RoCo Ltd

ERIE, NEW YORK

Site Management Plan

NYSDEC Site Number: V00422-9

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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

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SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at the RoCo, Ltd., property located at 1746 Dale Road, Cheektowaga, New York (hereinafter referred to as the "Site") under the New York State (NYS) Voluntary Cleanup Program (VCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Voluntary Cleanup Agreement (VCA) # B9-0588-01, Site # V-00422-9 which was executed on June 30, 2001.

1.1.1 General

RoCo Ltd. entered into a VCA with the NYSDEC to remediate an approximate two acre property located in Cheektowaga, Erie County, New York. This VCA required the Remedial Party, RoCo Ltd., to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this approximate two 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 deed restriction.

After completion of the remedial work described in the Supplemental Remedial Action Plan, some groundwater contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the deed restriction 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 Leader Professional Services Inc.(Leader), on behalf of RoCo Ltd. in accordance with the requirements in NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation, dated May 3, 2010 and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the deed restriction for the site.

1.1.2 Purpose

The site contains contamination left after completion of the Supplemental Remedial Action. Engineering Institutional Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. A deed restriction granted to the NYSDEC, and recorded with the Erie 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 deed restriction 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 deed restriction and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes two plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; and (2) a Monitoring Plan for implementation of Site Monitoring.

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

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the deed restriction. Failure to properly implement the SMP is a violation

of the deed restriction, 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 VCA (Index # B9-0558-01, Site # V-00Y22-9) 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 deed restriction for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 SITE BACKGROUND

1.2.1 Site Location and Description

The site is located at 1746 Dale Road in the Town of Cheektowaga, Erie County, New York and is identified as Section, Lot and Block 102.03-2-30 on the Town of Cheektowaga Tax Map. The site is an approximately two acre area bounded by Davis Electric to the north, Dale Road to the south, Anderson Road to the east, and Upstate Farm Cooperatives to the west (see Figure 2). The boundaries of the site are more fully described in Appendix C – Metes and Bounds.

1.2.2 Site History

Below is a summary of the property transactions associated with the Site.

	Approximate Year of Purchase
Careo Oxygen Corporation	1924
General American Transportation Corp. (Formerly General American Tank Car Corp.)	pre-1946
Walden Properties	1946
W. Weiss and others	1949

The Rotary Company, Inc.	1954
RoCo, Ltd.	1994

In approximately 1924, the Careo-Oxygen Co. Air Reduction Plant operated on-Site. Two railroad lines, branching to four lines, traversed the eastern portion of the Site. The buildings associated with this air reduction plant were removed and the Site was vacant up to the construction of the current building structure in approximately 1946. The manufacturing operations in the current structure are summarized in Sections 1.5.3.

The on-Site operations since the building's initial construction were reportedly precision sheet metal fabrication, metal weldments, and assemblies. In addition to these activities, there were manufacturing, shearing, punching, forming, stamping, machining, painting and silk screening, metal preparation and finishing. The materials involved in the manufacturing process included stainless steel, aluminum, brass, copper, exotic metals, specialty metals, extrusions, and plastics.

Based on the recollection of Mr. William M. Weiss, the former president of RoCo, Ltd., during the period spanning the early 1950s through 1994, the only process chemicals used (except for the paint and paint-related materials) occurred in the Metal Prep Room. The Metal Prep Room was located in the northwest corner of the facility. Metal cleaning in preparation for painting and aluminum iridizing were the only processes conducted in this area.

The Site is irregular in shape with one irregularly shaped building structure. The building was built in approximately 1946 and is comprised of cement block, and slab-on-grade construction. The Site has a total street frontage on Dale Road of approximately 365 feet and a total street frontage on Anderson Road of approximately 220 feet. The building encompasses the majority of the Site with an asphalt parking area located in the eastern portion of the Site.

Previous Studies

Several studies have been completed for the Site. Additionally, a Phase II ESA was conducted immediately west of the Site on Upstate Farms Cooperative, Inc. property. An October 19, 1998 Phase I ESA was performed by Panamerican Environmental, Inc. for Mr. Charles Husvar, the President of The Rotary Company, Inc. (formerly known as the Husvar Group). The Rotary Company was leasing the Site from the current owner, RoCo, Ltd. The Phase I ESA identified some issues of environmental concern such as: 1) flammable storage areas; 2) three separate waste storage areas (no secondary containment was noted for one of these areas); 3) floor stains and minor spills were observed in some areas; 4) staining and discoloration was observed surrounding various dip tanks and around a waste drum within a waste storage area adjacent to the press break room; and 5) stains and signs of spillage were observed surrounding a number of opened 5-gallon containers of oil and grease in the compressor/boiler room.

An October 1999 Phase II ESA was completed by Panamerican Environmental, Inc. for Upstate Farms Cooperative, Inc. and Harter, Secrest & Emery. This Phase II ESA was performed at the Site to assess the potential for subsurface contamination. The results of this subsurface investigation indicated that organic solvent contamination was detected above the NYSDEC Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels ("TAGM") No. 4046 guidelines dated January 24, 1994. A number of analytes were detected; however, two compounds (trichloroethene and vinyl chloride) were above the NYSDEC TAGM 4046 guidance values (see Table 1 – Previous Studies Soil Analysis). Some RCRA metals were detected below NYSDEC TAGM 4046 guidance values; however, B5 results indicated RCRA metals; cadmium, chromium and mercury were detected slightly above TAGM 4046 guidance values. B5 is located at the base of the driveway of Davis Electrical Supply Company along Anderson Avenue.

A March 3, 2000 Analytical Data/Soil Investigation Report was prepared by Frontier Technical Associates, Inc. for RoCo, Ltd. This report was prepared to assess the possible presence of volatile organic compounds ("VOCs") at the Site. The results of the investigation indicated that VOCs were detected above the NYSDEC TAGM 4046

guidelines. Table 1 lists the seven VOCs detected and their concentrations. According to the report, trichloroethene and tetrachloroethene were the most commonly found compounds. The other compounds detected could potentially have resulted from the breakdown of the trichloroethene and the tetrachloroethene through chemical and microbial decomposition of chlorinated solvents or trace constituents present in other reagents. No groundwater was encountered during this investigation. The presence of VOCs appears to be primarily located in the northwest portion of the Site at depths ranging between 2–12 feet.

A July 2000 Phase II ESA was prepared by TriTech Environmental Health and Safety, Inc. for Upstate Farms Cooperative, Inc. and Harter, Secrest & Emery. The Phase II ESA was performed at the neighboring property, west of the Site. The investigation was completed to assess the potential for subsurface contamination adjacent to the RoCo, Ltd. Site. This study detected VOC contamination in the southeast portion of Upstate's property at depths ranging between 4-12 feet. The highest VOC contamination encountered was bordering the RoCo, Ltd. Site.

In March of 2002, Leader developed and implemented a Voluntary Cleanup Program Site Investigation/Remedial Alternatives Report for the Site. Based upon the results of this investigation and previous on-Site studies, Leader then prepared and implemented a Supplemental Site Investigation, Bioremediation Pilot Study and Remedial Action Plan. The report of that effort was completed in October, 2003.

Results of the Bioremediation Pilot Study, i.e., injection of Hydrogen Release Compound (HRC), proved effective in reducing chlorinated solvent concentrations in groundwater at the Site. The recommendation to implement a full scale bioremediation program was made and implemented in September 2005. Monthly monitoring and bimonthly sampling of select groundwater wells occurred from 2005 through February 2007.

A VCP RAP status report was submitted to NYSDEC in March 2007 to summarize the progress of the remedial activities. RoCo's counsel, a Leader representative, and a representative of Regenesis, the HRC compound vendor met with NYSDEC and agreed

to supplemental HRC-X injections. As a result, Leader submitted a Supplemental Remedial Action Plan in September 2008. Additional HRC-X injections were executed on September 10 and 11, 2008. Monthly data collection and bimonthly sample collection has occurred through August 2009. Also during this time, Leader developed an Intrusive Soil Vapor Sampling and Analysis Plan in October 2007 which was implemented in late October and early November 2007. The results of that effort were included in the VCP Remedial Action Plan Report, dated January 2008.

Data collected by Leader while implementing the Supplemental Remedial Action Plan was compiled and included in the Supplemental Remedial Action Plan Report prepared in September of 2009. NYSDEC has reviewed the report and has concurred with the report's recommendation to continue the existing groundwater monitoring program for another six (6) months. The last round of supplemental groundwater monitoring occurred on March 26, 2010. In addition, NYSDEC required that a Site Management Plan (SMP) be developed and approved, and that the Site be continually managed and monitored in accordance with this SMP.

1.2.3 Geologic Conditions

The Site is located on the Lake Erie Plain, which is approximately six to twelve miles wide and extends from the Onondaga Escarpment (northern border) to northern Chautauqua County.

The predominant soil at the Site is a lacustrine silty-clay, deposited when the Lake Erie plain was occupied by a series of glacial lakes from approximately 10,000 to 14,000 years ago. The deposit consists of a medium to stiff, gray to brown, silty clay to clayey silt and is generally not conducive to groundwater flow. These soils are thought to overlie shales and limestones of the Middle Devonian Skaneateles Formation. Depth to bedrock at the Site is unknown; however, bedrock was encountered at depths ranging from 44 to 54 feet below ground surface (bgs) at the Niagara Transformer Site, which is located south of the Site, across Dale Road.

Borehole logs from the VCP SSI Bioremediation Pilot Study Report and Remedial Action Plan of October, 2003 indicate a reddish-brown silty clay with some sand ranging from the surface to a 15 foot depth. A geologic section is shown in Figure 3. Groundwater data from the April 27, 2009 sampling event indicates the depth to

groundwater varies from 1.12 feet bgs (GW-1) to 7.27 bgs (GW-5).

Based upon data generated from the RI/FS conducted at the Niagara Transformer Site, regional groundwater and surface water flow direction appear to be in a southerly direction. Localized groundwater flow direction at the Site is similar, from north to south. Figure [4] provides a typical groundwater contour map (April, 2009) generated from data collected for the Supplemental Remedial Action Plan.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

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

- Voluntary Cleanup Program Investigation Work Plan (September, 2001).
- Voluntary Cleanup Program Supplemental Site Investigation, Bioremediation Pilot Study Report and Remedial Action Plan (October, 2003).

Below is a summary of site conditions when the SI was completed in November, 2001.

Soil

- Twenty-four soil samples were analyzed for TCL VOC analysis using USEPA Method 8260. Carbon tetrachloride, cis-1,2-dichloroethene, trans-1,2-dichloroethene, ethylbenzene, and m,p-xylene were detected; however, these compounds did not exceed the applicable NYSDEC soil cleanup objectives. Tetrachloroethene, trichloroethene, and toluene were detected at concentrations above the applicable NYSDEC recommended soil cleanup objectives.
- Six soil samples were analyzed for semi-volatiles using USEPA Method 8270D. Fluoranthene, phenanthrene, bis (2-etylhexyl) phthalate pyrene were detected. These compounds did not exceed the applicable NYSDEC soil cleanup objectives.
- Six soil samples were analyzed for PCBs using USEPA Method 8082A. No PCBs were detected in the samples analyzed.

- Six soil samples were analyzed for Pesticides using USEPA Method 8081B. No pesticides were detected in the samples analyzed.
- Six soil samples were analyzed for Priority Pollutant Metals. Antimony, arsenic, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, thallium, and zinc were detected below the NYSDEC recommended soil cleanup objectives and/or Site background levels. Copper was detected at levels marginally above the designated Site background levels; however, this condition does not appear to be a remedial concern because the upper water-bearing zone is not supplying any on or off-Site wells.

Site-Related Groundwater

- Groundwater samples were submitted for analyses for TCL VOC analysis using USEPA Method 8260. Cis-1,2-dichloroethene was detected in all of the groundwater samples at concentrations that exceeded applicable NYSDEC groundwater standards. Trans-1,2-dichloroethene, trichloroethene, vinyl chloride and benzene were detected in some groundwater samples at concentrations that exceeded applicable NYSDEC groundwater standards.
- Elevated VOC concentrations in groundwater were generally detected in areas of elevated VOC concentrations in soil.
- A groundwater sample was submitted for analysis for TCL semi-volatiles using USEPA Method 8270. No semi-volatiles were detected in the sample analyzed.
- A groundwater sample was submitted for analysis for PCBs using USEPA Method 8082. No PCBs were detected in the sample analyzed.
- A groundwater sample was submitted for analysis for pesticides using USEPA Method 8081. No pesticides were detected in the sample analyzed.
- A groundwater sample was submitted for analysis for priority pollutant metals. Antimony, beryllium, mercury, selenium, silver, thallium, and zinc were detected at concentrations below applicable NYSDEC groundwater standards. However, arsenic cadmium, chromium, copper, lead, and nickel were detected at concentrations above the applicable NYSDEC groundwater standards. These elevated metals concentrations do not appear to warrant remediation due to their limited extent and the lack of supply wells in the area.

- The VCP data and the pertinent data from previous studies were used to approximate the extent of chlorinated solvent contamination above applicable NYSDEC standards or guidance values. The limits of the areas were based on direct interpolation between known data points for soil and groundwater data collected from six to ten feet below ground surface (the zone primarily impacted by the chlorinated solvents).
- Two areas of soil and groundwater above applicable standards or guidance values were identified. One area is in the northwestern portion of the Site in the vicinity of GW-3 and the second area is in the northeastern portion of the Site near GW-1.
- Based on a qualitative exposure assessment, the impacted soil and groundwater are contained below asphalt driveways and concrete-floored buildings that serve as a barrier. The public drinking water supply is not drawn from the on-Site water-bearing zone; therefore, exposures of workers and residents to VOC-contaminated water has not occurred. Exposures to contaminants during excavation activities could occur through dermal contact, incidental ingestion, and possibly inhalation. The proposed remediation of contaminated soils should eliminate potential future exposures. In the interim, any excavation activities should be monitored. Inspections of the asphalt surfaces and concrete-floored buildings are included in the SMP annual inspection (see Appendix E).

Site-Related Soil Vapor Intrusion

The ISVSA Program consisted of collecting ambient air samples and sub-slab air samples from within the Site structure and Davis Electric structure. The sampling program was developed utilizing the New York State Department of Health's (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006. An ISVSA Plan was developed by Leader and submitted to the NYSDEC and NYSDOH for approval in September 2007. A map showing the sampling locations is included with this report as Figure 5.

Approximately 24 hours prior to collection of samples, Leader conducted a Site walkthrough in the areas of proposed sampling. An indoor air quality questionnaire and building inventory forms were completed for the RoCo structure and the Davis Electric

structure. Synthetic materials or chemical containers were scanned with a PID in order to assess possible VOC sources in the vicinity of the sampling locations. There were no VOC emitting materials detected near the sample locations and any chemical containers were removed from the sample location areas approximately 24 hours prior to sample collection.

Two (2) samples were collected at each of the six (6) primary sample locations. One (1) ambient air sample and one (1) sub-slab air sample were collected at locations #1 through #6. In order to assess upwind and downwind conditions at the Site, ambient air samples were collected at locations #7 and #8 outside the building. In addition to these fourteen (14) samples, an ambient air sample was collected as a blind duplicate sample at location #1. The methodology used to collect these samples is outlined below.

Ambient Air Samples

Ambient air samples were collected utilizing TO-15 canisters obtained from Paradigm. The canisters were secured approximately six (6) feet above the ground surface and were calibrated to obtain a 24-hour composite sample. The regulators that were affixed to the canisters were calibrated by Paradigm to obtain ambient air samples at a flow rate not to exceed 0.2 liters per minute. Leader recorded the pressure of each canister prior to and following the sampling event. The canisters were then submitted to Paradigm, under proper chain of custody, for TO-15 analysis.

Sub-Slab Air Samples

The sub-slab air samples were collected by drilling a one-inch hole into the concrete slab at each sample location. One-quarter inch Teflon tubing was attached to the regulator and placed into the borings. The tubing was held in place by glass beads and the entire sampling port was sealed using non-VOC emitting clay. The regulators that were affixed to the canisters were calibrated by Paradigm to obtain ambient air samples at a flow rate not to exceed 0.2 liters per minute. Leader recorded the pressure of each canister prior to and following the sampling event. The canisters were then submitted to Paradigm, under proper chain of custody for TO-15 analysis.

The analytical results of the vapor intrusion sampling were compared to the NYSDOH guidelines set forth in its "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" document dated October 2006. At the time of this report, the NYSDOH had only set guidelines for TCE, PCE, and 1,1,1-trichloroethane. In 2007, the NYSDOH assigned three new volatile chemicals to the existing soil vapor/ indoor air decision matrices. Vinyl chloride was added to Matrix 1, and 1,1,-dichloroethene and cis-1,2- dichloroethene were added to Matrix 2.

The analytical laboratory results for the ISVSA Program (Table 1), indicate that TCE is present at locations #3 (Upstate warehouse) and #6 (Davis Electric warehouse) at levels which the NYSDOH recommends additional monitoring. The sub-slab and ambient air samples collected at location #1 (near GW-3) indicate concentrations of TCE at which the NYSDOH recommends mitigation. The sub-slab sample at this location ("C-1018") had concentrations of TCE that exceeded 303 ug/m3 and the ambient air sample at this location ("C-1003") had a TCE concentration of 3.84 ug/m3. However, the 303 ug/m3 concentration is only slightly above the 250 ug/m3 NYSDOH guideline. The samples collected at location #5 (Davis Electric office area), location #2 (east of GW-3) and location #4 (east end of Upstate warehouse) had concentrations of the three (3) regulated compounds below the recommended action levels for monitoring or mitigation. All samples were below the recommended action levels for monitoring or mitigation for the 2007 added compounds of vinyl chloride, 1,1,-dichloroethene and cis-1,2- dichloroethene.

Generally, the RI concluded that:

- Based on a qualitative exposure assessment, the impacted soil and groundwater are contained below asphalt driveways and concrete-floored buildings that serve as a barrier. The public drinking water supply is not drawn from the on-Site water-bearing zone; therefore, exposures of workers and residents to VOC contaminated water has not occurred. Exposures to contaminants during excavation activities could occur through dermal contact, incidental ingestion, and possibly inhalation. The proposed remediation of

contaminated soils should eliminate potential future exposures. In the interim, any excavation activities should be monitored.

- Based on a review of technologically feasible remedial technologies for the Site, four alternatives were identified for further evaluation. Based on a comparison of costs, implementability and effectiveness criterion, the insitu bioremediation alternative is effective in achieving cleanup levels and is by far the most cost-effective alternative for the Site. This alternative can be implemented without facility disruption and represents the lowest potential risk to workers during implementation. It does, however, require the longest time to implement, approximately 2 years.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC-approved VCP SSI BPS and RAP dated October, 2003, the March, 2004 VCP SSI BPS and RAP and the Supplemental RAP dated September, 2008. The following is a summary of the Remedial Actions performed and proposed for the site:

1. Implementation of the Bioremediation Pilot Study, including the July 2002 injection of Hydrogen Release Compound (HRC) into the substrata to enhance the natural biodegradation of chlorinated solvent compounds.

2. Monthly groundwater sampling for TCL VOC analysis using EPA method 8260 to assess the degree of bioremediation activity in the areas of GW-3 and GW-4, and later GW-7 to evaluate the effects of HRC on contamination levels at the perimeter of the area of concern, and; monthly groundwater sampling for Reduction /Oxidation Conditions (REDOX) in GW-1, GW-4, GW-6, and GW-7 to assess the effectiveness of the HRC in causing reducing conditions.

