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# REMEDIAL INVESTIGATION REPORT FOR THE CAMP PHARSALIA SITE SOUTH PLYMOUTH, NEW YORK

NYSDEC Site No.: 7-09-013

February 26, 2003

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#### 1.0 INTRODUCTION

# 1.1 Background

Camp Pharsalia is a large complex of New York State Department of Environmental Conservation (NYSDEC) crew headquarters and a New York State Department of Correctional Services (NYSDCS) active incarceration facility. The incarceration facility is operated by the NYSDCS but is located on property managed by the NYSDEC. One of the work activities formerly performed by the inmates at Camp Pharsalia was a sawmill and wood treatment operation. Wood treatment operations were conducted from approximately 1960 until 1977 within an area on the periphery of Department of Corrections Operations (Site).

Based on potential health concerns raised at a similar state facility, a review of all state owned lands formerly used for wood treatment was initiated in the summer of 1997. In October 1997 the Division of Operations recommended that the NYSDEC perform an environmental investigation at Camp Pharsalia. As a result of that request, the NYSDEC Division of Environmental Remediation initiated a preliminary site investigation. Based on the findings of the Preliminary Investigation, it was concluded that the Site should be added to the State's Registry of Inactive Hazardous Waste Disposal Sites (Registry). In December of 1999, the site was listed on the Registry as a Class 3 Site, meaning that hazardous waste is present, but it does not currently constitute a significant threat to public health and/or the environment.

Shaw Environmental, Inc. (Shaw) prepared a *Remedial Investigation and Feasibility Study* (*RI/FS*) Work Plan (dated October 4, 2001) based on the results of Preliminary Investigation completed by the NYSDEC (August, 1999), and conducted the associated field activities outlined in this Plan between October 2001 and January 2002. This remedial investigation was required to collect sufficient data to further characterize site conditions, determine the lateral and vertical distribution of the contaminants of concern (COCs), evaluate the risk to human health and/or the environment, and to determine the need for remedial action.

# 1.2 Objectives

The objective of this *Remedial Investigation Report* is to present the tasks and technologies that were used to complete the remedial investigation at the site and the results from those investigations. In addition, the results from the human health Qualitative Exposure Assessment M:/193reps/DEC/Pharsalia RI\_Feb03

are presented. Conclusions and recommendations are presented based on the results of both the Preliminary Investigation and this Remedial Investigation.

#### 1.3 Site Location

Camp Pharsalia is located in the Town of South Plymouth, Chenango County, New York. The location of Camp Pharsalia is illustrated on **Figure 1**. The incarceration facility is operated by the NYSDCS, but is located on property managed by the NYSDEC. The Site is located within the Camp Pharsalia property in an area on the periphery of the Department of Corrections Operations (**Figure 2**). Based on the results from the Preliminary Investigation, the areas requiring further investigation include the former treatment plant and a former outdoor staging area for treated lumber located immediately north-west of the former treatment plant. Since no contamination was found in the former treated lumber storage areas, the Preliminary Investigation eliminated these areas of concern. These areas are illustrated on **Figure 2**. The site is surrounded by New York State Forest, and is bordered by the correctional facility to the north and east (**Figure 3**).

The area around the site is typified by a mature and eroded plateau that is dissected by a series of valleys several hundred feet deep. This plateau has a rolling, rugged appearance. Although the region is dominated by long ridge lines and narrow valleys, the site topography is relatively flat. Due to relatively flat topography, surface water most likely permeates the over burden and disperses slowly into the regional groundwater flow regime. Groundwater on site flows in a north west direction. In addition to State Reforestation Land, the area surrounding the site is rural, used for residential and agricultural purposes. Potable water is provided in the region by wells, which are often screened in bedrock.

# 1.4 Summary of Preliminary Investigation Report

In May of 1998 the NYSDEC finalized a work plan for the Preliminary Investigation of the Camp Pharsalia site. The Preliminary Investigation was planned in response to reports of pentachlorophenol (PCP) use as part of the wood treatment operation that was conducted at the site. The objective of the Preliminary Investigation was to determine whether hazardous waste was disposed at the site and evaluate the extent of that contamination, if existing. The Preliminary Investigation was initiated in May 1998; the final *Preliminary Investigation Report* was issued by the NYSDEC in August 1999.

The results of the *Preliminary Investigation Report* are summarized below:

# Water Supply Well Sampling

There are three water supply wells at Camp Pharsalia. One of the wells is used very infrequently. The main well, located north of the treatment plant, was installed in 1981 and it is located approximately 250 feet northeast of the treatment plant. When installed, groundwater samples were analyzed for standard parameters (color, turbidity, iron, manganese, carbon dioxide, total solids, suspended matter, nitrates, sulfates, chlorides, hardness, alkalinity, calcium magnesium and pH). The NYSDOH maximum contaminant level (MCL) for manganese of 600 ppb was slightly exceeded (700 ppb). The NYSDOH laboratory also analyzed a well water sample for metals, fluoride and nitrites/nitrates. No information is available to determine where this sample was collected from however, no analytes were detected above NYSDOH MCLs.

Two other drinking wells exist on site. Well #2 is located approximately 210 feet north-northeast of the treatment plant and well #3 is located 700 – 1000 feet north-northeast of the treatment plant.

There were two rounds of groundwater sampling in 1992 and 1993. No information describing how the samples were collected or which well sampled was available. However, in 1992 a water supply well was analyzed for polynuclear aromatichydrocarbons (PAHs) and no contaminants were detected. In 1993 a composite sample was collected from the wells at Camp Pharsalia and Camp Georgetown. The water was analyzed for pesticides, PCBs, herbicides and other analytes including PCP. No analytes were detected in the sample.

#### Surface Soil

No PCP was detected in or around the former treated lumber storage areas above soil screening levels. Since no PCP was detected in the former storage areas, it is unlikely that dioxins are present in the former storage areas due to the co-existence of the two. The absence of PCP (and therefore dioxins) eliminated the former storage areas as areas of concern. Since no PCP was detected in the former storage areas the Preliminary Investigation eliminated these areas as areas of concern.

Four out of five samples collected in front of the treatment plant contained PCP above screening levels for the protection of groundwater.

#### Subsurface Soil

Test pits and soil borings were installed adjacent to and through the floors of the treatment plant and former lumber storage building. Since no analytes were detected under or around the former lumber storage building the Preliminary Investigation eliminated this area as an area of concern.

Subsurface soil samples collected west and underneath the treatment plant demonstrated PCP and dioxin concentrations in excess of the respective soil screening levels.

#### <u>Sediment</u>

No site-related analytes were detected from sediment samples collected from the drainage ditch which receives drainage from the treatment plant and flows off site to the west.

#### Groundwater

Odor and sheen were noted on groundwater from PMW-5 as well as elevated concentrations of PCP in subsurface soil directly upgradient and downgradient of PMW-5, however, analytical results for PMW-1, PMW-2, PMW-3, PMW-4 and PMW-5 were "non detect" for PCP and VOCs during the PI sampling event.

Dioxin was found in four wells exceeding the groundwater standard. The dioxin in PMW-5 (0.19 parts per trillion (ppt) exceeded the 2,3,7,8-TCDD equivalence groundwater standard of 0.0007 ng/L (ppt).

Data generated from the NYSDEC Preliminary Investigation is included on the appropriate **Figures and Tables** for comparison and discussion purposes.

In summary, the Preliminary Investigation conducted by the NYSDEC in 1999 identified the areas beneath, west and northwest of the treatment plant as contaminated. The Remedial Investigation was designed to supplement the Preliminary Investigation and further delineate soil and groundwater contamination.

#### 1.5 Contaminants of Concern

Based on the NYSDEC's review of the treatment process at the plant and the results from the Preliminary Investigation, the COCs for this investigation included:

- PCP
- Fuel Oil
- Dioxins and Furans

The PCP solutions used in the wood preserving process were prepared by dissolving technical grade PCP in fuel oil to produce a solution that was 4 to 8 percent PCP. Technical grade PCP contained 85-90 percent PCP; 2 to 6 percent higher molecular weight chlorophenols; 4 to 8 percent 2,3,4,6-tetrachlorophenol; and about 0.1 percent tetrachlorodibenzo-p-dioxins (dioxins) and tetrachlorodibenzofurans (furans). PCP is slightly soluble in water (8 mg per 100 mL) and adheres strongly to soils (based on organic content, pH, and soil type).

Dioxins and Furans are compounds that form as byproducts during the production of certain chlorophenolic chemicals. The dioxin congener of most concern; 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), has not been found in PCP produced in the United States. Dioxins and furans also display a very low solubility in water. The compounds adsorb strongly to organic matter and are persistent under ambient environmental conditions. They migrate primarily through the movement of particulate matter (ex: dust generated by earth moving activities or sediments carried by water) and are also transported by the migration of organic solvents and carrier oils. Since the primary source of dioxins and furans at wood preserving sites is discharged PCP, these compounds can be expected to occur in areas where PCP was used or where PCP wastes were disposed.

