-005.1.B-S	GR-ES-006.1.A-S	GR-EB-005.1.A-S	GR-ES-015.1.A-S	GR-ES-016.1.A-S	
			8 - 8.5 ft	8 - 8.5 ft	7.5 - 9 ft	7.5 - 9 ft	7.5 - 9 ft	8 - 8.5 ft	4 ft	0 - 4 ft	0 - 4 ft	
			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
			CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	
			A1981	A1981	A1981	A1981	A2030	A2016	A2138	A2138	A2138	
			A1981-02	A1981-02RE	A1981-05	A1981-05DL	A2030-01	A2016-01	A2138-05	A2138-01	A2138-02	
			Field Parameters									
			PID Reading	ppm	n/v	213	213	61	61	2	0	0.1
Metals												
Aluminum	mg/kg	n/v ^A	-	-	-	-	-	-	5010	6280	6980	
Antimony	mg/kg	n/v ^A	-	-	-	-	-	-	2.870 U	3.000 U	2.960 U	
Arsenic	mg/kg	16 _g ^A	-	-	-	-	-	-	2.040	4.320	3.020	
Barium	mg/kg	400 ^A	-	-	-	-	-	-	49.0	94.6	87.1	
Beryllium	mg/kg	72 ^A	-	-	-	-	-	-	0.287 J	0.375	0.390	
Cadmium	mg/kg	4.3 ^A	-	-	-	-	-	-	0.345 U	0.360 U	0.355 U	
Calcium	mg/kg	n/v ^A	-	-	-	-	-	-	2480	14800	11800	
Chromium (Total)	mg/kg	^A _{NS,q}	-	-	-	-	-	-	8.200	9.710	8.860	
Cobalt	mg/kg	n/v ^A	-	-	-	-	-	-	4.140	4.930	4.170	
Copper	mg/kg	270 ^A	-	-	-	-	-	-	13.0	33.4	33.9	
Iron	mg/kg	n/v ^A	-	-	-	-	-	-	13500	12600	13500	
Lead	mg/kg	400 ^A	-	-	-	-	-	-	8.630	131	76.4	
Magnesium	mg/kg	n/v ^A	-	-	-	-	-	-	1960	5000	4600	
Manganese	mg/kg	2000 _g ^A	-	-	-	-	-	-	191	331	231	
Mercury	mg/kg	0.81 _k ^A	-	-	-	-	-	-	0.05 J	0.20	0.14	
Nickel	mg/kg	310 ^A	-	-	-	-	-	-	10.3	11.1	8.730	
Potassium	mg/kg	n/v ^A	-	-	-	-	-	-	611	864	733	
Selenium	mg/kg	180 ^A	-	-	-	-	-	-	0.803 J	0.970 J	1.030 J	
Silver	mg/kg	180 ^A	-	-	-	-	-	-	0.575 U J	0.600 U J	0.591 U J	
Sodium	mg/kg	n/v ^A	-	-	-	-	-	-	134	382	279	
Thallium	mg/kg	n/v ^A	-	-	-	-	-	-	2.300 U	2.400 U	2.370 U	
Vanadium	mg/kg	n/v ^A	-	-	-	-	-	-	15.2	17.9	17.0	
Zinc	mg/kg	10000 _g ^A	-	-	-	-	-	-	38.8	112	72.8	
Volatile Organic Compounds												
Acetone	µg/kg	100000 _g ^A	58 U	58 U J	59 U	7400 U	57 U	55 U	-	-	-	
Benzene	µg/kg	4800 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Bromodichloromethane	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Bromoform	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Bromomethane	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U J	11 U	11 U	-	-	-	
Carbon Disulfide	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U J	11 U	11 U	-	-	-	
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Chlorinated Fluorocarbon (Freon 113)	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 _g ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Chloroethane	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Chloroform	µg/kg	49000 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Chloromethane	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U J	11 U	11 U	-	-	-	
Cyclohexane	µg/kg	n/v	12 U J	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	12 U	12 U J	12 U J	1500 U	11 U J	11 U J	-	-	-	
Dibromochloromethane	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dichlorobenzene, 1,2-	µg/kg	100000 _g ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dichlorobenzene, 1,3-	µg/kg	49000 ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dichlorobenzene, 1,4-	µg/kg	13000 ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dichlorodifluoromethane	µg/kg	n/v	12 U	12 U J	12 U	1500 U J	11 U	11 U	-	-	-	
Dichloroethane, 1,1-	µg/kg	26000 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloroethane, 1,2-	µg/kg	3100 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloroethylene, 1,1-	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloroethylene, cis-1,2-	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloroethylene, trans-1,2-	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloropropane, 1,2-	µg/kg	n/v ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Dichloropropene, cis-1,3-	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Dichloropropene, trans-1,3-	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Ethylbenzene	µg/kg	41000 ^A	12 U	12 U J	160 J	630 JD	11 U	11 U	-	-	-	
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Hexanone, 2-	µg/kg	n/v ^A	58 U	58 U J	59 U J	7400 U	57 U	11 J	-	-	-	
Isopropylbenzene	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Methyl Acetate	µg/kg	n/v	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Methyl Ethyl Ketone (MEK)	µg/kg	100000 _g ^A	58 U	58 U J	59 U	7400 U	57 U	55 U	-	-	-	
Methyl Isobutyl Ketone (MIBK)	µg/kg	n/v ^A	58 U	58 U J	59 U J	7400 U	57 U	12 J	-	-	-	
Methyl tert-butyl ether (MTBE)	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Methylcyclohexane	µg/kg	n/v	12 U	12 U J	100 J	1100 JD	11 U	11 U	-	-	-	
Methylene Chloride (Dichloromethane)	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Styrene	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Tetrachloroethane, 1,1,2,2-	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Tetrachloroethylene	µg/kg	19000 ^A	12 U	12 U J	1.7 J	1500 U	11 U	11 U	-	-	-	
Toluene	µg/kg	100000 _g ^A	12 U	12 U J	1000 E	2600 D	11 U	11 U	-	-	-	
Trichlorobenzene, 1,2,4-	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Trichloroethane, 1,1,1-	µg/kg	100000 _g ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Trichloroethane, 1,1,2-	µg/kg	n/v ^A	12 U	12 U J	12 U J	1500 U	11 U	11 U	-	-	-	
Trichloroethylene	µg/kg	21000 ^A	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	12 U	12 U J	12 U	1500 U	11 U	11 U	-	-	-	
Vinyl chloride	µg/kg	900 ^A	12 U	12 U J	12 U	1500 U J	11 U	11 U	-	-	-	
Xylene, m & p-	µg/kg	100000 _{g,p} ^A	12 U	12 U J	5500 E	12000 D	11 U	11 U	-	-	-	
Xylene, o-	µg/kg	100000 _{g,p} ^A	12 U	12 U J	4500 E	7700 D	11 U	11 U	-	-	-	
Volatile Tentatively Identified Compounds												
Total VOC TICs	µg/kg	n/v ^A	2020	1029	2620	69600	-	-	-	-	-	

Notes:

6NYCRR

NYSDEC 6 NYCRR Part 375

^A

NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Restricted Residential

6.5^A

Concentration exceeds the indicated standard.

15.2

Concentration was detected but did not exceed applicable standards.

0.50 U

Laboratory estimated quantitation limit exceeded standard.

0.03 U

The analyte was not detected above the laboratory estimated quantation limit.

n/v

No standard/guideline value.

-

Parameter not analyzed / not available.

NS,q

No SCO has been established for this compound. No SCO has been established for total chromium; however, see standards for trivalent and hexavalent chromium.

b

The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

e

The SCOS for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

g

For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

k

This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 TSD Table 5.6-1.

p

The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.

ns/v

No value.

D

Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.

E

Compound was over the calibration range.

J

Indicates estimated value.

N

Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.

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**

Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 17
CONFIRMATORY SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
399 GREGORY STREET
ROCHESTER, NY

Remedial Area of Concern			RAOC2A			RAOC2B					
Sample Location			ES-017 2-Apr-09	ES-018 2-Apr-09	EB-004 25-Mar-09	ES-011 25-Mar-09	ES-012 25-Mar-09	ES-013.1.A 25-Mar-09	ES-013.1.B 2-Apr-09	ES-014	
Sample Date			GR-ES-017.1.A-S	GR-ES-018.1.A-S	GR-EB-004.A-S	GR-011.1.A-S	GR-012.1.A-S	GR-013.1.A-S	GR-ES-013.1.B-S	GR-014.1.A-S	GR-002-S-DU
Sample ID											
Sample Depth			0 - 4 ft	0 - 4 ft	4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
Laboratory Work Order			A2138	A2138	A2017	A2017	A2017	A2017	A2140	A2017	A2017
Laboratory Sample ID			A2138-03	A2138-04	A2017-01	A2017-02	A2017-03	A2017-04	A2140-02	A2017-05	A2017-06
Sample Type	Units	6NYCRR									Field Duplicate
Field Parameters											
PID Reading	ppm	n/v	0.1	0.1	5.3	4.1	5.1	4.0	0.1	4.6	4.6
Metals											
Aluminum	mg/kg	n/v ^A	6130	6510	4810	5470	6020	5260	-	6170	7260
Antimony	mg/kg	n/v ^A	2.930 U	3.060 U	2.940 U	2.900 U	3.000 U	3.050 U	-	2.970 U	2.900 U
Arsenic	mg/kg	16 _g ^A	3.890	5.910	2.480	2.200	2.240	7.020	-	7.410	3.580
Barium	mg/kg	400 ^A	83.8	109	61.4	82.9	94.1	131	-	149	97.2
Beryllium	mg/kg	72 ^A	0.326 J	0.368	0.361	0.357	0.372	0.447	-	0.435	0.434
Cadmium	mg/kg	4.3 ^A	0.122 J	0.228 J	0.184 J	0.347 U	0.170 J	0.285 J	-	0.392	0.153 J
Calcium	mg/kg	n/v ^A	18600	13800	5850	7870	8550	14000	-	8940	6740
Chromium (Total)	mg/kg	NS,q ^A	8.740	9.690	7.340	8.090	8.670	8.610	-	9.780	9.740
Cobalt	mg/kg	n/v ^A	4.160	4.640	4.600	3.930	4.470	4.920	-	4.410	3.770
Copper	mg/kg	270 ^A	32.5	37.4	32.2	16.4	59.1	163	-	51.2	25.7
Iron	mg/kg	n/v ^A	13000	12900	12900	12000	11900	10800	-	15100	16800
Lead	mg/kg	400 ^A	169	275	71.4	119	180	259	-	323	147
Magnesium	mg/kg	n/v ^A	4500	6020	2510	2170	3410	3750	-	4110	2640
Manganese	mg/kg	2000 _g ^A	342	277	1520	208	239	312	-	244	195
Mercury	mg/kg	0.81 _k ^A	0.76	0.59	0.07 J	0.25	0.42	1.40 ^A	0.40	0.59	0.44
Nickel	mg/kg	310 ^A	9.790	10.2	10.2	7.830	9.120	10.3	-	9.560	8.020
Potassium	mg/kg	n/v ^A	621	664	522	541	563	669	-	618	568
Selenium	mg/kg	180 ^A	0.873 J	0.980 J	1.180 U	1.160 U	1.200 U	0.419 J	-	1.260 U	1.160 U
Silver	mg/kg	180 ^A	0.586 U J	0.613 U J	0.588 U	0.579 U	0.599 U	0.609 U	-	0.595 U	0.581 U
Sodium	mg/kg	n/v ^A	222	257	141	175	166	294	-	189	191
Thallium	mg/kg	n/v ^A	2.350 U	2.450 U	2.350 U	2.320 U	2.400 U	2.440 U	-	2.380 U	2.320 U
Vanadium	mg/kg	n/v ^A	16.5	18.3	13.8	15.2	15.3	18.7	-	19.3	20.2
Zinc	mg/kg	10000 _g ^A	103	151	117	85.8	151	146	-	164	110
Volatile Organic Compounds											
Acetone	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Benzene	µg/kg	4800 ^A	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Bromoform	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Bromomethane	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Carbon Disulfide	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 ^A	-	-	-	-	-	-	-	-	-
Chlorinated Fluorocarbon (Freon 113)	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Chloroethane	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Chloroform	µg/kg	49000 ^A	-	-	-	-	-	-	-	-	-
Chloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,3-	µg/kg	49000 ^A	-	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,4-	µg/kg	13000 ^A	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Dichloroethane, 1,1-	µg/kg	26000 ^A	-	-	-	-	-	-	-	-	-
Dichloroethane, 1,2-	µg/kg	3100 ^A	-	-	-	-	-	-	-	-	-
Dichloroethylene, 1,1-	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Dichloroethylene, cis-1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Dichloroethylene, trans-1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Dichloropropane, 1,2-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Dichloropropene, cis-1,3-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Dichloropropene, trans-1,3-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/kg	41000 ^A	-	-	-	-	-	-	-	-	-
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Hexanone, 2-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Isopropylbenzene	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone (MEK)	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone (MIBK)	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether (MTBE)	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Methylene Chloride (Dichloromethane)	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Styrene	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/kg	19000 ^A	-	-	-	-	-	-	-	-	-
Toluene	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Trichlorobenzene, 1,2,4-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,1-	µg/kg	100000 _g ^A	-	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,2-	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/kg	21000 ^A	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/kg	900 ^A	-	-	-	-	-	-	-	-	-
Xylene, m & p-	µg/kg	100000 _{g,p} ^A	-	-	-	-	-	-	-	-	-
Xylene, o-	µg/kg	100000 _{g,p} ^A	-	-	-	-	-	-	-	-	-
Volatile Tentatively Identified Compounds											
Total VOC TICs	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-

Notes:

6NYCRR

NYSDEC 6 NYCRR Part 375

^A

NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Restricted Residential

6.5^A

Concentration exceeds the indicated standard.

15.2

Concentration was detected but did not exceed applicable standards.

0.50 U

Laboratory estimated quantitation limit exceeded standard.

0.03 U

The analyte was not detected above the laboratory estimated quantation limit.

n/v

No standard/guideline value.

-

Parameter not analyzed / not available.

NS,q

No SCO has been established for this compound. No SCO has been established for total chromium; however, see standards for trivalent and hexavalent chromium.

b

The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

e

The SCOS for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

g

For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

k

This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 TSD Table 5.6-1.

p

The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.

ns/v

No value.

D

Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.

E

Compound was over the calibration range.

J

Indicates estimated value.

N

Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.

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**

Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 17
CONFIRMATORY SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
399 GREGORY STREET
ROCHESTER, NY

Remedial Area of Concern											
Sample Location			RAOC3				RAOC3		SP-001		
Sample Date			EB-003	ES-007	ES-008	ES-009	ES-010.1.A	ES-010.1.B	SP-001		Rinse Blank
Sample ID			25-Mar-09	25-Mar-09	25-Mar-09	25-Mar-09	25-Mar-09	2-Apr-09	17-Mar-09	17-Mar-09	23-Mar-09
Sample Depth			GR-EB-003.A-S	GR-ES-007.1.A-S	GR-ES-008.1.A-S	GR-ES-009.1.A-S	GR-ES-010.1.A-S	GR-ES-010.1.B-S	GR-SP-001-S	GR-SP-001-S	GR-001-EXB-RB
Sampling Company			8 ft	0 - 8 ft**	0 - 8 ft**	0 - 8 ft**	0 - 8 ft**	0 - 4 ft			
Laboratory			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory Work Order			CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
Laboratory Sample ID			A2016	A2016	A2016	A2016	A2016	A2140	A1891	A1891	A1981
Sample Type	Units	6NYCRR	A2016-03	A2016-04	A2016-05	A2016-06	A2016-07	A2140-01	A1891-03	A1891-03RE	Material Rinse Blank
Field Parameters											
PID Reading	ppm	n/v	2.1	0.9	3.1	5.5	3.7	0.1	0	0	-
Metals											
Aluminum	mg/kg	n/v ^A	2710	3550	6710	4610	5430	-	-	-	-
Antimony	mg/kg	n/v ^A	2.900 U	2.940 U	2.910 U	3.020 U	3.000 U	-	-	-	-
Arsenic	mg/kg	16 _g ^A	1.160 U	1.730	1.020 J	1.380	3.480	-	-	-	-
Barium	mg/kg	400 ^A	15.7	41.7	60.0	56.6	99.8	-	-	-	-
Beryllium	mg/kg	72 ^A	0.128 J	0.210 J	0.393	0.279 J	0.372	-	-	-	-
Cadmium	mg/kg	4.3 ^A	0.348 U	0.476	0.164 J	0.362 U	0.360 U	-	-	-	-
Calcium	mg/kg	n/v ^A	28200	32800	37200	35200	19700	-	-	-	-
Chromium (Total)	mg/kg	^{NS,q}	4.560	5.850	10.4	7.500	9.500	-	-	-	-
Cobalt	mg/kg	n/v ^A	3.110	3.840	6.620	4.630	3.470	-	-	-	-
Copper	mg/kg	270 ^A	7.560	13.3	16.8	17.1	25.6	-	-	-	-
Iron	mg/kg	n/v ^A	7630	10000	14700	10700	10700	-	-	-	-
Lead	mg/kg	400 ^A	3.250	27.6	14.6	68.2	219	-	-	-	-
Magnesium	mg/kg	n/v ^A	8400	9880	12400	11400	6440	-	-	-	-
Manganese	mg/kg	2000 _g ^A	247	297	321	337	194	-	-	-	-
Mercury	mg/kg	0.81 _k ^A	0.12 U	0.06 J	0.09 J	0.17	1.40 ^A	0.22	-	-	-
Nickel	mg/kg	310 ^A	6.520	8.070	14.9	9.720	8.410	-	-	-	-
Potassium	mg/kg	n/v ^A	404	499	942	569	571	-	-	-	-
Selenium	mg/kg	180 ^A	1.160 U	1.180 U	1.170 U	1.210 U	0.331 J	-	-	-	-
Silver	mg/kg	180 ^A	0.581 U	0.588 U	0.583 U	0.603 U	0.600 U	-	-	-	-
Sodium	mg/kg	n/v ^A	159	167	238	193	185	-	-	-	-
Thallium	mg/kg	n/v ^A	2.320 U	2.350 U	2.330 U	2.410 U	2.400 U	-	-	-	-
Vanadium	mg/kg	n/v ^A	8.020	9.760	15.9	11.9	16.5	-	-	-	-
Zinc	mg/kg	10000 _g ^A	19.9	291	45.1	54.8	93.9	-	-	-	-
Volatile Organic Compounds											
Acetone	µg/kg	100000 _g ^A	-	-	-	-	-	-	58 U	58 U	50 U
Benzene	µg/kg	4800 ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Bromodichloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Bromoform	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Bromomethane	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U	10 U
Carbon Disulfide	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U	10 U
Carbon Tetrachloride (Tetrachloromethane)	µg/kg	2400 ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Chlorinated Fluorocarbon (Freon 113)	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U	10 U
Chlorobenzene (Monochlorobenzene)	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Chloroethane	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U	10 U
Chloroform	µg/kg	49000 ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Chloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U	10 U
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	12 U	12 U	10 U
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	-	-	-	-	-	-	12 U J	12 U J	10 U
Dibromochloromethane	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Dichlorobenzene, 1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Dichlorobenzene, 1,3-	µg/kg	49000 ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Dichlorobenzene, 1,4-	µg/kg	13000 ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Dichlorodifluoromethane	µg/kg	n/v	-	-	-	-	-	-	12 U	12 U	10 U
Dichloroethane, 1,1-	µg/kg	26000 ^A	-	-	-	-	-	-	12 U	12 U	10 U
Dichloroethane, 1,2-	µg/kg	3100 ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Dichloroethylene, 1,1-	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U	10 U
Dichloroethylene, cis-1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Dichloroethylene, trans-1,2-	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U	10 U
Dichloropropane, 1,2-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Dichloropropene, cis-1,3-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Dichloropropene, trans-1,3-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Ethylbenzene	µg/kg	41000 ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/kg	n/v	-	-	-	-	-	-	12 U J	12 U J	10 U
Hexanone, 2-	µg/kg	n/v ^A	-	-	-	-	-	-	58 U J	58 U J	50 U
Isopropylbenzene	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	12 U	12 U	10 U
Methyl Ethyl Ketone (MEK)	µg/kg	100000 _g ^A	-	-	-	-	-	-	58 U	58 U J	50 U
Methyl Isobutyl Ketone (MIBK)	µg/kg	n/v ^A	-	-	-	-	-	-	58 U J	58 U J	50 U
Methyl tert-butyl ether (MTBE)	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U	10 U
Methylcyclohexane	µg/kg	n/v	-	-	-	-	-	-	12 U	12 U J	10 U
Methylene Chloride (Dichloromethane)	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U	10 U
Styrene	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Tetrachloroethane, 1,1,2,2-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Tetrachloroethylene	µg/kg	19000 ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Toluene	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Trichlorobenzene, 1,2,4-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Trichloroethane, 1,1,1-	µg/kg	100000 _g ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Trichloroethane, 1,1,2-	µg/kg	n/v ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Trichloroethylene	µg/kg	21000 ^A	-	-	-	-	-	-	12 U	12 U J	10 U
Trichlorofluoromethane (Freon 11)	µg/kg	n/v	-	-	-	-	-	-	12 U	12 U	10 U
Vinyl chloride	µg/kg	900 ^A	-	-	-	-	-	-	12 U	12 U	10 U
Xylene, m & p-	µg/kg	100000 _{g,p} ^A	-	-	-	-	-	-	12 U J	12 U J	20 U
Xylene, o-	µg/kg	100000 _{g,p} ^A	-	-	-	-	-	-	12 U J	12 U J	10 U
Volatile Tentatively Identified Compounds											
Total VOC TICs	µg/kg	n/v ^A	-	-	-	-	-	-	-	-	-

Notes:

6NYCRR NYSDEC 6 NYCRR Part 375

^A NYSDEC 6 NYCRR Part 375 - Restricted Use SCO - Protection of Human Health - Restricted Residential

6.5^A Concentration exceeds the indicated standard.

15.2 Concentration was detected but did not exceed applicable standards.

0.50 U Laboratory estimated quantitation limit exceeded standard.

0.03 U The analyte was not detected above the laboratory estimated quantation limit.

n/v No standard/guideline value.

- Parameter not analyzed / not available.

^{NS,q} No SCO has been established for this compound. No SCO has been established for total chromium; however, see standards for trivalent and hexavalent chromium.

^b The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

^e The SCOS for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 TSD Section 9.3.

^g For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

^k This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 TSD Table 5.6-1.

^p The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.

^{ns} No value.

D Indicates reanalysis of sample with additional dilution to address exceedance of instrument calibration range.

E Compound was over the calibration range.

J Indicates estimated value.

N Indicates presumptive evidence of a compound. Identification of tentatively identified compound is based on a mass spectral library search.

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** Sample is a composite taken from 2 different depths (0-4ft & 6-8 ft).

TABLE 18
CONFIRMATORY GROUNDWATER SAMPLE ANALYTICAL RESULTS SUMMARY
399 GREGORY STREET
ROCHESTER, NY

Sample Location			MW-101		MW-101R	MW-107	MW-108		MW-113		MW-116	MW-116R*		MW-211		Trip Blank	
Sample Date			8-Aug-05	8-Aug-05	8-May-09	8-May-09	5-Aug-05	8-May-09	9-Aug-05	8-May-09	5-Aug-05	8-May-09	8-May-09	9-Aug-05	4-Nov-05	8-May-09	8-May-09
Sample ID			GR-MW101-GW	GR-MW101-LNAPL	GR-MW-101R-GW	GR-MW-107-GW	GR-MW108-GW	GR-MW--108-GW	GR-MW113-GW	GR-MW--113-GW	GR-MW116-GW	GR-MW--116R-GW	GR-003-GW-DU	GR-MW211-GW	GR-MW211-GW	GR-MW-211-GW	GR-002-TB
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM
Laboratory Work Order			T4138	T4138	A2694	A2694	T4091	A2694	T4138	A2694	T4091	A2694	A2694	T4138	T5588	A2694	A2694
Laboratory Sample ID			T4138-03	T4138-02	A2694-09	A2694-02	T4091-03	A2694-04	T4138-14	A2694-03	T4091-04	A2694-05	A2694-08	T4138-15	T5588-04	A2694-10	A2694-01
Sample Type	Units	TOGS											Field Duplicate				Trip Blank
Volatile Organic Compounds																	
Acetone	µg/L	50 ^A	50 U	50 U	320 ^A	50 U	10 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	1.6 U	50 U	50 U
Benzene	µg/L	1 ^B	3.7 J ^B	3.5 J ^B	10 U	10 U	10 U	10 U	10 U	10 U	2.1 J ^B	10 U	10 U	10 U J	0.15 U	10 U	10 U
Bromodichloromethane	µg/L	50 ^A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.14 U	10 U	10 U
Bromoform	µg/L	50 ^A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.09 U	10 U	10 U
Bromomethane	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.18 U	10 U	10 U
Carbon Disulfide	µg/L	60 ^A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.91 J	10 U	10 U	10 U	0.11 U	10 U	10 U
Carbon Tetrachloride (Tetrachloromethane)	µg/L	5 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.16 U	10 U	10 U
Chlorinated Fluorocarbon (Freon 113)	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.13 U	10 U	10 U
Chlorobenzene (Monochlorobenzene)	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.11 U	10 U	10 U
Chloroethane	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.46 U	10 U	10 U
Chloroform	µg/L	7 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.16 U	10 U	10 U
Chloromethane	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.08 U	10 U	10 U
Cyclohexane	µg/L	n/v	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.15 U	10 U	10 U
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/L	0.04 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.20 U	10 U	10 U
Dibromochloromethane	µg/L	50 ^A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.13 U	10 U	10 U
Dichlorobenzene, 1,2-	µg/L	3 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.08 U	10 U	10 U
Dichlorobenzene, 1,3-	µg/L	3 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.10 U	10 U	10 U
Dichlorobenzene, 1,4-	µg/L	3 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.12 U	10 U	10 U
Dichlorodifluoromethane	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12 U	10 U	10 U
Dichloroethane, 1,1-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.17 U	10 U	10 U
Dichloroethane, 1,2-	µg/L	0.6 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.13 U	10 U	10 U
Dichloroethylene, 1,1-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.19 U	10 U	10 U
Dichloroethylene, cis-1,2-	µg/L	5.. ^B	1.8 J	2.0 J	10 U	10 U	10 U	10 U	10 U	10 U	1.0 J	10 U	10 U	10 U	0.09 U	10 U	10 U
Dichloroethylene, trans-1,2-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Dichloropropane, 1,2-	µg/L	1 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.15 U	10 U	10 U
Dichloropropene, cis-1,3-	µg/L	0.4 _p ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12 U	10 U	10 U
Dichloropropene, trans-1,3-	µg/L	0.4 _p ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Ethylbenzene	µg/L	5.. ^B	6.2 J ^B	1.0 J	6.8 J ^B	10 U	10 U	10 U	10 U	10 U	1.9 J	10 U	10 U	10 U J	0.11 U	10 U	10 U
Ethylene Dibromide (Dibromoethane, 1,2-)	µg/L	0.0006 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12 U	10 U	10 U
Hexanone, 2-	µg/L	50 ^A	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	0.57 U	50 U	50 U
Isopropylbenzene	µg/L	5.. ^B	3.5 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	22 ^B	10 U	10 U	10 U J	0.12 U	10 U	10 U
Methyl Acetate	µg/L	n/v	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.16 U	10 U	10 U
Methyl Ethyl Ketone (MEK)	µg/L	50 ^A	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	0.23 U	50 U	50 U
Methyl Isobutyl Ketone (MIBK)	µg/L	n/v	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	0.46 U	50 U	50 U
Methyl tert-butyl ether (MTBE)	µg/L	10 ^A	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.22 U	10 U	10 U
Methylcyclohexane	µg/L	n/v	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.8 J	10 U	10 U	10 U	0.14 U	10 U	10 U
Methylene Chloride (Dichloromethane)	µg/L	5.. ^B	10 U	8.0 J ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.42 U	10 U	10 U
Styrene	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.11 U	10 U	10 U
Tetrachloroethane, 1,1,2,2-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.09 U	10 U	10 U
Tetrachloroethylene	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12 U	10 U	10 U
Toluene	µg/L	5.. ^B	10 U	10 U	35 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.11 U	10 U	10 U
Trichlorobenzene, 1,2,4-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U J	0.08 U	10 U	10 U
Trichloroethane, 1,1,1-	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.16 U	10 U	10 U
Trichloroethane, 1,1,2-	µg/L	1 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.11 U	10 U	10 U
Trichloroethylene	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.12 U	10 U	10 U
Trichlorofluoromethane (Freon 11)	µg/L	5.. ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.10 U	10 U	10 U
Vinyl chloride	µg/L	2 ^B	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.09 U	10 U	10 U
Xylene, m & p-	µg/L	5.. ^B	60 ^B	16 ^B	35 ^B	20 U	10 U	20 U	10 U	20 U	190 ^B	20 U	20 U	10 U J	0.24 U	20 U	20 U
Xylene, o-	µg/L	5.. ^B	57 ^B	1.7 J	14 ^B	10 U	10 U	10 U	10 U	10 U	2.4 J	10 U	10 U	10 U J	0.13 U	10 U	10 U
Volatile Tentatively Identified Compounds																	
Total VOC TICs	µg/L	n/v	12.2	0	0	0	0	0	0	0	989	0	0	0	0	0	-

Notes:

- TOGS NYSDEC TOGS 1.1.1 (Reissued June 1998 with errata in January 1999 and addenda in April 2000 and June 2004)
- ^A TOGS 1.1.1 - Table 1 - Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Guidance
- ^B TOGS 1.1.1 - Table 1 - Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Standards
- 6.5^A Concentration exceeds the indicated standard.
- 15.2 Concentration was detected but did not exceed applicable standards.
- 0.50 U Laboratory estimated quantitation limit exceeded standard.
- 0.03 U The analyte was not detected above the laboratory estimated quantation limit.
- n/v No standard/guideline value.
- Parameter not analyzed / not available.

- The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in the TOGS table) applies to this substance.
- p Applies to the sum of cis- and trans-1,3-dichloropropene.
- J Indicates estimated value.
- R* Denotes that well was replaced.
- CHEM Chemtech Laboratory, Mountainside, NJ
- µg/L Micrograms per liter.

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:

Ms. Charlotte Theobald

New York State Department of Environmental Conservation, Region 8

6274 East Avon-Lima Road

Avon, New York 14414-9519

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, 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,
- Identification of disposal facilities for potential waste streams, and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 SOIL SCREENING METHODS

Monitoring of materials encountered during construction is generally needed for three purposes:

- To protect the health and safety of Site workers during construction;
- To determine that soil/fill materials and groundwater are consistent with pre-construction characterization; or
- To allow characterization of the non-hazardous or hazardous nature of material encountered in the event that no previous investigation results are available for a specific area.

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. 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.

Several portable monitoring instruments are available to assist in field monitoring of materials. Such instruments are primarily used for detection of volatile organic compounds or dust and particulates. Since volatile organics and metals have been detected in the past at the Site, this type of instrumentation is appropriate for construction excavation monitoring. Types of instruments available for this purpose include:

- Photoionization detector instruments (PID) - these instruments operate by pumping a sample of ambient air into a chamber where the air is ionized using a light source of specific energy (10.2, 10.6, or 11.7 eV). Such instruments are manufactured by HNu and Rae.
- Flame ionization detector instruments (FID) - these instruments operate on a similar principle as the PIDs; however, ionization is caused by a flame produced by combusting hydrogen. The OVA manufactured by Foxboro is such an instrument.
- Colorimetric tubes - these are small glass tubes which contain chemical salts formulated to react with specific volatile and some non-volatile compounds. A sample of air is drawn through a tube with the use of a hand pump. The presence of the target chemical causes a reaction and a color change to the chemical salts in the tube. The Draeger Tube system is such an instrument.

- Combustible gas meters/gas monitors – these instruments are capable of measuring combustible gases such as methane and hydrogen sulfide and would be used during construction activities if large amounts of organic materials such as railroad timbers or peat are encountered.
- Dust/Particulate Meters – these instruments are capable of measuring dust and particulates in ambient air. An example of an aerosol monitor is the MIE PDE-1000.

These types of instruments are readily available in the Rochester area and can be rented or purchased from several sources. However, these instruments should be operated by individuals trained and experienced in their use, limitations and capability for data generation. Readings generated from monitoring instruments should be recorded in the field along with visual observations. 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. As long as excavation monitoring shows soil, fill, and groundwater material to be consistent with previous investigations, then the material should be manageable as determined prior to construction. If conditions are different from those anticipated, then sampling and additional characterization may be necessary.

Sampling of excavated fill or subsurface materials during construction efforts should be considered if either of the following conditions are encountered:

- If conditions during construction are significantly different than those observed during pre-construction exploration, including unusual odors or visual observations such as stained soils, drums, containers, etc.; or
- If concerns such as sheens or free-product are identified within soil or groundwater. If evidence of staining, olfactory, fill or other impacts are observed within the excavated materials, sampling will be required for VOCs and metals.

In these situations, sampling frequency and analyses would vary based on the types and quantities of material encountered and anticipated use/disposal of removed materials. Analysis must adequately characterize materials in light of current NYSDEC 6 NYCRR Part 375 Recommended Soil Cleanup Objectives and/or permitted disposal facility requirements, depending on intended destination of materials.

Typical waste disposal analyses are:

- Toxicity Characteristic Leaching Procedure (TCLP) VOCs,
- TCLP SVOCs,
- TCLP Metals,
- PCBs, Pesticides and Herbicides,
- Ignitability,
- Reactivity,
- Modified Paint Filter Test, and
- pH.

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).

A truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete. 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.

At this time, there is no preferred method for the management of soil/fill excavated during construction activities. In general, it is recommended that non-hazardous soil/fill excavated during remedial measures, grading foundation work, utility trenching work and other earth moving activities, if permitted and in accordance with regulations, be reused on-site and covered with either clean soil or an impervious surface, or be hauled off-Site to a properly licensed and permitted facility. However, if hazardous wastes are encountered, they cannot be reused on-site and will need to be disposed properly at an approved, off-Site permitted facility.

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. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of in an appropriate manner.

Truck transport routes are as follows: trucks will enter from Gregory Street and exit onto Cayuga Street, turning right up to Gregory Street. 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; (f) overall safety in transport; and (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.

A-6 MATERIALS DISPOSAL OFF-SITE

Management of materials that will be disposed off-site will need to include characterization (sampling and laboratory analysis as required by the chosen landfill), management, and off-site transportation and disposal at an approved landfill. Appropriate measures for management of excavated materials will need to include temporarily stockpiling excavated soils and solids, as well as measures to prevent them from contaminating other materials or migrating off-site. Measures that should be incorporated into such plans include:

- Stockpile locations away from storm sewers, downwind property boundaries, and drainage courses;
- Dust suppression techniques, as necessary;
- Placement of stockpiles of contaminated soils, fill or hazardous materials (e.g. drums, containers, odiferous fill) on 6-mil polyethylene (poly) with perimeter berms; and
- Covering stockpiles of contaminated soils, fill, or hazardous materials (e.g. drums, containers, odiferous fill) with weighted down poly at the end of each day of placement to prevent migration by wind-blown dust or stormwater runoff until final placement and final cover is established.

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

Impacted materials that will be re-used on-Site will need to be segregated based upon field screening, previous investigation findings, and/or additional pre-construction and/or construction sampling and analyses. The analysis results will be compared to Restricted Residential SCOs. If concentrations are below Restricted Residential SCOs, the soil can be reused on-Site. If the concentrations are elevated above Restricted Residential SCOs, the results shall be shared with the NYSDEC and approval obtained prior to their specified reuse on-Site. It should be noted the NYSDEC may require highly impacted materials to be transported off-Site and disposed of at a permitted landfill facility. Impacted materials that are determined acceptable for re-use on-Site to backfill excavations should be covered with clean soil or an impervious surface. Staging and stockpiling management of materials should be conducted as described in the sections above.

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table 17. 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. On-site material, including historic fill and soil, that is acceptable for re-use on-site must meet Table 375-6.8(b): Restricted Use Soil Cleanup Objectives for Restricted Residential.

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 derived from clearing and grubbing of the site will not be reused on-site.

A-8 FLUIDS MANAGEMENT

Sufficient data are available at this time such that it does not appear necessary to perform additional groundwater sampling prior to construction activities. Monitoring wells have been installed throughout the subject property and appear to provide sufficient coverage for the portions of the Site affected by the petroleum and chlorinated solvent compounds. If excavation activities are proposed outside the three RAOs identified in the Work Plan and are expected to extend to the depth of the water table, pre-construction sampling may be recommended. In such cases, pre-construction sampling frequency and analyses would vary based on the location of proposed work in relation to the characterized areas and on the anticipated quantity and handling of groundwater.

Sampling of groundwater during construction efforts should be considered if either of the following conditions are encountered:

- If conditions during construction are significantly different than those observed during pre-construction exploration, including unusual odors or visual observations such as stained soils, drums, containers, etc.; or
- If concerns such as sheens or free-product are identified within soil or groundwater.

In these situations, sampling frequency and analyses would vary based on the condition and quantity of groundwater encountered and handling options. In order to obtain approval to discharge potentially impacted groundwater to the Monroe County

sewer system, the typical analyses that may be required are identified in Appendix I (Sewer Use Permit Information).

If groundwater is pumped at the Site, a temporary sewer use permit would be required for sewer disposal from the Monroe County Department of Environmental Services (MCDES) – Division of Pure Waters (DPW). The required information to be supplied to the MCDES-DPW is included in Appendix I. Management of water will include characterization (sampling and laboratory analysis as required by the MCDES-DPW), management, and disposal to the Monroe County sewer system. Appropriate measures for management of water will need to include temporary containerization and measures to prevent water from contaminating other materials or migrating off-site. Measures that should be incorporated into such plans include:

- Containerize water prior to pumping off-site;
- Stage containers away from downwind property boundaries and drainage sources;
- Pump water directly into containers;
- Perform necessary sampling prior to disposal; and
- Coordinate with MCDES-DPW to receive permission for disposal.

The sewer use permit information is included in Appendix I.

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 discharged back to the land surface or subsurface of the site, but will be managed off-site.

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 17. 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 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 (CAMP)

The CAMP will follow the guidance provided in the New York State Department of Health Generic Community Air Monitoring Plan (Appendix D). For each day of intrusive field work, a wind sock or flag will be used to monitor wind direction in the area of the work zone. Based upon the daily wind direction, one upwind and one downwind monitoring point will be identified, at the perimeter of the site or field work location. Locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide upwind and downwind monitoring stations.

Real-time particulate monitoring and VOC monitoring will be carried out using equipment appropriate to measure the types of contaminants known to be present. Prior to the commencement of field work each day, background measurements of particulate and VOC concentrations will be logged at the up- and downwind locations. The real-time readings will be used to observe the difference between upwind and downwind particulate and VOC levels. If at any time, the difference between the upwind and downwind particulate levels or total VOC levels exceeds action levels, then work will be temporarily halted. The Contractor will then be required to implement dust suppression techniques or any other means necessary to control dusts and VOCs. Exceedances 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. Specific odor control methods to be used on a routine basis will include limiting the area of open excavations and size of soil stockpiles and covering soil stockpiles. 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 Environmental Professional, 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

If the monitoring described in Section A-13 results in fugitive particulate levels exceeding $100 \mu\text{g}/\text{m}^3$ above background, then the Contractor will implement fugitive dust control measures which may include one or more of the following:

- using water spray or other dust suppression methods;
- establishing wind shielding;
- slowing down the field work speed; and/or
- stopping the field work activities.

If fugitive particulate levels cannot be maintained below $100 \mu\text{g}/\text{m}^3$ above background using the above-listed dust suppression measures, all work activities must be halted.

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

Environmental Easement

**ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36
OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW**

THIS INDENTURE made this 2nd day of August, 2010, between
Owner(s) The City of Rochester having an office at 30 Church Street, Rochester, New York
14614, (the "Grantor"), and The People of the State of New York (the "Grantee."), acting
through their Commissioner of the Department of Environmental Conservation (the
"Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters
located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest
to encourage the remediation of abandoned and likely contaminated properties ("sites") that
threaten the health and vitality of the communities they burden while at the same time ensuring
the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest
to establish within the Department a statutory environmental remediation program that includes
the use of Environmental Easements as an enforceable means of ensuring the performance of
operation, maintenance, and/or monitoring requirements and of ensuring the potential restriction
of future uses of the land, when an environmental remediation project leaves residual
contamination at levels that have been determined to be safe for a specific use, but not all uses, or
which includes engineered structures that must be maintained or protected against damage to
perform properly and be effective, or which requires groundwater use or soil management
restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental
Easement shall mean an interest in real property, created under and subject to the provisions of
Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which
contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with
engineering controls which are intended to ensure the long term effectiveness of a site remedial
program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 399-409 Gregory
Street in the City of Rochester, Monroe County, State of New York, known and designated on
the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 121.65 Block 1
Lot 53, being the same as that property conveyed to Grantor by Tax Foreclosure Deed dated
November 16, 2004 and recorded in the Monroe County Clerk's Office in Book 10049 at page
0474 of deeds, comprising of approximately 0.465 ± acres, and hereinafter more fully described
in the ALTA/ACSM Land Title Survey dated July 1, 2009 (Revised December 18, 2009),
prepared by Stantec Consulting Services and corresponding Schedule "A" property description,
both documents are attached hereto and made a part hereof (the "Controlled Property"); and

WHEREAS, the Commissioner does hereby acknowledge that the Department accepts this
Environmental Easement in order to ensure the protection of human health and the environment
and to achieve the requirements for remediation established at this Controlled Property until such
time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein
and the terms and conditions of Brownfield Cleanup Agreement Index Number B8-0444-93-12,
Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant
to Article 71, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more
fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The following controls apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property:

A. The Controlled Property may be used for restricted residential use as described within 6 NYCRR Part 375- 1.8 (g) (2) (ii), as long as the following long-term engineering controls are employed and the land use restrictions specified below are adhered to:

(1) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(2) All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.

(3) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP; and

(4) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

(5) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(6) The use of the groundwater underlying the property is prohibited without treatment rendering it safe for its intended use;

(7) The potential for vapor intrusion must be evaluated for any buildings developed on the property, and any potential impacts that are identified must be monitored or mitigated;

(8) The site will be entered into the City of Rochester Building Information flagging system such that all future permit applications will need to be reviewed by the Division of Environmental Quality for compliance with the conditions identified herein;

(9) Sub-slab Depressurization System (SSDS) - If a SSDS is installed, the SSDS will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and New York State Department of Health;

(10) Monitored Natural Attenuation - Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated as defined in the SMP.

B. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the Site Management Plan ("SMP") that the Department has approved for the Controlled Property and all Department-approved amendments to that SMP.

The Grantor hereby acknowledges receipt of a copy of the NYSDEC-approved Site Management Plan, dated November 3, 2009. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system on the Controlled Property, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. Upon notice of not less than thirty (30) days the Department in exercise of its discretion and consistent with applicable law may revise the SMP. The notice shall be a final agency determination. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Regional Remediation Engineer
NYSDEC - Region 8
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414-9519
Phone: (585) 226-5349 fax: (585) 226-8139

or Site Control Section
Division of Environmental Remediation
NYS DEC
625 Broadway
Albany, New York 12233

C. The Controlled Property may not be used for a higher level of use such as residential use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

D. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

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

E. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

F. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Controlled Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer the underlying fee interest to the Controlled Property by operation of law, by deed, or by indenture, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person intentionally violates this Environmental Easement, the Grantee may revoke the Certificate of Completion provided under ECL Article 56, Title 5 or ECL Article 27 Title 14 with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach. Grantor shall then have a reasonable amount of time from receipt of such notice to cure. At the expiration of said second period, Grantee may commence any proceedings and take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement in accordance with applicable law to require compliance with the terms of this Environmental Easement.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar its enforcement rights in the event of a subsequent breach of or noncompliance with any of the terms of this Environmental Easement.

6. Notice. Whenever notice to the State (other than the annual certification) or approval from the State is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information: County, NYSDEC Site Number, NYSDEC Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to: Site Number: C 828091
Department of Environmental Enforcement
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

Such correspondence shall be delivered by hand, or by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. This Environmental Easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

565
Grantor's Name: The City of Rochester

By: 

Title: Corporation
Counsel

Date: 7/20/10

Grantor's Acknowledgment

STATE OF NEW YORK)
COUNTY OF) ss:

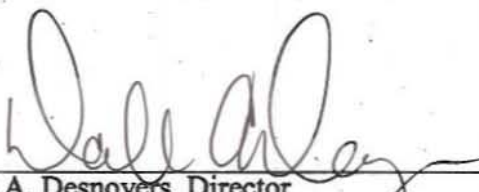
On the 20th day of July, in the year 2010, before me, the undersigned, personally appeared Thomas S. Richard personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.


Notary Public - State of New York

BONNIE K. DE CARLO
Notary Public, State of New York
Qualified in Monroe County
Commission Expires November 6, 2010

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By:


Dale A. Desnoyers, Director
Division of Environmental Remediation

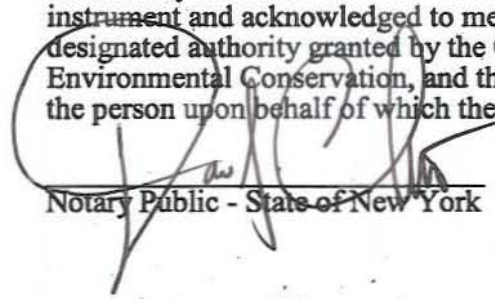
Date:

8-2-10

Grantee's Acknowledgment

STATE OF NEW YORK }
COUNTY OF Albany } ss:

On the 2nd day of AUGUST, in the year 2010, before me, the undersigned, personally appeared Dale A. Desnoyers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as a designated authority granted by the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2014

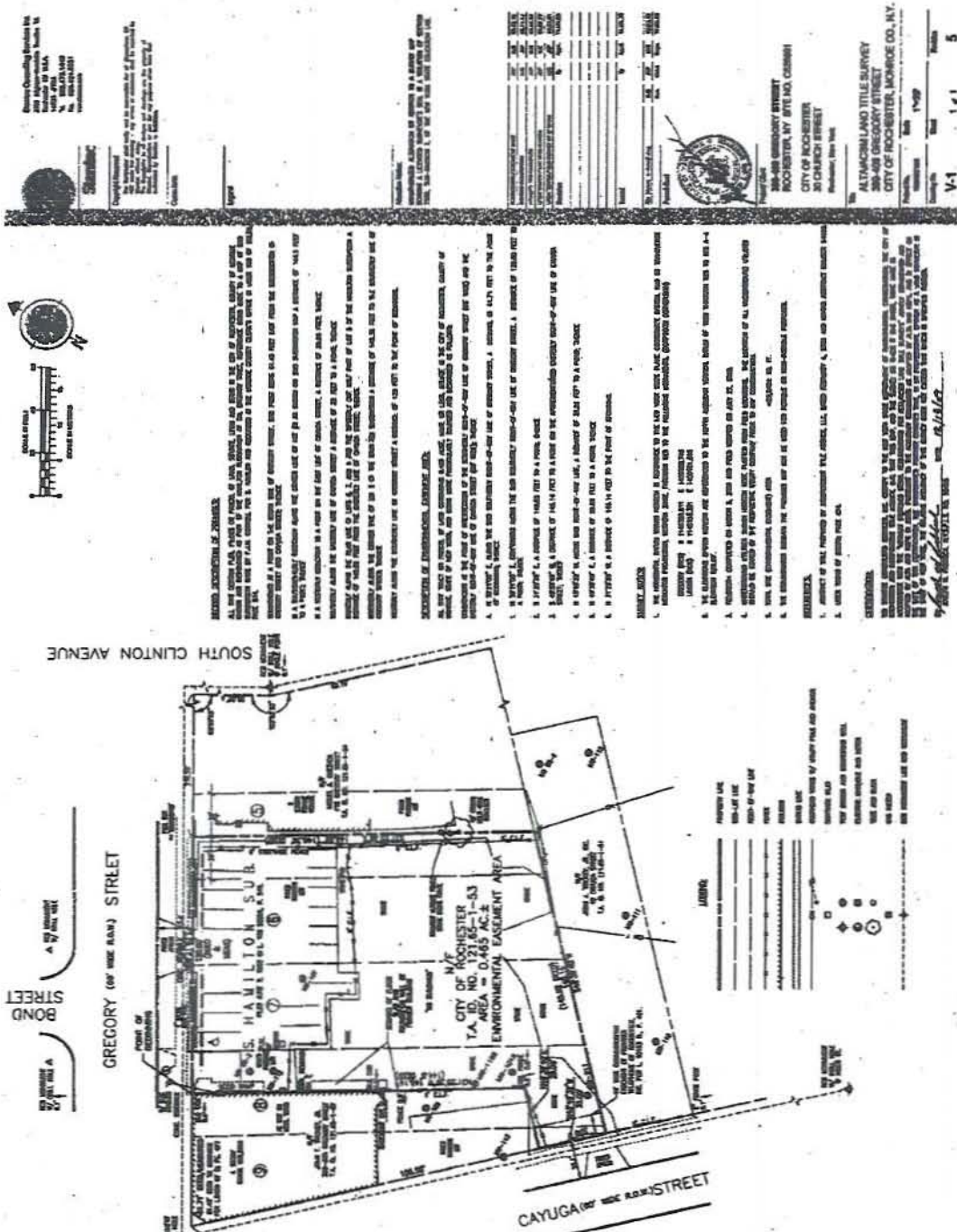
SCHEDULE "A" PROPERTY DESCRIPTION**DESCRIPTION OF PREMISES AND
ENVIRONMENTAL EASMENT:**

ALL THAT TRACT OR PARCEL OF LAND CONTAINING 0.465 ACRE, MORE OR LESS, SITUATE IN THE CITY OF ROCHESTER, COUNTY OF MONROE, STATE OF NEW YORK, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET (66' WIDE) AND THE EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET (60' WIDE); THENCE

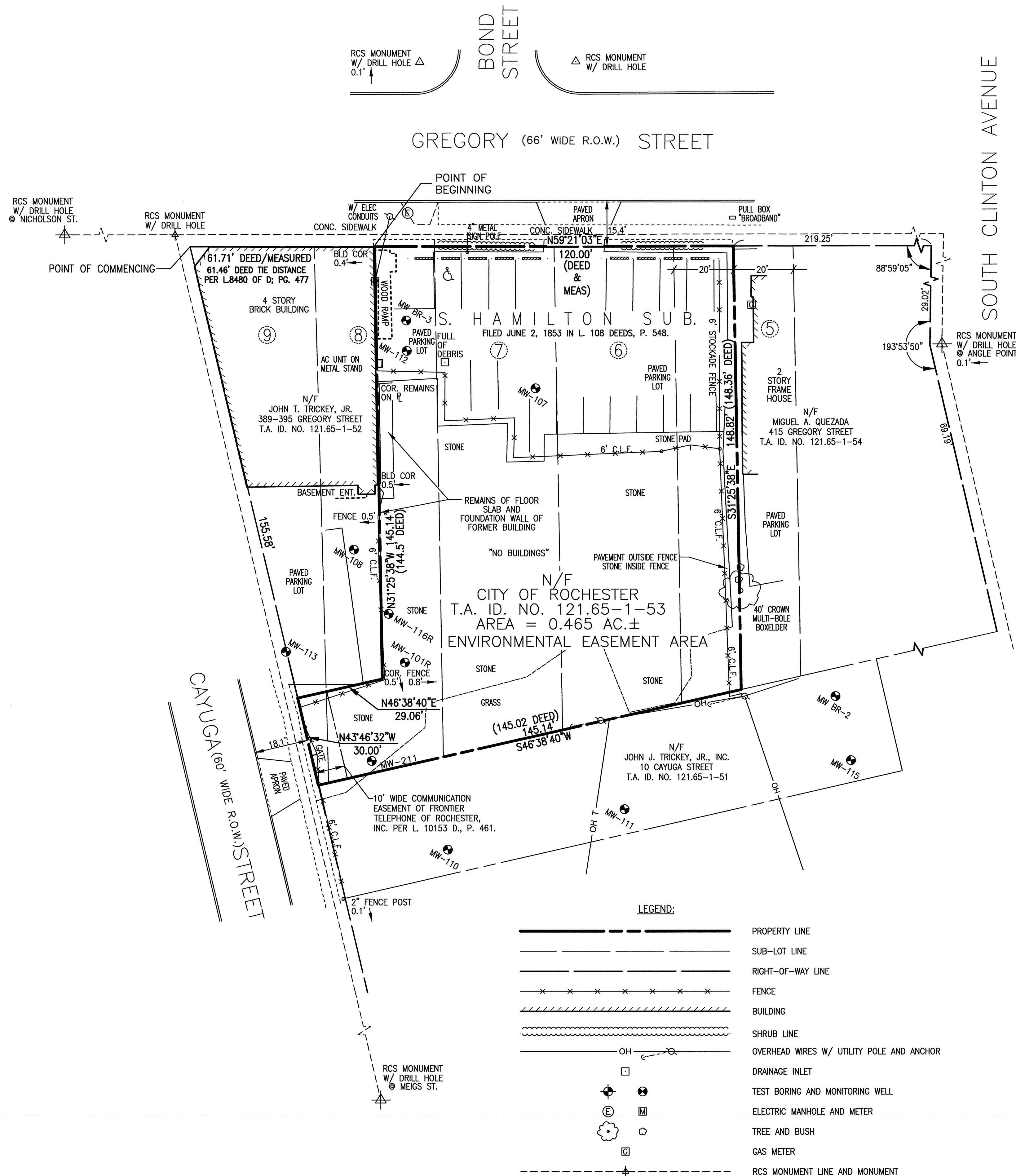
- A. N 59°21'03" E, ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 61.71 FEET TO THE POINT OF BEGINNING; THENCE
1. N 59°21'03" E, CONTINUING ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 120.00 FEET TO A POINT; THENCE
2. S 31°25'38" E, A DISTANCE OF 148.82 FEET TO A POINT; THENCE
3. S 46°38'40" W, A DISTANCE OF 145.14 FEET TO A POINT ON THE AFOREMENTIONED EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET; THENCE
4. N 43°46'32" W, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 30.00 FEET TO A POINT; THENCE
5. N 46°38'40" E, A DISTANCE OF 29.06 FEET TO A POINT; THENCE
6. N 31°25'38" W, A DISTANCE OF 145.14 FEET TO THE POINT OF BEGINNING.

SURVEY



APPENDIX C

Survey Map, Metes and Bounds



RECORD DESCRIPTION OF PREMISES:

ALL THAT CERTAIN PLOT, PIECES OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE CITY OF ROCHESTER, COUNTY OF MONROE KNOWN AND DESIGNATED AS PART OF THE HAMILTON SUBDIVISION OF THE GREGORY TRACT, REFERENCE BEING MADE TO A MAP OF SAID SUBDIVISION MADE BY F.J.M. CORNELL FOR S. HAMILON AND RECORDED IN THE MONROE COUNTY CLERK'S OFFICE IN LIBER 108 OF DEEDS, PAGE 514.

COMMENCING AT A POINT ON THE SOUTH SIDE OF GREGORY STREET, SAID POINT BEING 61.46 FEET EAST FROM THE INTERSECTION OF GREGORY STREET AND CAYUGA STREET; THENCE

IN A SOUTHWESTERLY DIRECTION ALONG THE CENTER LINE OF LOT #8 AS SHOWN ON SAID SUBDIVISION MAP A DISTANCE OF 144.5 FEET TO A POINT; THENCE

IN A WESTERLY DIRECTION TO A POINT ON THE EAST LINE OF CAYUGA STREET, A DISTANCE OF 29.06 FEET; THENCE

SOUTHERLY ALONG THE EASTERLY LINE OF CAYUGA STREET A DISTANCE OF 30 FEET TO A POINT; THENCE

EASTERLY ALONG THE REAR LINE OF LOTS 8, 7, AND 6 AND THE WESTERLY ONE HALF PART OF LOT 5 OF THE HAMILTON SUBDIVISION A DISTANCE OF 145.02 FEET FROM THE EASTERLY LINE OF CAYUGA STREET; THENCE

NORTHERLY ALONG THE CENTER LINE OF LOT 5 OF THE HAMILTON SUBDIVISION A DISTANCE OF 148.36 FEET TO THE SOUTHERLY LINE OF GREGORY STREET; THENCE

WESTERLY ALONG THE SOUTHERLY LINE OF GREGORY STREET A DISTANCE OF 120 FEET TO THE POINT OF BEGINNING.

DESCRIPTION OF ENVIRONMENTAL EASEMENT AREA:

ALL THAT TRACT OR PARCEL OF LAND CONTAINING 0.465 ACRE, MORE OR LESS, SITUATE IN THE CITY OF ROCHESTER, COUNTY OF MONROE, STATE OF NEW YORK, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET (66' WIDE) AND THE EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET (60' WIDE); THENCE

- A. N 59°21'03" E, ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 61.71 FEET TO THE POINT OF BEGINNING; THENCE
1. N 59°21'03" E, CONTINUING ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 120.00 FEET TO A POINT; THENCE
2. S 31°25'38" E, A DISTANCE OF 148.82 FEET TO A POINT; THENCE
3. S 46°38'40" W, A DISTANCE OF 145.14 FEET TO A POINT ON THE AFOREMENTIONED EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET; THENCE
4. N 43°46'32" W, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 30.00 FEET TO A POINT; THENCE
5. N 46°38'40" E, A DISTANCE OF 29.06 FEET TO A POINT; THENCE
6. N 31°25'38" W, A DISTANCE OF 145.14 FEET TO THE POINT OF BEGINNING.

