

SITE
INVESTIGATION

**National Plating, Inc.
Syracuse, New York**

Voluntary Cleanup Program



**Former National Plating Facility
1501 Brewerton Road
Syracuse, New York
VCP ID: V00265-7**

**ENSR Corporation
February 2005
Document Number 10160-004-400**

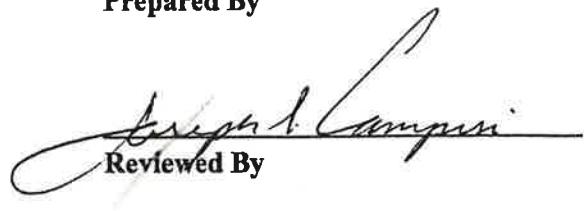
**National Plating, Inc.
Syracuse, New York**

Voluntary Cleanup Program



**Former National Plating Facility
1501 Brewerton Road
Syracuse, New York
VCP ID: V00264-7**


Prepared By


Reviewed By

**ENSR Corporation
February 2005
Document Number 10160-004-400**

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March 3, 2005

Mr. Kevin Kelly
Environmental Engineer
New York State
Department of Environmental Conservation
Department of Environmental Remediation, Region 7
615 Erie Boulevard West
Syracuse, NY 13204-2400

**RE: National Plating Site Investigation V00264-7
ENSR Project Number 10160-004**

Dear Mr. Kelly,

ENSR is pleased to provide the New York State Department of Environmental Conservation with this report summarizing the findings of the subsurface investigation conducted on the property located at 1501 Brewerton Road in Syracuse, New York. ENSR looks forward to your review of the enclosed report. If you have any questions, please do not hesitate to contact the undersigned at (315) 432-0506.

Sincerely,



Karl Reimer, P. Eng.
Senior Project Specialist

Joseph S. Campisi
NY CSC Manager

cc: Wendy Marsh, Esq., Hancock & Estabrook, LLP
Wendy Kuener, NYS Department of Health
Dennis J. Hile, D.J.H. Realty Corp.

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INTRODUCTION

1.1 Purpose of Investigation

The facility owners have entered into the Voluntary Clean-up Program (VCP) through the New York State Department of Environmental Conservation (NYSDEC) to investigate the property located at 1501 Brewerton Road in Syracuse, New York. The primary purpose of the investigation conducted between December 9 and December 23, 2004 was to complete site investigations in accordance with the NYSDEC approved Work Plan. The specific goals of the Site Investigation include:

1. Delineate the aerial and vertical extent and nature of impacts to the site; and
2. Produce data of sufficient quality and quantity to support the development of a remedial work plan, should remediation be necessary.

1.2 Site Description

The site is located at 1501 Brewerton Road, Syracuse, New York, and is bounded on the north by light industry, to the south by the former Town of Salina Landfill (a sub-site of the Onondaga Lake NPL site) and Ley Creek, to the west by the former Town of Salina Landfill, and to the east by Brewerton Road and residences. The northern boundary of the Ley Creek sewer right-of-way extends east-west across the site, passing approximately 15 feet south of the south east corner of the building. Figure 1 shows the site location.

1.3 Site History

The site was in use from the early 1950s to 2002 as a metal plating facility, which specialized in decorative and industrial metal finishing. National Plating was operated by its original owners until 1987, when the business and property were purchased by the Volunteers. Between 1987 and 1989, various plant renovations were conducted, including upgrading the wastewater treatment system and installing monitoring systems. In 1999, the Volunteers sold the business. The plating operations were discontinued in 2002. The property is owned by D.J.H. Realty.

The building is currently being leased to Solvents and Petroleum Services, Inc. and is used for storage of cleaning supplies (i.e., hangers, laundry detergent, etc.).

1.4 Structures and Site Features

A single story, slab on grade, concrete block, flat roofed building is located on the eastern side of the property. This building is approximately 9,000 square feet in area. Asphalt parking lot and driveway surface surrounds the building on all sides. A truck level loading dock is located at the south east corner, and a grade level roll up door is present on the north side of the building. There are two out

buildings consisting of an approximately 900 square foot storage building located at the western edge of asphalt at the northwest corner of the property, and a temporary office trailer located approximately 30 feet south of the storage building. Ground-surface elevations at the site range from approximately 374 to 380 feet above mean sea level. The site slopes generally from the north-northeast to the south.

1.5 Sump

A 4 ft. 9 in. deep sump, with an approximate capacity of 85 gallons is located in the former plating operations area. Since at least 1970, process wastewater was conveyed through six 1.5-inch PVC drains to the sump pit. A metal grate and screen over the sump prevented solids from entering the sump. Prior to the installation of the waste water treatment system in 1984, untreated sump discharge was conveyed to the municipal sewer system, and ultimately the Syracuse METRO sewage treatment plant. Reportedly, a polypropylene pit liner was installed at the same time as the wastewater treatment system. After the installation of the treatment system and sump liner, wastewater in the sump was pumped to the on-site treatment system prior to discharge to the municipal sewer. The discharge was historically regulated in accordance with a municipal industrial wastewater discharge permit under federal effluent guidelines and standards specified for the metal finishing and electroplating industry.

1.6 Report Structure

Section 2 provides a discussion of the site hydrology, geology, and hydrogeology. Section 3 provides a description of field activities, and section 4 discusses the hydrogeological setting for the site. Section 5 provides the analytical data results, and section 6 presents the findings for the Site Investigation. Section 7 presents ENSR's recommendations based on the Site Investigation.

2.0 REGIONAL HYDROGEOLOGICAL FRAMEWORK

2.1 Geology

The site is located in Central New York in the Lake Plain physiographic province. The site is underlain by glacial deposits, characterized by flat-lying sediments consisting of lacustrine fine sand and silt deposits; other glacial features evident in the region are moraines, drumlins, U-shaped valleys and meltwater channels. The meltwater channels consist of sands and gravels, which originally served to transmit large volumes of water at high velocities away from the glacier. In the Syracuse region, these channels form important water bearing and transmitting units that lie in an irregularly branching, net-like pattern throughout the area.

Bedrock in the Syracuse area includes Lower to Middle Paleozoic-age sedimentary rocks predominated by carbonates (dolostone and limestone) and shale, and containing some sandstone, siltstone, and evaporites. The bedrock beneath the site is the Silurian Vernon Shale, which exhibits low permeability but possesses secondary porosity due to fractures.

2.2 Surface Water Hydrology

Ley Creek is located approximately 350 feet south of the site and flows in a southwesterly direction. Groundwater generally flows in a south-southwesterly direction toward Ley Creek. Beartrap Creek lies approximately one mile west of the site. The confluence of Beartrap Creek and Ley Creek is downstream of the site. Surface water runoff is assumed to drain into either Ley Creek or municipal street sewers. Ley Creek is a tributary of Onondaga Lake, which lies approximately three miles southwest of the site.

The segment of Ley Creek adjacent to the landfill is a Class B stream, a protected water under New York state regulations. Downstream of the site, Ley Creek is a Class C stream from the location of the former Ley Creek sewage treatment plant outfall near the mouth of Beartrap Creek to Onondaga Lake.

A drainage swale along the eastern access drive collects drainage from the front parking area and the adjacent property for conveyance to Ley Creek. There are no catch basins or storm water detention/retention facilities on site.

2.3 Hydrogeology

Investigations at the Town of Salina Landfill indicate that groundwater in the vicinity of the site is at an elevation of approximately 368 feet (approximately six feet below grade) and generally flows in a south-southwesterly direction towards Ley Creek. No groundwater supply wells are located on the site. The site is serviced by public water. No State or National Wetland Inventory mapped wetlands are present on the site. The Town of Salina Landfill, adjacent to the site, was formerly a wetland area.

3.0 DESCRIPTION OF FIELD ACTIVITIES

ENSR completed site investigation activities between December 9 and December 21, 2004 consisting of monitoring well installation and development, groundwater sampling and advancement of soil borings. The following sections describe the field activities completed as part of the Investigation.

3.1 Utilities Locates

As part of the field investigation program, ENSR contacted Dig Safe New York, to clear the main services from the Brewerton Road corridor to the site, such as electrical, natural gas, sewer, water, and phone. ENSR also subcontracted HMT Inc. (HMT) of Cicero, New York, to clear all soil borings and monitoring well locations on the property prior to commencement of the field activities. ENSR and HMT met at the site on December 9, 2004 to clear utility locations using radio detection, and or electrical isolation to identify underground telephone, natural gas, and water lines. Each locate was identified and marked out prior to investigation.

3.2 Soil Borings

ENSR sub-contracted Parratt Wolff Inc. of Syracuse, New York to provide drilling services for the advancement of five exterior soil borings and one interior boring through the bottom of the sump, on site on December 10, 2004. Parratt Wolf supplied a tractor mounted GEOPROBE direct-push rig. Underlying stratigraphy was sampled continuously utilizing 4-foot long, 2-inch diameter clear acetate sleeves. Soil samples collected were described in the field notes for the site as well as in the soil boring logs, which are included in Appendix A. When completed, each soil boring was back filled with bentonite. Mr. Kevin Kelly, Environmental Engineer with the NYSDEC was present during the site investigation.

Each GEOPROBE sleeve was screened in 6-inch intervals with a Mini Rae 2000 photo ionization detector (PID) to provide an indication of total volatile organic vapors in parts per million (ppm). The PID was calibrated daily each morning, and PID readings were measured using headspace screening techniques. Soil samples from each boring were collected in laboratory grade bottle ware and were sent by overnight courier to Severn Trent Laboratories (STL), located in Buffalo, New York for analyses. Table 3.1 provides information on the soil borings, and the associated concerns with the particular area. Table 3.2 provides a summary of each soil boring, the depth below grade at which samples were selected, selected PID readings, sample QA/QC and sample analyses requested.

3.2.1 Exterior Soil Borings

One soil boring, SS-1, was advanced to a depth of 4 feet at the north east corner of the building to provide an indication of soil quality upgradient of the plating operations onsite. Soil sample SS-1A was collected at a depth of 0 to 2-feet in order to provide sufficient sample volume for laboratory

analyses. SS-1A sample was analyzed for TAL metals, cyanide, and pH. Similarly, SS-1B which was collected between the 2 to 4 ft. depth interval, was submitted to STL and held pending analytical results of the shallower sample. Table 3-2 provides a summary of the sample analyses requested. Figure 2 shows the location of the soil borings.

Along the western edge of pavement, four surface soil samples SS-2A, SS-3A, SS-4A and SS-5A were collected from the surface to a depth of 2-feet below grade. Due to safety concerns with regards to drilling close to overhead power lines, soil boring SS-5 was moved approximately 10 feet to the west of its proposed location to avoid overhead power lines. Soil samples collected from these borings were analyzed for TAL metals, cyanide, and pH. For soil sample SS-3A and its duplicate SS-DUP, analyses for volatile organic compounds (VOCs) was also requested. At each soil boring location, deeper soil samples were collected between depths of 2 to 4 feet below grade and submitted to STL, but were held pending the evaluation of laboratory results for the shallow samples. Figure 2 shows the soil boring locations.

3.2.2 Interior Soil Boring-Sump

To investigate potential impacts from the concrete sump pit, the pit was dewatered and inspected, and a soil boring was advanced through the base of the sump. During soil sampling, groundwater was forced under pressure into the bottom of the sump and came in contact with some sludge remaining in the sump. ENSR and the NYSDEC agreed that a groundwater sample would not be collected at this time due to possible contamination of groundwater with the remaining sludge in the sump. Based on olfactory evidence and high PID screening results, a soil sample was collected immediately below the polyethylene base of the sump, and submitted for analysis for VOCs, TAL metals, cyanide and pH.

TABLE 3.1 SOIL BORINGS AND RATIONALE

Soil Boring	Location	Rationale
SS-1	North east corner of property (see Figure 2)	To investigate soil characteristics upgradient of the plating operations
SS-2, SS-3, SS-4, SS-5	Western edge of pavement	<p>Provide indication of impact to soils based on the following concerns:</p> <ul style="list-style-type: none"> • Materials utilized in the plating process and kept in the storage room did not have secondary containment. • The floor drains discharged to the western exterior perimeter of the building. • Baghouse wastes (approximately two 55-gallon drums per year) from the polishing room ventilation system were disposed in the general office trash dumpster located along the western edge of the pavement. • Used plating tanks were reportedly stored along the western edge of the pavement in an approximately 30-foot by 30-foot area. These tanks were acquired in the late 1970s and were stored in the area for approximately one to two years. • Blowdown from boiler discharge is assumed to migrate with over land flow to the western edge of the asphalt.
SUMP	Interior of building	To investigate potential subsurface impacts from the unlined sump pit

TABLE 3.2 SOIL BORING AND SAMPLE SUMMARY

Soil Sample Location	Depth (feet below grade)	Reason for selection	QA/QC and/or Comments	Analyses
SS-1	SS-1A (0-2')	Indication of background conditions		TAL metals, cyanide, pH
	SS-1B (2-4)	Same as above (SAA)		TAL metals, cyanide, pH-held pending results of shallow sample analyses
SS-2	SS-2A (0'-2')	Shallow sample collected along western edge of pavement (PID 4.7 ppm).		TAL metals, cyanide, pH
	SS-2B (2'-4')	Deeper sample collected as per work plan (PID 4.0 ppm).		TAL metals, cyanide, pH-held pending results of shallow sample analyses
SS-3	SS-3A (0'-2')	Shallow sample collected along western edge of pavement (PID 10.6 ppm).	SS-DUP collected	TAL metals, cyanide, pH, and VOCs
	SS-3B (2'-4')	Deeper sample collected as per work plan (PID 2.3 ppm).		TAL metals, cyanide, pH-held pending results of shallow sample analyses
SS-4	SS-4A (0'-2')	Shallow sample collected along western edge of pavement (PID 12 ppm).		TAL metals, cyanide, pH
	SS-4B (2'-4')	Deeper sample collected as per work plan (PID 12 ppm).		TAL metals, cyanide, pH-held pending results of shallow sample analyses
SS-5	SS-5A (0'-2')	Shallow sample collected along western edge of pavement (PID 5.9 ppm).	SS-5A MS/MSD	TAL metals, cyanide, pH
	SS-5B (2'-4')	Deeper sample collected as per work plan (PID 2.3 ppm).		TAL metals, cyanide, pH-held pending results of shallow sample analyses
SUMP	Sump (4.75'-6.75')	Sample collected below sump base (PID 6286 ppm).		TAL metals, cyanide, pH, and VOCs

Soil samples collected were described in the field notes for the site as well as in the soil boring logs, which are included in Appendix A. When completed, each soil boring was back filled with bentonite.

3.3 Monitoring Well Installation

Three monitoring wells were installed onsite to ascertain depth to groundwater, hydraulic gradient, and groundwater quality. The locations of the monitoring wells are presented on Figure 2.

Each monitoring well boring was advanced utilizing a truck mounted Ingersoll Rand 8300 drilling rig equipped with 4.25-inch, internal diameter, hollow stem augers. Soil samples for PID field screening were collected from the split spoon samples. Monitoring well logs showing stratigraphy, PID readings and well construction details are included in Appendix A. During the monitoring well installation phase, soils were not collected for analytical purposes.

The construction for each of the monitoring wells consisted of a 10-foot length, 10 slot, Schedule (Sch.) 40, 2-inch diameter polyvinyl chloride (PVC) screen, installed to span the water table to account for seasonal water table fluctuations. A 2-inch diameter, Sch. 40 PVC riser was added to the screen to bring the well to ground level. Due to the depth of shallow groundwater encountered onsite (approximately 6 feet below grade) and the need to have an adequate water table well to intercept seasonally fluctuating groundwater levels, the sand pack was placed approximately 1.5 feet above the top of screen. Approximately 1.5 feet of bentonite seal was placed above the sand pack. Bentonite grout mixture was used to complete the well to grade level. An expandable/lockable "J" plug with brass padlock was placed in the top of the riser. At all monitoring wells, flush mount road boxes were used to complete the well at grade level. Figure 2 shows the locations of the monitoring wells.

3.4 Monitoring Well Development

After monitoring well installation, well development was conducted on December 15, 2004 at each location to remove any silts and fine materials that may have collected in the screen or sand pack during well installation activities.

Monitoring well development activities consisted of:

- Surging the submerged portion of the well screen with bailer in 2 foot intervals for approximately 5-10 minutes per interval;
- Removal of water and recording the following data: temperature, pH, specific conductivity, oxidation and reduction potential (ORP), turbidity, and presence/absence of odors, and well volumes removed; and
- Disposal of purge water into staged drums for National Plating disposal.

The well development continued until the monitoring parameters stabilized, and the turbidity had improved. Well Development Logs are included in Appendix B.

3.5 Site Survey

On January 3, 2005, C.T. Male Associates, P.C. located in Syracuse, New York conducted the site survey following installation of soil borings and monitoring wells. The survey accuracy for the site for both horizontal and vertical coordinates were: Central Zone of the NYS Plane Coordinate System (NAD 83), and National Geodetic Vertical Datum of 1929 (NGVD 29) respectively. Figure 2 shows the locations of the soil borings and monitoring wells.

3.6 Groundwater Sampling

Following well development on December 15, 2004 the monitoring wells were allowed to recover until December 21, 2004 when groundwater samples were collected from each of the monitoring wells using the USEPA low flow sampling procedures. Since each monitoring well was completed in fine sands/silts, pumping rates for low flow sampling were maintained close to 100 milliliters per minute (ml/min). Water quality parameters such as temperature, pH, specific conductivity, ORP, turbidity, and dissolved oxygen were monitored during sampling. Groundwater samples were collected when water quality parameters stabilized to within 10 percent variation for three successive measurements. All field data collected during well development was recorded on field logs. The groundwater sampling logs are included in Appendix B. All water generated during groundwater sampling was placed in drums, labeled, and staged for disposal by National Plating. Each of the groundwater samples collected from the monitoring wells were placed in coolers, packed on ice, and submitted to STL in Buffalo, New York for the following analyses:

- Target Analyte List (TAL) Metals,
- Hexavalent chromium
- Cyanide, and
- Target Compound List (TCL) VOCs

The results of the groundwater sampling program are discussed in Section 5.3.

3.7 Investigation Derived Waste

Waste soils generated in both the soil boring and monitoring well installation phases of the investigation were placed in appropriately labeled 55-gallon drums awaiting disposal. Groundwater generated from monitoring well development, decontamination, groundwater sampling and in-situ conductivity testing was drummed in appropriately labeled drums, and staged onsite awaiting disposal.

4.0 HYDROGEOLOGICAL DATA FOR SITE ASSESSMENT

4.1 On-Site Soils

Installation of monitoring wells and soil borings revealed the following sub-surface conditions onsite:

- Fill, consisting of well graded sand and gravel and brick chunks, was encountered from grade level to one to two feet along the western edge of pavement, at soil boring SS-1, and below the sump pit.
- Across the south side of the site, fine sand with little silt and trace gravel was encountered at MW-3, changing to an organic rich sand at MW-2 to a depth of approximately four feet below grade. Organic rich clayey silt was encountered at MW-3 from approximately four to fourteen feet. At MW-2, a rust brown clayey silt with trace sand and gravel was encountered from four to eight feet, underlain by brown silty fine sand with trace gravel to approximately fourteen feet.
- At the north side of the property, at MW-1, a red brown clay with little silt was encountered from grade to approximately 2 feet below grade, underlain by organic rich silt with little clay to nine feet bgs. From nine to fourteen feet a red brown silt, with little clay and trace gravel was encountered.

It is likely that the native materials encountered on site comprise a sequence of lacustrine deposits. Saturated soils were encountered across the south side of the property (MW-2 and MW-3) at two and three feet, respectively, and at the north side of the building (MW-1) at nine feet bgs.

4.2 Synoptic Groundwater Levels and Flow Map

On December 21, 2004, a round of groundwater levels was collected from all wells on-site. Figure 3 shows the potentiometric surface map for the shallow water bearing zone interpreted from these measurements. The flow direction onsite was determined to be south towards Ley Creek, with an overall hydraulic gradient of 0.04 ft/ft to the south, as calculated from the potentiometric map. Based on the flow direction, monitoring well MW-1 is located in a hydraulically upgradient position, and MW-2 and MW-3 are downgradient. MW-2 is directly downgradient of the interior sump.

4.3 Discussion of Hydrogeologic Data

The available hydrogeologic data for this site indicate the shallow water-bearing zone comprises low to moderate permeability materials (generally silty sand, silts and clay). The shallow depth to groundwater indicates this water bearing unit is susceptible to impacts from surficial or near surface releases of constituents of concern. The southerly direction of groundwater flow suggests that any groundwater traversing the site will eventually discharge into Ley Creek, which forms a local groundwater discharge boundary.

5.0 ANALYTICAL RESULTS

The following section provides a summary of the analytical results obtained for both soil and groundwater sampling.

5.1 Data Usability Summary Report

All analytical data for soils and groundwater have been validated by Data Validation Services, North Creek, New York. The data usability summary report is provided in Appendix C. The salient points regarding data validation are posted below:

- General – all cyanide concentrations in soil have been qualified as estimated "J";
- TCL Volatiles – all holding times were met, methylene chloride was detected in the low level soil method blank, therefore the methylene chloride detections in soil samples are considered to be external contamination and have been edited to be non-detect "U";
- TAL Metals – water-iron in dissolved phase in MW-1 adjusted to an estimated concentration "J"; and
- TAL Metals – soil from soil boring, SS-5A, the following results were qualified as estimated "J": aluminum, antimony, barium, cadmium, calcium, chromium, copper, iron, lead, magnesium, manganese, nickel, silver, and zinc.

Tables 1 and 2 contain analytical results for metals and VOCs in soil respectively. Table 3 and 4 contains results for metals and VOCs in groundwater respectively.

5.2 Exterior borings and Sump Soil Analytical Results- Inorganics (Table 1)

Table 1 shows the metals, cyanide and pH analytical results compared to the NYSDEC Technical and Administrative Guidance Memorandum #4046 Recommended Soil Cleanup Objectives (TAGM). Where TAGM objectives are not provided for a constituent, concentrations of that particular constituent from soil boring SS-1 have been applied as the background value.

For soil samples collected from 0 to 2 ft bgs. at borings SS-2, SS-3, SS-4 and SS-5 (located along the western edge of the asphalt), one or more of the following TAGM cleanup objectives were exceeded: cyanide, cadmium, chromium, copper, mercury, nickel, silver, thallium and zinc. The deeper soils collected from 2 to 4 feet below grade have not been analyzed at this time.

The soil sample collected beneath the sump exhibited the following inorganic exceedances to TAGM objectives: pH, antimony, cadmium, chromium, copper, lead, mercury, nickel, silver, thallium and zinc. The impacts are most likely attributable to the period between 1970 and 1984, when the sump was unlined, and received process wastewater prior to discharge.

5.3 Exterior Borings and Sump Analytical Results- VOC (Table 2)

Table 2 shows VOC analytical results for the soil samples collected at SS-3A (0-2') and the Sump sample compared to the NYSDEC Technical and Administrative Guidance Memorandum #4046 Recommended Soil Cleanup Objectives (TAGM). Exceedances of TAGM clean-up objectives were recorded at the sump, which correspond to the very high PID readings (in excess of 6,000 parts per million total VOC in the soil sample taken from below the sump base). The concentration of trichloroethylene (TCE) in the sump soil sample was 29,000 parts per billion (ppb), which exceeded the TAGM cleanup objective for soil of 700 ppb. The detections of cis-1,2 dichloroethene at 8,300 ppb and trans-1,2 dichloroethene at 1,400 ppb exceeded the TAGM clean-up objective of 300 ppb for both compounds. The presence of these TCE breakdown products suggests that TCE degradation is occurring at this location. Based on the high concentrations of TCE and its degradation products in the soil immediately beneath the sump, it appears that the unlined sump is a source for VOC exceedances in the soil and. TCE concentrations in the soil sample collected at SS-3A (0-2') did not exceed TAGM clean-up objectives.

5.4 Site Wide Groundwater Analytical Results – Inorganics (Table 3)

Table 3 compares inorganic results for groundwater analyses sampled from MW-1, MW-2 and MW-3, to NYSDEC Technical and Operational Guidance Series (TOGS) Ambient Water Quality Standards and Guidance Values.