The terms dioxin and furan refer to two classes of organic compounds. Dioxins and furans are found in technical grade PCP, and therefore could be expected to be present in areas that contain PCP. The polychlorinated dibenzo-p-dioxin (PCDD) molecule is composed of two benzene rings held together by two oxygen bridges. Chlorine atoms may be substituted for hydrogen at any of the eight positions on the benzene rings. The number and positions of the chlorine atoms determine the toxicity of the molecule. There are 75 possible configurations of dioxin, called congeners. Different configurations with the same number of substituted chlorine atoms are referred to as isomers. The most toxic dioxin congener is 2,3,7,8 tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD). Dioxin congeners with fewer than four substituted chlorine atoms are generally less toxic than the other, more highly substituted congeners.

Furans are structurally identical to dioxins except that only one oxygen bridge connects the two benzene rings. There are 135 possible furan congeners. Similar to dioxins, the most toxic furan is 2,3,7,8 tetrachlorinated dibenzofuran (2,3,7,8-TCDF).

Because 2,3,7,8-TCDD is the most toxic form of dioxin, the USEPA has established factors that equate the toxicity for other dioxin congeners and furans to that of 2,3,7,8-TCDD. Therefore, concentrations of dioxin and furan results will be discussed as the 2,3,7,8-TCDD equivalence, rather than reporting each individual congener.

Fuel oils are mixtures of aliphatic and aromatic petroleum hydrocarbons and include several polycyclic aromatic hydrocarbons (PAHs) and BTEX (benzene, toluene, ethylbenzene, and xylene) related compounds. Fuel oil No. 2 is typically used as a home heating oil or as an industrial heating oil. At this site, fuel oil No. 2 was used as a carrier for wood preserving compounds. Fuel oil is a colorless to brown liquid that is less dense than water.

# 1.6 Report Organization

This Remedial Investigation Report is organized into five sections as described below:

- **Section 1.0; Introduction**. Includes a summary of the project Background, a statement of the project Objectives, a description of the Site Location, a Summary of Previous Investigations, and describes the Report Organization.
- Section 2.0; Scope of Work. Includes a description of the scope and methodologies
  of the field investigation and describes the general parameters used when
  completing the Qualitative Exposure Assessment.
- Section 3.0; Investigation Results. Presents a summary of the sites physical characteristics and a description of the nature and extent of contamination based on field and laboratory results from the remedial investigation activities.
- Section 4.0; Conclusions and Recommendations. Includes a summary of the conclusions and recommendations developed based upon the data collected.
- **Section 5.0; References**. Provides a listing of references used when developing the remedial investigation report.

Due to the volume of data generated, laboratory reports have been summarized in tables and included in the *Tables* appendix. Similarly, all figures referenced in this report are included in the *Figures* appendix.

#### 2.0 FIELD INVESTIGATION

A description of field activities performed at the site is presented in the following sections. All site activities were conducted in compliance with the *Remedial Investigation Work Plan*, the *Site Health and Safety Plan* (HASP), *Field Sampling Plan* (FSP), and *Quality Assurance Project Plan* (QAPP). Any deviations from The Department approved plans are noted in the text.

Field investigation activities were conducted in November 2001 and additional work was completed in October 2002. The sections below include descriptions for both phases of field work.

# 2.1 Surface Soil Investigation

Surface soil samples were collected from nine locations based on historical operations of the treatment plant. The sampling locations were selected in the field with the NYSDEC and were located in areas of suspected impacts. Samples were collected from approximately 0 to 2 inches below ground surface (bgs) with a decontaminated stainless steel trowel. All surface soil samples collected were sent for laboratory analysis of SVOCs, dioxins and metals. All soil samples were placed in sample jars supplied by the contract laboratory. A summary of the laboratory analytical methods and quantity of samples analyzed is provided in **Table 1**. Surface soil sample locations are illustrated on the Sample Location Map (**Figure 4**).

# 2.2 Soil Boring Installation and Sampling

A total of thirteen (13) soil borings were installed at the site during the remedial investigation. Seven (7) borings were installed to the north and west of the former treatment plant (SB-1, SB-2, SB-3, SB-4, SB-5, SB-12, SB-13), two (2) were installed north and east of the treatment plant (SB-6, SB-7) three (3) were installed south of the treatment plant (SB-8, SB-9 and SB-10) and one (1) was installed west of the treatment plant. Boring locations are shown on **Figure 4.** 

Split spoon soil samples were continuously collected during boring installation. A Field Geologist recorded soil descriptions, including any visual and/or olfactory evidence of contamination that was noted. Drill logs are included as **Appendix A**. Additionally, a portion of each soil sample was split for a headspace monitoring using a calibrated Photoionization M:/193reps/DEC/Pharsalia RI\_Feb03

Detector (PID). Samples from each boring were sent to the laboratory for analysis of SVOCs and dioxins. Samples were selected based on elevated PID readings and proximity to the apparent water table. **Table 1** summarizes laboratory analytical methods. Borings were advanced to 8 feet below the apparent water table elevation, or to a depth approved by the onsite DEC representative. All down hole drilling equipment was decontaminated between borings as specified in the FSP and QAPP.

Soil borings SB-1 and SB-2 exhibited a sheen and petroleum-like odors from the soil water interface (approximately 5 feet bgs), to 14 feet bgs. Soil boring SB-11 exhibited a sheen and strong odors from 0-8 bgs. Elevated PID readings were also recorded at this interval. Petroleum-like odors were detected throughout SB-3 and SB-5. No notable odors, sheens or PID readings were detected in SB-4, SB-6, SB-7, SB-8, SB-9, SB-10, SB-12 and SB-13.

# 2.3 Monitoring Well Installation

An additional monitoring well (PMW-6A) was installed via hollow stem auger drilling techniques. The well was installed northwest of the former treatment plant as presented on **Figure 4**. Continuous split spoon sampling was conducted to completion of the soil boring. Soil characteristics (color, grain size, moisture, etc.) as well as any evidence of impacts to soil were recorded on field boring logs sheets by the site geologist. A portion of each split spoon was split and screened with a PID. Any elevated reading was also recorded on the field boring log sheet. A copy of the boring log for PMW-6A is presented in **Appendix A** of this report.

PMW-6A was advanced to total depth of 16 feet below ground surface (bgs). A summary of the analytical results discussed in **Section 3.0** of this report.

Monitoring well PMW-6A is constructed of 2 - inch PVC riser with a 10 - foot (5.5-15.5 ft. bgs) 0.010-inch slotted screen. A filter pack of "00" Morie sand was placed around the screen and completed to approximately 3.5 ft. bgs. The remaining annulur space was backfilled with a cement – bentonite grout slurry to the groundsurface. The monitoring well was completed at grade with a flush mount road box and surrounded by a concrete pad.

Monitoring well (PMW-6A) was developed several days after completion to allow for the grout and cement to cure. Total well depth and depth to water were recorded and used to determine one well volume. A submersible pump was then lowered just above the bottom of the well. The well was developed; flushing out any sediment that had accumulated at the bottom of the well. More than 10 well volumes were removed from PMW-6A during development. Field parameters

such as pH, conductivity, temperature, and turbidity were recorded throughout development process. Development logs are included as **Appendix B**.

#### 2.4 Groundwater Sample Collection

Prior to sampling, the water level in each of the monitoring wells were gauged to provide information on hydraulic gradients and groundwater flow at the site, as well as to provide information on the presence or absence of immiscible liquids. Measurements of water levels were obtained using an electronic water-level interface probe (IP). Specific procedures for data collection as detailed in the project specific QAPP and FSP were followed. Gauging data is presented as **Appendix C**.

# 2.5 Groundwater Sampling Events

A total of three groundwater sampling events have been conducted at the site. Two rounds of groundwater samples were collected (1998 and 2001) from the five previously existing monitoring wells (PMW-1, PMW-2, PMW-3, PMW-4, PMW-5) and one (1) round of groundwater samples (2002) were collected from the existing wells (PMW-1, PMW-2, PMW-3, PMW-4, PMW-5) and newly installed monitoring well PMW-6A. Each monitoring well was gauged and purged prior to sample collection as described in the project specific QAPP and FSP.

Petroleum-like odors were noted during the sampling of PMW-1 and PMW-5. A brown-white "tint" was seen in the samples and purge water from PMW-3, PMW-4, and PMW-5. A sheen was noted on the waters from PMW-5 during the December 2001 sampling event. During the November, 2002 sampling event there was no recordable evidence of detectable odors or sheen associated with the purge water. Monitoring wells PMW-2 and PMW-6A exhibited a brown-white turbidity throughout the low-flow purge of these wells.

Groundwater samples were collected using disposable polyethylene bailers. Samples were sent to the laboratory for analysis of SVOCs, dioxin, and by NYSDOH Method 310-34 or 310-13 for fuel oil components only, as shown on **Table 1**. Sample collection procedures were consistent with the requirements of the site specific QAPP and FSP.

### 2.6 Mapping and Surveying

Following completion of the field investigation activities, a licensed surveyor was contracted to expand the existing site map to include the new sampling locations and site topography. The survey shows all pertinent site features including monitoring wells, site buildings, roads, surface sample locations, topography, and utilities. This survey information has been used to produce the figures included in this *Remedial Investigation Report*.

# 2.7 Qualitative Exposure Assessment

A Qualitative Exposure Assessment was performed by Shaw to determine the current and potential future exposure pathways associated with baseline (i.e. current or unremediated) site conditions. A field survey to collect site specific information was conducted on January 23, 2002. The Qualitative Exposure Assessment report was prepared as a "stand-alone" report and is included in **Appendix D**. The report is summarized in **Section 3.3**.