SURVEY NOTES:

1. THE HORIZONTAL DATUM SHOWN HEREON IS REFERENCE TO THE NEW YORK STATE PLANE COORDINATE SYSTEM, NAD 83 TRANSVERSE MERCATOR PROJECTION, WESTERN ZONE, THROUGH TIES TO THE FOLLOWING MONUMENTS. (CORPSCON CONVERSION)

GREGORY (RCS) N 1146380.611 E 1409588.746
LINDEN (RCS) N 1145153.281 E 1409101.696

2. THE ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 THROUGH TIES TO RTS A-4 ELEVATION 525.99'.
3. FIELDWORK COMPLETED ON MARCH 5, 2009 AND FIELD VERIFIED ON JULY 27, 2009.
4. UNDERGROUND UTILITIES SHOWN HEREON WERE PLOTTED FROM FIELD LOCATIONS. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOULD BE STAKED BY THE RESPECTIVE UTILITY COMPANY PRIOR TO ANY CONSTRUCTION.
5. TOTAL SITE (ENVIRONMENTAL EASEMENT) AREA = 20,249± SQ. FT.
6. THE GROUNDWATER BENEATH THE PREMISES MAY NOT BE USED FOR POTABLE OR NON-POTABLE PURPOSES.

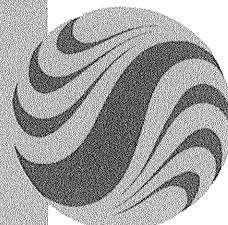
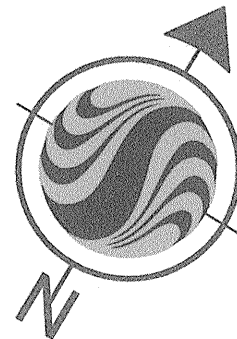
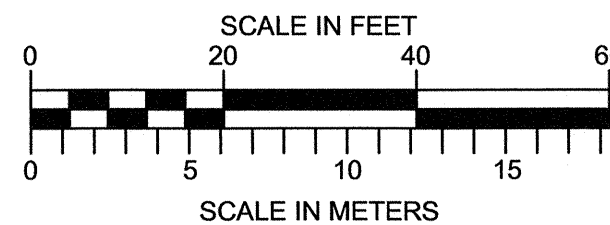
REFERENCES:

1. ABSTRACT OF TITLE PREPARED BY INDEPENDENT TITLE AGENCY, LLC, DATED FEBRUARY 4, 2009 AND HAVING ABSTRACT NUMBER 54408.
2. LIBER 10049 OF DEEDS; PAGE 474.

CERTIFICATION:

WE, STANTEC CONSULTING SERVICES, INC. CERTIFY TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION; THE CITY OF ROCHESTER; AND INDEPENDENT TITLE AGENCY, LLC; THAT THIS MAP, AND THE SURVEY ON WHICH IT WAS BASED, WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS" JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS, AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, THE UNDERSIGNED FURTHER CERTIFIES THAT, IN MY PROFESSIONAL OPINION AS A LAND SURVEYOR IN THE STATE OF NEW YORK, THE RELATIVE ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

BY: *Joseph W. Paddock* DATE: 12/18/09
JOSEPH W. PADDOCK, N.Y.S.P.L.S. NO. 05405



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The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Consultants

Legend

Alteration Notice:

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

REVISED PROJECT/CLIENT NAME	JWP	MJC	09.12.18
REVISED DESCRIPTION	MJC	JWP	09.11.13
REVISED PER COMMENTS	JWP	MJC	09.10.29
UPDATED PER FIELD VERIFICATION	JWP	MJC	09.07.27
UPDATED PER FIELD SURVEY OF 8/19/2009	MJC	JWP	09.07.01
Revision	By	Appd.	YY.MM.DD

Issued	By	Appd.	YY.MM.DD
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File Name: v--base2.dwg	MJC	JWP	MJC	09.03.19
	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Permit-Seal



Project/ Client

399-409 GREGORY STREET
ROCHESTER, NY SITE NO. C828091

CITY OF ROCHESTER
30 CHURCH STREET
Rochester, New York

Title

ALTA/ACSM LAND TITLE SURVEY
399-409 GREGORY STREET
CITY OF ROCHESTER, MONROE CO., N.Y.

Project No.	Scale
190500196	1"=20'

Drawing No.	Sheet	Revision
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V-1 1 of 1 5

DESCRIPTION OF PREMISES AND
ENVIRONMENTAL EASMENT:

ALL THAT TRACT OR PARCEL OF LAND CONTAINING 0.465 ACRE, MORE OR LESS, SITUATE IN THE CITY OF ROCHESTER, COUNTY OF MONROE, STATE OF NEW YORK, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET (66' WIDE) AND THE EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET (60' WIDE); THENCE

- A. N 59°21'03" E, ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 61.71 FEET TO THE POINT OF BEGINNING; THENCE
- 1. N 59°21'03" E, CONTINUING ALONG THE SAID SOUTHERLY RIGHT-OF-WAY LINE OF GREGORY STREET, A DISTANCE OF 120.00 FEET TO A POINT; THENCE
- 2. S 31°25'38" E, A DISTANCE OF 148.82 FEET TO A POINT; THENCE
- 3. S 46°38'40" W, A DISTANCE OF 145.14 FEET TO A POINT ON THE AFOREMENTIONED EASTERLY RIGHT-OF-WAY LINE OF CAYUGA STREET; THENCE
- 4. N 43°46'32" W, ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 30.00 FEET TO A POINT; THENCE
- 5. N 46°38'40" E, A DISTANCE OF 29.06 FEET TO A POINT; THENCE
- 6. N 31°25'38" W, A DISTANCE OF 145.14 FEET TO THE POINT OF BEGINNING.

APPENDIX D

Community Air Monitoring Plan

APPENDIX 1A

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 particulate 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.

APPENDIX E

Health and Safety Plan

**APPENDIX E
HEALTH AND SAFETY PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK**

Prepared for:
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
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Stantec

AUGUST 2009

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HEALTH AND SAFETY PLAN
REMEDIAL ACTION WORK PLAN
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**APPENDIX E
HEALTH AND SAFETY PLAN
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1.0 Introduction

The following Health and Safety Plan (HASP) describes personal safety protection standards and procedures to be followed by Stantec staff during on-site Remedial Action Work Plan activities at 399 Gregory Street, Rochester, New York (Figure 1). Remedial Action activities include a Remedial Design Investigation (RDI) including Geoprobe soil borings, groundwater monitoring well decommissioning/ installations, excavation and disposal of impacted soils, application of an in-situ, bio-augmentation additive to the open RAOC 1 excavation, soil and groundwater analytical sampling and a one year of post excavation groundwater monitoring program.

This HASP establishes mandatory safety procedures and personal protection standards pursuant to the Occupational Safety and Health Administration (OSHA) regulations 29 Code of Federal Regulations (CFR) 1910.120. The HASP applies to all Stantec personnel conducting any site work, as defined in 29 CFR 1910.120(a). All personnel involved in the mentioned activities must familiarize themselves with this HASP, comply with its requirements and have completed the required health and safety training and medical surveillance program participation pursuant to 29 CFR 1910.120 prior to beginning any work on site.

THIS HASP IS FOR THE EXPRESSED USE OF STANTEC CONSULTING GROUP, INC. EMPLOYEES. ALL OTHER CONTRACTORS TO BE WORKING IN THE EXCLUSION AREAS ARE REQUIRED BY LAW TO DEVELOP THEIR OWN HASP, AS WELL TO MEET ALL PERTINENT ASPECTS OF OSHA REGULATIONS. STANTEC RESERVES THE RIGHT TO STOP ANY SITE WORK WHICH IS DEEMED TO POSE A HEALTH AND SAFETY THREAT TO ITS STAFF.

On-site daily safety meetings will be conducted by Stantec for its employees and subcontractors. The form included in Appendix A will be used for guidance during these meetings. The purpose of the meetings is to familiarize the site workers with the known hazards at the site and to discuss the proper safety and emergency procedures.

1.1 SITE BACKGROUND

This project is being performed as part of the City of Rochester's 2003 Brownfield Assessment grant from the United States Environmental Protection Agency (EPA). The remediation of the Davidson Collision site is a key to the City's efforts to redevelop vacant and abandoned properties located throughout the City in densely populated commercial and residential areas.

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REMEDIAL ACTION WORK PLAN
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Introduction
August 2009

The former Davidson Collision Site (Site No. 828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision, however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of hazardous waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner, contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated, however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the site and to determine if the site represents a significant threat to human health or the environment.

1.2 INTRODUCTION OF 6 NYCRR PART 375 SCOS

NYSDEC 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives came into effect in December 2006. It was agreed with the NYSDEC that TAGM 4046 RSCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report issued in December 2008, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO)

2.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation¹;
- an August 1995 Preliminary Site Assessment Report²;
- a March 2003 Site Investigation Report³;
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)⁴; and
- a December 2007 Remedial Design Investigation Report⁵.

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994, the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle

maintenance/trench drain area (AOC2). A third AOC was identified by the NYSDEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

2.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

2.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

2.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

2.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

2.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

2.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above NYSDEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

2.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

2.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

2.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of

volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

2.4 SITE-SPECIFIC CHEMICALS OF CONCERN

Based on previous studies completed at the site and the Site's use history, the primary chemicals of concern at the subject site include the following volatile organic compounds (VOCs):

- methylene chloride
- trichloroethene
- ethylbenzene;
- toluene; and
- total xylenes.

VOCs were historically used on the site as part of the painting operations. The potential source of the VOCs is believed to have been historical use as a cleaning solvent in the painting operations.

In addition, the following SVOCs and metals have been identified as chemicals of concern at the subject site:

- Naphtalene;
- Butyl benzyl phthalate;
- Arsenic;
- Beryllium;
- Cadmium;
- Copper;

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- Lead; and
- Selenium.

Available Material Safety Data Sheets (MSDS) for the chemicals of concern present at the Site are presented in Appendix B. The volatile organic air monitoring action levels will be based on trichloroethene. SVOCs and metals in airborne dust will be monitored as per the CAMP.

3.0 STANTEC PERSONNEL ORGANIZATION

The following personnel will be involved in remedial actions at the Site

3.1 PROJECT MANAGER

The Project Manager is responsible for ensuring that all procedures and methods are carried out, and that all personnel abide by the provisions of this Health and Safety Plan.

3.2 SITE SAFETY OFFICER/FIELD TEAM LEADER

The Field Team Leader will report directly to the Project Manager and will be responsible for the implementation of this HASP as well as daily calibration of safety monitoring instruments. The Field Team Leader will keep a log book of all calibration data and instrument readings for the site. The Site Safety Officer will be responsible for conducting the daily on-site safety meetings.

3.3 HEALTH AND SAFETY COORDINATOR

The Project Health and Safety Coordinator will coordinate Health and Safety issues on the project as required.

4.0 MEDICAL SURVEILLANCE REQUIREMENTS

4.1 INTRODUCTION

Hazardous waste site workers can often experience high levels of physical and chemical stress. Their daily tasks may expose them to toxic chemicals, physical hazards, biologic hazards, or radiation. They may develop heat stress while wearing protective equipment or while working under temperature extremes. They can face life-threatening emergencies such as explosions

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and fires. Therefore, a medical program is essential to: assess and monitor worker's health and fitness both prior to employment and during the course of the work; provide emergency and other treatment as needed; and keep accurate records for future reference.

OSHA requires a medical evaluation for employees that may be required to work on hazardous waste sites and/or wear a respirator (29 CFR Part 1910.120 and 1910.134), and certain OSHA standards include specific medical surveillance requirements (e.g., 29 CFR Part 1926.62, Part 1910.95 and Parts 1910.1001 through 1910.1045).

4.2 MEDICAL EXAMINATIONS

- A. All Stantec personnel working in contaminated areas of the site shall have been examined by a licensed physician as prescribed in 29 CFR Part 1910.120, and shall be determined to be medically fit to perform their duties for work conditions which require respirators. Employees will be provided with medical examinations as outlined below:
- Pre-job physical examination;
 - Annually thereafter;
 - Termination of employment;
 - Upon reassignment in accordance with CFR 29 Part 1910.120(f)(3)(i)(C);
 - If the employee develops signs or symptoms of illness related to workplace exposures;
 - If the physician determines examinations need to be conducted more often than once a year; and
 - When an employee develops a lost time injury or illness during the employment period.
- B. Examinations will be performed by, or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and will be provided without cost to the employee, without loss of pay and at a reasonable time and place. Medical surveillance protocols and examination and test results shall be reviewed by the Occupational Physician.

5.0 ON-SITE HAZARDS

5.1 CHEMICAL HAZARDS

The primary potential chemical hazards on-site are expected to be exposure to petroleum related VOCs, as well as SVOCs and metals in airborne dust.

Many of the soil and groundwater contaminants identified to date are volatile; therefore, any activity at the site which causes physical disturbance of the soil can potentially allow the release of contaminants into the air. In addition, aeration of the groundwater may cause volatilization of chemicals into the air, particularly VOCs. Such an occurrence may be recognized by noticeable chemical odors. Field personnel should be aware of the odor threshold for these chemicals and their relation to the action levels and Permissible Exposure Limits.

To prevent dermal exposure to VOCs, dermal contact will be minimized by using disposable gloves and work gloves (as appropriate) when handling soil, groundwater equipment or samples.

To prevent inhalation of VOCs, real-time, breathing zone levels of total VOCs will be monitored using a portable photoionization detector (PID-Minirae Model 2000 or equivalent) equipped with a 10.6 eV lamp. If ambient levels exceed action levels, all site activities will be performed using level C personal protection until ambient concentrations dissipate. Where levels exceed 50 ppm, work will cease and the project manager will be notified immediately.

To prevent inhalation of dust, fugitive dust emissions will be monitored as per the CAMP. Level C personal protection shall be worn if particulate levels are above background. If fugitive particulate levels cannot be maintained below 100 $\mu\text{g}/\text{m}^3$ above background using the dust suppression measures prescribed in the CAMP, all work activities must be halted until particulate levels can be controlled.

5.2 PHYSICAL HAZARDS

Hazards typically encountered during drilling, well installation and sampling will be a concern at this site. These hazards include slippery ground surfaces, holes, and operation of heavy machinery and equipment. Basic Level D safety apparel including steel-toed shoes, hard hat and safety glasses will be worn during all activities by field team members.

Under no circumstance will Stantec personnel enter excavations or other confined spaces to collect soil samples for any reason.

Multi-purpose fire extinguishers, functional and with proof of valid annual inspection, will be staged and readily accessible for use.

The use of electrical equipment in any established exclusion zones will be limited to areas verified as containing non-explosive atmospheres (<10% LEL) prior to operation, unless the equipment has been previously demonstrated or designed to be FM or UL rated as intrinsically safe. Care will be taken to avoid an ignition source while working in the presence of vapors.

The contractor shall make all necessary contacts with utilities and/or underground utility locator hotlines prior to drilling, and shall meet OSHA requirements for distances between the heavy equipment and overhead utilities.

5.2.1 Noise

The use of heavy machinery/equipment and operation may result in noise exposures, which require hearing protection. Exposure to noise can result in temporary hearing losses, interference with speech communication, interference with complicated tasks or permanent hearing loss due to repeated exposure to noise.

During the investigative activities, all Stantec field team members will use hearing protection when sound levels are in excess of 90 dB TWA. All aspects of the Stantec Hearing Conservation Program (HCP) will apply when noise levels are in excess of 85 dB TWA. Drill rig and excavator operations do not typically result in noise exposures requiring an HCP.

5.2.2 Heat Stress Exposure

This project may be completed during all seasons. Therefore, both heat and cold are potential threats to the health and safety of site personnel. The Site Safety Officer under the direction of the Project Manager will determine the schedule of work and rest. These schedules will be employed as necessary so that personnel do not suffer adverse effects from heat.

Table 1: Exposure Symptoms and First Aid for Heat Exposure

Hazard	Exposure Symptoms	First-Aid Instructions
Heat Stress & Heat Stroke	Fatigue, sweating, irritability	rest; take fluids
	Dizziness, disorientation,	remove from hot area,

	perspiration ceases, loss of consciousness	activate 911, and administer first aid. No fluids to be administered to unconscious victim.
Cold Stress	Shivering, blanching of the extremities, numbness or burning sensations, blue, purple or gray discoloration of hands and feet, frostbite, hypothermia, and loss of consciousness.	<p><u>Prevention:</u> Acclimatization, increase fluid intake, avoid caffeine and alcohol, maintain proper salt and electrolyte intake, eat a well-balanced diet, wear proper clothing, build heated enclosures to work in, and take regular breaks to warm up.</p> <p><u>Treatment:</u> Remove from hot area, activate 911, and administer first aid. No fluids to be administered to unconscious victim.</p>

6.0 SITE WORK ZONES

The following work zones will be physically delineated by Stantec during the remedial activities.

6.1 CONTROL ZONES

Control boundaries will be established within the areas of site activities. Examples of boundary zones include: the work zone and decontamination zone. All boundaries will be dynamic, and will be determined by the planned activities for the day. The Field Team Leader will record the names of any visitors to the site.

6.2 WORK ZONE

The controlled portion of the site will be delineated to identify the work zone, wherein a higher level of personal protective equipment may be required for entry during intrusive activities. The

limits of the work zone will be appropriately designated and demarcated at each work location. A decontamination zone will be located immediately outside the entrance to the work zone. All personnel leaving the work zone will be required to adhere to proper decontamination procedures.

6.3 DECONTAMINATION ZONE

The decontamination zone will be located immediately outside the entrance to the work zone on its apparent upwind side, if feasible, and will be delineated with caution tape and traffic cones. This zone will contain the necessary decontamination materials for personnel decontamination. Decontamination procedures are outlined in Section 8.0 of this plan.

7.0 SITE MONITORING/ACTION LEVELS

7.1 SITE MONITORING

Field activities associated with the earth disturbing activities may create potentially hazardous conditions due to the migration of contaminants into the breathing zone. These substances may be in the form of mists, vapors, dusts, or fumes that can enter the body through ingestion, inhalation, absorption, and direct dermal contact. Monitoring for VOCs will be performed in order that appropriate personal protective measures are employed during site activities.

Although the anticipated concentrations of contaminants in soil/groundwater should not present an explosive hazard, explosive environments or conditions may be encountered unexpectedly during the course of this project. Monitoring for explosivity in the atmosphere will be routinely conducted during site activities as a precautionary measure to ensure site personnel are not subjected to any dangerous conditions.

The following describes the conditions that will be monitored for during the remediation activities. All calibrations, etc., carried out on instruments, as well as background and site readings, will be logged.

Organic Vapor Concentrations – Organic vapors will be monitored continuously in the work area with a portable photoionization detector (PID-Minirae Model 2000 or equivalent) with a 10.6 eV lamp. The instrument will be calibrated daily. PID readings will be used as the criteria for upgrading or downgrading protective equipment and for implementing additional precautions or procedures.

If applicable, split spoons or other soil sampling devices will be monitored using the PID at the time they are opened, with appropriate PPE to be used where soils exhibit measurable volatile organic compound levels.

Explosivity – Explosivity will be monitored using an explosive gas meter in the work area during excavation operations. Explosivity measurements will be made periodically at the excavation. Measurements obtained from this monitoring instrument will also be used as criteria for implementation of work stoppage or site evacuation.

Particulates – Particulates will be monitored with a particulate monitor, as per the CAMP.

7.2 ACTION LEVELS

During the course of any activity, as long as sustained volatile organic vapor readings in the breathing zone are less than 5 ppm above background for total organic vapors above background, Level D protection will be deemed adequate.

If concentrations in the work zone exceed 50 ppm for a period of 5 minutes or longer, work will immediately be terminated by the Site Safety Officer. Options to allow continued remedial activities will then be discussed amongst all parties.

If the lower explosive limit exceeds 10% LEL at the borehole, work will be immediately terminated by the Site Safety Officer. Options to allow continued remedial activities will then be discussed amongst all parties.

Level C protection will need to be worn if particulate levels in air are measured above background. Work activities will be halted if dust suppression measures cannot maintain particulate levels below 100 µg/m³ above background.

8.0 PERSONAL PROTECTIVE EQUIPMENT

Based on an evaluation of the hazards at the site, personal protective equipment (PPE) will be required for all personnel and visitors entering the exclusion zone. It is anticipated that all oversight work will be performed in Level D. The contractors will be responsible for selection and implementation of PPE for their personnel.

8.1 PROTECTIVE CLOTHING/RESPIRATORY PROTECTION:

Protective equipment for each level of protection is as follows:

When HNu readings range above 50 ppm total organic vapors, or particulate levels are measured above background, upgrade to Level C:

Level C

- Full face, air purifying respirator with organic/HEPA cartridge;
- Disposable chemical resistant one-piece suit (Tyvek or Saranex, as appropriate);
- Inner and outer chemical resistant gloves;
- Hard hat;
- Steel-toed boots; and
- Disposable booties.

When HNu readings range between background and 50 ppm for total organic vapors, and particulate levels are measured at background levels, use Level D:

Level D

- Safety glasses;
- Steel-toed boots;
- Protective cotton, latex or leather gloves depending on site duties;
- Hard hat; and
- Tyvek coverall (optional).

9.0 DECONTAMINATION

9.1 PERSONNEL DECONTAMINATION

For complete decontamination, all personnel will observe the following procedures upon leaving the exclusion zone:

1. Remove outer boots and outer gloves and place in disposal drum.
2. If using a respirator, remove respirator, dispose of cartridges if necessary, and set aside for later cleaning.
3. Remove disposable chemical resistant suit and dispose of in drum.
4. Remove and dispose of inner gloves.

Decontamination solutions shall be supplied at the decontamination zone. The wash solution will consist of water and detergent such as Alconox or trisodium phosphate (TSP), and the rinse solution will consist of clean water.

Contaminated wash solutions shall be collected in drums for disposal. All disposable health and safety equipment will be decontaminated and disposed of as non-hazardous waste.

9.2 EQUIPMENT DECONTAMINATION

If equipment is used during field activities, it will be properly washed or steam-cleaned prior to exiting the decontamination zone.

Monitoring instruments will be either wrapped in poly sheeting or carried by personnel not involved in handling contaminated materials, to reduce the need for decontamination. All instruments will be wet-wiped prior to removal from the work zone.

10.0 EMERGENCY PROCEDURES

The Site Safety Officer will coordinate emergency procedures and will be responsible for initiating emergency response activities. Emergency communications at the site will be

conducted verbally. All personnel will be informed of the location of the cellular or public telephone.

10.1 LIST OF EMERGENCY CONTACTS

Ambulance: 911

Hospital: Highland Hospital (585) 341-6880 - emergency department

Fire Department: 911

Police: 911

Poison Control Center: (585) 275-3232

Electric or Gas Emergency: (585) 546-1100

Mark Gregor, City of Rochester, Project Manager: (585) 428-5978

Frank Sowers, New York State Department of Environmental Conservation, Region 8 Office: (585) 226-5357

Joseph Albert, Monroe County Health Department, (585) 753-5904

Debby McNaughton, New York State Health Department: (585) 423-8069

10.2 DIRECTIONS TO HIGHLAND HOSPITAL

A map presenting directions to Highland Hospital is included in the back of the document (Figure 2). The route shall be reviewed at the initial site safety meeting on site.

The accident report form is illustrated in Table 2.

10.3 ACCIDENT INVESTIGATION AND REPORTING

A. All accidents requiring first aid, which occur incidental to activities on-site, will be investigated. The investigation format will be as follows:

- interviews with witnesses;
- pictures, if applicable; and

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REMEDIAL ACTION WORK PLAN
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399 GREGORY STREET
ROCHESTER, NEW YORK
EMERGENCY PROCEDURES
August 2009**

- necessary actions to alleviate the problem.

B. In the event that an accident or some other incident such as an explosion or exposure to toxic chemicals occurs during the course of the project, the Project Health and Safety Officer will be telephoned as soon as possible and receive a written report within 24 hours. The report will include the following items:

- Name of injured;
- Name and title of person(s) reporting;
- Date and time of accident/incident;
- Location of accident/incident, building number, facility name;
- Brief summary of accident/incident giving pertinent details including type of operation ongoing at the time of the accident/incident;
- Cause of accident/incident;
- Casualties (fatalities, disabling injuries), hospitalizations;
- Details of any existing chemical hazard or contamination;
- Estimated property damage, if applicable;
- Nature of damage; effect on contract schedule;
- Action taken to insure safety and security; and
- Other damage or injuries sustained (public or private).

Where reportable injuries, hospitalizations or fatalities occur amongst Stantec personnel, the necessary document required by OSHA will be submitted within timeframes allowed by law.

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Table 2: Accident Report

Project: _____		Date of Occurrence: _____	
Location: _____			
Type of Occurrence (Check all that apply)			
<input type="checkbox"/> Disabling Injury	<input type="checkbox"/> Other Injury		
<input type="checkbox"/> Property Damage	<input type="checkbox"/> Equip. Failure		
<input type="checkbox"/> Chemical Exposure	<input type="checkbox"/> Fire		
<input type="checkbox"/> Explosion	<input type="checkbox"/> Vehicle Accident		
<input type="checkbox"/> Other (explain) _____			
Witnesses to Accident/Injury:			
	_____	_____	_____
	_____	_____	_____
	_____	_____	_____
Injuries	Name of Injured: _____		
	What was being done at the time of the accident/injury?		

	What corrective actions will be taken to prevent reoccurrence?		

Signatures			
Health and Safety Officer: _____		Date: _____	
Project Manager: _____		Date: _____	
Reviewer: _____		Date: _____	
Comments by reviewer: _____			

**APPENDIX E
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References

¹ “Phase II Investigation, Davidson’s Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991.”

² “Preliminary Site Assessment Report, Davidson’s Collision, NYSDEC Site No. 828091, Rochester, New York. Prepared by ABB Environmental Services, August 1995.”

³ “Site Investigation Report, Davidson’s Collision, Site No. 828091, Rochester, New York. Prepared by Frank Sowers, PE, New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 8, March 2003.”

⁴ “Remedial Investigation and Alternative Analysis Report, Former Davidson Collision Site, 399 Gregory Street, Rochester, New York. Prepared by Stantec Consulting Services Inc., September 2006, revised January 2008.”

⁵ “Remedial Design Investigation Report, Former Davidson Collision Site, 399 Gregory Street, Site No. C828091, City of Rochester, Monroe County. Prepared by Stantec Consulting Services Inc., December 2007.”

Figures



Stantec

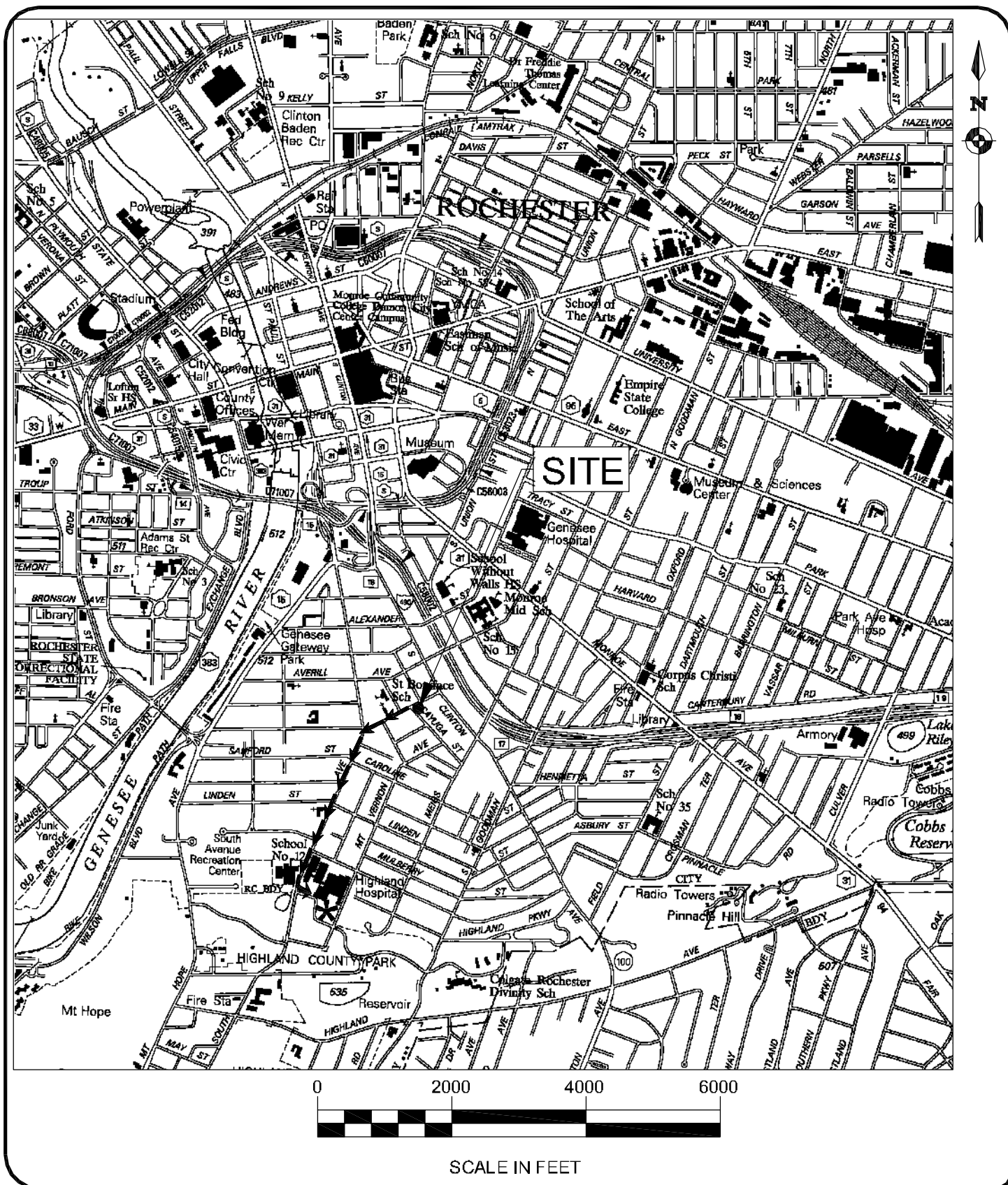
Geographic Information Systems

Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com
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Cartographic Design By: Marc Bouchard

Thursday, January 24, 2008 6:37:03 AM
\\us1275-f02\shared_projects\190500196\drawing\RAWP_January2008\Figure1_RAWP_Site_Location_Jan08.mxd

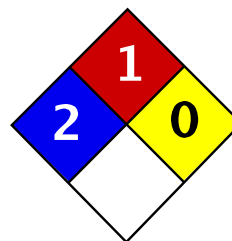
Figure 1 - Site Location
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY



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Appendix A

Material Safety Data Sheets



Health	2
Fire	1
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Methylene chloride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Methylene chloride

Catalog Codes: SLM2398, SLM3772, SLM1297, SLM2677, SLM4054

CAS#: 75-09-2

RTECS: PA8050000

TSCA: TSCA 8(b) inventory: Methylene chloride

CI#: Not available.

Synonym: Dichloromethane

Chemical Name: Methylene Chloride

Chemical Formula: C-H₂-Cl₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Methylene chloride	75-09-2	100

Toxicological Data on Ingredients: Methylene chloride: ORAL (LD50): Acute: 1600 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects: Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (irritant, permeator). Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system, liver, mucous membranes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 556°C (1032.8°F)

Flash Points: Not available.

Flammable Limits: LOWER: 12% UPPER: 19%

Products of Combustion: These products are carbon oxides (CO, CO₂), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions: Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 50 from ACGIH (TLV) [United States] TWA: 174 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 84.93g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: 39.75°C (103.5°F)

Melting Point: -96.7°C (-142.1°F)

Critical Temperature: Not available.

Specific Gravity: 1.3266 (Water = 1)

Vapor Pressure: 46.5 kPa (@ 20°C)

Vapor Density: 2.93 (Air = 1)

Volatility: Not available.

Odor Threshold: 214 ppm

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; log(oil/water) = 0.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility: Easily soluble in methanol, diethyl ether, n-octanol, acetone. Partially soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 1600 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 52000 1 hours [Rat].

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible for human.) by IARC. Causes damage to the following organs: lungs, the nervous system, liver, mucous membranes, central nervous system (CNS).

Other Toxic Effects on Humans: Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Dichloromethane UNNA: 1593 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Methylene chloride California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Methylene chloride Pennsylvania RTK: Methylene chloride Massachusetts RTK: Methylene chloride TSCA 8(b) inventory: Methylene chloride SARA 313 toxic chemical notification and release reporting: Methylene chloride CERCLA: Hazardous substances.: Methylene chloride

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

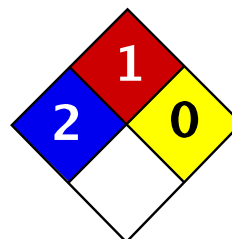
Other Special Considerations: Not available.

Created: 10/10/2005 10:43 AM

Last Updated: 12/02/2005 11:49 AM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the

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Health	2
Fire	1
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Trichloroethylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Trichloroethylene

Catalog Codes: SLT3310, SLT2590

CAS#: 79-01-6

RTECS: KX4560000

TSCA: TSCA 8(b) inventory: Trichloroethylene

CI#: Not available.

Synonym:

Chemical Formula: C₂HCl₃

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Trichloroethylene	79-01-6	100

Toxicological Data on Ingredients: Trichloroethylene: ORAL (LD50): Acute: 5650 mg/kg [Rat]. 2402 mg/kg [Mouse].
DERMAL (LD50): Acute: 20001 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract.

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 420°C (788°F)

Flash Points: Not available.

Flammable Limits: LOWER: 8% UPPER: 10.5%

Products of Combustion: These products are carbon oxides (CO, CO₂), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the

product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Carcinogenic, teratogenic or mutagenic materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 50 STEL: 200 (ppm) from ACGIH (TLV)

TWA: 269 STEL: 1070 (mg/m³) from ACGIH

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 131.39 g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 86.7°C (188.1°F)

Melting Point: -87.1°C (-124.8°F)

Critical Temperature: Not available.

Specific Gravity: 1.4649 (Water = 1)

Vapor Pressure: 58 mm of Hg (@ 20°C)

Vapor Density: 4.53 (Air = 1)

Volatility: Not available.

Odor Threshold: 20 ppm

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; $\log(\text{oil/water}) = 0$

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:

Easily soluble in methanol, diethyl ether, acetone.

Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity:

Extremely corrosive in presence of aluminum.

Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 2402 mg/kg [Mouse].

Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH.

The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in human. Detected in maternal milk in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Trichloroethylene : UN1710 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute:

Trichloroethylene

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Trichloroethylene

Pennsylvania RTK: Trichloroethylene

Florida: Trichloroethylene

Minnesota: Trichloroethylene

Massachusetts RTK: Trichloroethylene

New Jersey: Trichloroethylene

TSCA 8(b) inventory: Trichloroethylene

CERCLA: Hazardous substances.: Trichloroethylene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R36/38- Irritating to eyes and skin.

R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

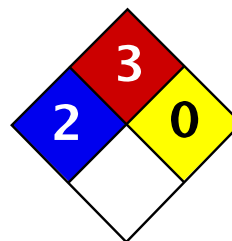
References: Not available.

Other Special Considerations: Not available.

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Ethylbenzene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ethylbenzene

Catalog Codes: SLE2044

CAS#: 100-41-4

RTECS: DA0700000

TSCA: TSCA 8(b) inventory: Ethylbenzene

CI#: Not available.

Synonym: Ethyl Benzene; Ethylbenzol; Phenylethane

Chemical Name: Ethylbenzene

Chemical Formula: C₈H₁₀

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ethylbenzene	100-41-4	100

Toxicological Data on Ingredients: Ethylbenzene: ORAL (LD50): Acute: 3500 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (irritant, sensitizer).

CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 432°C (809.6°F)

Flash Points:

CLOSED CUP: 15°C (59°F). (Tagliabue.) OPEN CUP: 26.667°C (80°F) (Cleveland) (CHRIS, 2001)

CLOSED CUP: 12.8 C (55 F) (Bingham et al, 2001; NIOSH, 2001)

CLOSED CUP: 21 C (70 F) (NFPA)

Flammable Limits: LOWER: 0.8% - 1.6%UPPER: 6.7% - 7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:

Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Vapors may form explosive mixtures in air.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid.

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 100 STEL: 125 (ppm) from OSHA (PEL) [United States]
TWA: 435 STEL: 545 from OSHA (PEL) [United States]
TWA: 435 STEL: 545 (mg/m3) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from ACGIH (TLV) [United States]
TWA: 100 STEL: 125 (ppm) [United Kingdom (UK)]
TWA: 100 STEL: 125 (ppm) [Belgium]
TWA: 100 STEL: 125 (ppm) [Finland]
TWA: 50 (ppm) [Norway]

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish. Gasoline-like. Aromatic.

Taste: Not available.

Molecular Weight: 106.16 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 136°C (276.8°F)

Melting Point: -94.9 (-138.8°F)

Critical Temperature: 617.15°C (1142.9°F)

Specific Gravity: 0.867 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.66 (Air = 1)

Volatility: 100% (v/v).

Odor Threshold: 140 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:

Easily soluble in diethyl ether.

Very slightly soluble in cold water or practically insoluble in water.

Soluble in all proportions in Ethyl alcohol.

Soluble in Carbon tetrachloride, Benzene.

Insoluble in Ammonia.

Slightly soluble in Chloroform.

Solubility in Water: 169 mg/l @ 25 deg. C.; 0.014 g/100 ml @ 15 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials, light

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity:

Can react vigorously with oxidizing materials.

Sensitive to light.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 3500 mg/kg [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.

May cause damage to the following organs: central nervous system (CNS).

Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation.

Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals:

Lethal Dose/Conc 50% Kill:

LD50 [Rabbit] - Route: Skin; Dose: 17800 ul/kg

Lowest Published Lethal Dose/Conc:

LDL[Rat] - Route: Inhalation (vapor); Dose: 4000 ppm/4 H

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.

May cause cancer based on animals data. IARC evidence for carcinogenicity in animals is sufficient. IARC evidence of carcinogenicity in humans inadequate.

May affect genetic material (mutagenic).

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Can cause mild skin irritation. It can be absorbed through intact skin.

Eyes: Contact with vapor or liquid can cause severe eye irritation depending on concentration. It may also cause conjunctivitis. At a vapor exposure level of 85 - 200 ppm, it is mildly and transiently irritating to the eyes; 1000 ppm causes further irritation and tearing; 2000 ppm results in immediate and severe irritation and tearing; 5,000 ppm is intolerable (ACGIH, 1991; Clayton and Clayton, 1994). Standard draize test for eye irritation using 500 mg resulted in severe irritation (RTECS)

Inhalation: Exposure to high concentrations can cause nasal, mucous membrane and respiratory tract irritation and can also result in chest constriction and, trouble breathing, respiratory failure, and even death. It can also affect behavior/Central Nervous System. The effective dose for CNS depression in experimental animals was 10,000 ppm (ACGIH, 1991). Symptoms of CNS depression include headache, nausea, weakness, dizziness, vertigo, irritability, fatigue, lightheadedness, sleepiness, tremor, loss of coordination, judgement and consciousness, coma, and death. It can also cause pulmonary edema. Inhalation of 85 ppm can produce fatigue, insomnia, headache, and mild irritation of the respiratory tract (Haley & Berndt, 1987).

Ingestion: Do not drink, pipet or siphon by mouth. May cause gastrointestinal/digestive tract irritation with Abdominal pain, nausea, vomiting. Ethylbenzene is a pulmonary aspiration hazard. Pulmonary aspiration of even small amounts of the liquid may cause fatal pneumonitis. It may also affect behavior/central nervous system with

Section 12: Ecological Information

Ecotoxicity:

Ecotoxicity in water (LC50): 14 mg/l 96 hours [Fish (Trout)] (static). 12.1 mg/l 96 hours [Fish (Fathead Minnow)] (flow-through)]. 150 mg/l 96 hours [Fish (Blue Gill/Sunfish)] (static). 275 mg/l 96 hours [Fish (Sheepshead Minnow)]. 42.3 mg/l 96 hours [Fish (Fathead Minnow)](soft water). 87.6mg/l 96 hours [Shrimp].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Ethylbenzene UNNA: 1175 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Ethylbenzene
Illinois toxic substances disclosure to employee act: Ethylbenzene
Illinois chemical safety act: Ethylbenzene
New York release reporting list: Ethylbenzene
Rhode Island RTK hazardous substances: Ethylbenzene
Pennsylvania RTK: Ethylbenzene
Minnesota: Ethylbenzene
Massachusetts RTK: Ethylbenzene
Massachusetts spill list: Ethylbenzene
New Jersey: Ethylbenzene
New Jersey spill list: Ethylbenzene
Louisiana spill reporting: Ethylbenzene
California Director's List of Hazardous Substances: Ethylbenzene
TSCA 8(b) inventory: Ethylbenzene
TSCA 4(a) proposed test rules: Ethylbenzene
TSCA 8(d) H and S data reporting: Ethylbenzene: Effective Date: 6/19/87; Sunset Date: 6/19/97
SARA 313 toxic chemical notification and release reporting: Ethylbenzene

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:**WHMIS (Canada):**

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASSE D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R11- Highly flammable.
R20- Harmful by inhalation.
S16- Keep away from sources of ignition - No smoking.
S24/25- Avoid contact with skin and eyes.
S29- Do not empty into drains.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References:

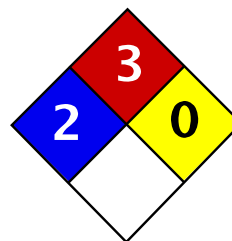
- Manufacturer's Material Safety Data Sheet.
- Fire Protection Guide to Hazardous Materials, 13th ed., National Fire Protection Association (NFPA)
- Registry of Toxic Effects of Chemical Substances (RTECS)
- Chemical Hazard Response Information System (CHRIS)
- Hazardous Substance Data Bank (HSDB)
- New Jersey Hazardous Substance Fact Sheet
- Ariel Global View
- Reprotex System

Other Special Considerations: Not available.

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Toluene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Toluene

Catalog Codes: SLT2857, SLT3277

CAS#: 108-88-3

RTECS: XS5250000

TSCA: TSCA 8(b) inventory: Toluene

CI#: Not available.

Synonym: Toluol, Tolu-Sol; Methylbenzene; Methacide; Phenylmethane; Methylbenzol

Chemical Name: Toluene

Chemical Formula: C₆H₅-CH₃ or C₇H₈

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Toluene	108-88-3	100

Toxicological Data on Ingredients: Toluene: ORAL (LD50): Acute: 636 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit]. VAPOR (LC50): Acute: 49000 mg/m 4 hours [Rat]. 440 ppm 24 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F).

Flammable Limits: LOWER: 1.1% UPPER: 7.1%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances:

Flammable in presence of open flames and sparks, of heat.

Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable liquid, insoluble in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:

Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide;

concentrated nitric acid, sulfuric acid + nitric acid; N₂O₄; AgClO₄; BrF₃; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Toxic flammable liquid, insoluble or very slightly soluble in water.

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States]

TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN

TWA: 100 STEL: 150 from NIOSH [United States]

TWA: 375 STEL: 560 (mg/m³) from NIOSH [United States]

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweet, pungent, Benzene-like.

Taste: Not available.

Molecular Weight: 92.14 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 110.6°C (231.1°F)

Melting Point: -95°C (-139°F)

Critical Temperature: 318.6°C (605.5°F)

Specific Gravity: 0.8636 (Water = 1)

Vapor Pressure: 3.8 kPa (@ 25°C)

Vapor Density: 3.1 (Air = 1)

Volatility: Not available.

Odor Threshold: 1.6 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.7

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:

Soluble in diethyl ether, acetone.

Practically insoluble in cold water.

Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide.

Solubility in water: 0.561 g/l @ 25 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride.

Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C.

Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 636 mg/kg [Rat].

Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit].

Acute toxicity of the vapor (LC50): 440 24 hours [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.

May cause damage to the following organs: blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose:

LDL [Human] - Route: Oral; Dose: 50 mg/kg

LCL [Rabbit] - Route: Inhalation; Dose: 55000 ppm/40min

Special Remarks on Chronic Effects on Humans:

Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes mild to moderate skin irritation. It can be absorbed to some extent through the skin.

Eyes: Causes mild to moderate eye irritation with a burning sensation. Splash contact with eyes also causes conjunctivitis, blepharospasm, corneal edema, corneal abrasions. This usually resolves in 2 days.

Inhalation: Inhalation of vapor may cause respiratory tract irritation causing coughing and wheezing, and nasal discharge. Inhalation of high concentrations may affect behavior and cause central nervous system effects characterized by nausea, headache, dizziness, tremors, restlessness, lightheadedness, exhilaration, memory loss, insomnia, impaired reaction time, drowsiness, ataxia, hallucinations, somnolence, muscle contraction or spasticity, unconsciousness and coma. Inhalation of high concentration of vapor may also affect the cardiovascular system (rapid heart beat, heart palpitations, increased or decreased blood pressure, dysrhythmia,), respiration (acute pulmonary edema, respiratory depression, apnea, asphyxia), cause vision disturbances and dilated pupils, and cause loss of appetite.

Ingestion: Aspiration hazard. Aspiration of Toluene into the lungs may cause chemical pneumonitis. May cause irritation of the digestive tract with nausea, vomiting, pain. May have effects similar to that of acute inhalation.

Chronic Potential Health Effects:

Inhalation and Ingestion: Prolonged or repeated exposure via inhalation may cause central nervous system and cardiovascular symptoms similar to that of acute inhalation and ingestion as well liver damage/failure, kidney damage/failure (with hematuria, proteinuria, oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigmented or nucleated red blood cells, changes in white blood cell count), bone marrow changes, electrolyte imbalances (Hypokalemia, Hypophosphatemia), severe, muscle weakness and Rhabdomyolysis.

Skin: Repeated or prolonged skin contact may cause defatting dermatitis.

Section 12: Ecological Information

Ecotoxicity:

Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 mg/l 24 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l 24 hours [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 56.8 ppm any hours [Fish (Goldfish)].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may

arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification : Toluene UNNA: 1294 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene

California prop. 65 (no significant risk level): Toluene: 7 mg/day (value)

California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value)

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene

Connecticut hazardous material survey.: Toluene

Illinois toxic substances disclosure to employee act: Toluene

Illinois chemical safety act: Toluene

New York release reporting list: Toluene

Rhode Island RTK hazardous substances: Toluene

Pennsylvania RTK: Toluene

Florida: Toluene

Minnesota: Toluene

Michigan critical material: Toluene

Massachusetts RTK: Toluene

Massachusetts spill list: Toluene

New Jersey: Toluene

New Jersey spill list: Toluene

Louisiana spill reporting: Toluene

California Director's List of Hazardous Substances.: Toluene

TSCA 8(b) inventory: Toluene

TSCA 8(d) H and S data reporting: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92

SARA 313 toxic chemical notification and release reporting: Toluene

CERCLA: Hazardous substances.: Toluene: 1000 lbs. (453.6 kg)

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R11- Highly flammable.

R20- Harmful by inhalation.

S16- Keep away from sources of ignition - No smoking.

S25- Avoid contact with eyes.

S29- Do not empty into drains.

S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

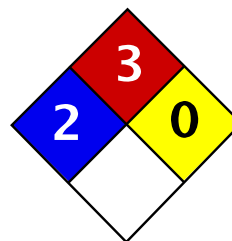
References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:30 PM

Last Updated: 10/10/2005 08:30 PM

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Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet

Xylenes MSDS

Section 1: Chemical Product and Company Identification

Product Name: Xylenes

Catalog Codes: SLX1075, SLX1129, SLX1042, SLX1096

CAS#: 1330-20-7

RTECS: ZE2100000

TSCA: TSCA 8(b) inventory: Xylenes

CI#: Not available.

Synonym: Xylenes; Dimethylbenzene; xylol; methyltoluene

Chemical Name: Xylenes (o-, m-, p- isomers)

Chemical Formula: C₆H₄(CH₃)₂

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Xylenes	1330-20-7	100

Toxicological Data on Ingredients: Xylenes: ORAL (LD50): Acute: 4300 mg/kg [Rat]. 2119 mg/kg [Mouse]. DERMAL (LD50): Acute: >1700 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 464°C (867.2°F)

Flash Points: CLOSED CUP: 24°C (75.2°F). (Tagliabue.) OPEN CUP: 37.8°C (100°F).

Flammable Limits: LOWER: 1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances:

Highly flammable in presence of open flames and sparks, of heat.

Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Vapors may travel to source of ignition and flash back.

Special Remarks on Explosion Hazards:

Vapors may form explosive mixtures with air.

Containers may explode when heated.

May polymerize explosively when heated.
An attempt to chlorinate xylene with 1,3-Dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin) caused a violent explosion

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid.

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 100 (ppm) [Canada]

TWA: 435 (mg/m³) [Canada]

TWA: 434 STEL: 651 (mg/m³) from ACGIH (TLV) [United States]

TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) [United States]

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 138.5°C (281.3°F)

Melting Point: -47.4°C (-53.3°F)

Critical Temperature: Not available.

Specific Gravity: 0.864 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 1 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; $\log(\text{oil/water}) = 3.1$

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:

Insoluble in cold water, hot water.

Miscible with absolute alcohol, ether, and many other organic liquids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Store away from acetic acid, nitric acid, chlorine, bromine, and fluorine.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 2119 mg/kg [Mouse].

Acute dermal toxicity (LD50): >1700 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 5000 4 hours [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.

May cause damage to the following organs: blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:

Lowest Lethal Dose:

LDL [Human] - Route: Oral; Dose: 50 mg/kg

LCL [Man] - Route: Oral; Dose: 10000 ppm/6H

Special Remarks on Chronic Effects on Humans:

Detected in maternal milk in human. Passes through the placental barrier in animal. Embryotoxic and/or fetotoxic in animal.

May cause adverse reproductive effects (male and female fertility (spontaneous abortion and fetotoxicity)) and birth defects based animal data.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes skin irritation. Can be absorbed through skin.

Eyes: Causes eye irritation.

Inhalation: Vapor causes respiratory tract and mucous membrane irritation. May affect central nervous system and behavior (General anesthetic/CNS depressant with effects including headache, weakness, memory loss, irritability, dizziness, giddiness, loss of coordination and judgement, respiratory depression/arrest or difficulty breathing, loss of appetite, nausea, vomiting, shivering, and possible coma and death). May also affects blood, sense organs, liver, and peripheral nerves.

Ingestion: May cause gastrointestinal irritation including abdominal pain, vomiting, and nausea. May also affect liver and urinary system/kidneys. May cause effects similar to those of acute inhalation.

Chronic Potential Health Effects:

Chronic inhalation may affect the urinary system (kidneys) blood (anemia), bone marrow (hyperplasia of bone marrow) brain/behavior/Central Nervous system. Chronic inhalation may also cause mucosal bleeding.

Chronic ingestion may affect the liver and metabolism (loss of appetite) and may affect urinary system (kidney damage)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Xylenes UNNA: 1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Connecticut hazardous material survey.: Xylenes
Illinois chemical safety act: Xylenes
New York acutely hazardous substances: Xylenes
Rhode Island RTK hazardous substances: Xylenes
Pennsylvania RTK: Xylenes
Minnesota: Xylenes
Michigan critical material: Xylenes
Massachusetts RTK: Xylenes
Massachusetts spill list: Xylenes
New Jersey: Xylenes
New Jersey spill list: Xylenes
Louisiana spill reporting: Xylenes
California Director's List of Hazardous Substances: Xylenes
TSCA 8(b) inventory: Xylenes
SARA 302/304/311/312 hazardous chemicals: Xylenes
SARA 313 toxic chemical notification and release reporting: Xylenes
CERCLA: Hazardous substances.: Xylenes: 100 lbs. (45.36 kg)

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R10- Flammable.
R21- Harmful in contact with skin.
R36/38- Irritating to eyes and skin.
S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

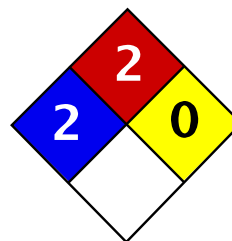
References: Not available.

Other Special Considerations: Not available.

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Last Updated: 10/11/2005 12:54 PM

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Health	2
Fire	2
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Naphthalene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Naphthalene

Catalog Codes: SLN1789, SLN2401

CAS#: 91-20-3

RTECS: QJ0525000

TSCA: TSCA 8(b) inventory: Naphthalene

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C₁₀H₈

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Naphthalene	91-20-3	100

Toxicological Data on Ingredients: Naphthalene: ORAL (LD50): Acute: 490 mg/kg [Rat]. 533 mg/kg [Mouse]. 1200 mg/kg [Guinea pig]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit]. VAPOR (LC50): Acute: 170 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant, permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].

The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 567°C (1052.6°F)

Flash Points: CLOSED CUP: 88°C (190.4°F). OPEN CUP: 79°C (174.2°F).

Flammable Limits: LOWER: 0.9% UPPER: 5.9%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

Flammable solid.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Flammable solid.

Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Israel: TWA: 10 (ppm)

TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995]

TWA: 52 STEL: 79 (mg/m³) from ACGIH [1995]

Australia: STEL: 15 (ppm)

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: Aromatic.

Taste: Not available.

Molecular Weight: 128.19 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 218°C (424.4°F)

Melting Point: 80.2°C (176.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.162 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 4.4 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.038 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:

Partially dispersed in hot water, methanol, n-octanol.

Very slightly dispersed in cold water.

See solubility in methanol, n-octanol.

Solubility:

Partially soluble in methanol, n-octanol.

Very slightly soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Highly reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: May attack some forms of rubber and plastic

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 490 mg/kg [Rat].

Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].

Acute toxicity of the vapor (LC50): 170 ppm 4 hour(s) [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].

The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).

Other Toxic Effects on Humans:

Very hazardous in case of ingestion.

Hazardous in case of inhalation.

Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 305.2 ppm 96 hour(s) [Trout].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Naphthalene, refined : UN1334 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:

Rhode Island RTK hazardous substances: Naphthalene

Pennsylvania RTK: Naphthalene

Florida: Naphthalene

Minnesota: Naphthalene

Massachusetts RTK: Naphthalene

TSCA 8(b) inventory: Naphthalene

TSCA 8(a) PAIR: Naphthalene

TSCA 8(d) H and S data reporting: Naphthalene: 06/01/87

SARA 313 toxic chemical notification and release reporting: Naphthalene: 1%

CERCLA: Hazardous substances.: Naphthalene: 100 lbs. (45.36 kg)

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS B-4: Flammable solid.

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R36- Irritating to eyes.

R40- Possible risks of irreversible effects.

R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation.

R63- Possible risk of harm to the unborn child.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/11/2005 01:30 PM

Last Updated: 10/11/2005 01:30 PM

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BUTYL BENZYL PHTHALATE**0834**

October 2005

CAS No: 85-68-7

RTECS No: TH9990000

UN No: 3082

EC No: 607-430-00-3

Benzyl butyl phthalate

1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester

BBP

 $1,2-C_6H_4(COOCH_2C_6H_5)(COOC_4H_9) / C_{19}H_{20}O_4$

Molecular mass: 312.4

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Alcohol-resistant foam. Powder, carbon dioxide. Water spray.
EXPLOSION			

EXPOSURE	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	PREVENT GENERATION OF MISTS! AVOID EXPOSURE OF (PREGNANT) WOMEN!	
Inhalation		Ventilation, local exhaust, or breathing protection.	Fresh air, rest.
Skin		Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Personal protection: filter respirator for organic gases and vapours. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.	T Symbol N Symbol R: 61-62-50/53 S: 45-53-60-61 UN Hazard Class: 9 UN Pack Group: III Marine pollutant.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-90GM6-III NFPA Code: H1; F1; R0	Store in an area without drain or sewer access. Separated from strong oxidants.

IPCSInternational
Programme on
Chemical SafetyPrepared in the context of cooperation between the International
Programme on Chemical Safety and the European Commission ©
IPCS 2005**SEE IMPORTANT INFORMATION ON THE BACK.**

IMPORTANT DATA

Physical State; Appearance

COLOURLESS OILY LIQUID

Chemical dangers

The substance decomposes on burning producing toxic fumes.
Reacts with oxidants.

Occupational exposure limits

TLV not established.
MAK not established.

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk

Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying.

Effects of long-term or repeated exposure

Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 370/C

Melting point: -35/C

Relative density (water = 1): 1.1

Solubility in water: 0.71 mg/l (very poor)

Vapour pressure, Pa at 20/C: negligible

Relative vapour density (air = 1): 10.8

Flash point: 198/C

Auto-ignition temperature: 425/C

Octanol/water partition coefficient as log Pow: 4.77

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish.

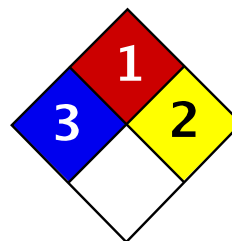
NOTES

Saniticer 160, Sicol 160, Unimoll BB and Palatinol BB are trade names.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information



Health	3
Fire	1
Reactivity	2
Personal Protection	E

Material Safety Data Sheet

Arsenic MSDS

Section 1: Chemical Product and Company Identification

Product Name: Arsenic

Catalog Codes: SLA1006

CAS#: 7440-38-2

RTECS: CG0525000

TSCA: TSCA 8(b) inventory: Arsenic

CI#: Not applicable.