3. Implementation of the RAP proposed in Section 5 of the October, 2003 VCP SSI BPS Report and RAP. The RAP includes implementation of a full-scale bioremediation program. The program involves in-situ bioremediation of the soil and groundwater at the Site through the additional HRC injections in September 2005.

4. September 2008 implementation of the recommendations in the 2007 Status Report of additional injections of a proprietary compound HRC-X/MRC (HRC Primer/Metals Reducing Compound). HRC-X is an advanced formula of HRC that remains active for approximately 36 months. Bi-monthly groundwater sampling for TCL VOC, dissolved iron, TOC and sulfate analysis of GW-1, GW-3 and GW-7, and sampling for Reduction /Oxidation Conditions (REDOX) in GW-1, through GW-7.

4. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the deed restriction, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, and (3) reporting;

5. Future Execution and recording of a deed restriction to restrict land use and prevent future exposure to any contamination remaining at the site.

Remedial activities (monitoring) are ongoing. The Supplemental Remedial Action Plan Report, dated September, 2009 summarized the effectiveness of the HRC/MRC injections to enhance the natural biodegradation of chlorinated solvents in the Site groundwater.

The general Remedial Action Objectives ("RAOs") for the VCP are summarized below.

- To prevent future exposure of human or animal receptors to contaminated groundwater or soil; and
- To prevent or mitigate the migration of contaminants that will cause groundwater contamination above the site-specific RAOs.

As stated in the RAP, bioremediation using HRC®-X may not result in groundwater concentrations at all monitoring well locations being below drinking water standards (e.g., the groundwater standard for trichloroethene ["TCE"] is 0.7 ppb). Thus, Site-specific RAOs have been developed that achieve the General RAOs while providing for some flexibility should future remedial efforts reach a point of diminishing returns. These site-specific RAOs are summarized below.

- Future residual groundwater and/or soil contamination will not pose an unacceptable risk to human health and the environment;
- The residual groundwater and soil contamination, if present, will be compatible with the anticipated future use of the site; and
- An approximate "zero slope" will be reached with regard to groundwater quality (i.e., continued treatment will not result in a decrease in the concentration of analytes in the groundwater).

This approach is reasonable based on the following site-specific conditions:

- The local groundwater currently has no beneficial use and is unlikely to be used in the foreseeable future;
- The present lack of completed pathways of human exposure and the absence of a significant threat to public health;
- The technical impracticability of restoring the groundwater to pre-release conditions, given the inaccessibility of the source area and the heterogeneous subsurface conditions; and
- The site's commercial/industrial setting and the absence of sensitive environmental receptors.

As of March 26, 2010, these objectives have been generally achieved at monitoring wells GW-1, GW-3 and GW-7. However, the verification that a "zero slope" has been reached at GW-3 may require additional monitoring.

1) Based on the groundwater elevations measured in the monitoring wells, it appears that the general direction of groundwater flow is from north to the south.

2) Monthly Redox measurements were obtained from all monitoring wells from October 2005 through August 2009. Based on these measurements, it appears that reducing conditions were present in the majority of the monitoring wells. The subsequent upward trend at some of the monitoring well locations may indicate that the HRC®-X is expended at these locations.

3) The analyses for sulfate, TOC and dissolved iron were conducted to evaluate HRC®-X activity. Bioremediation, as a result of the HRC®-X, appears to be continuing at GW-7. Conditions to support bioremediation at GW-1 and GW-7 exist, but data suggests that the activity may be lower than in the past. Ethene and Methane data at GW-3 indicate that the HRC®-X/MRC remains active.

4) Dissolved gases in samples from GW-1 and GW-7 were below laboratory analytical detection limits. Concentrations of Ethene at 16 ppm and Methane at 5 ppm were detected in the sample from GW-3. The presence of methane in the sample from GW-3 is indicative of conditions necessary to support continued bioremediation reduction activities. The presence of Ethene demonstrates that bioremediation reduction activity is continuing, reducing the VOC contaminants to more basic compounds.

5) TCE concentrations have been reduced by the HRC®-X in all three (3) monitoring wells to non-detectable concentrations.

6) The TCE concentration in GW-3 has dropped from over 89,000 ppb in September 2008 to 9.87 ppb in August 2009. The VC concentrations in GW-3 have dropped from 67,400 ppb in June, 2009 to 138 ppb in August, 2009.

7) As of August 2009, the RAOs have been generally achieved at monitoring wells GW-1, GW-3 and GW-7. However, the verification that a "zero slope" has been reached at GW-3 may require additional monitoring.

8) The off-Site migration of VOCs has been significantly reduced at GW-7 and during some recent monitoring events was not detectable.

Based on the results of the RAP monitoring program, the HRC®-X was effective in reducing chlorinated solvent concentrations in groundwater at the Site. Based on monitoring of the bioremediation indicator parameters, the subsequent September 2008 injection of HRC®-X does not appear to have reached its useful life, particularly at the GW-3 location. Thus, continued monitoring was conducted for another six (6) months. A dissolved gas analysis (i.e., methane, ethane and ethene) of GW-3 was included in one of the future sampling events to evaluate bioremediation activity. This additional

monitoring served to evaluate the representativeness of the August 2009 data and to monitor subsurface bioremediation activity.

1.4.1 Site-Related Treatment Systems

Site soils and groundwater have undergone three separate treatment applications of HRC, and/or HRC-X and MRC to enhance natural biodegradation of chlorinated solvent compounds. The amounts of treatment medium applied during each injection was estimated by the medium vendor, Regenesis, based on empirical equations that take into account the contaminant levels, soil conditions and groundwater conditions. Injection of the treatment material occurred as follows:

- July 2002 – As described in the BPS, 540 lbs. of HRC were injected into eight (8) points throughout the BPS area (See Table 2 and Figure 6 for injection point data and locations).
- September 2005 – As proposed in the October 2003 RAP, 1440 lbs. of HRC-X were injected at various points on and near the Site. (See Table 3 and Figure 7 for injection point data and locations).
- September 2008 – As proposed in the September 2008 Supplemental Remedial Action Plan, 240 lbs. of HRC-X and 480 lbs. of MRC were injected at specific locations at the Site. (See Table 4 and Figure 8 for injection point data and locations).

A core drill was used for each interior injection point to core through the concrete within the building structure. A Geoprobe unit was used to bore the desired depth. A pump was then attached to the Geoprobe unit and the HRC, HRC-X and/or MRC was injected into the ground under 2,000 lbs. of pressure. After completion of each injection each point was covered and sealed.

1.4.2 Remaining Contamination

Tables 5, 6 and 7 and Figure 9 summarize the results of all soil samples remaining at the site after completion of Remedial Action. The soil sample data is the most recent soil data available, collected in October and November 2001, during implementation of the Site Investigation. Only groundwater monitoring has been required at the Site since

the implementation of bioremediation activities. Tables 8 and 9 summarize recent results of groundwater samples collected from the first post-injection sampling event (9/26/05) to the August 2009 sampling event. An Alternate Remedial Plan is addressed in Section 3.1.2.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

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

2.1.2 Purpose

This plan provides:

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

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Soil Cover

Exposure to remaining contamination in soil/fill at the site is prevented by the existing asphalt driveways and concrete floor. This cover system is comprised of asphalt pavement and concrete building slabs. The Excavation Work Plan that appears in Section 6 outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

2.2.1.2 Metals Preparation Room Ventilation and Limited Access

Procedures for operating and maintaining the metal preparation room ventilation system are documented in the Operation and Maintenance Plan (Section 4 of this SMP). 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.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls is required by the RAP to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to its current restricted industrial use only. Adherence to these Institutional Controls on the site is required by the deed restriction and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the deed restriction 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, soil vapor 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 deed restriction may not be discontinued without an amendment to or extinguishment of the deed restriction.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the deed restriction. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted industrial 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, such as unrestricted or restricted residential, use without additional remediation and amendment of the deed restriction as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens 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.

2.3.1 Excavation Work Plan

The site has been remediated for restricted industrial use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is included as Section 6 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) that is in current compliance with DER 10, and 29 CFR 1910 and 29 CFR 1926, and all other applicable Federal, State and local regulations. If excavation is planned for the Site, a Site Specific HASP will be included as an attachment to the EWP. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP will be updated and re-submitted with the notification provided in Section 6-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

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

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located over areas that contain remaining contamination and the potential for soil vapor intrusion (SVI) has been identified (see Figure 9), an SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

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

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. Validated SVI data will be transmitted to the property owner within 30 days of validation. If any indoor air test results exceed NYSDOH guidelines, relevant NYSDOH fact sheets will be provided to all tenants and occupants of the property within 15 days of receipt of validated data.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

A second SVI sampling program is scheduled for November 2011. Previous locations SS#6 and AM #6 (Davis warehouse), SS#5 and AM#5 (Davis office space) and SS#3 and AM#3 (RoCo warehouse) will be sampled. Results of the sampling will be included as an addendum to this SMP. If the results of sampling indicate that the concentrations of soil vapors are below the NYSDOH decision matrices for mitigation, as

they were during the December 2007 sampling effort, no further SVI sampling will be necessary. Additionally, the metal preparation room at the RoCo facility will require resampling of the indoor air and sub-slab prior to removal of the restricted access status.

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;
- Evaluate the integrity of the asphalt and concrete surfaces covering contaminated areas;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the deed restriction;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

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

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

2.4.2 Notifications

Notifications will be submitted by the 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 Voluntary Cleanup Agreement (VCA), 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; or
- 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 30 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 Voluntary Cleanup Agreement (VCA), and all approved work plans and reports, including this SMP; and
- 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 Leader Professional Services Inc. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 10: 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 11: Contact Numbers

Leader Professional Services Inc. – Jeff Wittlinger, principal	(716) 565-0963
Jaeckle, Fleishman and Mugel, LLP – Dennis P. Harkawik	(716) 843-3848

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

2.5.2 Map and Directions to Nearest Health Facility

Site Location: RoCo Ltd., 1746 Dale Road, Cheektowaga, New York, 14225

Nearest Hospital Name: St. Joseph's Hospital

Hospital Location: 2605 Harlem Road, Cheektowaga, New York 14225

Hospital Telephone: (716) 891-2400

Directions to the Hospital:

1. Take Dale Road west to Walden Avenue
2. Go West (left) on Walden Avenue to Harlem Road
3. Go north (right) on Harlem Road to St. Joseph's Hospital

Total Distance: 1.1 miles

Total Estimated Time: 3 minutes

Figure 10 provides the map with the most direct route 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 10). The list will also be posted prominently at the site and 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 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 groundwater;
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards;
- 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.

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site [and off-site] will be conducted for the first year. The initial sampling event under this SMP is scheduled for late August or early September 2011. Trends in contaminant levels in 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 12 and outlined in detail in Sections 3.2 below.

Table 12: Monitoring Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater GWMW-1, 3, 5 and 7	Annually	water	Volatile Organics, Total Organic Carbon (TOC), Dissolved Iron, and Sulfate Field Parameters of Reduction/Oxidation and Groundwater Elevations
Groundwater GWMW-2 and 4	Annually	water	Field Parameters of Reduction/Oxidation and Groundwater Elevations

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

Alternative Remedial Plan

The most recent water quality data from March 26, 2010, prior to submission of the final SMP, indicates that the HRC is still active and reducing the only remaining detected chlorinated compound in GW-3, vinyl chloride. DCE has not been detected in a water sample from GW-3 since August 2009. The concentration of vinyl chloride has fluctuated from 138 ppb to 93,700 ppb since the final HRC injection in 2008. To ensure future compliance with the RAOs, an Alternative Remedial Plan has been developed involving the application of 60 pounds of HRC into GW-3 should any future annual monitoring events indicate an increasing trend in the concentrations of vinyl chloride. This additional application of HRC slurry would be conducted within one month of

receiving the laboratory report indicating that vinyl chloride concentrations were trending upward. If there is an increase in the concentrations of any of the site's chlorinated contaminants of concern, further treatment may be required. Furthermore, if there is an increasing trend and monitoring shows that the HRC has not been fully expended, then another remedy, or enhancement of the current approach will need to be evaluated.

3.2 MEDIA MONITORING PROGRAM

3.2.1 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 the following criteria:

- The location of the potential source location of contamination;
- Groundwater flow direction and contaminant plume potential; and
- Analytical results of surface and subsurface soil sampling conducted during the SI and previous studies.

Figure 11 provides the monitoring well array and post-remedial groundwater quality conditions.

Table 13 provides the frequency and duration of the monitoring program.

Monitoring well construction logs are included in Appendix D.

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

Deliverables for the groundwater monitoring program are specified below.

3.2.2 Sampling Protocol

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

The depth to groundwater will be measured with an electronic water level indicator to the nearest 0.01-foot. A point on the well's riser will be marked with a permanent mark to designate where all measurements should be initiated for each sampling event. This depth to groundwater will be recorded on the groundwater sampling log sheet. This depth, and the monitoring well's casing inside diameter will be used to calculate the volume of the well. This volume will determine the appropriate amount of water to be purged from the well. Stagnant water within the wells will be evacuated by siphoning using the dedicated tubing (with a check valve) prior to sampling. At least three volumes of water contained within the well will be removed to ensure the collection of a representative groundwater sample. If the well does not experience sufficient recovery, i.e. achieves complete evacuation, before the entire three volumes can be purged, the well will be allowed to recover and will be re-evacuated until at least one and one-half volumes are removed. The amount of purged groundwater will be recorded on the groundwater sampling log sheet. The physical appearance of the water (color, turbidity, odor, etc.) will also be recorded on the sampling log sheet.

Conductivity and pH will be monitored during sampling. Ideally, these parameters should stabilize for three consecutive measurements when the last well volume is removed prior to sampling.

Dedicated, polypropylene tubing with a check valve will be used to collect the groundwater samples after the wells have been evacuated and allowed to recharge to within 90-percent of the original static water level. The tubing used for collecting the sample will be handled in a manner to minimize the potential for contact with contaminants. The sample will be transferred into a dedicated pre-sterilized laboratory grade (ICHEM 300 or equivalent) sample container. When transferring the sample from the tubing to the sample container, care will be taken to avoid agitating the sample that would promote the loss of volatile constituents and chemical oxidation. Filters (either field or laboratory) will not be used to remove any potentially suspended sediment from the sample.

Generally, groundwater samples are not in equilibrium with the atmospheric conditions and can undergo significant changes in water chemistry upon extraction from

the well. Therefore, the samples will be stored at 4 degrees Centigrade (C) immediately after collection and delivered to the laboratory within 48 hours from the time of collection.

The samples will be analyzed by a New York State Department of Health (NYSDOH) certified laboratory, such as Paradigm Environmental Services Inc., located in Rochester, New York.

VOC samples will be analyzed using USEPA Method 8260, using Gas Chromatograph/Mass Spectroscopy (GC/MS). USEPA Method 300 will be used for Sulfate analysis; SM5310C for Total Organic Carbon analysis; and USEPA 200.7 for Dissolved Iron analysis.

3.2.3 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.

Currently GWMW-6 is non-functional. The well is located in the Upstate Farm Cooperative parking area and is subject to heavy truck and trailer traffic. The well has suffered sediment infiltration and well integrity breakdown (metal cover distortions, lock cap destruction) and frequently receives surface runoff and contains the runoff to the top surface of the well. The well was used exclusively for the collection of the field parameters of Reduction/Oxidation and groundwater elevation. Laboratory analysis of groundwater from this well has never been conducted as part of the RAP, and is not proposed as part of this SMP. The nearby GWMW-7, approximately 16 feet to the west of GWMW-6 provides groundwater samples for laboratory analysis as well as field data parameters. GWMW-4, approximately 16 feet to the east of GWMW-6 provides groundwater samples for field data parameters. GWMW-6 will not be part of the monitoring program detailed in this SMP, and will be subject to decommissioning during the November 2011 SVI effort.

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.

3.3 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix E). The form 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.

3.4 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 F). 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 have not been collected during RAP monitoring of groundwater. Given the frequency of sampling and monitoring, and the level of scrutiny and review of data collected, data outliers would be readily detected and causes for the outliers would be readily apparent to the reviewers. No field QC samples are proposed for future long term monitoring of the Site. If data from laboratory analysis of the groundwater samples indicates outliers or inconsistencies in expected results, field QC sampling could be implemented for future sample collection activities.
- 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.

3.5 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file with RoCo's legal representative. RoCo shall be responsible for keeping on file, forms and any other information generated during regular monitoring events and inspections while it is the owner of the Site until four (4) years have elapsed after such monitoring event. 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. A letter report will also be prepared, if required by NYSDEC, subsequent to each sampling event. The report (or letter) 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 (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized in Table 14 below.

Table 14: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Periodic Review Report	Annually
Inspection Report	Annually

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

4.0 OPERATION AND MAINTENANCE PLAN

4.1 INTRODUCTION

The site remedy does not currently rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP. If the metal preparation room is to be occupied in the future, an SVI mitigation system may be necessary.

4.2 ENGINEERING CONTROL SYSTEM OPERATION AND MAINTENANCE

4.2.1 System Start-Up and Testing

The system testing described above will be conducted if, in the course of the ventilation system lifetime, significant changes are made to the system, and the system must be restarted.

4.2.2 System Operation: Routine Operation Procedures

Access to the metal preparation room is currently limited by a constructed wall of plywood and two by four frame. The room is ventilated to the outside atmosphere by an electric fan located on the north corner of the west wall. The fan is powered by electricity from the building and operated by a wall switch. The fan is on 24 hours a day. If the electricity to the building is discontinued, an open roof vent will be created to allow passive ventilation of the room.

4.3 ENGINEERING CONTROL SYSTEM PERFORMANCE MONITORING

4.3.1 Monitoring Schedule

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the system has been reported or an emergency occurs that is deemed likely to affect the

operation of the system. Monitoring deliverables for the ventilation system are specified later in this Plan.

4.3.2 General Equipment Monitoring

A visual inspection of the complete system will be conducted during the monitoring event. The ventilation system (electric fan) will simply be observed to determine if it is operating.

There are currently no monitoring or alarm devices associated with the ventilation system. The metal preparation room has limited access, and is unoccupied. No alarm or monitoring devices are proposed for this system at this time.

4.4 MAINTENANCE AND PERFORMANCE MONITORING REPORTING REQUIREMENTS

Maintenance reports and any other information generated during regular operations at the site will be kept on-file with RoCo's legal representative. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

Checklists or forms (see Appendix E) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

- Date;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and

- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

4.4.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

5. 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 which are contained in Appendix E: 1) The Site Management Plan Inspection Form; and 2) Groundwater Sampling Log. These forms are subject to NYSDEC revision.

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

5.1.3 Evaluation of Records and Reporting

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

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

- 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 or Professional Engineer licensed to practice in New York State will prepare the following certification:

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

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the deed restriction;
- 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; and

- 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, Jeff Wittlinger, of, 2813 Wehrle Drive, Suite 1, Williamsville, New York am certifying as the Designated Site Representative, and I have been authorized and designated by all site owners to sign this certification for the site.

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

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

- The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the deed restriction;
- 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, Jeff Wittlinger, of, 2813 Wehrle Drive, Suite 1, Williamsville, New York am certifying as the

Designated Site Representative, and I have been authorized and designated by all site owners to sign this certification for the site;

- No new information has come to my attention, including groundwater monitoring data from wells located at the site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid; and
- Every five years the following certification will be added:
  - The assumptions made in the qualitative exposure assessment remain valid.

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 annually, beginning eighteen months after the release letter 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 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 groundwater contaminants of concern media (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 RAP;
  - 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.