# 2.8 Aerial Photograph Review

At the request of the NYSDEC an aerial photograph review was conducted and 3 photos were purchased and submitted to the State under separate cover to become a part of the NYSDEC project file. An aerial photo taken in 1968 demonstrated evidence of activity on the western side of Camp Pharsalia. There appears to be a row of timbers but this could not be positively identified. No evidence of stressed or dead vegetation could be identified nor could the location of any equipment used for wood treatment processes.

An aerial photo taken in 1974 demonstrates the same timber rows, only smaller in size.

An aerial photo taken in 1977 demonstrates an even smaller row of timbers than in 1974. No activity could be identified in either the 1974 or 1977 photos.

The review of aerial photos was inconclusive as it did not show evidence of any disposal activities.

# 2.9 Data Validation

An independent data validator, Environmental Quality Assurance, Inc., was subcontracted to review the data and compile a Data Usability Summary Report (DUSR). The DUSR is included as **Appendix E**.

#### 3.0 INVESTIGATION RESULTS

The results from the remedial investigation are presented in the following sections. A description of the site's physical characteristics, the nature and extent of chemical impacts and the results from the exposure assessments are provided.

# 3.1 Physical Characteristics

#### 3.1.1 Regional Geology

The Northern part of Chenango County is located on a plateau known as the Appalachian Uplands. The plateau is mature and eroded, and is dissected by a series of valleys that are several hundred feet deep. The major valleys on the plateau have a north-south orientation. The high plateau is characterized by large, rounded, bedrock controlled hills and ridges with nearly level hilltops at a similar elevation reflecting the nearly horizontal character of the underlying bedrock. Because of stream dissection and deepening of valleys by glacial scour, the plateau uplands have a rugged, rolling appearance. The rounded shoulders of the hills and steep lower valley sides are also indications of glacial modification.

Regional bedrock consists of an Upper Devonian Formation which includes Tully Limestone, Ithaca Siltstone and Sandstone and Geneseo Shales. The bedrock lies nearly flat, exhibiting a slight regional dip to the south of about 50 feet per mile.

#### 3.1.2 Site Specific Geology

Observations of the site specific subsurface conditions were made during the Preliminary Investigation and this remedial investigation. In general, the upper four feet of overburden consists of brown topsoil with gravel, sand fill with gravel and cobbles or silty clay with gravel and shale fragments. This surface layer is likely fill material placed as a base for buildings and staging treated and untreated lumber. Beneath the fill is glacial lodgement till consisting of clay, sand, silt, and shale cobbles and boulders with clay and sand lenses. The till varies in color including grey, tan, red-brown, and brown. The lodgement till continues to depths of at least 30 feet (which was the vertical extent of both investigations). The till is very dense, as evidenced by the very difficult drilling conditions and high blow counts encountered during monitoring well installations. Observations during drilling and review of boring logs confirms that the upper 13 feet of the till unit contains numerous discontinuous lenses of more permeable sands and fine

gravel that may or may not be interconnected through fractures within the till. A Geologic Cross Section Map is presented as **Figure 5**.

A drinking water well (well #1) was installed in 1981, approximately 250 feet northeast of the treatment plant, to a total depth of 300 feet below ground surface (bgs). Soft shale bedrock was encountered at approximately 134 feet bgs. Clay seams were present between 107 feet and 134 feet bgs. Soft grey sandstone with clay lenses were present from approximately 134 to 140 feet bgs. From 140 to 300 feet the bedrock consisted of a grey shale unit interbedded with thin layers of grey sandstone. Two other drinking water wells also exist on site. Well #2 is located approximately 210 feet north-northeast of the treatment plant and well #3 is located 700-1000 feet north-northeast of the treatment plant. Well #3 was installed after June 2001. All three drinking water wells are located at the correctional facility.

# 3.1.3 Regional Hydrogeology

Camp Pharsalia is located approximately 1 mile east of Brakel Creek which is presumed to be the nearest discharge zone for Deer Pond. Regionally, groundwater would be anticipated to flow toward Brakel Creek, which eventually discharges into the Otselic River. Shallow groundwater in the area of the site is typically found in coarser grained glacially derived sediments or as perched water over deposits of fine grained sediments of lower permeability.

#### 3.1.4 Site Specific Hydrogeology

Depth to groundwater was observed between approximately three (3) (PMW-1) and six (6) feet bgs (PMW-3) across the investigated area during the December 6, 2001 groundwater sampling event. Depth to groundwater was observed between approximately 2.5 (PMW-6A) and 6 (PMW-3) across the investigated area during the November 2002 sampling event. Groundwater contour maps for the December 2001 and November 2002 sampling events are included as **Figures 6A** and **6B**. Based on groundwater elevations and evaluation of topographic maps, groundwater flow appears to be in a north-northwesterly direction.

Recharge of the water table is likely provided by precipitation infiltrating areas of the property. Shallow groundwater likely exists as isolated "perched pockets" in permeable sandy lenses found within the till. Precipitation accumulates in these pockets and likely slowly disperses into the regional groundwater flow regime.

Groundwater recovery rates during the sampling event indicate that the hydraulic conductivity for the till unit is relatively low.

#### 3.2 Nature and Extent of Contamination

This section presents the analytical results from the surface, soil boring and groundwater samples collected at the site. These results are compared to published New York State standards and/or screening criteria for screening and discussion purposes only.

Soil criteria from the NYSDEC's *Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels HWR 4046* (TAGM 4046) was used for comparison to soil results. This document does not include soil cleanup objectives for dioxins and furans. Therefore, for the purposes of this report, and to be consistent with the previous investigation report for the site, 1 ppb (ug/kg) 2,3,7,8-TCDD equivalence has been used as the soil screening level. The NYSDEC has used 1 ppb (ug/kg) 2,3,7,8-TCDD equivalence as a remediation goal at other hazardous waste sites.

The soil cleanup objective listed in TAGM 4046 for PCP is 1 ppm (mg/kg) for protection of groundwater. Consistent with the *Preliminary Investigation Report* prepared for this site, this value has been adopted as a groundwater protection screening level for soil.

Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1) was used for screening groundwater. The groundwater standard for total phenolic compounds listed in TOGS 1.1.1 is 1.0 ppb (ug/L). Here again, to be consistent with the *Preliminary Investigation Report*, and because PCP is the only phenolic compound detected in the groundwater at the site, a groundwater screening level of 1.0 ppb (ug/L) has been used.

Finally, 6NYCRR Part 700-705 lists a groundwater standard of 0.0007 ng/L (parts per trillion) for 2,3,7,8-TCDD. This value has been adopted as the groundwater screening level, with the other forms of dioxins and furans normalized to 2,3,7,8-TCDD using the USEPA's toxicity equivalence factors (TEFs).

#### 3.2.1 Surface Soils

A total of nine (9) surface soils samples were collected and sent to the contract laboratory for analysis of SVOCs, dioxins, and metals. A summary of the analytical results is presented in **Table 2**.

SVOCs were randomly detected in five (5) of the nine (9) samples collected ranging in concentrations from 0.096 mg/kg (ppm) to 271.87 mg/kg (ppm) total SVOCs. None of the locations exhibited total SVOCs in excess of the TAGM 4046 guidance value of 500 mg/kg (ppm). Four (4) locations (SS-5, SS-6, SS-8 and SS-9), possessed an SVOC analyte at levels M:/193reps/DEC/Pharsalia RI\_Feb03

above TAGM 4046 guidance values for individual analytes. The only SVOC that exceeded the guidance value at these locations was PCP. All three areas were located on the west side of the treatment plant. Detected levels of PCP ranged from 1.0 mg/kg (ppm) in SS-8 to 270 mg/kg (ppm) in SS-5 (Figure 5). All four samples exceeded the screening level of 1.0 mg/kg (ppm) for the protection of groundwater.

PCP was also detected in SS-7 (0.096 mg/kg (ppm)) in the area west of the treatment plant at levels below the TAGM 4046 guidance value. PCP was not detected in any of the other surface samples collected. One potential explanation of the differences in concentrations from this remedial investigation and the Preliminary Investigation of PCP in surface soils is that PCP will readily break down by photochemical processes when exposed to the ultraviolet radiation in sunlight. The results of the surface soil samples collected during the Preliminary Investigation are included on **Table 2** and **Figure 7**.

Surface soil sample SS-5 possessed the highest concentrations of total SVOCs and PCP. This sample was collected from the western side of the treatment plant.

All surface soil samples collected were sent to the laboratory for analysis of metals. Background samples were collected in October 2002 at Camp Georgetown due to the proximity of the two sites and in accordance with the approved work plan. The background sample data collected from Camp Georgetown was averaged and the resulting averages were used to compare to the surface soil data collected at Camp Pharsalia. Zinc, nickel, iron, chromium and beryllium were detected above guidance values in all nine samples. These metals are not related to the treatment process and likely represent natural soil concentrations. Arsenic was detected slightly above guidance values in SS-1, SS-3, SS-6 and SS-7. These low concentrations most likely represent natural soil concentrations.

In addition, all nine (9) samples were sent for the analysis of dioxins. Although dioxins and furans were detected in all the samples, only four (4) samples (SS-5, SS-6, SS-8 and SS-9) possessed 2,3,7,8,-TCDD equivalence of above the 1.0 ug/kg (ppb) guidance value. This is consistent with the elevated concentrations of PCP detected in these locations.