Site wide TOGS guidance values exceedances were recorded for the following metals: manganese and sodium. The soluble manganese concentration at MW-1 is approximately 90 percent of the unfiltered sample which suggests that the majority of manganese is in the dissolved form.

Iron exceedances occurred at MW-1 and MW-3. The data validation has determined that the concentration of iron in the dissolved phase is an estimated value. However the apparent low concentration suggests that the majority of iron is un-dissolved, and likely a result of suspended sediment from the well.

Magnesium exceeds TOGS guidance values at MW-1 and MW-2. The soluble concentration of magnesium at MW-1 is approximately 93 percent of the unfiltered sample which suggests that the majority of magnesium is in the soluble form.

At MW-2 cadmium exceeds TOGS guidance values. MW-2 is downgradient from the sump, which contained a cadmium exceedance in the soil sample.

5.5 Site Wide Groundwater Analytical Results – VOCs (Table 4)

Table 4 compares VOC concentrations for groundwater to NYSDEC TOGS guidance values. There

were no VOCs detected in upgradient monitoring well MW-1, and no exceedances reported at downgradient well MW-3. At downgradient well MW-2, there were exceedances of TOGS guidance values for TCE, cis and trans 1,2-dichloroethene (1,2-DCE) and vinyl chloride. The presence of cis and trans-1,2-DCE and vinyl chloride indicate that TCE breakdown has been occurring in the groundwater. MW-2 is located hydraulically downgradient of the interior sump, which recorded TCE and 1,2-DCE exceedances in the soil. Based on the presence of TCE and its breakdown products in the sump and the presence of the same suite of compounds at downgradient well MW-2, it appears that the sump has historically contributed to the noted groundwater quality impacts.

6.0 FINDINGS

Based on the results from this Site Investigation, the following are the salient findings

1. The facility was previously used for batch plating operations for approximately five decades;
2. The soil boring data indicates the presence of some fill underlain by native lacustrine fine sands, silts and clays;
3. The hydrogeologic model suggests that the site is underlain by a shallow water bearing zone with groundwater movement in a southerly direction. This lower permeability water bearing zone likely discharges to Ley Creek located 350 feet south of the site;
4. The soil sampling results across the western edge of the paved area indicate the presence of several trace metals which may be present for a variety of reasons related to the historical use of the site for plating operations;
5. The sump located within the former plating facility was a likely historical contributor to the TCE and cis and trans 1,2 DCE exceedances observed in subsurface soil; and
6. The presence of TCE and its breakdown products at downgradient monitoring well MW-2 indicate that historical releases from the plating facility sump have likely resulted in the groundwater quality impacts observed.

The results from the Site Investigation have confirmed that the historical plating operations impacted soil and groundwater quality on site. To complete the delineation of the extent of these impacts and determine whether remediation may be required, it will be necessary to complete supplemental investigations.

7.0 RECOMMENDATIONS

Based on the findings of the soil and groundwater investigation onsite, ENSR recommends the following steps to further delineate the extent of impacts:

- 1) Characterize the lateral extent of soil impacts in the sump vicinity. This task would require the collection of one discrete soil sample from each of four Geoprobe advanced borings to be located 10 feet from the sump at the four points of the compass. The soil samples would be submitted for laboratory analyses of VOCs; and
- 2) Convert the southerly boring to a monitoring well to characterize groundwater quality immediately downgradient of the source area. This well would be installed to the same depth interval as the other monitoring wells on site. The groundwater sample would be submitted for analysis of VOCs.

TABLES

Table 1
Soil Analytical Data
Metals
Former National Plating Facility
1501 Brewerton Road
Syracuse, New York

	TAGM RSCO ^f	SS-1A µg/kg (ppb)	SS-2A µg/kg (ppb)	SS-3A µg/kg (ppb)	SS-Dup (SS-3A) µg/kg (ppb)	SS-4A µg/g (ppb)	SS-5A µg/kg (ppb)	SUMP µg/kg (ppb)	
Cyanide - Total	SB (SS-1A)	2.60	J	1.0	UJ	9.9	J	1.0	UJ
Corrosivity (pH)		7.77		7.97		7.32		7.17	
Antimony - Total	SB (SS-1A)	14.60	NJ	18.1	UNJ	14	NJ	20.5	UNJ
Aluminum - Total	SB (SS-1A)	9.260	EJ	2.610	EJ	8.820	EJ	10.300	EJ
Arsenic - Total	SB (SS-1A)	11.7		2.7		2.1		3.1	
Barium - Total	300	62.0	ENJ	79.1	NEJ	68.0	NEJ	80.0	NEJ
Beryllium - Total	SB (SS-1A)	0.47		0.38		0.42		0.53	
Cadmium - Total	1	0.22	NJ	9.30	NJ	0.54	NJ	0.28	NJ
Calcium - Total	SB (SS-1A)	18,300	EJ	157,000	EJ	4,050	EJ	2,530	EJ
Chromium - Total	SB (SS-1A)	10.70	NEJ	53.50	NEJ	13.70	NEJ	13.50	NEJ
Cobalt - Total	30	7.0		2.9		7.0		7.9	
Copper - Total	25	17.4	EJ	373.0	EJ	24.0	EJ	15.2	EJ
Iron - Total	SB (SS-1A)	16,900	EJ	7,840	EJ	13,700	EJ	16,000	EJ
Lead - Total	SB (SS-1A)	17.0	NJ	56.1	NJ	13.3	NJ	15.7	NJ
Magnesium - Total	SB (SS-1A)	2,640	NE*	19,900	NE*	3,010	NE*	3,050	NE*
Manganese - Total	SB (SS-1A)	506	EJ	291	EJ	315	EJ	255	EJ
Mercury - Total	0.1	0.065		0.062		0.045		0.046	
Nickel - Total	13	11.80	E*	147.0	E*	32.8	E*	16.6	E*
Potassium - Total	SB (SS-1A)	612		401		652		802	
Selenium - Total	SB (SS-1A)	3.9	U	4.8	U	3.7	U	5.5	UNJ
Silver - Total	SB (SS-1A)	0.49	UNJ	9.30	NJ	0.47	UNJ	0.68	U
Sodium - Total	SB (SS-1A)	226		169	U	131	U	191	U
Vanadium - Total	150	15.6		7.70		16.60		19.20	
Zinc - Total	SB (SS-1A)	50.6	NJ	164	NJ	39.2	NJ	42.7	NJ
Thallium - Total	SB (SS-1A)	0.10		0.12	U	0.12		0.16	

NOTES:

^f Technical and Administrative Guidance Memorandum #4046 Recommended Soil Cleanup Objectives.

RSCO values were determined as follows: When the TAGM guidelines provided a choice between Site Background and a value, the higher value was used. When Site Background was provided as the guideline, SS-1A was used.

19,000 constituent detected in ppb

SB = Site Background (SS-1A)
652 constituent exceeds NYSDDEC TAGM Guidance values in ppb

U Indicates element was analyzed for, but not detected at or above the reporting limit.

J Indicates an estimated value.

N Indicates spike sample recovery is not within the quality control limits.

E Indicates a value estimated or not reported due to the presence of interferences.

* Indicates analysis is not within quality control limits.

Table 2
Soil Analytical Data
VOCs
Former National Plating Facility
1501 Brewerton Road
Syracuse, New York

	TAGM RSCO [†] µg/kg (ppb)	SS-3A µg/kg (ppb)	SS-DUP (3A) µg/kg (ppb)	SUMP µg/kg (ppb)
Ethylbenzene	5500	6 U	6 U	760 U
Styrene	N/A	6 U	6 U	760 U
cis-1,3-Dichloropropene	N/A	6 U	6 U	760 U
trans-1,3-Dichloropropene	N/A	6 U	6 U	760 U
1,2-Dichloroethane	100	6 U	6 U	760 U
4-Methyl-2-pentanone	100	31 U	31 U	3,800 U
Toluene	1500	6 U	6 U	760 U
Chlorobenzene	1700	6 U	6 U	760 U
Dibromochloromethane	N/A	6 U	6 U	760 U
Tetrachloroethene	1400	6 U	6 U	760 U
cis-1,2-Dichloroethene	300	6 U	6 U	8,300
trans-1,2-Dichloroethene	300	6 U	6 U	1,400
Carbon Tetrachloride	600	6 U	6 U	760 U
2-Hexanone	N/A	31 U	31 U	3,800 U
Acetone	200	31 U	31 U	3,800 U
Chloroform	300	6 U	6 U	760 U
Benzene	60	6 U	6 U	760 U
1,1,1-Trichloroethane	800	6 U	6 U	760 U
Bromomethane	N/A	6 U	6 U	760 U
Chloromethane	N/A	6 U	6 U	760 U
Chloroethane	N/A	6 U	6 U	760 U
Vinyl chloride	200	12 U	12 U	1,500 U
Methylene chloride	100	6 U	7 U	760 U
Carbon Disulfide	2700	6 U	6 U	760 U
Bromoform	N/A	6 U	6 U	760 U
Bromodichloromethane	N/A	6 U	6 U	760 U
1,1-Dichloroethane	200	6 U	6 U	760 U
1,1-Dichloroethene	400	6 U	6 U	760 U
1,2-Dichloropropane	300	6 U	6 U	760 U
2-Butanone	300	31 U	31 U	3,800 U
1,1,2-Trichloroethane	800	6 U	6 U	760 U
Trichloroethene	700	31	50	29,000
1,1,2,2-Tetrachloroethane	600	6 U	6 U	760 U
o-Xylene	N/A	6 U	6 U	760 U
m/p-Xylenes	1200	12 U	12 U	1,500 U

NOTES:

[†]New York State Department of Environmental Conservation Technical and Administrative Guidance Memorandum #4046 Recommended Soil Cleanup
All analytical results in this table are in parts per billion (ppb)

B This flag is used when the analyte is found in the associated blank, as well as in the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation

U Indicates compound was analyzed for, but not detected at or above the reporting limit.

1000 constituent detected in ppb

Table 3
Groundwater Analytical Data
Metals
Former National Plating Facility
1501 Brewerton Road
Syracuse, New York

Analyte	NYSDEC Guidelines ^a ($\mu\text{g/L}$)	MW-1 ($\mu\text{g/L}$)	MW-1 soluble ($\mu\text{g/L}$)	MW-2 ($\mu\text{g/L}$)	MW-3 ($\mu\text{g/L}$)	MW-3 duplicate ($\mu\text{g/L}$)
Cyanide - Total	200	0.01 U	NA	0.01 U	0.01 U	0.01 U
Hexavalent Chromium - Total	50	0.01 U	NA	0.028	0.01 U	0.01 U
Aluminum - Total	NV	1,000 ^b	200 U	200 U	200 U	200 U
Antimony - Total	3	20 U	20 U	20 U	20 U	20 U
Arsenic - Total	25	10 U	10 U	10 U	10 U	10 U
Barium - Total	1,000	201 J	201 J	236	198	199
Beryllium - Total	3	2 U	2 U	2 U	2 U	2 U
Calcium - Total	NV	162,000	159,000 UJ	177,000	132,000	132,000
Cadmium - Total	5	1 U	1 U	33.3	1 U	1 U
Chromium - Total	50	4 U	4 U	38.4	4 U	4 U
Cobalt - Total	NV	4 U	4 U	4.2	4 U	4 U
Copper - Total	200	10 U	10 U	10 U	10 U	10 U
Iron - Total	300	1,050 NJ	78.4 J	96.6 NJ	20,400 NJ	20,200 NJ
Lead - Total	25	5 U	5 U	5 U	5 U	5 U
Magnesium - Total	35,000	35,900	33,500 J	44,200	16,900	16,800
Manganese - Total	300	6,380	6,130 J	3,370	712	708
Mercury - Total	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel - Total	100	10 U	10 U	38.7	10 U	10 U
Potassium - Total	NV	40,500	42,400 J	14,600	5,760	5,760
Selenium - Total	10	15 U	15 U	15 U	15 U	15 U
Silver - Total	50	3 U	3 U	3 U	3 U	3 U
Sodium - Total	20,000	433,000	445,000 EJ	326,000	73,700	73,600
Thallium - Total	0.5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vanadium - Total	NV	5 U	5 U	5 U	5 U	5 U
Zinc - Total	2,000	20 U	20 U	20 U	20 U	20 U

NOTES:

a. New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1)
 b. 1000 constituent detected in ppb

c. [33.3] constituent exceeds NYSDEC TOGS Guidance values in ppb
 U Constituent was not detected at the detection limit in ppb

D Constituent was detected after dilution
 E Constituent was detected above the calibration range for that particular constituent requiring dilution

NA spiked sample recovery is not within the quality control limits
 NV no value posted
 J Indicates estimated value.

Table 4
Groundwater Analytical Data
VOCs
Former National Plating Facility
 1501 Brewerton Road
 Syracuse, New York

	NYSDEC Guidelines ^a ($\mu\text{g/L}$)	MW-1 ($\mu\text{g/L}$)	MW-2 ($\mu\text{g/L}$)	MW-2 diluted ($\mu\text{g/L}$)	MW-3 ($\mu\text{g/L}$)	MW-3 duplicate ($\mu\text{g/L}$)
Ethylbenzene	5	1 U	1 U	8 U	1 U	1 U
Styrene	5	1 U	1 U	8 U	1 U	1 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	8 U	1 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	8 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	8 U	1 U	1 U
4-Methyl-2-pentanone	NV	5 U	5 U	40 U	5 U	5 U
Toluene	5	1 U	1 U	8 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	8 U	4.2	4.2
Dibromochloromethane	NV	1 U	1 U	8 U	1 U	1 U
Tetrachloroethene	5	1 U	1 U	8 U	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	200	200 D	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	10	8.3 D	1 U	1 U
Carbon Tetrachloride	5	1 U	1 U	8 U	1 U	1 U
2-Hexanone	NV	5 U	5 U	40 U	5 U	5 U
Acetone	NV	5 UJ	5 UJ	40 U	5 UJ	5 UJ
Chloroform	7	1 U	1 U	8 U	1 U	1 U
Benzene	1	1 U	1 U	8 U	1 U	1 U
1,1,1-Trichloroethane	5	1 U	1 U	8 U	1 U	1 U
Bromomethane	5	1 U	1 U	8 U	1 U	1 U
Chloromethane	5	1 U	1 U	8 U	1 U	1 U
Chloroethane	5	1 U	1 U	8 U	1 U	1 U
Vinyl chloride	2	1 U	30 ^b	30 D	1 U	1 U
Methylene chloride	5	1 UJ	1 UJ	8 U	1 UJ	1 UJ
Carbon Disulfide	NV	1 U	1 U	8 U	1 U	1 U
Bromoform	NV	1 U	1 U	8 U	1 U	1 U
Bromodichloromethane	NV	1 U	1 U	8 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1 U	8 U	1 U	1 U
1,1-Dichloroethene	5	1 U	0.58 J	8 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1 U	8 U	1 U	1 U
2-Butanone	NV	5 UJ	5 UJ	40 U	5 UJ	5 UJ
1,1,2-Trichloroethane	1	1 U	1 U	8 U	1 U	1 U
Trichloroethene	5	1 U	170	170 D	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	8 U	1 U	1 U
o-Xylene	5	1 U	1 U	8 U	1 U	1 U
m/p-Xylenes	5	2 U	2 U	16 U	2 U	2 U

NOTES:

a New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1)
 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations expressed in ug/L (parts per billion ppb)

4.2 constituent detected in ppb

b 30 constituent exceeds NYSDEC TOGS Guidance values in ppb

U Constituent was not detected at the detection limit in ppb

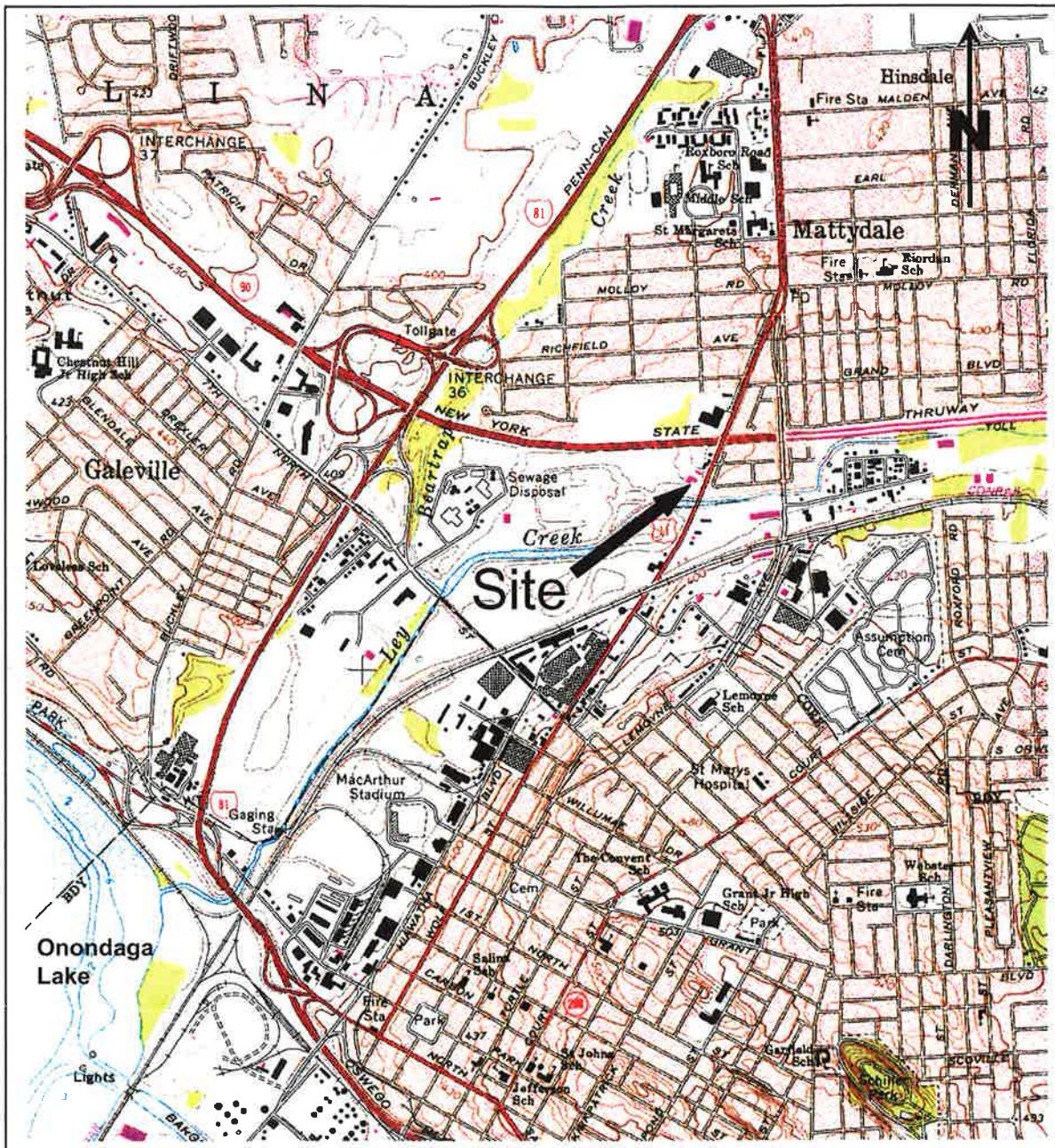
D Constituent was detected after dilution

E Constituent was detected above the calibration range for that particular constituent requiring dilution

J Constituent detected but below detection level, concentration is estimated

NV No value posted

FIGURES



SCALE
1:24,000

0 1000 2000 3000 4000 5000 FEET

0 .5 1.0 KILOMETERS

0 .5 1.0 MILES

MAP REFERENCE

United States Geological Survey
7.5 minute Series Topographic Map
Quadrangle: Syracuse, NY
Date: 1994 (check)



6601 KIRKVILLE ROAD
EAST SYRACUSE, NEW YORK 13057-9672
PHONE: (315) 432-0506
FAX: (315) 437-0509
WEB: [HTTP://WWW.ENSRI.COM](http://WWW.ENSRI.COM)

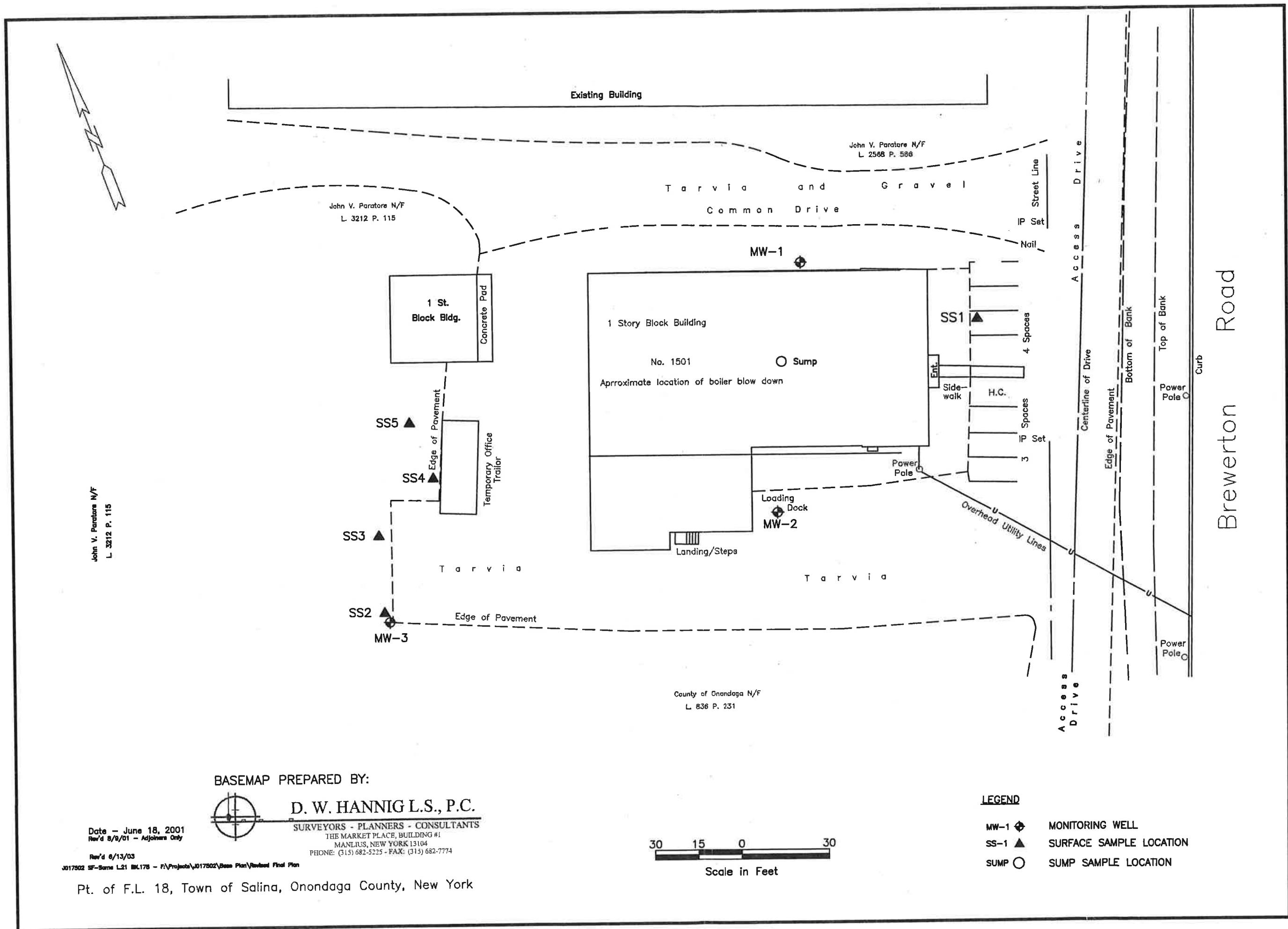
SITE LOCATION

FORMER NATIONAL PLATING FACILITY
SYRACUSE, NEW YORK

FIGURE NUMBER:

1

DRAWN BY:	DATE:	PROJECT NUMBER:
DMS	02/02/2005	10160-004



DESIGNED BY:	KDR	NO.:	DESCRIPTION:	DATE:
DRAWN BY:	L.M.			
CHECKED BY:	KDR			
APPROVED BY:	CG			



SAMPLE LOCATIONS		PROJECT NUMBER:
FORMER NATIONAL PLATING FACILITY	1501 BREWERTON ROAD	SYRACUSE, NEW YORK
AS NOTED	DATE:	10160-004