6. EXCAVATION WORK PLAN

6.1 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:

David Locey

NYSDEC Region 9, 270 Michigan Avenue, Buffalo, New York 14203

This notification will include:

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

6.2 SOIL SCREENING METHODS

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

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.

6.3 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.

6.4 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.

6.5 MATERIALS TRANSPORT OFF-SITE

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

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

All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes will be developed in the event that excavation of Site soils becomes necessary. All trucks loaded with site materials will exit the vicinity of the site

using only these approved truck routes. The route developed will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; and (g) community input.

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

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

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

6.6 MATERIALS DISPOSAL OFF-SITE

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

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

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does

not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

6.7 MATERIALS REUSE ON-SITE

Chemical criteria for on-site reuse of material have been approved by NYSDEC and are included in 6NYCRR Part 375-6.8(b). Soil brought from an off-Site source will need to satisfy the commercial use criteria set forth in 6NYCRR Part 375-6.8(b). The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

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

6.8 FLUIDS MANAGEMENT

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

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

6.9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities, the cover system, which is the existing concrete building slab and asphalt cover, will be restored in a manner that complies with the RAP. The demarcation layer providing the visual reference to the top of the "Remaining Contamination Zone" is the concrete or asphalt/subsoil interface. The Remaining Contamination zone is the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

6.10 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). 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.

6.11 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.

6.12 CONTINGENCY PLAN

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

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling

results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

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

6.13 COMMUNITY AIR MONITORING PLAN

A figure showing the location of air sampling stations based on generally prevailing wind conditions will be developed in the event that excavation of Site soils becomes necessary. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

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

6.14 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 be determined if excavation of Site soils becomes necessary. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

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

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

6.15 DUST CONTROL PLAN

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

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

6.16 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 A
TABLES

TABLE 1 – SOIL VAPOR ANALYSIS FOR TCE, PCE, AND 1,1,1-TRICHLOROETHANE
RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

Figure 9 Identification Symbol	SS #1 *	Duplicate Am #1	Am #1 *	SS #2	Am #2	SS #3	Am #3	SS #4	Am #4	SS #5	Am #5	SS #6	Am #6	Am #7	Am #8
Sample Canister (C) Number	1018	1002	1003	1005	1017 1	010	1021	1026	1007	1020	1011	1000 1	001 1	009 1	023
Trichloroethene (TCE)	E303	2.5	3.84 0.	792	3.5	9.68	3.78 0.	513 4.	53	4.21	8.03	17.7	1.08	ND	ND
Tetrachloroethene (PCE)	1.91	ND	ND	6.84 ND		5.67 ND		4.66	ND 4.	96 ND		4.0	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND ND		ND	ND	ND	2.54	ND	ND ND	ND ND		
NYSDOH Matrix Recommendations for TCE Levels	MITIGATE			Take reasonable and practical actions to identify source(s) and reduce exposures		MONITOR		Take reasonable and practical actions to identify source(s) and reduce exposures		Take reasonable and practical actions to identify source(s) and reduce exposures		MONITOR NA			NA
NYSDOH Matrix Recommendations for PCE Levels	No further action is required			No further action is required		No further action is required		No further action is required		No further action is required		No further action is required		NA NA	
NYSDOH Matrix Recommendations for 1,1,1-Trichloroethane Levels	No further action is required			No further action is required		No further action is required		No further action is required		No further action is required		No further action is required		NA NA	

Notes:
1.) All laboratory results are reported in micrograms per meter squared (ug/m^3).
2.) Matrix Recommendations were obtained from NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.
3.) * Indicates sample locations that have been identified for further mitigation based on review of NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York.
4.) "E" indicates result has been estimated; the calibration limit has been exceeded.
5.) ND = Not Detected
6.) NA = Not Applicable

TABLE 2 HRC DISPERSION - JULY 11, 2002
RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

Monitoring Well	Injection Point	Depth of Injection Point (ft)	Total lbs of HRC per Injection Point	Notes
GW-3	IP-1	12	60	
	IP-2	12	60	
	IP-3	12	60	
	IP-4	12	90	Increased due to refusal at IP-7 and IP-8
	IP-5	12	90	Increased due to refusal at IP-7 and IP-9
	IP-6	12	60	
	IP-7	12	30	Refusal after 30-lbs
	IP-8	0	0	Refusal
	IP-9	12	90	Increased due to refusal at IP-7 and IP-8
			540	**Total Pounds of HRC Injected**

TABLE 3 HRC-X INJECTION QUANTITIES
RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

Injection Point Designation	Approximate Depth of Injection Point (ft)	Approximate Pounds of HRC-X Injected
IP-1	12	90
IP-2	12	90
IP-3	12	90
IP-4	12	90
IP-5	12	90
IP-6	12	90
IP-7	12	40
IP-8	12	40
IP-9	12	60
IP-10	12	60
IP-11	12	60
IP-12	12	60
IP-13	12	60
IP-14	12	60
IP-15	12	60
IP-16	12	60
IP-17	12	60
IP-18	12	40
IP-19	12	40
IP-20	12	40
IP-21	12	40
IP-22	12	40
IP-23	12	40
IP-24	12	40
IP-25	12	40
	TOTAL =	1,480

NOTE - See Figure 1 for injection point locations.

TABLE 4 HRC PRIMER AND MRC DISPERSION - REMEDIAL PLAN
RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

Injection Point	Depth of Injection Point (ft)	Total lbs of HRC Primer per Injection Point	Total lbs of MRC per Injection Point	Notes:
IP-26	10	30	40	Area B: Plume
IP-27	10	30	40	Area B: Plume
IP-28	10	30	40	Area B: Plume
IP-29	10	30	40	Area B: Plume
IP-30	10	30	70	Area A: Source
IP-31	10	30	70	Area A: Source
IP-32	10	30	70	Area A: Source
IP-33	10	30	70	Area A: Source
		Total: 240 lbs	Total: 440 lbs	

Adjusted Total*: 480 llbs

*HRC Primer and MRC are sold in 30 lb units.

TABLE 5 SOIL ANALYSIS FOR VOLATILE ORGANIC COMPOUNDS

RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

VOLATILE ORGANIC COMPOUNDS	BH-1 (8'-10')	BH-2 (8'-10')	BH-3 (8'-10')	BH-4 (0'-2')	BH-4 (8'-10')	BH-5 (8'-10')	BH-6 (8'-10')	BH-7 (6'-8')	BH-7 (8'-10')	BH-8 (8'-10')	BH-9 (6'-8')	BH-10 (8'-10')	BH-11 (8'-10')	BH-12 (8'-10')	BH-13 (8'-10')	BH-14 (8'-10')	GW-1 (8'-10')	GW-2 (8'-10')	GW-3 (2'-4')	GW-3 (6'-8')	GW-3 (10'-12')	GW-3 (16'-18')	GW-4 (6'-8')	GW-5 (8'-10')	NYSDEC Soil Cleanup Objectives
Sample Collection Date:	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	10/25/01	11/02/01	11/02/01	11/02/01	11/02/01	11/02/01	11/02/01	11/02/01	11/01/01	11/01/01	11/02/01	11/02/01	11/02/01	11/02/01	11/01/01	11/01/01	
Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Bromodichloromethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Bromomethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Bromoform	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Carbon tetrachloride	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	12.4	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	600
Chloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,900
Chloromethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
2-Chloroethyl vinyl ether	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Chloroform	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	300
Dibromochloromethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
1,1-Dichloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	200
1,2-Dichloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	100
1,1-Dichloroethene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	400
cis-1,2-Dichloroethene	18.8	ND<11.0	73.7	19.2	17.6	29.1	545	592	325	ND<9.86	127	16.6	12.8	ND<8.51	423	107	76.4	ND<8.40	ND<112	ND<187	ND<147	53.6	ND<84.6	ND<9.13	NA
trans-1,2-Dichloroethene	ND<8.91	ND<11.0	ND<10.2	12.7	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	300
1,2-Dichloropropane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
cis-1,3-Dichloropropene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
trans-1,3-Dichloropropene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Methylene chloride	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<9.24	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	100
1,1,2,2-Tetrachloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	600
Tetrachloroethene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	3,990	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,400
1,1,1-Trichloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	800
1,1,2-Trichloroethane	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Trichloroethene	118	ND<11.0	18.1	ND<8.48	25.1	189	ND<254	10,900	2,130	65.8	1,150	89.9	116	67.5	1,440	628	82.0	ND<8.40	2,310	16,800	2,270	90.0	681	12.7	700
Vinyl Chloride	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	200
Benzene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	60
Chlorobenzene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,700
Ethylbenzene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	14.40	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	5,500
Toluene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	10,200	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	23.8	ND<8.51	ND<22.6	ND<11.0	46.40	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,500
m,p, - xylene	ND<8.91	ND<11.0	20.4	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	11.1	ND<21.4	ND<10.1	23.6	ND<8.51	ND<22.6	ND<11.0	42.00	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,200
o-xylene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	15.30	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	1,200
Styrene	ND<8.91	ND<11.0	ND<10.2	ND<8.48	ND<9.04	ND<10.5	ND<254	ND<275	ND<53.9	ND<9.86	ND<21.4	ND<10.1	ND<9.24	ND<8.51	ND<22.6	ND<11.0	ND<7.88	ND<8.40	ND<112	ND<187	ND<147	ND<8.02	ND<84.6	ND<9.13	NA
Acetone	ND<44.5	ND<55.2	ND<50.9	ND<42.4	ND<45.2	ND<52.5	ND<1,270	ND<1,380	ND<269	ND<49.3	ND<107	ND<50.3	ND<46.2	ND<42.6	ND<113	ND<55.0	ND<39.4	ND<42.0	ND<558	ND<934	ND<735	ND<40.1	ND<423	ND<45.6	200
Vinyl acetate	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<23.1	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	NA
2-Butanone	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<23.1	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	300
4-Methyl-2-pentanone	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<23.1	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	1,000
2-Hexanone	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<23.1	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	NA
Carbon disulfide	ND<22.3	ND<27.6	ND<25.5	ND<21.2	ND<22.6	ND<26.3	ND<636	ND<688	ND<135	ND<24.7	ND<53.6	ND<25.1	ND<23.1	ND<21.3	ND<56.5	ND<27.5	ND<19.7	ND<21.0	ND<279	ND<467	ND<367	ND<20.0	ND<212	ND<22.8	2,700

Notes:

1) Concentrations are in µg/kg, or ppb.
2) ND (Non-Detected above laboratory detection limit)
3) NA (Not Available)
4) NYSDEC Soil cleanup objectives were obtained from the NYSDEC TAGM #4046, dated December 2000.
5) Shaded areas indicate analyte detection; darker shaded areas indicate an exceedence of applicable NYSDEC Soil Cleanup Objectives.

TABLE 6 SOIL ANALYSIS FOR SEMI-VOLATILE ORGANIC COMPOUNDS

RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

SEMI-VOLATILE ORGANIC COMPOUNDS	BH-11 (8'-10')	GW-1 (8'-10')	GW-2 (8'-10')	GW-3 (10'-12')	GW-4 (6'-8')	GW-5 (8'-10')	NYSDEC Rec. Soil Cleanup Objective (PPB)
Sample Collection Date:	11/02/01	11/01/01	11/01/01	11/02/01	11/01/01	11/01/01	
Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Benzyl alcohol	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	NA
Bis (2-chloroethyl) ether	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Bis (2-chloroisopropyl) ether	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2-Chlorophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	800
1,3-Dichlorobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	1,600
1,4-Dichlorobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	8,500
1,2-Dichlorobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	7,900
Hexachloroethane	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2-Methylphenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	100,000 or MDL
4-Methylphenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	900
N-Nitrosodimetylamine	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
N-Nitroso-di-n-propylamine	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Phenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	30 or MDL
Benzoic acid	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	2,700
Bis (2-chloroethoxy) methane	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
4-Chloroaniline	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	220 or MDL
4-Chloro-3-methylphenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	240 or MDL
2,4-Dichlorophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	400
2,6-Dichlorophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2,4-Dimethylphenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Hexachlorobutadiene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Isophorone	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	4,400
2-methylnapthalene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	36,400
Naphthalene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	13,000
Nitrobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	200 or MDL
2-Nitrophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	330 or MDL
1,2,4-Trichlorobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	3,400
2-Chloronaphthalene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Acenaphthene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Acenapthylene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	41,000
4-Chlorophenyl phenyl ether	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Dibenzofuran	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	6,200
Diethyl phthalate	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	7,100
Dimethyl phthalate	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	2,000

SEMI-VOLATILE ORGANIC COMPOUNDS	BH-11 (8'-10')	GW-1 (8'-10')	GW-2 (8'-10')	GW-3 (10'-12')	GW-4 (6'-8')	GW-5 (8'-10')	NYSDEC Rec. Soil Cleanup Objective (PPB)
Sample Collection Date:	11/02/01	11/01/01	11/01/01	11/02/01	11/01/01	11/01/01	
Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
2,4-Dinitrophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	200 or MDL
2,4-Dinitrotoluene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2,6-Dinitrotoluene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	1,000.00
Fluorene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Hexachlorocyclopentadiene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2-Nitroanaline	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	430 or MDL
3-Nitroaniline	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	500 or MDL
4-Nitroaniline	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	NA
4-Nitrophenol	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <362	100 or MDL
2,4,6-Trichlorophenol	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
2,4,5-Trichlorophenol	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	100.00
4-Bromophenyl phenyl ether	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Di-n-butyl phthalate	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	8,100
4,6-Dinitro-2-methylphenol	ND< 864	ND <338	ND <317	ND <847	ND <827	ND <904	NA
Fluoranthene	ND <345	ND <338	ND <317	ND <339	ND <331	748	50,000***
Hexachlorobenzene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	410
N-Nitrosodiphenylamine	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Pentachlorophenol	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	1,000 or MDL
Anthracene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Phenanthrene	ND <345	ND <338	ND <317	ND <339	ND <331	483	50,000***
Benzidine	ND< 864	ND <845	ND <794	ND <847	ND <827	ND <904	NA
Benzo (a) anthracene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	224 or MDL
Bis (2-etylhexyl) phthalate	674	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Butylbenzylphthalate	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Chrysene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	400
3,3'-Dichlorobenzidine	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	NA
Pyrene	ND <345	ND <338	ND <317	ND <339	ND <331	620	50,000***
Benzo (b) fluoranthene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	1,100
Benzo (k) fluoranthene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	1,100
Benzo (g,h,i) perylene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Benzo (a) pyrene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	61 or MDL
Dibenz (a,h) anthracene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	14 or MDL
Di-n-octylphthalate	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	50,000***
Indeno (1,2,3-cd) pyrene	ND <345	ND <338	ND <317	ND <339	ND <331	ND <362	3,200

Notes:

1) Concentrations are in µg/kg, or ppb.
2) ND (Non-Detected above laboratory detection limit)
3) NA (Not Available)
4) NYSDEC Soil cleanup objectives were obtained from the NYSDEC TAGM #4046, dated December 2000.
5) Shaded areas indicate analyte detection; darker shaded areas indicate an exceedence of applicable NYSDEC Soil Cleanup Objectives.
6) MDL Method Detection Limit

TABLE 7 SOIL ANALYSIS FOR HEAVY METALS

RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

HEAVY METALS	BH-11 (8'-10')	GW-1 (8'-10')	GW-2 (8'-10')	GW-3 (10'-12')	GW-4 (6'-8')	GW-5 (8'-10')	NYSDEC Rec. Soil Cleanup Objective (PPM)
Sample Collection Date:	11/02/01	11/01/01	11/01/01	11/02/01	11/02/01	11/01/01	
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg (PPM)
Antimony	<6.65	<6.83	<6.64	<5.66	<6.35	<7.46	SB
Arsenic	7.06	2.58	2.39	1.20	5.18	4.12	7.5 or SB
Beryllium	<0.554	<0.569	<0.553	<0.472	<0.528	<0.622	0.16 (HEAST) OR SB
Cadmium	1.32	1.02	0.572	<0.472	1.24	1.50	1 or SB
Chromium	20.2	18.7	8.82	8.43	21.6	23.2	10 or SB
Copper	30.9	27.1	12.1	8.54	23.8	25.4	25 or SB
Lead	12.7	33.7	9.50	3.02	11.1	20.6	SB****
Mercury	<0.106	<0.0928	<0.0859	<0.0837	<0.0948	<0.0876	0.1
Nickel	23.2	16.0	8.92	<3.77	24.0	27.4	13 or SB
Selenium	<0.554	<0.569	<0.553	<0.472	<0.528	<0.622	2 or SB
Silver	<1.11	<1.14	<1.11	<0.942	<1.06	<1.24	SB
Thallium	<0.665	<0.683	<0.664	<0.566	<0.635	<0.746	SB
Zinc	66.3	78.6	48.4	39.3	56.5	82.1	20 or SB

Notes:

1) Concentrations are in µg/kg, or ppb.
2) ND (Non-Detected above laboratory detection limit)
3) NA (Not Available)
4) NYSDEC Soil cleanup objectives were obtained from the NYSDEC TAGM #4046, dated December 2000.
5) Shaded areas indicate analyte detection; darker shaded areas indicate an exceedence of applicable NYSDEC Soil Cleanup Objectives.
6) The location of GW-5 is not in the delineated area of concern. The site background levels will be based on the results obtained in this sample.

USEPA HEAST Database

**** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm.

TABLE 8 - BIOREMEDIATION WATER QUALITY PARAMETERS

RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

ANALYTE	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	Total* Change
Sample Collection Date:	09/23/05	12/27/05	03/01/06	04/18/16	06/14/06	08/08/06	10/18/06	12/11/06	02/26/07	04/12/07	06/20/07	08/15/07	12/04/07	09/09/08	12/03/08	02/25/09	04/27/09	06/17/09	08/14/09	
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Sulfate	37.0	31.0	30	30	36	36	25	26	27	25	29	ND<200	26	36	24	NA	20	ND<5.00	31.0	14.8%
Total Organic Carbon	1.6	19.9	1.5	1.7	2.5	2.6	3.1	2.2	3.0	1.1	3.0	2.4	1.8	5.3	28.9	NA	3.3	1530.0	2.7	-0.3
Dissolved Iron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.49	<0.1	0	8.71	NA	1.56	<0.10	<0.10	#VALUE!

ANALYTE	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3		Total Change
Sample Collection Date:	09/23/05	12/27/05	03/01/06	04/18/06	06/14/06	08/08/06	10/18/06	12/11/06	02/26/07	04/12/07	06/20/07	08/15/07	12/04/07	09/09/08	12/03/08	02/25/09	04/27/09	06/17/09	08/14/09	
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Sulfate	99.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	5.1	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<200	18	ND<2.0	ND<2.0	ND<2.0	ND<2.0	16.2	ND<10.00	#VALUE!
Total Organic Carbon	35.7	608	1,230	2,130	750	770	285	227.0	202.0	186.0	199.0	167.0	73	112	1,260	1,660	1,520	2.3	24.2	-177.8
Dissolved Iron	0.82	63.7	35.5	36.0	86.1	<0.1	60.0	47.4	44.1	40.5	38.8	5.2	8.1	10.4	179.0	262.0	232.0	153.0	93.9	49.8

ANALYTE	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7		Total Change
Sample Collection Date:	09/23/05	12/27/05	03/01/06	04/18/06	06/14/06	08/08/06	10/18/06	12/11/06	02/26/07	04/12/07	06/20/07	08/15/07	12/04/07	09/09/08	12/03/08	02/25/09	04/27/09	06/17/09	08/14/09	
Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Sulfate	59	73	71	70	71	62	10	35	86	78	72	ND<200	58	74	10	33	35	41.2	62.0	-68.6%
Total Organic Carbon	3.3	5.5	3.1	3.3	7.1	4.6	4.1	3.4	4.4	3.1	4.0	6.8	7	4	80.8	5.8	2.8	181.0	1180.0	1175.6
Dissolved Iron	<0.1	<0.1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	4.3	<0.1	0	6.16	2.63	2.69	0.645	0.618	#VALUE!