#### 3.2.2 Subsurface Soils

A total of fourteen (14) subsurface soil samples were collected from the area around the treatment plant. These samples were sent for laboratory analysis of SVOCs and dioxins. Laboratory results are summarized on **Table 3** and **Figure 8**.

Soil borings SB-1, SB-2 and SB-3 exhibited random SVOCs; however, no analytes were detected above TAGM 4046 guidance values for total SVOCs or individual analytes.

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Concentrations ranged from 0.125 mg/kg (ppm) to 1.412 mg/kg (ppm) total SVOCs. Soil borings SB-8 through SB-13 and PMW-6A possessed concentrations of Bis(2ethylhexyl) phthalate below the TAGM 4046 guidance value of 50 ppm. PCP was not detected in any of the subsurface soil samples.

None of the 14 soil samples collected possessed a 2,3,7,8-TCDD equivalence greater than the 1.0 ug/kg (ppb) screening level. The equivalence concentrations ranged from 0.00000014 ug/kg (ppb) (SB-11 10-12 feet) to 0.002183 ug/kg (ppb) (SB-2 10-12 feet).

#### 3.2.3 Groundwater

As described in **Section 2.4** three separate groundwater sampling events were conducted during the PI and the RI. The analytical results for all sampling events are summarized in **Figure 9**. The first sampling event was conducted during the preliminary investigation and the samples collected were sent for analysis of VOCs, SVOCs, metals and dioxins.

#### 1998 PI Results

PMW-1, PMW-3 and PMW-5 all possessed minor concentrations of acetone below the TOGs 1.1.1 guidance values.

PMW-5 possessed estimated concentrations of Flourene, 2-methylnaphthalene and phenanthrene. No PCP was detected in any of the monitoring wells including PMW-5.

Aluminum, arsenic, manganese and thallium were detected in all five monitoring wells above TOGs 1.1.1 guidance values. None of these metals are related to the wood treatment process used at Camp Pharsalia and the concentrations detected in the monitoring wells could represent natural levels. Groundwater samples collected from PMW-1, PMW-2, PMW-4 and PMW-5 all possessed 2, 3, 7, 8-TCDD equivalence concentrations above the TOGS 1.1.1 0.0007 ng/L guidance value. Equivalence concentrations ranged from 0.19 ng/L in PMW-5 to 0.00245 in PMW-4.

The results of the PI groundwater sampling event are presented on **Table 4**.

# December 2001 Results

The second groundwater sampling event was conducted in December 2001. Field sampling protocol was followed as described in the FSP and QAPP specific for this site. The groundwater samples collected were sent for laboratory analysis of SVOCs, pesticides and fuel oil method 310.34.

Fuel oil components, including diesel, were detected in PMW-1 at an estimated concentration of 1100 ug/L. PMW-1 is located southeast of the treatment plant.

Several SVOCs were detected in PMW-1, PMW-3 and PMW-5. None of the analytes detected were above TOGS 1.1.1 groundwater standards. No PCP was detected in any of the monitoring wells.

Heptaclor epoxide was detected above TOGS 1.1.1 guidance values in PMW-4 at 0.11 ug/L. PMW-4 is located west of the treatment plant.

Dioxins were not analyzed during this sampling event.

The results of the December 2001 sampling event are summarized on **Table 5**.

#### November 2002 Results

The third groundwater sampling event was conducted in November 2002. Groundwater samples collected were analyzed for SVOCs, dioxins and fuel oil via method 310.13, respectively. This method for fuel oil was used to attain lower laboratory method detection limits.

At the request of the NYSDEC additional samples were also collected from PMW-5 and PMW-6A and were filtered with an 0.45 micron in line filter. The filtered samples were analyzed for SVOCs, dioxins and fuel oil in an effort to determine if elevated contaminant concentrations could be attributed to suspended sediments or turbid water at the time of sample collection.

Diesel range organics were detected in PMW-3, (340 ug/L) PMW-5 filtered (290J ug/L), PMW-6A (140J ug/L) and PMW-6A filtered (190J ug/L).

Naphthalene was detected below TOGS 1.1.1 in PMW-1 (0.5J ug/L) and bis(2-ethylhexyl)phthalate was detected in all monitoring wells as well as the associated laboratory blanks. The presence of the bis(2-ethylhexyl)phthalate in the laboratory blanks suggests that it is a laboratory contaminant and does not actually exist at the site.

Dioxins were not detected in any of the on site monitoring wells above the 2,3,7,8-TCDD screening level of 0.0007 ng/L. Dioxins were present at very low levels in all samples collected except PMW-3 and PMW-6A filtered.

Filtering of the samples from PMW-5 and PMW-6A dropped dioxin congener concentrations slightly but more data would be necessary to definitively conclude if there is a direct correlation

between contaminant concentration and suspended sediments in water. The results of the November 2002 sampling event are summarized on **Table 6**.

#### 3.3 Qualitative Human Health Exposure Assessment

Below is a summary of the QEA conducted by Shaw. The QEA is presented in its entirety in **Appendix D**.

#### 3.3.1 Background

Exposure assessment is the process of identifying potential current and future receptors, and characterizing the nature of their contact with a chemical. A qualitative exposure assessment was performed for the Camp Pharsalia site in order to determine potential exposure pathways associated with current site conditions and to evaluate their potential significance.

# 3.3.2 Exposure Setting

The exposure setting is evaluated with respect to both current and potential future land uses of the site and surrounding area in order to aid in the identification of potential receptors, exposure points and exposure pathways.

Camp Pharsalia is a large complex of NYSDEC crew headquarters and an active NYDCS incarceration facility, situated in the town of South Plymouth, Chenango County, NY. The surrounding area is rural, generally consisting of farmland and undeveloped forest. Wood treatment operations were conducted at Camp Pharsalia between 1960 and 1977. The area of concern includes the former wood treatment plant and staging area, which is located immediately northwest of the former treatment plant.

# 3.3.3 Identification of Exposure Pathways

The exposure pathway is the route that the chemical takes from the source of the material to the receptor of concern. An exposure pathway has five elements:

- a contaminant source
- contaminant release and transport mechanisms
- · a point of exposure
- a route of exposure

#### a potential receptor

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is possible, but not documented.

#### 3.3.3.1 Source of Contamination

One of the work projects at Camp Pharsalia was the operation of a wood treatment facility and sawmill, which operated between 1960 and 1977. During this time, pentachlorophenol (PCP) was the primary chemical biocide used in treating lumber at the site. During the treatment process, PCP and No. 2 fuel oil were combined in the dip tanks. After treatment, poles were hoisted from the tank and allowed to drip over the tank for a period of time. Poles were then moved to outside the western end of the treatment plant and allowed to dry. They were then moved to a designated treated material storage area, located south of the treatment plant. Therefore, the sources of release to the environment are historical surficial spills of wood treatment products (PCP and fuel oil) to soil.

# 3.3.3.2 Fate and Transport

Contaminant release and transport mechanisms may carry contaminants from the source to points where individuals may be exposed. Chemical migration between media such as soil and groundwater is influenced by chemical parameters such as water solubility or molecular size or shape, in addition to the chemical and physical characteristics particular to a site's media. This section discusses information about the fate and transport of the source chemicals present at the site.

#### **Pentachlorophenol**

Pentachlorophenol is a moderately acidic substance, and thus its fate is strongly influenced by pH. At a neutral pH it is almost completely found in the ionized form, the pentachlorophenate anion, which is much more mobile than PCP (ATSDR, 2000). PCP has a low water solubility and a strong tendency to adsorb onto soil or sediment particles in the environment. Adsorption to soils and sediments is dependent on pH and organic content. Adsorption at a given pH increases with increasing organic content of soil or sediment. No adsorption occurs at pH values above 6.8 (ATSDR, 2000; Howard, 1991). Since it is expected that soils at the site are acidic (no pH data is available) and soils are low in organic content, (TOC is 0.043% in SB-11 (8-10') some adsorption is likely to occur, but it may be limited.

The ionized form of pentachlorophenol may be rapidly photolyzed by sunlight; PCP may also undergo biodegradation by microorganisms, animals, and plants, although degradation is M:/193reps/DEC/Pharsalia RI\_Feb03

generally slow (Howard, 1991). Given that at expected pH conditions a portion of PCP will be present in the ionized form, photolysis may be an important degradation pathway at this site in shallow soils.

PCP has an octanol-water partition coefficient (Kow) of 100,000 (Howard, 1991), which indicates that it is lipid-soluble and therefore has a tendency to bioaccumulate in organisms. Bioaccumulation is largely pH-dependent, with considerable variation among species. Bioconcentration factors (BCFs) for PCP in aquatic organisms are generally under 1,000, but some studies have reported BCFs up to 10,000. BCFs, however, for earthworms in soil were 3.4-13 (ATSDR, 2000). Significant biomagnification of PCP in either terrestrial or aquatic foodchains, however, has not been demonstrated (ATSDR, 2000).

Pentachlorophenol products often contain impurities such as chlorophenols, dioxins, and furans. Once released to the environment, the chlorinated dibenzo-p-dioxins (CDDs) and dibenzofurans (CDFs), are persistent and generally adsorb to soil or sediment particles, due to their low water solubilities. Adsorption is generally the predominate fate process affecting these chemicals, with the potential for adsorption related to the organic carbon content. CDDs and CDFs may undergo degradation through biological action or by photolysis, with a half-life ranging from weeks to months. Photolysis and hydrolysis are generally not significant processes, however, as these compounds persist in the adsorbed phase (USEPA, 2002).