FIGURE NUMBER:
2
SHEET NUMBER:
1

PROPERTY
BOUNDARY

John V. Paratore N/F
L 3212 P. 115

John V. Paratore N/F
L 3212 P. 115

Existing Building

John V. Paratore N/F
L 2568 P. 586

Tarvia and
Common Drive

1 St.
Block Bldg.

Concrete Pad

SS5 ▲ Edge of Pavement
SS4 ▲ Temporary Office
Trailer
SS3 ▲
373

Tarvia
SS2 ▲ 372
MW-3
(371.85)
Edge of Pavement
LEY CREEK SEWER RIGHT OF WAY BOUNDARY

MW-1
(375.53) ◆
1 Story Block Building
375
No. 1501
Approximate location of boiler blow down
374
373
MW-2
(372.63)
Landing/Steps
Loading Dock
Side-walk
Ent.
H.C.
IP Set
IP Set
3 Spaces
4 Spaces
Bottom of Bank
Top of Bank
Power Pole C
Curb
Power Pole C
Overhead Utility Lines
Access Drive
Centreline of Drive
Edge of Pavement
Bottom of Bank
Top of Bank
Power Pole C
Curb
Power Pole C

County of Onondaga N/F
L 838 P. 231

BASEMAP PREPARED BY:



Date - June 18, 2001
Rev'd 6/9/01 - Adjoiners Only

Rev'd 6/13/03

J017502 SF-Some L21 BK178 - P:\Projects\J017502\Base Plan\Revised Final Plan

Pt. of F.L. 18, Town of Salina, Onondaga County, New York

30 15 0 30
Scale in Feet

LEGEND

375 GROUNDWATER CONTOUR IN FEET

Flow Direction

MW-1 Monitoring Well

SS-1 Surface Sample Location

SUMP Sump Sample Location

GROUNDWATER FLOW MAP		PROJECT NUMBER:
FORMER NATIONAL PLATING FACILITY		1501 BREWERTON ROAD SYRACUSE, NEW YORK
1501 BREWERTON ROAD		PHONE: (315) 432-0506
		FAX: (315) 437-0508
SCALE	DATE:	WEB: HTTP://WWW.ENSR.COM
AS NOTED	02/10/05	10160-004

FIGURE NUMBER:	
3	
SHEET NUMBER:	1

DESIGNED BY:	REVISIONS
KDR	No.: DRAWN BY: L.I.M.
	DESCRIPTION: DATE BY: CHECKED BY: KDR
	APPROVED BY: CG

APPENDIX A

Soil Boring and Monitoring Well Completion Logs



Soil Boring Log

Client: Hancock & Estabrook Project: National Plating Project Number: 10160-004 Site Location: Syracuse, NY Coordinates: _____ Drilling Method: direct push macro core Sample Type(s): _____						BORING ID: SUMP Sheet: 1 of 1 Monitoring Well Installed: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N				
Elevation: _____ Boring Diameter: 2 in. Screened Interval: _____										
Weather: _____			Logged By: JDF		Date/Time Started: 12/10/04		Depth of Boring: 8.75 feet			
Drilling Contractor: Parratt-Wolff			Ground Elevation: _____		Date/Time Finished: 12/10/04		Water Level: _____			
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft)	(Headspace (ppmv)	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known) Sump area -- bottom of sump approximately 4', 9" below grade.		Lab Sample ID	Lab Sample Depth (inches)
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
NOTES: <i>Kallioie 02/10/05</i>							Date	Time	Depth to groundwater while drilling	



Soil Boring Log

Client: Hancock & Estabrook		Project: National Plating		BORING ID: SS-1					
Project Number: 10160-004									
Site Location: Syracuse, NY				Sheet: 1 of 1					
Coordinates: Northing: 1126432.6 Easting: 936138.5 Elevation: 378.9				Monitoring Well Installed: Y N					
Drilling Method: direct push macro core				Screened Interval:					
Sample Type(s):				Boring Diameter:					
Weather:		Logged By: JDF		Date/Time Started: 12/10/04	Depth of Boring: 4 feet				
Drilling Contractor: Parratt-Wolff		Ground Elevation:		Date/Time Finished: 12/10/04	Water Level:				
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft.)	(Headspace (ppmv)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth
0				0.9			FILL	SS-1A	0-2'
1									
2				1.8	4.9		Brown Silty CLAY, wet, no odor.	SS-1B	2-4'
3									
4							SS-1A, SS01B sampled at 16:20 Boring terminated at 4'.		
5									
6									
7									
8									
9									
10									
							Date	Time	Depth to groundwater while drilling
NOTES:									
Checked by <u>Karen</u> Date: <u>02/10/05</u>									



Soil Boring Log <i>Client: Hancock & Estabrook Project: National Plating</i>							BORING ID:			
<i>Project Number: 10160-004</i> <i>Site Location: Syracuse, NY</i> <i>Coordinates: Northing: 1126408.9 Easting: 935912.7 Elevation: 373.5</i> <i>Drilling Method: direct push macro core</i>									SS-2	
<i>Sample Type(s):</i> <i>Weather:</i> <i>Logged By: JDF</i> <i>Date/Time Started: 12/10/04</i> <i>Drilling Contractor: Parratt-Wolff</i> <i>Date/Time Finished: 12/10/04</i>							<i>Sheet: 1 of 1</i> <i>Monitoring Well Installed: Y N</i> <i>Screened Interval:</i> <i>Depth of Boring: 4 feet</i> <i>Water Level:</i>			
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft.)	(Headspace (mm))	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)		Lab Sample ID	Lab Sample Depth (ft)
0	0-2	0.8'					0-0.3 – Brown GRAVEL, some Silt and Clay 0.3-2 – Black fine SILT, some fine brown Sand, saturated, no odor.		SS-2A	0-2
1										
2		0.7			4.7		Black, organic, wood chips, saturated, no odor.		SS-2B	2-4
3										
4					6.0		Sample SS-2A, and SS-2B at 14:30. Boring terminated at 4'.			
5										
6										
7										
8										
9										
10										
NOTES:							Date	Time	Depth to groundwater while drilling	
Checked by <i>Karl Roemer</i> Date: <i>02/10/01</i>										



Client: Hancock & Estabrook				Project: National Plating				BORING ID: SS-3				
Project Number: 10160-004												
Site Location: Syracuse, NY				Coordinates: Northing: 1126434.4 Easting: 935920.1 Elevation: 374.3				Sheet: 1 of 1				
Drilling Method: direct push macro core								Monitoring Well Installed: Y N				
Sample Type(s):				Boring Diameter: 2 in.				Screened Interval:				
Weather:				Logged By: JDF				Date/Time Started: 12/10/04	Depth of Boring: 4 feet			
Drilling Contractor: Parratt-Wolff								Date/Time Finished: 12/10/04	Water Level:			
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft.)	(Headspace (pmv)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)			Lab Sample ID	Lab Sample Depth	
0				0.8			0-0.45 – Brown Gravel FILL, brick pieces. 0.45-0.8 – Black organics, Silt and Clay, trace wood pieces, wet.			SS-3A	0-2	
1										SS-DUP	0-2	
2				0.75	10.6		Dark gray-brown silty CLAY, wet.			SS-3B	2-4	
3							SS-3A, 0-2', SS-3B, 2-4', SS-DUP (duplicate of SS-3A), collected at 13:40.					
4					2.3		Boring Terminated at 4'.					
5							Date	Time	Depth to groundwater while drilling			
6												
7												
8												
9												
10												
NOTES:												
Checked by <i>Kent Rainey</i> Date: 02/10/05												



Soil Boring Log

		Client: Hancock & Estabrook				Project: National Plating				BORING ID: SS-4		
		Project Number: 10160-004				Site Location: Syracuse, NY						
		Coordinates: Northing: 1126446.5 Easting: 935944.7 Elevation: 374.5				Sheet: 1 of 1						
		Drilling Method: direct push macro core				Monitoring Well Installed: Y N						
		Sample Type(s):				Boring Diameter: 2 in.				Screened Interval:		
Weather:				Logged By: JDF				Date/Time Started: 12/10/04		Depth of Boring: 4 feet		
Drilling Contractor: Parratt-Wolff								Date/Time Finished: 12/10/04		Water Level:		
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft.)	(Headspace (ppmv)	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (if Known)				Lab Sample ID	Lab Sample Depth
0				1.1			FILL				SS-4A	0-2'
1												
2				1.2			Gray SILT and Clay, wet, with brown mottles.				SS-4B	2-4'
3												
4				12			SS-4A, SS-4B sampled at 15:50					
5							Boring terminated at 4'.					
6												
7												
8												
9												
10												
NOTES:										Date	Time	Depth to groundwater while drilling
Checked by <u>Karl Reim</u> Date <u>02/10/05</u>												

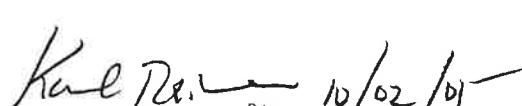


Soil Boring Log

		Client: Hancock & Estabrook			Project: National Plating			BORING ID: SS-5			
		Project Number: 10160-004									
		Site Location: Syracuse, NY						Sheet: 1 of 1			
		Coordinates: Northing: 1126467.2 Easting: 935943.7 Elevation: 375.3						Monitoring Well Installed: Y N			
		Drilling Method: direct push macro core									
		Sample Type(s):			Boring Diameter: 2 in.			Screened Interval:			
Weather:		Logged By: JDF			Date/Time Started: 12/10/04			Depth of Boring: 4 feet			
Drilling Contractor: Parratt-Wolff					Date/Time Finished: 12/10/04			Water Level:			
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	Recovery (in. or ft.)	Headspace (ppmv)	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)			Lab Sample ID	Lab Sample Depth
0				1.1'	5.9		0-0.6 – FILL 0.6-0.95 – Dark brown Silty CLAY with light brown mottles, wet. 0.95-2 – Medium brown Silty CLAY, wet. SAA. SS-5A, SS-5AMS/MSD, SS-5B collected at 15:10. Boring terminated at 4'.			SS-5A SS-5A MS SS-5A MSD	0-2' 0-2' 0-2'
1										SS-5B	2-4'
2											
3											
4											
5											
6											
7											
8											
9											
10											
NOTES:							Date	Time	Depth to groundwater while drilling		
 Checked by _____ Date: 02/10/05											



Soil Boring Log

Project Information							Boring ID: MW-01					
Client: Hancock & Estabrook		Project: National Plating										
Project Number: 10160-004												
Site Location: Syracuse, NY												
Coordinates: Northing: 1126471.9		Easting: 936088.9		Elevation: 378.85 ft.		Sheet: 1 of 1						
Drilling Method: HSA, spoon							Monitoring Well Installed: Y N					
Sample Type(s):				Boring Diameter: 8 1/4 in.		Screened Interval: 4.3-14.3						
Weather:				Logged By: KDR		Date/Time Started: 12/09/04		Depth of Boring: 14.3				
Drilling Contractor: Parratt-Wolff						Date/Time Finished: 12/09/04		Water Level:				
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	N	Recovery (in. or ft.)	(Headspace (psia))	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)			Lab Sample ID	Lab Sample Depth
0			0		5"	1.1		0-4" Asphalt Rust red brown CLAY, little Silt, trace coarse Sand, damp, moderately plastic.				
1			6	4	8							
2				4								
3				3	7			Dark brown organic SILT, little Clay, little Sand, trace angular Gravel, moist.				
4					4							
5					5	10		Rust brown CLAY, some Silt, trace medium Sand, trace Gravel, wet, moderately plastic.				
6					5		1.8					
7					6	16		SAA				
8					10							
9					6	17"	2.5	SAA, saturated.				
10					11			Red-brown SILT, little Clay, damp to moist, trace fine Sand, trace fine Gravel.				
11					18	39						
12					21			Red-brown SILT, Clay and Till, trace fine Gravel.				
13					28							
14					21	24"	1.8	SAA				
15					18							
16					34	63		SAA				
17					29							
18								Boring terminated at 14'.				
19												
20												
NOTES:  Checked by _____ Date: 10/02/04										Date	Time	Depth to groundwater while drilling



Client:	Hancock & Estabrook	WELL ID:	MW-1
Project Number:	10160-004	Date Installed:	12/9/2004
Site Location:	Syracuse, NY	Inspector:	KDR
Well Location:	North side of building. Coords: Northing: 1126471.9 Easting: 936088.9	Contractor:	Parratt-Wolff
Method:	HSA, split spoons for sample collection		

MONITORING WELL CONSTRUCTION DETAIL

Measuring Point for Surveying & Water Levels	Ground Elevation	Depth from G.S. (feet)	Elevation(feet)	
	Top of Flush Mount	0.0	378.9	
	Top of PVC casing	0.05	378.85	
		0.3	378.55	
	Cement, Bentonite, Bentonite Slurry Grout, or Native Materials			
	95 % Cement	Riser Pipe: Length 4.3 Inside Diameter (ID) 2" Type of Material Schedule 40 PVC		
	5 % Bentonite			
	% Native Materials			
		Top of Bentonite	1	377.9
		Bentonite Seal Thickness 2'		
	Top of Sand	3	375.9	
	Top of Screen	4.5	374.4	
	▲ Stabilized Water Level			
	Screen: Length 9.7' Inside Diameter (ID) 2" Slot Size 10 Slot (0.010 Inch) Type of Material Schedule 40 PVC			
	Type/Size of Sand 1 Sand Pack Thickness 11.3			
	Bottom of Screen	14.1	364.8	
	Bottom of Tail Pipe:	14.3	364.6	
	Bottom of Borehole	14.3	364.6	
Borehole Diameter:	Approved:  Signature	02/10/05 Date		
Describe Measuring Point:				



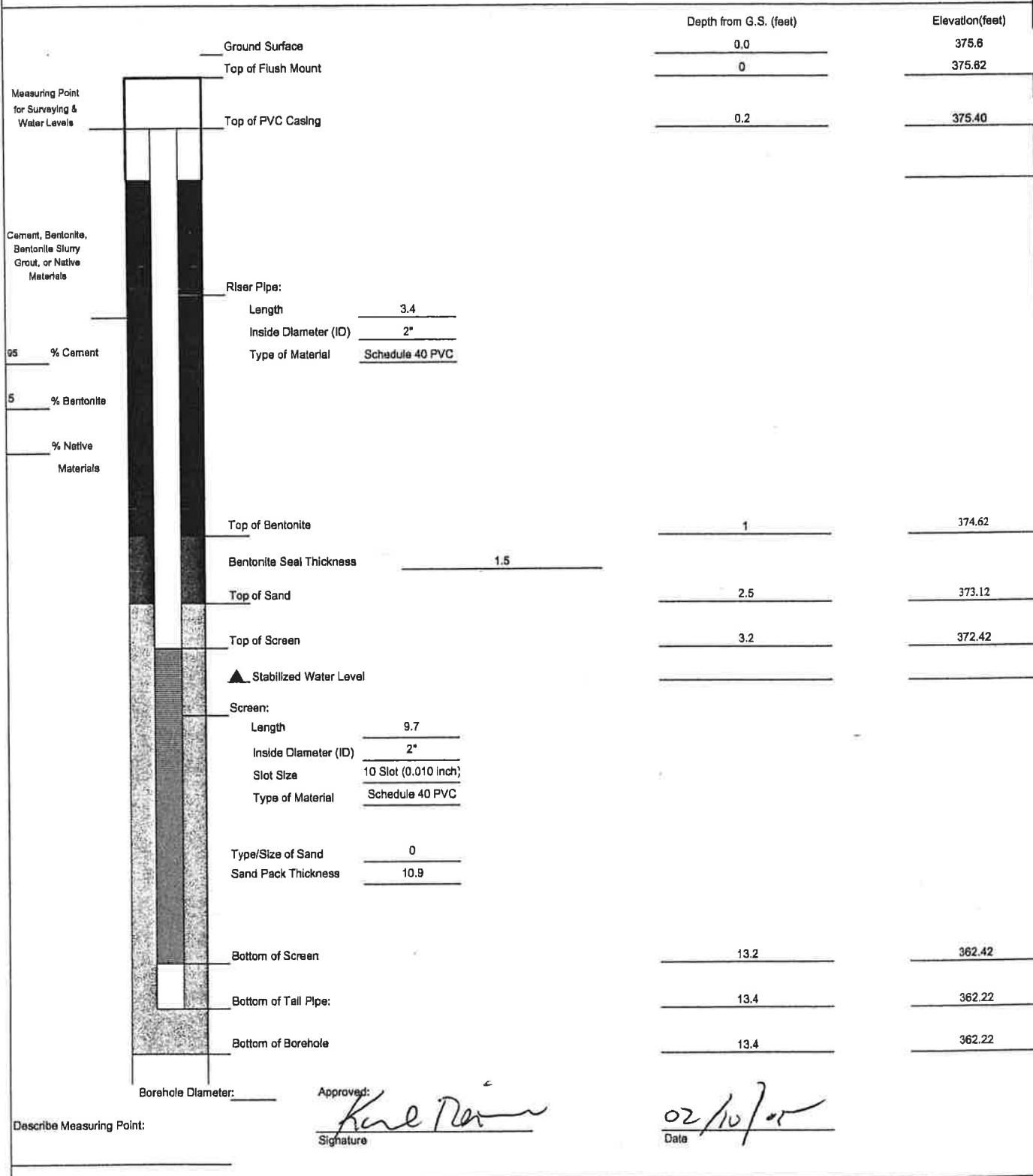
Soil Boring Log

 Soil Boring Log		Project Information					BORING ID: MW-02					
		Client: Hancock & Estabrook		Project: National Plating								
		Project Number: 10160-004										
		Site Location: Syracuse, NY										
		Coordinates: Northing: 1126394.0 Easting: 936051.4		Elevation: 375.8					Sheet: 1 of 1			
		Drilling Method: HSA, spoon							Monitoring Well Installed: Y N			
Sample Type(s):		Boring Diameter: 8 1/4 in.			Screened Interval: 3.2-13.2							
Weather:		Logged By: KDR			Date/Time Started: 12/09/04	Depth of Boring: 13.4						
Drilling Contractor: Parratt-Wolff					Date/Time Finished: 12/09/04	Water Level:						
Depth (feet)	Geologic Sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	N	Recovery (in. or ft.)	(Headspace (µm))	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)			Lab Sample ID	Lab Sample Depth
0		3		8	6"	2.6		0-4" -- Asphalt. 4"-2' - Dark brown fine to medium SAND, damp to wet.				
1		4		4								
2		3		3	2'	3.3						
3		3		1	3			2-2.5' - SAA 2.5'-4' - Dark brown to black fine SAND and Silt, organic, wet.				
4		2		6	2'							
5		5		3	7			Brown Clayey SILT, moderately plastic, trace medium Sand, trace coarse Sand, damp to wet.				
6		4		7	2'							
7		18		24	55			Rust red to brown SILT, some Clay, little fine Sand, trace fine sub-rounded Gravel, damp, slightly plastic, Till.				
8		31		19	13"							
9		23		21	42			Brown Silty fine SAND, little Clay, slightly plastic, trace fine Gravel. Till.				
10		21		21	18"							
11		30		34	74			SAA				
12		40		21								
13		30	80					SAA				
14		50			0.4			Boring terminated at 13.4'.				
15												
16												
17												
18												
19												
20												
NOTES: <i>Karl Rau</i> 02/10/05 Checked by _____ Date: 02/10/05										Date	Time	Depth to groundwater while drilling



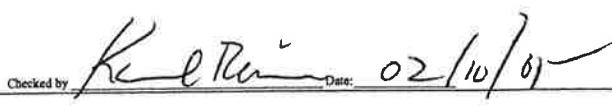
<i>Client:</i> Hancock & Estabrook	WELL ID: MW-2
<i>Project Number:</i> 10160-004	
<i>Site Location:</i> Syracuse, NY	<i>Date Installed:</i> 12/9/2004
<i>Well Location:</i> North side of building. <i>Coords:</i> Northing: 1126394.0 Easting: 936051.4	<i>Inspector:</i> KDR
<i>Method:</i> HSA, spoons	<i>Contractor:</i> Parratt-Wolff

MONITORING WELL CONSTRUCTION DETAIL





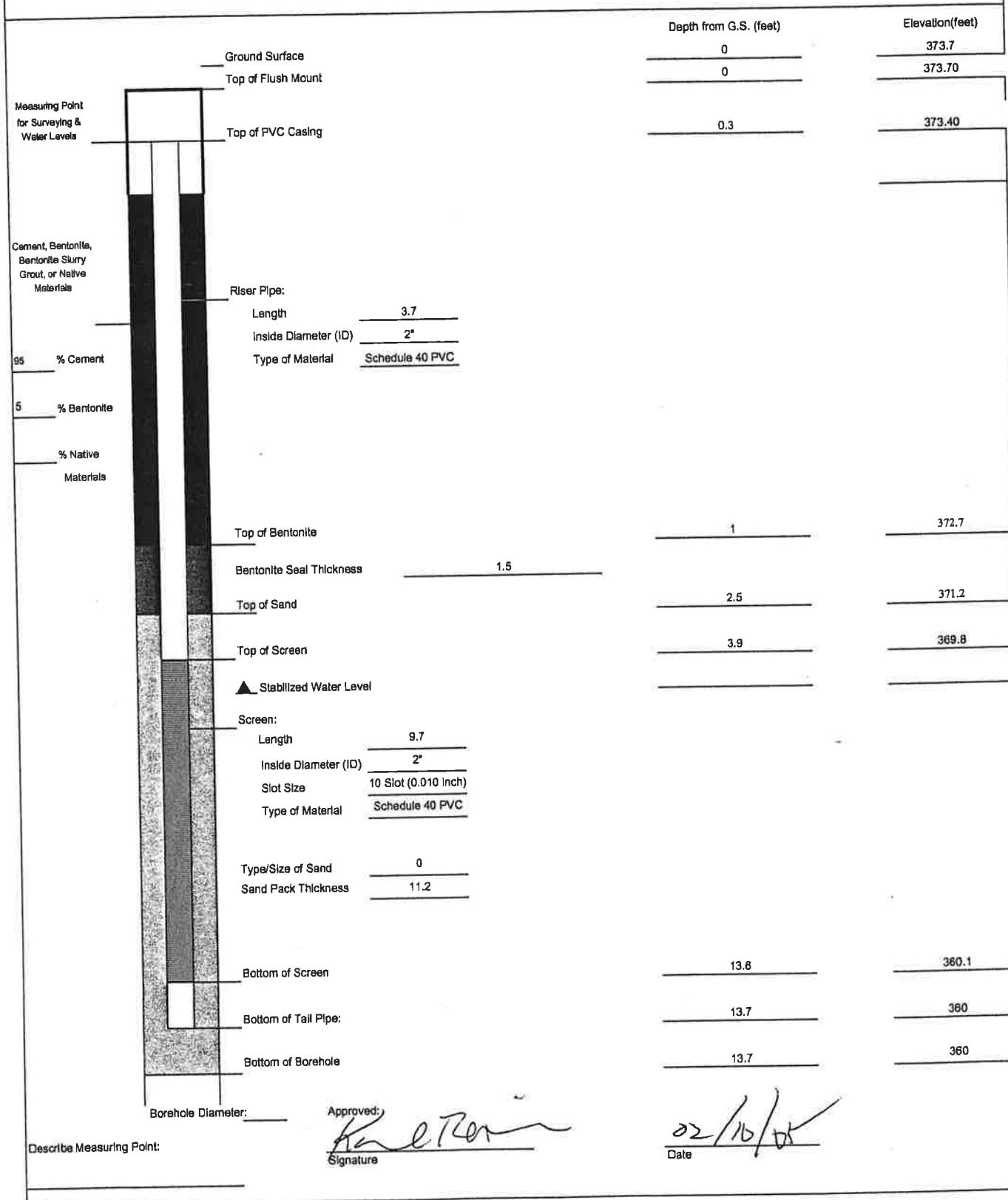
Soil Boring Log

		Project Information						BORING ID: MW-03				
		Client: Hancock & Estabrook			Project: National Plating							
		Project Number: 10160-004										
		Site Location: Syracuse, NY										
		Coordinates: Northing: 1126405.3 Easting: 935813.4 Elevation: 373.73			Sheet: 1 of 1							
Drilling Method: HSA, spoon		Monitoring Well Installed: <input checked="" type="checkbox"/> N										
Sample Type(s):						Boring Diameter: 8 1/4 in.	Screened Interval: 3.9-13.6					
Weather:				Logged By: KDR	Date/Time Started: 12/09/04	Depth of Boring: 13.7						
Drilling Contractor: Parratt-Wolff					Date/Time Finished: 12/09/04	Water Level:						
Depth (feet)	Geologic sample ID	Sample Depth (ft)	Blow Count (per 6-inches)	N	Recovery (in. or ft.)	(Headspace (piston))	U.S.C.S	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)		Lab Sample ID	Lab Sample Depth	
0			4 4 6 5	10	8"	2.7		Dark brown very fine SAND, little Silt, trace coarse Gravel, wet, trace organics (roots).				
1												
2			2 2 2 1	4	11"	4.6		Black saturated fine SAND, little Silt, trace coarse Gravel.				
3												
4			4 4 3 4	7	7"	3.2		Brown organic SILT, trace Clay, trace fine Sand, trace roots.				
5												
6			5 3 3 3	6	0"	NA		0" recovery.				
7												
8			2 2 2	4	0"	NA		0" recovery.				
9												
10			7 6 5 5	11	2"	4.6		Black organic SILT, trace fine Sand.				
11												
12			6 5 5 2	10				Gray-brown clayey SILT, saturated, non-plastic.				
13												
14								Boring terminated at 14".				
15												
16												
17												
18												
19												
20												
NOTES:										Date	Time	Depth to groundwater while drilling
Checked by  Date: 02/10/01												



Client:	Hancock & Estabrook	WELL ID:	MW-3
Project Number:	10160-004	Date Installed:	12/9/2004
Site Location:	Syracuse, NY	Inspector:	KDR
Well Location:	North side of building. Coords: Northing: 1126405.3 Easting: 935913.4	Contractor:	Parratt-Wolff
Method:	HSA, spoons		

MONITORING WELL CONSTRUCTION DETAIL



APPENDIX B

Groundwater Development and Sampling Logs

Low Flow Ground Water Sample Collection Record

Client: Hancock & Estabrook	Date: 12/21/2004	Time: Start 12:40 am/pm Finish 1:410 am/pm
Project No: 10160-004		
Site Location: 1501 Brewerton Road		
Weather Conds: ~15°, overcast, hazy	Collector(s): Joy D. Funke	

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 3.02' c. Length of Water Column 11.02' (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 13.74' d. Calculated System Volume (see back) 6.81

2. WELL PURGE DATA

- a. Purge Method: Low-flow using a peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
Horiba	U-22	03130-Pine

Volume

Time (24hr)	Removed (Liters)	Temp. (°C/F)	pH (SU)	Spec. Cond. (mS/cm)	DQ (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1244	0.5	8.73	7.69	2.75	3.28	-37	6.27			
1255	1	8.33	7.18	2.76	11.13	-4	3.50	200	50	light brown
1300	1.5	8.91	7.61	2.76	3.12	-47	307.0	200		
1305	2	8.74	7.08	2.86	2.86	-49	205	200		clear
1310	3	8.69	7.08	2.77	2.90	-53	157	200		clear
1315	4	8.77	7.07	2.79	3.07	-53	13.3	200	5.81 - 3.23	
1320	5	8.81	7.06	2.82	3.08	-52	89.3	200	24	clear

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low-flow and bailer.