Synonym:

Chemical Name: Arsenic

Chemical Formula: As

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Arsenic	7440-38-2	100

Toxicological Data on Ingredients: Arsenic: ORAL (LD50): Acute: 763 mg/kg [Rat]. 145 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to kidneys, lungs, the nervous system, mucous membranes.

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.01 from ACGIH (TLV) [United States] [1995]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 74.92 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Sublimation temperature: 615°C (1139°F)

Critical Temperature: Not available.

Specific Gravity: 5.72 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, acids, moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 145 mg/kg [Mouse].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.

Causes damage to the following organs: kidneys, lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans:

Very hazardous in case of ingestion, of inhalation.

Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Arsenic UNNA: UN1558 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Arsenic
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Arsenic

Pennsylvania RTK: Arsenic

Massachusetts RTK: Arsenic

TSCA 8(b) inventory: Arsenic

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R22- Harmful if swallowed.

R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 2

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 2

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16: Other Information**References:**

- Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
- Liste des produits purs tératogènes, mutagènes, cancérigènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec.
- Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
- SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
- The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
- Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986.

Other Special Considerations: Not available.

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BERYLLIUM

0226

October 1999

CAS No: 7440-41-7
RTECS No: DS1750000
UN No: 1567
EC No: 004-001-00-7

Glucinium
Be
Atomic mass: 9.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Special powder, dry sand, NO other agents.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	

EXPOSURE		PREVENT DISPERSION OF DUST! AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Cough. Shortness of breath. Sore throat. Weakness. Symptoms may be delayed (see Notes).	Local exhaust. Breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
Eyes	Redness. Pain.	Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Carefully collect the spilled substance into containers; if appropriate moisten first, then remove to safe place. Chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment.	EU classification T+ Symbol R: 49-25-26-36/37/38-43-48/23 S: 53-45 Note: E UN classification UN Hazard Class: 6.1 UN Subsidiary Risks: 4.1 UN Pack Group: II
	Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GTF3-II NFPA Code: H3; F1; R0	Separated from strong acids, bases, chlorinated solvents, food and feedstuffs.

IMPORTANT DATA

Physical State; Appearance

GREY TO WHITE POWDER.

Physical dangers

Dust explosion possible if in powder or granular form, mixed with air.

Chemical dangers

Reacts with strong acids and strong bases forming flammable/explosive gas (hydrogen - see ICSC0001). Forms shock sensitive mixtures with some chlorinated solvents, such as carbon tetrachloride and trichloroethylene.

Occupational exposure limits

TLV: 0.002 mg/m³ as TWA, 0.01 mg/m³ as STEL; A1 (confirmed human carcinogen); (ACGIH 2004). Intended change 0.00002 mg/m³ Skin, Inhal. SEN (ACGIH 2005).

MAK: sensitization of respiratory tract and skin (Sah); Carcinogen category: 1; (DFG 2004).

Routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk

Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

Effects of short-term exposure

The aerosol of this substance is irritating to the respiratory tract. Inhalation of dust or fumes may cause chemical pneumonitis. Exposure may result in death. The effects may be delayed. Medical observation is indicated.

Effects of long-term or repeated exposure

Repeated or prolonged contact may cause skin sensitization. Lungs may be affected by repeated or prolonged exposure to dust particles, resulting in chronic beryllium disease (cough, weight loss, weakness). This substance is carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: above 2500/C
Melting point: 1287/C

Density: 1.9 g/cm³
Solubility in water: none

ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.

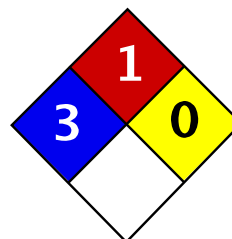
Do NOT take working clothes home.

Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

ADDITIONAL INFORMATION

LEGAL NOTICE

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Health	3
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet

Cadmium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Cadmium

Catalog Codes: SLC3484, SLC5272, SLC2482

CAS#: 7440-43-9

RTECS: EU9800000

TSCA: TSCA 8(b) inventory: Cadmium

CI#: Not applicable.

Synonym:

Chemical Name: Cadmium

Chemical Formula: Cd

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Cadmium	7440-43-9	100

Toxicological Data on Ingredients: Cadmium: ORAL (LD50): Acute: 2330 mg/kg [Rat.]. 890 mg/kg [Mouse]. DUST (LC50): Acute: 50 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to kidneys, lungs, liver.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact: No known effect on eye contact, rinse with water for a few minutes.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 570°C (1058°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:

Non-flammable in presence of open flames and sparks, of heat, of oxidizing materials, of reducing materials, of combustible materials, of moisture.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:

Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.01 (ppm)

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 112.4 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: 765°C (1409°F)

Melting Point: 320.9°C (609.6°F)

Critical Temperature: Not available.

Specific Gravity: 8.64 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity: Reacts violently with potassium.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 890 mg/kg [Mouse].

Acute toxicity of the dust (LC50): 229.9 mg/m³ 4 hour(s) [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP.

The substance is toxic to kidneys, lungs, liver.

Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation.

Slightly hazardous in case of skin contact (irritant, sensitizer).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: An allergen. 0047 Animal: embryotoxic, passes through the placental barrier.

Special Remarks on other Toxic Effects on Humans: May cause allergic reactions, exzema and/or dehydration of the skin.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:

Identification:

Special Provisions for Transport:

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute:

Cadmium

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Cadmium

Pennsylvania RTK: Cadmium

Massachusetts RTK: Cadmium

TSCA 8(b) inventory: Cadmium

SARA 313 toxic chemical notification and release reporting: Cadmium

CERCLA: Hazardous substances.: Cadmium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R26- Very toxic by inhalation.

R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16: Other Information

References:

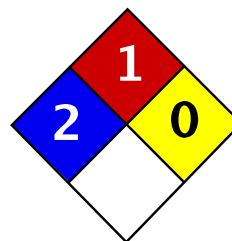
- Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
- Liste des produits purs tératogènes, mutagènes, cancérrogènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec.
- Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
- SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
- The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
- Guide de la loi et du règlement sur le transport des marchandises dangereuses au Canada. Centre de conformité international Ltée. 1986.

Other Special Considerations: Not available.

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Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet

Copper MSDS

Section 1: Chemical Product and Company Identification

Product Name: Copper

Catalog Codes: SLC4939, SLC2152, SLC3943, SLC1150, SLC2941, SLC4729, SLC1936, SLC3727, SLC5515

CAS#: 7440-50-8

RTECS: GL5325000

TSCA: TSCA 8(b) inventory: Copper

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Cu

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Copper	7440-50-8	100

Toxicological Data on Ingredients: Copper LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance is toxic to lungs, mucous membranes.

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible.

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 1 (mg/m³) from ACGIH [1990]

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 63.54 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 2595°C (4703°F)

Melting Point: 1083°C (1981.4°F)

Critical Temperature: Not available.

Specific Gravity: 8.94 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available.

LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:

Very hazardous in case of ingestion.

Hazardous in case of inhalation.

Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Copper

Massachusetts RTK: Copper

TSCA 8(b) inventory: Copper

CERCLA: Hazardous substances.: Copper

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator

when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

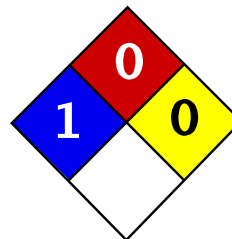
References: Not available.

Other Special Considerations: Not available.

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Health	1
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet

Lead MSDS

Section 1: Chemical Product and Company Identification

Product Name: Lead

Catalog Codes: SLL1291, SLL1669, SLL1081, SLL1459, SLL1834

CAS#: 7439-92-1

RTECS: OF7525000

TSCA: TSCA 8(b) inventory: Lead

CI#: Not available.

Synonym: Lead Metal, granular; Lead Metal, foil; Lead Metal, sheet; Lead Metal, shot

Chemical Name: Lead

Chemical Formula: Pb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Lead	7439-92-1	100

Toxicological Data on Ingredients: Lead LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (permeator).

CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to blood, kidneys, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Non-flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: When heated to decomposition it emits highly toxic fumes of lead.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.05 (mg/m³) from ACGIH (TLV) [United States]

TWA: 0.05 (mg/m³) from OSHA (PEL) [United States]

TWA: 0.03 (mg/m³) from NIOSH [United States]

TWA: 0.05 (mg/m³) [Canada] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 207.21 g/mole

Color: Bluish-white. Silvery. Gray

pH (1% soln/water): Not applicable.

Boiling Point: 1740°C (3164°F)

Melting Point: 327.43°C (621.4°F)

Critical Temperature: Not available.

Specific Gravity: 11.3 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, excess heat

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Can react vigorously with oxidizing materials.

Incompatible with sodium carbide, chlorine trifluoride, trioxane + hydrogen peroxide, ammonium nitrate, sodium azide, disodium acetylide, sodium acetylide, hot concentrated nitric acid, hot concentrated hydrochloric acid, hot concentrated sulfuric acid, zirconium.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available.

LC50: Not available.

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.

May cause damage to the following organs: blood, kidneys, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential:

Skin:

Lead metal granules or dust: May cause skin irritation by mechanical action.

Lead metal foil, shot or sheets: Not likely to cause skin irritation

Eyes:

Lead metal granules or dust: Can irritate eyes by mechanical action.

Lead metal foil, shot or sheets: No hazard. Will not cause eye irritation.

Inhalation:

In an industrial setting, exposure to lead mainly occurs from inhalation of dust or fumes.

Lead dust or fumes: Can irritate the upper respiratory tract (nose, throat) as well as the bronchi and lungs by mechanical action. Lead dust can be absorbed through the respiratory system. However, inhaled lead does not accumulate in the lungs. All of an inhaled dose is eventually absorbed or transferred to the gastrointestinal tract. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include metallic taste, chest pain, decreased physical fitness, fatigue, sleep disturbance, headache, irritability, reduces memory, mood and personality changes, aching bones and muscles, constipation, abdominal pains, decreasing appetite. Inhalation of large amounts may lead to ataxia, delirium, convulsions/seizures, coma, and death.

Lead metal foil, shot, or sheets: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.

Ingestion:

Lead metal granules or dust: The symptoms of lead poisoning include abdominal pain or cramps (lead colic), spasms, nausea, vomiting, headache, muscle weakness, hallucinations, distorted perceptions, "lead line" on the gums, metallic taste, loss of appetite, insomnia, dizziness and other symptoms similar to that of inhalation. Acute poisoning may result in high lead levels in the blood and urine, shock, coma and death in extreme cases.

Lead metal foil, shot or sheets: Not an ingestion hazard for usual industrial handling.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead

California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead

California prop. 65: This product contains the following ingredients for which the State of California has found to

cause reproductive harm (male) which would require a warning under the statute: Lead
California prop. 65 (no significant risk level): Lead: 0.0005 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead
Connecticut hazardous material survey.: Lead
Illinois toxic substances disclosure to employee act: Lead
Illinois chemical safety act: Lead
New York release reporting list: Lead
Rhode Island RTK hazardous substances: Lead
Pennsylvania RTK: Lead

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R20/22- Harmful by inhalation and if swallowed.
R33- Danger of cumulative effects.
R61- May cause harm to the unborn child.
R62- Possible risk of impaired fertility.
S36/37- Wear suitable protective clothing and gloves.
S44- If you feel unwell, seek medical advice (show the label when possible).
S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16: Other Information

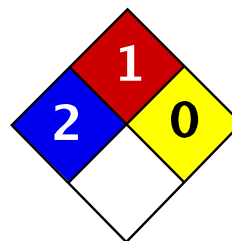
References: Not available.

Other Special Considerations: Not available.

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Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Selenium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Selenium

Catalog Codes: SLS2629

CAS#: 7782-49-2

RTECS: VS7700000

TSCA: TSCA 8(b) inventory: Selenium

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Se

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Selenium	7782-49-2	100

Toxicological Data on Ingredients: Selenium: ORAL (LD50): Acute: 6700 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Material in powder form, capable of creating a dust explosion.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.

Storage:

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 0.2 (mg/m³)

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid metallic powder.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 78.96 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 684.9°C (1264.8°F)

Melting Point: 217°C (422.6°F)

Critical Temperature: Not available.

Specific Gravity: 4.81 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 6700 mg/kg [Rat].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation.

Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in animal. Excreted in maternal milk in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Selenium powder : UN2658 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

Pennsylvania RTK: Selenium

Massachusetts RTK: Selenium

TSCA 8(b) inventory: Selenium

SARA 313 toxic chemical notification and release reporting: Selenium

CERCLA: Hazardous substances.: Selenium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).

DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 06:24 PM

Last Updated: 10/09/2005 06:24 PM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.

Appendix B

On-Site Safety Meeting Forms

DAILY
ON-SITE SAFETY MEETING

Project: Gregory Street Brownfield Assessment Site

Date: _____ Time: _____ Job No.: _____ -

Address: 399 Gregory Street, Rochester, New York

Scope of Work: _____

Weather Temp: _____ Wind direction/speed: _____

Sky Conditions: _____ Humidity: _____

Weather Conditions affecting work: _____

Safety Topics Discussed

Protective Clothing/Equipment: _____

Chemical Hazards: _____

Physical Hazards: _____

Personnel/Equipment Decontamination: _____

Personnel/Job Functions: _____

Emergency Procedures: _____

Special Equipment:

Other: _____

Emergency Phone Numbers/Addresses

Ambulance, Fire, Police: 911

Hospital: Highland Hospital (585) 341-6880 - emergency department

Poison Control Center: (585) 275-3232

Electric or Gas Emergency: (585) 546-1100

DEC: (585) 226-5438

DOH: (585) 423-8069

On-Site Safety Meeting
ATTENDEES

<u>Name Printed</u>	<u>Signature</u>	<u>Job function</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Meeting Conducted By:

	<u>Name Printed</u>	<u>Signature</u>
Site Safety Officer	_____	_____
Team Leader	_____	_____

APPENDIX F

Monitoring Well Construction Diagrams



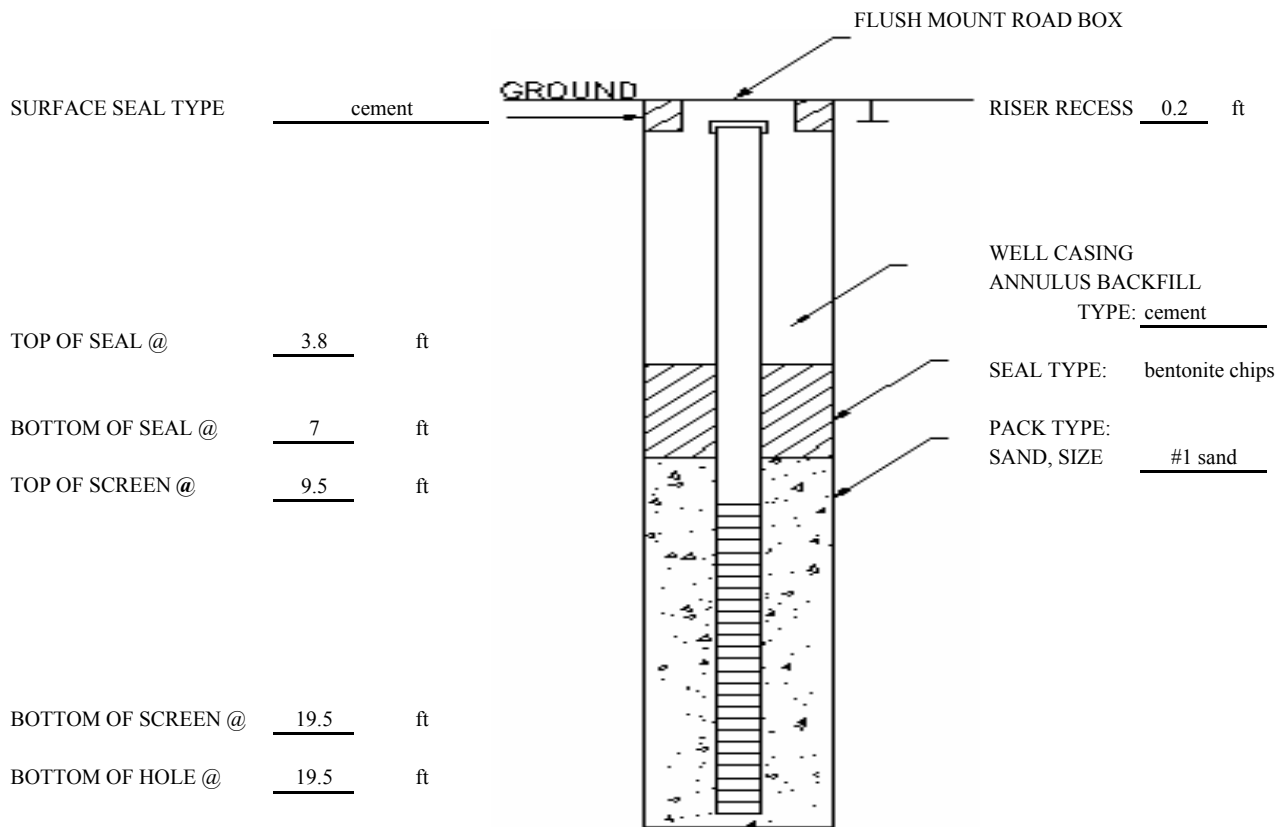
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER 190500196
 CLIENT City of Rochester
 LOCATION 399 Gregory Street
Rochester, NY

HOLE DESIGNATION MW-101R
 DATE COMPLETED 4/16/2009
 DRILLING METHOD HSA
 SUPERVISOR D. Bauch



NOTE:
 ALL DIMENSIONS ARE
 BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED X _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC X _____ OTHER _____

SCREEN LENGTH: 10 ft SCREEN DIAMETER 2 in. SCREEN SLOT SIZE: 10-slot

WELL CASING MATERIAL: _____ PVC _____ WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 4-inch



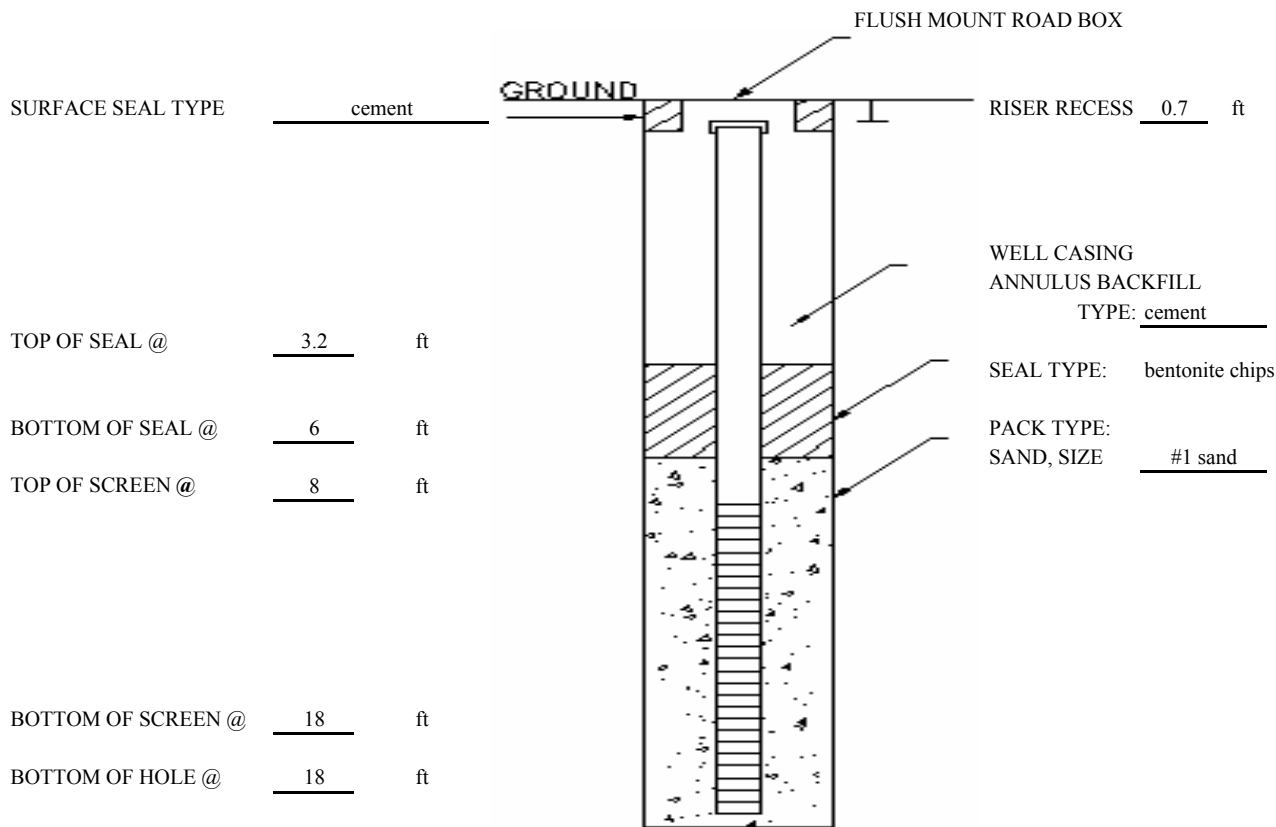
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER 190500196
 CLIENT City of Rochester
 LOCATION 399 Gregory Street
Rochester, NY

HOLE DESIGNATION MW-116R
 DATE COMPLETED 4/16/2009
 DRILLING METHOD HSA
 SUPERVISOR D. Bauch



NOTE:
 ALL DIMENSIONS ARE
 BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED X _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC X _____ OTHER _____

SCREEN LENGTH: 10 ft SCREEN DIAMETER 2 in. SCREEN SLOT SIZE: 10-slot

WELL CASING MATERIAL: _____ PVC _____ WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 4-inch



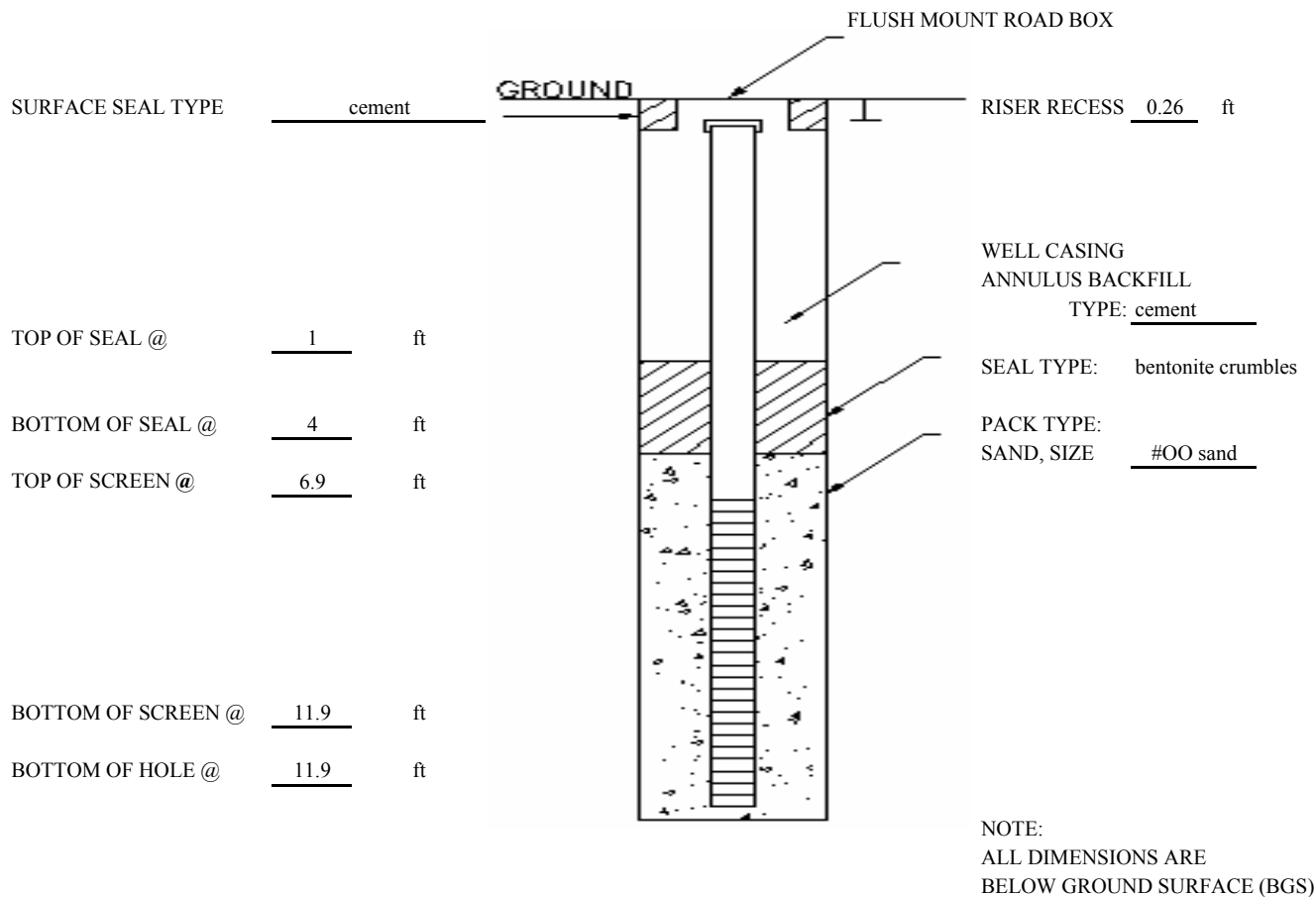
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER 190500196
 CLIENT City of Rochester
 LOCATION See Figure

HOLE DESIGNATION MW-211
 DATE COMPLETED 8/5/2005
 DRILLING METHOD Direct Push
 SUPERVISOR D. Gnage



SCREEN TYPE: CONTINUOUS SLOT PERFORATED __X__ LOUVRE OTHER

SCREEN MATERIAL: STAINLESS STEEL PVC __X__ OTHER

SCREEN LENGTH: 5 ft **SCREEN DIAMETER** 1 in. **SCREEN SLOT SIZE:** 10-slot

WELL CASING MATERIAL: PVC **WELL CASING DIAMETER:** 1 in

HOLE DIAMETER: 2-inch



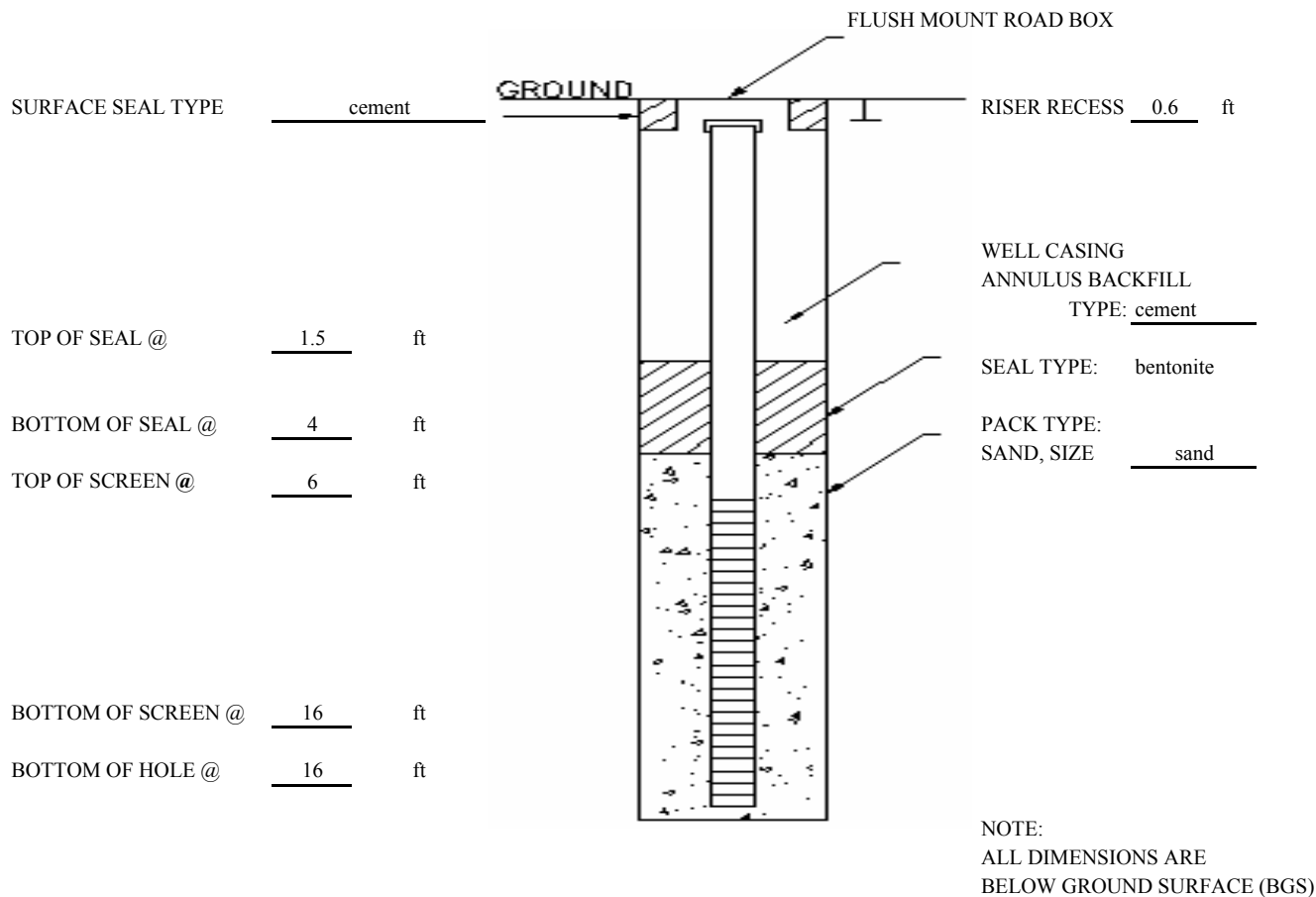
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER _____
 CLIENT City of Rochester
 LOCATION 399 Gregory Street
Rochester, NY

HOLE DESIGNATION MW-107
 DATE COMPLETED 3/9/2001
 DRILLING METHOD HSA
 SUPERVISOR DEC



SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED X _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC X _____ OTHER _____

SCREEN LENGTH: 10 ft SCREEN DIAMETER 2 in. SCREEN SLOT SIZE: 10-slot

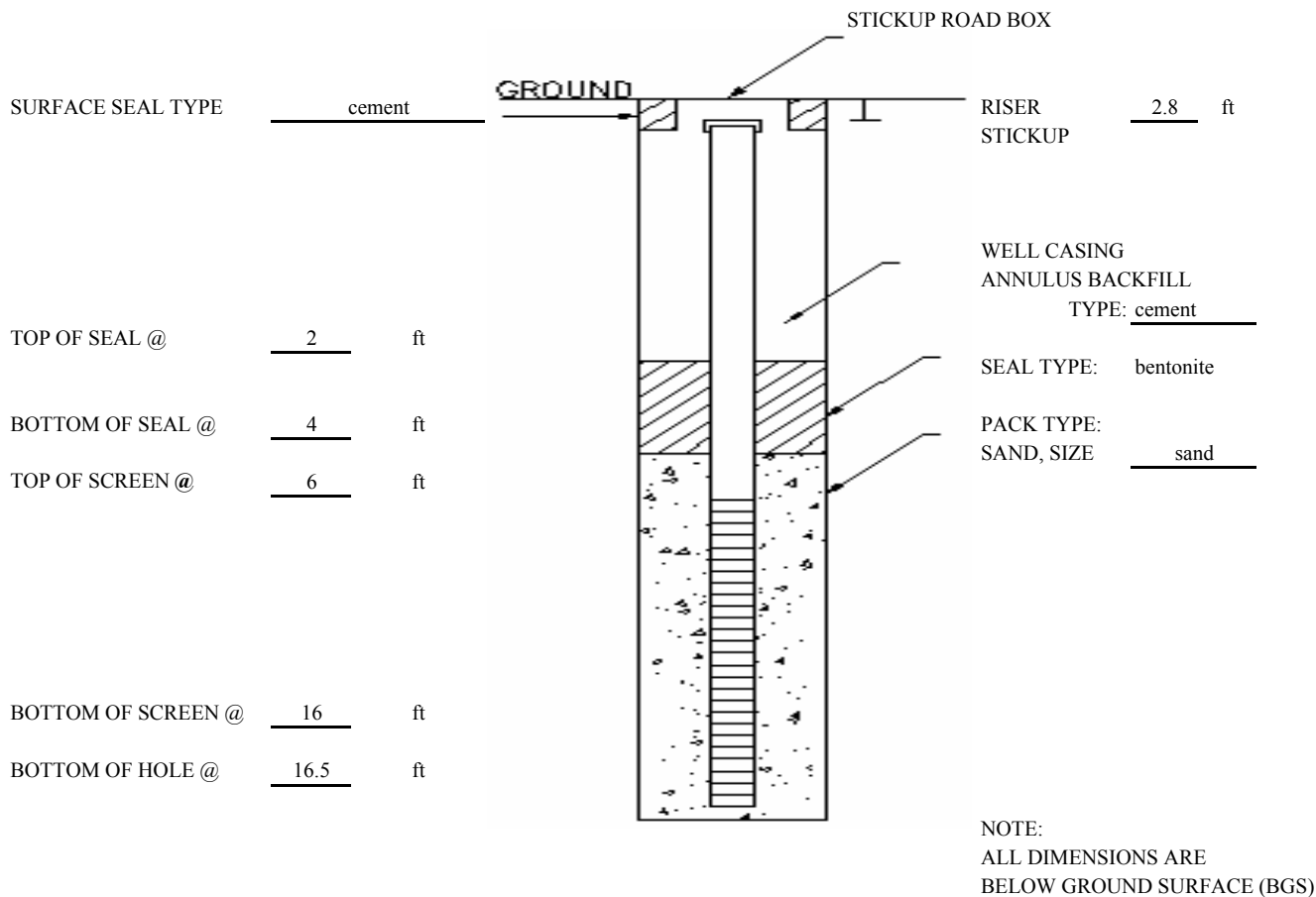
WELL CASING MATERIAL: _____ PVC _____ WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 4-inch

**Stantec****OVERBURDEN MONITORING WELL***DESIGN DETAILS*

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER _____
 CLIENT City of Rochester
 LOCATION 399 Gregory Street
Rochester, NY

HOLE DESIGNATION MW-108
 DATE COMPLETED 3/15/2001
 DRILLING METHOD HSA
 SUPERVISOR DEC



SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED X _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC X _____ OTHER _____

SCREEN LENGTH: 10 ft SCREEN DIAMETER 2 in. SCREEN SLOT SIZE: 10-slot

WELL CASING MATERIAL: _____ PVC _____ WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 4-inch



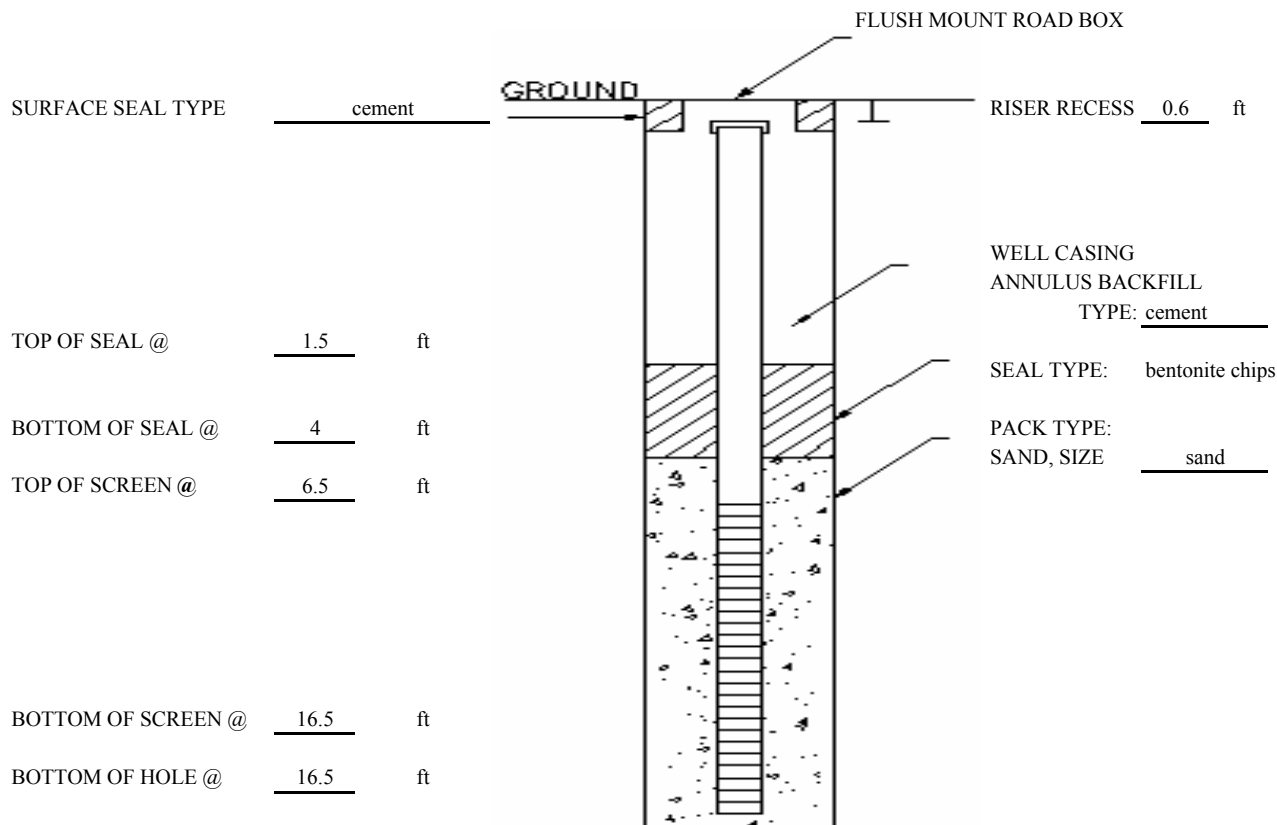
Stantec

OVERBURDEN MONITORING WELL

DESIGN DETAILS

PROJECT NAME 399 Gregory Street
 PROJECT NUMBER _____
 CLIENT City of Rochester
 LOCATION 399 Gregory Street
Rochester, NY

HOLE DESIGNATION MW-113
 DATE COMPLETED 3/15/2001
 DRILLING METHOD HSA
 SUPERVISOR DEC



NOTE:
 ALL DIMENSIONS ARE
 BELOW GROUND SURFACE (BGS)

SCREEN TYPE: CONTINUOUS SLOT _____ PERFORATED X _____ LOUVRE _____ OTHER _____

SCREEN MATERIAL: STAINLESS STEEL _____ PVC X _____ OTHER _____

SCREEN LENGTH: 10 ft SCREEN DIAMETER 2 in. SCREEN SLOT SIZE: 10-slot

WELL CASING MATERIAL: _____ PVC _____ WELL CASING DIAMETER: 2 in

HOLE DIAMETER: 4-inch

APPENDIX G

Groundwater Monitoring Well Sampling Log Form



Stantec

GROUNDWATER SAMPLING FORM

Job Name: 399 Gregory Street
 Well ID: _____
 Samplers: _____

Job No: 190500196
 Date/Time: _____

Well Depth (ft): _____
 Water Level (ft): (-) _____
 Water Col.(ft): _____

Min. Purge Vol. (Gal): _____
 (See Calculations)
 Volume Purged: _____
 Purge Method: _____

Purge Monitoring

Vol. Purged/ Time	Temp(C)	pH	Spec. Cond(umhos)	Turbidity (NTU)	Dissolved Oxygen mg/l	ORP (eV)	Color/odor
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

Container	Parameter	Preservative	Filtered (Y/N)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Physical Appearance/Odor: _____

Sample ID: _____ Sample Time: _____

Field Parameters @ Sampling	Sampling Method					
	Temp	pH	Spec. Conductivity	Turbidity	DO	ORP
_____	_____	_____	_____	_____	_____	_____

Meter ID _____

C of C Number _____
 Sample Containers Labeled _____
 Sample Delivery Via _____
 Analytical Laboratory _____

Well Vol. Calcs.

Note: 1" dia. well 1'=0.04 gal; 1.5" dia. well 1'=0.09 gal.
 Note: 2" dia. well 1'=0.16 gal; 4" dia. well 1'=0.65' gal.

Weather _____
 Comments _____

Checked By _____ Date _____

APPENDIX H

Quality Assurance Project Plan

**APPENDIX H
QUALITY ASSURANCE PROJECT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK**

Prepared for:
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE
ROAD
ROCHESTER, NEW YORK 14623



Stantec

AUGUST 2009

**APPENDIX H
QUALITY ASSURANCE PROJECT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK**

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399 GREGORY STREET
ROCHESTER, NEW YORK**

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REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
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1.0 Introduction

On behalf of the City of Rochester, Stantec has prepared this Quality Assurance Project Plan (QAPP) for use during the Remedial Action Work Plan (RAWP) activities for the property located at 399 Gregory Street, Rochester, New York (Site) (Figure 1).

This QAPP presents the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities to ensure the validity of data generated in the completion of the investigation. The purpose of the QAPP is to ensure that technical data generated are accurate and representative.

Quality Assurance (QA) is a management system for ensuring that information, data, and decisions resulting from investigation and environmental monitoring programs are technically sound, and properly documented. Quality Control (QC) is the functional mechanism through which quality assurance achieves its goals. Quality control programs, for example, define the frequency and methods of checks, audits, and reviews necessary to identify problems and dictate corrective actions to resolve these problems, thus ensuring high quality data. As such, a quality assurance and quality control program pertains to data collection, evaluation, and review activities, which are part of the investigation.

QA/QC procedures will be in accordance with applicable professional technical standards, government regulations and guidelines, and specific project goals and requirements. This QAPP has been prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (EPA) Region II guidance documents.

The QAPP incorporates the following activities:

- Sample collection, control, chain-of-custody, and analysis;
- Document control;
- Laboratory instrumentation, analysis, and control; and
- Review of project reports.

Analytical samples will be collected in the field using standard operating procedures and sent to a NYSDEC-certified Analytical Services Protocol (ASP) laboratory for analysis. Duplicates, replicates, and spiked samples will be used to identify the quality of the analytical data. Field audits may be conducted to verify that proper sampling techniques and chain-of-custody

procedures are followed. Field data compilation, tabulation, and analysis will be checked for accuracy. Calculations and other post-field tasks will be reviewed by senior project personnel. Equipment used to take field measurements will be maintained and calibrated in accordance with established procedures. Records of calibration and maintenance will be kept by assigned personnel. Field testing and data acquisition will be performed following strict guidelines as described herein.

Document control procedures will be used to coordinate the distribution, coding, storage, retrieval, and review of all data collected during all sampling tasks.

2.0 Project Description

This QAPP pertains to the completion of field activities and subsequent laboratory and data analysis associated with the Remedial Action activities at 399 Gregory Street (Figure 2). Previous investigations completed at the Site identified volatile organic compounds (VOCs) impacts to soil and groundwater. The Remedial Action activities are intended to remove the contamination from the Site.

2.1 SITE DESCRIPTION

The former Davidson Collision Site (Site No. 828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision, however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of hazardous waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner, contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated, however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in

2000-2002 to obtain additional information regarding the nature and extent of contamination at the site and to determine if the site represents a significant threat to human health or the environment.

2.2 INTRODUCTION OF 6 NYCRR PART 375 SCOS

NYSDEC 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives came into effect in December 2006. It was agreed with the NYSDEC that TAGM 4046 RSCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report issued in December 2008, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO)

3.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation¹;
- an August 1995 Preliminary Site Assessment Report²;
- a March 2003 Site Investigation Report³;
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)⁴; and
- a December 2007 Remedial Design Investigation Report⁵.

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and

1993 activities were performed without NYSDEC approval or oversight. In 1994, the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by the NYSDEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

3.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

3.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

3.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

3.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

3.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

3.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above NYSDEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a

localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

3.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

3.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

3.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

4.0 Project Organization and Responsibility

This QAPP provides for designated qualified personnel to review products and provide guidance on QA matters. This QAPP also outlines the approach to be followed to ensure that products of sufficient quality are obtained. This structure will provide for direct and constant operational responsibility, clear lines of authority, and the integration of QA activities. The various QA functions of the project positions are explained in the following subsections.

Project Manager

The project manager will have overall responsibility for ensuring that the project meets the objectives and quality standards as presented in the Work Plan and this QAPP. He will be responsible for implementing the project and will have the authority to commit the resources

necessary to meet project objectives and requirements. The project manager's primary function is to ensure that technical, financial, and scheduling objectives are achieved successfully. The project manager will provide the major point of contact and control for matters concerning the project. In addition, he will be responsible for technical quality control and project oversight, and will be the primary point-of-contact.

Team Leaders

The project manager will be supported by a team leader or leaders who will be responsible for leading and coordinating the day-to-day activities of the various resource specialists under their supervision. The team leader is a highly experienced environmental professional who will report directly to the project manager.

Technical Staff

The technical staff (team members) for this project will be drawn from corporate resources and appropriately qualified subcontractors. The technical team staff will be used to gather and analyze data, and to prepare various task reports and support materials. The designated technical team members will be experienced professionals who possess the degree of specialization and technical competence required to effectively and efficiently perform the required work.

Project QA Director

The Project QA Director will be responsible for maintaining QA for the project.

Laboratory Director

The laboratory director will be responsible for analytical work and works in conjunction with the QA unit. He maintains liaison with the QA officer regarding QA and custody requirements.

Laboratory Manager

The laboratory manager will maintain liaison with the laboratory director regarding QA elements of specific sample analyses tasks. He will report to the laboratory director and work in conjunction with the laboratory QA unit.

Laboratory QA Coordinator

The Laboratory QA officer will be responsible for overseeing the QA program within the laboratory and for maintaining all QC documentation. He reports directly to the laboratory director.

Laboratory Staff

Each member of the laboratory staff will perform an assigned QA or analytical function that is pertinent to and within the scope of his or her knowledge, experience, training, and aptitude. An individual will be assigned the responsibility for checking, reviewing, or otherwise verifying that a sample analysis activity has been correctly performed.

Laboratory Facilities

Laboratory work will be performed in accordance with guidelines established by NYSDEC, USEPA, the Water Pollution Control Federation, and/or the American Society for Testing and Materials (ASTM). In case of conflict, these guidelines and protocols will be considered in the order shown (i.e., NYSDEC criteria is of primary precedence). In addition, QA and QC programs will be maintained for the instruments and the analytical procedures used.

5.0 QA Objectives for Data Measurement

Measurements will be made to ensure that analytical results are representative of the media and conditions measured. Unless otherwise specified, data will be calculated and reported in units consistent with other organizations who report similar data to allow comparability of databases among organizations.

The key considerations for the QA assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. These characteristics are defined below:

Accuracy: Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

Precision: Precision is the degree of mutual agreement among individual measurements of a given parameter.

Completeness: Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

Representativeness: Representativeness expresses the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Comparability: Comparability expresses the confidence with which one data set can be compared to another.

5.1 QA/QC GOALS

The QA/QC goal will focus on controlling measurement error within the limits established and will ultimately provide a database for estimating the actual uncertainty in the measurement data.

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and relative percent difference of duplicates/replicates are provided in the referenced analytical procedures. It should be noted that target values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the laboratory will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

6.0 Sampling Procedures

The sampling of various environmental media will be completed as part of the investigation activities. Table 1 presents a Summary of Potential Analytical Testing for the site including; location, matrix, and analytical requirements.

6.1 SAMPLING PROTOCOL

The following sections outline the sampling procedures for the collection of environmental media samples of soils and groundwater.

6.1.1 Groundwater Samples from Monitoring Wells

New and existing groundwater monitoring wells will be developed prior to purging and sampling using disposable polyethylene bailers, dedicated Waterra inertial pumps or dedicated peristaltic pump tubing. Prior to development, wells will be allowed to equilibrate for at least 48-hours following installation. All development water will be collected and stored on site in 55-gallon drums. All drums will be labeled with paint markers according to matrix, location and date of generation. Turbidity readings and the number of consecutive well volumes removed will be recorded during well development. The wells will be developed to reduce sediment and turbidity to the maximum extent practical.

Following well development, each well will be allowed to equilibrate for at least two weeks prior to purging and sampling. Purging of each new and existing well will be performed with a low flow peristaltic pump and dedicated polyethylene tubing or disposable polyethylene bailers. When using low flow methods, wells will be purged until stable parameters are achieved; otherwise, purging of each well for at least three consecutive well volumes or until dry will allow representative formation water to enter the well prior to sample collection. Water quality field parameters (turbidity, pH, specific conductance and temperature) will be recorded during purging and sampling.

Immediately following the completion of purging and monitoring well recovery, groundwater samples will be collected. The groundwater sample will be collected from the middle portion of the water column. New gloves will be used for collection of each sample. Each sample container will be labeled, handled, packaged, and shipped in accordance with the procedures as outlined in Section 7.0.

6.1.2 Soil Sampling from Open Excavations

Soil at the bottom and sidewalls of the open excavations will be screened with a photoionization detector (PID) in the field. Based upon the PID readings and visual or olfactory evidence of impacts, Stantec proposes to take one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

Samples will be collected with a stainless steel trowel. New gloves will be used for placing the sample into the laboratory glassware.

6.2 FIELD QUALITY CONTROL SAMPLES

A summary of the following quality control samples is presented in attached Table 2.

6.2.1 Field Duplicates

Field quality control samples will be collected to verify reproducibility of the sampling and analytical methods. Field duplicates will be obtained as outlined in Table 1 and include the following:

- one field duplicate groundwater sample collected from representative groundwater monitoring well (baseline), or 5% of batch size;
- one field duplicate soil sample collected from representative final excavation, or 5% of batch size.

6.2.2 Trip Blanks

Trip blanks will be used to assess whether groundwater has been exposed to volatile constituents during sample storage and transport. Trip blanks will be submitted at a frequency of once per day, per cooler containing water to be analyzed for volatile organics. The trip blank for water samples will consist of a container filled by the laboratory with analyte-free water. The trip blank will remain unopened throughout the sampling event and will only be analyzed for volatile organics.

6.2.3 Matrix Spike/Matrix Spike Duplicates

Matrix Spike/Matrix Spike Duplicates (MS/MSD) will be obtained as outlined on Table 1 and include the following:

- one MS/MSD groundwater sample collected from representative groundwater monitoring well (baseline) , or 5% of batch size.
- one MS/MSD soil sample collected from representative final excavation, or 5% of batch size.

6.2.4 Laboratory Quality Control Checks

Internal laboratory quality control checks will be used to monitor data integrity. These checks include method (equipment) blanks, spike blanks, internal standards, surrogate samples, calibration standards, and reference standards.

6.3 SAMPLE CONTAINERS

The volumes and containers required for the sampling activities are included in Table 3. Pre-washed sample containers will be provided by the laboratory. All bottles are to be prepared in accordance with EPA bottle washing procedures.

6.4 DECONTAMINATION

Dedicated and/or disposable sampling equipment will be used to minimize decontamination requirements and the possibility of cross-contamination.

The water level indicator and stainless steel trowels are pieces of sampling equipment that can be used at more than one location. They will be decontaminated between locations by the following decontamination procedures:

- Initial cleaning of any foreign matter with paper towels;
- Low phosphate detergent wash;
- De-ionized water rinse; and
- Air dry.

6.5 LEVELS OF PROTECTION/SITE SAFETY

Field sampling will be conducted under a documented Health and Safety Plan. On the basis of air monitoring, the level of protection may be downgraded or upgraded at the discretion of the site safety officer. Crew members will stand upwind of excavations and open boreholes or wellheads during the collection of samples, when possible.

All work will initially be conducted in Level D (refer to Site Specific Health and Safety Plan). Air purifying respirators (APRs) will be available if monitoring indicates an upgrade to Level C is appropriate.

7.0 Sample Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be used for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during collection, transportation, storage, and analysis. All

chain-of-custody requirements comply with standard operating procedures indicated in USEPA and NYSDEC sample-handling protocol.

Sample identification documents will be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field records,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

7.1 CHAIN-OF-CUSTODY

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses.

7.1.1 Sample Labels

Sample labels attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample labels are to be placed on the bottles so as not to obscure any QA/QC lot numbers on the bottles. Sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the field sampling records or sample logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

7.1.2 Custody Seals

Custody seals are preprinted adhesive-backed seals with security slots designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing logbook entries) that seals on shipping containers are intact. Strapping or other clear packaging tape should be placed over the seals to ensure that seals on shipping containers are not accidentally broken during shipment.

7.1.3 Chain-Of-Custody Record

The chain-of-custody record must be fully completed at least in duplicate by the field technician who has been designated by the project manager as being responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints in the "Remarks" section of the custody record.

7.1.4 Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained pre-cleaned by the laboratory and shipped to the sampling personnel in charge of the field activities. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in a controlled field notebook and/or on appropriate field sampling records.
- The site team leader will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

7.2 DOCUMENTATION

7.2.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag affixed to the sample container:

XX-AA-BBB.C.D-YY-ZZ

XX – This set of initials identifies the project, in this case the Gregory Street Remediation Project:

GR

AA – These initials identify the sample origin. Actual sample locations will be numbered sequentially:

SB – Soil Boring

TP – Test Pit

MW – Monitoring Well

ES – Excavation Sidewall

EB – Excavation Bottom

SV – Soil Vapor Probe

AA – Ambient Indoor or Outdoor Air

BBB.C.D – These initials identify the borehole, test pit, air/vapor sampling point or monitoring well number (BBB, three digits), and in the case of excavation sidewall and/or excavation bottom samples, the sample location number (BBB, starting at 001) followed by a number from 1 to 9 (shallow to deep) identifying the depth interval, only in the case of sidewall samples (C), and a letter from A-Z identifying the number of over-excavations (D), the initial sidewall or bottom sample being designated by "A".

YY – These initials identify the sample matrix in accordance with the following abbreviations:

S – Soil

GW – Groundwater

SW – Surface Water

SE – Sediment

SV – Soil Vapor

IA – Indoor Air

OA – Outdoor Air

ZZ – Sub Sample Type – Field duplicates, rinsate blanks and trip blanks will be assigned unique sample numbers (if applicable):

DU – Duplicate Sample

RB – Rinsate (Equipment) Blank

TB – Trip Blank

MS/MSD – Matrix Spike/Matrix Spike Duplicate

Each sample will be labeled, chemically preserved, if required, and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Name of sampler;
- Date and time of collection;
- Sample number;
- Intended analysis; and
- Preservation required.

7.2.2 Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project. All daily logs will be kept in a notebook and consecutively numbered. All entries will be made in waterproof ink, dated, and signed. Sampling data will be recorded in the sampling records. All information will be completed in waterproof ink. Corrections will be made according to the procedures given at the end of this section.

7.3 SAMPLE HANDLING, PACKAGING, AND SHIPPING

The transportation and handling of samples will be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping

hazardous materials are promulgated by the United States Department of Transportation (DOT) in the Code of Federal Regulations, 49 CFR 171 through 177.

All chain-of-custody requirements will comply with standard operating procedures in the NYSDEC and USEPA sample handling protocol. Field personnel will make arrangements for transportation of samples to the laboratory. When custody is relinquished to a shipper, field personnel will telephone the laboratory custodian to inform him of the expected time of arrival of the sample shipment and to advise him of any time constraints on sample analysis. All samples will be delivered to the laboratory no later than 48 hours from the day of collection.

8.0 Calibration Procedures and Frequency

Instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references.

8.1 FIELD INSTRUMENTS

A calibration program will be implemented to ensure that routine calibration is performed on all field instruments. Field team members familiar with the field calibration and operations of the equipment will maintain proficiency and perform the prescribed calibration procedures outlined in the Operation and Field Manuals accompanying the respective instruments. Calibration records for each field instrument used on the project will be maintained on-site during the respective field activities and a copy will be kept in the project files.

8.1.1 Portable Total Organic Vapor Monitor

Any vapor monitor used will undergo routine maintenance and calibration prior to shipment to the project site. Daily calibration and instrument checks will be performed by a trained team member at the start of each day. Daily calibrations will be performed according to the manufacturer's specifications and are to include the following:

- Battery check: If the equipment fails the battery check, recharge the battery.
- Gas standard: The gauge should display an accurate reading when a standard gas is used.

- Cleaning: If proper calibration cannot be achieved, then the instrument ports must be cleaned.

8.1.2 pH, Specific Conductance and Turbidity

The following steps should be observed by personnel engaged in groundwater sampling for pH and specific conductance:

- The operation of the instrument should be checked with fresh standard buffer solution (pH 4 and pH 10) prior to each day's sampling.
- The specific conductance meter should be calibrated prior to each day's sampling using a standard solution of known specific conductance.
- The turbidity meter should be calibrated prior to each day's sampling using a standard solution of known turbidity.

More frequent calibrations may be performed as necessary to maintain analytical integrity. Calibration records for each field instrument used on the project should be maintained and a copy kept in the project files.

8.2 LABORATORY INSTRUMENTS

Laboratory calibration procedures are addressed in detail in the laboratory QAPP (Appendix A). All calibration procedures will be consistent with the method used for analysis.