Due to their high adsorption rate, CDDs are not expected to leach from soil, although some leaching of disassociated forms of the compound may occur, especially at lower pHs (USEPA, 2002). Since the pH at site soils are not known but are not expected to be highly acidic, leaching of CDDs and CDFs is unlikely. Migration of CDD-contaminated soil may occur through erosion and surface runoff. Upon reaching surface waters, additional adsorption may occur due to the typically higher levels of organic matter content of sediments as compared to surface soils (ATSDR 2000). Volatilization from either subsurface soil or water is not expected to be a major transport pathway, although it may occur from surface soils (ATSDR, 2000). As with PCP and other lipophilic pesticides, CDDs and CDFs tend to bioaccumulate in exposed organisms, with BCFs for aquatic organisms ranging from 5,000 to 10,000 (Montgomery, 1996). Uptake from soil by plants can occur, although it is limited by the strong adsorption of these compounds to soils. BCFs in plants have been measured to be 0.0002, with most accumulation occurring in the roots with little translocated to the foliage (ATSDR, 2000). Terrestrial organisms may accumulate CDDs and CDFs as a result of direct ingestion and contact with soils.

At the Pharsalia site, PCP is expected to be adsorbed to soil organic matter content, although leaching may occur due to the expected pH (slightly acidic) and low organic matter content in site soils (TOCs of 0.043% in SB-11 [8-10']). However, leaching is most likely not occurring as there has been no PCP detected in any of the monitoring wells. Some photolysis of PCP from M://193reps/DEC/Pharsalia RI\_Feb03

surface soils can be expected. Uptake of PCP from soil by plants or terrestrial organisms may occur, but biomagnification is not expected. CDDs and CDFs are expected to be strongly sorbed to soil, as well as persistent. Leaching of these compounds is likely to be limited. Accumulation of these compounds in plants as a result of root uptake is unlikely to be significant, although absorption of CDDs and CDFs deposited on leaves as a result of windborne migration may occur. Accumulation in terrestrial organisms may occur as a result of soil ingestion.

#### Fuel Oil

At the site, PCP was mixed with No. 2 fuel oil for wood treatment application. Fuel oils are mixtures of numerous aliphatic and aromatic hydrocarbons. Individual components of fuel oil include n-alkanes, branched alkanes, benzene and alkylbenzenes, naphthalenes, and PAHs (ATSDR, 2000). Primary constituents identified in soil and/or groundwater at the site are PAHs. Soil adsorption, volatilization to air, and leaching potential depend on a PAH's individual chemical characteristics; however, as a class of compounds, they are generally insoluble in water, with a strong tendency to bind to soil or sediment particles. Some of the lighter-weight PAHs (such as naphthalene, acenaphthene, and phenanthrene) may volatilize from soil or groundwater into the air. Degradation may occur through photolysis, oxidation, biological action, and other mechanisms. Microbial degradation appears to be a major degradation pathway in soil (ATSDR, 2000).

As nonpolar, organic compounds, PAHs may be accumulated in aquatic organisms from water, soil, sediments, and food. BCFs vary among PAHs and receptor species, but in general, bioconcentration is greater for the higher molecular weight compounds than for the lower molecular weight compounds (ATSDR, 2000). BCFs for accumulation of PAHs by plants from soil are low, with values of 0.001 to 0.18 reported for total PAHs (ATSDR, 2000). Accumulation of PAHs from soil by terrestrial organisms is also limited, with BCF values for voles of 12 reported for phenanthrene and 31 for acenapthene.

At this site, PAHs, the primary fuel oil constituents of interest, are expected to be adsorbed to soil, with limited potential for leaching. Microbial degradation may occur, with other degradation processes less important in soil. Uptake of PAHs from soil by terrestrial organisms or plants may occur, but bioconcentration is expected to be limited.

#### 3.3.3.3 Points of Exposure

The exposure point is a location where actual or potential human contact with a contaminated medium may occur. Analytical results for samples collected at Camp Pharsalia indicate that soil and groundwater have been impacted by numerous contaminants, including the following:

# Pentachlorophenol (PCP);

- Polychlorinated dioxins (CDDs) and dibenzofurans (CDFs); and
- Fuel oil.

Analytical results from samples collected across the site indicate that contaminants have been identified in surface soils (0-2 inches bgs) northwest of the treatment plant and in subsurface soil samples collected beneath the treatment plant.

Groundwater samples showed low concentrations of a few semi-volatile organic compounds that were detected at estimated concentrations below the reporting limit. PCP was not detected in any groundwater sample.

Dioxins and furans were detected in the four wells in which they were analyzed (PMW-1, PMW-2, PMW-4, and PMW-5) during the PI completed in 1998.

The water supply well used by the facility is located at the site located approximately 250 feet northeast of the treatment plant. It was installed in bedrock at a depth of 300 feet below grade, as compared to the monitoring wells at the site that are screened at depths of 10 – 20 feet below grade. This well was previously sampled by New York State Department of Health in May 1998 and analyzed for VOCs, SVOCs, pesticides and PCBs, and metals. No volatiles, pesticides, PCP, or PCBs were detected, and does not appear to be impacted by the site. Sampling of this well in June 2001 and analysis for ketones and petroleum products and herbicides (including PCP), confirmed that this well was not impacted by fuel oil or PCP.

#### 3.3.3.4 Potential Receptors and Exposure Routes

Exposure assessment includes a description of the potentially exposed persons who live, work, play, visit, or otherwise come to the site or surrounding environment. Consideration is given to the characteristics of the current populations (including sensitive subpopulations) as well as those of any potential future populations that may be exposed under any reasonable foreseeable future site activities and uses.

Camp Pharsalia is currently maintained as a NYSDEC management area and as a NYSDCS correctional facility, and is located in a heavily wooded, rural area. Inmates at Camp Pharsalia and NYSDEC employees conduct no activities in the impacted area. In fact, inmates have been instructed not to go in this area. This area is, however, currently accessible (i.e. no fence or gate limits access), nor are there any deed restrictions on the property that would restrict future land use. Therefore, the following receptors have been identified for the site under current and reasonable foreseeable future land use scenarios:

#### **Current Use**

• Adult inmates and staff at Camp Pharsalia (infrequent); and

#### **Future Use**

- Construction workers performing excavation activities
- NYSDEC Maintenance and Operations activities

The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption). Based on the nature of the chemicals of potential concern, the types of media impacted at the site, and land use scenarios, the following exposure routes were identified:

- Incidental ingestion of and dermal contact with soil and groundwater, and the inhalation of particulate-bound contaminants.
- Direct contact with groundwater used as a future drinking water source. Routes of exposure include ingestion and dermal contact.

There is some potential for the uptake of site contaminants (PCP and dioxins) by terrestrial organisms that may then be consumed as game species. Terrestrial game likely to be hunted in this area would include species such as white-tailed deer and turkey. Both species consume vegetation; additionally, turkeys are opportunistic feeders that will also include invertebrates to their diet. Uptake by plants from soil is not expected to result in significant bioaccumulation in plants. In addition, the area of impact is small relative to the expected home range of these two species. White-tailed deer have a home range of 120 to 400 acres (Burnett et al. 2002), while turkey can have a home range of 1000 acres or more (North Caroline State University 1995). Any contribution of site-related contaminants to the body burden of these species is, therefore, expected to be insignificant.

#### 3.3.4 Conclusions

Complete exposure pathways have been identified for potential current and future human receptors based on exposure to contaminated soil and groundwater, although such exposures are expected to be very infrequent. The impacted area (PCP and dioxins and furans) is located under the treatment plant and in a small area of surface soils west of the treatment plant.

Given the limited potential for exposure to soil and the relatively small size of the areas where concentrations exceed standards, potential site exposures are unlikely to pose a significant risk M:/193reps/DEC/Pharsalia RI\_Feb03

to human health under current use. In addition, the soil standards are based on long-term exposure on a frequent basis. Actual exposures at this site are very infrequent, and not likely to occur over an extended period of time. Site concentrations may pose a significant risk in the future if site use were to change, resulting in increased exposure to the area of concern.

Groundwater concentrations of SVOCs from the recent round of sampling were all below either applicable groundwater criteria or standards (NYSDEC, 1998). The concentration of heptachlor epoxide at PMW-4 of 0.11 ug/L was above the groundwater standard of 0.03 ug/L. This pesticide was not detected in any other groundwater sample, nor is it known to be site-related. Concentrations of dioxins and furans at PMW-5 in 1999 (190 pg/L 2,3,7,8-TCDD equivalents) were higher than the groundwater standard of 0.7 pg/L 2,3,7,8-TCDD equivalents. However, PCP was not detected in this well in either round of sampling, making the origin of these compounds unclear. Since there is no use of shallow groundwater for drinking water purposes, the presence of dioxins and furans at PMW-5 does not pose a risk to human health under current use. Site groundwater concentrations may pose a significant risk in the future if shallow groundwater at the site were to be used for drinking water purposes.

#### 4.0 CONCLUSIONS

### **Background**

- The previous Preliminary Investigation Report determined that additional investigative activities were required around the wood treatment plant.
- This Remedial Investigation addresses the area of the treatment plant.

### Site Specific Geology

 Overburden at the site consists of brown top soil underlain by glacial lodgement till, interspersed with sand lenses.