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-1	3 plastic, 3 glass	6	Various	TAL Metals, U.S., Cr, Cr ⁺⁶	1345
MW-1 MS (MSD)	glass+plastic	6 plastic, 6 glass	various	Sorbent, TAL Metals,	1345
MW-1 F (filtered)	left to filter - sent unpreserved			Cr, Hex(Crom., VOA)	1345

Comments * collected 1.5L volume for later filtration of metals samples.

Signature Joy D. Funke

FORMS99

Date 12/21/04

12/20/2004

Low Flow GW Front

Low Flow Ground Water Sample Collection Record

Client: Hancock & Estabrook Date: 12/21/2004 Time: Start 10:20 am/pm
 Project No: 10160-004 Finish 11:05 am/pm
 Site Location: 1501 Brewerton Road
 Weather Conds: 25°, overcast, breezy Collector(s): Joy D. Funke

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 12.58' c. Length of Water Column 10.13' (a-b) Casing Diameter/Material
 $\pm 0.3 = 12.88'$ b. Water Table Depth 2.75' d. Calculated System Volume (see back) 10.25 l 2" PVC

2. WELL PURGE DATA

a. Purge Method: Low-flow using a peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	$\pm 10\text{mV}$
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
Horiba	U-22	03130-Pine

Time (24hr)	Volume (Liters)	Volume							
		Removed Temp. (°C/F)	pH	Spec. Cond. (mS/cm)	DQ (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)
10:25	1.1	6.85	6.74	264	5.47	3	24.9	~400	
10:30	1.5	7.02	6.91	262	4.41	-15	33.8	~400	
10:35	2	8.35	7.01	260	3.63	-29	21.2	~300	
10:40	3	8.34	7.10	250	3.72	-34	18.7	~250	
10:45	4	8.36	7.11	250	3.59	-34	13.8	~250	
10:50	5	8.77	7.13	250	3.71	-32	10.9		

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low-flow and bailer.

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-2	glass	3 - 40 ml vials	HCl	VOCs	10:55
"	plastic	1	NaOH	Cn	"
"	plastic	1	HNO3	Cn, TAL metals	"
"	plastic	1	ice	Cr +6	"

Comments VOCs, TAL metals, Cyanide, Hex Chromium,

Signature Joy D. Funke

FORMS99

Date 12/21/04

12/20/2004

Low Flow GW Front



Well ID: MW-3

Low Flow Ground Water Sample Collection Record

Client: Hancock & Estabrook	Date: 12/21/2004	Time: Start 11:30 am/pm
Project No: 10160-004		Finish 12:15 am/pm
Site Location: 1501 Brewerton Road		
Weather Conds: ~10° F, sunny, overcast	Collector(s): Joy D. Funke	

1. WATER LEVEL DATA: (measured from Top of Casing)

- a. Total Well Length 186 c. Length of Water Column 10.31' (a-b) Casing Diameter/Material
b. Water Table Depth 1.55 d. Calculated System Volume (see back) 6.4 l 2" PVC

2. WELL PURGE DATA

- a. Purge Method: Low-flow using a peristaltic pump

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:	Make	Model	Serial Number
	Horiba	U-22	03130-Pine

Volume

Time (24hr)	Removed (Liters)	Temp. (°C/F)	pH (SU)	Spec. Cond. (mS/cm)	DQ (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
11:30	0.5	4.82	7.25	1.08	4.34	-85	14			clear
11:35	1	5.42	7.19	1.07	2.53	-95	13.5			clear
11:40	1.5	5.67	7.19	1.07	1.40	-98	10.3	225		clear
11:46	2	5.81	7.20	1.08	0.163	-90	10.4	225		clear
11:51	2.75	5.25	7.21	1.06	0.27	-100	8.0	225		clear
11:55	3.5	5.93	7.21	1.06	0.28	-115	5.8	225		clear
11:58	5.75	5.93	7.21	1.06	0.38	-118	5.3	225		clear

d. Acceptance criteria pass/fail

Yes No N/A

(continued on back)

Has required volume been removed

Has required turbidity been reached

Have parameters stabilized

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Low-flow and bailer.

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-3	3 plastic, 3-40 ml glass VOA's		See Chain	TAL metals, VOA's, CN, Cr ⁺⁶	1205
MW-DW	3 plastic, 3-40 ml glass VOA's		See Chain	TAL Metals, VOA's, CN, Cr ⁺⁶	1205

Comments _____

Signature _____

Date _____

Chain of Custody Record

**SEVERN
TRENT**

Severn Trent Laboratories, Inc.

Client/ Project Name/ Address		Project Manager <u>Karl Peimer</u>		Date 12/21/04	Chain of Custody Number 192502
		Telephone Number (Area Code)/Fax Number 315-432-0500 / 315-437-0509		Lab Number P. Filby	Page / of /
City <u>E. Syracuse</u>		State <u>NY</u>	Zip Code <u>13057</u>	Site Contact Carrier/Waybill Number <u>P. Filby</u>	Analysis (Attach list if more space is needed)
Special Instructions/ Conditions of Receipt					
<p>MW-1 Filled - 3 gal Soil In metal container D</p> <p>MW-2 - 8500 Lys - Chemical Chemical TCL Method</p> <p>MW-3 - 8500 Lys - Chemical Chemical TCL Method</p>					
Project Name and Location (State) <u>SDI Bauer Jon Rd. NY</u>		Contract/Purchase Order/Quote No.			
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	#	Matrix	Containers & Preservatives
MW-1	12/21/04	13:45	✓	Aqueous Soil Sed.	NH4 ZnAc HNO3 H2SO4 Uptres
MW-1 MSD	12/21/04	13:45	✓		HCl NaOH
MW-1 Filler - Blue Label	12/21/04	13:45	✓		
MW-2	12/21/04	10:55	✓		
MW-DUP	12/21/04		✓		
MW-3	12/21/04	12:05	✓		
Sample Disposal					
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison G <input type="checkbox"/> Unknown		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Turn Around Time Required <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input checked="" type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days Date _____ Time _____					
1. Reinquished By <u>J. P. Funkhouser</u> Date _____ Time _____					
2. Received By <u>J. P. Funkhouser</u> Date _____ Time _____					
3. Received By Date _____ Time _____					
Comments					

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample; PINK - Field Copy



Well/Piezometer Development Record

Well/Piez. ID:
MW-1

Client: Harry + Aldrich

Site Location: 1501 Brewerton Rd.

Project #: 10160-004

Date: December 14, '04 Developer: Joy D. Funke

WELL/PIEZOMETER DATA

Well Piezometer Diameter 2" Material PVC

Measuring Point Description T.O.C. Geology at Screen Interval
(if known)

Depth to Top of Screen (ft.)

Depth to Bottom of Screen (ft.) Time of Water Level Measurement 850 am

Total Well Depth (ft.) 13.85 Calculate Purge Volume (gal.) 1.8

Depth to Static Water Level (ft.) 2.86 Disposal Method drum

Wellhead PID/FID

Original Well Development Redevelopment Date of Original Development _____

DEVELOPMENT METHOD Bailer PURGE METHOD Bailer

Field Testing Equipment Used: Make Horiba U-22 Model Serial Number 03130-Pile

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	Other
915	5 gal	9.36	7.07	3,000 ^{mS/cm}	>999	8.17	Brown	none	
Q30	4.24 gal	11.00	7.20	2710	>999	5.65	Brown	none	
Q45	6 gal	10.05	7.18	2890	>999	6.58	Brn.	none	
955	9 gal	10.04	7.19	2840	>999	6.94	"	"	
1015	11 gal	11.37	7.25	25160	404?	5.55	"	"	
1027	14 gal	10.64	7.27	2690	>999	106.04	"	"	
1100	16.5 gal	10.10	7.22	2550	>999	8.22	"	"	
1113	19 gal	10.05	7.26	2590	>999	7.24	"	"	
12:13	22 gal	9.39	7.11	2350	>999	7.21	"	"	
12:20	25 gal	11.30	7.31	2660	>999	6.03	"	"	
12:28	27 gal	11.99	7.48	2540	>999	4.23			

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (___ well volumes) ___ gallons

Has required volume been removed

Yes No N/A

Maximum Turbidity Allowed ___ NTUs

Has required turbidity been reached

Stabilization of parameters ___ %

Have parameters stabilized

If no or N/A explain below:

Signature Joy D Funke

Date: 12/14/04

12/13/2004

Well-Piez. developing

Well/Piez. ID:
MW-2

Well/Piezometer Development Record

Client: Haley + Aldrich

Site Location: 1501 Brewerton Rd.

Project #: 10160-004

Date: December 15, '04 Developer: Joy D. Funke

WELL/PIEZOMETER DATA

Well Piezometer Diameter 2" Material PVCMeasuring Point Description T.O.C. Geology at Screen Interval
(if known)

Depth to Top of Screen (ft.) _____

Depth to Bottom of Screen (ft.) _____ Time of Water Level Measurement 9:30Total Well Depth (ft.) 12.62 Calculate Purge Volume (gal.) 1.6 galDepth to Static Water Level (ft.) 2.75 Disposal Method drum
9.87' Wellhead PID/FID _____Original Well Development Redevelopment Date of Original Development _____DEVELOPMENT METHOD Bailer PURGE METHOD BailerField Testing Equipment Used: Make Horiba U-22 Model _____ Serial Number 03130 - Pine

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	Other
9:50	2 gal	10.94	7.35	2890	7999	7.77	brownish red	none	
10:00	5 gal	11.41	7.29	3460	7999	9.15	"	"	
10:10	7 gal	12.63	7.34	3620	7999	8.19	"	"	well nearly dry
10:20	8.5 gal	11.53	7.39	5940	7999	10.37	"	"	well dry

DTW Time
10.86, 10:29,
10.79, 10:49

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) ____ gallons

Has required volume been removed

Yes No N/A

Maximum Turbidity Allowed ____ NTUs

Has required turbidity been reached

Stabilization of parameters ____ %

Have parameters stabilized

If no or N/A explain below:

Signature Joy D. FunkeDate: 12/15/04

12/13/2004

Well-Piez. developing



Well/Piezometer Development Record

Well/Piez ID:
MW-13
(Handwritten)

Client: Haley + Aldrich

Hancock + Estabrook

Site Location: 1501 Brewerton Rd.Project #: 10160-004Date: December 14, '04 Developer: Joy D. Funke

WELL/PIEZOMETER DATA

Well <input checked="" type="checkbox"/>	Piezometer <input type="checkbox"/>	Diameter <u>2"</u>	Material <u>PVC</u>
Measuring Point Description <u>T.O.C.</u>		Geology at Screen Interval (if known)	
Depth to Top of Screen (ft.)			
Depth to Bottom of Screen (ft.)		Time of Water Level Measurement <u>12:45</u>	
Total Well Depth (ft.) <u>11.97</u>		Calculate Purge Volume (gal.) <u>1.8 gal</u>	
Depth to Static Water Level (ft.) <u>1.03</u> <u>10.94' H₂O</u>		Disposal Method <u>drum</u>	
Original Well Development <input checked="" type="checkbox"/>	Redevelopment <input type="checkbox"/>	Date of Original Development _____	

DEVELOPMENT METHOD

Bailer

PURGE METHOD

Bailer

Field Testing Equipment Used:

Make Horiba U-22

Model _____

Serial Number 03130-Pine

Field Testing Calibration Documentation Found in Field Notebook # _____ Page # _____

Time	Volume Removed (gal)	T° (°F)	pH	Spec. Cond (umhos)	Turbidity (NTUs)	DO	Color	Odor	Other
12:55	2 gal	6.41	7.02	1,110	>999	3.68	brown-gray	present	slight shear
13:05	4 gal	6.66	7.20	1,170	>999	3.68	" gray	VOLATILES	
13:15	6.5	6.98	7.18	1,190	>999	4.04	"	odor	
13:22	9.5	7.01	7.15	1,220	>999	3.21	"	odor	
13:33	12.5	6.67	7.13	1,200	>999	3.61	"	odor	
13:40	15	6.90	7.16	1,210	>999	3.85	"	odor	
13:53	18	7.07	7.15	1,210	>999	3.79	"	odor	
14:05	21	6.94	7.14	1,200	>999	2.70	"	odor	
14:15	24	6.74	7.15	1,210	>96.9	2.82	"	"	
14:25	27	4.73	7.15	1,240	1,932,942	3.41	"	"	
14:40	30	6.04	7.12	1,220	>999	3.96	"	"	

ACCEPTANCE CRITERIA (from workplan)

Min. Purge Volume (____ well volumes) ____ gallons

Has required volume been removed

Yes No N/A

Maximum Turbidity Allowed ____ NTUs

Has required turbidity been reached

Stabilization of parameters ____ %

Have parameters stabilized

If no or N/A explain below:

Signature

Joy D. Funke

Date:

12/14/04

APPENDIX C

Data Validation Report

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428

February 11, 2005

Karl Reimer
ENSR International
6601 Kirkville Rd.
East Syracuse, NY 13057

RE: Data Usability Summary Report (DUSR) for the National Plating site
STL-Buffalo SDG Nos. A04-C377 and A04-C716

Dear Mr. Reimer:

Review has been completed for the data packages generated by Severn Trent Laboratories that pertain to samples collected 12/10/04 and 12/21/04 at the National Plating site. Four aqueous samples and three soil samples (including field duplicates) were processed for TCL volatiles and TAL metals/CN. All of the aqueous samples were also analyzed for hexavalent chromium, and one of the aqueous samples was also processed for filtered metals. Four additional soil samples were processed for TAL metals and cyanide. Methodologies utilized are those of the USEPA SW846.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the summary form information, with full review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary forms have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, with consideration of the requirements of the project QAPP. The following items were reviewed:

- * Laboratory Narrative Discussion
- * Case Narratives
- * Custody Documentation
- * Holding Times
- * Surrogate and Internal Standard Recoveries
- * Matrix Spike Recoveries/Duplicate Correlations
- * Preparation/Calibration Blanks
- * Control Spike/Laboratory Control Samples
- * Instrumental Tunes
- * Calibration/CRI/CRA Standards
- * ICP Interference Check Standards
- * ICP Serial Dilution Correlations
- * Method Compliance
- * Sample Result Verification

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for this level of review.

In summary, samples were primarily processed in compliance with protocol, and most results are usable as reported, or usable with qualification as estimated in value due to sample matrix or to typical processing outliers. Volatile results for one sample are revised. Results for fourteen elements and cyanide in the soil samples are qualified as estimated due to a matrix effect.

Copies of the laboratory case narratives are attached to this text, and should be reviewed in conjunction with this report. Included with this report are red-ink qualified client results tables.

The following text discusses quality issues of concern.

Data Completeness

The volatile result for SUMP has been resubmitted on request, with corrections to reported results reflecting the medium level analysis. Only these results for the sample are to be used.

Resubmission communications are attached.

Discrepancies in bottle labeling were resolved at sample receipt.

General

Blind field duplicate correlations for aqueous sample MW-3 were acceptable. Those for soil SS-3A were all acceptable, with the exception of that for total cyanide (variance $> 2X \pm CRDL$). That analyte also showed poor matrix spike recovery (discussed later in this text), and results for cyanide in the soil samples are qualified as estimated ("J").

TCL Volatiles by EPA 8260B

Results for sample analytes initially reported with the "E" flag, indicating a response above the established linear range of the instrument, are to be derived from the dilution ("-DL") analyses of the samples. All other target analyte results can be derived from the initial analyses.

Calibrations standard responses were within laboratory and validation guidelines, with the exception of the following, results for which are qualified estimated ("J" or "UJ") in the indicated associated samples:

- a) Bromomethane in the medium level soil samples (low RRF; 30%RSD)
- b) Acetone and 2-butanone in the aqueous samples (low RRF)
- c) Methylene chloride in the aqueous samples (23%D and 25%D)

Holding times requirements were met. Sample surrogate and internal standard responses were within required ranges.

Aqueous matrix spikes of MW-1 show acceptable accuracy and precision. There are no sample matrix spikes performed on the low or medium level soil samples. Therefore, the sample matrix effect is

not evaluated, although it is noted that the surrogate standard responses do not indicate a significant effect. Accuracy of spiked blanks in the soil analysis was acceptable.

Methylene chloride was detected in the low level soil method blank, and therefore the detections in the associated soil samples are considered external contamination, and are edited to nondetection ("U").

TAL Metals by EPA 6010B/7470/7471

Because the filtered fraction of MW-1 was not filtered and preserved until lab receipt a day after sample collection, the results for the filtered metals in that sample are qualified as estimated ("J" or "UJ"), and may have a low bias.

The aqueous matrix spikes of MW-1 and MW-1-Filt. show acceptable accuracy and precision, with the exception of those for iron in the unfiltered fraction (8.5% and 45%). Results for iron the aqueous samples are qualified as estimated ("J").

The soil matrix spikes of SS-5A show eight elements with outlying recoveries, some with inconsistency between the two spikes. Although there are no laboratory duplicates of the sample to show potential sample nonhomogeneity, outlying post-digest spikes and serial dilution evaluation (see below) indicate a sample matrix effect on the recoveries. Results for the following elements are qualified as estimated (J" or "UJ") in the soil samples. The result for silver is likely biased low; the bias of the others is not known: antimony, barium, cadmium, chromium, lead, magnesium, silver, and zinc

The ICP serial dilution evaluations of the total and soluble fractions of MW-1 show good correlations.

The ICP serial dilution evaluation of SS-5A shows outlying correlations for aluminum, barium, calcium, chromium, copper, iron, magnesium, manganese, and nickel (all range 21%D to 24%D, above the recommended limit of 10%D). Detected results for these elements in the soil samples are therefore qualified as estimated ("J").

Instrument processing is compliant, and blanks show no contamination above CRDL.

Wet Chemistry Parameters-Cyanide and Hexavalent Chromium

Review was conducted for method compliance, transcription, calculations, standard and blank acceptability, accuracy and precision, etc., as applicable to each procedure. All were found acceptable unless noted specifically within this text.

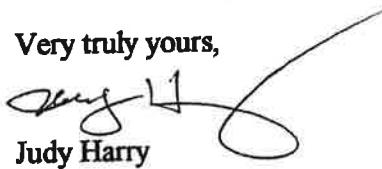
Cyanide aqueous matrix spikes of MW-1 show acceptable recoveries and duplicate correlations. The parent sample and soil matrix spikes of SS-5A show inconsistent results with repeated analyses (nondetection on one analysis, and detection sixteen times the RL on another; also with inconsistent matrix spike results), and outlying low calculated recoveries of 14% and 4%. These variances and

reanalyses should have been noted in the case narrative. All soil cyanide results are qualified as estimated ("J" or "UJ"), and should be used with caution due to matrix.

Hexavalent chromium matrix spike evaluations of MW-1 show acceptable accuracy and precision.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,


Judy Harry

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

- U** - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J** - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N** - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ** - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ** - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R** - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

- U** - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J** - The associated value is an estimated quantity.
- R** - The data are unusable. (Note: Analyte may or may not be present.)
- UJ** - The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

LABORATORY SAMPLE IDs AND CASE NARRATIVES

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
SS-1A	A4C37706	-	-	-	-	SW8463	-	SW8463
SS-2A	A4C37702	-	-	-	-	SW8463	-	SW8463
SS-3A	A4C37703	SW8463	-	-	-	SW8463	-	SW8463
SS-4A	A4C37705	-	-	-	-	SW8463	-	SW8463
SS-5A	A4C37704	-	-	-	-	SW8463	-	SW8463
SS-DUP	A4C37707	SW8463	-	-	-	SW8463	-	SW8463
SUMP	A4C37701	SW8463	-	-	-	SW8463	-	SW8463

NYSDEC-1

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
MW-1	A4C71601	SW8463	-	-	-	SW8463	-	SW8463
MW-2	A4C71602	SW8463	-	-	-	SW8463	-	SW8463
MW-3	A4C71604	SW8463	-	-	-	SW8463	-	SW8463
MW-DUP	A4C71603	SW8463	-	-	-	SW8463	-	SW8463

NYSDEC-1

NON-CONFORMANCE SUMMARY

Job#: A04-C377STL Project#: NY4A9368Site Name: ENSR International-National PlatingGeneral Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A04-C377

Sample Cooler(s) were received at the following temperature(s); 2.0 °C
All samples were received in good condition.

GC/MS Volatile Data

The analyte Methylene Chloride was detected in the Method Blank A4B2089902 (VBLK02) at a level below the project established reporting limit. No corrective action is necessary for any values in Method Blanks that are below the requested reporting limits.

Initial calibration standard curve A4I0001186-1 exhibited the %RSD of the compounds Methylene Chloride, Acetone and Toluene-D8 as greater than 15%. However, the mean RSD of all compounds is 10.83%.