9.0 Analytical Procedures

9.1 FIELD ANALYTICAL PROCEDURES

On-site procedures for analysis of total organic vapor and other field parameters are addressed in the Work Plan.

9.2 LABORATORY ANALYTICAL PROCEDURES

Analytical methods to be used for the sampling tasks are referenced in the NYSDEC's Analytical Services Protocols (ASP), 1995 or its most current version.

Specific analytical methods for constituents of interest in soil, groundwater, and air are listed in Table 1. The laboratory will maintain and have available for the appropriate operators standard operating procedures relating to sample preparation and analysis according to the methods stipulated in Table 1.

10.0 Data Reduction and Reporting

QA/QC requirements will be strictly adhered to during sampling and analytical work. Laboratory data generated will be reviewed by comparing and interpreting results from chromatograms (responses, stability of retention times), accuracy (mean percent recovery of spiked samples), and precision (reproducibility of results). Refer to Section 10 for further discussion of QA/QC protocol.

Data storage and documentation will be maintained using logbooks and data sheets that will be kept on file. Analytical QC will be documented and included in the analytical testing report. A central file will be maintained for the sampling and analytical effort after the final laboratory report is issued.

Relevant calculations and data manipulations are included in the appropriate methodology references. Control charts and calibration curves will be used to review the data and identify outlying results. Prior to the submission of the report to the client, all data will be evaluated for precision, accuracy, and completeness. Sections 4.0 and 13.0 of this document include some of the QC criteria to be used in the data evaluation process.

Laboratory reports will be reviewed by the laboratory supervisor, the QA officer, laboratory manager and/or director, and the project manager. Analytical reports will contain a data tabulation including results and supporting QC information will be provided. Raw data will be available for later inspection, if required, and maintained in the control job file.

11.0 Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of glassware and reagents. The procedures to be followed for internal quality control checks are to be consistent with NYSDEC ASP and NYSDOH Environmental Laboratory Approval Program (ELAP).

12.0 Performance and System Audits

12.1 FIELD AUDITS

The Project QA Director may conduct episodic audits of the operations at the site to ensure that work is being performed in accordance with the Work Plan and associated standard operating practice. The audit will cover, but not necessarily be limited to, such areas as:

- Conformance to standard operating procedures
- Completeness and accuracy of documentation
- Chain of custody procedures
- Construction specifications

12.2 LABORATORY AUDITS

In addition to any audits required by NYSDEC, the Project QA Director may chose to audit the laboratory. These additional audits may take the form of performance evaluation samples or on-site inspections of the laboratory. Performance evaluation samples may be either blind samples or samples of known origin to the laboratory. Reasonable notice will be provided if the audit is to include an on-site inspection of the laboratory.

13.0 Preventive Maintenance

13.1 FIELD

Field personnel assigned to complete the work will be responsible for preventative maintenance of all field instruments. The field sampling personnel will protect the portable total organic vapor monitors, temperature, conductivity, pH and turbidity instruments by placing them in portable boxes and/or protective cases.

Field equipment will be subjected to a routine maintenance program, prior to and after each use. The routine maintenance program for each piece of equipment will be in accordance with the manufacturer's operations and maintenance manual. All equipment will be cleaned and checked for integrity after each use. Necessary repairs will be performed immediately after any

defects are observed, and before the item of equipment is used again. Equipment parts with a limited life (such as batteries, membranes and some electronic components) will be periodically checked and replaced or recharged as necessary according to the manufacturer's specifications.

13.2 LABORATORY

The laboratory's preventative maintenance procedures are provided in the laboratory's QAPP (Appendix A).

14.0 Data Assessment Procedures

Performance of the following calculations will be completed by Ms. Judy Harry of Data Validation Services for the completion of a Data Usability Summary Report (DUSR). The purpose of the DUSR will be to evaluate the accuracy, precision and completeness of collected measurement data.

14.1 PRECISION

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is sometimes not known to the laboratory and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. For most purposes precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantification of precision is impossible. Replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Relative Percent Difference (RPD), is calculated as follows:

$$RPD = \left| \frac{C_1 - C_2}{(C_1 + C_2)/2} \right| \times 100\%$$

where C_1 is the concentration in the original sample and C_2 is the concentration in the sample replicate.

RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample re-analysis or flagging of the data as suspect if problems cannot be resolved.

14.2 ACCURACY

Accuracy of a particular analysis is measured by assessing its performance with “known” samples. These “knowns” can take the form of EPA or NBS traceable standards (usually spiked into a pure water matrix), or laboratory prepared solutions of target analytes in pure water or a sample matrix; or (in the case of GC or GC/MS analyses) solutions of surrogate compounds which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination. In each case the recovery of the analyte is measured as a percentage, corrected for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA or NBS supplied known solutions, this recovery is compared to the published data that accompany the solution. For prepared solutions, the recovery is compared to EPA-developed data or previous data as available. For surrogate compounds, recoveries are compared to USEPA CLP acceptable recovery tables. If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate.

Accuracy is expressed as the Percent Recovery (%R), which is calculated as follows:

$$\%R = \frac{(X_s - X_u)}{K} \times 100$$

Where:

X_s = Measured value of the spike sample

X_u = Measured value of the unspiked sample

K = Known amount of spike in the sample

For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

14.3 COMPLETENESS

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the total amount expected to be obtained under normal conditions. Completeness for each parameter is calculated as:

$$Completeness = \frac{N_S}{N_R} \times 100$$

where N_S is the number of successful analyses and N_R is the number of requested analyses.

Target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the client project officer.

14.4 REPRESENTATIVENESS

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area.

15.0 Corrective Action

Corrective actions can be initiated as a result of performance and system audits, laboratory and interfield comparison studies, data validation, and/or a QA program audit. They may also be required as a result of a request from project representatives. All corrective action necessary to resolve analytical problems will be taken. Success or failure of corrective actions will be reported with an estimate of effect on data quality, if any.

Corrective actions may include altering procedures in the field, conducting subsequent audits, or modifying project protocol. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. The project manager is responsible for initiating corrective action and the team leader is responsible for its implementation in the correction of field non-conformance corrective actions.

16.0 Quality Assurance Reports

Upon completion of a project sampling effort, analytical and QC data will be included in a comprehensive report that summarizes the work and provides a data evaluation. A discussion of the validity of the results in the context of QA/QC procedures will be made, as well as a summation of all QA/QC activity.

Serious analytical problems will be reported. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. Corrective actions may include altering procedures in the field, conducting an audit, or modifying laboratory protocol. Corrective actions will be implemented after notification of project representatives.

References

¹ "Phase II Investigation, Davidson's Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991."

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Figures



Stantec

Geographic Information Systems

Cartographic Design By: Marc Bouchard

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Figure 1 - Site Location
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY



Tables

TABLE 1
SUMMARY OF POTENTIAL ANALYTICAL TESTING

QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

LOCATION	Matrix	TCL	TCL	TAL	TCL	TPH
		VOCs	SVOCs	Metals	PCBs	
Soil Samples						
Excavation	soil	X		X		
Soil DUP - Excavation	soil	X		X		
MS/MSD - Excavation	soil	X		X		
Groundwater Samples						
Groundwater	groundwater	X				
MS/MSD	groundwater	X				
GW-DUP	groundwater	X				
Trip Blank	water	X				

Notes:

1. TCL VOCs - Target Compound List Volatile Organic Compounds OLM4.3.
2. TCL SVOCs - Target Compound List Semi-volatile Organic Compounds OLM4.3.
3. TAL Inorganics - Target Analyte List Inorganics ILM05.4.
4. TCL PCBs - Target Compound List Polychlorinated Biphenyls OLM4.3.
5. MS/MSD - Matrix Spike/Matrix Spike Duplicate.
6. Dup = Field Duplicate Sample.
7. Sample frequency and parameters will be determined by evidence of staining, olfactory, fill or other impacts. If these are observed within the excavated materials, sampling will be required for VOCs and metals.

TABLE 2**SUMMARY OF QUALITY CONTROL CHECKS**

QAPP - Remedial Action Work Plan
 399 Gregory Street
 Rochester, New York

Type of QC Check	Frequency	Min. Number Required for Project	Remarks
<u>Laboratory Blanks</u>			
Method Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Reagent/Solvent Blanks	1 per lot	1	
Standard Reference Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
<u>Field Samples</u>			
Matrix Spike/Matrix Spike Duplicates	1 per matrix contingent on total number of samples [soil and groundwater]	1 or 5% of batch size	Batch may include samples from other projects
Trip Blanks	1 per shipment of water samples	1 minimum - based on number of water sample shipments	Trip Blanks to be prepared by Analytical Laboratory
Field Duplicates	1 per sample batch	1 or 5% of batch size for soil	Select a sample with suspected contamination impacts.
		1 or 5% of batch size for groundwater	

TABLE 3
REQUIRED SAMPLE CONTAINERS, VOLUMES, PRESERVATION,
AND HOLDING TIMES FOR ANALYTICAL SAMPLES

QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

Media	Type of Analysis	Required Container	Preferred Sample Volume	Preservation	Maximum Holding Time
Soil	VOCs by EPA Method OLM4.3	4 oz.cwm	4 oz.	Cool 4°C	VSTR + 10 days
	SVOCs by EPA Method OLM4.3	8 oz.cwm	8 oz.	Cool 4°C	VSTR + 5 days
	PCBs by EPA Method OLM4.3	8 oz.cwm	8 oz.	Cool 4°C	VSTR + 5 days
	TAL Metals by EPA Method ILM05.4	8 oz.cwm	8 oz.	Cool 4°C	VSTR + 6 Months
Groundwater	VOCs by EPA Method OLM4.3	(2) 40 ml glass vials	80 ml	pH<2, HCL	VTSR + 10 days if acidified with HCL
	SVOCs by EPA Method OLM4.3	1000 ml amber glass jar	1000 ml	pH<2, HCL	VTSR + 5 days if acidified with HCL
	PCBs by EPA Method OLM4.3	1000 ml amber glass jar	1000 ml	Cool 4°C	VTSR + 5 days if acidified with HCL
	TAL Metals by EPA Method ILM05.4	100-200 ml plastic or glass jar	100-200 ml	pH<2, HNO3	VTSR + 6 Months

Notes:

1. Samples have to be received by the lab within 48 hours of the first sample being taken.
2. VTSR = Validated Time of Sample Receipt at laboratory
3. cwm = clear wide mouth jar

Appendix A

Laboratory QA/QC Manual

QUALITY ASSURANCE MANUAL

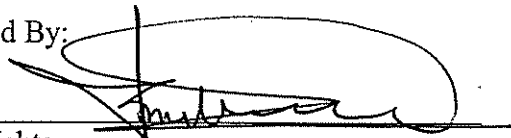
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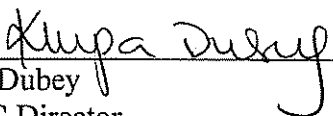
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Date Effective: January 4, 2007

Approved By:


Divya Mehta
Technical Director


Krupa Dubey
QA/QC Director

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INTRODUCTION

The Chemtech Quality Program, outlined in this document, has been prepared to meet the requirements of ISO/IEC DIS 17025 and National Environmental Laboratory Accreditation Program (NELAP). The program establishes all Quality Assurance (QA) policies and Quality Control (QC) procedures to follow in order to ensure and document the quality of the analytical data produced by the Laboratory. The Quality Program is reviewed periodically and revisions are implemented as required.

Chemtech Standard Operating Procedures (SOP's), provide explicit instructions on the implementation of each element of the plan and assure that compliance with the requirements of the plan are achieved. All employees are required to adhere to the requirements of the SOP's in performing their specific job functions. SOP's are reviewed periodically and revisions are implemented as required when change occurs.

The goal of the Quality Program is to consistently produce accurate, defensible analytical data through the implementation of sound and useful Quality Assurance/Quality Control management practices. The plan will ensure that Chemtech, its employees and client expectations are achieved.

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1 QUALITY POLICY

1.1 CHEMTECH MISSION

Chemtech will be recognized as a dynamic, professional organization, which provides high quality analytical services to the environmental market.

It will consistently meet client expectations while providing a challenging work environment for its employees and acceptable profit margins for its shareholders.

1.2 POLICY STATEMENT

Chemtech is committed to the production of analytical data meeting specific defined quality standards and to continue improvements in all areas of our operation. As a result of having a focus on environmental analyses, an emphasis is placed on timelines of work, meeting data quality objectives, and the legal defensibility of the data. Each operation maintains a local perspective in its scope of services and client relations and maintains a national perspective in terms of quality. Under the guidance of this quality assurance manual, a level of quality, which is acceptable on a national and international scale, is upheld in all Chemtech laboratory operations.

Our corporate goal for all segments of Chemtech operations is to have uniform products and service quality standards, while encouraging local variation to meet state regulations and customer specific needs. The process of achieving this goal entails continuous evaluation and action. Chemtech management requires documentation of existing practices and improvement action plans at every stage in the analytical measurement process. Documentation is fundamental to the demonstration and management of quality practices in environmental analytical laboratories.

A spirit of innovation is an essential element to the success of Chemtech in solving the complicated analytical problems encountered with environmental samples. This spirit, combined with the discipline and attention to detail required to provide the level of service expected by our customers, is what makes Chemtech stand out among others in this field. This same spirit is what drives continuous quality improvement and which is the keystone to the Chemtech quality program.

1.3 ANNUAL REVIEWS AND PLANNING

As part of our 2003 NELAC Standard Certification requirement, the QA/QC Director produces an annual report to the Management to discuss deficiencies, corrective actions and planning for the upcoming year. All

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corrective actions in the laboratory are documented and updated in the Corrective Action Report Database. These Corrective Action Reports are also graphed. The QA/QC Director submits this report to the Management at the beginning of the year and the management performs annual review and planning based on this report. The issues discussed in the report are New Certifications, New Instrumentation, Performance Evaluation, Assessment, Quality Assurance Programs and Goals for the next year.

2. ORGANIZATION AND MANAGEMENT

2.1 ORGANIZATIONAL ENTITY

Chemtech, located in Mountainside, New Jersey, is a privately held independent analytical laboratory established in 1967. Chemtech is incorporated in the State of New York and registered to do business in the State of New Jersey. Our Directors, many of who are also major shareholders are acutely aware of the dynamics of our industry, the changing technology, and need for capital investment. Capital for investment in technology and expansion is mainly derived from operating profits and our shareholders. We have been successful in acquiring the necessary equipment, software and automation necessary to be a leader in the analytical community.

2.2 MANAGEMENT RESPONSIBILITIES

Objective: The laboratory has an established chain of command as detailed in the Organizational Chart. The responsibilities of the management staff are linked to the President of Chemtech who establishes the strategy and direction for all company activities.

President: Primarily responsible for all operations and business activities. Develops and implements strategies, initiatives and direction for the company. Delegates authority to Laboratory Directors, all Managers, and Quality Assurance/Quality Control Director to conduct day-to-day operations and execute quality assurance duties.

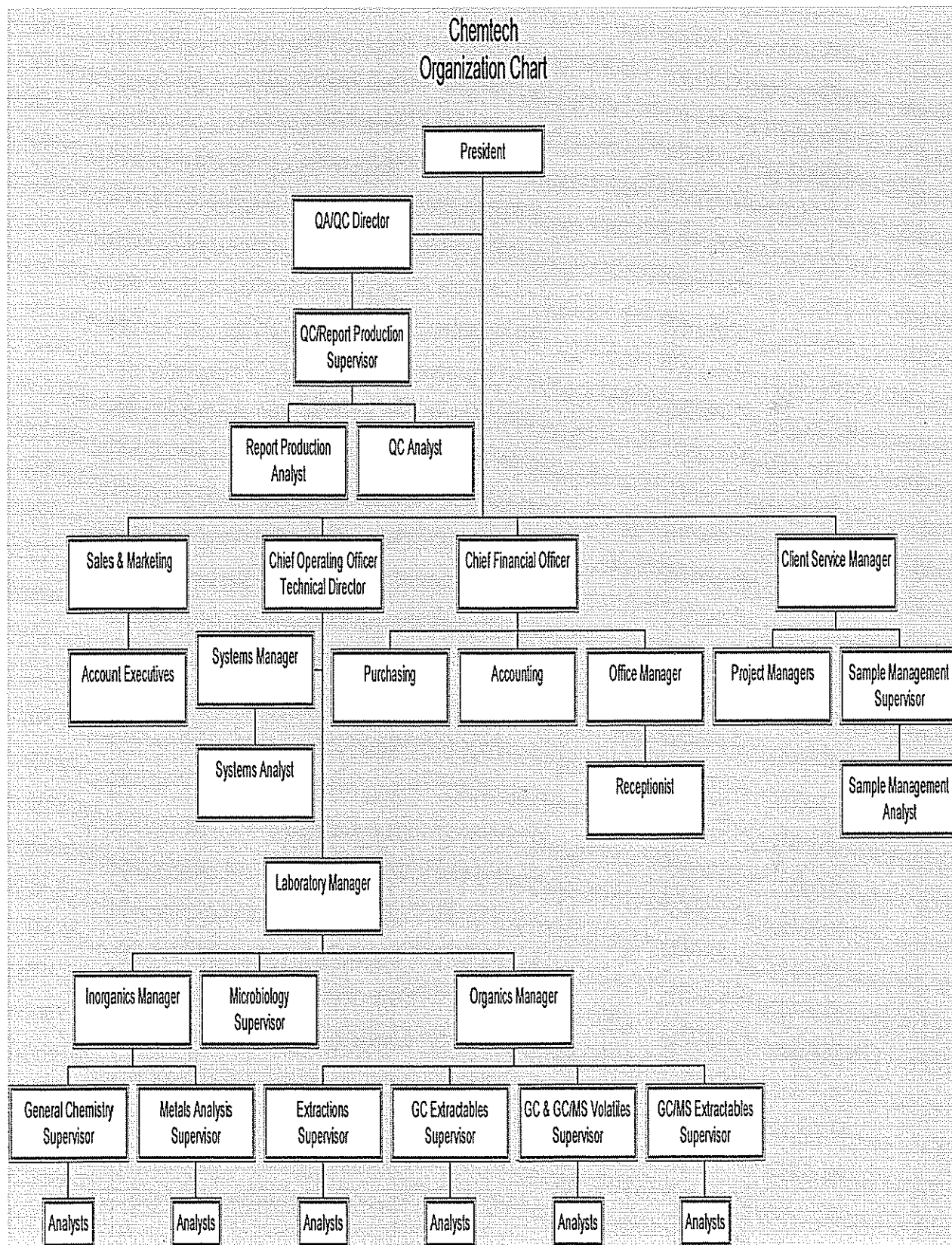
Chief Operating Officer/Technical Director: Facilitates uniformity and focus in all aspects of the company's technical affairs; including, Quality Assurance, Information Systems, and Organic and Inorganic technical direction. Strives to align the strategies, initiative and direction of technical affairs with the strategic direction of the company. Reports to the President. QA/QC Director executes these responsibilities in his/her absence.

Quality Assurance/Quality Control (QA/QC) Director: Implements, supervises, and facilitates responsibility for all QA activities established by the Quality Program. Reports to the President.

Laboratory Manager: Plans, directs, and controls the day-to-day company's operational performance expectations. Reports to the Chief Operating Officer/Technical Director.

Department Manager: Supervises, plans, directs, and controls the day-to-day responsibility of a specific laboratory department. Report to Laboratory Manager.

Department Supervisors: Supervise day-to-day responsibility of a specific laboratory department. Report to Department Manager.



3. RELATIONSHIP BETWEEN MANAGEMENT, TECHNICAL OPERATIONS, SUPPORT SERVICES, AND QUALITY SYSTEM

Objective: The members of the management team have defined responsibility for the Quality Program. The development and implementation of the Quality Program is the responsibility of Quality Assurance/Quality Control Director. The implementation and operation of the Program is the responsibility of the operations management.

President: Responsible for all quality activities including the overall responsibility of implementing the Program. Is the primary alternate in the absence of QA/QC Director. Authorizes the QA/QC Director to design, implement, and coordinate the Program.

Chief Operating Officer/Technical Director: Responsible for executing and coordinating the Program in all laboratory departments. Responsible to certify and document that personnel have the appropriate education and/or technical background to perform the tests for which the laboratory is accredited to perform. Responsible for the development and implementation of corrective actions, including the authority to delegate Quality Program implementation responsibilities.

Quality Assurance/Quality Control Director: Responsible for the establishment, execution, support, training, and monitoring of the Quality Program. Identifies all product, process, or operational defects through statistical monitoring and audits including implementation of corrective action. Audits corrective actions for compliance with the Program.

Laboratory Manager: Responsible for coordinating and monitoring the requirements of the Quality Program in the laboratory. Assures that subordinates follow the requirements of the Quality Program. Implement corrective actions as necessary to address quality deficiencies. Is the primary alternate in the absence of Technical Director

Department Managers: Responsible for implementing the requirements of the Quality Program in their departments. To assure all subordinates and analysts follow the requirements of the Quality Program. Implement corrective actions as necessary to address quality deficiencies.

Department Supervisors: Responsible for implementing the requirements of the Quality Program within their department. To assure all analysts follow the requirements of Quality Program. Implement corrective actions as necessary to address quality deficiencies.

Analysts: Responsible for applying the requirements of the Quality Program to the analyses they perform. To evaluate QC data and initiate corrective action for quality control deficiencies within their control. Implement corrective actions as directed by superiors.

Support Services: Sample Management, MIS, Client Services and the Account Executives are responsible for applying the applicable requirements of the Quality Program to their specific tasks.

4. JOB DESCRIPTION OF KEY PERSONNEL

Objective: Job descriptions of key positions are defined to communicate a clear understanding of the duties and responsibilities including reporting relationships.

President: Responsible for all business activities including the strategic direction, mission and expectations of the company. Builds a strong, cohesive management team that is constantly focused on improving the operating, technical and financial performance of the company.

Chief Operating Officer/Technical Director: Coordinates the operational activities and the technical direction of the laboratory. Responsible to certify and document that personnel have the appropriate education and/or technical background to perform the tests for which the laboratory is accredited to perform. Develops the strategy to evaluate new methods, technology and objectives. Provides assistance and leadership to management teams to implement new innovated technologies. Reports to the President.

Quality Assurance/Quality Control Director: Establishes and audits the company quality program. Provides technical assistance to ensure that the procedure and data quality is technically sound, legally defensible and consistently meets the objectives of the QA Manual. Reports to the President.

System Manager: Provides the operational support for all information systems. Develops and implements MIS software to meet the strategic and technical goal of the company. Reports to the Technical Director.

Client Service Manager: Responsible for the planning, directing and control of the Sample Management Department and the Project Management staff. Supervises the sample log in operation and coordinates the project management activities. Communicates client expectations to the laboratory regarding analytical and reporting requirements. Reports to the President.

Laboratory Manager: Provides the technical, operational and administrative leadership through planning, allocation and management of personnel and equipment resources. Maintains a clearly qualified model of laboratory capacity. Uses this model as a basis for controlling the flow of work into and through the laboratory. Reports to the Technical Director.

Department Manager: Directs, plans and controls the operations of the department. Supervises daily production to ensure compliance with the requirements of the Quality Program and client expectations. Reports to the Laboratory Manager.

Department Supervisor: Provides supervision and directions for the group. Implements the daily analysis schedule. Ensures that the group and the analytical data are in compliance with the Quality Program. Reports to the Department Manager.

5. APPROVED SIGNATORIES

Objective: For traceability of data and related documents procedures are required which detail the authorization of signature approvals of data and information within Chemtech. A log of signatures and initials of all the analytical staff is maintained in the QA/QC office for cross-reference check.

5.1 SIGNATURE AUTHORITY

President: Authorizes contracts and binding agreements.

Chief Operating Officer/Technical Director: Approves the QA policy and SOP's and approves final reports in the absence of QC supervisor and QA/QC Director.

Quality Assurance/Quality Control Director: Approves SOP's, and the QA Plan. Approves final reports in the absence of QC supervisor.

5.2 SIGNATURE REQUIREMENT: All laboratory activities, commencing with sample receipt through the release of data, are approved by appropriate personnel by initialing or signing and dating the documents. A document signed or initialed by an employee, is within their limits of authority. All raw data are initialed and dated by the analyst conducting the analysis. All signatures and initials can be cross-referenced to the signatures and initial log.

5.3 SIGNATURE AND INITIAL LOG: The QA/QC office keeps a logbook of all signatures and initials of all technical personnel. New technical employee's signatures and initials are added to the logbook on the first day of their employment. Ex-employee signatures are kept on file but annotated with the last day of employment.

6. PERSONNEL TRAINING

Objective: To ensure that all analysts are properly trained, acquire an adequate amount of experience prior to performing independent analyses and maintain technical competence. These factors are an essential part of the laboratory QA Program.

6.1 EMPLOYEE ORIENTATION AND TRAINING: All new employees go through a training period which includes introducing new personnel to Chemtech company policies, QA/QC practices, safety and health, and ethics training in addition to training related to their job functions. The training period extends approximately 1 to 6 months, depending upon the level of experience of the individual.

6.2 PERSONNEL QUALIFICATIONS AND TRAINING: All technical employees at Chemtech fulfill the educational, work experience, and training requirements for their positions as outlined in their job description. As workload permits, Chemtech encourages cross training of personnel as appropriate.

All employees must undergo laboratory health and safety training and ethics training and must read laboratory QA Manual. A signed and dated statement from each technical employee that they have read, understood, and is using the latest version of the laboratory QA manual and SOP's is maintained in their training file.

A signed and dated statement from each employee that they have read, acknowledged and understood their personal ethical and legal responsibilities is kept in their training record.

The analysts are also required to take any QA/QC training (Introduction to Quality Assurance and specialized QC courses) provided by the QA/QC Director.

6.3 TECHNICAL SKILLS: Analysts are initially qualified by education with a minimum of a BS degree in Chemistry, Physical and/or Biological sciences, wherever required. Every new analyst is trained, regardless of education and outside experience, in the individual analytical procedures by a senior analyst. All Chemtech analyst capabilities are determined initially with Initial Demonstration of Capability studies.

When new equipment is purchased, appropriate Chemtech personnel are trained locally by the manufacturer, vendor or at the manufacturer's training course.

Any significant change to an analytical system requires that the analyst perform an initial demonstration of precision and accuracy, and recalibration of the instrument. For example, replacing a column in a gas chromatograph, cleaning the mass spectrometer ion source, etc.

- 6.4 TRAINING RECORDS:** Training records for technical employees are kept in the QA office. The Technical Director certifies and documents that all technical employees have the appropriate education and/or technical background to perform the tests for which the laboratory is accredited to perform. It is the responsibility of each employee to assure that records of completed training are provided to the QA/QC Director to update his/her personnel file.

In addition to the ethics and QA manual statements, the employee record file contains: read receipts of SOP's, a Demonstration of Capability for each accredited method that he/she performs; documentation of any training courses, seminars, and/or workshops; and documentation of continued proficiency to perform each test.

Continued analyst proficiency can be achieved by one of the following: acceptable performance of blind samples for each accredited method that he/she performs; through the analysis of Laboratory Control Samples - at least four consecutive Laboratory Control Samples with acceptable levels of precision and accuracy.

- 6.5 Training requirements for key positions:** Training requirements are assigned depending on the position and department the employee is in.

QA/QC Director: The QA/QC Director must have ample knowledge of the laboratory procedures, have at least 5 years of laboratory experience preferably in Organics and have at least 2 years of data review procedures training.

Department Manager- A department manager must have at least 3 years of experience in the area of Supervision. Must have proper training in methodology and the skill to organize, schedule and train personnel for a successful operation of their department.

Department Supervisor: A department supervisor must have at least 2 years of experience in the area they are to supervise. Be able to write SOPs

7. ETHICS POLICY

Chemtech provides comprehensive analytical testing services for the qualitative and quantitative assessment of environmental contaminants. Our services are used to meet various regulatory permitting and reporting requirements, determine compliance for both State and Federal environmental regulations to assess potential present and future environmental liability or health risks.

Our policy is to conduct our business with honesty and integrity; to produce accurate and usable data, and provide our employees with guidelines leading to an understanding of the ethical and quality standard required by Chemtech.

7.1 CODE OF ETHICS: Chemtech is managed in accordance with the following principals:

To produce analytical test results that are accurate and meet the requirements of our Quality program.

To operate our laboratory in a manner that protects the environment, as well as the health and safety of all our employees.

To provide employees with guidelines leading to an understanding of the ethical and quality standards required by Chemtech.

To report analytical data without any considerations or self-interests.

To provide analytical services in a confidential, truthful, and candid manner.

To abide by all Federal, State, and Local regulations that affects our business.

7.2 EMPLOYEE ETHICS TRAINING: Each employee receives ethics training during employee orientation and must sign an Employee Ethics Statement. During the orientation, an employee is made aware of the ethical and legal responsibilities including potential punishments and penalties for improper, unethical or illegal actions. The Employee Ethics Training program is updated annually (or more frequently if required). Ethics Training Seminars are presented annually, and all employees are required to attend. Personnel files are updated to include the date the employee attended the annual Ethics Training Seminar.

8. FACILITIES AND RESOURCES FOR NEW ANALYTICAL PROJECTS AND IMPLEMENTING CLIENT REQUIREMENTS

Objective: To ensure that appropriate facilities and resources are available to meet the demand for new analytical projects and process to implement client requirements.

8.1 REVIEW OF NEW ANALYTICAL PROJECTS: A Project Chronicle (PC) is prepared by the Account Executive prior to a quotation preparation and/or an award, and presented to the Technical Director and his staff for review and comments. The PC outlines all the client requirements and includes copies (if available) of the clients Quality Assurance Project Plan (QAPP), Statement of Work (SOW) and contractual provisions. The PC and associated information are scanned and stored on the network for future reference.

A "Kick Off Meeting" chaired by the Technical Director is scheduled to discuss the PC and its associated information. Project Management, the QA/QC Director, Laboratory Manager, including appropriate Department Managers/Supervisors, Sample Management and MIS staff are present to familiarize themselves with the requirements, and are asked to participate in the planning and implementation of the project.

8.2 RESOURCE AVAILABILITY: Chemtech maintains a 30,000 square foot laboratory designed for maximum efficiency and safety. There is a redundancy of equipment to ensure ample equipment resources. The laboratory is adequately staffed by a highly skilled group of chemists with diversified experience in environmental analysis; and managed by a knowledgeable team of professionals who are committed to quality and client satisfaction.

The laboratory management maintains a clearly defined model of laboratory capacity based upon historical data. This model is the basis for controlling resources, management of personnel and equipment, including the flow of work into and through the laboratory.

8.3 NEW WORK COORDINATION: Project Management coordinates the project logistics with the client and Sample Management in addition to overseeing the analytical progress through the laboratory. Sample Management initiates the Log-In process, which includes requirements, detailed in the PC and Quotation.

Prior to release of data to the client, the Department Managers, Supervisors, and the QC/Report Production staff review the data for

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completeness, accuracy, and conformance with applicable regulatory and clients requirements.

9. CLIENT CONFIDENTIALITY

Objective: To design and implement policies and procedures to protect the confidentiality and proprietary rights of our clients.

9.1 CLIENT CONFIDENTIALITY

Information related to a Client and or a Project are entered and stored in Chemtech's LIMS SQL Server. Employees with the appropriate level of authority enter the information. Security levels within Chemtech's system define an individual's access to information levels. Information on the Server is backed up at defined intervals, and the backup information is stored offsite.

Analytical data is prepared in a report format, as required by the client. The report is copied and scanned electronically. A paginated copy of the report or the original copy is distributed as directed by the client while the scanned copy and related information is kept on site in the Document Storage Area on our LIMS Server. The employee's security authorization levels limit access to the Document Storage Area or the LIMS Server. The files are archived for a period of five years.

Electronic data stored in Chemtech's database is protected by a variety of systems including, Virtual Private Networks (VPS), firewalls, log in user names and passwords. A Gateway system is also employed to restrict access to specific users based upon their authorization level.

Reports or client information requested by a third party must be accompanied by written authorization from our Client. Client information is released when directed by a subpoena from a court with valid jurisdiction. The Client is promptly notified of the subpoena requesting their information.

10. CLIENT COMPLAINTS AND RESOLUTIONS

Objective: To establish a system to address and resolve client complaints regarding any laboratory activity. The process for dealing with complaints must include a procedure, documentation, corrective action, and monitoring of the implemented corrective action.

- 10.1 PROCEDURE:** When a client calls or e-mails an inquiry regarding a project or a report to the Project Manager (PM), the PM receiving the call (or e-mail) summarizes the client issue or requests the client to mail/fax any questions. Once a formal request is received, the PM communicates to the QA/QC Director, who prepares a Corrective Action (CA) report form, which includes the client name, laboratory project numbers(s), and summary of issues. The CA report form is assigned a three digit tracking number, by the QA/QC Director. The CA report form is submitted to the Technical Director, who assigns the CA report form to the affected department supervisor to review, comment and correct the issue within 24 hours. All technical and data reporting inquiries are submitted to the QA/QC Director for review. Once the response comes back from the laboratory, the QC Supervisor and QA/QC Director reviews it, and if satisfactory, the CA report form is filed in the QA/QC office. The client is sent the corrected information.
- 10.2 DOCUMENTATION:** Client's complaints are documented using CA report form, which originates from the QA/QC Director's office. The original communication (phone log, e-mail, or fax) is kept in the PM office while closed CA report form is filed in the QC office. The CA report contains the date and name of the person receiving the complaint, a description of the complaint, source of the complaint, the resolution, and any written material accompanying the complaint. The CA database is updated by QA/QC office to which only QA/QC Director has access. A database is maintained where client inquiries are logged-in including date, client name, project number, department in question, and a summary of the inquiry and CA taken.
- 10.3 CORRECTIVE ACTION:** The CA report is entered in a database to monitor systematic defects. The appropriate department supervisor must deal with the complaint by responding to the inquiry. The response must address the issue(s) and provide an explanation and resolution. The response may involve reprocessing of data and issuing a revised data report. The QA/QC Director reviews the CA for a persistent defect in case the respective SOP needs modifications.

- 10.4 QA/QC AUDITING:** The CA is entered in a database to monitor systematic defects. The QA/QC Director investigates complaints and promptly audits all areas of activity to assure that the CA implemented has resolved the defect. If the defect persists, the QA/QC Director, and Department Manager and Supervisor develop and implement an effective process. When the defect is resolved, monitoring is incorporated as a part of the annual system audit. For detailed information on client inquiries refer to the SOP for handling client inquiries.

11. SAMPLE MANAGEMENT PROCESS

Objective: To establish a system to process client requests for analytical services and samples upon arrival at the laboratory. Please refer to P204-Chain of Custody SOP and P250-Log in SOP for detailed information for sample receipt, containers and all other related information.

11.1 ANALYTICAL REQUEST: Project Managers prepare an Analytical Request (AR) Form from the information detailed on the Project Chronicle (PC) and provide a copy to Sample Management in order to initiate a sampling event.

11.2 SAMPLE CONTAINER PREPARATION AND SHIPMENT: All bottle orders prepared from the Analytical Requests are prepared with bottles that are certified pre-cleaned by the manufacturer according to US EPA specifications. Reagent grade preservatives are added to the bottles at the laboratory. All preservative solutions are checked to assure that they are free of contamination. Chemtech utilizes laboratory reagent water for trip and field blanks.

Bottle orders are prepared by one individual and checked by a second individual to ensure that the bottle order was properly prepared. The bottles are then relinquished from Sample Management to the appropriate courier. When the bottles arrive at the client destination, the courier will then relinquish custody of the bottles to the client or the client designee.

Samples arrive at the laboratory via Chemtech couriers, common carrier, or client delivery. All shipments and deliveries of samples are received through the shipping & receiving door located in the rear of the facility. All deliveries enter in the same location and go directly to the sample room. The SOP's for Chain of Custody (CoC) and Sample Acceptance and Receipt are followed.

Sample Management personnel will sign for all shipments received and notify the Sample Custodian immediately. The samples are then relinquished to the Sample Custodian.

A sample or sample container is considered to be in custody if: it is in the persons' actual possession; it is in the person's view after being in their physical possession; it was in their possession and then locked in a refrigerator or sealed in a cooler; it is in a designated secure area.

11.3 SAMPLE ACCEPTANCE

Upon receipt of sample coolers at the laboratory, coolers are examined for damaged or broken custody seals. Records of the condition of the custody seals and coolers are recorded on the Laboratory Chronicles. If seals and coolers are intact, the sample acceptance procedure is continued. If they are not intact, the appropriate Laboratory Project Manager (PM) is notified. The PM will seek guidance from the client whether to proceed with the analysis of the samples or discard or send back the samples. The PM will communicate information given by the Client to Sample Management via a Record of Communication.

11.4 SAMPLE RECEIPT

Once the samples have been accepted, the sample receipt process begins. The Sample Custodian will line up the samples according to the CoC and begin comparing the information documented on the CoC to the samples received. Any deviation noted from the CoC or non-conformance is recorded on the Laboratory Chronicle and communicated to the appropriate Laboratory Project Manager.

11.5 SAMPLE CUSTODIAN RESPONSIBILITIES

The Sample Custodian must take a cooler temperature soon after sample receipt and record it on the Laboratory Chronicle and the Field CoC. This will verify that the samples were transported and received at the required temperature.

The Sample Custodian must ensure that samples are received in good condition and ensure that samples listed on the CoC are all present. The Sample Custodian must compare the sample identification on the CoC to the labels on the bottles, and make sure that the information on the CoC exactly matches the bottle labels. Verification that enough volume has been received for the sample tests requested and absence of headspace for volatile analysis must be noted.

The Sample Custodian must ensure that all samples are properly preserved. Appropriate preservation of samples is determined by checking the pH of the samples. Sample Management Staff are issued a reference table that lists the tests methods we utilize and their appropriate preservation techniques. The pH of the samples is checked, and any discrepancies are recorded on the Laboratory Chronicle and communicated to the client.

The Sample Custodian must sign the CoC and other documentation received with the samples. Documentation of custody is initiated when the field sampler is collecting the samples. Custody documentation includes all information that provides a clear record of the sample identification,

time of collection, and collection chronology. This record is kept on the Chemtech or Client CoC Forms.

The Sample Custodian must place the samples in storage or relinquish to the appropriate laboratory analyst after labeling the samples with the unique laboratory number.

11.6 SAMPLE MANAGEMENT STAFF RESPONSIBILITIES

Sample Management staff must review the Field CoC submitted by the Sample Custodian and procure the correct Analytical Request (AR) form from the file. They must compare the AR to the Field CoC and ensure that all information on the CoC follows the AR exactly. If not, contact the appropriate PM for further guidance. The PM should resolve all discrepancies between the AR and the CoC prior to sample login. Once the discrepancies are resolved the PM will issue a Record of Communication to document the client's instructions.

If an unapproved rush analysis is received, Sample Management staff must inform the PM, and contact the appropriate Department Supervisor via email. Proceed to login the samples. Create a folder with the original Field CoC, the sample and delivery tickets, any third party delivery documentation, and the login report.

11.7 SUBCONTRACTED ANALYSIS

Projects sometimes contain analyses that Chemtech does not perform. In order to give a high level of service to our clients, Chemtech will subcontract these analyses to other laboratories. All subcontracted laboratories must meet vigorous standards set forth by QA/QC Department as well as standards established for the environmental laboratory industry. A documented procedure is followed to qualify laboratories for subcontracting and a list is maintained in our QA/QC Department. Procedures have also been established to assure that CoC is maintained and the subcontract laboratory achieves all client objectives.

A subcontracted laboratory must provide our QA/QC Department the following information in order to be used as a subcontractor: a valid state certification for the required tests, Quality Assurance Plan, PT Studies for the required tests, and copies of the SOP's for the required tests.

The subcontracting procedure is a documented procedure that is initiated by an Account Executive. The Account Executive is responsible for ensuring that the subcontracted laboratory meets all client specifications. When a client issues a Scope of Work, the Account Executive thoroughly reviews the document. If subcontracting is required, the Account

Executive will consult the established subcontracting list that is issued by the QA/QC Department. If a particular analysis is not conducted by one of these approved laboratories, the Account Executive must then request that QA/QC Director locates and approves a laboratory for the requested analysis.

Once a subcontract laboratory is found, the Account Executive must contact the laboratory to communicate the client's requirements and request a quotation from the laboratory. The Account Executive then creates a *Project Chronicle* that documents the client requirements, the subcontract laboratory to be used, and attaches a quote to this document. The Project Chronicle is an electronic document available to all appropriate personnel. This procedure is followed prior to the receipt of samples from the client.

When the client calls to order the bottles for the project, the PM initiates an Analytical Request Form (AR) from the information documented on the Project Chronicle. The AR includes the information for the subcontract laboratory as well as any special bottle instructions for the subcontracted tests, and is given to Sample Management. Sample Management then creates the bottle order and sends it to the client.

Upon receipt of the samples, the Sample Custodian will give a copy of the CoC to the Client Service Manager. The Client Service Manager will then create a subcontract chain of custody and procure a Purchase Order from Accounting. This documentation is given to Sample Management to send to the subcontract laboratory along with the samples. A copy of this documentation is retained and placed in the login folder and double-checked by the appropriate Project Manager.

All subcontracted samples are logged into the LIMS System to allow for sample tracking and data reporting. A PM will track the samples to ensure that client deadlines and specifications are met. Once the data packages arrive from the subcontract laboratory, the PM will check the report for completeness. If the data package is deficient, the PM will immediately notify the subcontract laboratory to remediate the deficiencies. The report is then passed to the QA/QC Department for further review. If any corrective action is required at this point, the QA/QC staff will call the subcontractor laboratory. All data that is subcontracted is clearly designated.

11.8 SAMPLE STORAGE

Chemtech maintains a 40-foot walk-in refrigerator that contains a multitude of shelves. All samples, with the exception of volatiles, are kept

in this refrigerator. The refrigerator temperature is monitored constantly and recorded once a day. All shelves in the walk-in refrigerator are identified with a code. The Sample Custodian assigns samples to a refrigerator shelf and gives the shelf location to Sample Management to login with the sample information. This documented procedure allows the samples to be found very easily.

The volatile refrigerators are located in the Volatile Department and kept secure. All Volatile refrigerators are also monitored for temperature. The temperature is recorded every day on a log page.

Back-up refrigerators are available should any mechanical problem present itself. All samples are securely moved to the backup refrigerators if necessary.

Only the Sample Custodians are permitted access to sample storage. Analysts create a sample request electronically and send the request to the Sample Custodians. Once received, the Sample Custodians fill out the appropriate paperwork and issue the samples to the Analysts.

Periodically throughout the day, the Sample Custodians will pick up samples from the laboratory and sign them back into storage. Analysts will submit a signed work list to the Sample Custodian along with the samples when they finished with the samples. All samples must be back in refrigeration at the end of a shift and the chain of custody is required to be kept at all times.

12. ANALYTICAL CAPABILITIES

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Volatile Organics by GC/MS	SW 5030B/8260B SW 5035/8260B SW 3585 OLM03.2 OLM04.2 OLM04.3	SW 5030B/SW 8260B SW5035/SW 8260B OLM03.2, OLM04.3 OLM04.2 OLC02.1 OLC03.1 EPA 524.2 EPA 624
Volatile Organics by GC	SW 8015B SW 5030B/SW 8021B SW 5035/8021B	SW 8015B SW 5030B/SW 8021B SW 5035/8021B EPA 601 EPA 602
Semi volatiles by GC/MS	SW 3510C/SW 8270C SW 3520C/SW 8270C SW 3540C/SW 8270C SW 3545/SW 8270C SW 3580A/SW 8270C OLM03.2 OLM04.2 SW 3550B OLM04.3	EPA 625 SW 3510C/SW 8270C SW 3520C/SW 8270C SW 3540C/SW 8270C SW 3545/SW 8270C SW 3580A/SW 8270C OLM03.2, OLM04.3 OLM04.2 OLC02.1 OLC03.1
Semi volatiles by HPLC	SW 8310	SW 8310 SW 8330
Semi volatiles by GC	SW 8015B	SW 8015B
Pesticides &/ or PCBs	SW 3510C/SW 8081A&/or 8082 SW 3520C/SW 8081A&/or 8082 SW 3540C/SW 8081A&/or 8082 SW 3545/SW 8081A&/or 8082 SW 3580A/SW 8081A&/or 8082 OLM03.2 OLM04.2 OLM04.3	SW 3510C/SW 8081A&/or 8082 SW 3520C/SW 8081A&/or 8082 SW 3540C/SW 8081A&/or 8082 SW 3545/SW 8081A&/or 8082 SW 3580A/SW 8081A&/or 8082 EPA 608 OLM03.2 OLM04.2, OLM04.3
Chlorinated Herbicides	SW 8151A	SW 8151A
Volatile Organics by GC/MS	Air Matrix Method: TO-14	

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Metals	SW 6010B SW 7471A ILMO4.1 ILM05.3 SW 3050B	EPA 200.7 EPA 245.1 SW 6010B SW 7470A ILM04.1 ILM05.3 SW 3005A SW 3010A
Wet Chemistry		
Acidity	-----	EPA 305.1 SM 18 2310B(4A)
Alkalinity	-----	EPA 4100B SM18/19 2320 B
Alkalinity, Bicarbonate	-----	SM18/19 2320 B
Ammonia	EPA 350.2	EPA 350.2 SM 18 4500-NH3 B/E
Anions: Bromate Bromide Chloride Fluoride Nitrate Nitrite Orthophosphate Sulfate	-----	EPA 300.0
ASTM Leaching Procedure	ASTM 3987	-----
Biochemical Oxygen Demand (BOD5)	-----	EPA 405.1 SM 18 5210B
Bromide	SW 9211	EPA 320.1 EPA 300.0
Carbon Dioxide	-----	EPA 310.1
Carbonaceous BOD (cBOD)	-----	SM 18/19 ED 5210B
Cation-Exchange Capacity	SW 9080 SW 9081	-----
Chemical Oxygen Demand (COD)	-----	EPA 410.1 EPA 410.2 EPA 410.3 SM 18 5220C SM 18 5220D

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Chloride	SW 9212 SW 9056	EPA 325.3 EPA 300.0 SM 18 4500-Cl C
Chlorine Demand	-----	SM 18/19 ED 2350B
Color	-----	EPA 110.2 SM 18 2120B
Conductivity	SW 9050A	EPA 120.1 SM 18/19 ED 2510 B
Corrosivity	SW 9040B	SW 9040B
Corrosivity Toward Steel	SW 1110	SW 1110
Cyanide	SW 9010B	EPA 335.2 EPA 340.1 SM 18/19 4500-CN C&E
Cyanide-Amenable	SW 9010B SW 9213	EPA 335.1 SM 18 4500-CN G
Density	-----	SM 18 2710F ASTM D1298 ASTM 5057
Dissolved Oxygen	-----	EPA 360.1 EPA 360.2 SM 4500-O C SM 4500-O G
Extractions	SW 3610 SW 3620 SW 3640 SW 3665 SW 8440	SW 3610 SW 3620 SW 3640 SW 3665 SW 8440
Ferrous Iron	-----	SM 18 3500 B SM 19 3500FE-D
Flashpoint	SW 1010 SW 1030	SW 1010 SW 1030
Foaming Agents	-----	SM 18/19 ED 5540 C
Fluoride	SW 9214	EPA 340.2 SM 18 4500 F-B, C EPA 300.0
Hardness, Calcium	-----	EPA 200.7
Hardness, Total	-----	EPA 130.2 SM 18 2340 B OR C

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Hexavalent Chromium	SW 3060A/SW 7196A	SM 18/19 ED3500-Cr D
Ignitability	SW 1010 SW 1030	SW 1010 SW 1030
Methylene Blue Active Substances (MBAS) Surfactants	-----	EPA 425.1 SM 18/19 ED 5540 C
Nitrate	SW 9210 SW 9056	EPA 353.2 SM 18 4500-NO3 F EPA 300.0
Nitrate/Nitrite	EPA 353.2	EPA 353.2 SM 18 4500-NO3 F EPA 300.0
Nitrite	EPA 353.2 SW 9056	EPA 354.1 SM 18 4500-NO2 B EPA 300.0
Odor	-----	SM 18 2150 B
Oil & Grease	SW 9070, SW 9071	EPA 413.1 EPA 1664A
Organic Nitrogen	EPA 351.1, .2, .3 .4 EPA 350.1.2.3	EPA 351.1, .2, .3 .4 EPA 350.1.2.3 SM 18/19 4500-NH3 BCEFGH
Orthophosphate		EPA 365.2 SM 18/19 ED 4500-P,E
Paint Filter Test	-----	SW 9095
Petroleum Hydrocarbons	EPA 418.1	EPA 418.1
pH	SW 9040B SW 9045C	EPA 150.1 SM 18 4500-H+-B SW 9041A
Phenolics	SW 9065 SW 9066 SW 9067	EPA 420.1
Phosphorus, Ortho	-----	EPA 365.2 SM 18/19 4500 P-E
Phosphorus, Total	EPA 365.2	EPA 365.2 SM 18 4500-P B5+E
Reactive Cyanide	SW 7.3.3.2 Rev 3	SW 7.3.3.2 Rev 3
Reactive Sulfide	SW 7.3.4.2 Rev 3	SW 7.3.4.2 Rev 3
Redox Potential	SM 18 2580	SM 18 2580 ASTM D1498

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Residual Chlorine	-----	SM 18 4500-Cl G
Settleable Solids	-----	EPA 160.5 SM 18/19 2540 F
Silica	SW 6010B	EPA 200.7
SPLP Extraction	SW 1312	SW 1312
Sulfate	SW 9035 SW 9036 SW9038	EPA 375.4 EPA 300.0 SM 18/19 4500SO4 F, C or D
Sulfide	SW 9215	EPA 376.1 SM 18/19 4500-S E SW 9215
Sulfide, Acid Soluble & Insoluble	SW 9030B	SW 9030B SW 9031
TCLP Leaching Procedure	SW 1311	SW 1311
Temperature	SW 2550B	EPA 170.1 SM 18/19 2550B
Total Dissolved Solids (TDS)	-----	EPA 160.1 SM 18 2540 C
Total Kjeldahl Nitrogen (TKN)	EPA 351.3	EPA 351.3 SM 18/19 4500-N Org B or C
Total Organic Carbon (TOC)	SW 9060 Lloyd Kahn	EPA 415.1 SM 18/19 5310 B, C or D
Total Organic Halides (TOX)	SW 9020B	SW 9020B EPA 450.1
Extractable Organic Halides (EOX)	SW 9023	SW 9023
Total Solids (TS)	EPA 160.3	EPA 160.3 SM 2540 B
Total Suspended Solids (TSS)	-----	EPA 160.2 SM 2540 D
Total Volatile Solids (TVS)	-----	EPA 160.4
Turbidity	-----	EPA 180.1 SM 18/19 2130 B
Volatile Suspended Solids (VSS)	-----	PA 160.4
Microbiology		
Total Coliform	SW 9131 SW 9132	SM 18/19 9221D SM 18/19 9222B
Fecal Coliform	-----	SM 18/19 9222B or D

Analytical Fraction	Soil/Solid Matrix Methods	Aqueous Matrix Methods
Escherichia coli	-----	SM 18/19 9222B SM 18/19 9221E
Heterotrophic bacteria (Standard Plate Count)	SM 18/19 9215D	SM 18/19 9215B

13. MAJOR EQUIPMENT

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
<u>GC/MS SEMI VOA Lab</u>							
GC	BNA-A	Hewlett Packard 5890 Series II	3223A43380	June 1992	July 2001	BNA Lab	used
MSD	BNA-A	Hewlett Packard 5971 Series	2919A00378	June 1992	July 2001	BNA Lab	Used
Auto Sampler	BNA-A	Hewlett Packard 18596B	2718A04705	June 1992	July 2001	BNA Lab	Used
Injector Tower	BNA-A	Hewlett Packard 7673 A	3048A24622	June 1992	July 2001	BNA Lab	Used
Controller	BNA-A	Hewlett Packard 7673 A 18594B	3330A32763	June 1992	July 2001	BNA Lab	Used
Computer	BNA-A	Minta	CN548014089	June 1992	July 2001	BNA Lab	Used
GC	BNA-B	Hewlett Packard 5890	2750A18411	July 1994	July 2001	BNA Lab	Used
MSD	BNA-B	Hewlett Packard 5971 Series	3188A03673	July 1994	July 2001	BNA Lab	Used
Auto Sampler	BNA-B	Hewlett Packard 18596B	3021A21493	July 1994	July 2001	BNA Lab	Used
Injector Tower	BNA-B	Hewlett Packard 7673 A	2704A04914	July 1994	July 2001	BNA Lab	Used
Controller	BNA-B	Hewlett Packard 7673 A 18594B	320A28097	July 1994	July 2001	BNA Lab	Used
Computer	BNA-B	Minta	93001897	July 1994	July 2001	BNA Lab	Used
GC	BNA-E	Hewlett Packard 5890 Series	4500030441	Dec 2002	Jan 2003	BNA Lab	New
MSD	BNA-E	Hewlett Packard 5973	4591422501	Dec 2002	Jan 2003	BNA Lab	New
Auto Sampler	BNA-E	Agilent 7683 Series	4514413296	Dec 2002	Jan 2003	BNA Lab	New
Injector Tower	BNA-E	Agilent 7683 Series	CN13922355	Dec 2002	Jan 2003	BNA Lab	New
Computer	BNA-E	Hewlett Packard Vectra VL 420 DT	4522100267	Dec 2002	Jan 2003	BNA Lab	New
GC	BNA-F	Thermo Finnigan Trace Ultra	20041853	March 2004	March 2004	BNA Lab	New
MSD	BNA-F	Thermo Finnigan Trace DSQ	100166	March 2004	March 2004	BNA Lab	New
Auto Sampler	BNA-F	Thermo Finnigan AS 3000	20041111	March 2004	March 2004	BNA Lab	Used
Refrigerator	BNA-Ref-1	Roper	ED2933135	May 1999	July 2001	BNA Lab	Used
Refrigerator	BNA-Ref-2	White Westinghouse		June 2006	June 2006	BNA Lab	New
Refrigerator	BNA-Ref-3	White Westinghouse	BA54880352	August 1999	July 2001	BNA Lab	Used
<u>GC SEMI VOA Lab</u>							
HPLC	HPLC-1	Hewlett Packard Series 1100 DAD	JP73007001/ US72101011/ US72101340	May 1999	July 2001	Pest Lab	Used
Auto sampler	HPLC-1	Hewlett Packard 1313 AS	US72102636	May 1999	July 2001	Pest Lab	Used
Computer	HPLC-1	HP Vectra XA	US73465640	May 1999	July 2001	Pest Lab	Used
ECD	ECD-1	Shimadzu AOC-20	C11144007149KG	Feb 2004	Feb 2004	Pest Lab	Used
Auto Sampler	ECD-1	Hewlett Packard 7673A	2718A07921	June 1992	July 2001	Pest Lab	Used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
GC SEMI VOA Lab							
Inject Tower	ECD-1	Hewlett Packard 7673A	2843A11812	June 1992	July 2001	Pest Lab	Used
Controller	ECD-1	Hewlett Packard 7673A	2843A11812	June 1992	July 2001	Pest Lab	Used
Computer	ECD-1	Seventeam	3862A403	June 1992	July 2001	Pest Lab	Used
ECD	ECD-4	Hewlett Packard 5890	3203A40376	May 1999	July 2001	Pest Lab	Used
Auto Sampler	ECD-4	Hewlett Packard 7673A	2718A05058	May 1999	July 2001	Pest Lab	Used
Inject Tower	ECD-4	Hewlett Packard 7673A	3120A26762	May 1999	July 2001	Pest Lab	Used
Computer	ECD-4	ACER 324	93006805	May 1999	July 2001	Pest Lab	Used
Controller	ECD-4	Hewlett Packard 7673A	3113A26547	May 1999	July 2001	Pest Lab	Used
ECD	ECD-5	Hewlett Packard 5890 Series II	3115A34809	June 1992	July 2001	Pest Lab	Used
Auto Sampler	ECD-5	Hewlett Packard 7673A	3137A26240	June 1992	July 2001	Pest Lab	Used
Inject Tower	ECD-5	Hewlett Packard 7673A	3033A23016	June 1992	July 2001	Pest Lab	Used
Controller	ECD-5	Hewlett Packard 7673A	3329A32728	June 1992	July 2001	Pest Lab	Used
Computer	ECD-5	Expert Group 36X MAX	-----	June 1992	July 2001	Pest Lab	Used
ECD	ECD-6	Hewlett Packard 5890 Series II	3235A44756	May 1999	July 2001	Pest Lab	Used
Auto Sampler	ECD-6	Hewlett Packard 7673A	2718A07968	May 1999	July 2001	Pest Lab	Used
Inject Tower	ECD-6	Hewlett Packard 7673A	2546A01644	May 1999	July 2001	Pest Lab	Used
Controller	ECD-6	Hewlett Packard 7673A	2546A01644	May 1999	July 2001	Pest Lab	Used
Computer	ECD-6	Expert Group	CN548014091	May 1999	July 2001	Pest Lab	Used
ECD	ECD-7	Agilent Technologies 6890N	CN10521041	June 2005	June 2005	Pest Lab	New
Auto Sampler	ECD-7	Agilent 7683	CN52033127	June 2005	June 2005	Pest Lab	New
Inject Tower	ECD-7	Agilent 7683B	CN51825037	June 2005	June 2005	Pest Lab	New
Computer	ECD-7	Dell	CN-0G1494-70821-359-25-KF	June 2005	June 2005	Pest Lab	New
ECD	ECD-8	Hewlett Packard 5890 Series II	2541A06937	May 1999	July 2001	Pest Lab	Used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
<u>GC SEMI VOA Lab</u>							
Auto Sampler	ECD-8	Agilent 7683	CN1115410412 1	May 1999	July 2001	Pest Lab	Used
Inject Tower	ECD-8	Agilent 7683	CN1114410779 0	May 1999	July 2001	Pest Lab	Used
Controller	ECD-8	-----	S00132	May 1999	July 2001	Pest Lab	Used
FID	FID-1	Hewlett Packard 5890	2643A09798	May 1999	July 2001	Pest Lab	Used
Auto Sampler	FID-1	Hewlett Packard 7673A	2718A08986	May 1999	July 2001	Pest Lab	Used
Inject Tower	FID-1	Hewlett Packard 7673A	CN41235695	May 1999	July 2001	Pest Lab	Used
Computer	FID-1	44X Max Expert Group	-----	May 1999	July 2001	Pest Lab	Used
Controller	FID-1	Hewlett Packard 7673A	2702A05818	May 1999	July 2001	Pest Lab	Used
Refrigerator	GC ext- Ref 1	General Electric	ST734619	May 1999	July 2001	Pest Lab	Used
Refrigerator	GC ext- Ref 2	Kelvinator	-----	May 1999	July 2001	Pest Lab	Used
Refrigerator	GC ext- Ref 3	General Electric	MT841152	May 1999	July 2001	Pest Lab	Used
Refrigerator	GC ext- Ref 4	Howard WC-45	84236156	May 1999	July 2001	Pest Lab	Used
<u>GC/GC MS VOA Lab</u>							
MSD	MSVOA-D	Hewlett Packard 5971	3234A04258	May 1999	July 2001	VOA Lab	Used
GC	MSVOA-D	Hewlett Packard 5890	3033A31948	May 1999	July 2001	VOA Lab	Used
Auto Sampler	MSVOA-D	OI Analytical 4552	13990	May 1999	July 2001	VOA Lab	Used
Concentrator	MSVOA-D	OI 4660 Eclipse	A405466417P	2004	Feb 04	VOA Lab	New
Computer	MSVOA-D	MINTA ACER 32X	93007352	May 1999	July 2001	VOA Lab	Used
MSD	MSVOA-E	Hewlett Packard 5972	3435A01877	May 1999	July 2001	VOA Lab	Used
GC	MSVOA-E	Hewlett Packard 5890	2443A3670	May 1999	July 2001	VOA Lab	Used
Auto Sampler	MSVOA-E	OI Analytical 4552	13854	May 1999	July 2001	VOA Lab	Used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
<u>GC/GC MS VOA Lab</u>							
Concentrator	MSVOA-E	OI 4660 Eclipse	A405466419P	2004	Feb 04	VOA Lab	New
Computer	MSVOA-E	-----	-----	May 1999	July 2001	VOA Lab	Used
MSD	MSVOA-F	Hewlett Packard 5971 Series	3118A02237	May 1999	July 2001	VOA Lab	Used
GC	MSVOA-F	Hewlett Packard 5890	3108A34429	May 1999	July 2001	VOA Lab	Used
Concentrator	MSVOA-F	TEKMAR LCS 2000	92056013	July 2001	July 2001	VOA Lab	Recondition
Auto Sampler	MSVOA-F	TEKMAR ALS 2016	92231005	July 2001	July 2001	VOA Lab	Recondition
Computer	MSVOA-F	MINTA ACER 32X	93007037	May 1999	July 2001	VOA Lab	Used
MSD	MSVOA-G	Hewlett Packard 5971A	2749A00075	May 1999	July 2001	VOA Lab	Used
GC	MSVOA-G	Hewlett Packard 5890 Series II	3020A11012	May 1999	July 2001	VOA Lab	Used
Concentrator	MSVOA-G	OI Eclipse 4660	338466642P	2003	March 2003	VOA Lab	Used
Auto Sampler	MSVOA-G	OI Archon 5100	12971	May 1999	July 2001	VOA Lab	Used
Computer	MSVOA-G	Expert Group	-----	May 1999	July 2001	VOA Lab	Used
MSD	MSVOA-H	Hewlett Packard 5971 Series	3188A03008	May 1999	July 2001	VOA Lab	Used
GC	MSVOA-H	Hewlett Packard 5890	2750A17849	May 1999	July 2001	VOA Lab	Used
Concentrator	MSVOA-H	OI Eclipse 4660	A401466023P	2004	Feb 2004	VOA Lab	Used
Auto Sampler	MSVOA-H	OI Archon 5100	12225	May 1999	July 2001	VOA Lab	Used
Computer	MSVOA-H	MINTA ACER 32X	93006275	May 1999	July 2001	VOA Lab	Used
MSD	MSVOA-I	Hewlett Packard 5971 Series	IOW24-528	June 1992	July 2001	VOA Lab	Used
GC	MSVOA-I	Hewlett Packard 5890 Series II	3235A45496	June 1992	July 2001	VOA Lab	Used
Concentrator	MSVOA-I	OI 4660 Eclipse	338466643P	2003	March 2003	VOA Lab	New
Auto Sampler	MSVOA-I	OI 4552 Archon	14293	2003	March 2003	VOA Lab	Used
Computer	MSVOA-I	Expert Group 36X Max	-----	June 1992	July 2001	VOA Lab	Used
MSD	MSVOA-K	Hewlett Packard 5971A Series	3324A04574	December 2002	Jan 2003	VOA Lab	New
GC	MSVOA-K	Hewlett Packard 5890 Series II	3235A45495	December 2002	Jan 2003	VOA Lab	New
P&T 2	MSVOA-K	OI Analytical 4560	N249460496	December 2002	Jan 2003	VOA Lab	New