## Site Specific Hydrogeology

- Depth to groundwater ranges from approximately three (3) to six (6) feet below ground surface (bgs).
- Groundwater appears to flow in a northwesterly direction.
- Recharge of the water table is likely provided by precipitation infiltrating areas of the site.

#### **Nature and Extent of Contamination**

#### **Surface Soils**

- Nine (9) surface soil samples were collected and analyzed for SVOCs, dioxins and metals.
- SVOCs were randomly detected in five (5) of the nine (9) samples ranging in concentration from of 96 ug/kg to 271,870 ug/kg.
- PCP was detected above TAGM 4046 guidance values in SS-5, SS-6, SS-8 and SS-9, which were installed west of the treatment plant.
- SS-5 exhibited the highest total SVOC and PCP concentrations.
- Metal results were compared to the background soil samples collected in October 2002 at Camp Georgetown. Zinc, nickel, iron, chromium and beryllium were the most frequently detected metals and were detected in all of the surface soil samples.
- Dioxins and furans were detected in all of the surface soil samples.
- SS-5, SS-6, SS-8 and SS-9 exhibited dioxin concentrations above the 1.0 ppb 2,3,7,8-TCDD equivalence screening level.

- The area west of the treatment plant is contaminated with PCP and dioxins to a depth of at least 6 inches based on surface soil results from the PI and RI. Figure 7 includes an outlined area of contamination.
- Metals exceedences most likely represent natural soil concentrations as they are not related to wood treatment activities.
- A total volume of 20 cubic yards of surface soil to a depth of 4 inches is anticipated to be contaminated.

#### **Subsurface Soils**

- Fourteen (14) subsurface soil samples were collected and analyzed for SVOCs and dioxins.
- PCP was detected above TAGM 4046 guidance values in the soil samples collected beneath the treatment plant during the PI.
- Dioxins and furans were detected above the 1.0 ppb 2,3,7,8-TCDD equivalence screening level in the soil samples collected beneath the treatment plant during the PI.
- The area beneath the treatment plant is contaminated with PCP and dioxins to a depth of at least 4 feet based on the subsurface soil results from the PI. **Figure 8** includes an outlined area of contamination.
- A total volume of 110 cubic yards of subsurface soil to a depth of 4 feet is anticipated to be contaminated.

#### **Groundwater**

- Based on the results of the three (3) groundwater sampling events, fuel oil components exist in monitoring wells PMW-5 and PMW-6.
- No PCP was detected in any of the monitoring wells during any sampling event.
- Based on the most recent groundwater sampling event (November 2002), groundwater in the area of the treatment plant is not impacted with PCP or dioxin.

#### **Water Supply Wells**

 No evidence of PCP or dioxins were detected in any of the supply wells which are screened in bedrock, located away from the treatment plant, and sampled by the NYSDOH.

#### **Qualitative Exposure Assessment**

- Sources of contamination to the environment exist at the site and are associated with historical releases and surficial spills of wood treatment products.
- Contaminants of concern include PCP, fuel oil and dioxins.

- Points of exposure include surficial soil and groundwater.
- Exposure routes were identified under current land use conditions
- Based on the exposure routes and limited access to the affected area, inmates and staff at Camp Pharsalia do not have significant exposure risk based on current land use.

# 5.0 RECOMMENDATIONS

- The existing treatment plant should be removed and disposed of.
- A feasibility study should be completed for further remedial action at this site.

#### 6.0 REFERENCES

- Preliminary Investigation Report; Camp Pharsalia, New York State Department of Environmental Conservation, Division of Environmental Remediation; August 1999.
- Division Technical and Administrative Guidance Memorandum; Determination of Soil Cleanup Objectives and Cleanup Levels HWR 4046, New York State Department of Environmental Conservation; January 1994.
- Division of Water Technical and Operational Guidance Series (1.1.1); Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmental Conservation; June 1998.
- Qualitative Human Health Exposure Assessment for the Camp Pharsalia Site; Shaw Environmental, Inc., December 2002.

# TABLES

Table 1 Sample Summary Table Remedial Investigation

| Groundwater Existing Wells |               |      |          |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---------------|------|----------|--|--|--|--|--|--|--|--|--|--|
| Location                   | Fuel Oil      | SVOC | Pest/PCB |  |  |  |  |  |  |  |  |  |  |
| Analytical Method          | 310-34/310-13 | 8270 | 8080     |  |  |  |  |  |  |  |  |  |  |
| PMW-1                      | 1             | 1    | 1        |  |  |  |  |  |  |  |  |  |  |
| PMW-2                      | 1             | 1    | 1        |  |  |  |  |  |  |  |  |  |  |
| PMW-3                      | 1             | 1    | 1        |  |  |  |  |  |  |  |  |  |  |
| PMW-4                      | 1             | 1    | 1        |  |  |  |  |  |  |  |  |  |  |
| PMW-5                      | 1             | 1    | 1        |  |  |  |  |  |  |  |  |  |  |
| PMW-6A                     | 1             | 1    | 0        |  |  |  |  |  |  |  |  |  |  |

| Surface Soil Samples |      |        |           |  |  |  |  |  |  |  |  |  |  |
|----------------------|------|--------|-----------|--|--|--|--|--|--|--|--|--|--|
| Location             | SVOC | Metals | Dioxin    |  |  |  |  |  |  |  |  |  |  |
| Analytical Method    | 8270 | TAL    | 8290/8280 |  |  |  |  |  |  |  |  |  |  |
| SS-1                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-2                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-3                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-4                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-5                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-6                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-7                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-8                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |
| SS-9                 | 1    | 1      | 1         |  |  |  |  |  |  |  |  |  |  |

| Soil Boring Samples |      |           |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|------|-----------|--|--|--|--|--|--|--|--|--|--|--|
| Location            | SVOC | Dioxin    |  |  |  |  |  |  |  |  |  |  |  |
| Analytical Method   | 8270 | 8290/8280 |  |  |  |  |  |  |  |  |  |  |  |
| SB-1                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-2                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-3                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-4                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-5                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-6                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-7                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-8                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-9                | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-10               | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-11               | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-12               | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| SB-13               | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |
| PMW-6A              | 1    | 1         |  |  |  |  |  |  |  |  |  |  |  |