Notes:

1) Concentrations are in mg/l, or ppm.
2) NA (Not Available)
3) ND (Not Detected)
4) Desired sulfate decrease.
5) Desired TOC increase of 20-500 ppm.
6) Desired iron increase of 2-30 ppm.
7) *Total change measured from 2/26/07 value and 8/14/09 value.
8) GW-1 was not accessible on 2/25/09 due to snow pile coverage.

TABLE 9 - GROUNDWATER ANALYSIS FOR VOLATILE ORGANIC COMPOUNDS

RoCo, Ltd. 1746 Dale Road, Cheektowaga, New York

VOLATILE ORGANIC COMPOUNDS	NYSDEC CLASS GA STANDARD	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1	GW-1
Sample Collection Date:	NA	11/9/01	9/23/02	10/24/02	11/26/02	12/31/02	1/28/03	2/27/03	6/27/03	9/26/05	12/27/05	3/1/06	4/18/06	6/14/06	8/8/06	10/18/06	12/11/06	2/26/07	4/12/07	06/20/07	08/15/07	12/04/07	09/09/08	12/03/08	02/26/09	04/27/09	06/17/09	08/14/09
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Tetrachloroethene (PCE)	5.00	ND<5.00	NS	NS	NS	NS	NS	NS	NS	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	NA	ND<2.00	ND<2.00	ND<2.00
Trichloroethene (TCE)	5.00	7.09	NS	NS	NS	NS	NS	NS	NS	ND<2.00	ND<2.00	52.40	ND<2.00	ND<2.00	2.04	ND<2.00	3.29	3.26	2.92	2.50	ND<2.00	3.18	ND<2.00	ND<2.00	NA	ND<2.00	3.48	ND<2.00
cis-1,2-Dichloroethene (DCE)	5	481	NS	NS	NS	NS	NS	NS	NS	E 276	154	16	206	152	195	153	158	112	116	117	84	171	52	60	NA	37.8	131.0	66.2
trans-1,2-Dichloroethene	5.00	5.42	NS	NS	NS	NS	NS	NS	NS	2.54	2.10	ND<2.00	3.40	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	ND<2.00	NA	ND<2.00	2.10	ND<2.00
Vinyl Chloride	2	291	NS	NS	NS	NS	NS	NS	NS	121	ND<2.00	ND<2.00	ND<2.00	20.80	102.00	4.15	ND<2.00	3.80	ND<2.00	10	17	ND<2.00	30	ND<2.00	NA	4.9	43.2	30.9
Benzene	1.00	ND<5.00	NS	NS	NS	NS	NS	NS	NS	ND<0.70	ND<0.70	ND<0.71	ND<2.00	ND<0.70	ND<0.70	ND<0.70	ND<0.70	ND<0.70	ND<0.70	ND<0.700	ND<0.700	ND<0.700	ND<0.700	ND<0.700	NA	ND<0.700	ND<0.700	ND<0.700

VOLATILE ORGANIC COMPOUNDS	NYSDEC CLASS GA STANDARD	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3	GW-3
Sample Collection Date:	NA	11/9/01	9/23/02	10/24/02	11/26/02	12/31/02	1/28/03	2/27/03	6/27/03	9/26/05	12/27/05	3/1/06	4/18/06	6/14/06	8/8/06	10/18/06	12/11/06	2/26/07	4/12/07	6/20/07	8/15/07	12/4/07	5/8/08	9/9/08	12/3/08	2/26/09	4/27/09	6/17/09	08/14/09
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Tetrachloroethene (PCE)	5.00	ND<1,000	ND<400	ND<2,000	ND<1,000	ND<2,000	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<2,000	ND<1,000	ND<1,000	ND<2,000	ND<1,000	ND<100	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<400	ND<1,000	ND<1,000	ND<2.00
Trichloroethene (TCE)	5.00	71,600	52,500	161,000	84,600	80,300	122,000	102,000	153,000	75,600	ND<2,000	ND<1,000	ND<1,000	ND<2,000	ND<1,000	ND<100	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<400	ND<1,000	ND<1,000	ND<2.00
cis-1,2-Dichloroethene (DCE)	5	4,860	5,010	7,500	4,190	3,390	4,570	4,410	7,210	38,400	60,500	57,800	89,400	48,600	26,300	2,590	19,800	19,100	22,600	32,900	36,800	33,700	53,300	89,000	24,900	25,400	26,600	24,800	9.87
trans-1,2-Dichloroethene	5.00	ND<1,000	ND<400	ND<2,000	ND<1,000	ND<2,000	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<2,000	ND<1,000	ND<1,000	ND<2,000	ND<1,000	ND<100	ND<2,000	ND<2,000	ND<2,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<1,000	ND<400	ND<1,000	ND<1,000	ND<2.00
Vinyl Chloride	2	ND<1,000	ND<400	ND<2,000	ND<1,000	ND<2,000	ND<2,000	ND<2,000	ND<2,000	ND<1,000	8,630	20,400	37,800	34,700	48,700	5,730	39,700	21,500	54,700	44,500	45,300	27,800	29,000	58,200	31,000	38,600	42,700	67,400	138
Benzene	1.00	ND<1,000	ND<140	ND<700	ND<350	ND<700	ND<700	ND<700	ND<700	ND<350	ND<700	ND<350	ND<350	ND<350	ND<350	ND<35.0	ND<700	ND<700	ND<700	ND<350	ND<350	ND<350	ND<350	ND<350	ND<350	ND<140	ND<350	ND<350	ND<0.70
Acetone	NA																										9,290	6,420	ND<10.0

VOLATILE ORGANIC COMPOUNDS	NYSDEC CLASS GA STANDARD	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7	GW-7
Sample Collection Date:	11/9/01	7/16/02	9/23/02	10/24/02	11/26/02	12/31/02	1/28/03	2/27/03	6/27/03	9/26/05	12/27/05	3/1/06	4/18/06	6/14/06	8/8/06	10/18/06	12/11/06	2/26/07	4/12/07	6/20/07	8/15/07	12/4/07	9/9/08	12/3/08	2/26/09	4/27/09	6/17/09	08/14/09
Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Tetrachloroethene (PCE)	5.00	ND<100	NS	NS	NS	NS	NS	NS	ND<10.0	ND<40	ND<20	ND<20	ND<20	ND<200	ND<20	ND<2.00	ND<20	ND<20	ND<20	ND<20	ND<20.0	ND<4.0	ND<20.0	ND<2.0	ND<2.0	ND<20.0	ND<20.0	ND<2.0
Trichloroethene (TCE)	5.00	624	NS	NS	NS	NS	NS	NS	158	545	ND<20	94.00	128.0	ND<200	ND<20	ND<2.00	ND<20	ND<20	ND<20	ND<20	ND<20.0	ND<4.0	ND<20.0	ND<2.0	ND<2.0	ND<20.0	ND<20.0	ND<2.0
cis-1,2-Dichloroethene (DCE)	5	6,120	NS	NS	NS	NS	NS	NS	582	4,350	1,530	1,800	2,080	1,770	648	9.09	308.00	616.00	685.00	811	432	25	224	ND<2.0	ND<2.0	ND<20.0	ND<20.0	8.51
trans-1,2-Dichloroethene	5.00	ND<100	NS	NS	NS	NS	NS	NS	ND<10.0	62.40	ND<20	23.50	ND<20	ND<200	ND<20	ND<2.00	ND<20	ND<20	ND<20	ND<20	ND<20.0	ND<4.0	ND<20.0	ND<20.0	ND<2.0	ND<20.0	ND<20.0	ND<2.0
Vinyl Chloride	2	1,410	NS	NS	NS	NS	NS	NS	36.0	686	23.4	ND<20	ND<20	342.00	992.00	24.70	ND<20	ND<20	ND<20	28	316	450	243	14.8	2.1	ND<20.0	ND<20.0	46.1
Benzene	1.00	ND<35.0	NS	NS	NS	NS	NS	NS	ND<3.50	ND<14.0	ND<7.00	ND<7.00	ND<7.00	ND<70	ND<7.00	ND<0.7	ND<0.7	ND<0.7	ND<0.7	ND<7.00	ND<7.00	ND<1.40	ND<7.00	ND<0.7	ND<0.7	ND<7.00	ND<7.00	ND<0.7
Acetone	NA																									271	271	ND<10.0
Carbon Disulfide	NA																											5.83

Notes:

1) First post-injection sampling event was 9/26/05.
2) ND (Non-Detected above laboratory detection limit)
3) NA (Not Available), NS (Not Sampled)
4) Green shaded values indicate an exceedence of NYCRR Part 703 Class GA groundwater standards.
5) NYSDEC Groundwater Quality Standards were obtained from the NYSDEC NYCRR Part 703.5 - Table 1 Groundwater Standards/Criteria, dated August 1999.
6) Second injection occurred on 9/10/08 and 9/11/08.First post-injection sampling after 9/10-11/08 injection occurred on 12/03/08.
7) GW-1 was not accessible on 2/26/09 due to snow pile coverage.

TABLE 13

MONITORING FREQUENCY AND DURATION

Month	Groundwater Measurements	Redox	Analytical Testing
September 2010	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7
March 2011	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7
September 2011	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7
March 2012	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7
September 2012	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7
March 2013	X	X	TOC, sulfate, dissolved iron, VOCs in monitoring wells GW-1, GW-3, and GW-7

APPENDIX B
FIGURES

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Typical Geologic Cross Section Through the Site

Figure 4 – Groundwater Contour Map for April 27, 2009

Figure 5 – Intrusive Soil Vapor Sample Location Map

Figure 6 – HRC Injection Point Locations

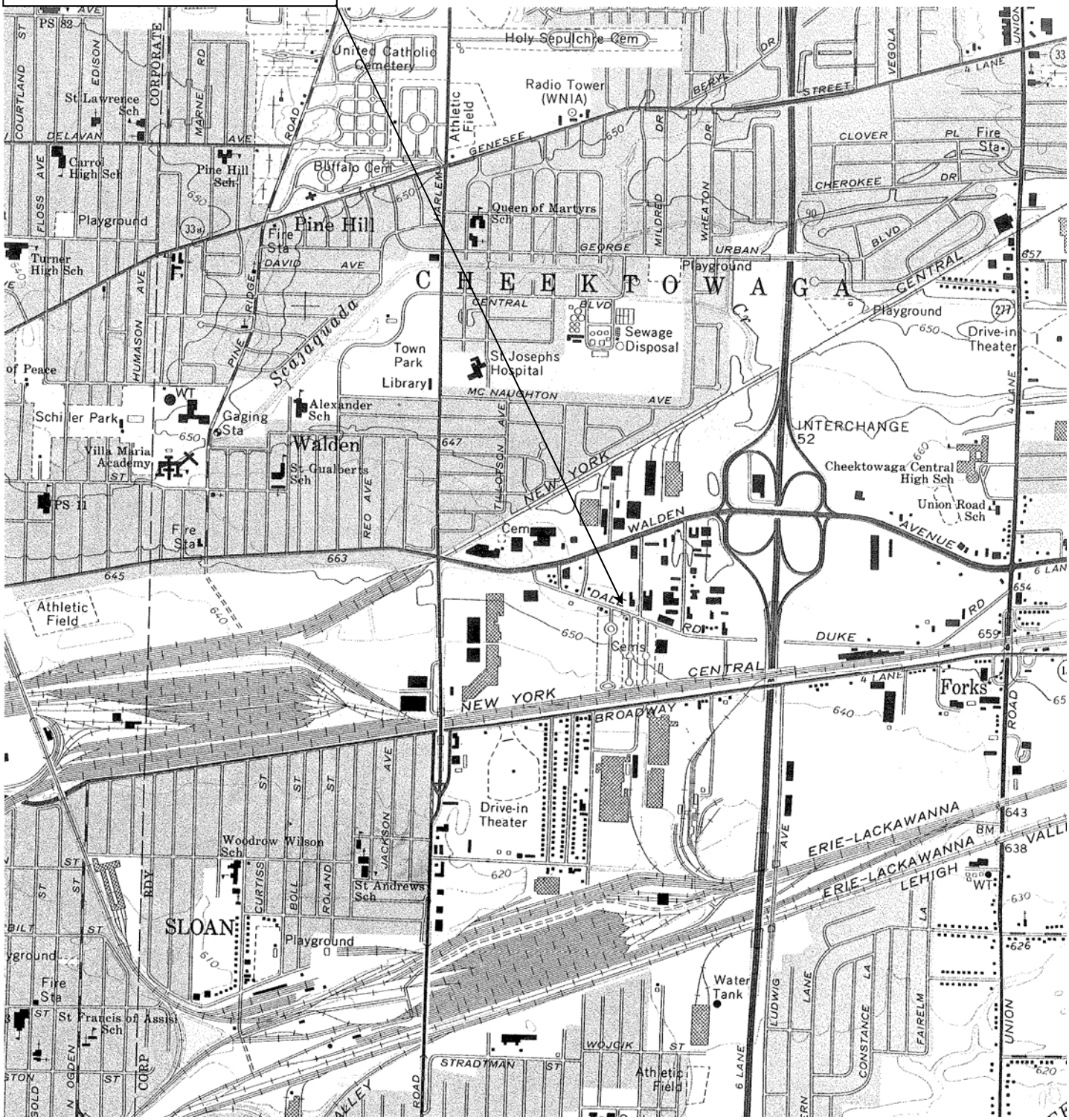
Figure 7 – RAP HRC-X Injection Point

Figure 8 – SRA Injection Location Plan

Figure 9 – Supplemental Site Investigation Data

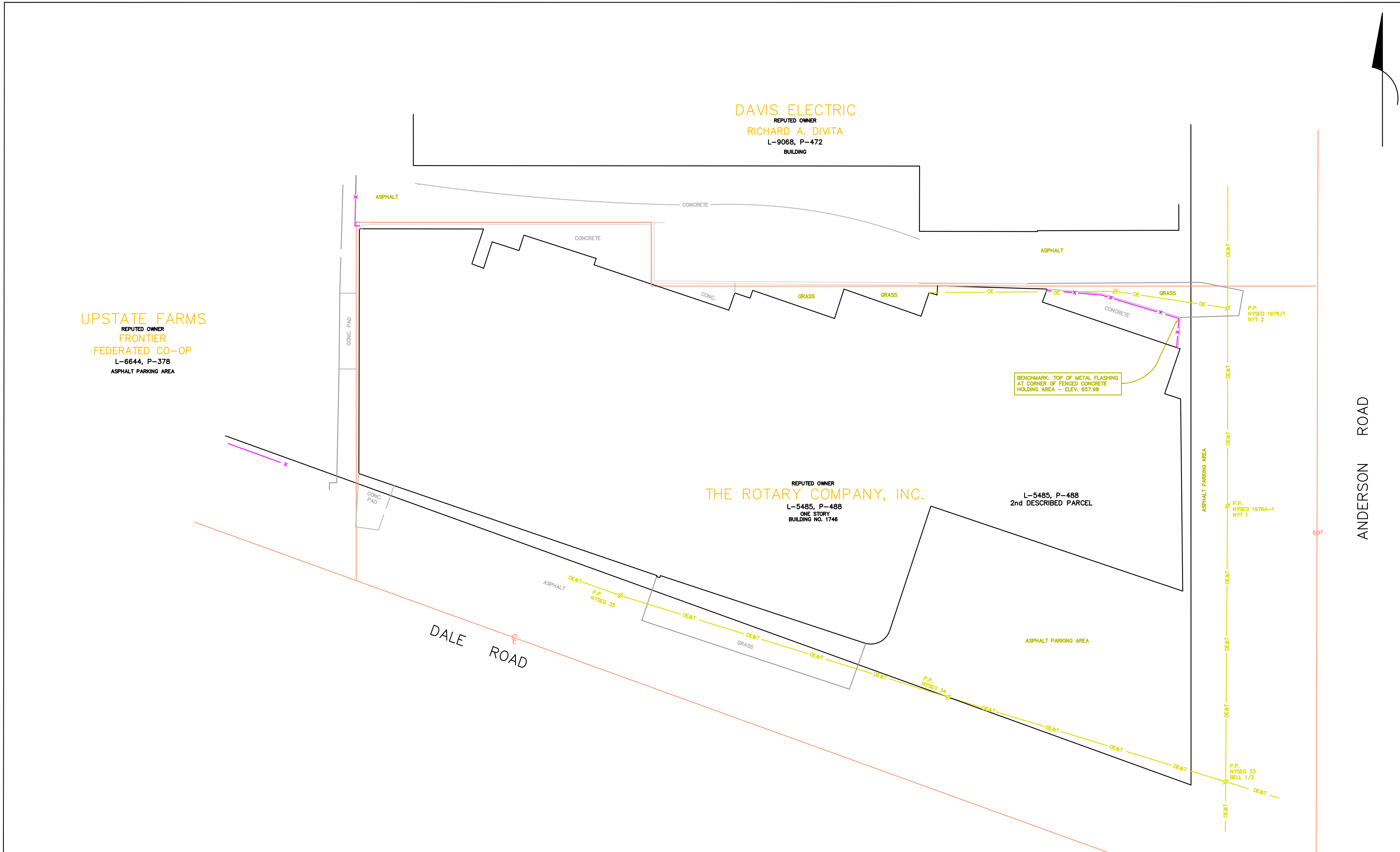
Figure 10 – Route to the Hospital

Figure 11 – Monitoring Well Array and Post-Remedial Groundwater Quality Conditions



Source: 1965 USGS NE BUFFALO NEW YORK QUADRANGLE

Title: SITE LOCATION MAP 1746 Dale Road Cheektowaga, New York	LEADER Leader Professional Services, Inc. 2813 Wehrle Drive, Suite 1 Williamsville, New York 14221 (716) 565-0963	Project: KDK Date: 12/2009 Scale: 1:24,000	Drawn: Checked: JAW File Name: 147.007	Figure: 1
Prepared For: Jaeckle, Fleischmann & Mugel, LLP				