Initial calibration standard curve A4I0001133-1 exhibited the %RSD of the compounds Bromomethane, Chloroethane, Acetone, Carbon Disulfide, 1,1-Dichloroethene and Bromoform as greater than 15%. However, the mean RSD of all compounds is 8.05%.

Sample SUMP was analyzed using medium level techniques due to high concentrations of target analytes.

Metals Data

The recovery of sample SS-5A Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Barium, Cadmium, Chromium, Lead, Magnesium, and Zinc and below the quality control limits for Antimony and Silver. The RPD of sample SS-5A Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Cadmium, Lead, Magnesium, and Zinc. Sample matrix is suspect. However, the LCS (A4B2093601) was acceptable.

The recovery of sample SS-5A Matrix Spike exhibited results above the quality control limits for Calcium, Copper, Iron, and Nickel and below the quality control limits for Aluminum and Manganese. The recovery of sample SS-5A Matrix Spike Duplicate exhibited results above the quality control limits for Calcium, Copper, Iron, Nickel and below the quality control limits for Aluminum and Manganese. The sample result is more than four times greater than the spike added. The RPD of sample SS-5A Matrix Spike and Matrix Spike Duplicate exceeded quality control limits for Copper and Nickel. Sample matrix is suspect. The LCS (A4B2093601) is acceptable.

The Serial Dilution of sample SS-5A exceeded quality control limits for Aluminum, Barium, Calcium, Chromium, Copper, Lead, Magnesium, Manganese, and Nickel. However, the LCS (A4B2093601) was acceptable.

Wet Chemistry Data

The recovery of sample SS-5A Matrix Spike exhibited results below the quality control limits for Cyanide. The recovery of sample SS-5A Matrix Spike Duplicate exhibited results below the quality control limits for Cyanide. However, the LCS was acceptable.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

NON-COMFORMANCE SUMMARY

Job#: A04-C716

STL Project#: NY4A9368

Site Name: ENSR International-National Plating

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A04-C716

Sample Cooler(s) were received at the following temperature(s); 2@3.0 °C

LAB: Please filter and preserve SMETALS for samples MW-1, MW-1 MS, and MW-1 MSD prior to analysis.

GC/MS Volatile Data

All samples were preserved to a pH less than 2.

Initial calibration standard curve A4I0001223-1 exhibited the %RSD of several compounds as greater than 15%. However, the mean RSD of all compounds is 11.52%.

Metals Data

All Dissolved Metal volumes were filtered and preserved in the metals digestion lab on 12/22/04. Each sample was filtered with a .45 micron filter, Environmental Express lot #34938-2. Each sample was preserved to a pH<2 with 2.0 mls of HNO₃, J.T.Baker lot #A40031.

The recovery of sample MW-1 Matrix Spike and Matrix Spike Duplicate exhibited results below the quality control limits for Iron. Sample matrix is suspect. However, the LFB (A4B2143901) was acceptable.

The recovery of sample MW-1 Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Potassium and below the quality control limits for Calcium(MS), Manganese, and Sodium(MS). The recovery of Soluble sample MW-1 Matrix Spike and Matrix Spike Duplicate exhibited results above the quality control limits for Potassium(MS) and Sodium(MS) and below the quality control limits for Calcium(MSD), Manganese(MSD), Potassium(MSD), and Sodium(MSD). The sample result is more than four times greater than the spike added. The LFB's (A4B2143901 and A4B2143601) are acceptable.

The recovery of sample MW-1 Post Spike exhibited results below the quality control limits for Calcium and Manganese. The recovery of Soluble sample MW-1 Post Spike exhibited results above the quality control limits for Sodium and below the quality control limits for Calcium and Manganese. However, the LFB's (A4B2143901 and A4B2143601) are acceptable.

Wet Chemistry Data

Samples designated for analysis of Hexavalent Chromium were received with little or no time remaining prior to holding time expiration. Samples were analyzed as soon as possible, unfortunately all samples were analyzed outside the 24 hour holding times but on the same day as receipt.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

RESUBMISSION COMMUNICATIONS

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

Facsimile Transmission

TO: Brian Fischer

COMPANY: STL-Buffalo

FAX NUMBER: 716 691 7991

FROM: Judy Harry

DATE: 02-10-05

No. of pages (including cover): 2

COMMENTS: RE: ENSR National Plating site
STL SDGs A04-C716 and A04-C377

1. Please review the volatile analysis for SUMP (-C377). The reported results do not seem to be adjusted for the medium level. It is not possible for me to derive the calculated results directly from the raw data (i.e. no extraction volume data; only the soil weight). Please correct the results, or provide an example calculation for a detected value.
2. Metals summary forms 2B and 4 are not provided in the data package A04-C377 (Forms 3 are available in the summary package). Please forward for review.

3. Was the volatile analysis of the soil duplicate SS-DUP run from the bottle for metals analysis? (There is no volatile fraction noted on the custody).
4. Do the serial dilution evaluations utilize the EQL values on your Forms 10, or IDL values?

Please provide an expedited response, so that project deadlines can be met. Please also forward copies of all communications to Karl Reimer at ENSR.

Thanks.

cc: Karl Reimer

Original to follow:

X No

Yes

SEVERN
TRENT

STL

Fax message

To: Juon Harry
Company: DATA VALIDATION SERVICES
Fax: (518) 251-4428
Subject: ENSR NAT'L PLATING

From: Brian Fischer
Date: 2-11-05
Pages: 23

JUON,

RESPONSE TO YOUR QUESTIONS REGARDING THE
ENSR NAT'L PLATING SITE - SDG A04-C71L
& A04-C377. ~~Are~~ ANY ADD'L QUESTIONS,
DON'T HESITATE TO CONTACT ME.

BRIAN

CC: K. Reiner

This message contains information intended only for the use of the person named above. It may also be confidential and/or privileged. If you are not the intended recipient of this message you are hereby notified that you must not disseminate, copy or take any action in reliance on it. If you have received this message in error please contact STL at 868-STL-LABS. The views expressed in this fax are not necessarily those of the company STL.

Severn Trent Laboratories Inc.
STL Buffalo 10 Hazelwood Drive • Amherst, New York 14228-2298
Tel 716 691-2600 Fax 716 691 7991 • www.stl-hq.com

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

Facsimile Transmission

TO: Brian Fischer

COMPANY: STL-Buffalo

FAX NUMBER: 716 691 7991

FROM: Judy Harry

DATE: 02-10-05

No. of pages (including cover): 2

COMMENTS: RE: ENSR National Plating site
STL SDGs A04-C716 and A04-C377

1. Please review the volatile analysis for SUMP (-C377). The reported results do not seem to be adjusted for the medium level. It is not possible for me to derive the calculated results directly from the raw data (i.e. no extraction volume data; only the soil weight). Please correct the results, or provide an example calculation for a detected value.
Insert ATTACHED Pages Into ORIGINAL Report.

2. Metals summary forms 2B and 4 are not provided in the data package A04-C377 (Forms 3 are available in the summary package). Please forward for review.

Insert ATTACHED Pages Into ORIGINAL Report.

Pg. 2/2

3. Was the volatile analysis of the soil duplicate SS-DUP run from the bottle for metals analysis? (There is no volatile fraction noted on the custody).
4. Do the serial dilution evaluations utilize the EQL values on your Forms 10, or IDL values? The "EQL" IS UTILIZED.

Please provide an expedited response, so that project deadlines can be met. Please also forward copies of all communications to Karl Reimer at ENSR.

Thanks.

- ③ ALTHOUGH NOT INDICATED ON THE CHAIN OF CUSTODY,
A SEPARATE BOTTLE INDICATING VOLATILE ANALYSIS
WAS RECEIVED FOR THIS LOCATION. SEE ATTACHED
"SAMPLE INVENTORY" LOG SHEET

cc: Karl Reimer

Original to follow: X No Yes

QUALIFIED REPORT FORMS

Client No.

Lab Name: STL Buffalo

Contract: _____

SS-3A

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37703Sample wt/vol: 5.06 (g/mL) GLab File ID: F5235.RRLevel: (low/med) LOWDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 19.3 Heated Purge: YDate Analyzed: 12/13/2004GC Column: DB-624 ID: 0.20 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KGQ

71-55-6-----	1,1,1-Trichloroethane	6	U
79-34-5-----	1,1,2,2-Tetrachloroethane	6	U
79-00-5-----	1,1,2-Trichloroethane	6	U
75-34-3-----	1,1-Dichloroethane	6	U
75-35-4-----	1,1-Dichloroethene	6	U
107-06-2-----	1,2-Dichloroethane	6	U
78-87-5-----	1,2-Dichloropropane	6	U
78-93-3-----	2-Butanone	31	U
591-78-6-----	2-Hexanone	31	U
108-10-1-----	4-Methyl-2-pentanone	31	U
67-64-1-----	Acetone	31	U
71-43-2-----	Benzene	6	U
75-27-4-----	Bromodichloromethane	6	U
75-25-2-----	Bromoform	6	U
74-83-9-----	Bromomethane	6	U
75-15-0-----	Carbon Disulfide	6	U
56-23-5-----	Carbon Tetrachloride	6	U
108-90-7-----	Chlorobenzene	6	U
75-00-3-----	Chloroethane	6	U
67-66-3-----	Chloroform	6	U
74-87-3-----	Chloromethane	6	U
156-59-2-----	cis-1,2-Dichloroethene	6	U
10061-01-5----	cis-1,3-Dichloropropene	6	U
124-48-1-----	Dibromochloromethane	6	U
100-41-4-----	Ethylbenzene	6	U
-----m/p-Xylenes		12	U
95-47-6-----	o-Xylene	6	U
75-09-2-----	Methylene chloride	6	U
100-42-5-----	Styrene	6	U
127-18-4-----	Tetrachloroethene	6	U
108-88-3-----	Toluene	6	U
156-60-5-----	trans-1,2-Dichloroethene	6	U
10061-02-6----	trans-1,3-Dichloropropene	6	U
79-01-6-----	Trichloroethene	31	

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

18/663

Client No.

Lab Name: STL Buffalo Contract: _____ SS-3A
Lab Code: RECONY Case No.: _____ SAS No.: _____ SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: A4C37703
Sample wt/vol: 5.06 (g/mL) G Lab File ID: F5235.RR
Level: (low/med) LOW Date Samp/Recv: 12/10/2004 12/10/2004
% Moisture: not dec. 19.3 Heated Purge: Y Date Analyzed: 12/13/2004
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.00
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u> Q		
75-01-4-----	Vinyl chloride	12	U	

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

19/663

Client No.

Lab Name: STL Buffalo

Contract: _____

SS-DUP

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37707Sample wt/vol: 5.09 (g/mL) GLab File ID: F5236.RRLevel: (low/med) LOWDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 19.8 Heated Purge: YDate Analyzed: 12/13/2004GC Column: DB-624 ID: 0.20 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/KG

Q

71-55-6-----	1,1,1-Trichloroethane	6	U
79-34-5-----	1,1,2,2-Tetrachloroethane	6	U
79-00-5-----	1,1,2-Trichloroethane	6	U
75-34-3-----	1,1-Dichloroethane	6	U
75-35-4-----	1,1-Dichloroethene	6	U
107-06-2-----	1,2-Dichloroethane	6	U
78-87-5-----	1,2-Dichloropropane	6	U
78-93-3-----	2-Butanone	31	U
591-78-6-----	2-Hexanone	31	U
108-10-1-----	4-Methyl-2-pentanone	31	U
67-64-1-----	Acetone	31	U
71-43-2-----	Benzene	6	U
75-27-4-----	Bromodichloromethane	6	U
75-25-2-----	Bromoform	6	U
74-83-9-----	Bromomethane	6	U
75-15-0-----	Carbon Disulfide	6	U
56-23-5-----	Carbon Tetrachloride	6	U
108-90-7-----	Chlorobenzene	6	U
75-00-3-----	Chloroethane	6	U
67-66-3-----	Chloroform	6	U
74-87-3-----	Chloromethane	6	U
156-59-2-----	cis-1,2-Dichloroethene	6	U
10061-01-5-----	cis-1,3-Dichloropropene	6	U
124-48-1-----	Dibromochloromethane	6	U
100-41-4-----	Ethylbenzene	6	U
-----m/p-Xylenes		12	U
95-47-6-----	o-Xylene	6	U
75-09-2-----	Methylene chloride	7	B
100-42-5-----	Styrene	6	U
127-18-4-----	Tetrachloroethene	6	U
108-88-3-----	Toluene	6	U
156-60-5-----	trans-1,2-Dichloroethene	6	U
10061-02-6-----	trans-1,3-Dichloropropene	6	U
79-01-6-----	Trichloroethene	50	U

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

20/663

Client No.

Lab Name: STL Buffalo Contract: _____ SS-DUP
Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____
Matrix: (soil/water) SOIL Lab Sample ID: A4C37707
Sample wt/vol: 5.09 (g/mL) G Lab File ID: F5236.RR
Level: (low/med) LOW Date Samp/Recv: 12/10/2004 12/10/2004
% Moisture: not dec. 19.8 Heated Purge: Y Date Analyzed: 12/13/2004
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.00
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
75-01-4-----	Vinyl chloride		12	U

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

21/663

Client No.

SUMP

Lab Name: SIL Buffalo

Contract: _____

Lab Code: RBCNY Case No.: _____ SAS No.: _____ SOG No.: _____Matrix: (soil/water) SOILLab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) GLab File ID: R2603.RRLevel: (low/med) MEDDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: NDate Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00Soil Extract Volume: 10000 (uL)Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/kg	Q
71-55-6-----	1,1,1-Trichloroethane	760		U
79-34-5-----	1,1,2,2-Tetrachloroethane	760		U
79-00-5-----	1,1,2-Trichloroethane	760		U
75-34-3-----	1,1-Dichloroethane	760		U
75-35-4-----	1,1-Dichloroethene	760		U
107-06-2-----	1,2-Dichloroethane	760		U
78-87-5-----	1,2-Dichloropropene	760		U
78-93-3-----	2-Butanone	3800		U
591-78-6-----	2-Hexanone	3800		U
108-10-1-----	4-Methyl-2-pentanone	3800		U
67-64-1-----	Acetone	3800		U
71-43-2-----	Benzene	760		U
75-27-4-----	Bromodichloromethane	760		U
75-25-2-----	Bromoform	760		U
74-83-9-----	Bromomethane	760		U
75-15-0-----	Carbon Disulfide	760		U
56-23-5-----	Carbon Tetrachloride	760		U
108-90-7-----	Chlorobenzene	760		U
75-00-3-----	Chloroethane	760		U
67-66-3-----	Chloroform	760		U
74-87-3-----	Chloromethane	760		U
156-59-2-----	cis-1,2-Dichloroethene	8300		
10061-01-5-----	cis-1,3-Dichloropropene	760		U
124-48-1-----	Dibromochloromethane	760		U
100-41-4-----	Ethylbenzene	760		U
-----	m/p-Xylenes	1500		U
95-47-6-----	o-Xylene	760		U
75-09-2-----	Methylene chloride	760		U
100-42-5-----	Styrene	760		U
127-18-4-----	Tetrachloroethene	760		U
108-88-3-----	Toluene	760		U
156-60-5-----	trans-1,2-Dichloroethene	1400		
10061-02-6-----	trans-1,3-Dichloropropene	760		U
79-01-6-----	Trichloroethene	29000		

ENER-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

22/663

Client No.

SUMP

Lab Name: SIL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) SOILLab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) GLab File ID: R2603.RRLevel: (low/med) MEDDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: NDate Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00Soil Extract Volume: 10000 (uL)Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
75-01-4-----	Vinyl chloride	1500	U	

STL BUFFALO

ENSR
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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-1A

Contract: CN04-009

Lab Code: STLBFLO Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467862

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9260	E J	P	
7440-36-0	Antimony	14.6	U N J	P	
7440-38-2	Arsenic	11.7			P
7440-39-3	Barium	62.0	NE J	P	
7440-41-7	Beryllium	0.47			P
7440-43-9	Cadmium	0.22	N* J	P	
7440-70-2	Calcium	18300	E J	P	
7440-47-3	Chromium	10.7	NE J	P	
7440-48-4	Cobalt	7.0			P
7440-50-8	Copper	17.4	E* J	P	
7439-89-6	Iron	16900	E J	P	
7439-92-1	Lead	17.0	N* J	P	
7439-95-4	Magnesium	2640	NE* J	P	
7439-96-5	Manganese	506	E J	P	
7440-02-0	Nickel	11.8	E* J	P	
7440-09-7	Potassium	612			P
7782-49-2	Selenium	3.9	U		P
7440-22-4	Silver	0.49	U N J	P	
7439-97-6	Mercury	0.065			CV
7440-23-5	Sodium	226			P
7440-62-2	Vanadium	15.6			P
7440-66-6	Zinc	50.6	N* J	P	
7440-28-0	Thallium	0.10			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments: _____

STL BUFFALO

24/663

ENSR

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-2A

Contract: CN04-009

Lab Code: STLBFLO Case No.: _____

SAS No.: _____

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467856

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 92

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2610	E J	P	
7440-36-0	Antimony	18.1	U N J	P	
7440-38-2	Arsenic	2.7			P
7440-39-3	Barium	79.1	NE J	P	
7440-41-7	Beryllium	0.38			P
7440-43-9	Cadmium	9.3	N* J	P	
7440-70-2	Calcium	157000	E J	P	
7440-47-3	Chromium	53.5	NE J	P	
7440-48-4	Cobalt	2.9			P
7440-50-8	Copper	373	E* J	P	
7439-89-6	Iron	7840	E J	P	
7439-92-1	Lead	56.1	N* J	P	
7439-95-4	Magnesium	19900	NE* J	P	
7439-96-5	Manganese	291	E J	P	
7440-02-0	Nickel	147	E* J	P	
7440-09-7	Potassium	401			P
7782-49-2	Selenium	4.8	U		P
7440-22-4	Silver	9.3	N J	P	
7439-97-6	Mercury	0.062			CV
7440-23-5	Sodium	169	U		P
7440-62-2	Vanadium	7.7			P
7440-66-6	Zinc	164	N* J	P	
7440-28-0	Thallium	0.12	U		M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL
Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****SS-3A**

Contract: CNO4-009

Lab Code: STLBFLO Case No.: SAS No.: SDG No.: A04-C377
 Matrix (soil/water): SOIL Lab Sample ID: AD467857
 Level (low/med): LOW Date Received: 12/10/2004
 Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8820	E	J	P
7440-36-0	Antimony	14.0	U	N	J
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	68.0	NE	J	P
7440-41-7	Beryllium	0.42			P
7440-43-9	Cadmium	0.54	N*	J	P
7440-70-2	Calcium	4050	E	J	P
7440-47-3	Chromium	13.7	NE	J	P
7440-48-4	Cobalt	7.0			P
7440-50-8	Copper	24.0	E*	J	P
7439-89-6	Iron	13700	E	J	P
7439-92-1	Lead	13.3	N*	J	P
7439-95-4	Magnesium	3010	NE*	J	P
7439-96-5	Manganese	315	E	J	P
7440-02-0	Nickel	32.8	E*	J	P
7440-09-7	Potassium	652			P
7782-49-2	Selenium	3.7	U		P
7440-22-4	Silver	0.47	U	N	J
7439-97-6	Mercury	0.045			CV
7440-23-5	Sodium	131	U		P
7440-62-2	Vanadium	16.6			P
7440-66-6	Zinc	39.2	N*	J	P
7440-28-0	Thallium	0.12			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL
 Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-4A

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467861

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 76

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9120	E	J	P
7440-36-0	Antimony	15.8	U	N	J
7440-38-2	Arsenic	2.3			P
7440-39-3	Barium	113	NE	J	P
7440-41-7	Beryllium	0.42			P
7440-43-9	Cadmium	93.8	N*	J	P
7440-70-2	Calcium	13700	E	J	P
7440-47-3	Chromium	55.7	NE	J	P
7440-48-4	Cobalt	7.3			P
7440-50-8	Copper	244	E*	J	P
7439-89-6	Iron	14400	E	J	P
7439-92-1	Lead	158	N*	J	P
7439-95-4	Magnesium	5450	NE*	J	P
7439-96-5	Manganese	231	E	J	P
7440-02-0	Nickel	300	E*	J	P
7440-09-7	Potassium	641			P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	7.0	N	J	P
7439-97-6	Mercury	0.065			CV
7440-23-5	Sodium	148	U		P
7440-62-2	Vanadium	15.8			P
7440-66-6	Zinc	185	N*	J	P
7440-28-0	Thallium	0.12			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

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INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-5A

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG No.: A04-C377
 Matrix (soil/water): SOIL Lab Sample ID: AD467858
 Level (low/med): LOW Date Received: 12/10/2004
 Solids: 72

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7800	E J	P	
7440-36-0	Antimony	18.7	U N	J P	
7440-38-2	Arsenic	4.8			P
7440-39-3	Barium	110	NE	J	P
7440-41-7	Beryllium	0.39			P
7440-43-9	Cadmium	5.8	N* J		P
7440-70-2	Calcium	6920	- E	J	P
7440-47-3	Chromium	71.6	NE	J	P
7440-48-4	Cobalt	4.8			P
7440-50-8	Copper	150	E* J		P
7439-89-6	Iron	11000	E J		P
7439-92-1	Lead	19.0	N* J		P
7439-95-4	Magnesium	2810	NE* J		P
7439-96-5	Manganese	621	E J		P
7440-02-0	Nickel	308	E* J		P
7440-09-7	Potassium	631			P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	10.5	N	J	P
7439-97-6	Mercury	0.189			CV
7440-23-5	Sodium	174	U		P
7440-62-2	Vanadium	13.9			P
7440-66-6	Zinc	50.7	N*	J	P
7440-28-0	Thallium	0.14			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****SS-DUP**Contract: CN04-009Lab Code: STLBELLO

Case No.: _____

SAS No.: _____

SDG NO.: A04-C377Matrix (soil/water): SOILLab Sample ID: AD467863Level (low/med): LOWDate Received: 12/10/2004% Solids: 80Concentration Units (ug/L or mg/kg dry weight): **MG/KG**

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300	E	J	P
7440-36-0	Antimony	20.5	U	N	J
7440-38-2	Arsenic	3.1			P
7440-39-3	Barium	80.0	NE	J	P
7440-41-7	Beryllium	0.53			P
7440-43-9	Cadmium	0.28	N*	J	P
7440-70-2	Calcium	2530	E	J	P
7440-47-3	Chromium	13.5	NE	J	P
7440-48-4	Cobalt	7.9			P
7440-50-8	Copper	15.2	E*	J	P
7439-89-6	Iron	16000	E	J	P
7439-92-1	Lead	15.7	N*	J	P
7439-95-4	Magnesium	3050	NE*	J	P
7439-96-5	Manganese	255	E	J	P
7440-02-0	Nickel	16.6	E*	J	P
7440-09-7	Potassium	802			P
7782-49-2	Selenium	5.5	U		P
7440-22-4	Silver	0.68	U	N	J
7439-97-6	Mercury	0.046			CV
7440-23-5	Sodium	191	U		P
7440-62-2	Vanadium	19.2			P
7440-66-6	Zinc	42.7	N*	J	P
7440-28-0	Thallium	0.16			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOILColor After: YELLOW Clarity After: CLEAR Artifacts: _____Comments: _____

STL BUFFALO

ENSR
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SUMP

Contract: CN04-009

Lab Code: STLBFLO Case No.: _____

SAS No.: _____

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467855

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 79

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7920	E	J	P
7440-36-0	Antimony	19.3	U	N	J
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	84.6	NE	J	P
7440-41-7	Beryllium	0.41			P
7440-43-9	Cadmium	1.6	N*	J	P
7440-70-2	Calcium	3690	E	J	P
7440-47-3	Chromium	12.5	NE	J	P
7440-48-4	Cobalt	4.1			P
7440-50-8	Copper	23.2	E*	J	P
7439-89-6	Iron	14300	E	J	P
7439-92-1	Lead	41.8	N*	J	P
7439-95-4	Magnesium	1920	NE*	J	P
7439-96-5	Manganese	639	E	J	P
7440-02-0	Nickel	34.1	E*	J	P
7440-09-7	Potassium	1060			P
7782-49-2	Selenium	5.2	U		P
7440-22-4	Silver	0.64	U	N	J
7439-97-6	Mercury	0.322			CV
7440-23-5	Sodium	657			P
7440-62-2	Vanadium	15.6			P
7440-66-6	Zinc	111	N*	J	P
7440-28-0	Thallium	0.24			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL
 Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments: _____

30/663

Wet Chemistry Analysis

Client Sample No.