#### Table 2 **Surface Soil Sample Analytical Results** Camp Pharsalia

| Analyte (Units)              | TAGM       | SS-1                  | SS-2             | SS-3           | SS-4         | SS-5      | SS-6     | SS-7          | SS-8      | SS-9        | PSS-1    | PSS-2    | PSS-3    | PSS-4 | PSS-5    |
|------------------------------|------------|-----------------------|------------------|----------------|--------------|-----------|----------|---------------|-----------|-------------|----------|----------|----------|-------|----------|
| SVOC (mg/kg)                 |            | L                     |                  |                | <u>.</u>     | ı         |          | L             |           |             |          |          | L        | ų.    |          |
| Bis (2-ethylhexyl) phthalate | 50         | < 0.33                | < 0.33           | <5.9           | <1.65        | <5.9      | 0.17 J   | < 0.33        | < 0.33    | <1.65       | -        | -        | -        | -     | -        |
| Chrysene                     | 0.4        | <0.33                 | <0.33            | <4.0           | <1.65        | 0.26 J    | <1.65    | <0.33         | < 0.33    | <1.65       | -        | -        | -        | -     | -        |
| Di-n-butyl phthalate         | 8.1        | < 0.33                | <0.33            | <4.0           | <1.65        | <3.5      | <0.33    | <0.33         | 0.044 J   | <1.65       | -        | -        | -        | -     | -        |
| Fluoranthene                 | 50         | <0.33                 | <0.33            | <5.9           | <1.65        | 0.31 J    | 0.12 J   | <0.33         | < 0.33    | <0.33       | -        | -        | -        | -     | -        |
| Pentachlorophenol            | 1          | <1.6                  | <1.6             | <16            | <80          | 270 D     | 70 D     | 0.096 J       | 1.0 J     | 7.8         | 550      | 10       | 25       | 0.74  | 1.9      |
| Pyrene                       | 50         | <0.33                 | <0.33            | <5.9           | <1.65        | 1.3       | 0.57 J   | <0.33         | <0.33     | <1.65       | -        | -        | -        | -     | -        |
| Total SVOC                   |            | BDL                   | BDL              | BDL            | BDL          | 271.87 J  | 70.86 J  | 0.096 J       | 1.044 J   | 7.8         | -        | -        | -        | -     | -        |
| Metals (mg/kg)               | Background | SS-1                  | SS-2             | SS-3           | SS-4         | SS-5      | SS-6     | SS-7          | SS-8      | SS-9        | -        | -        | -        | -     | -        |
| Aluminum                     | 135200     | 11800 J               | 12300 J          | 11000 J        | 12400 J      | 9960 J    | 13700 J  | 14100 J       | 14400 J   | 12500 J     | _        | _        | _        | _     | _        |
| Antimony                     | 0.974      | 1.8 B                 | 1.1 B            | 1.4 B          | 0.94 B       | 1.0 B     | 1.3 B    | 0.97 B        | 1.1 B     | 1.5 B       | _        | _        | _        | _     | _        |
| Arsenic                      | 8.04       | 8.5                   | 7.5              | 9              | 7.5          | 5         | 10.3     | 7.7           | 7.4       | 3.8         | _        | _        | _        | _     | _        |
| Barium                       | 40.82      | 67.9 J                | 62.2 J           | 58.0 J         | 67.6 J       | 52.8 J    | 85.0 J   | 67.2 J        | 79.5 J    | 74.6 J      | -        | -        | -        | -     | -        |
| Berillium                    | 0.45       | 0.52 B                | 0.41 B           | 0.41 B         | 0.47 B       | 0.36 B    | 0.54 B   | 0.49 B        | 0.53 B    | 0.49 B      | _        | _        | _        | _     | _        |
| Cadmium                      | U          | 0.18 B                | <0.03            | <0.04          | 0.10 B       | <0.03     | <0.04    | 0.26 B        | <0.03     | <0.03       | _        | _        | _        | _     | _        |
| Calcium                      | 430        | 1570 J                | 636 J            | 2680 J         | 1070 J       | 755 J     | 1190 J   | 544 B         | 916 J     | 967 J       | _        | _        | _        | _     | _        |
| Chromium                     | 17.44      | 15.1 J                | 14.6 J           | 14.2 J         | 15.9 J       | 13.7 J    | 18.4 J   | 16.4 J        | 19.4 J    | 16.8 J      | _        | _        | _        | _     | _        |
| Cobalt                       | 9.74       | 10.9 J                | 11.2 J           | 10.6 J         | 12.6 J       | 8.2 J     | 13.7 J   | 13.1 J        | 12.9 J    | 11.6 J      | _        | _        | _        | _     | _        |
| Copper                       | 13.32      | 23.1 J                | 18.4 J           | 36.7 J         | 119 J        | 80.4 J    | 79.2 J   | 57.7 J        | 50.4 J    | 139 J       | _        | _        | _        | _     | _        |
| Iron                         | 26060      | 25300 J               | 25800 J          | 24100 J        | 28800 J      | 23400 J   | 31800 J  | 26500 J       | 33600 J   | 29900 J     | _        | _        | _        | _     | _        |
| Lead                         | 10.42      | 20.8 J                | 17.7 J           | 20.6 J         | 22.2 J       | 41.9 J    | 77.2 J   | 50.8 J        | 38.2 J    | 145 J       | _        | _        | _        | _     | _        |
| Magnesium                    | 3532       | 3510 J                | 3240 J           | 3620 J         | 4230 J       | 3440 J    | 4660 J   | 3150 J        | 4980 J    | 4310 J      | _        | _        | _        | _     | _        |
| Manganese                    | 298.2      | 805 J                 | 947 J            | 558 J          | 807 J        | 253 J     | 960 J    | 740 J         | 692 J     | 698 J       | _        | _        | _        | _     | _        |
| Nickel                       | 22.94      | 22.8 J                | 22.2 J           | 23.9 J         | 29.0 J       | 21.3 J    | 30.2 J   | 21.5 J        | 32.2 J    | 28.0 J      | _        | _        | _        | _     | _        |
| Potassium                    | 626.6      | 860 J                 | 718 J            | 820 J          | 670 J        | 775 J     | 1060 J   | 718 J         | 906 J     | 760 J       | -        | _        | _        | _     | _        |
| Selenium                     | 1.3        | 1.6                   | 1                | 1.1            | 1.1          | 1.1       | 1.4      | 1.6           | 1.6       | 1.3         | -        | _        | _        | _     | _        |
| Silver                       | U          | 0.41 B                | 0.17 B           | <0.11          | <0.10        | <0.10     | <0.11    | <0.12         | <0.10     | <0.10       | -        | _        | _        | _     | _        |
| Mercury                      | 0.0158     | 0.064                 | 0.028 B          | <0.021 B       | 0.008 B      | 0.016 B   | 0.011 B  | 0.037 B       | 0.012 B   | 0.011 B     | -        | _        | _        | _     | _        |
| Sodium                       | 38.34      | 50.4 B                | 40.0 B           | 73.3 B         | 44.9 B       | <29.6     | 45.4 B   | <37.0         | 61.9 B    | 43.5 B      | -        | _        | _        | _     | _        |
| Thallium                     | U          | <0.61 J               | <0.59 J          | <0.63 J        | <0.55 J      | <0.57 J   | <0.61 J  | <0.70 J       | <0.58 J   | <0.60 J     | _        | _        | _        | _     | -        |
| Vanadium                     | 17.6       | 15.0 J                | 15.9 J           | 15.3 J         | 14.0 J       | 11.9 J    | 16.7 J   | 18.4 J        | 17.2 J    | 16.1 J      | _        | _        | _        | _     | -        |
| Zinc                         | 53.66      | 57.1 J                | 53.8 J           | 56.6 J         | 61.9 J       | 49.4 J    | 69.5 J   | 64.0 J        | 72.3 J    | 59.9 J      | _        | _        | _        | _     | -        |
| Dioxins (ng/g)               | TEF's      | SS-1                  | SS-2             | SS-3           | SS-4         | SS-5      | SS-6     | SS-7          | SS-8      | SS-9        | -        | _        | _        | _     | _        |
| Total TCDF                   | 12.0       | 0.001 J               | 0.00092          | 0.014          | 0.037        | <0.15     | <0.29    | 0.021         | <0.087    | <0.13       | _        | _        | _        | _     | _        |
| Total PeCDF                  |            | 0.31 J                | 0.031            | 0.2            | 0.59         | <0.59     | 2.1 J    | 3.4           | <0.75     | 1.3 J       | _        | _        | _        | _     | _        |
| TotalHxCDF                   |            | 0.49 J                | 0.43             | 2.2            | 6.3          | 47 J      | 25 J     | 7.9           | 14 J      | 24 J        | _        | _        | _        | _     | -        |
| Total HpCDF                  |            | 1.9 J                 | 1.5              | 7              | 24 J         | 270 J     | 130 J    | 53            | 66        | 100 J       |          | _        | _        | _     | _        |
| Total TCDD                   |            | 0.001 J               | 0.0016           | 0.0086         | 0.0088       | <0.027    | <0.053   | 0.015         | <0.037    | <0.050      |          | _        | _        | _     | _        |
| Total PeCDD                  |            | 0.019 J               | 0.0083           | 0.083          | 0.15         | <0.48     | <0.51    | 0.2           | <0.49     | <0.76       |          | _        | _        | _     | _        |
| Total HxCDD                  |            | 0.49 J                | 0.36             | 1.4            | 3.7          | 30 J      | 19 J     | 4.1           | 10 J      | 18 J        | _        | _        | _        | _     | -        |
| Total HpCDD                  |            | 5 J                   | 3.3              | 15             | 47           | 730 J     | 560 J    | 44            | 220 J     | 350 J       | _        | _        | _        | _     | -        |
| 2,3,7,8-TCDD                 | 1          | 0.0011 J              | 0.00083 J        | 0.0028         | 0.0035       | <0.027    | <0.053   | 0.0065        | <0.037    | <0.050      | _        | _        | _        | _     | _        |
| 1,2,3,7,8-PeCDD              | 0.5        | 0.01 J                | 0.0083           | 0.032          | 0.056        | <0.48     | <0.51    | 0.1           | <0.49     | <0.76       | _        | _        | _        | -     | -        |
| 1,2,3,4,7,8-HxCDD            | 0.3        | 0.029 J               | 0.021 J          | 0.068 J        | 0.18 J       | 0.72 J    | 0.70 J   | 0.25 J        | <0.62     | 1.1 J       | _        | _        | _        | -     | -        |
| 1,2,3,6,7,8-HxCDD            | 0.1        | 0.12 J                | 0.099            | 0.39           | 1.2          | 13 J      | 7.2 J    | 1.3           | 3.7 J     | 5.8 J       | _        | _        | _        | -     | -        |
| 1,2,3,7,8,9-HxCDD            | 0.1        | 0.074 J               | 0.056 J          | 0.2 J          | 0.44 J       | 2.1 J     | 1.8 J    | 0.59 J        | 1.4 J     | 2.5 J       | _        | _        | _        | _     | -        |
| 1,2,3,4,6,7,8-HpCDD          | 0.01       | 3.2 E J               | 2.1              | 9.3 EJ         | 30 D         | 520 EJ    | 370 EJ   | 28.0 D        | 150 EJ    | 230 EJ      | _        | _        | _        | -     | -        |
| OCDD                         | 0.0001     | 23.0 E J              | 13.0 EJ          | 58.0 EJ        | 210 DEJ      | 2500 EJ   | 1700 EJ  | 170.0 D       | 600 EJ    | 870 EJ      | _        | _        | -        | _     | -        |
| 2,3,7,8-TCDF                 | 0.1        | <0.05 J               | 0.00092 JCON     | 0.0037 CON     | 0.011 CON    | <0.15     | <0.29    | 0.0043 CON    | <0.087    | <0.13       | _        | _        | _        | _     | -        |
| 1,2,3,7,8-PeCDF              | 0.05       | 0.0039 J              | 0.0052 J         | 0.025          | 0.066        | <0.34     | <0.18    | 0.031         | <0.35     | <0.40       | _        | _        | _        | _     | -        |
| 2,3,4,7,8-PeCDF              | 0.5        | 0.0031 J              | <0.0029          | 0.015          | 0.047        | <0.33     | <0.17    | 0.024         | <0.35     | <0.39       | -        | _        | _        | _     | -        |
| 1,2,3,4,7,8-HxCDF            | 0.1        | 0.018 J               | 0.021            | 0.1            | 0.24         | 1.2 J     | 0.78 J   | 0.4           | <0.55     | 0.87 J      | _        | _        | _        | _     | -        |
| 1,2,3,6,7,8-HxCDF            | 0.1        | 0.012 J               | 0.012            | 0.057          | 0.11         | <0.42     | <0.29    | 0.16          | <0.29     | <0.49       | -        | _        | _        | _     | -        |
| 2,3,4,6,7,8-HxCDF            | 0.1        | 0.012 J               | 0.0083           | 0.045          | 0.086        | 1.1 J     | 0.78 J   | 0.10          | <0.46     | 1.0 J       |          | _        | _        | -     | -        |
| 1,2,3,7,8,9-HxCDF            | 0.1        | <0.00113<br><0.0013 J | <0.002           | 0.0079         | 0.02         | <0.14     | <0.067   | 0.0095        | <0.12     | <0.17       |          | _        |          | _     | -        |
| 1,2,3,4,6,7,8-HpCDF          | 0.01       | 0.51 J                | 0.37             | 1.7            | 5.3 DJ       | 50 EJ     | 27 J     | 12.0 D        | 16 J      | 25 J        | -        | _        | _        | _     | -        |
| 1,2,3,4,7,8,9-HpCDF          | 0.01       | 0.037 J               | 0.029            | 0.13           | 0.36 DJ      | 3.4 J     | 2 / J    | 0.78 D        | 0.99 J    | 1.6 J       | -        | _        | _        | _     | -        |
| OCDF                         | 0.001      | 1.9 J                 | 1.3              | 6.5 EJ         | 20.0 D       | 450 EJ    | 100 EJ   | 53.0 D        | 56 EJ     | 81 EJ       | <u>-</u> |          | _        | _     | <u> </u> |
| 2,3,7,8-TCDD Equivalance     |            |                       | 0.053482 JECON   |                |              |           |          | 0.78253 DCON  |           |             | <u>-</u> |          | _        | -     | -        |
| Notes:                       | 1.0        | 2.07.0010 0L          | 3.300-101 0E0014 | J.202-10 E0014 | 5.0000 BEOOK | 7.0-71 E0 | 0.200 20 | 2.7 0200 DOON | 2.2.30 L0 | 3.7 03 T EU |          | <u> </u> | <u> </u> | 1     |          |