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
GC/GC MS VOA Lab							
Auto Sampler	MSVOA-K	OI Analytical 4552	13843	December 2002	Jan 2003	VOA Lab	New
Computer	MSVOA-K	Dell XPS D233	DLCY9	December 2002	Jan 2003	VOA Lab	New
MSD	MSVOA-L	Agilent 5975	US52430266	2004	March 2004	VOA Lab	New
GC	MSVOA-L	Agilent 6890	CN10524059	2004	March 2004	VOA Lab	New
Concentrator	MSVOA-L	Entech 7100A	1224	2004	March 2004	VOA Lab	New
Auto Sampler	MSVOA-L	Entech 7500		2004	March 2004	VOA Lab	New
Computer	MSVOA-L	Dell XP		2004	March 2004	VOA Lab	New
MSD	MSVOA-M	Agilent 5971		2004	March 2004	VOA Lab	New
GC	MSVOA-M	Agilent 5890	2429A02327	2004	March 2004	VOA Lab	New
Concentrator	MSVOA-M	Entech 7100A	1129	2004	March 2004	VOA Lab	New
Auto Sampler	MSVOA-M	Entech 7500		2004	March 2004	VOA Lab	New
Computer	MSVOA-M	Dell XP		2004	March 2004	VOA Lab	New
Refrigerator	VOA-Ref-1	Frigidaire	WB50332890	June 2005	June 2005	VOA Lab	New
Refrigerator	VOA-Ref-2	Frigidaire	WB50332901	June 2005	June 2005	VOA Lab	New
Refrigerator	VOA-Ref-3	Sanyo	911246533	May 1999	July 2001	VOA Lab	Used
Refrigerator	VOA-Ref-4	Glenco	JJ-371503	May 1999	July 2001	VOA Lab	Used
Refrigerator	VOA-Ref-5	Beverage Air KR48-IAS	7054308	May 1999	July 2001	VOA Lab	Used
Refrigerator	VOA-Ref-6	True Refrigerator T-72	682166	May 1999	July 2001	VOA Lab	Used
Oven	VOA-Oven 1	Fisher Scientific 230F	2876	May 1999	July 2001	VOA Lab	Used
Oven	VOA-Oven 2	Precision Scientific	9402-010	May 1999	July 2001	VOA Lab	Used
Scale	VOA SC-1	Mettler PE 300	E28222	May 1999	July 2001	VOA Lab	Used
Hot Plate	VOA HP-1	VWR Dylathern		May 1999	July 2001	VOA Lab	Used
GC	GC-VOA-I-A	Perkin Elmer PID	610N4101940	May 1999	July 2001	GC Lab	Used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
<u>GC/GC MS VOA Lab</u>							
Hall Detector	GC-VOA-1-A	Perkin Elmer 1000 Hall	920071	May 1999	July 2001	GC Lab	Used
Concentrator	GC-VOA-1-A	TEKMAR LCS 2000	91343002	May 1999	July 2001	GC Lab	Used
Auto Sampler	GC-VOA-1-A	Hewlett Packard Purge & Trap	3449A20171	May 1999	July 2001	GC Lab	Used
Computer	GC-VOA-1-A	MINTA	93001817	May 1999	July 2001	GC Lab	Used
GC	GC-VOA-2-B	Hewlett Packard 5890 Series II PID	3235A46097	May 1999	July 2001	GC Lab	Used
Concentrator	GC-VOA-2-B	TEKMAR LCS 2000	91233006	May 1999	July 2001	GC Lab	Used
Auto Sampler	GC-VOA-2-B	Hewlett Packard Purge & Trap	3449A20164	May 1999	July 2001	GC Lab	Used
Computer	GC-VOA-2-B	MINTA	93001817	May 1999	July 2001	GC Lab	Used
GC	GC-VOA-3-C	Dimension PID/FID	921105	May 1999	July 2001	GC Lab	Used
Concentrator	GC-VOA-3-C	TEKMAR LCS 2000	93257007	May 1999	July 2001	GC Lab	Used
Auto Sampler	GC-VOA-3-C	TEKMAR 2016	94067022	May 1999	July 2001	GC Lab	Used
Computer	GC-VOA-3-C	MINTA	93001817	May 1999	July 2001	GC Lab	Used
<u>Metals Lab</u>							
ICAP	ICP-1	Thermo Jarrell Ash (ICAP 61E Trace Analyzer	346590	June 1999	July 2001	Metals Lab	New
Power Unit	ICP-1	Thermo Jarrell Ash Power Unit	2579	June 1999	July 2001	Metals Lab	New
Circulator	ICP-1	Thermo Jarrell Ash (Water Circulator)	J95048013	June 1999	July 2001	Metals Lab	New
Computer	ICP-1	Dell		June 2002	June 2002	Metals Lab	New
ICAP	ICP-2	Thermo Jarrell Ash (ICAP 61E Trace Analyzer	357490	May 1999	July 2001	Metals Lab	Used
Power Unit	ICP-2	Thermo Jarrell Ash Power Unit	2653	May 1999	July 2001	Metals Lab	Used
Circulator	ICP-2	Thermo Jarrell Ash (Water Circulator)	J95048013	May 1999	July 2001	Metals Lab	Used
Computer	ICP-2	Dell		June 2002	June 2002	Metals Lab	New

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
Metals Lab							
ICAP	ICP-3	Thermo Jarrell Ash (ICAP 61E Trace Analyzer	249490	May 1994	July 2001	Metals Lab	Used
Power Unit	ICP-3	Thermo Jarrell Ash Power Unit	2244	May 1994	July 2001	Metals Lab	Used
Circulator	ICP-3	Thermo Jarrell Ash (Water Circulator)	20205	May 1999	July 2001	Metals Lab	Used
Computer	ICP-3	Dell		June 2002	June 2002	Metals Lab	New
ICP MS	ICPMS 1	Thermo Elemental	X0315	Dec 2003	Feb 2004	Metals Lab	New
Auto Sampler	ICPMS-1	ASX-510 Autosampler	120308ASX	Dec 2003	Feb 2004	Metals Lab	New
Circulator	ICP MS 1	Thermo Neslab (Water Circulator)	103240043	Dec 2003	Feb 2004	Metals Lab	New
Computer	ICP MS 1	Dell XP	1 DCV V0J	Dec 2003	Feb 2004	Metals Lab	New
Mercury Analyzer	CV-1	Leeman Labs PS 200II Automated Mercury Analyzer	62345	Jan 2002	Jan 2002	Metals Lab	New
Computer	CV-1	Dell		June 2002	June 2002	Metals Lab	New
Mercury Analyzer	CV-2	Leeman Labs Hydra AA Automated Mercury Analyzer	62598	June 2002	June 2002	Metals Lab	New
Computer	CV-2	Dell	CJ85K11	June 2002	June 2002	Metals Lab	New
Hot Plate	MHP-1	Valad Electric Co. 24 X 36	1920	Jan 2002	Jan 2002	Metals Digestion Lab	New
Oven	MOven-1	Lab-Line Model 3512	0700-0078	May 1999	July 2001	Metals Digestion Lab	Used
Water Bath	MWB-1	National Model 230	1SW-7	2003	2003	Metals Digestion Lab	New
Scale	M SC-1	Adventurer Pro	8027100143	June 2006	June 2006	Metals Digestion Lab	New
Scale	M SC-2	Mettler PJ 400	G62435	May 1999	July 2001	Metals Digestion Lab	Used
Scale	M SC-3	Mettler PE360	47890	May 1999	July 2001	Metals Digestion Lab	Used
Block Digestor	MBD-1	Environmental Express Hot Block	615CEC0814	Jan 2002	Jan 2002	Metals Digestion Lab	New

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
<u>Metals Lab</u>							
Microwave Digestor	MD-1	Mars	MD8656	June 2006	June 2006	Metals Digestion Lab	New
<u>General Chemistry Lab</u>							
Ion Chromatograph	IC-1	Metrohm 761 Compact Ion Chromatograph	17610020/09119	June 2002	June 2002	General Chemistry Lab	New
Sample Processor	IC-1	Metrohm 766	62041430	June 2002	June 2002	General Chemistry Lab	New
Computer	IC-1	Micron	13186350008	June 2002	June 2002	General Chemistry Lab	New
Incubator	Incubator-3	Forma-Scientific Model 3918 Incubator	60147-89	May 1999	July 2001	General Chemistry Lab	Used
Scale	WC SC-1	Mettler PJ 400	J39330	May 1999	July 2001	General Chemistry Lab	Used
Scale	WC SC-2	Mettler AE200	J39333	May 1999	July 2001	General Chemistry Lab	Used
Hot Plate	WC HP-1	Hach Hot Plate 16500-10	4069	May 1999	July 2001	General Chemistry Lab	Used
Hot Plate	WC HP-2	COD Reactor	880711134	May 1999	July 2001	General Chemistry Lab	Used
Stirrer	WC S-1	PMC	-----	June 2006	June 2006	General Chemistry Lab	New
Stirrer	WC S-2	Fisher Thermix Model 220T	101	May 1999	July 2001	General Chemistry Lab	Used
Stirrer	WC S-3	Corning	-----	June 2000	June 2000	General Chemistry Lab	New
Tumbler	T-1	Env. Express	-----	June 1997	July 2001	General Chemistry Lab	New
Tumbler	T-2	Env. Express	-----	June 1997	July 2001	General Chemistry Lab	New
Zero Headspace Extractor	ZHE-1	ZHE	3745-ZHE	June 1997	July 2001	General Chemistry Lab	New
Zero Headspace Extractor	ZHE-2	ZHE	3740-12-BRE	May 1999	July 2001	General Chemistry Lab	Used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
General Chemistry Lab							
pH Meter	WC pH meter-1	ThermoOrion 350	-----	July 2004	July 2004	General Chemistry Lab	New
TOX 10 Sigma	TOX	Cosa Instrument Corp. 10 sigma	-----	May 1999	July 2001	General Chemistry Lab	Used
TOX 10 Sigma Boat Controller	TOX	Cosa Instrument Corp. 10 sigma	-----	May 1999	July 2001	General Chemistry Lab	Used
Konelab	Konelab	Konelab	P4719011	Dec 2002	Jan 2003	General Chemistry Lab	new
Computer	Konelab	Dell	2000-256036	Dec 2002	Jan 2003	General Chemistry Lab	new
Refrigerator	WC-Ref-1	Gibson Model RM18F5WX	-----	May 1999	July 2001	General Chemistry Lab	used
Refrigerator	WC-Ref-2	Frigidaire	-----	May 1999	July 2001	General Chemistry Lab	used
Oven	WC-Oven 1	VWR 1305U	-----	Dec 1997	July 2001	General Chemistry Lab	Used
Oven	WC- Oven 2	Fisher Model 516G	803N0088	May 1999	July 2001	General Chemistry Lab	used
Oven	WC- Oven 3	VWR 1305U	-----	May 1999	July 2001	General Chemistry Lab	Used
COD	COD-1	Hach DR/2010 Spectrophotometer	971100006417	May 1999	July 2001	General Chemistry Lab	used
GBC	GBC	Monitek-TA1/Nephelometer	T04136701H7E	May 1999	July 2001	General Chemistry Lab	used
Conductance Meter	Conductance Meter	YSI Model 35 Conductance Meter	K8002530	May 1999	July 2001	General Chemistry Lab	used
Muffle Furnace	Muffle Furnace	Blue M Model M15A-2A	7419	May 1999	July 2001	General Chemistry Lab	used
TKN Heater	TKN Heater	Labconco TKN Heater (6 position)	183300	May 1999	July 2001	General Chemistry Lab	used
Midi Cyanide	MC-1	Andrews Glass (Cyanide Distillation)	ABX0409	May 1999	July 2001	General Chemistry Lab	used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
General Chemistry Lab							
Midi Cyanide	MC-2	Andrews Glass (Cyanide Distillation)	-----	2002	2002	General Chemistry Lab	New
TOC Analyzer	TOC	Tekmar Appolo 9000	US03227003	Aug 2003	Aug 2003	General Chemistry Lab	new
TOC Boat Sampler	TOC	Boat Sampler 183	-----	Aug 2003	Aug 2003	General Chemistry Lab	new
Auto-Titrator	Titrator	Titroline Alpha	441912	March 2004	March 2004	General Chemistry Lab	new
Auto-Titrator Sampler	Titrator	TW Alpha 16 Sample Changer	00472248	March 2004	March 2004	General Chemistry Lab	new
Digester	Digester	Westco Easy Digest 40/20	1102	March 2003	March 2003	General Chemistry Lab	new
Ignitability instrument	IGN-1	Kochlex closed cup (Penske substitute)	R61091858	March 2004	April 2004	General Chemistry Lab	new
Dissolved Oxygen meter	DO Meter	YSI 5000 Dissolved Oxygen Meter	98C0951AB	May 1999	July 2001	General Chemistry Lab	Used
Microbiology Lab							
Autoclave	Autoclave-1	Tuttnauer Autoclave Model 2540M	9603296	May 1999	July 2001	Microbiology Lab	used
Refrigerator	Micro-Ref-4	Goldstar (GR-142BP)	20019795	May 1999	July 2001	Microbiology Lab	used
Colony Counter	Colony Counter	Darkfield Quebec Colony Counter	3325	May 1999	July 2001	Microbiology Lab	used
Incubator Bath	Incubator-1	Precision Coliform Incubator Bath	10AY-11	May 1999	July 2001	Microbiology Lab	used
Incubator	Incubator-2	VWR 1540 Incubator	0102290	May 1999	July 2001	Microbiology Lab	used
Incubator	Incubator-3	Shel-Lab 1545 Incubator	1100691	May 1999	July 2001	Microbiology Lab	used
Sample Management							
Refrigerator	SM Ref-1	Kelvinator (Ice Packs)	-----	May 1999	July 2001	Sample Management	used
Refrigerator	SM Ref-2	White Westinghouse (Ice Packs)	-----	May 1999	July 2001	Sample Management	used
Walk in Refrigerator	SM-Walk-in-1	Bally (10' X 38')	-----	May 1999	July 2001	Sample Management	used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
Sample Management							
Scale	SMB-3	Sartorius Model L320	36050083	May 1999	July 2001	Sample Management	used
Temperature Gun	Temperature Gun	Mannix Model # IRT4	-----	2005	2005	Sample Management	New
Extractions Lab							
Sonicator	SONC-1	TEKMAR Sonicator	-----	May 1999	July 2001	Extraction s Lab	used
Sonicator	SONC-2	TEKMAR Sonicator	-----	May 1999	July 2001	Extraction s Lab	used
Sonicator	SONC-3	Heat Systems-Ultrasonics Inc (W-380)	-----	May 1999	July 2001	Extraction s Lab	used
N-EVAP	N-EVAP	Organomation Nitrogen Evaporation System	-----	May 1999	July 2001	Extraction s Lab	used
Water Bath	EX-WB-1	Boekel	-----	May 1999	July 2001	Extraction s Lab	used
Water Bath	EX-WB-2	Boekel	-----	May 1999	July 2001	Extraction s Lab	used
Water Bath	EX-WB-3	Boekel	-----	May 1999	July 2001	Extraction s Lab	used
Water Bath	EX-WB-4	Boekel	-----	May 1999	July 2001	Extraction s Lab	used
GPC	GPC-1	Accuprep JZ Scientific	03B-1060-3.0	2003	March 2003	Extraction s Lab	used
S-Evaporator	Evaporator-1	Organomation Analytical Evaporator	10688	May 1999	July 2001	Extraction s lab	used
IR	IR-1	Perkin Elmer 1310 Infrared Spectrophotometer	135039	May 1999	July 2001	Extraction s lab	used
Oven	EX Oven-1	VWR 13054	01002393	May 1999	July 2001	Extraction s Lab	used
Oven	EX Oven-2	Fisher 117G	-----	May 1999	July 2001	General Chemistry Lab	Used
Heater	Heater-1	Lab line Extraction Heater 6 position	-----	May 1999	July 2001	Extraction s Lab	used
Heater	Heater-2	Lab line Extraction Heater 6 position	-----	May 1999	July 2001	Extraction s Lab	used
ASE	ASE-1	Dionex Accelerated Extraction	03010456	March 2003	October 2003	Extraction s Lab	new
ASE	ASE-2	Dionex Accelerated Extraction	03060034	March 2003	October 2003	Extraction s Lab	new
ASE	ASE-3	Dionex Accelerated Extraction	03060032	March 2003	October 2003	Extraction s Lab	new
Ultrasonic Bath	Sonicator Bath	Bransonic Ultrasonic Cleaner 8510	RPA020497187 E	March 2004	March 2004	Extraction s Lab	new
Turbovap II	Turbovap	Zymark	TV9751N7885	1997	July 2001	Extraction s Lab	New
Refrigerator	EX Ref-1	Gibson	LA23601205	May 1999	July 2001	Extraction s Lab	used

Instrument	Lab ID	Manufacturer Description	Serial Number	Year Purchased	Date placed in service at this location	Current Location	Condition Received (used, new, recondition)
Extractions Lab							
Refrigerator	EX Ref-2	Welbilt	-----	May 1999	July 2001	General Chemistry Lab	Used
Hot Plate	EX HP-1	Corning PC-35	-----	May 1999	July 2001	General Chemistry Lab	Used
pH Meter	EX pH meter-1	Hanna Instruments pH 211	283704	2004	2004	Extraction s Lab	New
Touch Vortexer	Vortex	Glas-Col	263248	May 1999	July 2001	General Chemistry Lab	Used
Centrifuge	Centrifuge	Damon/IEC Division	AE0921	1984	July 2001	Extraction s Lab	New
Scale	EX-SC-1	Mettler PM 4600	975690	May 1999	July 2001	Extraction s Lab	used
Scale	EX SC-2	Ohaus GA110	1348	2000	July 2001	Extraction s Lab	Used
Scale	EX SC-3	Sartorius A 200S	36100008	2000	July 2001	Extraction s Lab	Used
Auto Soxhlet	Auto Soxhlet-1	Soxtherm/Multistat	4031743	Feb 2004	March 2004	Extraction s Lab	New
Soxtherm	SOX-1	Soxtherm	4032298	Feb 2004	March 2004	Extraction s Lab	New
Soxtherm	SOX-2	Soxtherm	4040032	Feb 2004	March 2004	Extraction s Lab	New
Soxtherm	SOX-3	Soxtherm	4031744	Feb 2004	March 2004	Extraction s Lab	New
Soxtherm	SOX-4	Soxtherm	4031743	Feb 2004	March 2004	Extraction s Lab	New
SPE DEX Extractor	SPE-1	Horizon 4790 series	04-0509	2004	2004	Extraction s Lab	New
SPE DEX Extractor	SPE-2	Horizon 4790 series	04-0510	2004	2004	Extraction s Lab	New
SPE DEX Extractor	SPE-3	Horizon 4790 series	04-0507	2004	2004	Extraction s Lab	New
SPE DEX Extractor	SPE-4	Horizon 4790 series	04-0508	2004	2004	Extraction s Lab	New
SPE DEX Controller	SPE Controller	Horizon	04-0433	2004	2004	Extraction s Lab	New
ROT-X-TRACT-LC	LL-Extractor	Organomation Liquid-Liquid extractor	-----	Nov 2005	Nov 2005	Extraction s Lab	New

14. DOCUMENT CONTROL

Objective: To establish a system in order to have all information related to the production of analytical data controlled, protected, and stored to ensure its integrity and traceability. The system must ensure that only most recent version of required documentation is used by the appropriate personnel in the laboratory. All internal regulatory documents including the QA manual, SOP's, software, and equipment user's manuals are subject to document control.

Quality Assurance Manual: The QA Manual outlines how Chemtech plans, implements, and assesses the effectiveness of QA/QC control actions in the functioning of its analytical services.

Standard Operating Procedures (SOP's): An SOP is a written document, which details the method of an operation, analysis or action whose techniques and procedures are thoroughly prescribed, and which is accepted as the method for performing certain routine or repetitive task. SOP's are an integral part of consistent quality laboratory work.

14.1 DOCUMENT OVERSIGHT: The QA/QC Director is responsible for the document control system and maintains a current list of controlled documents, their location, and revision number. The QA/QC Director and Technical Director approve all newly released operating procedures and any revision to controlled documents.

14.2 DISTRIBUTION OF CONTROLLED DOCUMENTS: Controlled documents are signed by QA/QC Director and Technical Director. Copies of documents not signed or assigned a control number are considered uncontrolled documents. All departments supervisor receive a copy of the updated document control of the QA Manual, SOP's, and any other related documents. With the document, the supervisor receives a distribution document log that is signed and returned to the QA Office to be filed in a binder. This distribution log has the name of the document the printed name of the person receiving it, the signature and date of distribution.

A copy of current applicable SOP (analytical, administrative, and or procedural) and QA Manual is kept in each department. The original document of each outdated SOP or QA manual is retained in the QA/QC office.

14.3 DOCUMENTS REVISIONS: All laboratory documents under document control are reviewed annually and revised as appropriate. A request to change a document is detailed on a "Document Change/Revision Form."

For further details refer to the SOP for writing SOP's. The Technical Director and QA/QC Director review the requested change. The QA/QC Director is responsible for updating the appropriate document and Document Control List once a change has been approved.

14.4 STANDARD OPERATING PROCEDURES (SOP's): Three (3) types of SOP's are used at Chemtech.

14.4.1 **Analytical SOP:** Provides stepwise instructions to an analyst on how to perform a particular analysis.

14.4.2 **Administrative SOP:** Details the process of documentation of all administrative activities.

14.4.3 **Procedural SOP:** Provides instructions and information for support activities in the laboratory.

Each SOP developed is assigned a unique document control number. SOP's are reviewed annually and updated if necessary. SOP's can be edited more frequently if systematic errors dictate a need for process change or the originating regulatory agency promulgates a new revision of the method.

SOP's are maintained in electronic read only format on Chemtech LIMS network server. All original hard copies are kept in the QA/QC office in official SOP file.

14.5 LOGBOOK CONTROL: Laboratory logbooks maintained at Chemtech are preprinted, numbered and include a title which identifies the purpose of the logbook. Each logbook indicates the instrument name, manufacturer, model number and a Chemtech identification number. The logbooks also include calibration and maintenance schedules. Extraction department activities are recorded in preparation logbooks. All quality control activities are recorded in the logbooks.

Active logbooks are maintained in the laboratory and retired logbooks are maintained in the QA/QC office. Laboratory staff may keep two recent sequentially dated logbooks of the same type in order to simplify review of recently conducted analysis.

14.6 ANALYTICAL DOCUMENT MAINTENANCE AND STORAGE: Analytical data logbooks and clients reports are retained for five years unless specified otherwise. After five years, the analytical data and reports are systematically destroyed.

Projects completed in the current year are maintained in the Report Production area. All other analytical data, reports, and logbooks are kept

in the Document Storage Area. The electronically scanned data are archived on LIMS Server. Levels of authorization limit access to Document Storage Area and the LIMS Server.

In the event of an ownership change all appropriate regulatory agencies will be notified. As a condition of the ownership change the buyer will be requested to maintain all records and reports prior to the time of legal transfer.

In the event of a bankruptcy all appropriate regulatory agencies and clients will be notified. They will be given the opportunity to retrieve their records and reports within 30 days of notification. The records and reports will be destroyed after the 30 days notification period has expired.

- 14.7 PERSONNEL RECORDS:** The QA/QC office maintains personnel folders for all analytical staff members. These folders document that analysts have received *instructions for their job related activities including read receipts* for SOP's and the QA Manual. Personnel records also include health and safety training received and a signed ethics agreement, in addition to technical training records, demonstration of capability, and precision and accuracy for the tests.

15. TRACEABILITY OF MEASUREMENTS

Objective: To establish procedures for achieving traceability of measurements between a measured value and a national reference standard.

- 15.1 METRIC MEASUREMENTS – THERMOMETER AND BALANCE CALIBRATION:** Verification and/or validation of balances and thermometers are performed with National Institute of Standards and Technology (NIST) traceable standards. All new thermometers used in the laboratory are calibrated prior to their use and all thermometers are calibrated annually. A tag attached to the calibrated thermometer documents the date it was calibrated and any correction factor if necessary. The calibration readings are recorded in a logbook. Test equipment used in the laboratory requiring temperature control is assigned a separate calibrated thermometer. The temperature is recorded daily in a temperature log for all required equipment. For further details refer to the "Thermometer Calibration SOP."

Class S Calibration weights are used to calibrate all the balances used in the laboratory. Calibration checks are performed on a daily basis and recorded in a logbook. An annual balance calibration is conducted by a certified agency or organization. Calibration certificates include the location of the equipment, model, serial number, manufacturer and sensitivity information. This information is maintained in the QA/QC office.

- 15.2 CHEMICAL STANDARDS:** All reference and working standards used for calibration must be NIST traceable and have a traceability certificate. Vendors provide a traceability certificate for all chemical standards, which include a lot number and expiration date. Working standards are prepared from the vendor traceable standards and are documented in the "Standard Preparation Logbook" and include the vendor lot number, dates of preparation, and preparer's initials and date. The certificates of traceability are affixed to the logbook to keep a permanent record. The vials, in which working standards are kept, are labeled with the lot number, preparation date, and expiration date. All reagents that do not have an expiration date from the manufacturer will be labeled as expiring 10 years from the date the reagent container was opened. All expired standards must be stored separately from the working standards.

16. CALIBRATION AND VERIFICATION OF TEST PROCEDURES

Objective: To ensure that instrumentation is performing to predetermined operational standard prior to the analysis of any samples and that the data are of known quality and appropriate for a given regulatory agency requirements must be established by the laboratory.

16.1 ORGANIC TEST PROCEDURES

Tuning Criteria for GC/MS Instruments: Each GC/MS system must pass the performance criteria for 4-Bromofluorobenzene (BFB) or Decafluorotriphenylphosphine (DFTPP) before any samples, standards or blanks can be analyzed. The tuning standard must meet the criteria specified in each analytical SOP. The chromatogram should not contain any baseline drift and the peaks should be symmetrical. Each GC/MS system must be tuned every 12 hours for SW846 methods, OLM04.2 and 24 hours for 600 series methods.

Initial Calibration: Second source standards are obtained from a different manufacturer than the original standards, unless one is not available and are used to verify the initial calibration. An initial calibration is run on all instruments. Initial calibration is rerun when continuing calibration criteria cannot be met. The criterion for an initial calibration curve consists of a minimum of five points for SW846 Methods and OLM04.2 and a minimum of three points for 600 series methods. The lowest standard analyzed must be equal to or less than the reporting limit. The response factor (RF) must be calculated for all compounds. The Relative Standard Deviation (RSD) is used to determine linearity. See individual SOPs for limits, criteria and allowances. The system performance check compounds (SPCC) are checked for a minimum average response factor. These compounds must meet the minimum response factors specified in each analytical SOP. If the minimum average response factor for any SPCC does not meet the criteria then corrective action is required and the GC/MS system recalibrated. The initial calibration verification must be successfully completed prior to running any samples.

Continuing Calibration Verification (CCV): The initial calibration curve for each compound of interest is checked and verified once every 12 hours for SW846 methods and OLM04.2, and once every 24 hours for 600 series methods. This is accomplished by analyzing a midpoint calibration standard and verifying all continuing calibration criteria for a given method are met. Sample, blank, and QC standards cannot be

analyzed unless a CCV meets method criteria. For further details refer to the individual SOP's.

Formulas:

$$RF = \frac{\text{Area of compound x Concentration of ISTD}}{\text{Area of ISTD x Concentration of compound}}$$

$$\% RSD = \frac{SD}{RF} \times 100$$

where **SD** is the standard deviation for all compounds and **RF** is the average response factor

When the %RSD exceeds criteria for any analyte, a linear regression of the instrument response versus the concentration of the standards is performed. The regression will produce the slope and intercept terms for a linear equation in the form

$$y = ax + b,$$

where:

y = instrument response (peak area or height)

a = slope of the line(also called the coefficient of x)

x = concentration of the calibration standard

b = intercept

- The use of linear regression may not be used as a rationale for reporting results below the calibration range demonstrated by the analysis of the standards.
- The regression calculation will generate a correlation coefficient(r).

In order to be used for quantitative purposes, the correlation coefficient must be greater or equal to 0.99

16.2 INORGANIC TEST PROCEDURES

Balance Calibration: All balances are calibrated each day with 3 class "S" weights covering the expected range of analysis and recorded in the balance calibration logbook. An outside contractor certifies each balance for accuracy once a year. A calibration sticker is placed on the balance and all associated information is maintained in the QA/QC department.

Titrant Standardization: All titrants used in the laboratory are standardized when opened to verify the titrant's normality in duplicate. These values are recorded in the appropriate analytical logbook. Each titrant must be within 90-110% of the known value. If not, the titrant is restandardized.

Instrument Calibration: An initial calibration is run on all instruments.

Mercury analyzer must be calibrated using a blank and 5 standards in graduated amounts that define the linear range of analysis. The correlation coefficient for the curve must be > 0.995 .

Spectrophotometric analyses are calibrated by using a blank and minimum 5 standards. The correlation coefficient must be > 0.995 , or as defined in the analytical SOP

If any calibration curve has a correlation coefficient < 0.995 , corrective action is taken and a new calibration curve is analyzed. Samples, blanks, and standards are not analyzed until the curve passes the criteria. For all calibrations the lowest standard analyzed must be equal to or less than the reporting limit.

Formula:

$$y = ax \pm b,$$

where:

y = instrument response (peak area or height)

a = slope of the line(also called the coefficient of x)

x = concentration of the calibration standard

b = intercept

Initial Calibration Verification (ICV): Second source standards are obtained from a different manufacturer than the original standards, whenever possible, or a different lot number from the same manufacturer is obtained, unless one is not available, and are used to verify the initial calibration. The ICV must be performed immediately after calibration of each metal and spectrophotometric analysis. This is accomplished by analyzing a midpoint calibration standard. The ICV must have a percent recovery between 90-110% from the initial calibration curve for inorganic analyses and between 70-130% from the initial calibration curve for organic analyses. If the criterion is not met, corrective action must be taken. If the source of the problem can be determined after corrective

action has been taken, a new calibration MUST be generated. Samples, blank, and QC standards cannot be analyzed unless the ICV meets method criteria. The initial calibration shall be verified and documented for every analyte at each wavelength used for analysis.

Continuing Calibration Verification (CCV): CCV analysis is performed every 10 samples for all FLAA and spectrophotometric analyses. The CCV must be analyzed at the beginning of the run and after the last analytical sample. The CCV concentration is at or near the midpoint of the calibration curve and is analyzed at every wavelength used for the analysis of each analyte. The CCV results must fall within the control limits of 85-115% of the true value or the control limits specified in each analytical SOP.

Thermometer Calibration: Every thermometer used in the laboratory is certified annually against a NIST certified thermometer, which is traceable to the manufacturer. All data is recorded in a logbook.

pH meter Calibration: Each pH meter is calibrated daily at pH of 4 and 7 and then checked with a pH 10 buffer solution. The calibration is recorded in the pH logbook along with the date and time of calibration. The calibration is checked every 3 hours during use and any adjustments are made.

Spectrophotometer Wavelength Check: A wavelength check of each spectrophotometer is performed annually against Platinum/Cobalt standards and recorded in the maintenance logbook. If the wavelength does not meet the manufacturer's specified conditions, service is performed on the instruments.

Autoclave test strip: A temperature sensitive tape is used to verify the content of each autoclave run is processed.

Linear range Verification & Calibration for ICP - Metals: Linear range verification is performed for all ICP instruments. A series of calibration standards are analyzed over a broad range of concentration and data from these analyses are used to determine the valid analytical range for the instrument. ICP instrument calibration is routinely performed using a single standard at a concentration within the linear range and a blank.

17. CALIBRATION, VERIFICATION, AND MAINTENANCE OF EQUIPMENT

Objective: To establish a system to ensure accurate calibration and maintenance of all laboratory equipment. All instrument maintenance activities must be recorded in the instrument logbooks. Instrument should be labeled as a dedicated piece of equipment when an instrument is used for a unique activity.

17.1 INSTRUMENT CALIBRATION: Instruments are calibrated according to the requirements set forth by the manufacturer or as dictated by the respective SOP's for the test method for which the instruments are used. The frequency and type of maintenance and calibration activity performed must be documented in the instrument logbook. If an instrument is out of working order, out of calibration or in need of repair, a tag is affixed to the instrument directing the analysts to use another instrument.

Support instruments are calibrated and verified using NIST traceable reference standards over the range of use. Balances, ovens, incubators, water baths, freezers, and refrigerators are checked daily if in use and readings are recorded in their respective logbooks.

17.2 INSTRUMENT MAINTENANCE: Some instruments are purchased with a service contract. If a service contract is purchased, it is recorded in the logbook along with a contact phone number. Calibration is necessary after instrument repair and prior to using any new instrument. Instrument servicing includes routine cleaning and the repair and/or replacement of any faulty parts. For further information refer to the instrument manual or the SOP for the test method the equipment is used.

17.3 CALIBRATION/MAINTENANCE LOG: Each instrument has an associated maintenance and calibration logbook. The interval maintenance/calibrations are guided by the manufacturer's instructions or as often as needed based on individual instrument performance. It may be modified by user's experience and frequency of use. The instrument is identified on the first page of the logbook. The logbook must document the calibration and maintenance of the instrument.

18. VERIFICATION PRACTICES

Objective: To establish a process for the verification practices in effect to assure adherence to the Quality Assurance Plan. A system for proficiency testing, use of reference materials, and internal QC schemes must be in place in order to ensure compliance.

18.1 PROFICIENCY TESTING (PT) PROGRAMS:

External PT Samples: Chemtech participates in NYSDOH Potable, Non Potable and Solid/Hazardous Categories and USEPA CLP. The results are used to evaluate the ability of the laboratory to produce accurate data. PT reports and raw data are retained in the laboratory. The laboratory participates in the PT from other providers as well, e.g., client specific PT samples and Environmental Resources Association (ERA).

Internal PT Samples: The QA/QC Director is responsible for administering an in-house blind check sample program, at QA/QC Director's discretion. Quality control samples are obtained from the EPA and from a private supplier. The known samples are blindly introduced into the system as a typical sample and analyzed as such. The results are reported to the QA/QC Director and evaluated.

This process allows for close monitoring of the accuracy of laboratory analyses on blind samples. If a problem is discovered, the QA/QC Director brings it to the attention of the Company President and Laboratory and Department Manager. With the assistance of the Technical Director, the cause of the problem is determined and appropriate corrective action is taken. Another blind sample is sent through the laboratory to confirm the problem has been resolved.

18.2 USE OF REFERENCE MATERIAL: The laboratory purchases external reference samples from known vendors. All reference samples are certified and the laboratory maintains the manufacturer's Certificate of Analysis on file.

18.3 INTERNAL QUALITY CONTROL PROCEDURES: The data acquired from QC procedures are used to judge the analytical quality of the data, to determine the need for a corrective action, and to interpret results after the implementation of corrective actions. Each test method SOP details the QC procedures to be followed.

Method Blank: A method blank is an aliquot of reagent water for aqueous samples and an aliquot of a solid matrix, whenever possible, carried

through the entire sample preparation and analytical procedure. A method blank must not contain any target analyte(s) at concentrations that exceed method requirements. If it does, the source of contamination must be removed or minimized before proceeding with sample analysis.

Laboratory Control Samples (LCS): A LCS is an aliquot of reagent water for aqueous samples and aliquot of a solid matrix, whenever possible, spiked with the target analyte list analyzed with each batch of samples to demonstrate the method accuracy within acceptance QC limits. The results are used to determine batch acceptance. Each method SOP includes detailed QC procedures and QC limits.

Sample Duplicates: Sample duplicates are performed to measure analytical precision. One duplicate sample must be analyzed from each group of samples of similar matrix type for each batch of 20 samples. If a duplicate result falls outside QC limits the original sample and the duplicate sample data are regarded as unreliable and may necessitate corrective action.

Matrix Spikes: Matrix spikes are analyzed at a frequency of one per twenty samples to measure analytical precision and accuracy of the specified matrix. If precision and accuracy are out of QC limits, corrective action is required.

Surrogate Spikes: Surrogates are organic compounds that are similar in behavior to the target analytes but are not found in nature. They are added to all blanks, samples, and standards except the tuning standards at a concentration specified in relevant SOP's. All surrogates must meet the recovery limits specified in each SOP. If any surrogate does not meet the limits, the sample must be reanalyzed.

Internal Standard: An internal standard (IS) is a known amount of standard added to a test portion of a sample as a reference for evaluating and controlling the precision and bias of the applied analytical method. Retention time (RT) for an IS is also compared to reference standards to assure that target analytes can be located by their individual relative RT. If the criteria for IS response or RT criteria are not achieved corrective action is required, e.g., recalibration and reanalysis.

Sample Analysis: The analyst is responsible for performing all QC requirements before and after analyzing the sample to make sure that required QC criteria are met. If the sample QC criteria are not met, the analyst must take corrective action to rectify any problems. If the analyst

is not able to remediate the issue, then must notify the supervisor who will take necessary corrective action.

Data Package Review: Data review is performed at four different levels to assure that all QC criteria are met. The analyst conducting the analysis performs first data review. Another analyst conducts a peer review and then the data is submitted for supervisory review. The final review of the data is conducted in the QC department before the data are released to the client. The QA/QC Director conducts a spot check review of the completed data packages. For further details refer to "Procedures for Audits and Data Review" section of this QA Manual and "Data Review/Validation" SOP.

Monitoring Quality Control Limits: Quality Control data generated from duplicate analysis and matrix spikes/matrix spike duplicates are monitored and plotted on Quality Control Charts. Chemtech utilizes the Quality Control charts to identify data trends and assure that all tests are within control.

Chemtech records the theoretical or true value, then calculates and plots the mean value. In general, our warning limits are ± 2 Standard Deviations from the true value. Corrective action is taken when ± 3 Standard Deviations from the mean value are encountered. The Percent Recovery for all quality control samples must be within the limits stated in the method.

In addition to control chart limits, the laboratory uses limits of 75-125% and RPD limits of $\pm 20\%$ for inorganic analysis. For organic analysis %R limits and RPD limits as stated in applicable methods are used.

In control charts application, any points beyond the control limits indicate an out of control situation. When an out-of-control situation occurs, analyses must be stopped immediately until the problem has been identified and resolved. The control charts are also utilized to identify trends, which can be checked and resolved before the system goes out-of-control.

Annual Quality Audits: An annual quality review of the system is important to ensure that laboratory management can continue to be confident that all measures are being taken to produce the highest quality of data and services. Annual audits, along with day-to-day data review, provide effective means for ensuring that QC activities are being implemented and that each analyst performs in a manner consistent with the quality system. The QA/QC Director conducts the audits, which are

scheduled and announced in advance. For further details refer to the
"Data Review and Internal Quality Audits" section of this manual.

19. LABORATORY MANAGEMENT POLICY FOR PERMITTED DEPARTURES FROM DOCUMENTED POLICIES AND PROCEDURES

Objective: To establish a process for an event which requires departure from the documented policies and procedures.

19.1 PROCEDURE: The Technical Director, Laboratory Manager, and QA/QC Director have the responsibility for ensuring that all personnel adhere to the laboratory's policies. A departure from documented policies is allowed if fully documented and approved by the appropriate level of authority. Documentation of the departure includes the reason for the departure, the effected SOP(s), intended results of the departure and the actual results.

If the departure affects data, the client is notified before conducting the analysis for approval. This departure is also noted in the case narrative of *the final report*.

If the Client requests a method modification that represents a significant departure from a reference method, the client must acknowledge in writing the authorization of the modification. The acknowledgment can be in the form of a contract modification or signing the quotation acceptance page.

The quotation details the analytical requirements including the test methods for the project, the acceptance page to be signed by the client, states that "the quotation accurately describes the analytical requirements".

20. CORRECTIVE ACTIONS FOR TESTING DISCREPANCIES

Objective: To establish a system for actions taken in response to non-conformance reports issued during performance, data review, or a client complaint. The goal of the corrective action program is to correct and monitor out-of-control events, which effect the integrity of analytical results. All conditions that adversely impact data quality must be identified and corrected.

20.1 OUT-OF-CONTROL EVENTS: Out-of-control situations are identified through analytical data validation procedures. An out-of-control event is a situation, which results in the development of unacceptable results. Once a problem has been identified, the QA/QC Director must contact the department supervisor using the Corrective Action (CA) report form. The supervisor must initiate investigation into cause, and must ensure that corrective action is implemented and is effective. The CA must be documented on the (CA) report form and filed in QA/QC office. Refer to Corrective Action SOP for details of the corrective action report forms.

There are many situations that present an out-of-control situation. Contamination, percent recoveries and duplicate variations that are not within control limits, and failing calibrations are examples of situations considered out-of-control. Whenever a situation of this nature is encountered, Chemtech diligently develops the appropriate corrective action.

20.2 CORRECTIVE ACTION PROCESS: A corrective action is a response to an out-of-control event, which brings back a system to produce acceptable results. Corrective actions taken to control an event can be: stop analytical work immediately; identify the symptom of the out-of-control event; identify the cause of the out-of-control event; implement a corrective action; confirm that a return to control has been achieved by analyzing reference samples; document entire process by completing a CA Report Form; complete and return the CA Report Form to the QA/QC office.

20.3 DEPARTURES FROM DOCUMENTED POLICIES AND PROCEDURES: Method SOP's provide QC acceptance criteria and specific protocols for corrective actions. When testing discrepancies are detected such as out-of-control QC, the analyst must follow the corrective action protocol as described in the applicable method SOP.

Technical Director and QA/QC Director first approve any corrective action taken that is not mentioned in the SOP. This action is recorded in the CA Report Form and is documented in the electronic database of

corrective actions. If necessary, the method SOP is then revised to incorporate the corrective action to make it a part of SOP for future uses.

- 20.4 CORRECTIVE ACTION MONITORING:** Laboratory Manager, Department Managers and QA/QC Director routinely monitor corrective actions implemented in the laboratory for effectiveness and to ensure that the deficiency has been completely removed from the system. If the deficiency still exists after a given period of time, the corrective action is reevaluated and modified.

21. REPORTING ANALYTICAL RESULTS

Objective: To ensure that the reported results are accurate, clear, objective, and unambiguous. The contents of the final report must include all necessary information and must be clear and understandable for the end-user.

21.1 REQUIRED DOCUMENTATION: All documentation used to approve and defend reported data must be collected and should be available and referenced so it can be found at any time it may be needed. Chemtech reports meet all applicable regulatory and client requirements. Electronic reports can be customized to meet the client specific requirements.

Documentation for Sample Identification: Includes at minimum sample identification, chain-of-custody, Field QC, if any and any other related documents.

Documentation of the Analytical Performance: Analytical method used and method detection limit (MDL, if required); Instrumentation (manufacturer, model, performance checks); Calibration data (initial and continuing); Detailed analytical work (raw data, run logs, standard and reagent preparation, calculations)

QA/QC Documentation and Data: Analysis of blanks; Source of QC check standards; Preparation of spike stock solution.

Checks and Validation of Analytical Data: QC review Checklists; Corrective actions (when applicable); Date and signature of approval of the reportable data of each parameter tested; Date and signature for approval of the final report.

21.2 SIGNIFICANT FIGURES IN ANALYTICAL REPORTS: Numerical data are often obtained with more digits than are justified by their accuracy and precision, therefore must be reported by the accuracy of the analytical method.

The number of significant figures refers to the number of digits reported for the value of a measured or calculated quantity indicating the accuracy and precision of the value. Nonzero integers always count as significant figures. Leading zeros are zeros that precede all the zero digits and do not count as significant figures. The zeros simply indicate the position of the decimal point.

Captive zeros are zeros between nonzero digits, and always count as significant figures. Trailing zeros are zeros at the right end of the number and are significant only if the number contains a decimal point. At Chemtech the results are reported to two significant figures.

When rounding a number carry at least one digit beyond the last significant digit throughout all calculations. Round the final result by changing all digits beyond the last significant digit to zeros; drop these zeros if they are to the right of the decimal point.

- 21.3 UNITS USED TO EXPRESS ANALYTICAL RESULTS:** Units used to express analytical results depend on the analytical method used, the concentration of the analytes, and the matrices of the sample analyzed.

The most common unit used to express results is milligrams per liter (mg/L), which is equal to parts per million (ppm) or milligrams per kilogram (mg/Kg). Other units used are microgram per liter ($\mu\text{g/L}$), which is equal to parts per billion (ppb) or micrograms per kilogram ($\mu\text{g/Kg}$).

- 21.4 REPORT CONTENTS:** The final report includes the following information:

Client Information: name and address of the client

Project Information: Client project name and location (if specified by the client)

Chemtech Reference Information: Chemtech project number

Evidence Receipt: Description and identification of samples, chain-of-custody

Case narrative (if applicable): Description and/or identification of analysis performed with a description of deviations from the SOP if required

Summary and Results: Analytical results supported by raw data, chromatograms, initial calibration and continuous calibration, etc.

Report is sequentially numbered and all raw data and chromatograms are initialed and dated by the analyst. The final report is signed and dated by the QC supervisor.

21.5 DATA COLLECTION , REDUCTION, REPORTING AND VALIDATION PROCEDURE

Data collection:

All data is collected from the instrumentation electronically. This data is then transferred electronically to a data processing computer where the data is revised and verified for method adherence and compliance.

For some analysis the data cannot be transferred electronically. The data is then entered manually to the reporting software and verified by a peer review.

Data reduction:

Analyst then processes the data and saves all instrument data collected in a designated folder in Mars (data storage server). The data is then brought electronically into the data reporting system where the data is reviewed against the method requirements and QC limits.

Data reporting:

Once the data is approved, the forms are printed. The data package is arranged with the necessary forms, depending on the method and client specifications. Once the data package is complete, the package is then brought to the Reporting Department for review and validation.

Data validation:

The first review is done in the lab by the analyst performing the analysis with the help of the reporting software (EISC), which contains all the method requirements.

The supervisor for the department performs a secondary review.

The third and last review is done at the reporting department where data reviewers go through the data package in detail and verify compliance with the method and client requirements.

22. DATA REVIEW AND INTERNAL QUALITY AUDITS

Objective: To design a process to assess compliance of laboratory activities with the operational requirements of the QA manual and to evaluate the performance of all analytical departments. The validation of data must be accomplished by a data review procedure.

22.1 DATA REVIEW: At Chemtech there are several stages for the data review/validation process. The analyst performing the analysis conducts the first data review. A department peer performs a secondary review. The supervisor reviews the data after the peer review. The QC/Report Production performs the final review.

Analyst Review: The analyst is responsible for ensuring that all work performed meets the specifications and criteria outlined in the Statement of Work. They are to double-check all aspects of their analyses, including instrumental conditions, QA/QC limits, calculations, and compound identification. When manual integration's are performed, the raw data records shall include a complete audit trail for those manipulations. Raw data output showing the results of the manual integration's, a notation of the rationale for the manual integration, including the date and initials/signature of the person performing the manual operation must be included in the raw data file.

Peer Review: A qualified peer performs a technical data review, verifying the analysis logbook that the correct method was used, the accurate analytical sequence was employed, all QA/QC criteria were met, compounds were properly identified, and checked for standard, dilutions, and calculations. The supervisor signs the logbook following this review.

Supervisor Review: Supervisor performs a technical data review to ensure that proper analytical sequence was employed, all QA/QC criteria were met, compounds were properly identified and flagged if required, correct standard, dilutions, and calculations were made.

Quality Control/Report Production Review: The completed data is reviewed by the QC/Report Production. Sample information from the sample receiving documentation is compared to in-house laboratory information to ensure consistency. The data are checked for general completeness, compliance, and QA/QC requirements, and random calculations are performed. If a quality control measure is found to be out of control, and the results are to be reported, all samples associated with the failed quality control measure will be reported with the appropriate data qualifier(s).

If a defect is identified in the data package, that can be corrected before the data are released to the client, the data package is returned to the laboratory for corrections along with a CA report form. Immediate action is taken by the affected department to rectify the problem and corrected data package is returned to QC/Report Production office for review and final release of the data.

Spot Check Review by QA/QC Director: The QA/QC Director performs spot-check reviews on data packages before they are released to the client. He/she focuses on all elements of data deliverables including sample identification, sample custody documentation, analytical quality control, and client specifications and requirements.

- 22.2 INTERNAL QUALITY SYSTEM AUDITS:** Annual internal audits are conducted under the direction of the QA/QC Director. These audits are used to detect and correct any specific problems. The audit involves a thorough laboratory inspection to evaluate the following areas: adherence to all laboratory procedures as specified in applicable New Jersey, Pennsylvania, New York and other state regulations; verification of methodology; adherence to all method QC requirements; frequency of duplicates, spikes, blanks, and QC sample analyses; maintenance of documentation in adherence with good laboratory practices; and verification that laboratory equipment, supplies, and reagents are properly maintained. The internal audits also include the analyst qualifications and training documents.

A comprehensive audit checklist is used for the department to be audited based on the method SOP and includes the cycle of a sample analysis beginning from sample receiving till the disposal of the sample and the release of data to the client. Deficiencies are noted on the checklist and CA reports are issued to the area being audited.

Findings of the audit are documented and copies of the findings are given to the Company President, the Technical Director, the Laboratory Manager, and the Department Supervisor. A copy of the findings is also provided to the analyst. Any problems and their prospective resolutions are discussed among the QA/QC Director, Technical Director, and Department Supervisor. After an agreed upon time period, it is the responsibility of the QA/QC Director to ensure that the required corrective action has been implemented. All audit documents are kept on file by the QA/QC Director in the QA office.

23. Electronic Data

Objective: To establish a system to control, verify, validate and document computer software used by LIMS.

23.1 Software: To ensure that the software that is used to collect, analyze, process and or maintain LIMS Raw Data, SOP's are established, approved and managed for:

Testing and quality assurance methods to ensure that all LIMS software accurately performs its intended functions, including acceptance criteria, tests to be used, personnel responsible for conducting the tests, documentation of test results, and test review and approval.

Change control methods that include instructions for requesting, testing, approving, documenting and implementing changes. When indicated, change control methods shall also include reporting and evaluating problems, as well as implementing corrective actions.

23.2 Documentation: Documentation is established and maintained to demonstrate the validity of all software used in the LIMS and includes:

A description of the software and functional requirements; a listing of all algorithms and formulas; and as they occur, testing and quality assurance, installation and operation/enhancement, and retirement.

23.3 Security: SOP's are established to implement appropriate security procedures to assure the integrity of LIMS data are adequate.

23.4 Electronic Audit: The organics laboratory uses two different software packages to collect the data and two different software packages to produce the report. Both the volatiles and semi-volatiles departments use the combination of Hewlett Packard (HP) Chemstation/Enviroforms and EISC to collect and produce reports. GC volatiles only use TurboChrom software to process and quantitate the data. TurboChrom generates 3 separate files. The raw files contain no quantitation, only the output from the instrument. The .TXT files contain a process file, and the rpt. file contains a detailed report table. The raw file cannot be tampered with or changed. This file is protected by the software to preserve the original output. The PST/PCB data is collected on a different version of Chemstation and the EISC software is used to produce the reports. HP and EISC have set up security for the data itself and there is no way to effect any changes to the raw data.

The quantitation is similarly secured by the software in that any data produced has information on it that can be used to determine its origin.