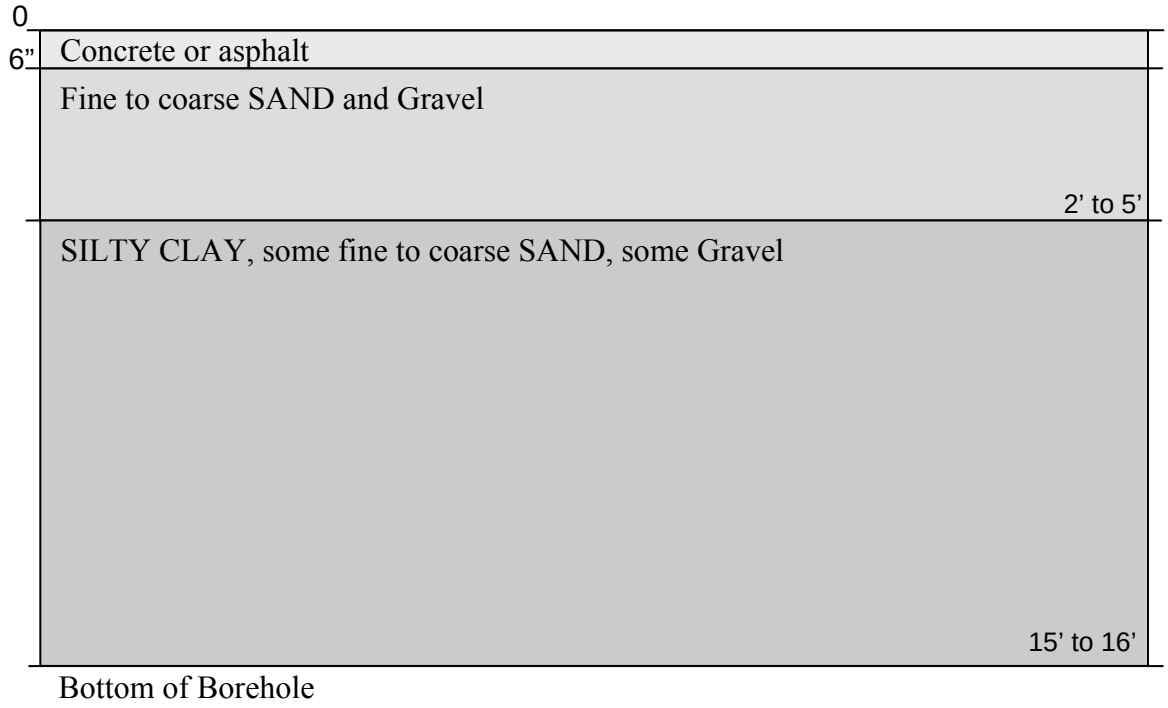
Title	SITE PLAN RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2300 Wehrle Drive
Williamsville, New York 14228
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007
Date:	SEPTEMBER 2003
Drawn By:	KCC
Checked By:	JAW
Scale:	1" = 30 FEET

Figure Number: 2

Figure 3
Typical Geologic Cross Section Throughout the Site



REPUTED OWNER
FRONTIER
FEDERATED CO-OP
L-6644, P-378
ASPHALT PARKING AREA

REPUTED OWNER
RICHARD A. DIVITA
L-9068, P-472
BUILDING

NORTH

GW-2 GW ELEV. 655.55'
GW-7 GW ELEV. 653.10'
GW-6 GW ELEV. NA
GW-5 GW ELEV. 656.00'
GW-3 GW ELEV. 656.34'
GW-1 GW ELEV. 654.67'
GW-4 GW ELEV. 652.21'

BH-1 BH-2 BH-3 BH-4 BH-5 BH-6 BH-7 BH-8 BH-9 BH-10 BH-11 BH-12 BH-13 BH-14 BH-15 BH-16 BH-17

GW-3 REDOX
JULY 16, 2002 NR

ASPHALT
CONCRETE
CONC. PAD
GRASS
ASPHALT PARKING AREA
ASPHALT PARKING AREA

106.20' DEED
44.70'
13.23'
10.15'
5.90'
27.35'
2.40'
4.50'
23' DEED
90° DEED
51.25'
6.55'
2.80'
2.95'
31.15'
11.10'
29.40'
149.40' DEED
9.0'
2.95'
2.30'
OE
39.50'
4.90'
52.35'
17.10'
8.05'
69.20'
123.71' DEED
88.20'
113.45'
161.84' DEED
47.10'
95.70'
1.20'
0.35'
0.78'
77.75'
11.4'
177.98' DEED
365.77' DEED
187.79' DEED
220.50' DEED

655
654
653
656

BENCHMARK: TOP OF METAL FLASHING AT CORNER OF FENCED CONCRETE HOLDING AREA - ELEV. 657.98

ONE STORY
BUILDING NO. 1746

REPUTED OWNER
THE ROTARY COMPANY, INC.
L-5485, P-488

L-5485, P-488
2nd DESCRIBED PARCEL

P.P. NYSEG 1976/1 NYT 2
P.P. NYSEG 1976A-1 NYT 1
P.P. NYSEG 35
P.P. NYSEG 34
P.P. NYSEG 33 BELL 1/2

OE&T

DALE ROAD (66.0' WIDE)
ADDITION (FORMERLY WALDEN AVENUE)
ANDERSON ROAD (VARYING WIDTHS) (FORMERLY GOOD ROAD) (FORMERLY 100.0' WIDE PRIVATE ROAD)

LEGEND

OE	OVERHEAD ELECTRIC
OE&T	OVERHEAD ELECTRIC & TELEPHONE
X	CHAIN LINK FENCE
P.P.	POWER POLE
GW-1	MONITORING WELL
BH-1	BORE HOLE LOCATION

NOTE:
1) GROUNDWATER ELEVATION MEASUREMENTS OBTAINED ON APRIL 27, 2009 USING AN ELECTRONIC WATER LEVEL INDICATOR.
2) GROUNDWATER CONTOUR LINES ARE BASED UPON LINEAR INTERPOLATION BETWEEN MONITORING WELLS AND SHOULD BE CONSIDERED ACURATE TO THE DEGREE IMPLIED BY THE METHOD USED.
3) WELL MONITORING POINT ELEVATIONS WERE OBTAINED BY MCINTOSH & MCINTOSH, PC AND REFERENCED TO NGVD.
4) GROUNDWATER ELEVATION DATA FROM GW-6 NOT USED FOR CONTOUR MAPPING PURPOSES. AS OF APRIL 27,2009 SAMPLING EVENT, BROKEN PAVEMENT AND GRAVEL HAVE ENTERED THE WELL, RENDERING GROUNDWATER ELEVATION DATA UNRELIABLE.

Title	GROUNDWATER CONTOUR MAP FOR APRIL 27, 2009 RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2813 Wehrle Drive, Suite 1
Williamsville, New York
14221
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007		
Date:	May 2009		
Drawn By:	LAA	Checked By:	JAW
Scale:	NONE		

Figure Number: 4

REPUTED OWNER
FRONTIER
FEDERATED CO-OP
L-6644, P-378
ASPHALT PARKING AREA

REPUTED OWNER
RICHARD A. DIVITA
L-9068, P-472
BUILDING

REPUTED OWNER
THE ROTARY COMPANY, INC.
L-5485, P-488

L-5485, P-488
2nd DESCRIBED PARCEL

ONE STORY
BUILDING NO. 1746

ASPHALT PARKING AREA

BENCHMARK: TOP OF METAL FLASHING AT CORNER OF FENCED CONCRETE HOLDING AREA = ELEV. 657.98

DALE ROAD (66.0' WIDE)

ANDERSON ROAD (VARYING WIDTHS) (FORMERLY GOODRICH ROAD) (FORMERLY 100.0' WIDE PRIVATE ROAD)

SAMPLE IDENTIFICATION TABLE

Canister Number	Location of Air Sample
C-1018	SS #1
C-1003	Am #1
C-1002	Duplicate of Am #1
C-1005	SS #2
C-1017	Am #2
C-1010	SS #3
C-1021	Am #3
C-1026	SS #4
C-1007	Am #4
C-1020	SS #5
C-1011	Am #5
C-1000	SS #6
C-1001	Am #6
C-1009	Am #7 (outdoor downwind)
C-1023	Am #8 (outdoor upwind)

LEGEND

- OE — OVERHEAD ELECTRIC
- OE&T — OVERHEAD ELECTRIC & TELEPHONE
- X — CHAIN LINK FENCE
- Ø P.P. — POWER POLE
- GW-1 — MONITORING WELL
- BH-1 — BORE HOLE LOCATION
- IP-1 — INJECTION POINT LOCATION
- B-19 — BORE HOLE LOCATION
- AMBIENT AIR SAMPLE ("Am")
- SUB SLAB AIR SAMPLE ("SS")

NOTE:

1) ONLY CONCENTRATIONS OF ANALYTES ABOVE APPLICABLE STANDARDS OR GDUIDANCE VALUES ARE SHOWN.
2) GW-6 AND GW-7 ARE THE LOCATIONS OF THE TWO MONITORING WELLS FOR THE SUPPLEMENTAL SI.
3) BH-15, BH-16, AND BH-17 ARE THE LOCATIONS OF THE SOIL BORINGS FOR THE SUPPLEMENTAL SI.

Title	INTRUSIVE SOIL VAPOR SAMPLE LOCATION MAP RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2813 Wehrle Drive
Williamsville, New York
14221
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007
Date:	SEPTEMBER 2007
Drawn By:	LAA
Checked By:	JAW
Scale:	1" = 30 FEET

Figure Number: 5

UPSTATE FARMS
REPUTED OWNER
FRONTIER
FEDERATED CO-OP
L-6644, P-378
ASPHALT PARKING AREA

DAVIS ELECTRIC
REPUTED OWNER
RICHARD A. DIVITA
L-9068, P-472
BUILDING

REPUTED OWNER
THE ROTARY COMPANY, INC.
L-5485, P-488
ONE STORY
BUILDING NO. 1746

L-5485, P-488
2nd DESCRIBED PARCEL

ASPHALT PARKING AREA

DALE ROAD

ANDERSON ROAD

B-19, B-15, B-17, B-8A, B-16, B-20, B-14, B-13, B-12, B-11, B-10, B-18, B-9A, B-7, B-4A, B-4, B-6, B-5, B-5A, B-3, B-2, B-1

GW-2, GW-7, GW-6, GW-4, GW-3, GW-1, GW-5

IP-1, IP-2, IP-3, IP-4, IP-5, IP-6, IP-7, IP-8, IP-9

BH-5, BH-6, BH-15, BH-16, BH-17, BH-9, BH-4, BH-3, BH-8, BH-10, BH-12, BH-13, BH-14, BH-11, BH-1, BH-2

ASPHALT, CONCRETE, CONC., GRASS, CONC. PAD, OE, OE&T

P.P. NYSEG 1976/1 NYT 2
P.P. NYSEG 1976A-1 NYT 1
P.P. NYSEG 35
P.P. NYSEG 34
P.P. NYSEG 33 BELL 1/2

BENCHMARK: TOP OF METAL FLASHING AT CORNER OF FENCED CONCRETE HOLDING AREA – ELEV. 657.98

LEGEND

B-1	•	BORE HOLE LOCATION-PREVIOUS STUDIES
BH-8	•	BORE HOLE LOCATION-SI
GW-4	+	MONITORING WELL-SI
BH-15	◉	BORE HOLE LOCATION-SSI
GW-7	✳	MONITORING WELL-SSI
IP-5	⬭	INJECTION POINT LOCATION-BPS

NOTES:

1) SITE PLAN PREPARED BY McINTOSH & McINTOSH, P.C.
2) LOCATIONS OF SITE FEATURES AND SAMPLING LOCATIONS ARE APPROXIMATE.
3) CONTOUR LINES WERE GENERATED USING SURFER VERSION 7.0.

Title	HRC INJECTION POINT LOCATIONS RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2300 Wehrle Drive
Williamsville, New York 14228
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007
Date:	OCTOBER 2003
Drawn By: KCC	Checked By: JAW
Scale:	1" = 30 FEET

Figure Number: 6

UPSTATE FARMS
REPUTED OWNER
FRONTIER
FEDERATED CO-OP
L-6644, P-378
ASPHALT PARKING AREA

DAVIS ELECTRIC
REPUTED OWNER
RICHARD A. DIVITA
L-9068, P-472
BUILDING

GW-2
IP-18
IP-17
IP-19
IP-20
IP-21
IP-7
IP-9
IP-11
IP-16
IP-1
IP-2
IP-3
IP-13
IP-10
IP-12
IP-8
IP-14
IP-4
IP-5
IP-6
IP-15
GW-7
GW-6
GW-4
GW-3
BH-7
BH-9
BH-8
BH-10
BH-11
BH-12
BH-13
BH-14
BH-15
BH-16
BH-17
BH-6
BH-5
BH-4
BH-3
GW-1
IP-22
IP-23
IP-24
IP-25
ASPHALT
CONCRETE
CONC.
GRASS
OE
CONC. PAD
BENCHMARK: TOP OF METAL FLASHING AT CORNER OF FENCED CONCRETE HOLDING AREA – ELEV. 657.98
P.P. NYSEG 1976/1 NYT 2
P.P. NYSEG 1976A-1 NYT 1
P.P. NYSEG 33 BELL 1/2
P.P. NYSEG 34
P.P. NYSEG 35
OE&T
ASPHALT PARKING AREA
ANDERSON ROAD
℄

REPUTED OWNER
THE ROTARY COMPANY, INC.
L-5485, P-488
ONE STORY
BUILDING NO. 1746

L-5485, P-488
2nd DESCRIBED PARCEL

GW-5
BH-1
BH-2
ASPHALT PARKING AREA

DALE ROAD

LEGEND

B-1	•	BORE HOLE LOCATION-PREVIOUS STUDIES
BH-8	•	BORE HOLE LOCATION-SI
GW-4	✦	MONITORING WELL-SI
BH-15	◉	BORE HOLE LOCATION-SSI
GW-7	✳	MONITORING WELL-SSI
IP-5	⬭	INJECTION POINT LOCATION-RAP

NOTES:

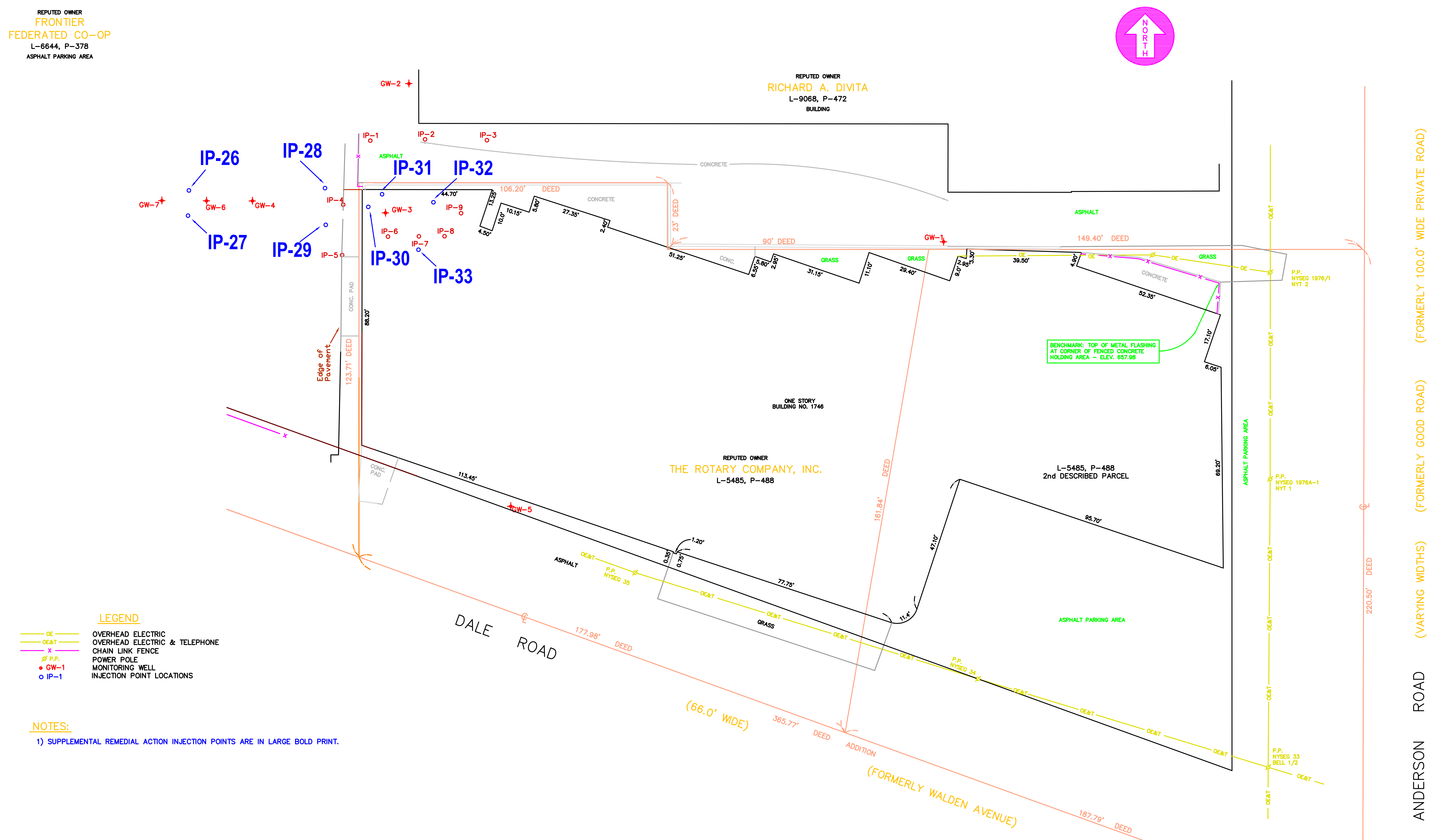
1) SITE PLAN PREPARED BY McINTOSH & McINTOSH, P.C.
2) LOCATIONS OF SITE FEATURES AND SAMPLING LOCATIONS ARE APPROXIMATE.