SS-1A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37706% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.77				9045	12/13/2004
Cyanide - Total		2.6	J			9012	12/15/2004

Comments:

31/663

Wet Chemistry Analysis

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

SS-2A

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37702% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.97 1.0	U	T		9045 9012	12/13/2004 12/15/2004
Cyanide - Total							

Comments:

32/663

Wet Chemistry Analysis

Client Sample No.

SS-3A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37703% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.32 9.9	J			9045 9012	12/13/2004 12/15/2004
Cyanide - Total							

Comments:

33/663

Wet Chemistry Analysis

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

SS-4A

Lab Code: RECONY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37705% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.17 1.0 U			J	9045 9012	12/13/2004 12/15/2004
Cyanide - Total							

Comments:

Wet Chemistry Analysis

34/663

Client Sample No.

SS-5A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37704% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH) _____	S.U. UG/G	7.77 17.2				9045 9012	12/13/2004 12/20/2004
Cyanide - Total _____							

Comments:

35/663

Wet Chemistry Analysis

Client Sample No.

SS-DUP

Lab Name: SIL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37707% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.34				9045	12/13/2004
Cyanide - Total		1.0	U	J		9012	12/15/2004

Comments:

Wet Chemistry Analysis

36/663

Client Sample No.

SUMP

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37701% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	9.02				9045	12/13/2004
Cyanide - Total		1.0	U	T		9012	12/15/2004

Comments:

Client No. _____

Lab Name: STL Buffalo

Contract: _____

MW-1Lab Code: RECONY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATERLab Sample ID: A4C71601Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1692.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LQ

67-64-1-----	<u>Acetone</u>	5.0	<u>U</u>
71-43-2-----	<u>Benzene</u>	1.0	<u>U</u>
75-27-4-----	<u>Bromodichloromethane</u>	1.0	<u>U</u>
75-25-2-----	<u>Bromoform</u>	1.0	<u>U</u>
74-83-9-----	<u>Bromomethane</u>	1.0	<u>U</u>
75-15-0-----	<u>Carbon Disulfide</u>	1.0	<u>U</u>
56-23-5-----	<u>Carbon Tetrachloride</u>	1.0	<u>U</u>
108-90-7-----	<u>Chlorobenzene</u>	1.0	<u>U</u>
75-00-3-----	<u>Chloroethane</u>	1.0	<u>U</u>
67-66-3-----	<u>Chloroform</u>	1.0	<u>U</u>
74-87-3-----	<u>Chloromethane</u>	1.0	<u>U</u>
75-35-4-----	<u>1,1-Dichloroethene</u>	1.0	<u>U</u>
156-59-2-----	<u>cis-1,2-Dichloroethene</u>	1.0	<u>U</u>
156-60-5-----	<u>trans-1,2-Dichloroethene</u>	1.0	<u>U</u>
78-87-5-----	<u>1,2-Dichloropropane</u>	1.0	<u>U</u>
10061-01-5-----	<u>cis-1,3-Dichloropropene</u>	1.0	<u>U</u>
10061-02-6-----	<u>trans-1,3-Dichloropropene</u>	1.0	<u>U</u>
124-48-1-----	<u>Dibromochloromethane</u>	1.0	<u>U</u>
100-41-4-----	<u>Ethylbenzene</u>	1.0	<u>U</u>
-----m/p-Xylenes		2.0	<u>U</u>
95-47-6-----	<u>o-Xylene</u>	1.0	<u>U</u>
75-09-2-----	<u>Methylene chloride</u>	1.0	<u>U</u>
100-42-5-----	<u>Styrene</u>	1.0	<u>U</u>
127-18-4-----	<u>Tetrachloroethene</u>	1.0	<u>U</u>
108-88-3-----	<u>Toluene</u>	1.0	<u>U</u>
79-01-6-----	<u>Trichloroethene</u>	1.0	<u>U</u>
75-01-4-----	<u>Vinyl chloride</u>	1.0	<u>U</u>
71-55-6-----	<u>1,1,1-Trichloroethane</u>	1.0	<u>U</u>
79-34-5-----	<u>1,1,2,2-Tetrachloroethane</u>	1.0	<u>U</u>
79-00-5-----	<u>1,1,2-Trichloroethane</u>	1.0	<u>U</u>
75-34-3-----	<u>1,1-Dichloroethane</u>	1.0	<u>U</u>
107-06-2-----	<u>1,2-Dichloroethane</u>	1.0	<u>U</u>
78-93-3-----	<u>2-Butanone</u>	5.0	<u>U</u>
591-78-6-----	<u>2-Hexanone</u>	5.0	<u>U</u>

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-1Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A4C71601Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1692.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
108-10-1-----	4-Methyl-2-pentanone	5.0	U	

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo Contract: _____MW-2Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71602Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1695.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		
		(ug/L or ug/Kg)	UG/L	Q
67-64-1-----	Acetone	5.0	U	J
71-43-2-----	Benzene	1.0	U	
75-27-4-----	Bromodichloromethane	1.0	U	
75-25-2-----	Bromoform	1.0	U	
74-83-9-----	Bromomethane	1.0	U	
75-15-0-----	Carbon Disulfide	1.0	U	
56-23-5-----	Carbon Tetrachloride	1.0	U	
108-90-7-----	Chlorobenzene	1.0	U	
75-00-3-----	Chloroethane	1.0	U	
67-66-3-----	Chloroform	1.0	U	
74-87-3-----	Chloromethane	1.0	U	
75-35-4-----	1,1-Dichloroethene	0.58	J	
156-59-2-----	cis-1,2-Dichloroethene	200	E	
156-60-5-----	trans-1,2-Dichloroethene	160	E	
10061-01-5-----	1,2-Dichloropropane	10		
10061-02-6-----	cis-1,3-Dichloropropene	1.0	U	
10061-02-6-----	trans-1,3-Dichloropropene	1.0	U	
124-48-1-----	Dibromochloromethane	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
-----	m/p-Xylenes	2.0	U	
95-47-6-----	o-Xylene	1.0	U	
75-09-2-----	Methylene chloride	1.0	U	J
100-42-5-----	Styrene	1.0	U	
127-18-4-----	Tetrachloroethene	1.0	U	
108-88-3-----	Toluene	1.0	U	
79-01-6-----	Trichloroethene	170	E	
75-01-4-----	Vinyl chloride	30		
71-55-6-----	1,1,1-Trichloroethane	1.0	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U	
79-00-5-----	1,1,2-Trichloroethane	1.0	U	
75-34-3-----	1,1-Dichloroethane	1.0	U	
107-06-2-----	1,2-Dichloroethane	1.0	U	
78-93-3-----	2-Butanone	5.0	U	J
591-78-6-----	2-Hexanone	5.0	U	

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-2Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A4C71602Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1695.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/L

Q

<u>CAS NO.</u>	<u>COMPOUND</u>	<u>5.0</u>	<u>U</u>
108-10-1-----	4-Methyl-2-pentanone		

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

MW-3

Lab Name: SIL Buffalo Contract: _____Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71604Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1705.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

<u>67-64-1-----Acetone</u>	<u>5.0</u>	<u>U</u>	<u>J</u>
<u>71-43-2-----Benzene</u>	<u>1.0</u>	<u>U</u>	
<u>75-27-4-----Bromodichloromethane</u>	<u>1.0</u>	<u>U</u>	
<u>75-25-2-----Bromoform</u>	<u>1.0</u>	<u>U</u>	
<u>74-83-9-----Bromomethane</u>	<u>1.0</u>	<u>U</u>	
<u>75-15-0-----Carbon Disulfide</u>	<u>1.0</u>	<u>U</u>	
<u>56-23-5-----Carbon Tetrachloride</u>	<u>1.0</u>	<u>U</u>	
<u>108-90-7-----Chlorobenzene</u>	<u>4.2</u>		
<u>75-00-3-----Chloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>67-66-3-----Chloroform</u>	<u>1.0</u>	<u>U</u>	
<u>74-87-3-----Chloromethane</u>	<u>1.0</u>	<u>U</u>	
<u>75-35-4-----1,1-Dichloroethene</u>	<u>1.0</u>	<u>U</u>	
<u>156-59-2-----cis-1,2-Dichloroethene</u>	<u>1.0</u>	<u>U</u>	
<u>156-60-5-----trans-1,2-Dichloroethene</u>	<u>1.0</u>	<u>U</u>	
<u>78-87-5-----1,2-Dichloropropane</u>	<u>1.0</u>	<u>U</u>	
<u>10061-01-5-----cis-1,3-Dichloropropene</u>	<u>1.0</u>	<u>U</u>	
<u>10061-02-6-----trans-1,3-Dichloropropene</u>	<u>1.0</u>	<u>U</u>	
<u>124-48-1-----Dibromochloromethane</u>	<u>1.0</u>	<u>U</u>	
<u>100-41-4-----Ethylbenzene</u>	<u>1.0</u>	<u>U</u>	
<u>-----m/p-Xylenes</u>	<u>2.0</u>	<u>U</u>	
<u>95-47-6-----o-Xylene</u>	<u>1.0</u>	<u>U</u>	
<u>75-09-2-----Methylene chloride</u>	<u>1.0</u>	<u>U</u>	<u>J</u>
<u>100-42-5-----Styrene</u>	<u>1.0</u>	<u>U</u>	
<u>127-18-4-----Tetrachloroethene</u>	<u>1.0</u>	<u>U</u>	
<u>108-88-3-----Toluene</u>	<u>1.0</u>	<u>U</u>	
<u>79-01-6-----Trichloroethene</u>	<u>1.0</u>	<u>U</u>	
<u>75-01-4-----Vinyl chloride</u>	<u>1.0</u>	<u>U</u>	
<u>71-55-6-----1,1,1-Trichloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>79-34-5-----1,1,2,2-Tetrachloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>79-00-5-----1,1,2-Trichloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>75-34-3-----1,1-Dichloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>107-06-2-----1,2-Dichloroethane</u>	<u>1.0</u>	<u>U</u>	
<u>78-93-3-----2-Butanone</u>	<u>5.0</u>	<u>U</u>	<u>J</u>
<u>591-78-6-----2-Hexanone</u>	<u>5.0</u>	<u>U</u>	

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

MW-3

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4C71604

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1705.RR

Level: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 01/03/2005

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
108-10-1-----	4-Methyl-2-pentanone		5.0	U

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-DUP

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71603Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1704.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

<u>67-64-1-----Acetone</u>	<u>5.0</u>	<u>U</u>
<u>71-43-2-----Benzene</u>	<u>1.0</u>	<u>U</u>
<u>75-27-4-----Bromodichloromethane</u>	<u>1.0</u>	<u>U</u>
<u>75-25-2-----Bromoform</u>	<u>1.0</u>	<u>U</u>
<u>74-83-9-----Bromomethane</u>	<u>1.0</u>	<u>U</u>
<u>75-15-0-----Carbon Disulfide</u>	<u>1.0</u>	<u>U</u>
<u>56-23-5-----Carbon Tetrachloride</u>	<u>1.0</u>	<u>U</u>
<u>108-90-7-----Chlorobenzene</u>	<u>4.2</u>	
<u>75-00-3-----Chloroethane</u>	<u>1.0</u>	<u>U</u>
<u>67-66-3-----Chloroform</u>	<u>1.0</u>	<u>U</u>
<u>74-87-3-----Chloromethane</u>	<u>1.0</u>	<u>U</u>
<u>75-35-4-----1,1-Dichloroethene</u>	<u>1.0</u>	<u>U</u>
<u>156-59-2-----cis-1,2-Dichloroethene</u>	<u>1.0</u>	<u>U</u>
<u>156-60-5-----trans-1,2-Dichloroethene</u>	<u>1.0</u>	<u>U</u>
<u>78-87-5-----1,2-Dichloropropane</u>	<u>1.0</u>	<u>U</u>
<u>10061-01-5-----cis-1,3-Dichloropropene</u>	<u>1.0</u>	<u>U</u>
<u>10061-02-6-----trans-1,3-Dichloropropene</u>	<u>1.0</u>	<u>U</u>
<u>124-48-1-----Dibromochloromethane</u>	<u>1.0</u>	<u>U</u>
<u>100-41-4-----Ethylbenzene</u>	<u>1.0</u>	<u>U</u>
<u>-----m/p-Xylenes</u>	<u>2.0</u>	<u>U</u>
<u>95-47-6-----o-Xylene</u>	<u>1.0</u>	<u>U</u>
<u>75-09-2-----Methylene chloride</u>	<u>1.0</u>	<u>U</u>
<u>100-42-5-----Styrene</u>	<u>1.0</u>	<u>U</u>
<u>127-18-4-----Tetrachloroethene</u>	<u>1.0</u>	<u>U</u>
<u>108-88-3-----Toluene</u>	<u>1.0</u>	<u>U</u>
<u>79-01-6-----Trichloroethene</u>	<u>1.0</u>	<u>U</u>
<u>75-01-4-----Vinyl chloride</u>	<u>1.0</u>	<u>U</u>
<u>71-55-6-----1,1,1-Trichloroethane</u>	<u>1.0</u>	<u>U</u>
<u>79-34-5-----1,1,2,2-Tetrachloroethane</u>	<u>1.0</u>	<u>U</u>
<u>79-00-5-----1,1,2-Trichloroethane</u>	<u>1.0</u>	<u>U</u>
<u>75-34-3-----1,1-Dichloroethane</u>	<u>1.0</u>	<u>U</u>
<u>107-06-2-----1,2-Dichloroethane</u>	<u>1.0</u>	<u>U</u>
<u>78-93-3-----2-Butanone</u>	<u>5.0</u>	<u>U</u>
<u>591-78-6-----2-Hexanone</u>	<u>5.0</u>	<u>U</u>

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

MW-DUP

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71603Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1704.RRLevel: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	108-10-1-----4-Methyl-2-pentanone	5.0	U
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STL BUFFALO

ENSR
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-1

Contract: CN04-009
 Lab Code: STLBFLO Case No.: SAS No.: SDG No.: A04-C716
 Matrix (soil/water): WATER Lab Sample ID: AD469488
 Level (low/med): LOW Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1000			P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	201			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	162000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1050	N	J	P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	35900			P
7439-96-5	Manganese	6880			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	40500			P
7782-49-2	Selenium	15.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	433000			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****MW-1-SOL**Contract: CN04-009Lab Code: STLBFL0

Case No.: _____

SAS No.: _____

SDG NO.: A04-C716Matrix (soil/water): WATERLab Sample ID: AD469459Level (low/med): LOWDate Received: 12/22/2004Concentration Units (ug/L or mg/kg dry weight): **UG/L**

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U	J	P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	201			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	159000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	78.4			P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	33500			P
7439-96-5	Manganese	6130			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	42400			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	445000	E		P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U	V	M

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

STL BUFFALO

ENSR
-1-
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-2

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water):

WATER

Lab Sample ID: AD469491

Level (low/med):

LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	236			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	33.3			P
7440-70-2	Calcium	177000			P
7440-47-3	Chromium	38.4			P
7440-48-4	Cobalt	4.2			P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	96.6	N	J	P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	44200			P
7439-96-5	Manganese	3370			P
7440-02-0	Nickel	38.7			P
7440-09-7	Potassium	14600			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	326000			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****MW-3**Contract: CN04-009Lab Code: STLBFL0

Case No.:

SAS No.:

SDG NO.: A04-C716Matrix (soil/water): WATERLab Sample ID: AD469493Level (low/med): LOWDate Received: 12/22/2004Concentration Units (ug/L or mg/kg dry weight): **UG/L**

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	198			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	20400	N	J	P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	16900			P
7439-96-5	Manganese	712			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	5760			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	73700			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONEColor After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-DUP

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water): WATER

Lab Sample ID: AD469492

Level (low/med): LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	199			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	20200	N	J	P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	16800			P
7439-96-5	Manganese	708			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	5760			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	73600			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Wet Chemistry Analysis

32/770

Client Sample No.

MW-1

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: A4C71601% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/29/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

33/770

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

MW-2

Lab Code: RECONY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: AAC71602% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.028			A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

34/770

Client Sample No.

MW-3

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: A4C71604% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

35/770

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

MW-DUP

Lab Code: RBCNY Case No.: _____

SAS No.: _____ SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: A4C71603% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:

SEVERN
TRENT

STL

STL Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228

February 11, 2005

Tel: 716 691 2600 Fax: 716 691 7991
www.stl-inc.com

Mr. Karl Reimer
ENSR International
6601 Kirkville Rd.
East Syracuse, NY 13057

RE: REVISION for Job# A04-C377

Dear Mr. Reimer:

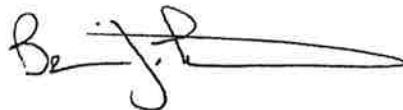
Please find enclosed, revised analytical report pages concerning samples recently submitted by your firm. Specifically, volatile results for sample SUMP have been revised and Forms 2B, 3, and 4, which were inadvertently omitted from the original report, are attached. The attached pages have been numbered for replacement (volatiles) and insertion of omitted forms (metals) in the original report. The pertinent information regarding these analyses is listed below:

Site: National Plating
STL Job/SDG #: A04-C377

If you have any questions concerning these data, please contact the Program Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide ENSR International with environmental testing services. We look forward to serving you in the future.

Sincerely,

STL Buffalo



Brian J. Fischer
Program Manager

BJF
Enclosure

I.D. A04-C377
#NY4A9368

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

SUMP

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) GLab File ID: R2603.RRLevel: (low/med) MEDDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: NDate Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00Soil Extract Volume: 10000 (uL)Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/KG

Q

<u>71-55-6-----</u>	<u>1,1,1-Trichloroethane</u>	<u>760</u>	<u>U</u>
<u>79-34-5-----</u>	<u>1,1,2,2-Tetrachloroethane</u>	<u>760</u>	<u>U</u>
<u>79-00-5-----</u>	<u>1,1,2-Trichloroethane</u>	<u>760</u>	<u>U</u>
<u>75-34-3-----</u>	<u>1,1-Dichloroethane</u>	<u>760</u>	<u>U</u>
<u>75-35-4-----</u>	<u>1,1-Dichloroethene</u>	<u>760</u>	<u>U</u>
<u>107-06-2-----</u>	<u>1,2-Dichloroethane</u>	<u>760</u>	<u>U</u>
<u>78-87-5-----</u>	<u>1,2-Dichloropropane</u>	<u>760</u>	<u>U</u>
<u>78-93-3-----</u>	<u>2-Butanone</u>	<u>3800</u>	<u>U</u>
<u>591-78-6-----</u>	<u>2-Hexanone</u>	<u>3800</u>	<u>U</u>
<u>108-10-1-----</u>	<u>4-Methyl-2-pentanone</u>	<u>3800</u>	<u>U</u>
<u>67-64-1-----</u>	<u>Acetone</u>	<u>3800</u>	<u>U</u>
<u>71-43-2-----</u>	<u>Benzene</u>	<u>760</u>	<u>U</u>
<u>75-27-4-----</u>	<u>Bromodichloromethane</u>	<u>760</u>	<u>U</u>
<u>75-25-2-----</u>	<u>Bromoform</u>	<u>760</u>	<u>U</u>
<u>74-83-9-----</u>	<u>Bromomethane</u>	<u>760</u>	<u>U</u>
<u>75-15-0-----</u>	<u>Carbon Disulfide</u>	<u>760</u>	<u>U</u>
<u>56-23-5-----</u>	<u>Carbon Tetrachloride</u>	<u>760</u>	<u>U</u>
<u>108-90-7-----</u>	<u>Chlorobenzene</u>	<u>760</u>	<u>U</u>
<u>75-00-3-----</u>	<u>Chloroethane</u>	<u>760</u>	<u>U</u>
<u>67-66-3-----</u>	<u>Chloroform</u>	<u>760</u>	<u>U</u>
<u>74-87-3-----</u>	<u>Chloromethane</u>	<u>760</u>	<u>U</u>
<u>156-59-2-----</u>	<u>cis-1,2-Dichloroethene</u>	<u>8300</u>	
<u>10061-01-5-----</u>	<u>cis-1,3-Dichloropropene</u>	<u>760</u>	<u>U</u>
<u>124-48-1-----</u>	<u>Dibromochloromethane</u>	<u>760</u>	<u>U</u>
<u>100-41-4-----</u>	<u>Ethylbenzene</u>	<u>760</u>	<u>U</u>
	<u>m/p-Xylenes</u>	<u>1500</u>	<u>U</u>
<u>95-47-6-----</u>	<u>o-Xylene</u>	<u>760</u>	<u>U</u>
<u>75-09-2-----</u>	<u>Methylene chloride</u>	<u>760</u>	<u>U</u>
<u>100-42-5-----</u>	<u>Styrene</u>	<u>760</u>	<u>U</u>
<u>127-18-4-----</u>	<u>Tetrachloroethene</u>	<u>760</u>	<u>U</u>
<u>108-88-3-----</u>	<u>Toluene</u>	<u>760</u>	<u>U</u>
<u>156-60-5-----</u>	<u>trans-1,2-Dichloroethene</u>	<u>1400</u>	
<u>10061-02-6-----</u>	<u>trans-1,3-Dichloropropene</u>	<u>760</u>	
<u>79-01-6-----</u>	<u>Trichloroethene</u>	<u>29000</u>	<u>U</u>

22/663

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

Client No.

SUMP

Lab Name: STL Buffalo Contract: _____Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) SOIL Lab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) G Lab File ID: R2603.RRLevel: (low/med) MED Date Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: N Date Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.00Soil Extract Volume: 10000 (μ L) Soil Aliquot Volume: 100.00 (μ L)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	1500	U
75-01-4-----	Vinyl chloride		

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

116/663

Client No.

SUMP

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) GLab File ID: R2603.RRLevel: (low/med) MEDDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: NDate Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00Soil Extract Volume: 10000 (uL)Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/kg

Q

<u>71-55-6-----1,1,1-Trichloroethane</u>	<u>760</u>	<u>U</u>
<u>79-34-5-----1,1,2,2-Tetrachloroethane</u>	<u>760</u>	<u>U</u>
<u>79-00-5-----1,1,2-Trichloroethane</u>	<u>760</u>	<u>U</u>
<u>75-34-3-----1,1-Dichloroethane</u>	<u>760</u>	<u>U</u>
<u>75-35-4-----1,1-Dichloroethene</u>	<u>760</u>	<u>U</u>
<u>107-06-2-----1,2-Dichloroethane</u>	<u>760</u>	<u>U</u>
<u>78-87-5-----1,2-Dichloropropane</u>	<u>760</u>	<u>U</u>
<u>78-93-3-----2-Butanone</u>	<u>3800</u>	<u>U</u>
<u>591-78-6-----2-Hexanone</u>	<u>3800</u>	<u>U</u>
<u>108-10-1-----4-Methyl-2-pentanone</u>	<u>3800</u>	<u>U</u>
<u>67-64-1-----Acetone</u>	<u>3800</u>	<u>U</u>
<u>71-43-2-----Benzene</u>	<u>760</u>	<u>U</u>
<u>75-27-4-----Bromodichloromethane</u>	<u>760</u>	<u>U</u>
<u>75-25-2-----Bromoform</u>	<u>760</u>	<u>U</u>
<u>74-83-9-----Bromomethane</u>	<u>760</u>	<u>U</u>
<u>75-15-0-----Carbon Disulfide</u>	<u>760</u>	<u>U</u>
<u>56-23-5-----Carbon Tetrachloride</u>	<u>760</u>	<u>U</u>
<u>108-90-7-----Chlordbenzene</u>	<u>760</u>	<u>U</u>
<u>75-00-3-----Chloroethane</u>	<u>760</u>	<u>U</u>
<u>67-66-3-----Chloroform</u>	<u>760</u>	<u>U</u>
<u>74-87-3-----Chloromethane</u>	<u>760</u>	<u>U</u>
<u>156-59-2-----cis-1,2-Dichloroethene</u>	<u>8300</u>	
<u>10061-01-5-----cis-1,3-Dichloropropene</u>	<u>760</u>	<u>U</u>
<u>124-48-1-----Dibromochloromethane</u>	<u>760</u>	<u>U</u>
<u>100-41-4-----Ethylbenzene</u>	<u>760</u>	<u>U</u>
<u>-----m/p-Xylenes</u>	<u>1500</u>	<u>U</u>
<u>95-47-6-----o-Xylene</u>	<u>760</u>	<u>U</u>
<u>75-09-2-----Methylene chloride</u>	<u>760</u>	<u>U</u>
<u>100-42-5-----Styrene</u>	<u>760</u>	<u>U</u>
<u>127-18-4-----Tetrachloroethene</u>	<u>760</u>	<u>U</u>
<u>108-88-3-----Toluene</u>	<u>760</u>	<u>U</u>
<u>156-60-5-----trans-1,2-Dichloroethene</u>	<u>1400</u>	
<u>10061-02-6-----trans-1,3-Dichloropropene</u>	<u>760</u>	<u>U</u>
<u>79-01-6-----Trichloroethene</u>	<u>29000</u>	

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

117/663

Client No.