24. Glossary

1. Acceptance Criteria: specified limits placed on characteristics of an item, process, or service defined in requirement documents.
2. Analytical Detection Limit: the smallest amount of an analyte that can be distinguished in a sample by a given measurement procedure throughout a given confidence interval.
3. Analyst: the designated individual who performs the "hands-on" analytical methods and associated techniques and who is the one responsible for applying required laboratory practices and other pertinent quality controls to meet the required level of quality.
4. Audit: a systematic evaluation to determine the conformance to quantitative and qualitative specifications of some operational function or activity.
5. Calibration: to determine, by measurement or comparison with a standard, the correct value of each scale reading on a meter, instrument, or other device. The levels of the applied calibration standard should bracket the range of planned or expected sample measurements.
6. Chain of custody: an unbroken trail of accountability that ensures the physical security of samples and includes the signatures of all who handle the samples.
7. Confidential Business Information: Information that an organization designates as having the potential of providing a competitor with inappropriate insight into its management, operation or products.
8. Confirmation: verification of the identity of a component through the use of an approach with a different scientific principle from the original method. These may include, but are not limited to: second column confirmation; alternate wavelength, derivatization, mass spectral interpretation, alternative detectors or additional cleanup procedures.
9. Corrective Action: the action taken to eliminate the causes of an existing nonconformity, defect or other undesirable situation in order to prevent recurrence.
10. Data Audit: a qualitative and quantitative evaluation of the documentation and procedures associated with environmental measurements to verify that the resulting data are of acceptable quality.
11. Demonstration of Capability: a procedure to establish the ability of the analyst to generate acceptable accuracy.

12. Document Control: the act of ensuring that documents and revisions are proposed, reviewed for accuracy, approved for release by authorized personnel, distributed properly and controlled to ensure use of the correct version at the location where the prescribed activity is performed.
13. Holding Times: the maximum times that samples may be held prior to analysis and still be considered valid or not compromised.
14. Laboratory: a defined facility performing environmental analyses in a controlled and scientific manner.
15. Laboratory Control Sample (lab fortified blank, blank spike, QC check sample): a sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes from a source independent of the calibration standards or a material containing known and verified amounts of analytes. It is generally used to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
16. Manager: the individual designated as being responsible for the overall operation, all personnel, and the physical plant of the environmental laboratory.
17. Method Detection Limit : the minimum concentration of a substance an analyte that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.
18. NELAC standards: the plan of procedures for consistently evaluating and documenting the ability of laboratories performing environmental measurements to meet nationally defined standards established by the National Environmental Laboratory Accreditation Conference.
19. Nonconformance: An indication or judgement that a product or service has not met the requirements of the relevant specifications, contract or regulation; also the state of failing to meet the requirements.
20. Precision: the degree to which a set of observations or measurements of the same property, obtained under similar conditions, conform to themselves; a data quality indicator.
21. Preservation: refrigeration and/or reagents added at the time of sample collection to maintain the chemical and/or biological integrity of the sample.

22. Proficiency testing: a means of evaluating a laboratory's performance under controlled conditions relative to a given set of criteria through analysis of unknown samples provided by an external source.
23. Quality Assurance: an integrated system of activities involving planning, quality control, quality assessment, reporting and quality improvement to ensure that a product or service meets defined standards of quality with a stated level of confidence.
24. Quality Assurance Plan: a formal document describing the detailed quality control procedures by which the quality requirements defined for the data and decisions pertaining to a specific project are to be achieved.
25. Quality Control Sample: an uncontaminated sample matrix spiked with known amounts of analytes from a source independent from the calibration standards. It is generally used to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
26. Quality System: a structured and documented management system describing the policies objectives, principles, organizational authority, responsibilities, accountability and implementation plan of an organization for ensuring quality in its work processes products and services. The quality system provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required QA and QC.
27. Raw data: any original factual information from a measurement activity or study recorded in a laboratory notebook, worksheets, records memoranda, notes, or exact copies thereof that are necessary for the reconstruction and evaluation of the report of the activity or study.
28. Record Retention: The systematic collection, indexing and storing of documented information under secure conditions.
29. Reference Method: a method of known and documented accuracy and precision issued by an organization recognized as competent to do so.
30. Reporting Limit: A specific concentration at or above the lower quantitation limit that is reported to the client with confidence. It is often defined on a project-specific basis. If set by the client below the lower quantitation limit, method modification is required or the client will be required to accept the lowest technically valid value that can be provided by the laboratory.
31. Standard Operating Procedures: a written document which details the method of an operation, analysis or action whose techniques and procedures are thoroughly

prescribed and which is accepted as the method for performing certain routine or repetitive tasks.

32. Technical Director: individuals who has overall responsibility for the technical operation of the environmental testing laboratory.
33. Traceability: the property of a result of a measurement whereby it can be related to appropriate standards, generally international or national standards, through an unbroken chain of comparisons

25. References

1. ISO/IEC DIS 17025: 1990. General requirements for the competence of calibration and testing laboratories.
2. NELAC, Program Policy and Structure, Revision 11, July 1, 1999.
3. NELAC, Quality Systems, Revision 14, June 29, 2000.
4. DOD Quality Systems Manual for Environmental Laboratories Version 1
October 2000

26. Resumes of Key Personnel and Certification list**26.1 Certification List**

STATE	STATUS	LABORATORY ID	Expiration Date	Certification Categories
NJ-NELAP	Certified	20012	30-Jun-07	DW, WW, SHW
NY-ELAP	Certified	11376	1-Apr-07	DW, WW, SHW, AIR
NY-ASP	Certified	11376	1-Apr-07	DW, WW, SHW, AIR
CONNECTICUT	Certified	PH-0649	30-Jun-07	DW, WW, SHW
FLORIDA	Certified	E87935	30-Jun-07	WW, SHW
MARYLAND	Certified	296	30-Jun-07	DW
MASSACHUSETTS	Certified	M-NJ503	30-Jun-07	WW
Maine	Certified	NJ0503	1-Sep-07	DW, WW, GRO,DRO
OKLAHOMA	Certified	9705	31-Aug-07	WW
PENNSYLVANIA	Certified	68-548	31-Jan-07	DW
RHODE ISLAND	Certified	LAO00259	30-Dec-07	DW,WW,SHW, Air
USDA	Certified	S-47647	30-Jun-07	Soil Permit
US-Navy	Certified	NFESC 413	7-Jun-07	WW, SHW
USEPA	CLP(ILM05.3)	CHEMED	N/A	metals, cyanide
USEPA	CLP(SOM1.1)	CHEMED	N/A	VOC,SVOC,PEST,PCB

26.2 Key Employee Resume

NAME: Krupa Dubey

POSITION: QA/QC Director

Dates: Feb. 2006 - Present

RESPONSIBILITIES: Enforcement of all QA/QC requirements as per EPA, CLP protocols and all state regulations, Internal Audit of the lab, write and annually update Standard Operating Procedures, Assure that lab QA/QC practices are kept by conducting Internal Audit Annually, Verify all QC Client Contract compliance and Screening, Provide clients with technical support upon request, Development and maintenance of corrective action reports, regulatory and client document review, monitor external assessments, monitor compliance of lab systems with quality system guidelines established by federal and state agencies.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
<i>LTM Medical College Mumbai, India</i>	1991	1993	<i>Medical Lab Technology</i>		<i>1993</i>
<i>Khalsa College Mumbai, India</i>	1988	1991	<i>Microbiology</i>		<i>BS, 1991</i>

Professional Experience

Name & Address of Employer: CHEMTECH Mountainside, NJ 07092	Responsibilities included: Supervision of data deliverable production, data review of GC/MS Volatile and Semi-Volatile, Pesticides, PCBs, Herbicides, Metals and Wet Chemistry based on SW-846, EPA CLP and 40 CFR methodologies, Verify all QC requirements, contract compliance, screening and requirements.
Title of Position & Dates: <i>QC Supervisor; 11/2002 – 01/06</i>	
Name & Address of Employer: CHEMTECH Mountainside, NJ 07092	Responsibilities included: Supervision of GC/MS analysts, production scheduling and co-ordination of work flow, perform and review GC/MS analyses using SW-846, EPA CLP methodologies and interpretation of mass spectra, perform SIM analysis, plot control charts for establishing QC acceptance criteria, conduct assessments, precision and accuracy, proficiency, technical data review, troubleshoot instrument operations and other technical problems.
Title of Position & Dates: <i>GC & GC/MS Volatiles and Extractables Supervisor; 5/2000 – 11/2002</i>	

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Name & Address of Employer: <i>CHEMTECH</i> 205, Campus Plaza 1, Edison, NJ	Responsibilities included: Analysis of water, wastewater, soil, and air samples for volatile and semivolatile organics, pesticides and PCBs using SW846, CLP, and USEPA methodologies. Daily maintenance of instruments. Data reduction.
Title of Position & Dates: <i>GC/MS Analyst, 5/1999 – 5/2000</i>	
Name & Address of Employer: <i>CHEMTECH Consulting</i> 205, Campus Plaza 1, Edison, NJ	Responsibilities included: Analysis of water samples for Bacteria Count, Total Coliform, and <i>E.coli</i> , Fecal Coliform, and Standard Plate Count using Standard Methods and EPA procedures. BOD, COD, analyses. Preparation of agar media and standard solutions.
Title of Position & Dates: <i>Microbiologist, 4/1998 – 4/1999</i>	
Name & Address of Employer: <i>Medline Pathology Laboratory</i>	Responsibilities included: Supervision of Medical Laboratory technologists; scheduling workflow. Microbiological detection of infectious diseases, serological testing, antibiotic testing, review of laboratory procedures.
Title of Position & Dates: Lab Manager, 3/95 – 4/97	
Name & Address of Employer: <i>Shree Hospital & ICCU</i>	Responsibilities included: Agar plating, isolation of bacteria; plate count, bacteria count; preparation of agar media; antibiotic sensitivity testing.
Title of Position: <i>Medial Laboratory Technologist, 3/93 – 2/95</i>	

Professional Skills

- Troubleshooting of GC/MS, Tekmar autosampler
- Data package production using Enviroforms
- Acquisition and analysis of samples using Enviroquant and RTE software
- ASP Deliverables, CLP Deliverables

Computer Skills

- *MS Office – MS Word, MS Excel, MS PowerPoint*
- Use of Environmental Data Reduction Softwares – Enviroquant & Enviroform

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NAME: Hiren Artist**POSITION: Systems Manager****DATES: June 2003- Present**

RESPONSIBILITIES: Quality Control of all computer systems, including hardware, software, documentation and procedures. He generates and updates the automated deliverables in accordance to client specifications. Installation, training, maintenance and operation of programs as they pertain to providing open architected systems that promote adaptability efficiency, reliability and system integration. Develop, designed and implemented CHEMTECH's LIMS system. Develop US Army. US Navy and US Air Force and commercial client EDDs based on each individual requirement.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
Mithibai College, Bombay India	1992	1996	BS Computer Science		May 1996

Professional Experience

Name & Address of Employer: <i>Chemtech</i> <i>284 Sheffield Street Mountainside, NJ 07092</i>	Responsibilities included: generates and updates the automated deliverables in accordance to client specifications. Assist in the installation, training, maintenance and operation of programs.
Title of Position: <i>Systems Manager assistant Jun 2001-Jun 2002</i>	
Name & Address of Employer: <i>Unisoft Corporation</i>	Responsibilities included: Installation, training, maintenance and operation of programs
Title of Position: <i>System analyst 2000- 2001</i>	

Professional Skills

Computer programming, internet access expert

Computer Skills*Fortis, Microsoft Office Word, Power Point Excel***Other Achievements or Awards**

Microsoft Certified Systems Engineer

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NAME: Kedar Pathak **POSITION:** GC & GC/MS Volatiles Supervisor
DATES: July 2006-Present
RESPONSIBILITIES: Supervision of GC and GC/MS Volatile Organic department, co-ordination of work flow in the department, analysis of samples within the specified holding times, scheduling work with the analysts and training of new employees.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
Stevens Institute of Technology	1999	2003	<i>Mechanical Engineering</i>		<i>BE 2003</i>

Professional Experience

Name & Address of Employer: Chemtech 284 Sheffield St., NJ - 08824	Responsibilities included: Perform VOC analysis as per EPA 600 series, SW846 and CLP protocols. Assist supervisor with SOP updates. Update LIMS system. Troubleshoot instruments. Assist on other lab duties assigned by the supervisor.
Title of Position: GC/MS analyst June 2004-July 2006	
Name & Address of Employer: Metro North Railroad Croton on Hudson, NY	Responsibilities included: Searched engineering department files and organized test reports. Updated Excel databases on train fleets, Duplicated drawing records and filed drawings.
Title of Position: Engineer Assistant June 2000- Aug 2000	
Name & Address of Employer: Atkinson Koven Feinberg Engineers New York, NY	Responsibilities included: Calculated criteria for design of pumps fans ducts and boilers. Modified ductwork and equipment layout. Performed field surveys for existing building conditions to determine design needs. Gathered billing information from Project Managers and entered data into Excel.
Title of Position: Engineering Assistant Sept 99-Dec 99	

Professional Skills

Havard Model Congress, Cooperative Education

Computer Skills

Microsoft Window 2000- Excel, Word

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NAME: Deepak Patel	POSITION: Extractions Supervisor
DATES: Nov 2003-Present	
RESPONSIBILITIES: Supervision of Extractions department, schedule and coordinate workflow for the extractions analysts. Perform extractions on samples for BNA and Pesticide/PCB analyses. Updating LIM system. Review and updating of Extractions SOPs.	

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
<i>Polytechnic of NY</i>		1975	<i>Chemical Engineering</i>	<i>Environmental</i>	<i>MS 5 / 75</i>
<i>Polytechnic of NY</i>		1976	<i>Management</i>	<i>Business</i>	<i>MS 5 / 77</i>

Professional Experience

Name & Address of Employer: NYCTA (MTA) New York, NY	Responsibilities included: Monitor Installation of 3 elevators.
Title of Position: <i>Construction Supervisor II</i>	
Name & Address of Employer: CHEMTECH Edison, NJ	Responsibilities included: Supervision of Extractions department, schedule and coordinate workflow for the extractions analysts. Perform extractions on samples for BNA and Pesticide/PCB analyses. Updating LIM system. Review and updating of Extractions SOPs.
Title of Position: <i>Organic Extraction</i>	

Professional Skills

OSHA- training- 8 hour course

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NAME: *Danuta Roguska***POSITION:** Metals analysis Supervisor**Dates:** 5/99 to Present

RESPONSIBILITIES: Supervision of Metals and General Chemistry departments. Flow of work; analyses of samples within holding times, scheduling of work with the analysts, verify the test results performed by analysts. Technical data review of analyses (ICP data run – Methods 6010, 200.7, CLP, Hg data run – Methods 7470, 7471, 245.1, CLP. Report preparation and handle centralize computer system for analytical reports.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
<i>Warsaw University Warsaw, Poland</i>	1976	1981	<i>Chemistry</i>	<i>N/A</i>	<i>BS; 1981</i>

Professional Experience

Name & Address of Employer: <i>Analab Inc.</i> <i>205 Campus Plaza 1, Edison, NJ 08837</i>	Responsibilities included: Analyses of General Chemistry and Metals parameters including cyanide, nitrate-nitrite, TKN, TDS, TSS, BOD, COD, TOC, hardness, etc. of wastewater, drinking water, soil, and sludges. Reporting of data as required.
Title of Position & Dates: <i>Laboratory Chemist; 9/90 to 5/99</i>	
Name & Address of Employer: <i>Analab, Inc.</i>	Responsibilities included: Phenolics distillations, titrations, PHC, reactive CB (EPA Method 9010, 9012), pH, TSS, TDS, COD, TCLP leaching for solids, semisolids, drinking-, , ground-, and wastewater.
Title of Position & Dates: <i>Laboratory Chemist; 9/90 to 4/92</i>	
Name & Address of Employer: <i>Analab Inc.</i> <i>205 Campus Plaza 1, Edison, NJ</i>	Responsibilities included: Running AA spectroscope, Flame PE 1100B; AA spectroscope, Furnace PE 5100 HGA & PE4100; Cold vapor Mercury analysis; regular maintenance of AA spectroscopes; analytical reporting.
Title of Position & Dates: <i>Analyst; 4/92 to 8/99</i>	
Name & Address of Employer: <i>Analyst Chem Laboratory</i> <i>Parczew, Poland</i>	Responsibilities included: Wet Chemistry Analytical Methods; procedures – distillation, acid/base titrations, PHC, reactive CN, pH, TSS, TDS, COD.
Title of Position: <i>Analyst; 7/83 to 9/86</i>	
Name & Address of Employer: <i>Debowa Kloda Middle School</i> <i>Debowa Kloda, Poland</i>	Responsibilities included: Taught Chemistry and Physics; Grades 7-9.
Title of Position: <i>Science Teacher; 9/81 – 6/83</i>	

Professional Skills

- Experience in EPA methods, NYSDOH, NJDEP, and CLP requirements.
- Hands on experience for running ICP/Hg analyzer, TOC, Lachate, UV spectrophotometer, etc.
- Troubleshooting of above-mentioned instruments.

Computer Skills

- MS Office – MS Word, MS Excel, MS PowerPoint

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NAME: Sejal Vyas**POSITION:** General Chemistry Supervisor**DATES:** Nov. 2004- Present**RESPONSIBILITIES:** Perform General Chemistry analysis as per SW 846 and CLP protocols. SOPs updates. Update LIMS system. Troubleshoot instrumentation. Schedule and monitor personnel's daily routine.**Educational Background**

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
Gujarat University India	1993	1995	Botany		MS 1995
Gujarat University India	1990	1993	Microbiology		BS 1993

Professional Experience

Name & Address of Employer: <i>CHEMTECH</i> <i>284 Sheffield Street Mountainside</i>	Responsibilities included: Analysis of samples using methodology based on EPA series, SW 846 and CLP protocols for Cyanide, Anions, Phenols, Alkalinity, Nitrate, Nitrite, Sulfate, Sulfide and many others. Assist supervisor with daily routine and new staff training.
Title of Position: <i>General Chemistry Analyst</i> June 2000- Nov. 2004	
Name & Address of Employer: Eureka Forbes LTD Ahmedabad, India	Responsibilities included: Drinking Water analysis
Title of Position: Lab Technician	

Professional Skills

Extensive experience in EPA methods, NYSDOH, NJDEP and CLP protocols in the inorganic area. Years of experience in the wet analysis of water and soil samples for Hexavalent Chromium, Cyanide, Alkalinity, Sulfate, Chloride, Fluoride, TKN, COD, Ortho-P, Phenolics, Ammonia, Nitrate, Hardness, Acidity, pH, Specific Conductance, Bromide, Surfactant, Turbidity, TSS, VSS, TDS, EP Toxicity and TCLP extractions using USEPA methods.

Computer Skills

Microsoft Office 2000- Excel, Words, LIMS system

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NAME: Ugochukwu Amadioha**POSITION:** GC Extractables Supervisor**DATES :** MAY 06 - PRESENT**RESPONSIBILITIES:** Supervision of Pesticide/PCB department, co-ordination of workflow in the department, analysis of samples within the specified holding times, scheduling the work with the analysts, and training of the new employees.**Educational Background**

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
COLLEGE OF NEW JERSEY		2003	Biology		BS 2003

Professional Experience

Name & Address of Employer: <i>CHEMTECH</i> <i>Mountainside, NJ 07092</i>	Responsibilities included: VOC water, soil and gases analysis by method EPA 600 and SW846. Operate Archon autosampler, GC FID. Prepare standards. Follow GLP. Daily calibration of lab scales, refrigerators, autoclaves.
Title of Position: <i>GC and GC/MS analyst; 10/04-05/06</i>	
Name & Address of Employer: <i>Roche Molecular systems</i> <i>Branchburg, NJ</i>	Responsibilities included: Support manufacturing of Qualitative standards and Internal Controls for Polymerase Chain Reaction kits. Operate PCR instruments and Real Time PCR. Review controlled testing and manufacturing documents.
Title of Position: <i>PCR Control Scientist; 06/05-02/06</i>	
Name & Address of Employer: Medco Health Solution, LLC Parsippany, NJ	Responsibilities included: Educate members about prescription drug benefits managed by Medco Health and on plan attributes as it relates to copay, deductible, Out of Pocket expenses and CAP.
Title of Position: Customer Services Representative; 10/03-08/04	

Professional Skills

Lab Techniques in Cell and Molecular Biology and Genetics: PAGE and Agrose Gel Electrophoresis. Protein purification, DNA isolation, Column Affinity Chromatography, PCR and Restrictive Fragment Analysis, Pour Plating, Colony Isolation, and Aseptic techniques.

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NAME: Himanshu N. Prajapati**POSITION:** GC/MS Extractables Supervisor**Dates:** 10/2002 – Present

RESPONSIBILITIES: Responsible for review of CLP packages, maintenance and troubleshooting of instruments, training other lab personnel in Semi-Volatile analysis and instrumentation. Prepare and analyze proficiency samples. Schedule workflow for other analysts.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
L.D. College of Engineering Ahmedabad, Gujarat, India	1993	1997	<i>Chemical Engineering</i>	NA	<i>B.E. Chemical Engineering</i>
Stevens Institute of Technology NJ, USA	1999	-	<i>MS Chemical Engineering</i>	NA	

Professional Experience

Name & Address of Employer: <i>CHEMTECH 284 Sheffield Street Mountainside, NJ 07092</i>	Responsibilities Included: Assist supervisor with all aspects of data deliverable production, review data based on SW-846, CLP and 40 CFR methodology, depending on project requirement. Verify all QC requirements, contract compliance, screening and method requirements.
Title of Position: <i>QC Analyst; 9/04-12/04</i>	
Name & Address of Employer: <i>CHEMTECH 284 Sheffield Street Mountainside, NJ 07092</i>	Responsibilities Included: Perform BNA analysis as per EPA 600 series, SW 846 and CLP protocols. Assist supervisor with SOPs updates. Update LIMS system. Troubleshoot instrument.
Title of Position: <i>GC/MS Analyst; 04/00-10/02</i>	
Name & Address of Employer: G.S.F.C Surat, Gujarat, India	Responsibilities included: Supervising a continuously running plant of plastic manufacturing. Testing of raw materials and final products.
Title of Position: Shift Engineer; 02/98-11/98	
Name & Address of Employer: <i>ECT Engineers & Associated</i> Ahmedabad, Gujarat, India	Responsibilities included: Surveying of company/factory for energy conservation. Implementing energy conservation plans.
Title of Position: Energy Saving Engineer; 10/97-2/98	

Professional Skills

Proficient with the analysis of samples for inorganic parameters.

Computer Skills

MS Office- Word and Excel
Data Processing software

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NAME: *Divyajit Mehta***POSITION:** **Technical Director/Chief Operating Officer**

RESPONSIBILITIES: Responsible for all technical efforts of the Laboratory to meet all terms and conditions of EPA contract as well as all of CHEMTECH's clients. Experienced in the analysis of inorganic soil and water samples according to the requirements of the EPA Superfund, Contract Laboratory Program. Hands on experience in the use of the modern analytical instrumentation and wet chemical techniques. Currently responsible for the overall technical performance of the laboratory. Review the technical and QA/QC requirements during the analysis. Oversees the laboratory operations and compliance with all regulations.

Educational Background

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
<i>Gujarat University</i> INDIA	1979	1982	<i>CHEMICAL</i> ENGINEERING		<i>BS, 1982</i>
<i>NJIT</i>	1984		<i>CHEMICAL</i> ENGINEERING		INCOMPLETE

Professional Experience

Name & Address of Employer: <i>CHEMTECH</i> <i>MOUNTAINSIDE, NJ 1/99-Present</i>	Responsibilities included: Oversee overall technical laboratory performance and compliance with regulations and contracts.
Title of Position: <i>CHIEF OF OPERATIONS/LABORATORY DIRECTOR</i>	
Name & Address of Employer: CHEMTECH <i>ENGLEWOOD, NJ 1/89-1/99</i>	Responsibilities included: Responsible for the technical efforts of the inorganic department and compliance with EPA contract
Title of Position: <i>INORGANIC MANAGER</i>	

Professional Skills

Hands on experience in a variety of instruments such as GC/MS, ICP, GC and various Wet chemistry techniques. Various training such NELAC training, instrument training and other seminars related with the Analytical procedures and instrumentation.

Computer Skills

Computer literate- MS Office- MS Word, MS Excel, MS Power Point
Use and design of Environmental Data Reduction Software
Enviroquant & Enviroforms, LIMS- Sample Master, EISC data reduction Software.

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Other Achievements or Awards

Divyajit has completed various training in the Environmental field. Examples of these are: Inorganic Data validation training, Region II Organic data validation, Sample Master LIMS advance course, ICP training course and others

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NAME: *Mildred V. Reyes***POSITION:** QC Supervisor**DATES:** Feb.2006-Present**RESPONSIBILITIES:** Supervision of data deliverable production, data review based on SW-846, CLP and 40 CFR methodologies. Verify QC requirements, contract compliance and screening requirements.**Educational Background**

College/University	Dates Attended		Major	Minor	Degree & Date
	From	To			
UNIVERSITY OF PUERTO RICO	1982	1987	<i>Biology</i>		<i>BS 1987</i>

Professional Experience

Name & Address of Employer: <i>CHEMTECH</i> <i>Mountainside, NJ 07092</i>	Responsibilities included: Enforcement of QA/QC requirements, Internal Audit of the lab, Write and update SOP, Verify QC Client Contract Compliance and Screening, Provide clients with technical support.
Title of Position: QA/QC Director - 2002-2006	
Name & Address of Employer: <i>CHEMTECH</i> <i>Mountainside, NJ 07092</i>	Responsibilities included: Supervision of all aspects of data deliverable production, data review of GC/MS Volatile and Semi volatile, Pesticides, PCBs, Herbicides, Metals and Wet Chemistry based on SW 846, EPA, CLP and 40 CFR methodologies. Verify all QC requirements, contract compliance, screening and requirements.
Title of Position: <i>QA/QC Supervisor- 1999-2002</i>	
Name & Address of Employer: Analab/ICM Division 205 Campus Plaza 1, Edison, NJ 08837	Responsibilities included: Supervision of four GC analysts; coordination of work flow and schedule; technical review of all data generated for GC Volatile, Pest, PCB Herbicides analysis; instrument trouble shooting and other technical problems.
Title of Position: <i>GC, Supervisor- 1995-1999</i>	
Name & Address of Employer: Cycle Chem, INC Elizabeth, NJ	Responsibilities included: Perform daily lab analysis on disposal material based on SW 846 and 40 CFR requirements. Analysis included PCB analysis, Metals and Wet Chemistry; inventory of all incoming samples
Title of Position: Production Chemist- 1993-1995	

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Professional Experience (Continued)

Name & Address of Employer: Safety Kleen, Linden, NJ	Responsibilities included: Senior Technician overseen laboratory operations during night shift. Perform daily lab analysis, which included Volatile Organic analysis, PCB analysis, and Wet Chemistry.
Title of Position: <i>Laboratory Technician-1990-1993</i>	

Other Achievements or Awards

Environmental Laboratories Seminar
Internal Assessment Training

Professional Skills

GC Volatile, Pesticides, PCBs, Herbicides analysis by GC using EPA, SW 846 and 40 CFR methodology.
ASP and CLP deliverable.

Computer Skills

MS Office- MS Excel, MS Word, MS Power Point
Use of Environmental data reduction software

27. Nelac Certificate and Parameter list

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State of New Jersey Department of Environmental Protection

Certifies That

Chemtech

Laboratory Certification ID #: 20012

having duly met the requirements of the
Regulations Governing The Certification Of
Laboratories And Environmental Measurements N.J.A.C. 7:18 et. seq.

and

having been found compliant with the standard approved by the
National Environmental Laboratory Accreditation Conference

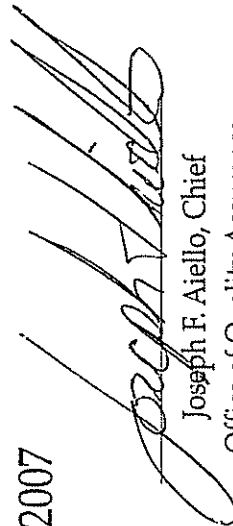
is hereby approved as a

Nationally Accredited Environmental Laboratory
to perform the analyses as indicated on the Annual Certified Parameter List
which must accompany this certificate to be valid



NJDEP is a NELAP Recognized Accrediting Authority

Expiration Date June 30, 2007


Joseph F. Aiello, Chief
Office of Quality Assurance

THIS CERTIFICATE IS TO BE CONSPICUOUSLY DISPLAYED AT THE LABORATORY WITH THE ANNUAL CERTIFIED PARAMETER LIST IN A LOCATION ON THE PREMISES VISIBLE TO THE PUBLIC

New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

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Category: CAP03 – Atmospheric Organic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00180	AE	GC/MS, Canisters	[EPA TO-15]	Acetaldehyde
Certified	Yes	NJ	CAP03.00184	AE	GC/MS, Canisters	[EPA TO-15]	Acetone
Certified	Yes	NJ	CAP03.00185	AE	GC/MS, Canisters	[EPA TO-15]	Acetonitrile
Certified	Yes	NJ	CAP03.00190	AE	GC/MS, Canisters	[EPA TO-15]	Acetophenone
Certified	Yes	NJ	CAP03.00195	AE	GC/MS, Canisters	[EPA TO-15]	Acrolein
Certified	Yes	NJ	CAP03.00200	AE	GC/MS, Canisters	[EPA TO-15]	Acrylamide
Certified	Yes	NJ	CAP03.00205	AE	GC/MS, Canisters	[EPA TO-15]	Acrylic acid
Certified	Yes	NJ	CAP03.00210	AE	GC/MS, Canisters	[EPA TO-15]	Acrylonitrile
Certified	Yes	NJ	CAP03.00215	AE	GC/MS, Canisters	[EPA TO-15]	Allyl chloride
Certified	Yes	NJ	CAP03.00220	AE	GC/MS, Canisters	[EPA TO-15]	Aniline
Certified	Yes	NJ	CAP03.00225	AE	GC/MS, Canisters	[EPA TO-15]	Benzene
Certified	Yes	NJ	CAP03.00230	AE	GC/MS, Canisters	[EPA TO-15]	Benzyl chloride
Certified	Yes	NJ	CAP03.00235	AE	GC/MS, Canisters	[EPA TO-15]	Propiolactone (beta-)
Certified	Yes	NJ	CAP03.00240	AE	GC/MS, Canisters	[EPA TO-15]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	CAP03.00245	AE	GC/MS, Canisters	[EPA TO-15]	Bis (chloromethyl) ether
Certified	Yes	NJ	CAP03.00250	AE	GC/MS, Canisters	[EPA TO-15]	Bromodichloromethane
Certified	Yes	NJ	CAP03.00255	AE	GC/MS, Canisters	[EPA TO-15]	Bromoform
Certified	Yes	NJ	CAP03.00260	AE	GC/MS, Canisters	[EPA TO-15]	Bromomethane
Certified	Yes	NJ	CAP03.00265	AE	GC/MS, Canisters	[EPA TO-15]	Butadiene (1,3-)
Certified	Yes	NJ	CAP03.00270	AE	GC/MS, Canisters	[EPA TO-15]	Carbon disulfide
Certified	Yes	NJ	CAP03.00275	AE	GC/MS, Canisters	[EPA TO-15]	Carbon tetrachloride
Certified	Yes	NJ	CAP03.00280	AE	GC/MS, Canisters	[EPA TO-15]	Carbon oxysulfide (Carbonyl sulfide)
Certified	Yes	NJ	CAP03.00285	AE	GC/MS, Canisters	[EPA TO-15]	Catechol
Certified	Yes	NJ	CAP03.00290	AE	GC/MS, Canisters	[EPA TO-15]	Butadiene (2-chloro-1,3-)
Certified	Yes	NJ	CAP03.00295	AE	GC/MS, Canisters	[EPA TO-15]	Chloroacetic acid
Certified	Yes	NJ	CAP03.00300	AE	GC/MS, Canisters	[EPA TO-15]	Chlorobenzene
Certified	Yes	NJ	CAP03.00305	AE	GC/MS, Canisters	[EPA TO-15]	Chloroethane
Certified	Yes	NJ	CAP03.00310	AE	GC/MS, Canisters	[EPA TO-15]	Chloroform
Certified	Yes	NJ	CAP03.00315	AE	GC/MS, Canisters	[EPA TO-15]	Chloromethane
Certified	Yes	NJ	CAP03.00320	AE	GC/MS, Canisters	[EPA TO-15]	Chloromethyl methyl ether
Certified	Yes	NJ	CAP03.00325	AE	GC/MS, Canisters	[EPA TO-15]	Chlorotoluene (2-)

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New Jersey Department of Environmental Protection
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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00330	AE	GC/MS, Canisters	[EPA TO-15]	Cresols/Cresylic acid
Certified	Yes	NJ	CAP03.00335	AE	GC/MS, Canisters	[EPA TO-15]	Cyclohexane
Certified	Yes	NJ	CAP03.00340	AE	GC/MS, Canisters	[EPA TO-15]	Diazomethane
Certified	Yes	NJ	CAP03.00345	AE	GC/MS, Canisters	[EPA TO-15]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	CAP03.00350	AE	GC/MS, Canisters	[EPA TO-15]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	CAP03.00355	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	CAP03.00360	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	CAP03.00365	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	CAP03.00370	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethane (1,1-)
Certified	Yes	NJ	CAP03.00375	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethane (1,2-)
Certified	Yes	NJ	CAP03.00380	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (1,1-)
Certified	Yes	NJ	CAP03.00384	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	CAP03.00385	AE	GC/MS, Canisters	[EPA TO-15]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	CAP03.00390	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorofluoromethane
Certified	Yes	NJ	CAP03.00395	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropane (1,2-)
Certified	Yes	NJ	CAP03.00400	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	CAP03.00401	AE	GC/MS, Canisters	[EPA TO-15]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	CAP03.00405	AE	GC/MS, Canisters	[EPA TO-15]	Dichlorotetrafluoroethane (1,2-)
Certified	Yes	NJ	CAP03.00410	AE	GC/MS, Canisters	[EPA TO-15]	Diethyl sulfate
Certified	Yes	NJ	CAP03.00415	AE	GC/MS, Canisters	[EPA TO-15]	Dimethyl sulfate
Certified	Yes	NJ	CAP03.00420	AE	GC/MS, Canisters	[EPA TO-15]	Dimethylaniline (N, N-)
Certified	Yes	NJ	CAP03.00425	AE	GC/MS, Canisters	[EPA TO-15]	Dimethylcarbamoyl chloride
Certified	Yes	NJ	CAP03.00430	AE	GC/MS, Canisters	[EPA TO-15]	Dimethyl formamide (N, N-)
Certified	Yes	NJ	CAP03.00435	AE	GC/MS, Canisters	[EPA TO-15]	Dimethyl hydrazine (1,1-)
Certified	Yes	NJ	CAP03.00440	AE	GC/MS, Canisters	[EPA TO-15]	Dioxane (1,4-)
Certified	Yes	NJ	CAP03.00445	AE	GC/MS, Canisters	[EPA TO-15]	Epichlorohydrin
Certified	Yes	NJ	CAP03.00450	AE	GC/MS, Canisters	[EPA TO-15]	Epoxybutane (1,2-)
Applied	No	NJ	CAP03.00452	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl acetate
Certified	Yes	NJ	CAP03.00455	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl acrylate
Certified	Yes	NJ	CAP03.00460	AE	GC/MS, Canisters	[EPA TO-15]	Ethyl carbamate (Urethane)
Certified	Yes	NJ	CAP03.00465	AE	GC/MS, Canisters	[EPA TO-15]	Ethylbenzene
Certified	Yes	NJ	CAP03.00470	AE	GC/MS, Canisters	[EPA TO-15]	Ethylene Oxide

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00475	AE	GC/MS, Canisters	[EPA TO-15]	Ethyleneimine
Certified	Yes	NJ	CAP03.00480	AE	GC/MS, Canisters	[EPA TO-15]	Ethyltoluene (4-)
Certified	Yes	NJ	CAP03.00485	AE	GC/MS, Canisters	[EPA TO-15]	Formaldehyde
Certified	Yes	NJ	CAP03.00490	AE	GC/MS, Canisters	[EPA TO-15]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	CAP03.00495	AE	GC/MS, Canisters	[EPA TO-15]	Hexachloroethane
Certified	Yes	NJ	CAP03.00498	AE	GC/MS, Canisters	[EPA TO-15]	Hexanone (2-)
Certified	Yes	NJ	CAP03.00500	AE	GC/MS, Canisters	[EPA TO-15]	Heptane (n-)
Certified	Yes	NJ	CAP03.00505	AE	GC/MS, Canisters	[EPA TO-15]	Hexane (n-)
Certified	Yes	NJ	CAP03.00510	AE	GC/MS, Canisters	[EPA TO-15]	Isophorone
Certified	Yes	NJ	CAP03.00511	AE	GC/MS, Canisters	[EPA TO-15]	Isopropanol
Certified	Yes	NJ	CAP03.00515	AE	GC/MS, Canisters	[EPA TO-15]	Isopropylbenzene
Certified	Yes	NJ	CAP03.00520	AE	GC/MS, Canisters	[EPA TO-15]	Methyl alcohol (Methanol)
Certified	Yes	NJ	CAP03.00525	AE	GC/MS, Canisters	[EPA TO-15]	Methyl ethyl ketone
Certified	Yes	NJ	CAP03.00530	AE	GC/MS, Canisters	[EPA TO-15]	Methyl iodide
Certified	Yes	NJ	CAP03.00535	AE	GC/MS, Canisters	[EPA TO-15]	Methyl isobutyl ketone
Certified	Yes	NJ	CAP03.00540	AE	GC/MS, Canisters	[EPA TO-15]	Methyl isocyanate
Certified	Yes	NJ	CAP03.00545	AE	GC/MS, Canisters	[EPA TO-15]	Methyl methacrylate
Certified	Yes	NJ	CAP03.00550	AE	GC/MS, Canisters	[EPA TO-15]	Methyl tert-butyl ether
Certified	Yes	NJ	CAP03.00555	AE	GC/MS, Canisters	[EPA TO-15]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	CAP03.00560	AE	GC/MS, Canisters	[EPA TO-15]	Methylhydrazine
Certified	Yes	NJ	CAP03.00565	AE	GC/MS, Canisters	[EPA TO-15]	Methylphenol (2-)
Certified	Yes	NJ	CAP03.00570	AE	GC/MS, Canisters	[EPA TO-15]	Nitrobenzene
Certified	Yes	NJ	CAP03.00575	AE	GC/MS, Canisters	[EPA TO-15]	Nitropropane (2-)
Certified	Yes	NJ	CAP03.00580	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitrosodimethylamine
Certified	Yes	NJ	CAP03.00585	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitrosomorpholine
Certified	Yes	NJ	CAP03.00590	AE	GC/MS, Canisters	[EPA TO-15]	N-Nitroso-N-methylurea
Certified	Yes	NJ	CAP03.00595	AE	GC/MS, Canisters	[EPA TO-15]	Phenol
Certified	Yes	NJ	CAP03.00600	AE	GC/MS, Canisters	[EPA TO-15]	Phosgene
Certified	Yes	NJ	CAP03.00605	AE	GC/MS, Canisters	[EPA TO-15]	Propionaldehyde
Certified	Yes	NJ	CAP03.00610	AE	GC/MS, Canisters	[EPA TO-15]	Propyleneimine (1,2-)
Applied	No	NJ	CAP03.00612	AE	GC/MS, Canisters	[EPA TO-15]	Propylene
Certified	Yes	NJ	CAP03.00615	AE	GC/MS, Canisters	[EPA TO-15]	Propylene oxide

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	CAP03.00620	AE	GC/MS, Canisters	[EPA TO-15]	Propane sulfone (1,3-)
Certified	Yes	NJ	CAP03.00625	AE	GC/MS, Canisters	[EPA TO-15]	Styrene
Certified	Yes	NJ	CAP03.00630	AE	GC/MS, Canisters	[EPA TO-15]	Styrene oxide
Certified	Yes	NJ	CAP03.00635	AE	GC/MS, Canisters	[EPA TO-15]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	CAP03.00640	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	CAP03.00645	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	CAP03.00650	AE	GC/MS, Canisters	[EPA TO-15]	Trimethylpentane (2,2,4-)
Certified	Yes	NJ	CAP03.00655	AE	GC/MS, Canisters	[EPA TO-15]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	CAP03.00660	AE	GC/MS, Canisters	[EPA TO-15]	Tetrachloroethene
Applied	No	NJ	CAP03.00662	AE	GC/MS, Canisters	[EPA TO-15]	Tetrahydrofuran
Certified	Yes	NJ	CAP03.00665	AE	GC/MS, Canisters	[EPA TO-15]	Toluene
Certified	Yes	NJ	CAP03.00670	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	CAP03.00675	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	CAP03.00680	AE	GC/MS, Canisters	[EPA TO-15]	Trichloroethene
Certified	Yes	NJ	CAP03.00684	AE	GC/MS, Canisters	[EPA TO-15]	Trichlorofluoromethane
Certified	Yes	NJ	CAP03.00685	AE	GC/MS, Canisters	[EPA TO-15]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Certified	Yes	NJ	CAP03.00690	AE	GC/MS, Canisters	[EPA TO-15]	Triethylamine
Certified	Yes	NJ	CAP03.00695	AE	GC/MS, Canisters	[EPA TO-15]	Trifluoromethane
Certified	Yes	NJ	CAP03.00700	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl acetate
Certified	Yes	NJ	CAP03.00705	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl bromide
Certified	Yes	NJ	CAP03.00710	AE	GC/MS, Canisters	[EPA TO-15]	Vinyl chloride
Certified	Yes	NJ	CAP03.00715	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (m-)
Certified	Yes	NJ	CAP03.00720	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (o-)
Certified	Yes	NJ	CAP03.00725	AE	GC/MS, Canisters	[EPA TO-15]	Xylene (p-)
Certified	Yes	NJ	CAP03.00730	AE	GC/MS, Canisters	[EPA TO-15]	Xylenes (total)
Applied	No	NJ	CAP03.00735	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Acetic acid
Applied	No	NJ	CAP03.00740	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Acetone
Applied	No	NJ	CAP03.00745	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Acetonitrile
Applied	No	NJ	CAP03.00750	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Acrylonitrile
Applied	No	NJ	CAP03.00755	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Aniline
Applied	No	NJ	CAP03.00760	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Benzene
Applied	No	NJ	CAP03.00765	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butane

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CAP03.00770	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butanol (1-)
Applied	No	NJ	CAP03.00775	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butoxyethanol
Applied	No	NJ	CAP03.00780	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butoxyethylacetate
Applied	No	NJ	CAP03.00785	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butyl Acetate (n-)
Applied	No	NJ	CAP03.00790	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butyl Acetate (tert-)
Applied	No	NJ	CAP03.00795	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Butyl aldehyde
Applied	No	NJ	CAP03.00800	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Carbon tetrachloride
Applied	No	NJ	CAP03.00805	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Chlorobenzene
Applied	No	NJ	CAP03.00810	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Cyclohexanone
Applied	No	NJ	CAP03.00815	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Decane (n-)
Applied	No	NJ	CAP03.00820	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Dichloroethane (1,2-)
Applied	No	NJ	CAP03.00825	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Dodecane (n-)
Applied	No	NJ	CAP03.00830	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethanol
Applied	No	NJ	CAP03.00835	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethoxyethanol
Applied	No	NJ	CAP03.00840	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethoxyethylacetate
Applied	No	NJ	CAP03.00845	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethyl acetate
Applied	No	NJ	CAP03.00850	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethyl acrylate
Applied	No	NJ	CAP03.00855	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethylbenzene
Applied	No	NJ	CAP03.00860	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethylbenzene (1-methyl-2-)
Applied	No	NJ	CAP03.00865	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethylbenzene (1-methyl-3-)
Applied	No	NJ	CAP03.00870	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Ethylbenzene (1-methyl-4-)
Applied	No	NJ	CAP03.00875	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Furfural
Applied	No	NJ	CAP03.00880	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Heptane (n-)
Applied	No	NJ	CAP03.00885	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Hexane (n-)
Applied	No	NJ	CAP03.00890	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Iso-butyl alcohol
Applied	No	NJ	CAP03.00895	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Isobutylacetate
Applied	No	NJ	CAP03.00900	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Isophorone
Applied	No	NJ	CAP03.00905	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Isopropanol
Applied	No	NJ	CAP03.00910	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Isopropyl acetate
Applied	No	NJ	CAP03.00915	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Isopropylbenzene
Applied	No	NJ	CAP03.00920	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Maleic anhydride
Applied	No	NJ	CAP03.00925	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methoxyethanol (2-) (methyl cellosolve)

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Applied	No	NJ	CAP03.00930	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methoxyethylacetate
Applied	No	NJ	CAP03.00935	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methoxypropanol
Applied	No	NJ	CAP03.00940	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl alcohol (Methanol)
Applied	No	NJ	CAP03.00945	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl ethyl ketone
Applied	No	NJ	CAP03.00950	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl isobutyl ketone
Applied	No	NJ	CAP03.00955	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl methacrylate
Applied	No	NJ	CAP03.00960	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl tert-butyl ether
Applied	No	NJ	CAP03.00965	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methyl acetate
Applied	No	NJ	CAP03.00970	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methylene chloride (Dichloromethane)
Applied	No	NJ	CAP03.00975	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Methylstyrene
Applied	No	NJ	CAP03.00980	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Nitrobenzene
Applied	No	NJ	CAP03.00985	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Nonane (-n)
Applied	No	NJ	CAP03.00990	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Propyl Alcohol (n-)
Applied	No	NJ	CAP03.00995	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Octane (-n)
Applied	No	NJ	CAP03.01000	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Octanol (1-)
Applied	No	NJ	CAP03.01005	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Pentane (-n)
Applied	No	NJ	CAP03.01010	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1016
Applied	No	NJ	CAP03.01015	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1221
Applied	No	NJ	CAP03.01020	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1232
Applied	No	NJ	CAP03.01025	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1242
Applied	No	NJ	CAP03.01030	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1248
Applied	No	NJ	CAP03.01035	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1254
Applied	No	NJ	CAP03.01040	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	PCB 1260
Applied	No	NJ	CAP03.01045	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Phenol
Applied	No	NJ	CAP03.01050	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Propionitrile
Applied	No	NJ	CAP03.01055	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Propyl acetate
Applied	No	NJ	CAP03.01060	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Pyridine
Applied	No	NJ	CAP03.01065	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Propylbenzene (n-)
Applied	No	NJ	CAP03.01070	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Styrene
Applied	No	NJ	CAP03.01075	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Tetrachloroethane (1,1,1,2-)
Applied	No	NJ	CAP03.01080	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Tetrachloroethane (1,1,2,2-)
Applied	No	NJ	CAP03.01085	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Tetrachloroethene

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

Category: CAP03 – Atmospheric Organic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CAP03.01090	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Toluene
Applied	No	NJ	CAP03.01095	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trichloroethane (1,1,1-)
Applied	No	NJ	CAP03.01100	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trichloroethane (1,1,2-)
Applied	No	NJ	CAP03.01105	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trichloroethene
Applied	No	NJ	CAP03.01110	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trimethylbenzene (1,2,3-)
Applied	No	NJ	CAP03.01115	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trimethylbenzene (1,2,4-)
Applied	No	NJ	CAP03.01120	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Trimethylbenzene (1,3,5-)
Applied	No	NJ	CAP03.01125	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Xylenes (total)
Applied	No	NJ	CAP03.01130	AE	GC/MS, Sorbent Tubes	[EPA TO-17]	Undecane (n-)

Category: SDW01 – Microbiological Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SDW01.06015	DW	Membrane Filter - MI Agar	[SM 9222B]	Total coliform / E. coli

Category: SDW02 – Inorganic Parameters Including Na + Ca

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW02.01000	DW	Nephelometric	[EPA 180.1] [SM 2130 B]	Turbidity
Certified	Yes	NJ	SDW02.02000	DW	Automated Cadmium Reduction	[EPA 353.2] [SM 4500-NO3 F]	Nitrate
Certified	Yes	NJ	SDW02.04000	DW	Ion Chromatography	[EPA 300.0]	Nitrate
Certified	Yes	NJ	SDW02.06000	DW	Automated Cadmium Reduction	[SM 4500-NO3 F]	Nitrite
Certified	Yes	NJ	SDW02.08000	DW	Ion Chromatography	[EPA 300.0]	Nitrite
Certified	Yes	NJ	SDW02.13000	DW	Manual Potentiometric Ion Select Electrode	[SM 4500-F C]	Fluoride
Certified	Yes	NJ	SDW02.14000	DW	Ion Chromatography	[EPA 300.0]	Fluoride
Certified	Yes	NJ	SDW02.15200	DW	Spectrophotometric, Distill, Semi Automated	[EPA 335.4]	Cyanide
Certified	Yes	NJ	SDW02.18100	DW	Turbidity, Spectrophotometric	[SM 4500-SO4 E]	Sulfate
Certified	Yes	NJ	SDW02.19000	DW	Ion Chromatography	[EPA 300.0]	Sulfate
Suspended	No	NJ	SDW02.20000	DW	ICP	[SM 3120 B]	Sodium

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

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Category: SDW02 -- Inorganic Parameters Including Na + Ca

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW02.24000	DW	Gravimetric At 180	[SM 2540 C]	Total dissolved solids (TDS)
Certified	Yes	NJ	SDW02.27000	DW	ICP	[EPA 200.7] [SM 3120 B]	Calcium
Certified	Yes	NJ	SDW02.27200	DW	Ca as Carbonate	[EPA 200.7]	Calcium-hardness
Certified	Yes	NJ	SDW02.27300	DW	Hardness By Calculation	[EPA 200.7]	Total hardness
Certified	Yes	NJ	SDW02.28000	DW	Titrimetric Indicator	[SM 2320 B]	Alkalinity
Certified	Yes	NJ	SDW02.29000	DW	Electrometric Titration	[SM 2320 B]	Alkalinity
Certified	Yes	NJ	SDW02.29310	DW	Automated Phenate	[SM 4500-NH3 G]	Ammonia
Applied	No	NJ	SDW02.29500	DW	Ion Chromatography	[EPA 300.0]	Bromide
Certified	Yes	NJ	SDW02.30000	DW	Potentiometric	[SM 4500-Cl D]	Chloride
Certified	Yes	NJ	SDW02.31000	DW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NJ	SDW02.31100	DW	Ion Chromatography	[EPA 300.0]	Chlorate
Certified	Yes	NJ	SDW02.31120	DW	Ion Chromatography	[EPA 314.0]	Perchlorate
Applied	No	NJ	SDW02.31125	DW	LC MS/MS	[EPA 331.0]	Perchlorate
Applied	No	NJ	SDW02.31200	DW	Ion Chromatography	[EPA 300.1]	Chlorite (monthly)
Applied	No	NJ	SDW02.31240	DW	Amperometric, Titration	[SM 4500-ClO2 E]	Chlorite (daily)
Certified	Yes	NJ	SDW02.31400	DW	Ion Chromatography	[EPA 300.1]	Bromate
Certified	Yes	NJ	SDW02.32000	DW	Platinum-Cobalt	[SM 2120 B]	Color
Certified	Yes	NJ	SDW02.33000	DW	Methylene Blue	[SM 5540 C]	Foaming agents
Certified	Yes	NJ	SDW02.34000	DW	Consistent Series	[SM 2150 B]	Odor
Certified	Yes	NJ	SDW02.35000	DW	Conductance	[SM 2510 B]	Conductivity
Applied	No	NJ	SDW02.36400	DW	ICP	[EPA 200.7]	Silica
Certified	Yes	NJ	SDW02.37000	DW	Colorimetric	[SM 4500-P E]	Orthophosphate
Certified	Yes	NJ	SDW02.38000	DW	Ion Chromatography	[EPA 300.0]	Orthophosphate
Certified	Yes	NJ	SDW02.39600	DW	High Temp. Combustion	[SM 5310 B]	Total organic carbon (TOC)
Certified	Yes	NJ	SDW02.39610	DW	Persulfate-UV	[SM 5310 C]	Total organic carbon (TOC)
Certified	Yes	NJ	SDW02.40000	DW	Pyrolysis, Titrimetric	[SM 5320 B]	Total organic halides (TOX)

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Category: SDW03 -- Analyze-Immediately Inorganic Parameter

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW03.03000	DW	DPD, Colorimetric	[SM 4500-Cl G]	Chlorine - residual
Certified	Yes	NJ	SDW03.08000	DW	Electrometric	[SM 4500-H B]	pH
Certified	Yes	NJ	SDW03.09000	DW	Thermometric	[SM 2550 B]	Temperature

Category: SDW04 -- Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW04.03000	DW	ICP	[EPA 200.7] [SM 3120 B]	Aluminum
Certified	Yes	NJ	SDW04.03100	DW	ICP/MS	[EPA 200.8]	Aluminum
Applied	No	NJ	SDW04.05000	DW	AA, Graphite Furnace	[SM 3113 B]	Antimony
Certified	Yes	NJ	SDW04.07000	DW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NJ	SDW04.12000	DW	ICP/MS	[EPA 200.8]	Arsenic
Certified	Yes	NJ	SDW04.16000	DW	ICP	[EPA 200.7]	Barium
Certified	Yes	NJ	SDW04.17000	DW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NJ	SDW04.20000	DW	ICP	[EPA 200.7]	Beryllium
Certified	Yes	NJ	SDW04.21000	DW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NJ	SDW04.24000	DW	ICP	[EPA 200.7]	Cadmium
Certified	Yes	NJ	SDW04.25000	DW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NJ	SDW04.28000	DW	ICP	[EPA 200.7]	Chromium
Certified	Yes	NJ	SDW04.29000	DW	ICP/MS	[EPA 200.8]	Chromium
Certified	Yes	NJ	SDW04.33000	DW	ICP	[EPA 200.7]	Copper
Certified	Yes	NJ	SDW04.34000	DW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NJ	SDW04.37000	DW	ICP	[EPA 200.7] [SM 3120 B]	Iron
Applied	No	NJ	SDW04.38000	DW	Graphite Furnace	[SM 3113 B]	Lead
Certified	Yes	NJ	SDW04.40000	DW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	NJ	SDW04.41100	DW	ICP	[EPA 200.7]	Magnesium
Certified	Yes	NJ	SDW04.44000	DW	ICP	[EPA 200.7]	Manganese
Certified	Yes	NJ	SDW04.45000	DW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NJ	SDW04.46000	DW	Manual Cold Vapor	[EPA 245.1]	Mercury
Certified	Yes	NJ	SDW04.52000	DW	ICP	[EPA 200.7]	Nickel

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Category: SDW04 – Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW04.53000	DW	ICP/MS	[EPA 200.8]	Nickel
Applied	No	NJ	SDW04.55000	DW	AA, Graphite Furnace	[SM 3113 B]	Selenium
Certified	Yes	NJ	SDW04.57000	DW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NJ	SDW04.62000	DW	ICP	[EPA 200.7] [SM 3120 B]	Silver
Certified	Yes	NJ	SDW04.63000	DW	ICP/MS	[EPA 200.8]	Silver
Applied	No	NJ	SDW04.64000	DW	AA, Platform Furnace	[EPA 200.9]	Thallium
Certified	Yes	NJ	SDW04.65000	DW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NJ	SDW04.67000	DW	ICP	[EPA 200.7] [SM 3120 B]	Zinc
Certified	Yes	NJ	SDW04.68000	DW	ICP/MS	[EPA 200.8]	Zinc

Category: SDW06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW06.01010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromoform
Certified	Yes	NJ	SDW06.01020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroform
Certified	Yes	NJ	SDW06.01030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromochloromethane
Certified	Yes	NJ	SDW06.01040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromodichloromethane
Certified	Yes	NJ	SDW06.02010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Benzene
Certified	Yes	NJ	SDW06.02020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Carbon tetrachloride
Certified	Yes	NJ	SDW06.02030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorobenzene
Certified	Yes	NJ	SDW06.02040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SDW06.02050	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SDW06.02060	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SDW06.02070	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethane (1,1-)
Certified	Yes	NJ	SDW06.02080	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethane (1,2-)
Certified	Yes	NJ	SDW06.02090	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SDW06.02100	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SDW06.02110	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	SDW06.02120	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (1,2-)
Certified	Yes	NJ	SDW06.02130	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Ethylbenzene

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Category: **SDW06 – Organic Parameters, Chromatography/MS**

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW06.02140	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl tert-butyl ether
Certified	Yes	NJ	SDW06.02150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Naphthalene
Certified	Yes	NJ	SDW06.02160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Styrene
Certified	Yes	NJ	SDW06.02170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	SDW06.02180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethene
Certified	Yes	NJ	SDW06.02190	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	SDW06.02200	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethene
Certified	Yes	NJ	SDW06.02210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Toluene
Certified	Yes	NJ	SDW06.02220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SDW06.02230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloroethene (1,1-)
Certified	Yes	NJ	SDW06.02240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	SDW06.02250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Vinyl chloride
Certified	Yes	NJ	SDW06.02260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Xylenes (total)
Certified	Yes	NJ	SDW06.03010	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromobenzene
Certified	Yes	NJ	SDW06.03020	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromochloromethane
Certified	Yes	NJ	SDW06.03030	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Bromomethane
Certified	Yes	NJ	SDW06.03040	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Butyl benzene (n-)
Certified	Yes	NJ	SDW06.03050	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Sec-butylbenzene
Certified	Yes	NJ	SDW06.03060	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tert-butylbenzene
Certified	Yes	NJ	SDW06.03070	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroethane
Certified	Yes	NJ	SDW06.03080	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloromethane
Certified	Yes	NJ	SDW06.03090	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (2-)
Certified	Yes	NJ	SDW06.03100	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorotoluene (4-)
Certified	Yes	NJ	SDW06.03110	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SDW06.03120	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromomethane (1,2-) (EDB)
Certified	Yes	NJ	SDW06.03130	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dibromomethane
Certified	Yes	NJ	SDW06.03140	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichlorodifluoromethane
Certified	Yes	NJ	SDW06.03150	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (1,3-)
Certified	Yes	NJ	SDW06.03160	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropane (2,2-)
Certified	Yes	NJ	SDW06.03170	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (1,1-)
Certified	Yes	NJ	SDW06.03180	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SDW06.03190	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropene (trans-1,3-)