Title	RAP HRC-X INJECTION POINT RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2300 Wehrle Drive
Williamsville, New York 14228
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007		
Date:	March 2007		
Drawn By:	KCC	Checked By:	JAW
Scale:	1" = 30 FEET		

Figure Number: 7

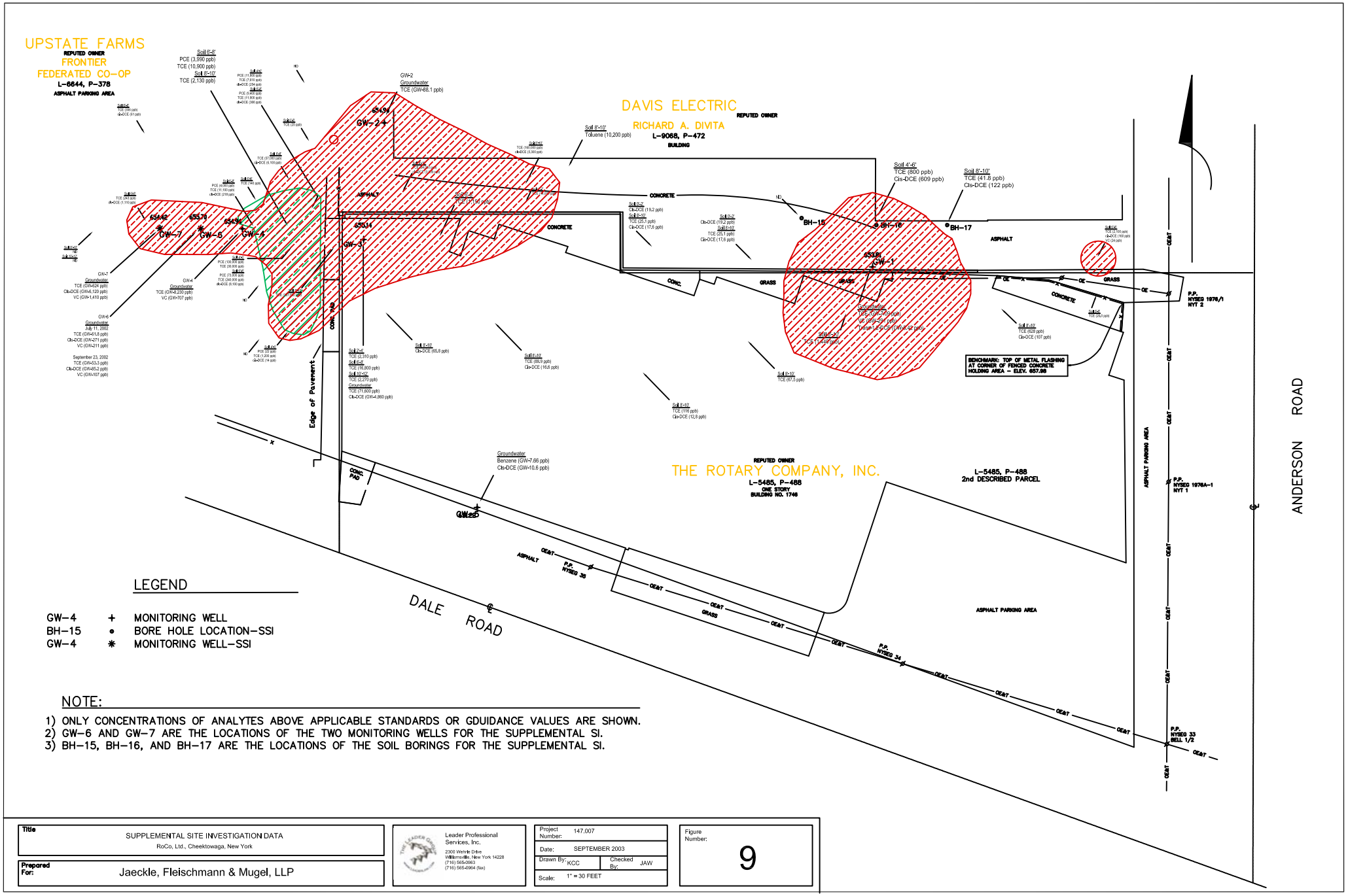


Title	SRA INJECTION LOCATION PLAN RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2813 Wehrle Drive
Williamsville, New York 14221
(716) 565-0963
(716) 565-0964 (fax)

Project Number:	147.007
Date:	JUNE 2008
Drawn By:	LAA
Checked By:	JAW
Scale:	1" = 30 FEET

Figure Number: 8



NOTE:

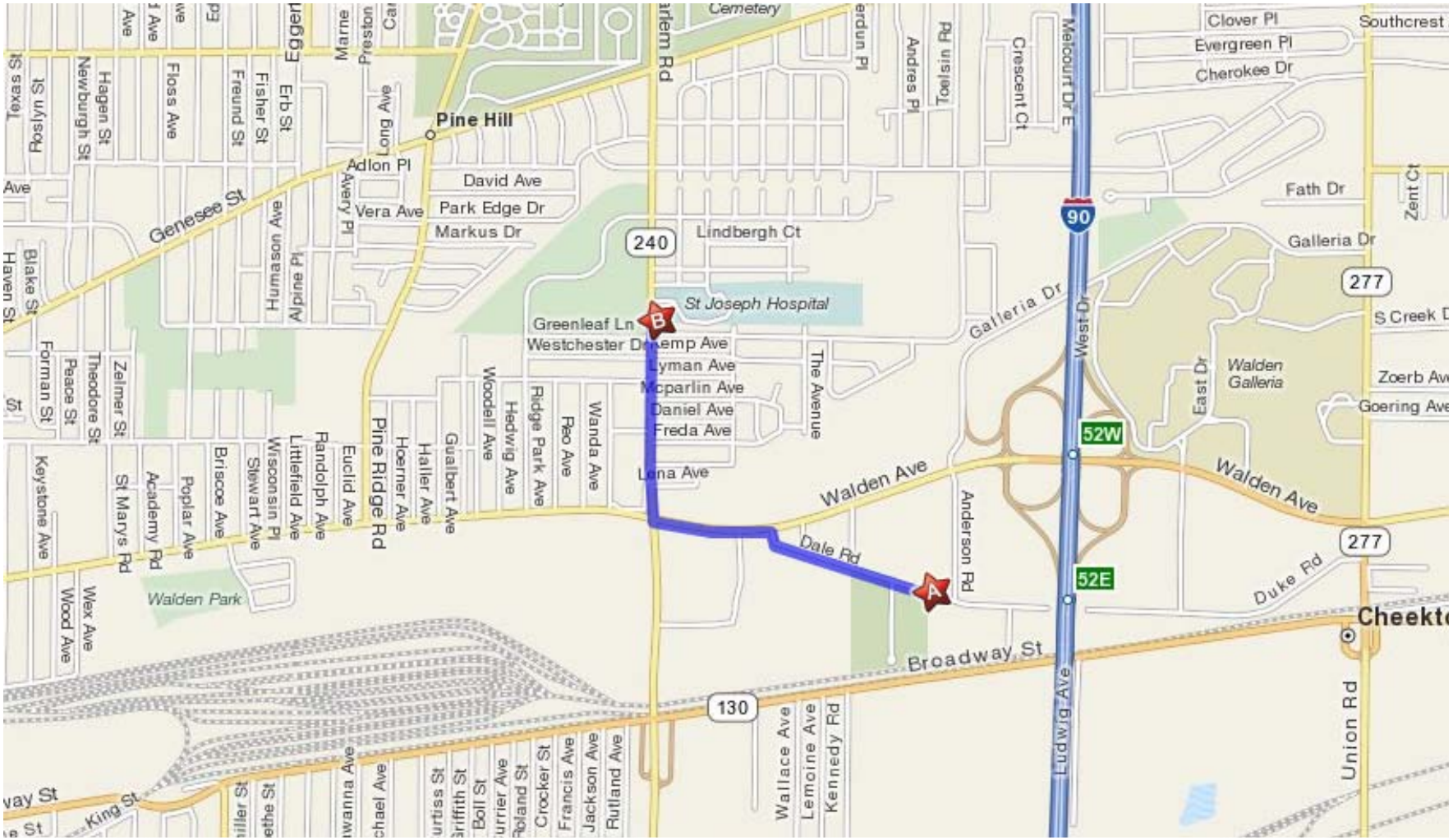
1) ONLY CONCENTRATIONS OF ANALYTES ABOVE APPLICABLE STANDARDS OR GDUIDANCE VALUES ARE SHOWN.
2) GW-6 AND GW-7 ARE THE LOCATIONS OF THE TWO MONITORING WELLS FOR THE SUPPLEMENTAL SI.
3) BH-15, BH-16, AND BH-17 ARE THE LOCATIONS OF THE SOIL BORINGS FOR THE SUPPLEMENTAL SI.

Title	SUPPLEMENTAL SITE INVESTIGATION DATA RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2300 Wehrle Drive
Williamsville, New York 14228
(716) 565-0063
(716) 565-0064 (fax)

Project Number:	147.007
Date:	SEPTEMBER 2003
Drawn By:	KCC
Checked By:	JAW
Scale:	1" = 30 FEET

Figure Number: 9



Note:

A – 1746 Dale Road, Cheektowaga, NY (the Site)
B – 2605 Harlem Road, Cheektowaga, NY (St. Joseph Hospital)

Source: Mapquest.

Title: Route to Hospital St. Joseph Hospital	LEADER Leader Professional Services, Inc. 2813 Wehrle Drive, Suite #1 Williamsville, New York (716) 565-0963 (716) 565-0964 (fax)	Project: KDK Date: 12/2009 Scale: N.T.S.	Drawn: Checked: JAW File Name: 147.009	Figure: 10
Prepared For: Jaeckle, Fleischmann & Mugel, LLP				

DAVIS ELECTRIC
REPUTED OWNER
RICHARD A. DIVITA
L-9068, P-472
BUILDING

UPSTATE FARMS
REPUTED OWNER
FRONTIER
FEDERATED CO-OP
L-6644, P-378
ASPHALT PARKING AREA

THE ROTARY COMPANY, INC.
REPUTED OWNER
L-5485, P-488
ONE STORY
BUILDING NO. 1746

L-5485, P-488
2nd DESCRIBED PARCEL

ASPHALT PARKING AREA

ASPHALT PARKING AREA

GW-1
GW-2
GW-3
GW-4
GW-5
GW-6
GW-7

Groundwater
Cis-DCE (GW-8.51 ppb)
VC (GW-46.1 ppb)

Groundwater
Cis-DCE (GW-0.87 ppb)
VC (GW-138 ppb)

Groundwater
Cis-DCE (GW-66.2 ppb)
VC (GW-30.8 ppb)

BH-1
BH-2
BH-3
BH-4
BH-5
BH-6
BH-7
BH-8
BH-9
BH-10
BH-11
BH-12
BH-13
BH-14
BH-15
BH-16
BH-17

ASPHALT
CONCRETE
CONC.
CONC. PAD
GRASS
OE
OE&T
P.P. NYSEG 1976/1 NYT 2
P.P. NYSEG 1976A-1 NYT 1
P.P. NYSEG 35
P.P. NYSEG 34
P.P. NYSEG 33 BELL 1/2

BENCHMARK: TOP OF METAL FLASHING AT CORNER OF FENCED CONCRETE HOLDING AREA = ELEV. 657.98

DALE ROAD

ANDERSON ROAD

LEGEND

BH-8	○	BORE HOLE LOCATION
GW-4	+	MONITORING WELL
BH-15	○	BORE HOLE LOCATION-SSI
GW-4	+	MONITORING WELL

NOTE:

1) ONLY CONCENTRATIONS OF ANALYTES ABOVE APPLICABLE STANDARDS OR GDUIDANCE VALUES ARE SHOWN.
2) GW-6 AND GW-7 ARE THE LOCATIONS OF THE TWO MONITORING WELLS FOR THE SUPPLEMENTAL SI.
3) BH-15, BH-16, AND BH-17 ARE THE LOCATIONS OF THE SOIL BORINGS FOR THE SUPPLEMENTAL SI.

Title	Monitoring Well Array and Post-remedial Groundwater Quality Conditions RoCo, Ltd., Cheektowaga, New York
Prepared For:	Jaeckle, Fleischmann & Mugel, LLP

Leader Professional Services, Inc.
2300 Wehrle Drive
Williamsville, New York 14228
(716) 565-0963
(716) 565-0964 (fax)

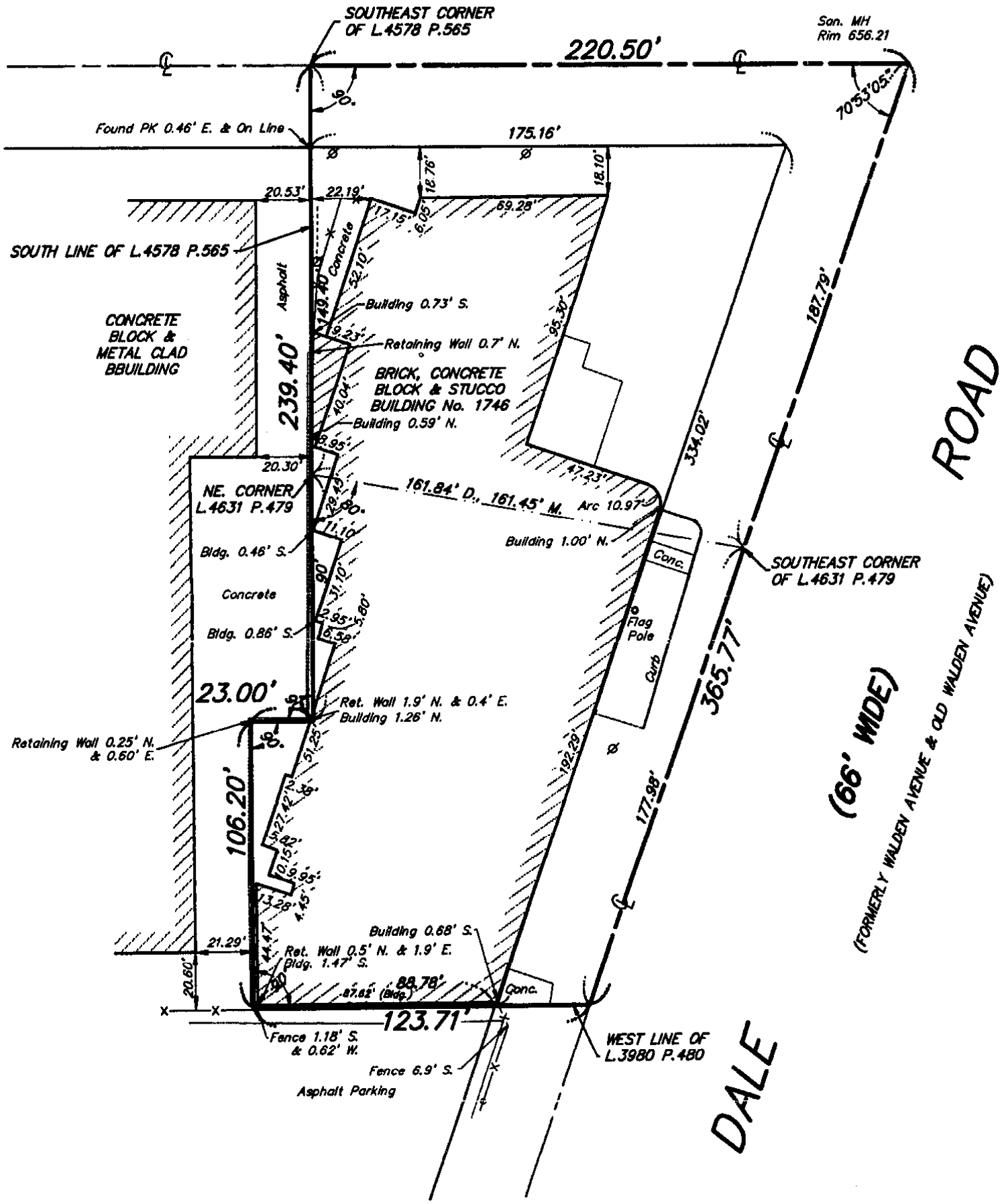
Project Number:	147.007
Date:	SEPTEMBER 2003
Drawn By:	KCC
Checked By:	JAW
Scale:	1" = 30 FEET

Figure Number: 11

APPENDIX C
METES AND BOUNDS

ANDERSON (60' WIDE) ROAD

(FORMERLY A 100' WIDE PRIVATE ROAD)



1746 Dale Road, Cheektowaga, NY
Legal Description

All that tract or parcel of land situate in the Town of Cheektowaga, County of Erie and State of New York, being part of Lot No. 24, Township 11, Range 7 of the Holland Land Company's Survey, described as follows:-

Beginning at a point in the center line of Dale Road (formerly Walden Avenue) at its intersection with the west line of lands conveyed to Walden Properties Incorporated by deed from The General American Transportation Corporation recorded in Erie County Clerk's Office in Liber 3980 of Deeds page 480: thence northerly from said point and along the west line of Walden Properties Incorporated lands one hundred twenty-three and seventy-one hundredths (123.71) feet to a point: thence easterly at right angles to said line one hundred six and twenty hundredths (106.20) feet to a point: thence southerly at right angles to said last mentioned line twenty-three (23) feet to a point: thence easterly at right angles to said last mentioned line ninety (90) feet to a point: thence southerly with an interior angle of 80° one hundred sixty-one and eighty-four hundredths (161.84) feet to the center line of Dale Road (formerly Walden Avenue): thence westerly along the center line of Dale Road (formerly Walden Avenue) one hundred seventy-seven and ninety-eight hundredths (177.98) feet to the point or place of beginning and also

All that tract or parcel of land situate in the Town of Cheektowaga, County of Erie and State of New York, being part of Lot No. 24, Township 11, Range 7 of the Holland Land Company's Survey, described as follows:-

Beginning at a point in the center line of Dale Road (formerly Walden Avenue) one hundred seventy-seven and ninety-eight hundredths (177.98) feet east measured along said center line from the intersection of said center line with the west line of lands conveyed to the Walden Properties Incorporated by deed recorded in Erie County Clerk's Office in Liber 3980 of Deeds page 480, which point of beginning is also the southeast corner of lands conveyed by William Zacher to William Weiss and others by deed recorded in Erie County Clerk's Office in Liber 4631 of Deeds page 479: thence continuing east along the said center line of Dale Road (formerly Walden Avenue) a distance of one hundred eighty-seven and seventy-nine hundredths (187.79) feet to a point in the center line of a private roadway as originally laid out as a one hundred (100) foot roadway (now known as Anderson Road): thence north at an interior angle with the last described line 70° 53' 05" and along the center line of said private roadway two hundred twenty and fifty hundredths (220.50) feet to the southeast corner of lands conveyed to Henry S. Kolk by deed dated September 15, 1949 and recorded in Erie County Clerk's Office in Liber 4578 of Deeds page 565: thence west at right angles to the last mentioned line and along the southerly boundary line of the said Kolk lands, a distance of one hundred forty-nine and forty hundredths (149.40) feet to the northeast corner of lands deeded to William Weiss and others by deed recorded as aforesaid: thence southerly at an interior angle of 100° with the last described line and along the easterly line of the lands deeded by Zacher to Weiss as aforesaid, a distance of one hundred sixty-one and eighty-four hundredths (161.84) feet to the point or place of beginning

Excepting the part of the premises conveyed to The Town of Cheektowaga by deed recorded in Erie County Clerk's Office in Liber 6222 of Deeds page 673

APPENDIX D
MONITORING WELL LOGS

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: NOVEMBER 1, 2001 — GW-1

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

DRILLING COMPANY: ZEBRA Envrionmental, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr.Philip Orsi/Mr. Christopher Donovan
TOTAL DEPTH: 15-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: NA
CASING LENGTH: NA
CASING TYPE: NA
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-1

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION	WELL CONST.
	0.0 PPM	S-1	NA	48-inches	Gray, CEMENT, dry. [FILL]	
1	0.0 PPM				Reddish-brown, SILTY CLAY, damp.	
	0.0 PPM					
2	0.0 PPM					
	0.0 PPM					
3	0.0 PPM					
	0.0 PPM				… olive-black, FMC SAND, some Silty Clay, damp.	
4	0.0 PPM					
	0.0 PPM	S-2	NA	48-inches		
5	0.0 PPM				… reddish-brown, SILTY CLAY.	
	0.0 PPM					
6	0.0 PPM					
	0.0 PPM					
7	0.0 PPM					
	0.0 PPM					
8	0.0 PPM					
	0.0 PPM	S-3	NA	48-inches	… olive-black, and FMC SAND.	
9	0.0 PPM				… reddish-gray, SILTY CLAY.	
	0.0 PPM					
10	0.0 PPM					
	0.0 PPM					
11	0.0 PPM					
	0.0 PPM					
12	0.0 PPM					
	0.0 PPM	S-4	NA	36-inches	… some FMC SAND, wet.	
13	0.0 PPM					
	0.0 PPM					
14	0.0 PPM					
	0.0 PPM					
15	0.0 PPM				[FMC SAND and SILTY CLAY]	
					Bottom of hole at 15-feet.	
16						
17						
18						
19						

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: NOVEMBER 1, 2001 — GW-2

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

DRILLING COMPANY: ZEBRA Envrionmental, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr.Philip Orsi/Mr. Christopher Donovan
TOTAL DEPTH: 16-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: NA
CASING LENGTH: NA
CASING TYPE: NA
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-2