SUMP

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A4C37701

Sample wt/vol: 4.17 (g/mL) G Lab File ID: R2603.RR

Level: (low/med) MED Date Samp/Recv: 12/10/2004 12/10/2004

% Moisture: not dec. 20.8 Heated Purge: N Date Analyzed: 12/15/2004

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.00

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

<u>75-01-4-----</u>	<u>Vinyl chloride</u>	<u>1500</u>	<u>U</u>
---------------------	-----------------------	-------------	----------

Extractor Blank

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) SOIL Lab Sample ID: A4C37708Sample wt/vol: 4.00 (g/mL) G Lab File ID: R2579.RRLevel: (low/med) MED Date Samp/Recv: _____% Moisture: not dec. 0.0 Heated Purge: N Date Analyzed: 12/14/2004GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.00Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100.00 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KGQ

CAS NO.	COMPOUND	UG/KG	Q
71-55-6-----	1,1,1-Trichloroethane	620	U
79-34-5-----	1,1,2,2-Tetrachloroethane	620	U
79-00-5-----	1,1,2-Trichloroethane	620	U
75-34-3-----	1,1-Dichloroethane	620	U
75-35-4-----	1,1-Dichloroethene	620	U
107-06-2-----	1,2-Dichloroethane	620	U
78-87-5-----	1,2-Dichloropropane	620	U
78-93-3-----	2-Butanone	3100	U
591-78-6-----	2-Hexanone	3100	U
108-10-1-----	4-Methyl-2-pentanone	3100	U
67-64-1-----	Acetone	3100	U
71-43-2-----	Benzene	620	U
75-27-4-----	Bromodichloromethane	620	U
75-25-2-----	Bromoform	620	U
74-83-9-----	Bromomethane	620	U
75-15-0-----	Carbon Disulfide	620	U
56-23-5-----	Carbon Tetrachloride	620	U
108-90-7-----	Chlorobenzene	620	U
75-00-3-----	Chloroethane	620	U
67-66-3-----	Chloroform	620	U
74-87-3-----	Chloromethane	620	U
156-59-2-----	cis-1,2-Dichloroethene	620	U
10061-01-5-----	cis-1,3-Dichloropropene	620	U
124-48-1-----	Dibromochloromethane	620	U
100-41-4-----	Ethylbenzene	620	U
	m/p-Xylenes	1200	U
95-47-6-----	o-Xylene	620	U
75-09-2-----	Methylene chloride	620	U
100-42-5-----	Styrene	620	U
127-18-4-----	Tetrachloroethene	620	U
108-88-3-----	Toluene	620	U
156-60-5-----	trans-1,2-Dichloroethene	620	U
10061-02-6-----	trans-1,3-Dichloropropene	620	U
79-01-6-----	Trichloroethene	620	U

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

212/663

Client No.

Lab Name: STL Buffalo

Contract: _____

Extractor Blank

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37708Sample wt/vol: 4.00 (g/mL) GLab File ID: R2579.RRLevel: (low/med) MED

Date Samp/Recv: _____

% Moisture: not dec. 0.0 Heated Purge: NDate Analyzed: 12/14/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00Soil Extract Volume: 10000 (uL)Soil Aliquot Volume: 100.00 (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

75-01-4-----Vinyl chloride

1200

U

STL BUFFALO

ENSR

-2B-

CRDL STANDARD FOR AA AND ICP

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: _____

SDG No.: A04-C377

AA CRDL Standard Source: _____

ICP CRDL Standard Source: VHG

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP			
	True	Found	%R	Initial	Found	%R	Final
Aluminum				200.0	175.75	87.9	
Antimony				20.0	16.35	81.8	
Arsenic				10.0	9.99	99.9	
Barium				2.0	1.81	90.5	
Beryllium				2.0	1.84	92.0	
Cadmium				1.0	0.90	90.0	
Calcium				500.0	493.44	98.7	
Chromium				4.0	3.39	84.8	
Cobalt				4.0	3.66	91.5	
Copper				10.0	10.41	104.1	
Iron				50.0	45.11	90.2	
Lead				5.0	5.73	114.6	
Magnesium				200.0	189.45	94.7	
Manganese				3.0	3.20	106.7	
Nickel				10.0	9.20	92.0	
Potassium				500.0	505.27	101.1	
Selenium				15.0	14.22	94.8	
Silver				3.0	3.29	109.7	
Sodium				1000.0	978.65	97.9	
Vanadium				5.0	4.36	87.2	
Zinc				20.0	18.89	94.4	

Comments:

STL BUFFALO

ENSR
-2B-
CRDL STANDARD FOR AA AND ICP

Contract: CN04-009Lab Code: STLBFL0 Case No.: SAS No.: SDG No.: A04-C377AA CRDL Standard Source: ICP CRDL Standard Source: VHG

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP			
	True	Found	%R	Initial	Found	%R	Final
Calcium				500.0	511.95	102.4	519.48 103.9
Zinc				20.0	19.78	98.9	20.56 102.8

Comments:

STL BUFFALO**ENSR****-2B-****CRDL STANDARD FOR AA AND ICP**Contract: CN04-009Lab Code: STLBFL0

Case No.:

SAS No.:

SDG No.: A04-C377

AA CRDL Standard Source:

ICP CRDL Standard Source: VHG

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP			
	True	Found	%R	Initial	Found	%R	Final
Thallium				0.2	0.22	110.0	

Comments:

STL BUFFALO**ENSR****-2B-****CRDL STANDARD FOR AA AND ICP**Contract: CN04-009Lab Code: STLBEL0

Case No.:

SAS No.:

SDG No.: A04-C377

AA CRDL Standard Source:

ICP CRDL Standard Source: VHG

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP			
	True	Found	%R	Initial	Found	%R	Final
Mercury	0.2	0.16	80.0				

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
		1	C	2	C	3	C			
Aluminum	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	10.000 U	P		
Antimony	150.0 U	150.0 U	150.0 U	150.0 U	150.0 U	150.0 U	15.000 U	P		
Arsenic	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	2.000 U	P		
Barium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Beryllium	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.200 U	P		
Cadmium	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.200 U	P		
Calcium	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	10.000 U	P		
Chromium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Cobalt	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Copper	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.000 U	P		
Iron	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	100.0 U	10.000 U	P		
Lead	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	1.000 U	P		
Magnesium	200.0 U	200.0 U	200.0 U	200.0 U	200.0 U	200.0 U	20.000 U	P		
Manganese	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	0.200 U	P		
Nickel	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Potassium	300.0 U	300.0 U	300.0 U	300.0 U	300.0 U	300.0 U	30.000 U	P		
Selenium	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U	40.0 U	4.000 U	P		
Silver	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Sodium	1400.0 U	1400.0 U	1400.0 U	1400.0 U	1400.0 U	1400.0 U	140.000 U	P		
Vanadium	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	0.500 U	P		
Zinc	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	20.0 U	2.000 U	P		

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
		1	C	2	C	3	C			
Aluminum		100.0	U							P
Antimony		150.0	U							P
Arsenic		20.0	U							P
Barium		5.0	U							P
Beryllium		2.0	U							P
Cadmium		2.0	U							P
Calcium		100.0	U							P
Chromium		5.0	U							P
Cobalt		5.0	U							P
Copper		10.0	U							P
Iron		100.0	U							P
Lead		10.0	U							P
Magnesium		200.0	U							P
Manganese		2.0	U							P
Nickel		5.0	U							P
Potassium		300.0	U							P
Selenium		40.0	U							P
Silver		5.0	U							P
Sodium		1400.0	U							P
Vanadium		5.0	U							P
Zinc		20.0	U							P

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
		C	1	C	2	C	3			
Calcium	100.0	U	100.0	U	100.0	U	100.0	U		P
Zinc	20.0	U	20.0	U	20.0	U	20.0	U		P

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	
		C	1	C	2	C	3	C	M
Calcium			100.0	U	100.0	U			P
Zinc			20.0	U	20.0	U			P

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank		C	M
		C	1	C	2	C	3	C			
Thallium	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.010 U		M	

Comments:

STL BUFFALO

ENSR

-3-

BLANKS

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	Continuing Calibration Blank (ug/L)						Preparation Blank	C	M
		1	C	2	C	3	C			
Mercury	0.2 U	0.2 U	0.2 U	0.2 U				0.017 U	CV	

Comments:

STL BUFFALO

ENSR

-4-

ICP INTERFERENCE CHECK SAMPLE

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

ICP ID Number: SUPERTRACE

ICS Source: VHG

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Aluminum	500000	500000	508046	508830.2	101.8			
Antimony		600	6	601.0	100.2			
Arsenic		100	-1	102.2	102.2			
Barium		500	2	507.1	101.4			
Beryllium		500	2	484.6	96.9			
Cadmium		1000	3	904.6	90.5			
Calcium	500000	500000	443395	443407.1	88.7			
Chromium		500	-2	472.5	94.5			
Cobalt		500	1	455.9	91.2			
Copper		500	2	529.8	106.0			
Iron	200000	100000	185126	92919.5	92.9			
Lead		50	1	48.8	97.6			
Magnesium	500000	500000	513360	516015.3	103.2			
Manganese		500	0	489.2	97.8			
Nickel		1000	2	911.1	91.1			
Potassium			-18	-48.8				
Selenium		50	2	49.3	98.6			
Silver		200	1	209.0	104.5			
Sodium			96	142.6				
Vanadium		500	0	485.1	97.0			
Zinc		1000	0	886.0	88.6			

STL BUFFALO**ENSR****-4****ICP INTERFERENCE CHECK SAMPLE**

Contract: CN04-009
 Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377
 ICP ID Number: SUPERTRACE ICS Source: VHG

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Calcium	500000	500000	473618	472802.3	94.6	475815	472751.9	94.6
Zinc		1000	3	939.6	94.0	4	958.0	95.8

STL BUFFALO

ENSR

-4

ICP INTERFERENCE CHECK SAMPLE

Contract: CN04-009
Lab Code: STLBFL0 Case No.: SAS No.: SDG NO.: A04-C377
ICP ID Number: ELAN-ICPMS ICS Source: VHG

Concentration Units): ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Thallium			0	0.0				

SAMPLE DATA PACKAGE

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

17/663

Client No.

SS-3A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) SOIL Lab Sample ID: A4C37703Sample wt/vol: 5.06 (g/mL) G Lab File ID: F5235.RRLevel: (low/med) LOW Date Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 19.3 Heated Purge: Y Date Analyzed: 12/13/2004GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
71-55-6-----	1,1,1-Trichloroethane	6	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	6	U	
79-00-5-----	1,1,2-Trichloroethane	6	U	
75-34-3-----	1,1-Dichloroethane	6	U	
75-35-4-----	1,1-Dichloroethene	6	U	
107-06-2-----	1,2-Dichloroethane	6	U	
78-87-5-----	1,2-Dichloropropane	6	U	
78-93-3-----	2-Butanone	31	U	
591-78-6-----	2-Hexanone	31	U	
108-10-1-----	4-Methyl-2-pentanone	31	U	
67-64-1-----	Acetone	31	U	
71-43-2-----	Benzene	6	U	
75-27-4-----	Bromodichloromethane	6	U	
75-25-2-----	Bromoform	6	U	
74-83-9-----	Bromomethane	6	U	
75-15-0-----	Carbon Disulfide	6	U	
56-23-5-----	Carbon Tetrachloride	6	U	
108-90-7-----	Chlorobenzene	6	U	
75-00-3-----	Chloroethane	6	U	
67-66-3-----	Chloroform	6	U	
74-87-3-----	Chloromethane	6	U	
156-59-2-----	cis-1,2-Dichloroethene	6	U	
10061-01-5-----	cis-1,3-Dichloropropene	6	U	
124-48-1-----	Dibromochloromethane	6	U	
100-41-4-----	Ethylbenzene	6	U	
-----m/p-Xylenes		12	U	
95-47-6-----	o-Xylene	6	U	
75-09-2-----	Methylene chloride	5	BJ	
100-42-5-----	Styrene	6	U	
127-18-4-----	Tetrachloroethene	6	U	
108-88-3-----	Toluene	6	U	
156-60-5-----	trans-1,2-Dichloroethene	6	U	
10061-02-6-----	trans-1,3-Dichloropropene	6	U	
79-01-6-----	Trichloroethene	31		

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

18/663

Client No.

Lab Name: STL Buffalo

Contract: _____

SS-3A

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37703Sample wt/vol: 5.06 (g/mL) GLab File ID: F5235.RRLevel: (low/med) LOWDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 19.3 Heated Purge: YDate Analyzed: 12/13/2004GC Column: DB-624 ID: 0.20 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO. COMPOUND

75-01-4-----Vinyl chloride

12

U

Client No.

Lab Name: STL Buffalo

Contract: _____

SS-DUP

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) SOIL Lab Sample ID: A4C37707Sample wt/vol: 5.09 (g/mL) G Lab File ID: F5236.RRLevel: (low/med) LOW Date Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 19.8 Heated Purge: Y Date Analyzed: 12/13/2004GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg)

UG/KG

Q

71-55-6-----	1,1,1-Trichloroethane	6	U
79-34-5-----	1,1,2,2-Tetrachloroethane	6	U
79-00-5-----	1,1,2-Trichloroethane	6	U
75-34-3-----	1,1-Dichloroethane	6	U
75-35-4-----	1,1-Dichloroethene	6	U
107-06-2-----	1,2-Dichloroethane	6	U
78-87-5-----	1,2-Dichloropropane	6	U
78-93-3-----	2-Butanone	31	U
591-78-6-----	2-Hexanone	31	U
108-10-1-----	4-Methyl-2-pentanone	31	U
67-64-1-----	Acetone	31	U
71-43-2-----	Benzene	6	U
75-27-4-----	Bromodichloromethane	6	U
75-25-2-----	Bromoform	6	U
74-83-9-----	Bromomethane	6	U
75-15-0-----	Carbon Disulfide	6	U
56-23-5-----	Carbon Tetrachloride	6	U
108-90-7-----	Chlorobenzene	6	U
75-00-3-----	Chloroethane	6	U
67-66-3-----	Chloroform	6	U
74-87-3-----	Chloromethane	6	U
156-59-2-----	cis-1,2-Dichloroethene	6	U
10061-01-5-----	cis-1,3-Dichloropropene	6	U
124-48-1-----	Dibromochloromethane	6	U
100-41-4-----	Ethylbenzene	6	U
-----m/p-Xylenes		12	U
95-47-6-----	o-Xylene	6	U
75-09-2-----	Methylene chloride	7	B
100-42-5-----	Styrene	6	U
127-18-4-----	Tetrachloroethene	6	U
108-88-3-----	Toluene	6	U
156-60-5-----	trans-1,2-Dichloroethene	6	U
10061-02-6-----	trans-1,3-Dichloropropene	6	U
79-01-6-----	Trichloroethene	50	

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

20/663

Client No.

SS-DUP

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL

Lab Sample ID: A4C37707

Sample wt/vol: 5.09 (g/mL) G

Lab File ID: F5236.RR

Level: (low/med) LOW

Date Samp/Recv: 12/10/2004 12/10/2004

% Moisture: not dec. 19.8 Heated Purge: Y

Date Analyzed: 12/13/2004

GC Column: DB-624 ID: 0.20 (mm)

Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

<u>CAS NO.</u>	<u>COMPOUND</u>	<u>12</u>	<u>U</u>
<u>75-01-4-----</u>	<u>Vinyl chloride</u>		

Client No.

Lab Name: STL Buffalo

Contract: _____

SUMP

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL

Lab Sample ID: A4C37701

Sample wt/vol: 4.17 (g/mL) G

Lab File ID: R2603.RR

Level: (low/med) LOW

Date Samp/Recv: 12/10/2004 12/10/2004

% Moisture: not dec. 20.8 Heated Purge: N

Date Analyzed: 12/15/2004

GC Column: DB-624 ID: 0.25 (mm)

Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

71-55-6-----	1,1,1-Trichloroethane	8	U
79-34-5-----	1,1,2,2-Tetrachloroethane	8	U
79-00-5-----	1,1,2-Trichloroethane	8	U
75-34-3-----	1,1-Dichloroethane	8	U
75-35-4-----	1,1-Dichloroethene	8	U
107-06-2-----	1,2-Dichloroethane	8	U
78-87-5-----	1,2-Dichloropropane	8	U
78-93-3-----	2-Butanone	38	U
591-78-6-----	2-Hexanone	38	U
108-10-1-----	4-Methyl-2-pentanone	38	U
67-64-1-----	Acetone	38	U
71-43-2-----	Benzene	8	U
75-27-4-----	Bromodichloromethane	8	U
75-25-2-----	Bromoform	8	U
74-83-9-----	Bromomethane	8	U
75-15-0-----	Carbon Disulfide	8	U
56-23-5-----	Carbon Tetrachloride	8	U
108-90-7-----	Chlorobenzene	8	U
75-00-3-----	Chloroethane	8	U
67-66-3-----	Chloroform	8	U
74-87-3-----	Chloromethane	8	U
156-59-2-----	cis-1,2-Dichloroethene	83	
10061-01-5-----	cis-1,3-Dichloropropene	8	U
124-48-1-----	Dibromochloromethane	8	U
100-41-4-----	Ethylbenzene	8	U
-----m/p-Xylenes		15	U
95-47-6-----	o-Xylene	8	U
75-09-2-----	Methylene chloride	8	U
100-42-5-----	Styrene	8	U
127-18-4-----	Tetrachloroethene	8	U
108-88-3-----	Toluene	8	U
156-60-5-----	trans-1,2-Dichloroethene	14	
10061-02-6-----	trans-1,3-Dichloropropene	8	
79-01-6-----	Trichloroethene	290	

ENSR-METHOD 8260 - TCL VOLATILE ORGANICS
ANALYSIS DATA SHEET

22/663

Client No.

Lab Name: STL Buffalo

Contract: _____

SUMP

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) SOILLab Sample ID: A4C37701Sample wt/vol: 4.17 (g/mL) GLab File ID: R2603.RRLevel: (low/med) LOWDate Samp/Recv: 12/10/2004 12/10/2004% Moisture: not dec. 20.8 Heated Purge: NDate Analyzed: 12/15/2004GC Column: DB-624 ID: 0.25 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO. COMPOUND

75-01-4-----Vinyl chloride

15

U

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-1A

Contract: CN04-009

Lab Code: STLBFLO Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467862

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 84

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9260	E	P	
7440-36-0	Antimony	14.6	U	N	P
7440-38-2	Arsenic	11.7			P
7440-39-3	Barium	62.0		NE	P
7440-41-7	Beryllium	0.47			P
7440-43-9	Cadmium	0.22		N*	P
7440-70-2	Calcium	18300	E		P
7440-47-3	Chromium	10.7		NE	P
7440-48-4	Cobalt	7.0			P
7440-50-8	Copper	17.4		E*	P
7439-89-6	Iron	16900	E		P
7439-92-1	Lead	17.0		N*	P
7439-95-4	Magnesium	2640		NE*	P
7439-96-5	Manganese	506	E		P
7440-02-0	Nickel	11.8		E*	P
7440-09-7	Potassium	612			P
7782-49-2	Selenium	3.9	U		P
7440-22-4	Silver	0.49	U	N	P
7439-97-6	Mercury	0.065			CV
7440-23-5	Sodium	226			P
7440-62-2	Vanadium	15.6			P
7440-66-6	Zinc	50.6		N*	P
7440-28-0	Thallium	0.10			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****SS-2A**

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377

Matrix (soil/water): SOIL Lab Sample ID: AD467856

Level (low/med): LOW Date Received: 12/10/2004

% Solids: 92

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2610	E	P	
7440-36-0	Antimony	18.1	U	N	P
7440-38-2	Arsenic	2.7			P
7440-39-3	Barium	79.1		NE	P
7440-41-7	Beryllium	0.38			P
7440-43-9	Cadmium	9.3		N*	P
7440-70-2	Calcium	157000	E		P
7440-47-3	Chromium	53.5		NE	P
7440-48-4	Cobalt	2.9			P
7440-50-8	Copper	373		E*	P
7439-89-6	Iron	7840	E		P
7439-92-1	Lead	56.1		N*	P
7439-95-4	Magnesium	19900		NE*	P
7439-96-5	Manganese	291	E		P
7440-02-0	Nickel	147		E*	P
7440-09-7	Potassium	401			P
7782-49-2	Selenium	4.8	U		P
7440-22-4	Silver	9.3		N	P
7439-97-6	Mercury	0.062			CV
7440-23-5	Sodium	169	U		P
7440-62-2	Vanadium	7.7			P
7440-66-6	Zinc	164		N*	P
7440-28-0	Thallium	0.12	U		M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-3A

Contract: CN04-009

Lab Code: STLBFLO Case No.: SAS No.: SDG NO.: A04-C377

Matrix (soil/water): SOIL Lab Sample ID: AD467857

Level (low/med): LOW Date Received: 12/10/2004

% Solids: 81

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8820	E	P	
7440-36-0	Antimony	14.0	U	N	P
7440-38-2	Arsenic	2.1			P
7440-39-3	Barium	68.0		NE	P
7440-41-7	Beryllium	0.42			P
7440-43-9	Cadmium	0.54		N*	P
7440-70-2	Calcium	4050	E		P
7440-47-3	Chromium	13.7		NE	P
7440-48-4	Cobalt	7.0			P
7440-50-8	Copper	24.0		E*	P
7439-89-6	Iron	13700	E		P
7439-92-1	Lead	13.3		N*	P
7439-95-4	Magnesium	3010		NE*	P
7439-96-5	Manganese	315	E		P
7440-02-0	Nickel	32.8		E*	P
7440-09-7	Potassium	652			P
7782-49-2	Selenium	3.7	U		P
7440-22-4	Silver	0.47	U	N	P
7439-97-6	Mercury	0.045			CV
7440-23-5	Sodium	131	U		P
7440-62-2	Vanadium	16.6			P
7440-66-6	Zinc	39.2		N*	P
7440-28-0	Thallium	0.12			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SS-4A

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467861

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 76

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9120	E	P	
7440-36-0	Antimony	15.8	U	N	P
7440-38-2	Arsenic	2.3			P
7440-39-3	Barium	113		NE	P
7440-41-7	Beryllium	0.42			P
7440-43-9	Cadmium	93.8		N*	P
7440-70-2	Calcium	13700	E	P	
7440-47-3	Chromium	55.7		NE	P
7440-48-4	Cobalt	7.3			P
7440-50-8	Copper	244		E*	P
7439-89-6	Iron	14400	E	P	
7439-92-1	Lead	158		N*	P
7439-95-4	Magnesium	5450		NE*	P
7439-96-5	Manganese	231	E	P	
7440-02-0	Nickel	300		E*	P
7440-09-7	Potassium	641			P
7782-49-2	Selenium	4.2	U		P
7440-22-4	Silver	7.0		N	P
7439-97-6	Mercury	0.065			CV
7440-23-5	Sodium	148	U		P
7440-62-2	Vanadium	15.8			P
7440-66-6	Zinc	185		N*	P
7440-28-0	Thallium	0.12			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****SS-5A**

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467858

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 72

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7800	E	P	
7440-36-0	Antimony	18.7	U	N	P
7440-38-2	Arsenic	4.8			P
7440-39-3	Barium	110		NE	P
7440-41-7	Beryllium	0.39			P
7440-43-9	Cadmium	5.8		N*	P
7440-70-2	Calcium	6920	-	E	P
7440-47-3	Chromium	71.6		NE	P
7440-48-4	Cobalt	4.8			P
7440-50-8	Copper	150		E*	P
7439-89-6	Iron	11000	E		P
7439-92-1	Lead	19.0		N*	P
7439-95-4	Magnesium	2810		NE*	P
7439-96-5	Manganese	621	E		P
7440-02-0	Nickel	308		E*	P
7440-09-7	Potassium	631			P
7782-49-2	Selenium	5.0	U		P
7440-22-4	Silver	10.5		N	P
7439-97-6	Mercury	0.189			CV
7440-23-5	Sodium	174	U		P
7440-62-2	Vanadium	13.9			P
7440-66-6	Zinc	50.7		N*	P
7440-28-0	Thallium	0.14			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****SS-DUP**Contract: CN04-009Lab Code: STLBFL0

Case No.:

SAS No.:

SDG NO.: A04-C377Matrix (soil/water): SOILLab Sample ID: AD467863Level (low/med): LOWDate Received: 12/10/2004% Solids: 80Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10300	E	P	
7440-36-0	Antimony	20.5	U	N	P
7440-38-2	Arsenic	3.1			P
7440-39-3	Barium	80.0		NE	P
7440-41-7	Beryllium	0.53			P
7440-43-9	Cadmium	0.28		N*	P
7440-70-2	Calcium	2530	E		P
7440-47-3	Chromium	13.5		NE	P
7440-48-4	Cobalt	7.9			P
7440-50-8	Copper	15.2		E*	P
7439-89-6	Iron	16000	E		P
7439-92-1	Lead	15.7		N*	P
7439-95-4	Magnesium	3050		NE*	P
7439-96-5	Manganese	255	E		P
7440-02-0	Nickel	16.6		E*	P
7440-09-7	Potassium	802			P
7782-49-2	Selenium	5.5	U		P
7440-22-4	Silver	0.68	U	N	P
7439-97-6	Mercury	0.046			CV
7440-23-5	Sodium	191	U		P
7440-62-2	Vanadium	19.2			P
7440-66-6	Zinc	42.7		N*	P
7440-28-0	Thallium	0.16			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOILColor After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments: _____

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

SUMP

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C377

Matrix (soil/water): SOIL

Lab Sample ID: AD467855

Level (low/med): LOW

Date Received: 12/10/2004

% Solids: 79

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7920	E	P	
7440-36-0	Antimony	19.3	U	N	P
7440-38-2	Arsenic	7.4			P
7440-39-3	Barium	84.6		NE	P
7440-41-7	Beryllium	0.41			P
7440-43-9	Cadmium	1.6		N*	P
7440-70-2	Calcium	3690	E		P
7440-47-3	Chromium	12.5		NE	P
7440-48-4	Cobalt	4.1			P
7440-50-8	Copper	23.2		E*	P
7439-89-6	Iron	14300	E		P
7439-92-1	Lead	41.8		N*	P
7439-95-4	Magnesium	1920		NE*	P
7439-96-5	Manganese	639	E		P
7440-02-0	Nickel	34.1		E*	P
7440-09-7	Potassium	1060			P
7782-49-2	Selenium	5.2	U		P
7440-22-4	Silver	0.64	U	N	P
7439-97-6	Mercury	0.322			CV
7440-23-5	Sodium	657			P
7440-62-2	Vanadium	15.6			P
7440-66-6	Zinc	111		N*	P
7440-28-0	Thallium	0.24			M

Color Before: BROWN Clarity Before: CLOUDY Texture: TOPSOIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

30/663

Wet Chemistry Analysis

Client Sample No.