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Certified	Yes	NJ	SDW06.03200	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SDW06.03210	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropylbenzene
Certified	Yes	NJ	SDW06.03220	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Isopropyltoluene (4-)
Certified	Yes	NJ	SDW06.03230	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Propylbenzene (n-)
Certified	Yes	NJ	SDW06.03240	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NJ	SDW06.03250	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorobenzene (1,2,3-)
Certified	Yes	NJ	SDW06.03260	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichlorofluoromethane
Certified	Yes	NJ	SDW06.03270	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trichloropropane (1,2,3-)
Certified	Yes	NJ	SDW06.03280	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,2,4-)
Certified	Yes	NJ	SDW06.03300	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Trimethylbenzene (1,3,5-)
Certified	Yes	NJ	SDW06.03310	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Nitrobenzene
Certified	Yes	NJ	SDW06.03410	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Acetone
Certified	Yes	NJ	SDW06.03420	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Acrylonitrile
Certified	Yes	NJ	SDW06.03430	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Allyl chloride
Certified	Yes	NJ	SDW06.03440	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Butanone (2-)
Certified	Yes	NJ	SDW06.03450	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Carbon disulfide
Certified	Yes	NJ	SDW06.03460	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chloroacetonitrile
Certified	Yes	NJ	SDW06.03470	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Chlorobutane (1-)
Certified	Yes	NJ	SDW06.03480	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloro-2-butene (trans-1,4-)
Certified	Yes	NJ	SDW06.03490	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Dichloropropanone (1,1-)
Certified	Yes	NJ	SDW06.03500	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Diethyl ether (Ethyl ether)
Certified	Yes	NJ	SDW06.03510	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Ethyl methacrylate
Certified	Yes	NJ	SDW06.03520	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexachloroethane
Certified	Yes	NJ	SDW06.03530	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Hexanone (2-)
Certified	Yes	NJ	SDW06.03540	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methacrylonitrile
Certified	Yes	NJ	SDW06.03550	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl acrylate
Certified	Yes	NJ	SDW06.03560	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl iodide
Certified	Yes	NJ	SDW06.03570	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Methyl methacrylate
Certified	Yes	NJ	SDW06.03580	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Pentanone (4-methyl-2-)
Certified	Yes	NJ	SDW06.03590	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Nitropropane (2-)
Certified	Yes	NJ	SDW06.03600	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Pentachloroethane
Certified	Yes	NJ	SDW06.03610	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Propionitrile

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: SDW06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SDW06.03620	DW	GC/MS, P & T or Direct Injection, Capillary	[EPA 524.2]	Tetrahydrofuran

Category: SHW03 -- Analyze-Immediately Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW03.02000	NPW	Thermometric	[SM 2550 B]	Temperature

Category: SHW04 -- Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.01000	NPW	Acid Digestion/Surface and Groundwater, ICP, FLAA	[SW-846 3005A, Rev. 1, 7/92]	Metals, Total Rec and Dissolved
Certified	Yes	NJ	SHW04.01500	NPW	Acid Digestion/Aqueous Samples, ICP, FLAA	[SW-846 3010A, Rev. 1, 7/92]	Metals, Total

Category: SHW05 -- Organic Parameters, Prep. / Screening

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW05.01000	NPW	Separatory Funnel Extraction	[SW-846 3510C, Rev. 3, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.02000	NPW	Continuous Liquid-Liquid Extraction	[SW-846 3520C, Rev. 3, 12/96]	Semivolatile organics
Applied	No	NJ	SHW05.02100	NPW	Solid Phase Extraction (SPE)	[SW-846 3535, Rev. 0, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.07000	NPW	Purge & Trap Aqueous	[SW-846 5030B, Rev. 2, 12/96]	Volatile organics

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.06000	NPW	Combustion, Titration	[SW-846 9020B, Rev. 2, 9/94]	Total organic halides (TOX)
Certified	Yes	NJ	SHW09.17000	NPW	Wheatstone Bridge	[SW-846 9050A, Rev. 1, 12/96]	Specific conductance

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Category: SHW09 – Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.22000	NPW	Colorimetric, Auto, 4AAP Distillation	[SW-846 9066, Rev. 0, 9/86]	Phenols

Category: WPP01 – Microbiological Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP01.10000	NPW	Pour Plate	[SM 9215 B]	Heterotrophic plate count

Category: WPP02 – Inorganic Parameters, Nutrients and Dema

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP02.01000	NPW	Electrometric or Phenolphthalein	[EPA 305.1] [ASTM D1067-92]	Acidity as CaCO ₃
Certified	Yes	NJ	WPP02.01500	NPW	Electrometric or Color Titration	[SM 2320 B]	Alkalinity as CaCO ₃
Certified	Yes	NJ	WPP02.03000	NPW	Distillation, Titration	[EPA 350.2] [SM 4500-NH ₃ B, E]	Ammonia
Certified	Yes	NJ	WPP02.04000	NPW	Distillation, Automated Phenate	[EPA 350.2 + .1] [SM 4500-NH ₃ H]	Ammonia
Certified	Yes	NJ	WPP02.05000	NPW	Dissolved Oxygen Depletion	[EPA 405.1] [SM 5210 B]	Biochemical oxygen demand
Certified	Yes	NJ	WPP02.06000	NPW	ICP	[EPA 200.7] [SM 3120 B]	Boron
Certified	Yes	NJ	WPP02.06600	NPW	Ion Chromatography	[EPA 300.0]	Bromate
Certified	Yes	NJ	WPP02.07100	NPW	Ion Chromatography	[EPA 300.0]	Bromide
Certified	Yes	NJ	WPP02.08000	NPW	Digestion, ICP	[EPA 200.7]	Calcium
Certified	Yes	NJ	WPP02.08050	NPW	ICP/MS	[EPA 200.8]	Calcium
Certified	Yes	NJ	WPP02.09500	NPW	Dissolved Oxygen Depletion, Nitrification Inhibition	[SM 5210 B]	Carbonaceous BOD (CBOD)
Certified	Yes	NJ	WPP02.10000	NPW	Titrimetric	[EPA 410.1 or .2 or .3] [SM 5220 C]	Chemical oxygen demand
Certified	Yes	NJ	WPP02.10500	NPW	Spectrophotometric Manual/Auto	[SM 5220 D]	Chemical oxygen demand
Certified	Yes	NJ	WPP02.11500	NPW	Titrimetric, Mercuric Nitrate	[EPA 325.3] [SM 4500-Cl C]	Chloride
Certified	Yes	NJ	WPP02.12500	NPW	Colorimetric, Automated (Ferryanide)	[EPA 325.1 OR .2]	Chloride
Certified	Yes	NJ	WPP02.12600	NPW	Ion Chromatography	[EPA 300.0]	Chloride
Certified	Yes	NJ	WPP02.12700	NPW	Ion Chromatography	[EPA 300.0]	Chlorate
Certified	Yes	NJ	WPP02.12800	NPW	Ion Chromatography	[EPA 300.0]	Chlorite
Certified	Yes	NJ	WPP02.13500	NPW	Colorimetric (Platinum-Cobalt)	[EPA 110.2] [SM 2120 B]	Color

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Category: **WPP02 – Inorganic Parameters, Nutrients and Dema**

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP02.14500	NPW	Distillation, Titrimetric	[SM 4500-CN C, D]	Cyanide
Certified	Yes	NJ	WPP02.15000	NPW	Distillation, Spectrophotometric (Manual)	[EPA 335.2] [SM 4500-CN C, E]	Cyanide
Certified	Yes	NJ	WPP02.16000	NPW	Manual Distillation, Titrimetric/Spectro	[EPA 335.1] [SM 4500-CN C,G]	Cyanide - amenable to Cl2
Certified	Yes	NJ	WPP02.16500	NPW	Distillation + Electrode, Manual	[EPA 340.2] [SM 4500-F B, C]	Fluoride
Applied	No	NJ	WPP02.17500	NPW	Distillation + Colorimetric(Spadns)	[EPA 340.1]	Fluoride
Certified	Yes	NJ	WPP02.18100	NPW	Ion Chromatography	[EPA 300.0]	Fluoride
Certified	Yes	NJ	WPP02.20100	NPW	Ca + Mg Carbonates, ICP	[EPA 200.7]	Hardness - total as CaCO3
Certified	Yes	NJ	WPP02.20500	NPW	Digestion, Distillation, Titration	[EPA 351.3] [SM 4500-N Org B or C]	Kjeldahl nitrogen - total
Certified	Yes	NJ	WPP02.22000	NPW	Digestion, Distillation, Automated Phenate	[EPA 351.1]	Kjeldahl nitrogen - total
Certified	Yes	NJ	WPP02.24000	NPW	Digestion, ICP	[EPA 200.7]	Magnesium
Applied	No	NJ	WPP02.24050	NPW	ICP/MS	[EPA 200.8]	Magnesium
Certified	Yes	NJ	WPP02.26100	NPW	Ion Chromatography	[EPA 300.0]	Nitrate
Certified	Yes	NJ	WPP02.27000	NPW	Cadmium Reduction, Automated	[EPA 353.2]	Nitrate - nitrite
Applied	No	NJ	WPP02.27500	NPW	Spectrophotometric Auto Hydrazine	[EPA 353.1]	Nitrate - nitrite
Certified	Yes	NJ	WPP02.28000	NPW	Spectrophotometric, Manual	[EPA 354.1] [SM 4500-NO2 B]	Nitrite
Certified	Yes	NJ	WPP02.28600	NPW	Ion Chromatography	[EPA 300.0]	Nitrite
Certified	Yes	NJ	WPP02.29000	NPW	Gravimetric	[EPA 413.1] [SM 5520 B]	Oil & grease - total recov
Certified	Yes	NJ	WPP02.29100	NPW	Gravimetric, Hexane Extractable Material-LL	[EPA 1664A]	Oil & grease - hem-LL
Certified	Yes	NJ	WPP02.29150	NPW	Gravimetric, Hexane Extractable Material-SPE	[EPA 1664A]	Oil & grease - hem-SPE
Certified	Yes	NJ	WPP02.29200	NPW	Gravimetric, Silica Gel Treated-Hem	[EPA 1664A]	Oil & grease - sgt-non polar
Certified	Yes	NJ	WPP02.29250	NPW	Gravimetric, Silica Gel Treated-Hem-SPE	[EPA 1664A]	Oil & grease - non polar
Certified	Yes	NJ	WPP02.29260	NPW	Spectrophotometric, Infrared	[EPA 418.1]	Total rec. petroleum hydrocarbons
Certified	Yes	NJ	WPP02.30000	NPW	Combustion or Oxidation	[EPA 415.1]	Total organic carbon (TOC)
Certified	Yes	NJ	WPP02.30500	NPW	Total Kjeldahl-N Minus Ammonia-N	[EPA 351.1, 2, 3, 4 - 350.1 2.3] [SM 4500-NH3 B, C, E, F, G, H]	Organic nitrogen
Certified	Yes	NJ	WPP02.31500	NPW	Ascorbic Acid, Manual Single Reagent	[EPA 365.2] [SM 4500-P, E]	Orthophosphate
Certified	Yes	NJ	WPP02.32100	NPW	Ion Chromatography	[EPA 300.0]	Orthophosphate
Certified	Yes	NJ	WPP02.32500	NPW	Manual Distillation, Colorimetric 4AAP	[EPA 420.1]	Phenols
Certified	Yes	NJ	WPP02.34000	NPW	Persulfate Digestion + Manual	[EPA 365.2 + .3]	Phosphorus (total)
Suspended	No	NJ	WPP02.36500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Potassium
Applied	No	NJ	WPP02.36550	NPW	ICP/MS	[EPA 200.8]	Potassium
Certified	Yes	NJ	WPP02.38000	NPW	Gravimetric, 103-105 Degrees C	[EPA 160.3] [SM 2540 B]	Residue - total

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284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
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Category: WPP02 -- Inorganic Parameters, Nutrients and Dema

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP02.38500	NPW	Gravimetric, 180 Degrees C	[EPA 160.1] [SM 2540 C]	Residue - filterable (TDS)
Certified	Yes	NJ	WPP02.39000	NPW	Gravimetric, 103-105 Degrees C, Post Washing	[EPA 160.2] [SM 2540 D]	Residue - nonfilterable (TSS)
Certified	Yes	NJ	WPP02.39500	NPW	Volumetric (Imhoff Cone) or Gravimetric	[EPA 160.5] [SM 2540 F]	Residue - settleable
Certified	Yes	NJ	WPP02.40000	NPW	Gravimetric, 550 Degrees C	[EPA 160.4]	Residue - volatile
Certified	Yes	NJ	WPP02.40100	NPW	Gravimetric, 500 Degrees C	[SM 2540 G]	Total, fixed, and volatile solids (SQAR)
Certified	Yes	NJ	WPP02.41000	NPW	Hydrometric (Density Salinity Tables)	[SM 2520 C]	Salinity
Certified	Yes	NJ	WPP02.42500	NPW	0.45u Filtration + ICP	[EPA 200.7] [SM 3120 B]	Silica - dissolved
Certified	Yes	NJ	WPP02.44000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Sodium
Certified	Yes	NJ	WPP02.44050	NPW	ICP/MS	[EPA 200.8]	Sodium
Certified	Yes	NJ	WPP02.45500	NPW	Wheatstone Bridge	[EPA 120.1] [SM 2510 B]	Specific conductance
Certified	Yes	NJ	WPP02.46500	NPW	Turbidimetric	[EPA 375.4]	Sulfate
Certified	Yes	NJ	WPP02.47100	NPW	Ion Chromatography	[EPA 300.0]	Sulfate
Certified	Yes	NJ	WPP02.47500	NPW	Titrimetric, Iodine	[EPA 376.1]	Sulfides
Certified	Yes	NJ	WPP02.48500	NPW	Colorimetric (Methylene Blue)	[EPA 425.1] [SM 5540 C]	Surfactants
Certified	Yes	NJ	WPP02.50000	NPW	Nephelometric	[EPA 180.1] [SM 2130 B]	Turbidity
Applied	No	NJ	WPP02.51000	NPW	Electrode	[SM 2710 B]	Specific oxygen uptake

Category: WPP03 -- Analyze-Immediately Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP03.05000	NPW	Spectrophotometric, DPD	[EPA 330.5]	Chlorine
Certified	Yes	NJ	WPP03.07000	NPW	Winkler, Azide Modification	[EPA 360.2] [SM 4500-O C]	Oxygen (dissolved)
Certified	Yes	NJ	WPP03.08000	NPW	Electrode	[EPA 360.1] [SM 4500-O G]	Oxygen (dissolved)
Certified	Yes	NJ	WPP03.09000	NPW	Electrometric	[EPA 150.1] [SM 4500-H B]	pH
Applied	No	NJ	WPP03.12000	NPW	Titrimetric, Iodine-Iodate	[EPA 377.1] [SM 4500-SO3 B]	Sulfite - SO3
Certified	Yes	NJ	WPP03.14000	NPW	Thermometric	[EPA 170.1] [SM 2550 B]	Temperature

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Category: WPP04 -- Inorganic Parameters, Metals

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP04.00800	NPW	Total Recoverable Elements	[EPA 200.2, Rev. 2.8, 5/94]	Sample preparation (Metals)
Certified	Yes	NJ	WPP04.02000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Aluminum
Certified	Yes	NJ	WPP04.02100	NPW	ICP/MS	[EPA 200.8]	Aluminum
Certified	Yes	NJ	WPP04.04500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Antimony
Certified	Yes	NJ	WPP04.04600	NPW	ICP/MS	[EPA 200.8]	Antimony
Certified	Yes	NJ	WPP04.05600	NPW	Digestion, ICP	[EPA 200.7] [SM 3120B]	Arsenic
Certified	Yes	NJ	WPP04.05700	NPW	ICP/MS	[EPA 200.8]	Arsenic
Certified	Yes	NJ	WPP04.08000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Barium
Certified	Yes	NJ	WPP04.08200	NPW	ICP/MS	[EPA 200.8]	Barium
Certified	Yes	NJ	WPP04.11000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Beryllium
Certified	Yes	NJ	WPP04.11100	NPW	ICP/MS	[EPA 200.8]	Beryllium
Certified	Yes	NJ	WPP04.13500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Cadmium
Certified	Yes	NJ	WPP04.13600	NPW	ICP/MS	[EPA 200.8]	Cadmium
Certified	Yes	NJ	WPP04.15000	NPW	0.45u Filter, Colorimetric DPC	[SM 3500-Cr D]	Chromium (VI)
Certified	Yes	NJ	WPP04.18000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Chromium
Certified	Yes	NJ	WPP04.18100	NPW	ICP/MS	[EPA 200.8]	Chromium
Certified	Yes	NJ	WPP04.19500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120B]	Cobalt
Certified	Yes	NJ	WPP04.19600	NPW	ICP/MS	[EPA 200.8]	Cobalt
Certified	Yes	NJ	WPP04.21500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Copper
Certified	Yes	NJ	WPP04.21600	NPW	ICP/MS	[EPA 200.8]	Copper
Certified	Yes	NJ	WPP04.26500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Iron
Applied	No	NJ	WPP04.26550	NPW	ICP/MS	[EPA 200.8]	Iron
Certified	Yes	NJ	WPP04.28000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Lead
Certified	Yes	NJ	WPP04.28100	NPW	ICP/MS	[EPA 200.8]	Lead
Certified	Yes	NJ	WPP04.31000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Manganese
Certified	Yes	NJ	WPP04.31100	NPW	ICP/MS	[EPA 200.8]	Manganese
Certified	Yes	NJ	WPP04.33000	NPW	Manual Cold Vapor	[EPA 245.1] [SM 3112 B]	Mercury
Applied	No	NJ	WPP04.33550	NPW	Digestion, ICP/MS (Incinerator)	[EPA 200.8]	Mercury
Certified	Yes	NJ	WPP04.35000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Molybdenum
Certified	Yes	NJ	WPP04.35200	NPW	ICP/MS	[EPA 200.8]	Molybdenum
Certified	Yes	NJ	WPP04.37500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Nickel
Certified	Yes	NJ	WPP04.37600	NPW	ICP/MS	[EPA 200.8]	Nickel

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Category: WPP04 – Inorganic Parameters, Metals

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Certified	Yes	NJ	WPP04.45500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Selenium
Certified	Yes	NJ	WPP04.45600	NPW	ICP/MS	[EPA 200.8]	Selenium
Certified	Yes	NJ	WPP04.48000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Silver
Certified	Yes	NJ	WPP04.48200	NPW	ICP/MS	[EPA 200.8]	Silver
Certified	Yes	NJ	WPP04.50000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Thallium
Certified	Yes	NJ	WPP04.50100	NPW	ICP/MS	[EPA 200.8]	Thallium
Certified	Yes	NJ	WPP04.51100	NPW	Digestion, ICP	[EPA 200.7]	Tin
Applied	No	NJ	WPP04.51200	NPW	ICP/MS	[EPA 200.8]	Tin
Applied	No	NJ	WPP04.52050	NPW	Digestion, ICP	[EPA 200.7]	Titanium
Applied	No	NJ	WPP04.52070	NPW	ICP/MS	[EPA 200.8]	Titanium
Certified	Yes	NJ	WPP04.52300	NPW	ICP/MS	[EPA 200.8]	Thorium
Applied	No	NJ	WPP04.52400	NPW	ICP/MS	[EPA 200.8]	Tungsten
Certified	Yes	NJ	WPP04.52500	NPW	ICP/MS	[EPA 200.8]	Uranium
Certified	Yes	NJ	WPP04.54000	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Vanadium
Certified	Yes	NJ	WPP04.54100	NPW	ICP/MS	[EPA 200.8]	Vanadium
Certified	Yes	NJ	WPP04.56500	NPW	Digestion, ICP	[EPA 200.7] [SM 3120 B]	Zinc
Certified	Yes	NJ	WPP04.56600	NPW	ICP/MS	[EPA 200.8]	Zinc

Category: WPP05 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP05.01010	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Bromodichloromethane
Certified	Yes	NJ	WPP05.01020	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Bromoform
Certified	Yes	NJ	WPP05.01030	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Bromomethane
Certified	Yes	NJ	WPP05.01040	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Carbon tetrachloride
Certified	Yes	NJ	WPP05.01060	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Chloroethane
Certified	Yes	NJ	WPP05.01070	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	WPP05.01080	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Chloroform
Certified	Yes	NJ	WPP05.01090	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Chloromethane
Certified	Yes	NJ	WPP05.01100	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dibromochloromethane

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National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

Quality Assurance Manual
Revision #: 2001-16
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Category: WPP05 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP05.01110	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP05.01120	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP05.01130	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP05.01140	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichlorodifluoromethane
Certified	Yes	NJ	WPP05.01150	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloroethane (1,1-)
Certified	Yes	NJ	WPP05.01160	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloroethane (1,2-)
Certified	Yes	NJ	WPP05.01170	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloroethene (1,1-)
Certified	Yes	NJ	WPP05.01180	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	WPP05.01190	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloropropane (1,2-)
Certified	Yes	NJ	WPP05.01200	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	WPP05.01210	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	WPP05.01220	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	WPP05.01230	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	WPP05.01240	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Tetrachloroethene
Certified	Yes	NJ	WPP05.01250	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	WPP05.01260	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	WPP05.01270	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Trichloroethene
Certified	Yes	NJ	WPP05.01280	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Trichlorofluoromethane
Certified	Yes	NJ	WPP05.01290	NPW	Purge & Trap, GC (HECD)	[EPA 601] [SM 6230 B]	Vinyl chloride
Certified	Yes	NJ	WPP05.02010	NPW	Purge & Trap, GC (PID)	[EPA 602] [SM 6220 B]	Benzene
Certified	Yes	NJ	WPP05.02030	NPW	Purge & Trap, GC (PID)	[EPA 602] [SM 6220 B]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP05.02040	NPW	Purge & Trap, GC (PID)	[EPA 602] [SM 6220 B]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP05.02050	NPW	Purge & Trap, GC (PID)	[EPA 602] [SM 6220 B]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP05.02060	NPW	Purge & Trap, GC (PID)	[EPA 602] [SM 6220 B]	Ethylbenzene
Certified	Yes	NJ	WPP05.02062	NPW	Purge & Trap, GC (PID)	[EPA 602]	Methyl tert-butyl ether
Certified	Yes	NJ	WPP05.02064	NPW	Purge & Trap, GC (PID)	[EPA 602]	Tert-butyl alcohol
Certified	Yes	NJ	WPP05.02070	NPW	Purge & Trap, GC (PID)	[EPA 602]	Toluene
Certified	Yes	NJ	WPP05.02080	NPW	Purge & Trap, GC (PID)	[EPA 602]	Xylenes (total)
Certified	Yes	NJ	WPP05.09010	NPW	Extract/GC (ECD)	[EPA 608]	Aldrin
Certified	Yes	NJ	WPP05.09020	NPW	Extract/GC (ECD)	[EPA 608]	Alpha BHC
Certified	Yes	NJ	WPP05.09030	NPW	Extract/GC (ECD)	[EPA 608]	Beta BHC
Certified	Yes	NJ	WPP05.09040	NPW	Extract/GC (ECD)	[EPA 608]	Delta BHC

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

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Category: WPP05 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP05.09050	NPW	Extract/GC (ECD)	[EPA 608]	Lindane (gamma BHC)
Certified	Yes	NJ	WPP05.09060	NPW	Extract/GC (ECD)	[EPA 608]	Chlordane
Certified	Yes	NJ	WPP05.09070	NPW	Extract/GC (ECD)	[EPA 608]	DDD (4,4'-)
Certified	Yes	NJ	WPP05.09080	NPW	Extract/GC (ECD)	[EPA 608]	DDE (4,4'-)
Certified	Yes	NJ	WPP05.09090	NPW	Extract/GC (ECD)	[EPA 608]	DDT (4,4'-)
Certified	Yes	NJ	WPP05.09100	NPW	Extract/GC (ECD)	[EPA 608]	Dieldrin
Certified	Yes	NJ	WPP05.09110	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan I
Certified	Yes	NJ	WPP05.09120	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan II
Certified	Yes	NJ	WPP05.09130	NPW	Extract/GC (ECD)	[EPA 608]	Endosulfan sulfate
Certified	Yes	NJ	WPP05.09140	NPW	Extract/GC (ECD)	[EPA 608]	Endrin
Certified	Yes	NJ	WPP05.09150	NPW	Extract/GC (ECD)	[EPA 608]	Endrin aldehyde
Certified	Yes	NJ	WPP05.09160	NPW	Extract/GC (ECD)	[EPA 608]	Endrin ketone
Certified	Yes	NJ	WPP05.09170	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor
Certified	Yes	NJ	WPP05.09180	NPW	Extract/GC (ECD)	[EPA 608]	Heptachlor epoxide
Certified	Yes	NJ	WPP05.09190	NPW	Extract/GC (ECD)	[EPA 608]	Methoxychlor
Certified	Yes	NJ	WPP05.09200	NPW	Extract/GC (ECD)	[EPA 608]	Toxaphene
Certified	Yes	NJ	WPP05.11010	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1016
Certified	Yes	NJ	WPP05.11020	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1221
Certified	Yes	NJ	WPP05.11030	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1232
Certified	Yes	NJ	WPP05.11040	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1242
Certified	Yes	NJ	WPP05.11050	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1248
Certified	Yes	NJ	WPP05.11060	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1254
Certified	Yes	NJ	WPP05.11070	NPW	Extract/GC (ECD)	[EPA 608]	PCB 1260
Applied	No	NJ	WPP05.13010	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Acenaphthene
Applied	No	NJ	WPP05.13020	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Acenaphthylene
Applied	No	NJ	WPP05.13030	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Anthracene
Applied	No	NJ	WPP05.13040	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Benzo(a)anthracene
Applied	No	NJ	WPP05.13050	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Benzo(a)pyrene
Applied	No	NJ	WPP05.13060	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Benzo(b)fluoranthene
Applied	No	NJ	WPP05.13070	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Benzo(ghi)perylene
Applied	No	NJ	WPP05.13080	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Benzo(k)fluoranthene
Applied	No	NJ	WPP05.13090	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Chrysene

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP05.13100	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Dibenzo(a,h)anthracene
Applied	No	NJ	WPP05.13110	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Fluoranthene
Applied	No	NJ	WPP05.13120	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Fluorene
Applied	No	NJ	WPP05.13130	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Indeno(1,2,3-cd)pyrene
Applied	No	NJ	WPP05.13140	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Naphthalene
Applied	No	NJ	WPP05.13150	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Phenanthrene
Applied	No	NJ	WPP05.13160	NPW	Extract/HPLC (UV/Fluorescence)	[EPA 610] [SM 6440 B]	Pyrene
Applied	No	NJ	WPP05.14010	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Acenaphthene
Applied	No	NJ	WPP05.14020	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Acenaphthylene
Applied	No	NJ	WPP05.14030	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Anthracene
Applied	No	NJ	WPP05.14040	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Benzo(a)anthracene
Applied	No	NJ	WPP05.14050	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Benzo(a)pyrene
Applied	No	NJ	WPP05.14060	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Benzo(b)fluoranthene
Applied	No	NJ	WPP05.14070	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Benzo(ghi)perylene
Applied	No	NJ	WPP05.14080	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Benzo(k)fluoranthene
Applied	No	NJ	WPP05.14090	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Chrysene
Applied	No	NJ	WPP05.14100	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Dibenzo(a,h)anthracene
Applied	No	NJ	WPP05.14110	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Fluoranthene
Applied	No	NJ	WPP05.14120	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Fluorene
Applied	No	NJ	WPP05.14130	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Indeno(1,2,3-cd)pyrene
Applied	No	NJ	WPP05.14140	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Naphthalene
Applied	No	NJ	WPP05.14150	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Phenanthrene
Applied	No	NJ	WPP05.14160	NPW	Extract/GC (FID)	[EPA 610] [ASTM D4657-92] [SM 6440 B]	Pyrene
Applied	No	NJ	WPP05.30000	NPW	Extraction, GC, FID	[OTHER NJ-OQA-QAM-025, Rev. 5]	Petroleum Organics

Category: WPP06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.02010	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Benzene
Certified	Yes	NJ	WPP06.02020	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Bromodichloromethane

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Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.02030	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Bromoform
Certified	Yes	NJ	WPP06.02040	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Bromomethane
Certified	Yes	NJ	WPP06.02050	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Carbon tetrachloride
Certified	Yes	NJ	WPP06.02060	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Chlorobenzene
Certified	Yes	NJ	WPP06.02070	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Chloroethane
Certified	Yes	NJ	WPP06.02080	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	WPP06.02090	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Chloroform
Certified	Yes	NJ	WPP06.02100	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Chloromethane
Certified	Yes	NJ	WPP06.02110	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dibromochloromethane
Certified	Yes	NJ	WPP06.02120	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP06.02130	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP06.02140	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP06.02150	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloroethane (1,1-)
Certified	Yes	NJ	WPP06.02160	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloroethane (1,2-)
Certified	Yes	NJ	WPP06.02170	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloroethene (1,1-)
Certified	Yes	NJ	WPP06.02180	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	WPP06.02190	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloropropane (1,2-)
Certified	Yes	NJ	WPP06.02200	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	WPP06.02210	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	WPP06.02220	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Ethylbenzene
Certified	Yes	NJ	WPP06.02230	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	WPP06.02232	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Methyl tert-butyl ether
Certified	Yes	NJ	WPP06.02234	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Tert-butyl alcohol
Certified	Yes	NJ	WPP06.02238	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Styrene
Certified	Yes	NJ	WPP06.02240	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	WPP06.02250	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Tetrachloroethene
Certified	Yes	NJ	WPP06.02260	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Toluene
Certified	Yes	NJ	WPP06.02270	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	WPP06.02280	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	WPP06.02290	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Trichloroethene
Certified	Yes	NJ	WPP06.02300	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Trichlorofluoromethane
Certified	Yes	NJ	WPP06.02310	NPW	GC/MS, P & T, Capillary Column	[EPA 624] [SM 6210 B]	Vinyl chloride

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Certified	Yes	NJ	WPP06.02312	NPW	GC/MS, P & T, Capillary Column	[EPA 624]	Xylenes (total)
Certified	Yes	NJ	WPP06.03010	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Acenaphthene
Certified	Yes	NJ	WPP06.03020	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Acenaphthylene
Certified	Yes	NJ	WPP06.03030	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Anthracene
Certified	Yes	NJ	WPP06.03040	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzo(a)anthracene
Certified	Yes	NJ	WPP06.03050	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzo(b)fluoranthene
Certified	Yes	NJ	WPP06.03060	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzo(k)fluoranthene
Certified	Yes	NJ	WPP06.03070	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzo(a)pyrene
Certified	Yes	NJ	WPP06.03080	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzo(ghi)perylene
Certified	Yes	NJ	WPP06.03090	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Butyl benzyl phthalate
Certified	Yes	NJ	WPP06.03100	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	WPP06.03110	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Bis (2-chloroethoxy) methane
Certified	Yes	NJ	WPP06.03120	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NJ	WPP06.03130	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Bis (2-chloroisopropyl) ether
Certified	Yes	NJ	WPP06.03140	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Bromophenyl-phenyl ether (4-)
Certified	Yes	NJ	WPP06.03150	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Chloronaphthalene (2-)
Certified	Yes	NJ	WPP06.03160	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NJ	WPP06.03170	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Chrysene
Certified	Yes	NJ	WPP06.03180	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	WPP06.03190	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Di-n-butyl phthalate
Certified	Yes	NJ	WPP06.03200	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	WPP06.03210	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	WPP06.03220	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	WPP06.03230	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichlorobenzidine (3,3'-)
Certified	Yes	NJ	WPP06.03240	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Diethyl phthalate
Certified	Yes	NJ	WPP06.03250	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dimethyl phthalate
Certified	Yes	NJ	WPP06.03260	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dinitrotoluene (2,4-)
Certified	Yes	NJ	WPP06.03270	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dinitrotoluene (2,6-)
Certified	Yes	NJ	WPP06.03280	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Di-n-octyl phthalate
Certified	Yes	NJ	WPP06.03290	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Fluoranthene
Certified	Yes	NJ	WPP06.03300	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Fluorene
Certified	Yes	NJ	WPP06.03310	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Hexachlorobenzene

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.03320	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	WPP06.03330	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Hexachloroethane
Certified	Yes	NJ	WPP06.03340	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	WPP06.03350	NPW	Extract, GC/MS	[EPA 625] [SM 6410B]	Isophorone
Certified	Yes	NJ	WPP06.03358	NPW	Extract, GC/MS	[EPA 625]	Methylnaphthalene (2-)
Certified	Yes	NJ	WPP06.03360	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Naphthalene
Certified	Yes	NJ	WPP06.03366	NPW	Extract, GC/MS	[EPA 625]	Chloroaniline (4-)
Certified	Yes	NJ	WPP06.03367	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (2-)
Certified	Yes	NJ	WPP06.03368	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (3-)
Certified	Yes	NJ	WPP06.03369	NPW	Extract, GC/MS	[EPA 625]	Nitroaniline (4-)
Certified	Yes	NJ	WPP06.03370	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Nitrobenzene
Certified	Yes	NJ	WPP06.03380	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	N-Nitroso-di-n-propylamine
Certified	Yes	NJ	WPP06.03390	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Phenanthrene
Certified	Yes	NJ	WPP06.03400	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Pyrene
Certified	Yes	NJ	WPP06.03410	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	WPP06.03417	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (2-)
Certified	Yes	NJ	WPP06.03418	NPW	Extract, GC/MS	[EPA 625]	Methylphenol (4-)
Certified	Yes	NJ	WPP06.03420	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Methyl phenol (4-chloro-3-)
Certified	Yes	NJ	WPP06.03430	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Chlorophenol (2-)
Certified	Yes	NJ	WPP06.03440	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichlorophenol (2,4-)
Certified	Yes	NJ	WPP06.03450	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dimethylphenol (2,4-)
Certified	Yes	NJ	WPP06.03460	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dinitrophenol (2,4-)
Certified	Yes	NJ	WPP06.03470	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dinitrophenol (2-methyl-4,6-)
Certified	Yes	NJ	WPP06.03480	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Nitrophenol (2-)
Certified	Yes	NJ	WPP06.03490	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Nitrophenol (4-)
Certified	Yes	NJ	WPP06.03500	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Pentachlorophenol
Certified	Yes	NJ	WPP06.03510	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Phenol
Certified	Yes	NJ	WPP06.03518	NPW	Extract, GC/MS	[EPA 625]	Trichlorophenol (2,4,5-)
Certified	Yes	NJ	WPP06.03520	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Trichlorophenol (2,4,6-)
Certified	Yes	NJ	WPP06.03530	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzoic acid
Certified	Yes	NJ	WPP06.03540	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Methylphenol (4-)
Certified	Yes	NJ	WPP06.03550	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Acetophenone

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Category: WPP06 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	WPP06.03560	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Alpha - terpineol
Certified	Yes	NJ	WPP06.03570	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Aniline
Certified	Yes	NJ	WPP06.03580	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Benzidine
Certified	Yes	NJ	WPP06.03590	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Carbazole
Certified	Yes	NJ	WPP06.03600	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dichloroaniline (2,3-)
Certified	Yes	NJ	WPP06.03610	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Methylphenol (2-)
Certified	Yes	NJ	WPP06.03620	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Decane (n-)
Certified	Yes	NJ	WPP06.03630	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Docosane (n-)
Certified	Yes	NJ	WPP06.03640	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Dodecane (n-)
Certified	Yes	NJ	WPP06.03650	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Eicosane (n-)
Certified	Yes	NJ	WPP06.03660	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Hexachlorocyclopentadiene
Certified	Yes	NJ	WPP06.03670	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Hexadecane (n-)
Certified	Yes	NJ	WPP06.03680	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	N-Nitrosodimethylamine
Certified	Yes	NJ	WPP06.03690	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	N-Nitrosodiphenylamine
Certified	Yes	NJ	WPP06.03700	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Octadecane (n-)
Certified	Yes	NJ	WPP06.03710	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Tetradecane (n-)
Certified	Yes	NJ	WPP06.03720	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Pyridine
Certified	Yes	NJ	WPP06.03730	NPW	Extract, GC/MS	[EPA 625] [SM 6410 B]	Methylphenanthrene (1-)
Applied	No	NJ	WPP06.08001	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Chlorobiphenyl (2-) (PCB 1)
Applied	No	NJ	WPP06.08002	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Chlorobiphenyl (3-) (PCB 2)
Applied	No	NJ	WPP06.08003	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Chlorobiphenyl (4-) (PCB 3)
Applied	No	NJ	WPP06.08004	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,2'-) (PCB 4)
Applied	No	NJ	WPP06.08005	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,3-) (PCB 5)
Applied	No	NJ	WPP06.08006	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,3'-) (PCB 6)
Applied	No	NJ	WPP06.08007	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,4-) (PCB 7)
Applied	No	NJ	WPP06.08008	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,4'-) (PCB 8)
Applied	No	NJ	WPP06.08009	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,5-) (PCB 9)
Applied	No	NJ	WPP06.08010	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (2,6-) (PCB 10)
Applied	No	NJ	WPP06.08011	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (3,3'-) (PCB 11)
Applied	No	NJ	WPP06.08012	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (3,4-) (PCB 12)
Applied	No	NJ	WPP06.08013	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (3,4'-) (PCB 13)
Applied	No	NJ	WPP06.08014	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (3,5-) (PCB 14)

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Applied	No	NJ	WPP06.08015	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Dichlorobiphenyl (4,4'-) (PCB 15)
Applied	No	NJ	WPP06.08016	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,2',3'-) (PCB 16)
Applied	No	NJ	WPP06.08017	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,2',4'-) (PCB 17)
Applied	No	NJ	WPP06.08018	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,2',5'-) (PCB 18)
Applied	No	NJ	WPP06.08019	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,2',6'-) (PCB 19)
Applied	No	NJ	WPP06.08020	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3,3'-) (PCB 20)
Applied	No	NJ	WPP06.08021	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3,4'-) (PCB 21)
Applied	No	NJ	WPP06.08022	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3,4'-) (PCB 22)
Applied	No	NJ	WPP06.08023	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3,5'-) (PCB 23)
Applied	No	NJ	WPP06.08024	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3,6'-) (PCB 24)
Applied	No	NJ	WPP06.08025	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3',4'-) (PCB 25)
Applied	No	NJ	WPP06.08026	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3',5'-) (PCB 26)
Applied	No	NJ	WPP06.08027	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3',6'-) (PCB 27)
Applied	No	NJ	WPP06.08028	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,4,4'-) (PCB 28)
Applied	No	NJ	WPP06.08029	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,4,5'-) (PCB 29)
Applied	No	NJ	WPP06.08030	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,4,6'-) (PCB 30)
Applied	No	NJ	WPP06.08031	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,4',5'-) (PCB 31)
Applied	No	NJ	WPP06.08032	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,4',6'-) (PCB 32)
Applied	No	NJ	WPP06.08033	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3',4'-) (PCB 33)
Applied	No	NJ	WPP06.08034	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (2,3',5'-) (PCB 34)
Applied	No	NJ	WPP06.08035	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (3,3',4'-) (PCB 35)
Applied	No	NJ	WPP06.08036	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (3,3',5'-) (PCB 36)
Applied	No	NJ	WPP06.08037	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (3,4,4'-) (PCB 37)
Applied	No	NJ	WPP06.08038	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (3,4,5'-) (PCB 38)
Applied	No	NJ	WPP06.08039	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Trichlorobiphenyl (3,4',5'-) (PCB 39)
Applied	No	NJ	WPP06.08040	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,3'-) (PCB 40)
Applied	No	NJ	WPP06.08041	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,4'-) (PCB 41)
Applied	No	NJ	WPP06.08042	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,4'-) (PCB 42)
Applied	No	NJ	WPP06.08043	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,5'-) (PCB 43)
Applied	No	NJ	WPP06.08044	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,5'-) (PCB 44)
Applied	No	NJ	WPP06.08045	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,6'-) (PCB 45)
Applied	No	NJ	WPP06.08046	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',3,6'-) (PCB 46)

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Applied	No	NJ	WPP06.08047	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',4,4'-) (PCB 47)
Applied	No	NJ	WPP06.08048	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',4,5'-) (PCB 48)
Applied	No	NJ	WPP06.08049	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',4,5'-) (PCB 49)
Applied	No	NJ	WPP06.08050	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',4,6'-) (PCB 50)
Applied	No	NJ	WPP06.08051	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',4,6'-) (PCB 51)
Applied	No	NJ	WPP06.08052	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',5,5'-) (PCB 52)
Applied	No	NJ	WPP06.08053	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',5,6'-) (PCB 53)
Applied	No	NJ	WPP06.08054	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,2',6,6'-) (PCB 54)
Applied	No	NJ	WPP06.08055	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,3',4'-) (PCB 55)
Applied	No	NJ	WPP06.08056	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,3',4'-) (PCB 56)
Applied	No	NJ	WPP06.08057	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,3',5'-) (PCB 57)
Applied	No	NJ	WPP06.08058	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,3',5'-) (PCB 58)
Applied	No	NJ	WPP06.08059	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,3',6'-) (PCB 59)
Applied	No	NJ	WPP06.08060	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,4,4'-) (PCB 60)
Applied	No	NJ	WPP06.08061	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,4,5'-) (PCB 61)
Applied	No	NJ	WPP06.08062	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,4,6'-) (PCB 62)
Applied	No	NJ	WPP06.08063	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,4',5'-) (PCB 63)
Applied	No	NJ	WPP06.08064	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,4',6'-) (PCB 64)
Applied	No	NJ	WPP06.08065	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3,5,6'-) (PCB 65)
Applied	No	NJ	WPP06.08066	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4,4'-) (PCB 66)
Applied	No	NJ	WPP06.08067	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4,5'-) (PCB 67)
Applied	No	NJ	WPP06.08068	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4,5'-) (PCB 68)
Applied	No	NJ	WPP06.08069	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4,6'-) (PCB 69)
Applied	No	NJ	WPP06.08070	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4',5'-) (PCB 70)
Applied	No	NJ	WPP06.08071	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4',6'-) (PCB 71)
Applied	No	NJ	WPP06.08072	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',5,5'-) (PCB 72)
Applied	No	NJ	WPP06.08073	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',5,6'-) (PCB 73)
Applied	No	NJ	WPP06.08074	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,4,4',5'-) (PCB 74)
Applied	No	NJ	WPP06.08075	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,4,4',6'-) (PCB 75)
Applied	No	NJ	WPP06.08076	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (2,3',4',5'-) (PCB 76)
Applied	No	NJ	WPP06.08077	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (3,3',4,4'-) (PCB 77)
Applied	No	NJ	WPP06.08078	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (3,3',4,5'-) (PCB 78)

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.08079	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (3,3',4,5'-) (PCB 79)
Applied	No	NJ	WPP06.08080	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (3,3',5,5'-) (PCB 80)
Applied	No	NJ	WPP06.08081	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Tetrachlorobiphenyl (3,4,4',5'-) (PCB 81)
Applied	No	NJ	WPP06.08082	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,3',4'-) (PCB 82)
Applied	No	NJ	WPP06.08083	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,3',5'-) (PCB 83)
Applied	No	NJ	WPP06.08084	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,3',6'-) (PCB 84)
Applied	No	NJ	WPP06.08085	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4,4'-) (PCB 85)
Applied	No	NJ	WPP06.08086	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4,5'-) (PCB 86)
Applied	No	NJ	WPP06.08087	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4,5'-) (PCB 87)
Applied	No	NJ	WPP06.08088	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4,6'-) (PCB 88)
Applied	No	NJ	WPP06.08089	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4,6'-) (PCB 89)
Applied	No	NJ	WPP06.08090	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4',5'-) (PCB 90)
Applied	No	NJ	WPP06.08091	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4',6'-) (PCB 91)
Applied	No	NJ	WPP06.08092	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,5,5'-) (PCB 92)
Applied	No	NJ	WPP06.08093	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,5,6'-) (PCB 93)
Applied	No	NJ	WPP06.08094	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,5,6'-) (PCB 94)
Applied	No	NJ	WPP06.08095	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,5,6'-) (PCB 95)
Applied	No	NJ	WPP06.08096	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,6,6'-) (PCB 96)
Applied	No	NJ	WPP06.08097	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4',5'-) (PCB 97)
Applied	No	NJ	WPP06.08098	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',3,4',6'-) (PCB 98)
Applied	No	NJ	WPP06.08099	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,4',5'-) (PCB 99)
Applied	No	NJ	WPP06.08100	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,4',6'-) (PCB 100)
Applied	No	NJ	WPP06.08101	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,5,5'-) (PCB 101)
Applied	No	NJ	WPP06.08102	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,5,6'-) (PCB 102)
Applied	No	NJ	WPP06.08103	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,5',6'-) (PCB 103)
Applied	No	NJ	WPP06.08104	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,2',4,6,6'-) (PCB 104)
Applied	No	NJ	WPP06.08105	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4,4'-) (PCB 105)
Applied	No	NJ	WPP06.08106	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4,5'-) (PCB 106)
Applied	No	NJ	WPP06.08107	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4',5'-) (PCB 107)
Applied	No	NJ	WPP06.08108	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4,5'-) (PCB 108)
Applied	No	NJ	WPP06.08109	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4,6'-) (PCB 109)
Applied	No	NJ	WPP06.08110	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4',6'-) (PCB 110)

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
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CHEMTECH
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Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.08111	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',5,5') (PCB 111)
Applied	No	NJ	WPP06.08112	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',5,6-) (PCB 112)
Applied	No	NJ	WPP06.08113	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',5',6-) (PCB 113)
Applied	No	NJ	WPP06.08114	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,4,4',5-) (PCB 114)
Applied	No	NJ	WPP06.08115	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,4,4',6-) (PCB 115)
Applied	No	NJ	WPP06.08116	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,4,5,6-) (PCB 116)
Applied	No	NJ	WPP06.08117	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,4',5,6-) (PCB 117)
Applied	No	NJ	WPP06.08118	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4,4',5-) (PCB 118)
Applied	No	NJ	WPP06.08119	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4,4',6-) (PCB 119)
Applied	No	NJ	WPP06.08120	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4,5,5') (PCB 120)
Applied	No	NJ	WPP06.08121	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4,5',6-) (PCB 121)
Applied	No	NJ	WPP06.08122	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3,3',4',5') (PCB 122)
Applied	No	NJ	WPP06.08123	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4,4',5-) (PCB 123)
Applied	No	NJ	WPP06.08124	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4',5,5') (PCB 124)
Applied	No	NJ	WPP06.08125	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (2,3',4',5',6-) (PCB 125)
Applied	No	NJ	WPP06.08126	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (3,3',4,4',5-) (PCB 126)
Applied	No	NJ	WPP06.08127	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Pentachlorobiphenyl (3,3',4,5,5') (PCB 127)
Applied	No	NJ	WPP06.08128	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',4,4') (PCB 128)
Applied	No	NJ	WPP06.08129	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',4,5-) (PCB 129)
Applied	No	NJ	WPP06.08130	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',4,5') (PCB 130)
Applied	No	NJ	WPP06.08131	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',4,6-) (PCB 131)
Applied	No	NJ	WPP06.08132	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',4,6') (PCB 132)
Applied	No	NJ	WPP06.08133	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',5,5') (PCB 133)
Applied	No	NJ	WPP06.08134	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',5,6-) (PCB 134)
Applied	No	NJ	WPP06.08135	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',5,6') (PCB 135)
Applied	No	NJ	WPP06.08136	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,3',6,6') (PCB 136)
Applied	No	NJ	WPP06.08137	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,4',5-) (PCB 137)
Applied	No	NJ	WPP06.08138	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,4',5') (PCB 138)
Applied	No	NJ	WPP06.08139	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,4',6-) (PCB 139)
Applied	No	NJ	WPP06.08140	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,4',6') (PCB 140)
Applied	No	NJ	WPP06.08141	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,5,5') (PCB 141)
Applied	No	NJ	WPP06.08142	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,5,6-) (PCB 142)

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CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.08143	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,5,6'-) (PCB 143)
Applied	No	NJ	WPP06.08144	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,5',6-) (PCB 144)
Applied	No	NJ	WPP06.08145	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4,6,6'-) (PCB 145)
Applied	No	NJ	WPP06.08146	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4',5,5'-) (PCB 146)
Applied	No	NJ	WPP06.08147	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4',5,6-) (PCB 147)
Applied	No	NJ	WPP06.08148	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4',5,6'-) (PCB 148)
Applied	No	NJ	WPP06.08149	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4',5',6-) (PCB 149)
Applied	No	NJ	WPP06.08150	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,4',6,6'-) (PCB 150)
Applied	No	NJ	WPP06.08151	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,5,5',6-) (PCB 151)
Applied	No	NJ	WPP06.08152	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',3,5,6,6'-) (PCB 152)
Applied	No	NJ	WPP06.08153	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',4,4',5,5'-) (PCB 153)
Applied	No	NJ	WPP06.08154	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',4,4',5,6'-) (PCB 154)
Applied	No	NJ	WPP06.08155	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,2',4,4',6,6'-) (PCB 155)
Applied	No	NJ	WPP06.08156	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,4',5-) (PCB 156)
Applied	No	NJ	WPP06.08157	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,4',5'-) (PCB 157)
Applied	No	NJ	WPP06.08158	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,4',6-) (PCB 158)
Applied	No	NJ	WPP06.08159	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,5,5'-) (PCB 159)
Applied	No	NJ	WPP06.08160	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,5,6-) (PCB 160)
Applied	No	NJ	WPP06.08161	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4,5',6-) (PCB 161)
Applied	No	NJ	WPP06.08162	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4',5,5'-) (PCB 162)
Applied	No	NJ	WPP06.08163	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4',5,6-) (PCB 163)
Applied	No	NJ	WPP06.08164	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',4',5',6-) (PCB 164)
Applied	No	NJ	WPP06.08165	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,3',5,5',6-) (PCB 165)
Applied	No	NJ	WPP06.08166	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3,4,4',5,6-) (PCB 166)
Applied	No	NJ	WPP06.08167	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3',4,4',5,5'-) (PCB 167)
Applied	No	NJ	WPP06.08168	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (2,3',4,4',5',6-) (PCB 168)
Applied	No	NJ	WPP06.08169	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Hexachlorobiphenyl (3,3',4,4',5,5'-) (PCB 169)
Applied	No	NJ	WPP06.08170	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,4',5-) (PCB 170)
Applied	No	NJ	WPP06.08171	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,4',6-) (PCB 171)
Applied	No	NJ	WPP06.08172	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,5,5'-) (PCB 172)

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Laboratory Name: **CHEMTECH** Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.08173	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,5,6-) (PCB 173)
Applied	No	NJ	WPP06.08174	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,5,6'-) (PCB 174)
Applied	No	NJ	WPP06.08175	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,5',6-) (PCB 175)
Applied	No	NJ	WPP06.08176	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,6,6'-) (PCB 176)
Applied	No	NJ	WPP06.08177	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',4,5',6'-) (PCB 177)
Applied	No	NJ	WPP06.08178	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',5,5',6-) (PCB 178)
Applied	No	NJ	WPP06.08179	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,3',5,6,6'-) (PCB 179)
Applied	No	NJ	WPP06.08180	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,4',5,5'-) (PCB 180)
Applied	No	NJ	WPP06.08181	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,4',5,6-) (PCB 181)
Applied	No	NJ	WPP06.08182	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,4',5,6'-) (PCB 182)
Applied	No	NJ	WPP06.08183	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,4',5',6-) (PCB 183)
Applied	No	NJ	WPP06.08184	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,4',6,6'-) (PCB 184)
Applied	No	NJ	WPP06.08185	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,5,5',6-) (PCB 185)
Applied	No	NJ	WPP06.08186	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4,5,6,6'-) (PCB 186)
Applied	No	NJ	WPP06.08187	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4',5,5',6-) (PCB 187)
Applied	No	NJ	WPP06.08188	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,2',3,4',5,6,6'-) (PCB 188)
Applied	No	NJ	WPP06.08189	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,3,3',4,4',5,5'-) (PCB 189)
Applied	No	NJ	WPP06.08190	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,3,3',4,4',5,6-) (PCB 190)
Applied	No	NJ	WPP06.08191	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,3,3',4,4',5',6-) (PCB 191)
Applied	No	NJ	WPP06.08192	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,3,3',4,5,5',6-) (PCB 192)
Applied	No	NJ	WPP06.08193	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Heptachlorobiphenyl (2,3,3',4',5,5',6-) (PCB 193)

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Category: WPP06 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	WPP06.08194	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,4',5,5'-) (PCB 194)
Applied	No	NJ	WPP06.08195	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,4',5,6'-) (PCB 195)
Applied	No	NJ	WPP06.08196	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,4',5,6'-) (PCB 196)
Applied	No	NJ	WPP06.08197	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,4',6,6'-) (PCB 197)
Applied	No	NJ	WPP06.08198	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,5,5',6'-) (PCB 198)
Applied	No	NJ	WPP06.08199	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,5,5',6'-) (PCB 199)
Applied	No	NJ	WPP06.08200	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,5,6,6'-) (PCB 200)
Applied	No	NJ	WPP06.08201	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',4,5',6,6'-) (PCB 201)
Applied	No	NJ	WPP06.08202	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,3',5,5',6,6'-) (PCB 202)
Applied	No	NJ	WPP06.08203	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,4,4',5,5',6'-) (PCB 203)
Applied	No	NJ	WPP06.08204	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,2',3,4,4',5,6,6'-) (PCB 204)
Applied	No	NJ	WPP06.08205	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Octachlorobiphenyl (2,3,3',4,4',5,5',6'-) (PCB 205)
Applied	No	NJ	WPP06.08206	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Nonachlorobiphenyl (2,2',3,3',4,4',5,5',6'-) (PCB 206)
Applied	No	NJ	WPP06.08207	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Nonachlorobiphenyl (2,2',3,3',4,4',5,6,6'-) (PCB 207)
Applied	No	NJ	WPP06.08208	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Nonachlorobiphenyl (2,2',3,3',4,5,5',6,6'-) (PCB 208)
Applied	No	NJ	WPP06.08209	NPW	Extraction, SIM, GC/MS	[EPA 1668A]	Decachlorobiphenyl (PCB 209)

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: **CHEMTECH** Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP01 -- Multi-Media, Multi-Conc. Inorganics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP01.03002	NPW, SCM	ICP	[EPA ILM05.3]	Aluminum
Applied	No	NJ	CLP01.03101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Aluminum
Applied	No	NJ	CLP01.06002	NPW, SCM	ICP	[EPA ILM05.3]	Antimony
Applied	No	NJ	CLP01.06101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Antimony
Applied	No	NJ	CLP01.08002	NPW, SCM	ICP	[EPA ILM05.3]	Arsenic
Applied	No	NJ	CLP01.08101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Arsenic
Applied	No	NJ	CLP01.11002	NPW, SCM	ICP	[EPA ILM05.3]	Barium
Applied	No	NJ	CLP01.11101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Barium
Applied	No	NJ	CLP01.14002	NPW, SCM	ICP	[EPA ILM05.3]	Beryllium
Applied	No	NJ	CLP01.14101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Beryllium
Applied	No	NJ	CLP01.19002	NPW, SCM	ICP	[EPA ILM05.3]	Cadmium
Applied	No	NJ	CLP01.19101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Cadmium
Applied	No	NJ	CLP01.21002	NPW, SCM	ICP	[EPA ILM05.3]	Calcium
Applied	No	NJ	CLP01.24002	NPW, SCM	ICP	[EPA ILM05.3]	Chromium
Applied	No	NJ	CLP01.24101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Chromium
Applied	No	NJ	CLP01.27002	NPW, SCM	ICP	[EPA ILM05.3]	Cobalt
Applied	No	NJ	CLP01.27101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Cobalt
Applied	No	NJ	CLP01.30002	NPW, SCM	ICP	[EPA ILM05.3]	Copper
Applied	No	NJ	CLP01.30101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Copper
Applied	No	NJ	CLP01.33002	NPW, SCM	ICP	[EPA ILM05.3]	Iron
Applied	No	NJ	CLP01.36002	NPW, SCM	ICP	[EPA ILM05.3]	Lead
Applied	No	NJ	CLP01.36101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Lead
Applied	No	NJ	CLP01.38002	NPW, SCM	ICP	[EPA ILM05.3]	Magnesium
Applied	No	NJ	CLP01.41002	NPW, SCM	ICP	[EPA ILM05.3]	Manganese
Applied	No	NJ	CLP01.41101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Manganese
Applied	No	NJ	CLP01.42101	NPW, SCM	CVAA, Manual	[EPA ILM05.3]	Mercury
Applied	No	NJ	CLP01.43101	NPW, SCM	CVAA, Automated	[EPA ILM05.3]	Mercury
Applied	No	NJ	CLP01.47002	NPW, SCM	ICP	[EPA ILM05.3]	Nickel
Applied	No	NJ	CLP01.47101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Nickel
Applied	No	NJ	CLP01.49002	NPW, SCM	ICP	[EPA ILM05.3]	Potassium
Applied	No	NJ	CLP01.51002	NPW, SCM	ICP	[EPA ILM05.3]	Selenium
Applied	No	NJ	CLP01.51101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Selenium