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION	WELL CONST.
	0.0 PPM	S-1	NA	48-inches	Gray, CEMENT, dry. [FILL]	
1	0.0 PPM				Olive, FMC SAND, wet.	
	0.0 PPM					
2	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
3	0.0 PPM					
	0.0 PPM				… brown.	
4	0.0 PPM					
	0.0 PPM	S-2	NA	48-inches		
5	0.0 PPM				… olive, FMC SAND, wet.	
	0.0 PPM					
6	0.0 PPM				… and SILTY CLAY, damp.	
	0.0 PPM				… brown, SILTY CLAY, some FMC Sand.	
7	0.0 PPM					
	0.0 PPM				… SILTY CLAY.	
8	0.0 PPM					
	0.0 PPM	S-3	NA	48-inches	… olive, FMC SAND, wet.	
9	0.0 PPM				… grayish-brow, SILTY CLAY, damp.	
	0.0 PPM					
10	0.0 PPM					
	0.0 PPM					
11	0.0 PPM					
	0.0 PPM					
12	0.0 PPM					
	0.0 PPM	S-4	NA	36-inches	… olive, FMC SAND, wet.	
13	0.0 PPM					
	0.0 PPM				… reddish-gray, SILTY CLAY, damp.	
14	0.0 PPM					
	0.0 PPM					
15	0.0 PPM					
	0.0 PPM					
16	0.0 PPM				[FMC SAND and SILTY CLAY]	
					Bottom of hole at 15-feet.	
17						
18						
19						

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: NOVEMBER 2, 2001 — GW-3

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

DRILLING COMPANY: ZEBRA Envrionmental, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr.Philip Orsi/Mr. Christopher Donovan
TOTAL DEPTH: 20-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: NA
CASING LENGTH: NA
CASING TYPE: NA
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-3

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION	WELL CONST.
	3.9 PPM	S-1	NA	48-inches	Black, FMC SAND, some Gravel, damp.	
1	0.00 PPM				… and SILTY CLAY.	
	0.00 PPM				… light olive, FMC SAND, wet.	
2	0.00 PPM					
	0.00 PPM					
3	**3.0 PPM**					
	50.1 PPM				… brown, SILTY CLAY, little FMC Sand, damp.	
4	**96.5 PPM**					
	15.9 PPM	S-2	NA	48-inches	… light olive, FMC SAND, wet.	
5	**21.2 PPM**					
	23.6 PPM					
6	**28.8 PPM**				… and SILTY CLAY, damp.	
	25.7 PPM				… little FMC Sand.	
7	**49.1 PPM**					
	88.0 PPM				… reddish-brown, SILTY CLAY.	
8	**204.0 PPM**					
	13.3 PPM	S-3	NA	48-inches	… light olive with milky white streaks, FMC SAND, wet.	
9	0.0 PPM					
	0.0 PPM					
10	0.0 PPM					
	0.0 PPM					
11	**445.0 PPM**					
	445.0 PPM				… reddish-brown, SILTY CLAY, damp.	
12	**469.0 PPM**					
	0.0 PPM	S-4	NA	48-inches	… olive, FMC SAND, wet.	
13	0.0 PPM					
	0.0 PPM					
14	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
15	**85.9 PPM**					
	354.0 PPM					
16	**81.0 PPM**					
	0.0 PPM	S-5	NA	48-inches		
17	0.0 PPM					
	0.0 PPM					
18	0.0 PPM					
	0.0 PPM					
19	0.0 PPM					
	0.0 PPM				[FMC SAND and SILTY CLAY]	

Bottom of hole at 20-feet.

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: NOVEMBER 1, 2001 — GW-4

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

DRILLING COMPANY: ZEBRA Envrionmental, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr.Philip Orsi/Mr. Christopher Donovan
TOTAL DEPTH: 16-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: NA
CASING LENGTH: NA
CASING TYPE: NA
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-4

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION	WELL CONST.
	0.0 PPM	S-1	NA	48-inches	Black, GRAVEL, damp. [FILL]	
1	0.0 PPM				Olive, FMC SAND, wet.	
	0.0 PPM					
2	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
3	0.0 PPM					
	0.0 PPM					
4	0.0 PPM					
	0.0 PPM	S-2	NA	48-inches	… olive, FMC SAND.	
5	0.0 PPM				… wet.	
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
6	0.0 PPM					
	0.0 PPM					
7	0.0 PPM					
	0.0 PPM					
8	0.0 PPM					
	0.0 PPM	S-3	NA	48-inches	… olive, FMC SAND, wet.	
9	0.0 PPM					
	0.0 PPM					
10	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
11	0.0 PPM					
	0.0 PPM					
12	0.0 PPM					
	0.0 PPM	S-4	NA	48-inches	… olive, and FMC SAND, wet.	
13	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
14	0.0 PPM					
	0.0 PPM					
15	0.0 PPM					
	0.0 PPM					
16	0.0 PPM				[FMC SAND and SILTY CLAY]	
					Bottom of hole at 16-feet.	
17						
18						
19						

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: NOVEMBER 1, 2001 — GW-5

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

DRILLING COMPANY: ZEBRA Envrionmental, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr.Philip Orsi/Mr. Christopher Donovan
TOTAL DEPTH: 16-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: NA
CASING LENGTH: NA
CASING TYPE: NA
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-5

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION	WELL CONST.
	0.0 PPM	S-1	NA	48-inches	Gray, GRAVEL, dry. [FILL]	
1	0.0 PPM				Olive-black, FMC SAND, little Silty Clay, damp.	
	0.0 PPM					
2	0.0 PPM					
	0.0 PPM					
3	0.0 PPM					
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
4	0.0 PPM					
	0.0 PPM	S-2	NA	48-inches	… olive-black, FMC SAND, some Silty Clay.	
5	0.0 PPM				… olive, FMC SAND.	
	0.0 PPM				… reddish-brown, SILTY CLAY, damp.	
6	0.0 PPM					
	0.0 PPM					
7	0.0 PPM					
	0.0 PPM					
8	0.0 PPM					
	0.0 PPM	S-3	NA	48-inches	… olive-black, FMC SAND.	
9	0.0 PPM				… olive.	
	0.0 PPM				… reddish-brown, SILTY CLAY.	
10	0.0 PPM					
	0.0 PPM				… reddish-gray.	
11	0.0 PPM					
	0.0 PPM					
12	0.0 PPM					
	0.0 PPM	S-4	NA	48-inches		
13	0.0 PPM					
	0.0 PPM					
14	0.0 PPM					
	0.0 PPM					
15	0.0 PPM					
	0.0 PPM					
16	0.0 PPM				[FMC SAND and SILTY CLAY]	
					Bottom of hole at 16-feet.	
17						
18						
19						

LEADER PROFESSIONAL SERVICES, INC.
2300 WEHRLE DRIVE
WILLIAMSVILLE, NEW YORK 14221

TEST BORING LOG: JULY 10, 2002 — GW-7

CLIENT: Jaeckle, Fleischmann & Mugel, LLP
LOCATION: 1746 Dale Road, Cheektowaga, New York
PROJECT NO.: 147.007
PROJECT MANAGER: Ms. Karen C. Carlson

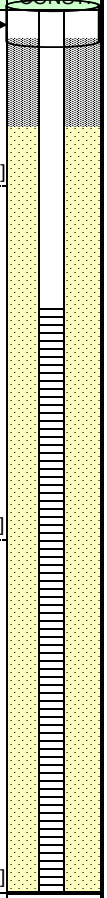
DRILLING COMPANY: International Waste Removal, Inc.
DRILLING METHOD: Geoprobe
DRILLER: Mr. Edward Eagan
TOTAL DEPTH: 15-feet
TOP OF CASING ELEV: NA
GROUNDWATER ELEV: NA
GROUND SURFACE ELEV: NA

SCREEN DIAMETER: 2-inch
SCREEN LENGTH: 10-feet
SCREEN TYPE: PVC
CASING DIAMETER: 2-inch
CASING LENGTH: 5-feet
CASING TYPE: PVC
SAMPLING METHOD: Macro core open sampling

TEST BORING DESIGNATION: GW-7

DEPTH (FEET)	PID READINGS (BACKGROUND = 0.0PPM)	SAMPLE NO.	N-VALUE	REC. (INCHES)	SAMPLE DESCRIPTION
	0.0 PPM	S-1	NA	48-inches	Black, FMC SAND and SILTY CLAY, damp.
1	0.0 PPM				
	0.0 PPM				
2	0.0 PPM				
	0.0 PPM				… brownish-black, little Silty Clay.
3	0.0 PPM				[FMC and SILTY CLAY]
	0.0 PPM				Redddish-brown, CLAY, damp.
4	0.0 PPM				
	0.0 PPM	S-2	NA	48-inches	
5	0.0 PPM				
	0.0 PPM				
6	0.0 PPM				
	0.0 PPM				
7	0.0 PPM				
	0.0 PPM				
8	0.0 PPM				… and GRAVEL.
	0.0 PPM	S-3	NA	48-inches	
9	0.0 PPM				[CLAY]
	0.0 PPM				Reddish-brown, SILTY CLAY, damp.
10	0.0 PPM				
	0.0 PPM				
11	0.0 PPM				
	0.0 PPM				… some FMC Sand.
12	0.0 PPM				
	0.0 PPM	S-4	NA	36-inches	
13	0.0 PPM				… no FMC Sand.
	0.0 PPM				
14	0.0 PPM				
	0.0 PPM				
15	0.0 PPM				[SILTY CLAY]
					Bottom of hole at 15-feet.
16					
17					
18					
19					

WELL CONST.



APPENDIX E
SITE INSPECTION AND GROUNDWATER MONITORING WELL SAMPLING FORMS

SITE MANAGEMENT PLAN INSPECTION FORM

Site Name: _____

Site Location: _____

_____

Date: _____ Time: _____

Status of Institutional Controls: _____

_____

_____

_____

_____

General Site Conditions: _____

_____

_____

_____

_____

Site Management Plan Activity in Addition to Inspection: _____

_____

_____

_____

_____

Notes: _____

_____

_____

_____

_____

Inspection Technician Name: _____

Inspection Technician Initials: _____

GROUNDWATER SAMPLING LOG

Site Name: _____

Site Location: _____

_____

Date: _____ Time: _____

Groundwater Monitoring Well #: _____

Groundwater Monitoring Well Inside Diameter: _____

Depth to bottom of Well: _____ Depth to Groundwater from Top of Casing: _____

_____ Water column Volume: _____

_____ Purge Volume: _____

Water quality conditions (Turbidity, Color, Odor): _____

_____

_____

_____

_____

pH: _____

Conductivity: _____

Sample Analysis Required: _____

_____

General Observations: _____

_____

_____

_____

_____

_____

Sampling Technicians Name: _____

Sampling Technician Initials: _____

APPENDIX F
QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN

ROCO LTD. SITE
1746 DALE ROAD
CHEEKTOWAGA, ERIE COUNTY, NEW YORK

Prepared for:

RoCo LTD.
PO Box 971
Colby Hill Road
New London, New Hampshire 03257

Prepared by:

Leader Professional Services, Inc.
2813 Wehrle Drive
Williamsville, New York 14221

Updated January 2010

147.007

TABLE OF CONTENTS

TABLES

ATTACHMENTS

1. INTRODUCTION

This document contains the quality assurance requirements and procedures for conducting environmental sampling and analysis at the RoCo Ltd. site located at 1746 Dale Road in Cheektowaga, New York (the Site). The quality of the environmental sample data, and subsequent decision-making processes based on the data, are directly related to the quality of the sampling and analysis.

In order to generate analytical data of known and defensible quality, adherence to established quality assurance requirements and procedures is necessary. This adherence will ensure that samples obtained in the field are representative of the particular environment and are of satisfactory quality and quantity to satisfy the project's objectives. To achieve this goal, this Quality Assurance Project Plan (QAPP) has been developed to document procedures to maintain consistency in sample collection, handling, and analysis during the Site's Voluntary Cleanup Program/Site Management Plan monitoring program.

2. PROJECT DESCRIPTION

This QAPP was prepared to support the Voluntary Cleanup Program/Site Management Plan (VCP/SMP) monitoring program for the Site by providing: 1) procedures for the sampling, handling, analysis, and data review activities; 2) the development of documentation standards for Site activities; and 3) development of a project management structure. This VCP/SMP is being conducted to monitor residual of chlorinated organic compounds at the Site. The monitoring program will be completed to address the continued effectiveness of contamination reduction as a result of remedial activities, specifically bioremediation medium introduction, and the risk to human health and the environment. The VCP/SMP scope of work will consist of groundwater monitoring and sampling and Institutional Control inspections.

3. PROJECT ORGANIZATION AND RESPONSIBILITY

The management of this project and their individual responsibilities is presented below.

NYSDEC Project Manager – David P. Locey. Mr. Locey's responsibility is to manage the project and the NYSDEC personnel who are assigned to the project for technical review and oversight, and to ensure that all aspects of the SMP are completed. Mr. Locey will be notified prior to deviations from the protocols presented herein, if there has been a problem with the procedures or analyses because of Site-specific conditions.

Leader Professional Services, Inc. Project Manager - Mr. Jeffrey Wittlinger, 2813 Wehrle Drive, Williamsville, New York 14221 (716-565-0963). Mr. Wittlinger's responsibility is to manage the VCP/SMP and to ensure that aspects of the project are completed in accordance with the SMP. Mr. Wittlinger will be the point of contact for all technical issues regarding the project. Mr. Wittlinger will be notified by Leader's Site Manager or the analytical laboratory prior to deviations from the protocols presented herein, if there has been a problem with implementing the procedures or analyses because of Site-specific conditions.

Leader Project Quality Assurance Officer – Mary Ellen Holvey's responsibility is to ensure that the QAPP is adhered to and to enforce any corrective actions needed.

Leader's VCP/SMP Site Manager – Keith Keller's responsibility is to manage the field activities and to ensure that the field activities are conducted in accordance with the VCP/SMP and the QAPP.

4. DATA QUALITY OBJECTIVES

The objective of this project is to collect sufficient information and data to address the continued effectiveness of contamination reduction as a result of remedial activities, specifically bioremediation medium introduction, and the risk to human health and the environment. This evaluation will be accomplished by the sampling and analysis of groundwater and Institutional Control Inspections at the Site. The overall data quality objectives for this project are to:

- Collect the groundwater samples as described in the SMP;
- Ensure samples are representative through the use of accepted sampling methods, as described in Section 5.0 and the SMP;
- Ensure data comparability through the use of standard methods;
- Provide analytical results of known and acceptable precision and accuracy; and
- Provide an acceptable percentage of valid project data (completeness).

These goals will be accomplished through a regimen of Quality Assurance (QA) practiced both by Leader and by Paradigm Environmental Services, Inc. of Rochester, New York (Paradigm). Data precision and accuracy will be controlled by use of Quality Control (QC) programs which involve the collection and analysis of prescribed QC samples and the use of corrective actions, if needed. For the purpose of this VCP/SMP, field QA/QC samples, i.e., field blanks and trip blanks will not be required. Due to the extensive number of groundwater sampling and testing conducted over the last eight (8) years, data contamination issues can be easily identified based on historical data.

4.1. Data Quality Objectives

In formulating project-specific QA/QC strategies, Leader has established specific objectives for measuring data quality for each measured parameter. These objectives provide the framework for designing an effective QA/QC system which is responsive to the needs of the project. Meeting these objectives will result in defensible data, for use in evaluating the nature and extent of contamination on the Site.

Accuracy and precision objectives of the sample analysis program are shown in the Paradigm Statement of Qualifications (Attachment A). Accuracy and precision

objectives for field instrument measurement are presented in Table 4-1. These values are not intended to represent data validation criteria; rather these values represent estimates of the magnitude of uncertainty which might be associated with the measurement data due to measurement error. Accuracy objectives reflect recovery of target analytes spiked into actual field samples, expressed as a percentage of the amount spiked. Precision objectives reflect differences between measurements of duplicate aliquots of spiked or unspiked field samples, expressed as the Relative Percent Difference (RPD), a percentage of the mean measured value. Precision objectives in this table do not include variability due to sampling. Matrix interference is also not reflected in these values. Matrix interference and sample non-homogeneity may be estimated from QC samples but are not amenable to control by the analyst. Table 4-1 presents the precision requirements for measurements collected using field instrumentation, such as water level indicators and pH meters. Required QC samples for groundwater samples are summarized in Table 4-2.

4.1.1. Accuracy

Accuracy is a measure of the closeness of an individual measurement to a known value. Analytical accuracy can be measured by the analysis of calibration checks, system blanks, quality control samples, surrogate spikes, matrix spikes, and other checks as required by USEPA Method 8260. These quality control samples will be further described in Section 9. Accuracy is assessed for the quality control standards and spikes by calculating the recovery of the known concentration in the quality control sample.

For the purpose of this VCP/SMP, field QA/QC samples, i.e., field blanks and trip blanks will not be required.

To determine analytical accuracy, percent recoveries will be calculated for control standards by the following equation:

where: A = spiked sample concentration,
B = unspiked sample concentration and
C = concentration of the spike added.
R = percent of spike recovered

$$\% R = [(A-B)/C] \times 100$$

Spike accuracy information will be provided in laboratory reports. Tables summarizing spike percent recovery data and blank results will be provided in the RI Report.

4.1.2. Precision

Precision is a measure of the reproducibility of repetitive measurements. Two types of precision may be considered: 1) analytical precision; and 2) total precision. Analytical precision will measure the relative percent difference (RPD) between laboratory duplicates and/or matrix spike duplicates. Total precision includes the effects of analytical, sample, and sampling variability, and is assessed through the analysis of field duplicate samples. Matrix spike duplicates will be discussed further in Section 9.1.

The *RPD* between duplicate results may be calculated by:

$$RPD = [(D1 - D2)/ ((D1- D2)/2)] \times 100$$

where *D1* and *D2* are the sample result and its duplicate result.

4.1.3. Completeness

The completeness goal for this project is 95 percent. In other words, all attempts will be made to ensure that 95% or more of project analyses result in valid data. Invalid data will include data lost due to laboratory or sampling error, and data for analyses which exceeded the sample hold time.

$$\text{Completeness } (\%) = \text{valid data obtained/total data planned} \times 100$$

4.2. Detection Limits

Detection limits are the levels above which there is a 99% chance that a detected compound is actually present. Clean-matrix detection limits for this project will meet the Practical Quantitation Limits (PQLs) set forth in the USEPA Method 8260 (volatile

organic compounds only) for the analysis of volatile organic compounds (VOCs). PQLs for these analyses, as provided by Laboratory, are provided in Attachment A. The achievable limits may be higher than the levels listed in Attachment A, depending on sampling dilution and/or sample matrix.

5. PROCEDURES FOR THE COLLECTION OF ENVIRONMENTAL SAMPLES

As much as possible, the procedures in this document have been standardized to make them applicable to the Site's field conditions. It must be recognized that under certain conditions the procedures discussed herein may not be appropriate to the Site conditions at the time of sample collection. In such cases, it will be necessary to adapt the procedures given to the specific conditions of the Site and the sampling objective.

5.1. Groundwater Sampling

5.1.1 Sampling Preparation

Information pertinent to the sampling procedures used and observations of the environmental conditions at the time of sampling will be entered into a groundwater sampling log data sheet. The depth to water will be measured with an electronic water level indicator to the nearest 0.01 foot. A point on the well's riser will be marked with permanent mark to signify where all measurements should originate during the project. This depth will be recorded in the sampling log data sheet and used in the field to calculate the volume of water within the well.

5.1.2 Well Evacuation

Stagnant water within the wells will be evacuated by siphoning using the dedicated tubing (with a check valve) prior to sampling. Prior to sampling at least three volumes of water contained within the well will be removed to insure the collection of a representative groundwater sample which is not influenced by stagnant water remaining in the well casing. The monitoring well's casing diameter will be used in all calculations to determine the volume to be purged. If the well goes dry during evacuation, the groundwater will be allowed to recover and will be re-evacuated until at least one and one-half volumes are removed. The physical appearance of the water (color, odor, turbidity, etc.) will also be recorded in sampling log data sheet as it is removed from the well.