Lab Name: SIL Buffalo

Contract: _____

SS-1A

Lab Code: RECONY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37706% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH) _____	S.U. UG/G	7.77 2.6				9045 9012	12/13/2004 12/15/2004
Cyanide - Total _____							

Comments:

31/663

Wet Chemistry Analysis

Client Sample No.

SS-2A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37702% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.97 1.0	U			9045 9012	12/13/2004 12/15/2004
Cyanide - Total							

Comments:

32/663

Wet Chemistry Analysis

Client Sample No.

SS-3A

Lab Name: SIL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37703% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH) _____	S.U. UG/G	7.32 9.9				9045 9012	12/13/2004 12/15/2004
Cyanide - Total _____							

Comments:

33/663

Wet Chemistry Analysis

Client Sample No.

SS-4A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37705% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH) _____	S.U.	7.17				9045	12/13/2004
Cyanide - Total _____	UG/G	1.0	U			9012	12/15/2004

Comments:

34/663

Wet Chemistry Analysis

Client Sample No.

SS-5A

Lab Name: STL Buffalo

Contract: _____

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37704% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U. UG/G	7.77 17.2				9045 9012	12/13/2004 12/20/2004
Cyanide - Total							

Comments:

35/663

Wet Chemistry Analysis

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

SS-DUP

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37707% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH)	S.U.	7.34				9045	12/13/2004
Cyanide - Total	UG/G	1.0	U			9012	12/15/2004

Comments:

36/663

Wet Chemistry Analysis

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

SUMPLab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): SOILLab Sample ID: A4C37701% Solids: 0.0Date Samp/Recv: 12/10/2004 12/10/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Corrosivity (pH) _____	S.U.	9.02				9045	12/13/2004
Cyanide - Total _____	UG/G	1.0	U			9012	12/15/2004

Comments:

SAMPLE DATA PACKAGE

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-1Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71601Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1692.RRLevel: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1-----	Acetone	5.0	U	
71-43-2-----	Benzene	1.0	U	
75-27-4-----	Bromodichloromethane	1.0	U	
75-25-2-----	Bromoform	1.0	U	
74-83-9-----	Bromomethane	1.0	U	
75-15-0-----	Carbon Disulfide	1.0	U	
56-23-5-----	Carbon Tetrachloride	1.0	U	
108-90-7-----	Chlorobenzene	1.0	U	
75-00-3-----	Chloroethane	1.0	U	
67-66-3-----	Chloroform	1.0	U	
74-87-3-----	Chloromethane	1.0	U	
75-35-4-----	1,1-Dichloroethene	1.0	U	
156-59-2-----	cis-1,2-Dichloroethene	1.0	U	
156-60-5-----	trans-1,2-Dichloroethene	1.0	U	
78-87-5-----	1,2-Dichloropropane	1.0	U	
10061-01-5-----	cis-1,3-Dichloropropene	1.0	U	
10061-02-6-----	trans-1,3-Dichloropropene	1.0	U	
124-48-1-----	Dibromochloromethane	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
-----m/p-Xylenes		2.0	U	
95-47-6-----	o-Xylene	1.0	U	
75-09-2-----	Methylene chloride	1.0	U	
100-42-5-----	Styrene	1.0	U	
127-18-4-----	Tetrachloroethene	1.0	U	
108-88-3-----	Toluene	1.0	U	
79-01-6-----	Trichloroethene	1.0	U	
75-01-4-----	Vinyl chloride	1.0	U	
71-55-6-----	1,1,1-Trichloroethane	1.0	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U	
79-00-5-----	1,1,2-Trichloroethane	1.0	U	
75-34-3-----	1,1-Dichloroethane	1.0	U	
107-06-2-----	1,2-Dichloroethane	1.0	U	
78-93-3-----	2-Butanone	5.0	U	
591-78-6-----	2-Hexanone	5.0	U	

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-1Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A4C71601Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1692.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
108-10-1-----	4-Methyl-2-pentanone		5.0	U

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: SIL Buffalo

Contract: _____

MW-2Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71602Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1695.RRLevel: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	5.0	U
71-43-2-----	Benzene	1.0	U
75-27-4-----	Bromodichloromethane	1.0	U
75-25-2-----	Bromoform	1.0	U
74-83-9-----	Bromomethane	1.0	U
75-15-0-----	Carbon Disulfide	1.0	U
56-23-5-----	Carbon Tetrachloride	1.0	U
108-90-7-----	Chlorobenzene	1.0	U
75-00-3-----	Chloroethane	1.0	U
67-66-3-----	Chloroform	1.0	U
74-87-3-----	Chloromethane	1.0	U
75-35-4-----	1,1-Dichloroethene	0.58	J
156-59-2-----	cis-1,2-Dichloroethene	160	E
156-60-5-----	trans-1,2-Dichloroethene	10	
78-87-5-----	1,2-Dichloropropane	1.0	U
10061-01-5----	cis-1,3-Dichloropropene	1.0	U
10061-02-6----	trans-1,3-Dichloropropene	1.0	U
124-48-1-----	Dibromochloromethane	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
-----m/p-Xylenes		2.0	U
95-47-6-----	o-Xylene	1.0	U
75-09-2-----	Methylene chloride	1.0	U
100-42-5-----	Styrene	1.0	U
127-18-4-----	Tetrachloroethene	1.0	U
108-88-3-----	Toluene	1.0	U
79-01-6-----	Trichloroethene	170	E
75-01-4-----	Vinyl chloride	30	
71-55-6-----	1,1,1-Trichloroethane	1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U
79-00-5-----	1,1,2-Trichloroethane	1.0	U
75-34-3-----	1,1-Dichloroethane	1.0	U
107-06-2-----	1,2-Dichloroethane	1.0	U
78-93-3-----	2-Butanone	5.0	U
591-78-6-----	2-Hexanone	5.0	U

20/770

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-2

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATERLab Sample ID: A4C71602Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1695.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 12/31/2004GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
108-10-1-----	4-Methyl-2-pentanone		5.0	U

**ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET**

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-2 DL

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71602DLSample wt/vol: 25.00 (g/mL) ML Lab File ID: L1703.RRLevel: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 8.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1-----	Acetone	40	U	
71-43-2-----	Benzene	8.0	U	
75-27-4-----	Bromodichloromethane	8.0	U	
75-25-2-----	Bromoform	8.0	U	
74-83-9-----	Bromomethane	8.0	U	
75-15-0-----	Carbon Disulfide	8.0	U	
56-23-5-----	Carbon Tetrachloride	8.0	U	
108-90-7-----	Chlorobenzene	8.0	U	
75-00-3-----	Chloroethane	8.0	U	
67-66-3-----	Chloroform	8.0	U	
74-87-3-----	Chloromethane	8.0	U	
75-35-4-----	1,1-Dichloroethene	8.0	U	
156-59-2-----	cis-1,2-Dichloroethene	200	D	
156-60-5-----	trans-1,2-Dichloroethene	8.3	D	
78-87-5-----	1,2-Dichloropropane	8.0	U	
10061-01-5----	cis-1,3-Dichloropropene	8.0	U	
10061-02-6----	trans-1,3-Dichloropropene	8.0	U	
124-48-1-----	Dibromochloromethane	8.0	U	
100-41-4-----	Ethylbenzene	8.0	U	
-----m/p-Xylenes		16	U	
95-47-6-----	o-Xylene	8.0	U	
75-09-2-----	Methylene chloride	8.0	U	
100-42-5-----	Styrene	8.0	U	
127-18-4-----	Tetrachloroethene	8.0	U	
108-88-3-----	Toluene	8.0	U	
79-01-6-----	Trichloroethene	170	D	
75-01-4-----	Vinyl chloride	30	D	
71-55-6-----	1,1,1-Trichloroethane	8.0	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	8.0	U	
79-00-5-----	1,1,2-Trichloroethane	8.0	U	
75-34-3-----	1,1-Dichloroethane	8.0	U	
107-06-2-----	1,2-Dichloroethane	8.0	U	
78-93-3-----	2-Butanone	40	U	
591-78-6-----	2-Hexanone	40	U	

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-2 DL

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A4C71602DLSample wt/vol: 25.00 (g/mL) MLLab File ID: L1703.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 8.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/LQ

<u>108-10-1-----4-Methyl-2-pentanone</u>	<u>40</u>	<u>U</u>
--	-----------	----------

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

MW-3

Lab Name: STL Buffalo Contract: _____Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A4C71604Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1705.RRLevel: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	5.0	U
71-43-2-----	Benzene	1.0	U
75-27-4-----	Bromodichloromethane	1.0	U
75-25-2-----	Bromoform	1.0	U
74-83-9-----	Bromomethane	1.0	U
75-15-0-----	Carbon Disulfide	1.0	U
56-23-5-----	Carbon Tetrachloride	1.0	U
108-90-7-----	Chlorobenzene	4.2	
75-00-3-----	Chloroethane	1.0	U
67-66-3-----	Chloroform	1.0	U
74-87-3-----	Chloromethane	1.0	U
75-35-4-----	1,1-Dichloroethene	1.0	U
156-59-2-----	cis-1,2-Dichloroethene	1.0	U
156-60-5-----	trans-1,2-Dichloroethene	1.0	U
78-87-5-----	1,2-Dichloropropane	1.0	U
10061-01-5----	cis-1,3-Dichloropropene	1.0	U
10061-02-6----	trans-1,3-Dichloropropene	1.0	U
124-48-1-----	Dibromochloromethane	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
-----m/p-Xylenes		2.0	U
95-47-6-----	o-Xylene	1.0	U
75-09-2-----	Methylene chloride	1.0	U
100-42-5-----	Styrene	1.0	U
127-18-4-----	Tetrachloroethene	1.0	U
108-88-3-----	Toluene	1.0	U
79-01-6-----	Trichloroethene	1.0	U
75-01-4-----	Vinyl chloride	1.0	U
71-55-6-----	1,1,1-Trichloroethane	1.0	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U
79-00-5-----	1,1,2-Trichloroethane	1.0	U
75-34-3-----	1,1-Dichloroethane	1.0	U
107-06-2-----	1,2-Dichloroethane	1.0	U
78-93-3-----	2-Butanone	5.0	U
591-78-6-----	2-Hexanone	5.0	U

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ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: SIL Buffalo Contract: _____ MW-3

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A4C71604

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: L1705.RR

Level: (low/med) LOW Date Samp/Recv: 12/21/2004 12/22/2004

% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 01/03/2005

GC Column: DB-624 ID: 0.53 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u> Q		
108-10-1-----	4-Methyl-2-pentanone	5.0	U	

**ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET**

Client No.

Lab Name: SIL Buffalo

Contract: _____

MW-DUPLab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATERLab Sample ID: A4C71603Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1704.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1-----	Acetone	5.0	U	
71-43-2-----	Benzene	1.0	U	
75-27-4-----	Bromodichloromethane	1.0	U	
75-25-2-----	Bromoform	1.0	U	
74-83-9-----	Bromomethane	1.0	U	
75-15-0-----	Carbon Disulfide	1.0	U	
56-23-5-----	Carbon Tetrachloride	1.0	U	
108-90-7-----	Chlorobenzene	4.2		
75-00-3-----	Chloroethane	1.0	U	
67-66-3-----	Chloroform	1.0	U	
74-87-3-----	Chloromethane	1.0	U	
75-35-4-----	1,1-Dichloroethene	1.0	U	
156-59-2-----	cis-1,2-Dichloroethene	1.0	U	
156-60-5-----	trans-1,2-Dichloroethene	1.0	U	
78-87-5-----	1,2-Dichloropropane	1.0	U	
10061-01-5----	cis-1,3-Dichloropropene	1.0	U	
10061-02-6----	trans-1,3-Dichloropropene	1.0	U	
124-48-1-----	Dibromochloromethane	1.0	U	
100-41-4-----	Ethylbenzene	1.0	U	
-----m/p-Xylenes		2.0	U	
95-47-6-----	o-Xylene	1.0	U	
75-09-2-----	Methylene chloride	1.0	U	
100-42-5-----	Styrene	1.0	U	
127-18-4-----	Tetrachloroethene	1.0	U	
108-88-3-----	Toluene	1.0	U	
79-01-6-----	Trichloroethene	1.0	U	
75-01-4-----	Vinyl chloride	1.0	U	
71-55-6-----	1,1,1-Trichloroethane	1.0	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	1.0	U	
79-00-5-----	1,1,2-Trichloroethane	1.0	U	
75-34-3-----	1,1-Dichloroethane	1.0	U	
107-06-2-----	1,2-Dichloroethane	1.0	U	
78-93-3-----	2-Butanone	5.0	U	
591-78-6-----	2-Hexanone	5.0	U	

ENSR-NAT'L PLATING-W- SW8463 8260/25ML - TCL VOA
ANALYSIS DATA SHEET

Client No.

Lab Name: STL Buffalo

Contract: _____

MW-DUP

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATERLab Sample ID: A4C71603Sample wt/vol: 25.00 (g/mL) MLLab File ID: L1704.RRLevel: (low/med) LOWDate Samp/Recv: 12/21/2004 12/22/2004% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 01/03/2005GC Column: DB-624 ID: 0.53 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Q

CAS NO.	COMPOUND	UG/L	Q
108-10-1-----	4-Methyl-2-pentanone	5.0	U

STL BUFFALO**ENSR****-1-****INORGANIC ANALYSIS DATA SHEET****SAMPLE NO.****MW-1**Contract: CN04-009Lab Code: STLBFLOCase No.: SAS No.: SDG NO.: A04-C716Matrix (soil/water): WATERLab Sample ID: AD469488Level (low/med): LOWDate Received: 12/22/2004Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1000			P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	201			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	162000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	1050	N		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	35900			P
7439-96-5	Manganese	6880			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	40500			P
7782-49-2	Selenium	15.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-22-4	Silver	3.0	U		P
7440-23-5	Sodium	433000			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONEColor After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments: _____

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-1-SOL

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water): WATER

Lab Sample ID: AD469459

Level (low/med): LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	201			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	159000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	78.4			P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	33500			P
7439-96-5	Manganese	6130			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	42400			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	445000	E		P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments: _____

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-2

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water):

WATER

Lab Sample ID: AD469491

Level (low/med):

LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	236			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	33.3			P
7440-70-2	Calcium	177000			P
7440-47-3	Chromium	38.4			P
7440-48-4	Cobalt	4.2			P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	96.6		N	P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	44200			P
7439-96-5	Manganese	3370			P
7440-02-0	Nickel	38.7			P
7440-09-7	Potassium	14600			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	326000			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water): WATER

Lab Sample ID: AD469493

Level (low/med): LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	198			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	20400	N		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	16900			P
7439-96-5	Manganese	712			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	5760			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	73700			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

STL BUFFALO

ENSR

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

MW-DUP

Contract: CN04-009

Lab Code: STLBFLO

Case No.:

SAS No.:

SDG NO.: A04-C716

Matrix (soil/water):

WATER

Lab Sample ID: AD469492

Level (low/med):

LOW

Date Received: 12/22/2004

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	200	U		P
7440-36-0	Antimony	20.0	U		P
7440-38-2	Arsenic	10.0	U		P
7440-39-3	Barium	199			P
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	1.0	U		P
7440-70-2	Calcium	132000			P
7440-47-3	Chromium	4.0	U		P
7440-48-4	Cobalt	4.0	U		P
7440-50-8	Copper	10.0	U		P
7439-89-6	Iron	20200	N		P
7439-92-1	Lead	5.0	U		P
7439-95-4	Magnesium	16800			P
7439-96-5	Manganese	708			P
7440-02-0	Nickel	10.0	U		P
7440-09-7	Potassium	5760			P
7782-49-2	Selenium	15.0	U		P
7440-22-4	Silver	3.0	U		P
7439-97-6	Mercury	0.200	U		CV
7440-23-5	Sodium	73600			P
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	20.0	U		P
7440-28-0	Thallium	0.20	U		M

Color Before: COLORLESS Clarity Before: CLEAR Texture: NONE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Wet Chemistry Analysis

32/770

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

 MW-1Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: A4C71601% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/29/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

33/770

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

MW-2

Lab Code: RECNY

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATER

Lab Sample ID: A4C71602

% Solids: 0.0

Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.028			A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

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Client Sample No.

Lab Name: STL Buffalo

Contract: _____

MW-3

Lab Code: RECNY Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix (soil/water): WATERLab Sample ID: A4C71604% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:

Wet Chemistry Analysis

35/770

Client Sample No.

Lab Name: STL Buffalo

Contract: _____

MW-DUP

Lab Code: RECNY Case No.: _____

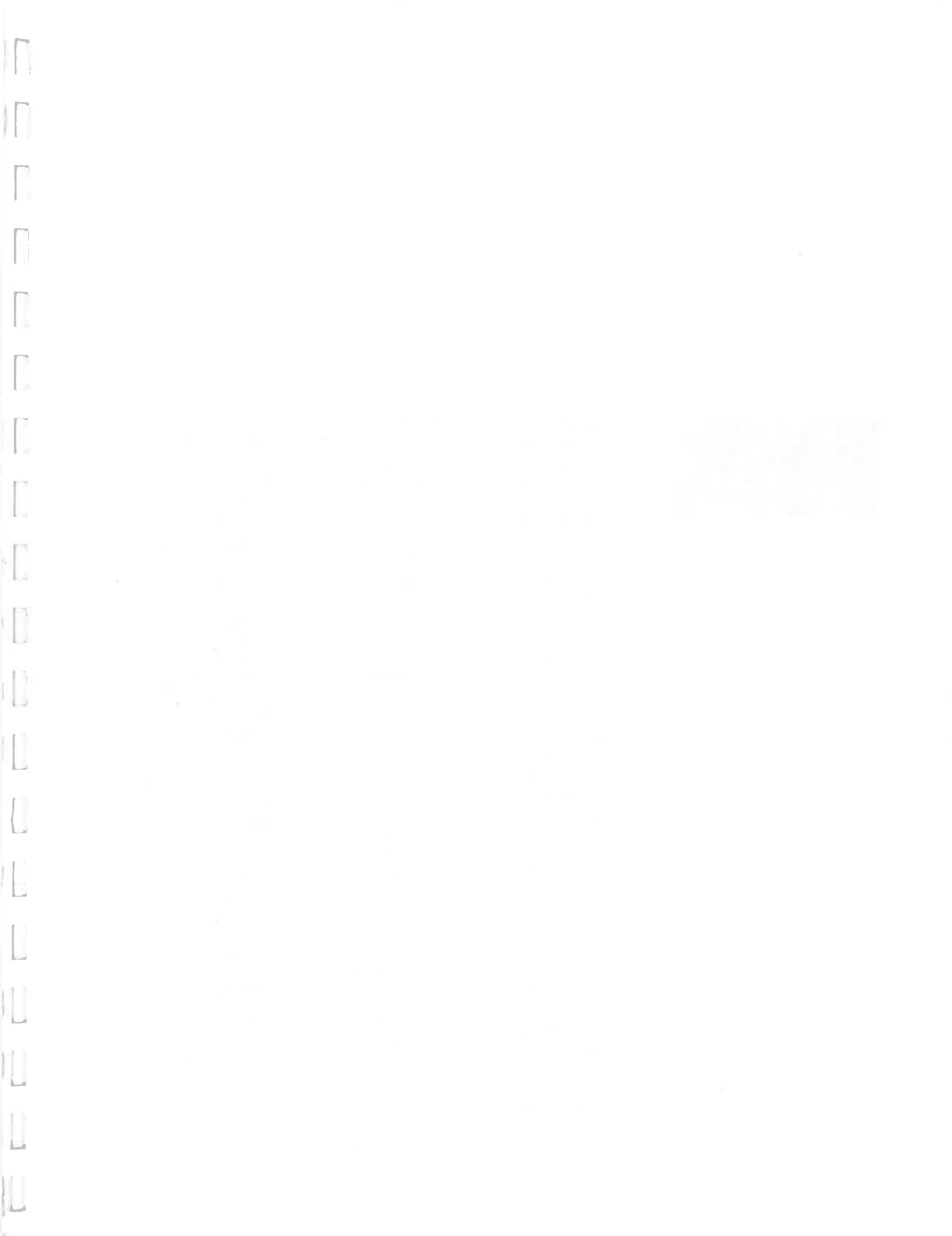
SAS No.: _____

SDG No.: _____

Matrix (soil/water) : WATERLab Sample ID: A4C71603% Solids: 0.0Date Samp/Recv: 12/21/2004 12/22/2004

Parameter Name	Units of Measure	Result	C	Q	M	Method Number	Analyzed Date
Cyanide - Total	MG/L	0.010	U			9012A	12/28/2004
Hexavalent Chromium - Total	MG/L	0.010	U		A	7196A	12/22/2004

Comments:





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