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP01 -- Multi-Media, Multi-Conc. Inorganics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP01.54002	NPW, SCM	ICP	[EPA ILM05.3]	Silver
Applied	No	NJ	CLP01.54101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Silver
Applied	No	NJ	CLP01.56002	NPW, SCM	ICP	[EPA ILM05.3]	Sodium
Applied	No	NJ	CLP01.59002	NPW, SCM	ICP	[EPA ILM05.3]	Thallium
Applied	No	NJ	CLP01.59101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Thallium
Applied	No	NJ	CLP01.63002	NPW, SCM	ICP	[EPA ILM05.3]	Vanadium
Applied	No	NJ	CLP01.63101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Vanadium
Applied	No	NJ	CLP01.66002	NPW, SCM	ICP	[EPA ILM05.3]	Zinc
Applied	No	NJ	CLP01.66101	NPW, SCM	ICP/MS	[EPA ILM05.3]	Zinc
Applied	No	NJ	CLP01.67101	NPW, SCM	Titrimetric, Spectrophotometric	[EPA ILM05.3]	Cyanide, Total in Water and Soil / Sediments
Applied	No	NJ	CLP01.69101	NPW, SCM	Midi Distillation, Spectrophotometric	[EPA ILM05.3]	Cyanide, Total in Water and Soil / Sediments

Category: CLP02 -- Multi-Media, Multi-Conc. Organics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.01012	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Aldrin
Applied	No	NJ	CLP02.01022	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Alpha BHC
Applied	No	NJ	CLP02.01032	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Beta BHC
Applied	No	NJ	CLP02.01042	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Delta BHC
Applied	No	NJ	CLP02.01052	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Lindane (gamma BHC)
Applied	No	NJ	CLP02.01062	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Chlordane (alpha)
Applied	No	NJ	CLP02.01072	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Chlordane (gamma)
Applied	No	NJ	CLP02.01082	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	DDD (4,4'-)
Applied	No	NJ	CLP02.01092	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	DDE (4,4'-)
Applied	No	NJ	CLP02.01102	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	DDT (4,4'-)
Applied	No	NJ	CLP02.01112	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Dieldrin
Applied	No	NJ	CLP02.01122	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endosulfan I
Applied	No	NJ	CLP02.01132	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endosulfan II
Applied	No	NJ	CLP02.01142	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endosulfan sulfate
Applied	No	NJ	CLP02.01152	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endrin

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP02 -- Multi-Media, Multi-Conc. Organics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.01162	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endrin aldehyde
Applied	No	NJ	CLP02.01172	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Endrin ketone
Applied	No	NJ	CLP02.01182	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Heptachlor
Applied	No	NJ	CLP02.01192	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Heptachlor epoxide
Applied	No	NJ	CLP02.01202	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Methoxychlor
Applied	No	NJ	CLP02.01212	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	Toxaphene
Applied	No	NJ	CLP02.01232	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1016
Applied	No	NJ	CLP02.01242	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1221
Applied	No	NJ	CLP02.01252	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1232
Applied	No	NJ	CLP02.01262	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1242
Applied	No	NJ	CLP02.01272	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1248
Applied	No	NJ	CLP02.01282	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1254
Applied	No	NJ	CLP02.01292	NPW, SCM	Extraction/GC (ECD)	[EPA SOM01.0 (8/2004)]	PCB 1260
Applied	No	NJ	CLP02.03022	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Benzene
Applied	No	NJ	CLP02.03026	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Bromochloromethane
Applied	No	NJ	CLP02.03032	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Chlorobenzene
Applied	No	NJ	CLP02.03042	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorobenzene (1,2-)
Applied	No	NJ	CLP02.03052	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorobenzene (1,3-)
Applied	No	NJ	CLP02.03062	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorobenzene (1,4-)
Applied	No	NJ	CLP02.03066	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dioxane (1,4-)
Applied	No	NJ	CLP02.03072	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Ethylbenzene
Applied	No	NJ	CLP02.03082	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Isopropylbenzene
Applied	No	NJ	CLP02.03088	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichlorobenzene (1,2,3-)
Applied	No	NJ	CLP02.03092	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichlorobenzene (1,2,4-)
Applied	No	NJ	CLP02.03102	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Styrene
Applied	No	NJ	CLP02.03112	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Toluene
Applied	No	NJ	CLP02.03116	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Xylene (m- + p-)
Applied	No	NJ	CLP02.03118	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Xylene (o-)
Applied	No	NJ	CLP02.03142	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Bromodichloromethane
Applied	No	NJ	CLP02.03152	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Bromoform
Applied	No	NJ	CLP02.03162	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Bromomethane
Applied	No	NJ	CLP02.03172	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Carbon tetrachloride

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP02 – Multi-Media, Multi-Conc. Organics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.03182	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Chloroethane
Applied	No	NJ	CLP02.03192	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Chloroform
Applied	No	NJ	CLP02.03202	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Chloromethane
Applied	No	NJ	CLP02.03212	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloropropene (trans-1,3-)
Applied	No	NJ	CLP02.03222	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dibromoethane (1,2-) (EDB)
Applied	No	NJ	CLP02.03232	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dibromochloromethane
Applied	No	NJ	CLP02.03242	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dibromo-3-chloropropane (1,2-)
Applied	No	NJ	CLP02.03252	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorodifluoromethane
Applied	No	NJ	CLP02.03262	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloroethane (1,1-)
Applied	No	NJ	CLP02.03272	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloroethane (1,2-)
Applied	No	NJ	CLP02.03282	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloroethene (1,1-)
Applied	No	NJ	CLP02.03292	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloroethene (trans-1,2-)
Applied	No	NJ	CLP02.03302	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloroethene (cis-1,2-)
Applied	No	NJ	CLP02.03312	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloropropane (1,2-)
Applied	No	NJ	CLP02.03322	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Dichloropropene (cis-1,3-)
Applied	No	NJ	CLP02.03332	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Methylene chloride (Dichloromethane)
Applied	No	NJ	CLP02.03342	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Tetrachloroethane (1,1,2,2-)
Applied	No	NJ	CLP02.03352	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Tetrachloroethene
Applied	No	NJ	CLP02.03362	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichloroethane (1,1,1-)
Applied	No	NJ	CLP02.03372	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichloroethane (1,1,2-)
Applied	No	NJ	CLP02.03382	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichloroethene
Applied	No	NJ	CLP02.03392	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichlorofluoromethane
Applied	No	NJ	CLP02.03402	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Applied	No	NJ	CLP02.03412	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Vinyl chloride
Applied	No	NJ	CLP02.03432	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Acetone
Applied	No	NJ	CLP02.03442	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Carbon disulfide
Applied	No	NJ	CLP02.03452	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Cyclohexane
Applied	No	NJ	CLP02.03462	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Butanone (2-)
Applied	No	NJ	CLP02.03472	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Hexanone (2-)
Applied	No	NJ	CLP02.03482	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Methyl acetate
Applied	No	NJ	CLP02.03492	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Methylcyclohexane
Applied	No	NJ	CLP02.03502	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Pentanone (4-methyl-2-)

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.03512	NPW, SCM	GC/MS/SIM, P & T, Capillary	[EPA SOM01.0 (8/2004)]	Tert-butyl methyl ether
Applied	No	NJ	CLP02.04022	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Atrazine
Applied	No	NJ	CLP02.04032	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	N-Nitrosodiphenylamine
Applied	No	NJ	CLP02.04042	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	N-Nitroso-di-n-propylamine
Applied	No	NJ	CLP02.04052	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Carbazole
Applied	No	NJ	CLP02.04062	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorobenzidine (3,3'-)
Applied	No	NJ	CLP02.04072	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Chloroaniline (4-)
Applied	No	NJ	CLP02.04082	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitroaniline (2-)
Applied	No	NJ	CLP02.04092	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitroaniline (3-)
Applied	No	NJ	CLP02.04102	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitroaniline (4-)
Applied	No	NJ	CLP02.04122	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Chloronaphthalene (2-)
Applied	No	NJ	CLP02.04132	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Hexachlorobenzene
Applied	No	NJ	CLP02.04142	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Hexachlorobutadiene (1,3-)
Applied	No	NJ	CLP02.04152	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Hexachlorocyclopentadiene
Applied	No	NJ	CLP02.04162	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Hexachloroethane
Applied	No	NJ	CLP02.04182	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Bis (2-chloroethoxy) methane
Applied	No	NJ	CLP02.04192	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Bis (2-chloroisopropyl) ether
Applied	No	NJ	CLP02.04202	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Bis (2-chloroethyl) ether
Applied	No	NJ	CLP02.04212	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Chlorophenyl-phenyl ether (4-)
Applied	No	NJ	CLP02.04222	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Bromophenyl-phenyl ether (4-)
Applied	No	NJ	CLP02.04232	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitroaromatics and isophorone
Applied	No	NJ	CLP02.04242	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dinitrotoluene (2,4-)
Applied	No	NJ	CLP02.04252	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dinitrotoluene (2,6-)
Applied	No	NJ	CLP02.04262	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Isophorone
Applied	No	NJ	CLP02.04272	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitrobenzene
Applied	No	NJ	CLP02.04292	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Butyl benzyl phthalate
Applied	No	NJ	CLP02.04302	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Bis (2-ethylhexyl) phthalate
Applied	No	NJ	CLP02.04312	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Diethyl phthalate
Applied	No	NJ	CLP02.04322	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dimethyl phthalate
Applied	No	NJ	CLP02.04332	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Di-n-butyl phthalate
Applied	No	NJ	CLP02.04342	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Di-n-octyl phthalate
Applied	No	NJ	CLP02.04362	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Acenaphthene

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP02 – Multi-Media, Multi-Conc. Organics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.04372	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Anthracene
Applied	No	NJ	CLP02.04382	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Acenaphthylene
Applied	No	NJ	CLP02.04392	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzo(a)anthracene
Applied	No	NJ	CLP02.04402	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzo(a)pyrene
Applied	No	NJ	CLP02.04412	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzo(b)fluoranthene
Applied	No	NJ	CLP02.04422	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzo(ghi)perylene
Applied	No	NJ	CLP02.04432	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzo(k)fluoranthene
Applied	No	NJ	CLP02.04442	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Chrysene
Applied	No	NJ	CLP02.04452	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dibenzo(a,h)anthracene
Applied	No	NJ	CLP02.04462	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Fluoranthene
Applied	No	NJ	CLP02.04472	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Fluorene
Applied	No	NJ	CLP02.04482	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Indeno(1,2,3-cd)pyrene
Applied	No	NJ	CLP02.04492	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Methylnaphthalene (2-)
Applied	No	NJ	CLP02.04502	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Naphthalene
Applied	No	NJ	CLP02.04512	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Phenanthrene
Applied	No	NJ	CLP02.04522	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Pyrene
Applied	No	NJ	CLP02.04542	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Methyl phenol (4-chloro-3-)
Applied	No	NJ	CLP02.04552	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Chlorophenol (2-)
Applied	No	NJ	CLP02.04562	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dichlorophenol (2,4-)
Applied	No	NJ	CLP02.04572	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dimethylphenol (2,4-)
Applied	No	NJ	CLP02.04582	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dinitrophenol (2,4-)
Applied	No	NJ	CLP02.04592	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dinitrophenol (2-methyl-4,6-)
Applied	No	NJ	CLP02.04602	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Methylphenol (2-)
Applied	No	NJ	CLP02.04612	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Methylphenol (4-)
Applied	No	NJ	CLP02.04622	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitrophenol (2-)
Applied	No	NJ	CLP02.04632	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Nitrophenol (4-)
Applied	No	NJ	CLP02.04642	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Pentachlorophenol
Applied	No	NJ	CLP02.04652	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Phenol
Applied	No	NJ	CLP02.04662	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Trichlorophenol (2,4,5-)
Applied	No	NJ	CLP02.04672	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Trichlorophenol (2,4,6-)
Applied	No	NJ	CLP02.04692	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Acetophenone
Applied	No	NJ	CLP02.04702	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Benzaldehyde

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
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Category: CLP02 – Multi-Media, Multi-Conc. Organics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP02.04712	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Biphenyl (1,1'-)
Applied	No	NJ	CLP02.04722	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Caprolactam
Applied	No	NJ	CLP02.04732	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Dibenzofuran
Applied	No	NJ	CLP02.04742	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Tetrachlorobenzene (1,2,4,5-)
Applied	No	NJ	CLP02.04752	NPW, SCM	Extraction, GC/MS/SIM, Capillary	[EPA SOM01.0 (8/2004)]	Tetrachlorophenol (2,3,4,6-)

Category: SHW02 – Characteristics of Hazardous Waste

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW02.01000	NPW, SCM	Pensky Martens	[SW-846 1010, Rev. 0, 9/86]	Ignitability
Certified	Yes	NJ	SHW02.03000	NPW, SCM	Aqueous Waste, Potentiometric	[SW-846 9040B, Rev. 2, 1/95]	Corrosivity - pH waste, >20% water
Certified	Yes	NJ	SHW02.04000	NPW, SCM	Weight Loss In Acid Media	[SW-846 1110, Rev. 0, 9/86]	Corrosivity toward steel
Certified	Yes	NJ	SHW02.06900	NPW, SCM	TCLP, Toxicity Procedure, ZHE	[SW-846 1311, Rev. 0, 7/92]	Volatile organics
Certified	Yes	NJ	SHW02.07000	NPW, SCM	TCLP, Toxicity Procedure, Shaker	[SW-846 1311, Rev. 0, 7/92]	Metals - semi volatile organics
Certified	Yes	NJ	SHW02.08000	NPW, SCM	Synthetic PPT Leachate Procedure	[SW-846 1312, Rev. 0, 9/94]	Metals - organics
Applied	No	NJ	SHW02.09000	NPW, SCM	Multiple Extraction	[SW-846 1320, Rev. 0, 9/86]	Metals - organics

Category: SHW03 – Analyze-Immediately Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW03.01000	NPW, SCM	Aqueous, Electrometric	[SW-846 9040B, Rev. 2, 1/95]	pH

Category: SHW04 – Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.05000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Aluminum
Certified	Yes	NJ	SHW04.05500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Aluminum
Certified	Yes	NJ	SHW04.06500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Antimony

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Category: SHW04 – Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.07000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Antimony
Certified	Yes	NJ	SHW04.09000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Arsenic
Certified	Yes	NJ	SHW04.09500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Arsenic
Certified	Yes	NJ	SHW04.11500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Barium
Certified	Yes	NJ	SHW04.12000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Barium
Certified	Yes	NJ	SHW04.13500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Beryllium
Certified	Yes	NJ	SHW04.14000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Beryllium
Certified	Yes	NJ	SHW04.15100	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Boron
Certified	Yes	NJ	SHW04.15500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Cadmium
Certified	Yes	NJ	SHW04.16000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Cadmium
Certified	Yes	NJ	SHW04.17500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Calcium
Certified	Yes	NJ	SHW04.17505	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Calcium
Certified	Yes	NJ	SHW04.18500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Chromium
Certified	Yes	NJ	SHW04.19000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Chromium
Certified	Yes	NJ	SHW04.21000	NPW, SCM	Colorimetric	[SW-846 7196A, Rev. 1, 7/92]	Chromium (VI)
Certified	Yes	NJ	SHW04.22500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Cobalt
Certified	Yes	NJ	SHW04.23000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Cobalt
Certified	Yes	NJ	SHW04.24500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Copper
Certified	Yes	NJ	SHW04.25000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Copper
Certified	Yes	NJ	SHW04.26000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Iron
Certified	No	NJ	SHW04.26005	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Iron
Certified	Yes	NJ	SHW04.27500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Lead
Certified	Yes	NJ	SHW04.28000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Lead
Applied	No	NJ	SHW04.29500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Lithium
Certified	Yes	NJ	SHW04.30500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Magnesium
Certified	Yes	NJ	SHW04.30505	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Magnesium
Certified	Yes	NJ	SHW04.31500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Manganese
Certified	Yes	NJ	SHW04.31600	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Manganese
Certified	Yes	NJ	SHW04.33000	NPW, SCM	AA, Manual Cold Vapor	[SW-846 7470A, Rev. 1, 9/94]	Mercury - liquid waste
Certified	Yes	NJ	SHW04.34000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Molybdenum
Applied	No	NJ	SHW04.34005	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Molybdenum
Certified	Yes	NJ	SHW04.35500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Nickel

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Category: SHW04 – Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW04.36000	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Nickel
Certified	Yes	NJ	SHW04.38000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Potassium
Certified	Yes	NJ	SHW04.38505	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Potassium
Certified	Yes	NJ	SHW04.39000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Selenium
Certified	Yes	NJ	SHW04.40600	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Selenium
Certified	Yes	NJ	SHW04.41000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Silver
Certified	Yes	NJ	SHW04.41500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Silver
Certified	Yes	NJ	SHW04.43000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Sodium
Certified	Yes	NJ	SHW04.43005	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Sodium
Applied	No	NJ	SHW04.44000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Strontium
Applied	No	NJ	SHW04.44001	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Strontium
Certified	Yes	NJ	SHW04.45000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Thallium
Certified	Yes	NJ	SHW04.45500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Thallium
Certified	Yes	NJ	SHW04.47100	NPW, SCM	ICP	[SW-846 6010B, Rev. 2, 12/96]	Tin
Applied	No	NJ	SHW04.47105	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Tin
Applied	No	NJ	SHW04.47150	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Titanium
Applied	No	NJ	SHW04.47170	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Tungsten
Certified	Yes	NJ	SHW04.47500	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Vanadium
Certified	Yes	NJ	SHW04.47505	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Vanadium
Certified	Yes	NJ	SHW04.49000	NPW, SCM	ICP	[SW-846 6010B, Rev. 2 12/96]	Zinc
Certified	Yes	NJ	SHW04.49500	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Zinc
Applied	No	NJ	SHW04.51050	NPW, SCM	ICP/MS	[SW-846 6020, Rev. 0, 9/94]	Zirconium

Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.03010	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Acetone
Certified	Yes	NJ	SHW06.03020	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Acetonitrile
Certified	Yes	NJ	SHW06.03030	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Aerolein
Certified	Yes	NJ	SHW06.03040	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Allyl alcohol

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ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.03050	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	Yes	NJ	SHW06.03060	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Crotonaldehyde
Certified	Yes	NJ	SHW06.03070	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Dioxane (1,4-)
Certified	Yes	NJ	SHW06.03080	NPW, SCM	GC, Direct Injection, FID	[SW-846 8015B, Rev. 2, 12/96]	Ethylene Oxide
Certified	Yes	NJ	SHW06.03090	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Iso-butyl alcohol
Certified	Yes	NJ	SHW06.03100	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Methyl ethyl ketone
Certified	Yes	NJ	SHW06.03110	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	N-Nitroso-di-n-butylamine
Certified	Yes	NJ	SHW06.03120	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Paraldehyde
Certified	Yes	NJ	SHW06.03130	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Picoline (2-)
Certified	Yes	NJ	SHW06.03140	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Propionitrile
Certified	Yes	NJ	SHW06.03150	NPW, SCM	GC, Direct Injection, FID	[SW-846 8015B, Rev. 2, 12/96]	Pyridine
Certified	Yes	NJ	SHW06.03160	NPW, SCM	GC, Direct Injection or P & T, FID	[SW-846 8015B, Rev. 2, 12/96]	Toluidine (2-) (2-Methylaniline)
Certified	Yes	NJ	SHW06.04010	NPW, SCM	GC P&T, FID	[SW-846 8015B, Rev. 2, 12/96]	Gasoline range organic
Certified	Yes	NJ	SHW06.04500	NPW, SCM	Extraction, GC, FID	[SW-846 8015B, Rev. 2, 12/96]	Diesel range organic
Applied	No	NJ	SHW06.04511	NPW, SCM	Extraction, GC, FID	[OTHER FL - PRO]	Petroleum Organics
Certified	Yes	NJ	SHW06.05010	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Benzene
Certified	Yes	NJ	SHW06.05020	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chlorobenzene
Certified	Yes	NJ	SHW06.05030	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW06.05040	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SHW06.05050	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SHW06.05060	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NJ	SHW06.05066	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Naphthalene
Certified	Yes	NJ	SHW06.05068	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Styrene
Certified	Yes	NJ	SHW06.05070	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Toluene
Certified	Yes	NJ	SHW06.05080	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (o-)
Certified	Yes	NJ	SHW06.05090	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (m-)
Certified	Yes	NJ	SHW06.05100	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Xylene (p-)
Certified	Yes	NJ	SHW06.05110	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromodichloromethane
Certified	Yes	NJ	SHW06.05120	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromoform
Certified	Yes	NJ	SHW06.05130	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Bromomethane
Certified	Yes	NJ	SHW06.05140	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Carbon tetrachloride
Certified	Yes	NJ	SHW06.05150	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroethane

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

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Laboratory Name: **CHEMTECH** Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
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Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.05160	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroform
Certified	Yes	NJ	SHW06.05170	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloromethane
Certified	Yes	NJ	SHW06.05180	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	SHW06.05190	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dibromochloromethane
Certified	Yes	NJ	SHW06.05200	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichlorodifluoromethane
Certified	Yes	NJ	SHW06.05210	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethane (1,1-)
Certified	Yes	NJ	SHW06.05220	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethane (1,2-)
Certified	Yes	NJ	SHW06.05230	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (1,1-)
Certified	Yes	NJ	SHW06.05240	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SHW06.05250	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SHW06.05260	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropane (1,2-)
Certified	Yes	NJ	SHW06.05270	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SHW06.05280	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	SHW06.05290	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	SHW06.05300	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Tetrachloroethene
Certified	Yes	NJ	SHW06.05310	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	SHW06.05320	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	SHW06.05330	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichloroethene
Certified	Yes	NJ	SHW06.05340	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Trichlorofluoromethane
Certified	Yes	NJ	SHW06.05350	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Vinyl chloride
Certified	Yes	NJ	SHW06.05360	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	NJ	SHW06.05370	NPW, SCM	GC, Direct Injection or P & T, PID-HECD	[SW-846 8021B, Rev. 2, 12/96]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	SHW06.12010	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Aldrin
Certified	Yes	NJ	SHW06.12020	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Alpha BHC
Certified	Yes	NJ	SHW06.12030	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Beta BHC
Certified	Yes	NJ	SHW06.12040	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Delta BHC
Certified	Yes	NJ	SHW06.12050	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Lindane (gamma BHC)
Certified	Yes	NJ	SHW06.12060	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (technical)
Certified	Yes	NJ	SHW06.12070	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (alpha)
Certified	Yes	NJ	SHW06.12080	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Chlordane (gamma)
Certified	Yes	NJ	SHW06.12090	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDD (4,4'-)
Certified	Yes	NJ	SHW06.12100	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDE (4,4'-)

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CHEMTECH
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National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

Category: SHW06 -- Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.12110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	DDT (4,4'-)
Certified	Yes	NJ	SHW06.12120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Dieldrin
Certified	Yes	NJ	SHW06.12130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan I
Certified	Yes	NJ	SHW06.12140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan II
Certified	Yes	NJ	SHW06.12150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endosulfan sulfate
Certified	Yes	NJ	SHW06.12160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin
Certified	Yes	NJ	SHW06.12170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin aldehyde
Certified	Yes	NJ	SHW06.12180	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Endrin ketone
Certified	Yes	NJ	SHW06.12190	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor
Certified	Yes	NJ	SHW06.12200	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Heptachlor epoxide
Certified	Yes	NJ	SHW06.12210	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Methoxychlor
Applied	No	NJ	SHW06.12212	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Mirex
Certified	Yes	NJ	SHW06.12220	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8081A, Rev. 1, 12/96]	Toxaphene
Certified	Yes	NJ	SHW06.13110	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1016
Certified	Yes	NJ	SHW06.13120	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1221
Certified	Yes	NJ	SHW06.13130	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1232
Certified	Yes	NJ	SHW06.13140	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1242
Certified	Yes	NJ	SHW06.13150	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1248
Certified	Yes	NJ	SHW06.13160	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1254
Certified	Yes	NJ	SHW06.13170	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB 1260
Applied	No	NJ	SHW06.13200	NPW, SCM	GC, Extraction, ECD or HECD, Capillary	[SW-846 8082, Rev. 0, 12/96]	PCB Congeners (19)
Applied	No	NJ	SHW06.21010	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Azinphos methyl
Applied	No	NJ	SHW06.21015	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Chlorpyrifos
Applied	No	NJ	SHW06.21020	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Demeton (o-)
Applied	No	NJ	SHW06.21030	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Demeton (s-)
Applied	No	NJ	SHW06.21040	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Diazinon
Applied	No	NJ	SHW06.21050	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Disulfoton
Applied	No	NJ	SHW06.21060	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Malathion
Applied	No	NJ	SHW06.21070	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Parathion
Applied	No	NJ	SHW06.21080	NPW, SCM	GC, Extract or Dir Inj, NPD or FPD, Cap	[SW-846 8141A, Rev. 1, 9/94]	Parathion methyl
Certified	Yes	NJ	SHW06.23010	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Dalapon
Certified	Yes	NJ	SHW06.23020	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Dicamba

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Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.23030	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Dinoseb
Certified	Yes	NJ	SHW06.23040	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	D (2,4-)
Certified	Yes	NJ	SHW06.23050	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	T (2,4,5-)
Certified	Yes	NJ	SHW06.23060	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	TP (2,4,5-) (Silvex)
Applied	No	NJ	SHW06.23061	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Dichlorobenzoic acid (3,5-)
Applied	No	NJ	SHW06.23062	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Hydroxydicamba (5-)
Applied	No	NJ	SHW06.23063	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	MCPA
Applied	No	NJ	SHW06.23064	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	MCPP
Applied	No	NJ	SHW06.23065	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Nitrophenol (4-)
Applied	No	NJ	SHW06.23066	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev. 1, 9/96]	Pentachlorophenol
Certified	Yes	NJ	SHW06.23070	NPW, SCM	GC, Extraction, ECD, Capillary	[SW-846 8151A, Rev 1, 9/96]	Picloram
Applied	No	NJ	SHW06.23100	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Ethane
Applied	No	NJ	SHW06.23105	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Ethene
Applied	No	NJ	SHW06.23110	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Methane
Applied	No	NJ	SHW06.23115	NPW, SCM	GC, Headspace, FID	[OTHER J. Chrom. Sci. RSK-175]	Propane
Certified	Yes	NJ	SHW06.24110	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Acenaphthene
Certified	Yes	NJ	SHW06.24120	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Acenaphthylene
Certified	Yes	NJ	SHW06.24130	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Anthracene
Certified	Yes	NJ	SHW06.24140	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(a)anthracene
Certified	Yes	NJ	SHW06.24150	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(a)pyrene
Certified	Yes	NJ	SHW06.24160	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW06.24170	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(ghi)perylene
Certified	Yes	NJ	SHW06.24180	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW06.24190	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Chrysene
Certified	Yes	NJ	SHW06.24200	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW06.24210	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Fluoranthene
Certified	Yes	NJ	SHW06.24220	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Fluorene
Certified	Yes	NJ	SHW06.24230	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW06.24240	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Naphthalene
Certified	Yes	NJ	SHW06.24250	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Phenanthrene
Certified	Yes	NJ	SHW06.24260	NPW, SCM	Extraction, HPLC	[SW-846 8310, Rev. 0, 9/86]	Pyrene
Certified	Yes	NJ	SHW06.28010	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	HMX

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.28020	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	RDX
Certified	Yes	NJ	SHW06.28030	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Trinitrobenzene (1,3,5-)
Certified	Yes	NJ	SHW06.28040	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Dinitrobenzene (1,3-)
Certified	Yes	NJ	SHW06.28050	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Tetryl
Certified	Yes	NJ	SHW06.28060	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Nitrobenzene
Certified	Yes	NJ	SHW06.28070	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Trinitrotoluene (2,4,6-)
Certified	Yes	NJ	SHW06.28080	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Dinitrotoluene (4-amino-2,6-)
Certified	Yes	NJ	SHW06.28090	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Dinitrotoluene (2-amino-4,6-)
Certified	Yes	NJ	SHW06.28100	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Dinitrotoluene (2,4-)
Certified	Yes	NJ	SHW06.28110	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Dinitrotoluene (2,6-)
Certified	Yes	NJ	SHW06.28120	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Nitrotoluene (2-)
Certified	Yes	NJ	SHW06.28130	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Nitrotoluene (3-)
Certified	Yes	NJ	SHW06.28140	NPW, SCM	HPLC, UV Detector	[SW-846 8330, Rev. 0, 9/94]	Nitrotoluene (4-)
Applied	No	NJ	SHW06.29100	NPW, SCM	HPLC, UV Detector	[SW-846 8332 Rev. 0, 12/96]	Nitroglycerine

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04010	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Benzene
Certified	Yes	NJ	SHW07.04020	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chlorobenzene
Certified	Yes	NJ	SHW07.04030	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW07.04040	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SHW07.04050	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorobenzene (1,4-)
Certified	Yes	NJ	SHW07.04060	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Ethylbenzene
Certified	Yes	NJ	SHW07.04070	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Toluene
Certified	Yes	NJ	SHW07.04080	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Xylenes (total)
Certified	Yes	NJ	SHW07.04090	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromodichloromethane
Certified	Yes	NJ	SHW07.04100	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromoform
Certified	Yes	NJ	SHW07.04110	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Bromomethane
Certified	Yes	NJ	SHW07.04120	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon tetrachloride

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04130	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethane
Certified	Yes	NJ	SHW07.04140	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroethyl vinyl ether (2-)
Certified	Yes	NJ	SHW07.04150	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloroform
Certified	Yes	NJ	SHW07.04160	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Chloromethane
Certified	Yes	NJ	SHW07.04170	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (trans-1,3-)
Certified	Yes	NJ	SHW07.04180	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromochloromethane
Certified	Yes	NJ	SHW07.04185	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromoethane (1,2-) (EDB)
Certified	Yes	NJ	SHW07.04187	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dibromo-3-chloropropane (1,2-)
Certified	Yes	NJ	SHW07.04190	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichlorodifluoromethane
Certified	Yes	NJ	SHW07.04200	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,1-)
Certified	Yes	NJ	SHW07.04210	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethane (1,2-)
Certified	Yes	NJ	SHW07.04220	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (1,1-)
Certified	Yes	NJ	SHW07.04230	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (trans-1,2-)
Certified	Yes	NJ	SHW07.04235	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloroethene (cis-1,2-)
Certified	Yes	NJ	SHW07.04240	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropane (1,2-)
Certified	Yes	NJ	SHW07.04250	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Dichloropropene (cis-1,3-)
Certified	Yes	NJ	SHW07.04260	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methylene chloride (Dichloromethane)
Certified	Yes	NJ	SHW07.04270	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,2,2-)
Certified	Yes	NJ	SHW07.04280	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethene
Certified	Yes	NJ	SHW07.04290	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,1-)
Certified	Yes	NJ	SHW07.04300	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethane (1,1,2-)
Certified	Yes	NJ	SHW07.04310	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloroethene
Certified	Yes	NJ	SHW07.04320	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorofluoromethane
Certified	Yes	NJ	SHW07.04322	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloro (1,1,2-) trifluoroethane (1,2,2-)
Certified	Yes	NJ	SHW07.04325	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichloropropane (1,2,3-)
Certified	Yes	NJ	SHW07.04327	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl acetate
Certified	Yes	NJ	SHW07.04330	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Vinyl chloride
Certified	Yes	NJ	SHW07.04340	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acetone
Certified	Yes	NJ	SHW07.04350	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Carbon disulfide
Certified	Yes	NJ	SHW07.04360	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Butanone (2-)
Certified	Yes	NJ	SHW07.04370	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexanone (2-)
Certified	Yes	NJ	SHW07.04375	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl iodide

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New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS

Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
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Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.04380	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Pentanone (4-methyl-2-)
Certified	Yes	NJ	SHW07.04390	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Methyl tert-butyl ether
Certified	Yes	NJ	SHW07.04395	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tert-butyl alcohol
Certified	Yes	NJ	SHW07.04400	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrolein
Certified	Yes	NJ	SHW07.04410	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Acrylonitrile
Certified	Yes	NJ	SHW07.04500	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SHW07.04530	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Hexachloroethane
Certified	Yes	NJ	SHW07.04540	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260C, Rev. 2, 12/96]	Naphthalene
Certified	Yes	NJ	SHW07.04550	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Styrene
Certified	Yes	NJ	SHW07.04560	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Tetrachloroethane (1,1,1,2-)
Certified	Yes	NJ	SHW07.04570	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SHW07.04580	NPW, SCM	GC/MS, P & T or Direct Injection, Capillary	[SW-846 8260B, Rev. 2, 12/96]	Nitrobenzene
Certified	Yes	NJ	SHW07.05006	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitroso-di-n-propylamine
Certified	Yes	NJ	SHW07.05010	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodiphenylamine
Certified	Yes	NJ	SHW07.05020	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diphenylamine
Certified	Yes	NJ	SHW07.05030	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Carbazole
Certified	Yes	NJ	SHW07.05038	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzidine
Certified	Yes	NJ	SHW07.05040	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzidine (3,3'-)
Certified	Yes	NJ	SHW07.05048	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aniline
Certified	Yes	NJ	SHW07.05050	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloraniline (4-)
Certified	Yes	NJ	SHW07.05060	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (2-)
Certified	Yes	NJ	SHW07.05062	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (3-)
Certified	Yes	NJ	SHW07.05063	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitroaniline (4-)
Certified	Yes	NJ	SHW07.05070	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chloronaphthalene (2-)
Certified	Yes	NJ	SHW07.05080	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobenzene
Certified	Yes	NJ	SHW07.05090	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobutadiene (1,3-)
Certified	Yes	NJ	SHW07.05100	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorocyclopentadiene
Certified	Yes	NJ	SHW07.05110	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachloroethane
Certified	Yes	NJ	SHW07.05120	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorobenzene (1,2,4-)
Certified	Yes	NJ	SHW07.05130	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethoxy) methane
Certified	Yes	NJ	SHW07.05132	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroethyl) ether
Certified	Yes	NJ	SHW07.05140	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-chloroisopropyl) ether

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Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.05150	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenyl-phenyl ether (4-)
Certified	Yes	NJ	SHW07.05160	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bromophenyl-phenyl ether (4-)
Certified	Yes	NJ	SHW07.05170	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,4-)
Certified	Yes	NJ	SHW07.05180	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrotoluene (2,6-)
Certified	Yes	NJ	SHW07.05190	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Isophorone
Certified	Yes	NJ	SHW07.05200	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrobenzene
Certified	Yes	NJ	SHW07.05210	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Butyl benzyl phthalate
Certified	Yes	NJ	SHW07.05220	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Bis (2-ethylhexyl) phthalate
Certified	Yes	NJ	SHW07.05230	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Diethyl phthalate
Certified	Yes	NJ	SHW07.05240	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethyl phthalate
Certified	Yes	NJ	SHW07.05250	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-butyl phthalate
Certified	Yes	NJ	SHW07.05260	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Di-n-octyl phthalate
Certified	Yes	NJ	SHW07.05270	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Accnaphthene
Certified	Yes	NJ	SHW07.05280	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Anthracene
Certified	Yes	NJ	SHW07.05290	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Accnaphthylene
Certified	Yes	NJ	SHW07.05300	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)anthracene
Certified	Yes	NJ	SHW07.05310	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)pyrene
Certified	Yes	NJ	SHW07.05320	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(b)fluoranthene
Certified	Yes	NJ	SHW07.05330	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(ghi)perylene
Certified	Yes	NJ	SHW07.05340	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(k)fluoranthene
Certified	Yes	NJ	SHW07.05350	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chrysene
Certified	Yes	NJ	SHW07.05360	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzo(a,h)anthracene
Certified	Yes	NJ	SHW07.05370	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluoranthene
Certified	Yes	NJ	SHW07.05380	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Fluorene
Certified	Yes	NJ	SHW07.05390	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Indeno(1,2,3-cd)pyrene
Certified	Yes	NJ	SHW07.05400	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylnaphthalene (2-)
Certified	Yes	NJ	SHW07.05410	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Naphthalene
Certified	Yes	NJ	SHW07.05420	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenanthrene
Certified	Yes	NJ	SHW07.05430	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyrene
Certified	Yes	NJ	SHW07.05440	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methyl phenol (4-chloro-3-)
Certified	Yes	NJ	SHW07.05450	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlorophenol (2-)
Certified	Yes	NJ	SHW07.05460	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorophenol (2,4-)

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

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New Jersey Department of Environmental Protection
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Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW07.05470	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dimethylphenol (2,4-)
Certified	Yes	NJ	SHW07.05480	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2,4-)
Certified	Yes	NJ	SHW07.05490	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dinitrophenol (2-methyl-4,6-)
Certified	Yes	NJ	SHW07.05500	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (2-)
Certified	Yes	NJ	SHW07.05510	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (4-)
Certified	Yes	NJ	SHW07.05520	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (2-)
Certified	Yes	NJ	SHW07.05530	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Nitrophenol (4-)
Certified	Yes	NJ	SHW07.05540	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorophenol
Certified	Yes	NJ	SHW07.05550	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Phenol
Certified	Yes	NJ	SHW07.05560	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorophenol (2,4,5-)
Certified	Yes	NJ	SHW07.05570	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Trichlorophenol (2,4,6-)
Certified	Yes	NJ	SHW07.05590	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methylphenol (3-)
Certified	Yes	NJ	SHW07.05600	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzofuran
Certified	Yes	NJ	SHW07.05691	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,2-)
Certified	Yes	NJ	SHW07.05692	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,3-)
Certified	Yes	NJ	SHW07.05700	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dichlorobenzene (1,4-)
Applied	No	NJ	SHW07.05740	NPW, SCM	Extraction, SIM, GC/MS	[ASTM D5739-00]	Petroleum Organics
Certified	Yes	NJ	SHW07.05750	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pyridine
Applied	No	NJ	SHW07.05770	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Aldrin
Applied	No	NJ	SHW07.05780	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Alpha BHC
Applied	No	NJ	SHW07.05790	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Beta BHC
Applied	No	NJ	SHW07.05800	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Delta BHC
Applied	No	NJ	SHW07.05810	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Lindane (gamma BHC)
Applied	No	NJ	SHW07.05820	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlordane (technical)
Applied	No	NJ	SHW07.05830	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlordane (alpha)
Applied	No	NJ	SHW07.05840	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Chlordane (gamma)
Applied	No	NJ	SHW07.05850	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	DDD (4,4'-)
Applied	No	NJ	SHW07.05860	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	DDE (4,4'-)
Applied	No	NJ	SHW07.05870	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	DDT (4,4'-)
Applied	No	NJ	SHW07.05880	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dieldrin
Applied	No	NJ	SHW07.05890	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endosulfan I
Applied	No	NJ	SHW07.05900	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endosulfan II

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Category: SHW07 -- Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW07.05910	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endosulfan sulfate
Applied	No	NJ	SHW07.05920	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endrin
Applied	No	NJ	SHW07.05930	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endrin aldehyde
Applied	No	NJ	SHW07.05940	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Endrin ketone
Applied	No	NJ	SHW07.05950	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Heptachlor
Applied	No	NJ	SHW07.05960	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Heptachlor epoxide
Applied	No	NJ	SHW07.05970	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Methoxychlor
Applied	No	NJ	SHW07.05980	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Toxaphene
Applied	No	NJ	SHW07.07510	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1016
Applied	No	NJ	SHW07.07520	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1221
Applied	No	NJ	SHW07.07530	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1232
Applied	No	NJ	SHW07.07540	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1242
Applied	No	NJ	SHW07.07550	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1248
Applied	No	NJ	SHW07.07560	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1254
Applied	No	NJ	SHW07.07570	NPW, SCM	GC/MS, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	PCB 1260
Applied	No	NJ	SHW07.07584	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)anthracene
Applied	No	NJ	SHW07.07586	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(a)pyrene
Applied	No	NJ	SHW07.07588	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(b)fluoranthene
Applied	No	NJ	SHW07.07590	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Benzo(k)fluoranthene
Applied	No	NJ	SHW07.07594	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Dibenzo(a,h)anthracene
Applied	No	NJ	SHW07.07596	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Hexachlorobenzene
Applied	No	NJ	SHW07.07598	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Indeno(1,2,3-cd)pyrene
Applied	No	NJ	SHW07.07608	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	N-Nitrosodimethylamine
Applied	No	NJ	SHW07.07616	NPW, SCM	GC/MS/SIM, Extract or Dir Inj, Capillary	[SW-846 8270C, Rev. 3, 12/96]	Pentachlorophenol

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.02000	NPW, SCM	Distillation	[SW-846 9010B, Rev. 2, 12/96]	Cyanide
Certified	Yes	NJ	SHW09.03000	NPW, SCM	Distillation	[SW-846 9010B, Rev. 2, 12/96]	Cyanide - amenable to Cl2

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Laboratory Name: **CHEMTECH** Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
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Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.04100	NPW, SCM	Titrimetric/Manual Spectrophotometric	[SW-846 9014, Rev. 0, 12/96]	Cyanide
Certified	Yes	NJ	SHW09.05000	NPW, SCM	Colorimetric, Automated	[SW-846 9012A, Rev. 1, 12/96]	Cyanide
Certified	Yes	NJ	SHW09.09000	NPW, SCM	Redox Titration	[SW-846 9030B, Rev. 2, 12/96]	Sulfides, acid sol. & insol.
Certified	Yes	NJ	SHW09.10000	NPW, SCM	Water Extraction, Distillation	[SW-846 9031, Rev. 0, 7/92]	Sulfides - extractable
Certified	Yes	NJ	SHW09.10100	NPW, SCM	Titration	[SW-846 9034, Rev. 0, 12/96]	Sulfides, acid sol. & insol.
Certified	Yes	NJ	SHW09.11000	NPW, SCM	Colorimetric, Automated (Chloranilate)	[SW-846 9035, Rev. 0, 9/86]	Sulfate
Certified	Yes	NJ	SHW09.12000	NPW, SCM	Colorimetric, Automated (Thymol Blue)	[SW-846 9036, Rev. 0, 9/86]	Sulfate
Certified	Yes	NJ	SHW09.13000	NPW, SCM	Turbidimetric	[SW-846 9038, Rev. 0, 9/86]	Sulfate
Certified	Yes	NJ	SHW09.13050	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 9/94]	Sulfate
Certified	Yes	NJ	SHW09.14000	NPW, SCM	Electrometric	[SW-846 9040B, Rev. 2, 1/95]	pH - waste, >20% water
Certified	Yes	NJ	SHW09.15000	NPW, SCM	Wide Range pH Paper	[SW-846 9041A, Rev. 1, 7/92]	pH
Certified	Yes	NJ	SHW09.18010	NPW, SCM	Ion Chromatography, Bomb Combustion, Solids	[SW-846 9056, Rev. 0, 9/94]	Inorganic anions
Certified	Yes	NJ	SHW09.19000	NPW, SCM	Infrared Spectrometry or FID	[SW-846 9060, Rev. 0, 9/86]	Total organic carbon (TOC)
Certified	Yes	NJ	SHW09.21000	NPW, SCM	Colorimetric, Man, 4AAP Distillation	[SW-846 9065, Rev. 0, 9/86]	Phenols
Certified	Yes	NJ	SHW09.24100	NPW, SCM	Extraction & Gravimetric - LL or SPE	[SW-846 1664A, Rev. 1, 2/99]	Oil & grease - hem
Certified	Yes	NJ	SHW09.24150	NPW, SCM	Extraction & Gravimetric - LL or SPE	[SW-846 1664A, Rev. 1, 2/99]	Oil & grease - total hem-npm
Certified	Yes	NJ	SHW09.29150	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/94]	Nitrite
Certified	Yes	NJ	SHW09.30150	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/94]	Nitrate
Certified	Yes	NJ	SHW09.30250	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Bromide
Certified	Yes	NJ	SHW09.32000	NPW, SCM	Colorimetric, Automated (Ferri-CN AAlI)	[SW-846 9251, Rev. 0, 9/86]	Chloride
Certified	Yes	NJ	SHW09.33100	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Chloride
Certified	Yes	NJ	SHW09.34000	NPW, SCM	Titrimetric, Silver Nitrate	[SW-846 9253, Rev. 0, 9/94]	Chloride
Certified	Yes	NJ	SHW09.34100	NPW, SCM	Aqueous, Ion-Selective Electrode	[SW-846 9214, Rev. 0, 12/96]	Fluoride
Certified	Yes	NJ	SHW09.34150	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/96]	Fluoride
Certified	Yes	NJ	SHW09.54150	NPW, SCM	Ion Chromatography	[SW-846 9056, Rev. 0, 12/94]	Orthophosphate

Category: SHW12 -- Immunoassay

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW12.10000	NPW, SCM	Screening	[SW-846 4010, Rev. 1, 12/96]	Immunoassay - pentachlorophenol

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Laboratory Name: **CHEMTECH** Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

Category: CLP01 -- Multi-Media, Multi-Conc. Inorganics

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	CLP01.44101	SCM	CVAA, Manual	[EPA ILM05.3]	Mercury - soils/sediments

Category: SHW02 -- Characteristics of Hazardous Waste

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW02.02100	SCM	Burn Rate	[SW-846 1030, Rev. 0, 12/96]	Ignitability of solids
Applied	No	NJ	SHW02.10000	SCM	Extraction	[SW-846 1330A, Rev. 1, 7/92]	Metals - oily waste

Category: SHW04 -- Inorganic Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW04.02200	SCM	Acid Digestion For AA or ICP, Oil	[SW-846 3031, Rev. 0, 12/96]	Metals
Applied	No	NJ	SHW04.02500	SCM	Dissolution of Oil, Grease & Wax	[SW-846 3040A, Rev. 1, 12/96]	Metals
Certified	Yes	NJ	SHW04.03000	SCM	Acid Digestion, Soil Sediment & Sludge	[SW-846 3050B, Rev. 2, 12/96]	Metals
Certified	Yes	NJ	SHW04.03700	SCM	Chromium VI Digestion	[SW-846 3060A, Rev. 1, 12/96]	Metals
Applied	No	NJ	SHW04.03800	SCM	Field X-Ray Fluorescence	[SW-846 6200, Rev. 0, 1/98]	Triad Metals
Certified	Yes	NJ	SHW04.33500	SCM	AA, Manual Cold Vapor	[SW-846 7471A, Rev. 1, 9/94]	Mercury - solid waste

Category: SHW05 -- Organic Parameters, Prep. / Screening

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW05.03000	SCM	Soxhlet Extraction	[SW-846 3540C, Rev. 3, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.04000	SCM	Automatic Soxhlet Extraction	[SW-846 3541, Rev. 0, 9/94]	Semivolatile organics
Certified	Yes	NJ	SHW05.04200	SCM	Pressurized Fluid Extraction	[SW-846 3545, Rev. 0, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.05000	SCM	Ultrasonic Extraction	[SW-846 3550B, Rev. 2, 12/96]	Semivolatile organics
Applied	No	NJ	SHW05.05100	SCM	Supercritical Fluid Ex. TPH	[SW-846 3560, Rev. 0, 12/96]	Semivolatile organics
Applied	No	NJ	SHW05.05200	SCM	Supercritical Fluid Ex. PAH	[SW-846 3561, Rev. 0, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.06000	SCM	Waste Dilution	[SW-846 3580A, Rev. 1, 7/92]	Organics

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Category: SHW05 – Organic Parameters, Prep. / Screening

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW05.06100	SCM	Waste Dilution, Volatile organics	[SW-846 3585, Rev. 0, 12/96]	Organics
Certified	Yes	NJ	SHW05.07300	SCM	Closed System Purge & Trap	[SW-846 5035L, Rev. 0, 12/96]	Volatile organics - low conc.
Certified	Yes	NJ	SHW05.07310	SCM	Methanol Extract, Closed System P & T	[SW-846 5035H, Rev. 0, 12/96]	Volatile organics - high conc.
Certified	Yes	NJ	SHW05.10000	SCM	Cleanup-Alumina	[SW-846 3610B, Rev. 3, 12/96]	Semivolatile organics
Applied	No	NJ	SHW05.11000	SCM	Petroleum Waste, Cleanup Alumina	[SW-846 3611B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.12000	SCM	Cleanup-Florisil	[SW-846 3620B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.13000	SCM	Cleanup-Silica Gel	[SW-846 3630C, Rev. 3, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.14000	SCM	Cleanup-Gel Permeation	[SW-846 3640A, Rev. 1, 9/94]	Semivolatile organics
Applied	No	NJ	SHW05.15000	SCM	Cleanup-Acid/Base Partition	[SW-846 3650B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.16000	SCM	Cleanup-Sulfur Removal	[SW-846 3660B, Rev. 2, 12/96]	Semivolatile organics
Certified	Yes	NJ	SHW05.17000	SCM	Cleanup-Sulfuric Acid/KMnO4	[SW-846 3665A, Rev. 1, 12/96]	Semivolatile organics
Applied	No	NJ	SHW05.18000	SCM	Headspace, GC or GC/MS Screen	[SW-846 3810, Rev. 0, 9/86]	Volatile organics

Category: SHW06 – Organic Parameters, Chromatography

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW06.01000	SCM	Field GC	[SW-846 3815, Rev. 0, 11/00]	Triad Organics

Category: SHW07 – Organic Parameters, Chromatography/MS

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW07.03000	SCM	Field GC/MS	[SW-846 8265, Rev. 0, 3/02]	Triad Organics

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.01000	SCM	Extraction SFE, Infrared Spectrometry	[SW-846 8440, Rev. 0, 12/96]	Total rec. petroleum hydrocarbons
Certified	Yes	NJ	SHW09.04000	SCM	Extraction, Oils and Solids	[SW-846 9013, Rev. 0, 7/92]	Cyanide

KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

New Jersey Department of Environmental Protection
National Environmental Laboratory Accreditation Program
ANNUAL CERTIFIED PARAMETER LIST AND CURRENT STATUS
Effective as of 07/01/2006 until 06/30/2007



Laboratory Name: CHEMTECH Laboratory Number: 20012 Activity ID: NLC060001
284 SHEFFIELD ST
Mountainside, NJ 07092

CHEMTECH
Nelac Certificate and Parameter List
Doc Control #: A2040129

Category: SHW09 -- Miscellaneous Parameters

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Certified	Yes	NJ	SHW09.08100	SCM	Extraction	[SW-846 9023, Rev. 0, 12/96]	Extractable organic halides (EOX)
Certified	Yes	NJ	SHW09.16000	SCM	Mix with Water or Calcium Chloride	[SW-846 9045C, Rev. 3, 1/95]	pH - soil and waste
Certified	Yes	NJ	SHW09.25000	SCM	Extraction & Gravimetric	[SW-846 9071 B, Rev. 2, 5/99]	Oil & grease - sludge-hem
Applied	No	NJ	SHW09.28000	SCM	Colorimetric, Field Test Kits	[SW-846 9077, Rev. 0, 9/94]	Chlorine - total, petroleum
Applied	No	NJ	SHW09.28100	SCM	Soil Screen Test	[SW-846 9078, Rev. 0, 12/96]	Polychlorinated biphenyls (PCB's)
Applied	No	NJ	SHW09.28200	SCM	Transformer Oil Screen	[SW-846 9079, Rev. 0, 12/96]	Polychlorinated biphenyls (PCB's)
Certified	Yes	NJ	SHW09.29000	SCM	Flow-Through Paint Filter, Observation	[SW-846 9095, Rev. 0, 9/86]	Free liquid
Certified	Yes	NJ	SHW09.39000	SCM	Soils, Ammonium Acetate	[SW-846 9080, Rev. 0, 9/86]	Cation-exchange capacity
Certified	Yes	NJ	SHW09.40000	SCM	Soils, Sodium Acetate	[SW-846 9081, Rev. 0, 9/86]	Cation-exchange capacity
Applied	No	NJ	SHW09.53000	SCM	Soil, Colorimetric Screen	[SW-846 8515, Rev. 0, 12/96]	Trinitrotoluene (2,4,6-)

Category: SHW12 -- Immunoassay

Status	Eligible to Report NJ Data	State	Code	Matrix	Technique Description	Approved Method	Parameter Description
Applied	No	NJ	SHW12.12000	SCM	Screening	[SW-846 4020, Rev. 0, 12/96]	Immunoassay - polychlorinated biphenyls
Certified	Yes	NJ	SHW12.13000	SCM	Field Immunoassay	[SW-846 4000, Rev. 0, 12/96]	Triad Immunoassay

Joseph F. Aiello, Chief

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KEY: AE = Air and Emissions, BT = Biological Tissues, DW = Drinking Water, NPW = Non-Potable Water, SCM = Solid and Chemical Materials

APPENDIX I

Sewer Use Permit Information



Department of Environmental Services
Monroe County, New York

Maggie Brooks
County Executive

John E. Graham, P.E.
Director

Initial Sewer Use Permit Instructions

Please provide all requested information accurately. The Sewer Use Permit is a legal document. Any name or address change will require a new Initial Sewer Use Permit. An officer of the company must sign the permit or designate someone else the responsibility by attachment letter with the permit package. The permit application refers to sections of the Sewer Use Law, which is available in the "Related Documents" section of this Web page.

Pure Waters, under Section 57 of the Worker's Compensation Law and Section 220 - Subdivision 8 of the Disability Benefits Law, is required to have on file proof that your company has workers compensation and disability benefits for your employees. A form from your insurance carrier stating such coverage will thus be required before your permit can be processed.

Initial permit fee of \$40.00 should be made payable to Director of Finance, County of Monroe. All copies of the application, the form from your insurance carrier, and the check should be mailed to:

Division of Pure Waters
Industrial Waste Control Section
444 E. Henrietta Road, Bldg. 15
Rochester, New York 14620

If you have any questions regarding the permit, please call the Industrial Waste Control Section at 760-7600 option 4.

**APPLICATION FOR PERMIT TO DISCHARGE
INTO PURE WATERS SEWER SYSTEM OR TRIBUTARY**

1. Name of Applicant:	_____
	Company or Individual
2. Address of Applicant:	_____

3. Location of Property:	_____
4. Ownership of Property:	_____
Name/Address if	
different than above	
5. Number of sewer	
connections requiring	
license/permit	_____
6. Type of activity producing	
wastes requiring license or	
permit pursuant to Sewer	
Use Law of Monroe County	_____
7. Department of Health or of	
New York State Permit #	
(if any)	_____
8. Number of Attachments:	_____
Exhibit "A"	_____
Exhibit "B"	_____
Exhibit "C"	_____
Exhibit "D"	_____

Note: 1. Fill in all spaces. Mark, "NA" in appropriate space, if not applicable.

 2. Refer to page 1c of this document for descriptions of Exhibits A, B and D.
 Refer to page 1b for Exhibit C.

SUMMARY OF INDUSTRIAL WASTE CHARACTERISTICS
Exhibit C

Firm: _____

Address: _____

Industrial Waste Characteristics and Quantity

Characteristics	(Unit)	Avg.	Minimum	Maximum
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Volume
(Gal. or CF/month)

Temperature (F or C)

pH

Biochemical Oxygen Demand
(mg/L or lbs/mil. gal.)

Chlorine Demand
(mg/L or lbs/mil. gal.)

Suspended Solids
(mg/L or lbs/mil. gal.)

Phosphate or Phosphorus
(mg/L or lbs/mil. gal.)

SUBSTANCES UNDER ARTICLES IV, V, VI, VII OF SEWER USE LAW

(List item and concentration (or volume) under appropriate heading. If none, so state.)

1. Unpolluted waters (Sect. 4.1) _____

2. Prohibited Materials (Sect. 4.2) _____

3. Certain materials and/or
characteristics (Sect. 4.3) _____

4. Toxic Substances (Sect. 5.1,
5.2) _____

5. Pathogenic Bacteria (Sect. 5.1) _____

6. Radioactive Wastes (Sect. 6.2) _____

7. Scavenger Wastes (Sect. 7.1,
7.2) _____

ATTACHMENTS TO ACCOMPANY APPLICATION

1. A plot or tape location map of the property showing accurately the size and location of all sewer and drainage connections to the sewerage system, all pretreatment devices and all manholes or other accessible sampling points. Each sewer or drain connection shown on drawing shall be designated by an identification number. The plot or tape location map shall be attached as Exhibit "A".
2. A complete schedule of all process waters and industrial wastes produced or expected to be produced at said property, including a description of the character of each waste, the daily volume and whether the flow is continuous or intermittent. The schedule shall be attached as Exhibit "B".
3. A summary of the total wastewater characteristics to be received from the applicant shall be submitted in proper for as Exhibit "C".
4. Additional information requested by the Director of Pure Waters shall be prepared as Exhibit "D" and be attached to the application as required.

Company Representative Signature

Print Name

Title

Phone Number _____

Person to be contacted for
inspection and/or emergency
purposes including phone number

Print Name

Phone number _____

INITIAL SEWER USE PERMIT

County of Monroe Pure Waters District No. _____

Permit No: _____

Expires: _____

Fee: \$40.00

Firm Name _____

Address _____

Type of Business or Service _____

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

- A. _____
- B. _____
- C. _____

II. The applicant further agrees to:

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

Applicant's Signature _____ Date _____

Applicant's Title _____

Emergency Contact _____ Phone _____

Permit Approved by _____ Date _____

Director of Pure Waters

444 E. Henrietta Rd., Bldg. 15 • Rochester, New York 14620-4630
(585) 760-7600 Option 4 • fax: (585) 324-1213 • www.monroecounty.gov