Groundwater conductivity and pH will be monitored prior to sampling. Conductivity and pH will be monitored and ideally, these parameters should stabilize, for three consecutive measurements, when the last well volume is removed prior to sampling.

5.1.3 Sample Collection

Dedicated, polypropylene tubing with a check valve will be used to collect the groundwater samples after the well has been evacuated and allowed to recharge to within 90-percent of the original static water level.

The tubing used for collecting the sample will be handled in such a manner that the tubing only contacts the water in the well, the well itself and the sampler's dedicated latex gloves. The tubing will never be placed on the ground or any other potentially contaminated surface. When sampling, the tubing will be gently lowered into the water column to collect a sample of groundwater that is not at equilibrium with the atmosphere.

The sample will be transferred into a dedicated pre-sterilized laboratory grade (ICHEM 300 or equivalent) sample container. When transferring the sample from the tubing to the sample container, care will be taken to avoid agitating the sample which would promote the loss of volatile constituents, stratification of floating product, and chemical oxidation. Filters (either field or laboratory) will not be used to remove any potentially suspended sediments from the sample.

Generally, groundwater samples are not in equilibrium with atmospheric conditions and can undergo significant changes in water chemistry upon extraction from the well. Therefore, the samples will be stored at 4 degrees Centigrade (“C”) immediately after collection and delivered to the laboratory within 48 hours from the time of collection.

6 DOCUMENTATION AND CHAIN OF CUSTODY

6.1 Packaging and Shipping Procedures

Once the samples have been collected, prepared, and preserved, they will be packaged for shipment and/or delivery to the laboratory as soon as possible. In addition, from the time of sample collection to the in receipt by the analytical laboratory, chain-of-custody procedures will be followed to insure the proper handling and possession of the samples. This section outlines procedures for the packing and shipping of environmental samples, and general chain-of-custody procedures.

All individual sample containers will be placed in a durable shipping container. It is recommended that for this purpose, an insulated plastic cooler be used. The following is an outline of the packing and shipping procedures to be followed:

- The drain plug at the bottom of the cooler will be sealed to ensure that water from sample container breakage or ice melting does not leak from the outside container.
- Line the bottom of the cooler with a layer of absorbent material such as vermiculite.
- Check screw caps for tightness and mark the sample volume level on the outside of large containers.
- For large glass containers, packing peanuts may be used to keep containers in place and to prevent breakage.
- Small containers, such as forty-milliliter vials, will be placed in small plastic sandwich bags. When shipping these with large containers, steps will be taken to prevent any shifting of the large containers which might break the smaller ones.
- When samples must be kept at 4 degrees C, ice sealed in plastic bags or cool packs will be placed in the cooler.
- Documents accompanying the samples will be sealed in a ziplock plastic bag attached to the inside of the cooler lid.
- The lid of the cooler will be closed and fastened.
- Duct tape or reinforced shipping tape will be wrapped around the cooler several times to insure that the lid will not open if the latch becomes unfastened.
- The following information will be attached to the outside of the cooler: name and address of receiving laboratory, return address of the sampling team, arrows indicating "This End Up" on all four sides, and a "This End Up" label on the top of the lid.
- Additional labels such as "Liquid in Glass" are optional. Since the bottles will have been carefully packaged, this additional warning should not be needed.
- A custody seal will be affixed and signed across the lid of the cooler.

Samples packaged in this way will be shipped by ground transportation. Personnel will be prepared to open and reseal the cooler for inspection if it is required by the courier.

6.2 Chain-of-Custody Procedures

The primary objective of these procedures is to create an accurate written record which can be used to trace the possession and handling of the sample from the moment of its collection, through analysis and to its introduction as evidence.

The number of persons involved in collecting and handling samples should be kept to a minimum. Detailed field records will be kept in the groundwater sampling log data sheet and will contain the following information:

- Sample identification and source (including sampler's name, sample location, and sample media).
- Dates and times of sample procurement, preparation, and shipping.
- Preservative used.
- Analyses required.
- Pertinent field data (pH, specific conductance, etc.).

To help eliminate possible problems in the chain-of-custody procedures, one person will be appointed Field Custodian for each task. For tasks where sampling teams are used, all samples are to be turned over to the Field Custodian by the team members who collected the samples. The Field Custodian will then document each sampling event and the sample will remain in his/her custody until it is shipped to the laboratory. The Field Custodian is responsible for properly packaging and dispatching samples to the laboratory. The responsibility includes filling out, dating and signing the appropriate portion of the chain-of-custody record.

Labels will be firmly affixed to each sample container. The labels on each sample bottle will be filled out with waterproof ink prior to sample collection. Sample reference numbers identical to that recorded on the labels will be recorded on the chain-of-custody.

When transferring the samples, the individual relinquishing the samples will sign and record the date and time on the chain-of-custody record. Every person who takes custody will fill in

the appropriate section of the chain-of-custody record form, and their affiliated company. To minimize custody records, the number of custodians in the chain-of-possession should be minimized.

7 CALIBRATION

Both field instrumentation and laboratory analytical instrumentation are to be used to provide project data. Both systems will require regular calibration in order to provide comparable and accurate information. Calibration procedures for on-site field instrumentation are provided below; procedures for analytical systems are discussed in Section 11.0.

7.1 Conductivity and pH Meter Calibration

The conductivity meter will be calibrated daily during groundwater sampling using the manufacturer's standard procedures. The instrument will be calibrated prior to field work using standards provided by the manufacturer and rechecked between each sample location using one of the manufacturer's reference standards.

The pH meter will be calibrated daily during groundwater sampling activities. Calibration will include setting the range and span using pH 4.0, 7.0, and 10.0 standard laboratory buffer solutions provided by the manufacturer. In order to ensure proper calibration, a pH 7.0 buffer will be used as a single-point check between each sampling location. Calibration of the instrument will follow the manufacturer's standard operating procedures.

8 SAMPLE ANALYTICAL PROCEDURES

8.1 Sample Analytical Procedures

The overall number of samples to be collected, including anticipated QA/QC samples, is presented in Table 8-1. The samples will be analyzed using USEPA protocols as shown on Table 8-1. Table 8-2 includes items (e.g., holding times, preservation requirements, etc.) which pertain to sample preparation. Attachment A includes a list of the practical quantitation levels (PQL) for the proposed analysis.

Samples analyzed using USEPA Method 8260 for VOCs and the deliverable data package for VOC analyses will include:

Gas Chromatographic/Mass Spectroscopic Methods

- Method 8260 GC/MS for Volatile Organics
  Packed Column Technique

The following information is to be provided:
- initial calibration
- continuing calibration
- daily tune (BFB or DFTPP)
- instrument blanks
- method blanks
- method of sample preparation
- method of cleanup (if used)
- surrogate recovery
- matrix spike/matrix spike duplicate
- mass spectral matches
- corrective actions taken

8.2 Standards

All solid and liquid chemicals used by the Laboratory will be reagent grade or better, and all gases will be high purity or better. All analytical standards will be obtained from the USEPA, from NIST, or from reliable commercial sources. According to the analytical laboratory's corporate QA/QC plan, the above mentioned materials have been logged in upon receipt: material name, lot number, purity, concentration, supplier, receipt/preparation date, preparer's name (if applicable), and expiration date. Each new solvent lot is analyzed to confirm that no contaminants are present.

8.3 Dilution

Analytes which exceed the calibration range will be flagged "E" to indicate the concentration is greater than the highest calibration standard. Samples will not be diluted or re-analyzed to bring an analyte within calibration. Results flagged "E" should be considered estimated values.

9 DATA REDUCTION AND REPORTING

9.1 Laboratory Data Reduction and Reporting

The initial data reduction from raw data materials (chromatograms, spectra, etc.) will be performed by the Laboratory as part of their reporting protocol. Groundwater sample results will be reported on a weight volume basis (milligrams or micrograms per liter).

In addition to reporting the field sample results, the Laboratory will provide results for the, matrix spike duplicates. For the purpose of this VCP/SMP, field QA/QC samples, i.e., field blanks and trip blanks, will not be required. Laboratory reports will also include the following QC data:

- Internal standard recoveries;
- Surrogate spike recoveries;
- Matrix spike recoveries, with identification of the spiked field sample and the recovery limits;
- Matrix spike duplicate recoveries;
- Laboratory duplicate recoveries (where applicable); and
- Laboratory control standard recoveries (where applicable) with the corresponding control limits.

The laboratory organization structure and responsibilities for responding to an out-of-control event are outlined as follows:

1. The bench analyst reports the situation to the laboratory supervisor and the quality assurance officer.

2. The supervisor and analyst determine and implement the appropriate corrective action.

3. If routine corrective actions rectify the situation, analytical work is resumed. The event is documented and the laboratory QA officer is advised. Leader's QA officer will be notified of the corrective action.

4. If the situation cannot be corrected immediately, the supervisor will notify Leader's QA officer who will in turn notify the Project Manager.

Corrections or additions to data reports (or raw data) will be made with indelible ink, with a single line. The correction will be dated and initialed. Review of the data occurs

at all levels of the laboratory, from the analyst to the supervisors, managers, laboratory directors, and laboratory QA personnel. Project data will be filed with the Laboratory's project file and will be archived for no less than five years.

9.2 Data Reduction and Reporting by Leader

Laboratory reports will be sent to Leader for Data Usability Summary. Data collected during the sampling event (including field logs, chain-of-custody forms, laboratory reports, field data forms, and all associated QC data) will be reviewed by Leader's QA/QC Officer. This review will include checking for thorough completion of data forms, proper correction techniques, analysis hold times, and an assessment of the overall data precision and accuracy. Corrective actions will be initiated if the data review indicates a need to do so (see Section 16.0).

10 FIELD NOTES

Field notes will be maintained during all SMP field activities. The overall chronology of field activities as well as sampling details will be recorded in a bound field book and/or groundwater sampling log data sheet. Each page will be consecutively numbered and signed by the Site Manager at the end of the work day. The following information, as appropriate, will be documented in the field notes:

- date
- weather conditions
- personnel on or visiting Site
- subcontractors on-Site
- worked performed
- Changes to planned work as discussed with NYSDEC
- time at which work, sampling or analysis was performed
- equipment calibration methods and time
- problems with personnel or machinery
- identification of borings and wells
- boring and well depths
- static water level depths and measurement techniques
- well yields - high or low
- purge volume
- sample identification numbers
- well evacuation procedure/equipment
- sample withdrawal procedure/equipment
- sampling sequence
- types of sample containers used
- parameters requested
- field analysis methods and data
- field observations during the sampling event
- name of sampler

11 SAMPLING FOR QUALITY ASSURANCE & QUALITY CONTROL

Laboratory Quality Assurance and Quality Control ("QA/QC") samples are used to assess the quality of the analytical data by identifying and quantifying any external sources of contamination to which the sample may have been exposed. The types of QA/QC samples which will be taken are described below.

11.1 Trip Blanks

Trip blanks will not be required for the purpose of this VCP/SMP

11.2 Field Blanks

Field blanks will not be required for the purpose of this VCP/SMP.

11.3 Spiked Samples

The analysis of spiked samples consists of the addition of a known amount of analyte to a sample and subsequent analysis of the sample spiked and unspiked. Recovery of the analyte added to the sample is then calculated, permitting a measure of the accuracy of the analysis. At a minimum, one spiked sample analysis will be performed for each type of sample matrix (aqueous and non-aqueous) for each group of twenty samples.

11.4 Cleanup Procedures

If a sample matrix interference is encountered during sample analysis a mandatory analytical cleanup is warranted.

12 SAMPLE PRESERVATION REQUIREMENTS

Certain analytical methodologies require chemical additives (preservatives) in order to stabilize and maintain sample integrity. The samples requiring preservation are indicated in Table 8-2. Generally, two preservation methods may be used:

- Preservatives are added to the sample bottles at the laboratory prior to shipment into the field.
- Preservatives are added to the media in the field immediately after the samples have been collected.

The analytical laboratory will provide pre-preserved bottles as a matter of convenience and to help ensure that samples will be preserved immediately upon collection. A problem associated with this method arises if not enough sample was able to be collected, resulting in too much preservative in the sample. A more common problem with this method is the possibility that insufficient preservative is provided to achieve the desired pH caused by the addition of sample liquids to pre-preserved bottles. Although laboratory pre-preserved bottles will be utilized, field sampling teams will always be prepared to add additional preservatives to samples if the aforementioned should occur.

When samples are preserved after collection, special care will be taken during the transportation and handling of the concentrated acids. All preservation acids used in the field will be trace metal or higher grade.

13 PERFORMANCE AUDITS

A performance audit tests the reliability and comparability of data from an individual measurement system, or instrument. This quantitative audit is usually accomplished through submittal and analysis of a reference standard or sample supplied by a source independent of the laboratory.

14 PREVENTIVE MAINTENANCE

Routine preventive maintenance of analytical instrumentation is performed by the Laboratory. Maintenance is based on manufacturers' recommendations and performed on a regular schedule. All aspects of routine and non-routine instrument maintenance are recorded in bound logbooks, specific to each instrument and analysis.

Leader maintains field equipment according to manufacturers' specifications, as well. Field analytical equipment, pH probes and conductivity meters, maintenance records for this equipment are maintained by Leader.

15 DATA ASSESSMENT PROCEDURES

Data assessment procedures for field data, i.e. water level and hydraulic conductivity measurements, will be a simple arithmetic average of three measurements. In accordance with our field procedures each measurement will be collected in triplicate to verify the instrument response and the measurement. The value used in future calculations will be the arithmetic average of the three observations.

16 CORRECTIVE ACTIONS

16.1 Analytical Corrective Actions

When an out-of-control condition is detected, efforts are undertaken by the analysts, the supervisor, and if need be, the Laboratory's QA Officer, to determine and correct the cause. Major analytical discrepancies determined by the Laboratory (due to instrument malfunction, calculation errors, missed hold times, etc.) will be reported to Leader's QA/QC officer as soon as possible. The QA/QC Officer will analyze the impact on sample integrity and the available options with laboratory personnel prior to contacting the NYSDEC Project Manager.

16.2 Field and Data Review Corrective Actions

During the course of the field activities it will be the responsibility of the Project Manager, QA/QC Officer, and other project team members to see that all measurement procedures are followed as specified, and that measurement data meets the prescribed acceptance criteria. Should a problem arise in the field, prompt action must be taken to correct it. The NYSDEC Project Manager will be advised of the problems encountered in the field by Leader's Project Manager. All problems or situations of concern will be recorded in the field logbook or groundwater sampling log data sheet.

Corrective action may also be initiated upon review of the field and analytical data by the Project QA/QC Officer. Should data errors require re-issued data reports, or if errors are found which compromise data quality, a Memorandum of Corrective Action will be prepared. The memorandum provides the mechanism for documentation of errors and corrective actions to be taken.

17 QUALITY ASSURANCE REPORTS TO MANAGEMENT

Quality assurance review and documentation of non-compliance is an important part any quality assurance program; however, the communication of the non-compliance is equally important. As result, schedules must be put into place so the reporting of quality assurance review information can be useful and variances to the QAPP can be dealt with swiftly so non-conformances can be eliminated.

TABLE 4-1

Precision Objectives for Field Instruments

Instrument	Precision
pH	.5 S.U.
Conductivity	10 mhos
Well Depth	0.01 feet

Notes:

S.U. = Standard Units
mhos = 1/milliohms

Table 4-2

Quality Control Sample Requirements

Sample Type	Frequency	Est. Total Needed	Analysis
Soil			All QC samples will be analyzed by USEPA Method 8260
Field Duplicate	5%	1	
Matrix Spike	10%	2 (pairs)	
Matrix Spike Duplicate	10%	2 (pairs)	
Groundwater			All QC samples will be analyzed by USEPA Method 8260
Matrix Spike	10%	1 (pair)	
Matrix Spike Duplicate	10%	1 (pair)	

TABLE 8-1

PLANNED NUMBER OF SAMPLES TO BE COLLECTED

TASK	MEDIA SAMPLES	ANALYSES	DUPLICATE	MATRIX SPIKE	MATRIX SPIKE DUPLICATE	FIELD BLANK	TOTALS
Groundwater from Monitoring Wells	3	USEPA Method 8260 VOCs, Sulfate, Dissolved Iron and Total Organic Carbon	0	1	1	0	5

NOTES

1. VOCs - Volatile Organic Compounds

2. Paradigm Environmental Services, Inc. will provide analytical results of these samples as part of its normal quality assurance testing

TABLE 8-2

SAMPLING PROTOCOLS

PARAMETER	WATER SAMPLE HOLDING TIMES	WATER CONTAINERS	PRESERVATIVES FOR WATER
Dissolved Iron USEPA Method 6010	6 months	250 ml. poly	none
Total Organic Carbon (TOC) SM5310C	28 days	250 ml. poly	none
Sulfate USEPA Method 300	28 days	250 ml. poly	none
Volatile Organic Compounds USEPA Method 8260:	14 Days	2x40 ml. vial	pH<2

Notes:

1. Water samples will be chilled to $4^{o}C$

2. The analytical laboratory will receive samples within 48-hours of sampling.

ATTACHMENT A

PARADIGM ENVIRONMENTAL SERVICES, INC.

STATEMENT OF QUALIFICATIONS

&

PQLs for EPA METHOD 8260

ENVIRONMENTAL ANALYSIS: NON-POTABLE WATER

- Amines
- Chlorinated Hydrocarbons
- Chlorinated Hydrocarbons Pesticides
- Chlorophenoxy Acid Pesticides
- Waste Water Metals I
- Waste Water Metals II
- Waste Water Metals III
- pH
- Purgeable Aromatics
- Purgeable Halocarbons
- Purgeable Organics
- Nitroaromatics and Isophorone
- Polynuclear Aromatics
- Phthalate Esters
- Benzinides
- Haloethers
- Nitrosoamines
- Polychlorinated Biphenyls
- Priority Pollutant Phenols
- TCLP Additional Compounds
- Total Hardness
- Specific Conductance

LABORATORY CERTIFICATIONS

- United States Environmental Protection Agency Lead-Based Paint Activities Certification # NY-01-042003-229
- New York State Department of Health (NELAC) Environmental Analysis/Air and Emissions # 10958
- New York State Department of Health (NELAC) Environmental Analysis/Non-Potable Water # 10958
- New York State Department of Health (NELAC) Environmental Analysis/Potable Water # 10958
- New York State Department of Health (NELAC) Environmental Analysis/Solid and Hazardous Waste # 10958
- National Voluntary Laboratory Accreditation Airborne Asbestos Fiber Analysis/ Bulk Asbestos Fiber Analysis (NVLAP)

PARADIGM ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Non-potable Water

Client:

Client Job Site:

Client Job Number:
Field Location:
Field ID Number:
Sample Type: Water

Lab Project Number:
Lab Sample Number:

Date Sampled:
Date Received:
Date Analyzed:
Date Reissued:

Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 2.00
Carbon Tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloromethane	ND< 2.00
2-Chloroethyl vinyl Ether	ND< 2.00
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl chloride	ND< 2.00

Aromatics	Results in ug / L
Benzene	ND< 0.700
Chlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00
Toluene	ND< 2.00
m,p-Xylene	ND< 2.00
o-Xylene	ND< 2.00
Styrene	ND< 5.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

Ketones	Results in ug / L
Acetone	ND< 10.0
2-Butanone	ND< 10.0
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

Miscellaneous	Results in ug / L
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958 Method: EPA 8260B Data File: V40858.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger: Technical Director