\*PSS results from PIR PCP Immunoassay Results

Bold Text=Analyte detected above laboratory method detection limit

Shaded Text=Exceedence of TAGM soil cleanup objectives to protect groundwater quality

Only analytes detected at or above laboratory method detection limits included on tables

# SVOC Data Qualifiers: All results in mg/kg

U=Analyte was not detected above laboratory detection limits

J=Estimated Value

B=Analyte was found in method blank as well as the sample

# <u>Dioxins Data Qualifiers</u> All results in ng/g

D=Result obtained from dilution

J=Estimated result, result is less than the reporting limit

E=Estimated result, result exceeds calibration range

CON=Confirmation analysis

# Metals Data Qualifiers

All results in mg/kg

B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit J=Estimated result, result is less than the reporting limit

# Table 3 Subsurface Soil Boring Analytical Results Camp Pharsalia

| Analyte (Units)            | TAGM   | SB-1       | SB-2      | SB-3      | SB-4        | SB-5       | SB-6      | SB-7         | SB-8          | SB-8      | SB-9      | SB-9      | SB-10     | SB-10     | SB-11          | SB-12     | SB-12     | SB-13     | SB-13     | PMW-6A    | PMW-6A    | PB-1 | PB-2    | PB-3    | PB-4    | PB-6 | PB-7 | PB-11 | PTP-1     | PTP-2     | PTP-3     | PTP-4     | PTP-5     | PTP-6     | PTP-7    |           | PTP-9      |
|----------------------------|--------|------------|-----------|-----------|-------------|------------|-----------|--------------|---------------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|------|---------|---------|---------|------|------|-------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|------------|
| Analyte (Omts)             |        | 10-12'     | 10-12'    | 10-12'    | 6-8'        | 8-10'      | 4-6'      | 2-4'         | 6-8'          | 10-12'    | 8-10'     | 12-14'    | 12-14'    | 14-16'    | 10-12'         | 4-6'      | 12-14'    | 8-10'     | 12-14'    | 6-8'      | 12-14'    | 0-4' | 0-4'    | 0-4'    | 0-4'    | 0-4' | 0-2' | 0-2'  | 10'x2'x8' | 11'x2'x7' | 12'x2'x7' | 11'x2'x7' | 12'x2'x9' | 12'x2'x8' | 9'x2'x6' | 11'x2'x6' | 10'x2'x10' |
| SVOC (mg/kg)               |        |            |           |           |             |            |           |              |               |           |           |           |           |           |                |           |           |           |           |           |           |      |         |         |         |      |      |       |           |           |           |           |           |           |          |           |            |
| Acenaphthene               | 50     | < 0.33     | 0.13 J    | 0.046 J   | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | < 0.38    | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | 0.38      | < 0.39    | -    | -       | -       | -       | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        | <u> </u>  |            |
| Bis(2-ethylhexyl)Phthalate | 50     | -          | -         | -         | -           | -          | -         | -            | 0.055 J       | < 0.38    | 0.023 J   | 0.021 J   | 0.048 J   | 0.13 J    | 0.035 J        | < 0.37    | 0.053 J   | 0.074 J   | < 0.37    | 0.024 J   | 0.031 J   | -    | -       | -       | -       | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      | 1 - 1     |            |
| Dibenzofuran               | 6.2    | < 0.33     | 0.081 J   | 0.039 J   | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | <0.38     | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | -       | -    | -    | -     | -         | -         | -         | -         | -         | -         |          |           | -          |
| Di-n-butyl phthalate       | 8.1    | < 0.33     | 0.075 J   | < 0.33    | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | < 0.38    | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | -       | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      | 1 - 1     |            |
| Fluorene                   | 50     | 0.025 J    | 0.3 J     | 0.15 J    | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | <0.38     | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | 3000 JD | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        | -         | -          |
| 2-Methylnaphthalene        | 36.4   | < 0.33     | 0.14 J    | 0.019 J   | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | < 0.38    | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | 8100 D  | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      | 1 - 1     |            |
| Pentachlorophenol          | 1      | < 0.33     | < 0.33    | < 0.33    | < 0.33      | < 0.33     | < 0.33    | < 0.33       | < 0.94        | < 0.94    | < 0.92    | < 0.92    | < 0.96    | < 0.92    | < 0.91         | < 0.92    | < 0.89    | < 0.97    | < 0.92    | < 0.96    | <0.97     | 111  | 330     | 128     | 82      | 0.16 | 0.24 | 0.22  | ND        | 0.14      | 0.18      | 0.2       | 0.22      | ND        | 0.16     | 0.19      | 56         |
| Phenanthrene               | 50     | 0.1 J      | 0.64      | 0.4       | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | < 0.38    | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | 6300 D  | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| Pyrene                     | 50     | < 0.33     | 0.046 J   | 0.018 J   | < 0.33      | < 0.33     | < 0.33    | < 0.33       | <0.38         | <0.38     | < 0.37    | < 0.37    | <0.38     | < 0.37    | < 0.36         | < 0.37    | < 0.35    | < 0.39    | < 0.37    | <0.38     | < 0.39    | -    | -       | -       | 1800 JD | -    | -    | -     | -         | -         | -         | -         | -         | -         |          | T         | -          |
| Total SVOCs                |        | 0.125 J    | 1.412 J   | 0.672 J   | BDL         | BDL        | BDL       | BDL          | 0.055 J       | BDL       | 0.023 J   | 0.021 J   | 0.048J    | 0.13 J    | 0.035 J        | BDL       | 0.053 J   | 0.074 J   | BDL       | 0.024 J   | 0.031 J   | -    | -       | -       | 101.2   | -    | -    | -     | -         | -         | -         | -         | -         | -         |          |           | -          |
| Dioxins (ng/g)             | TEF's  | SB-1       | SB-2      | SB-3      | SB-4        | SB-5       | SB-6      | SB-7         | SB-8          | SB-8      | SB-9      | SB-9      | SB-10     | SB-10     | SB-11          | SB-12     | SB-12     | SB-13     | SB-13     | PMW-6A    | PMW-6A    | PB-1 | PB-2    | PB-3    | PB-4    | PB-6 | PB-7 | PB-11 | PTP-1     | PTP-2     | PTP-3     | PTP-4     | PTP-5     | PTP-6     | PTP-7    | PTP-8     | PTP-9      |
| Total TCDF                 |        | < 0.0003   | < 0.00036 | <0.00029  | < 0.00027   | < 0.00019  | < 0.00025 | 5 <0.00052   | < 0.00003     | < 0.00002 | < 0.00002 | <0.00002  | < 0.00001 | < 0.00001 | < 0.00011      | <0.00002  | < 0.00001 | < 0.00002 | < 0.00001 | <0.00002  | <0.00002  | -    | 0.136   | 0.0988  | 0.255   | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      | 1 - 1     |            |
| Total PeCDF                |        | < 0.0003   | <0.00058  | < 0.00056 | < 0.00022   | <0.0002    | < 0.0004  | <0.00084     | < 0.00031     | <0.00004  | < 0.00004 | <0.00005  | < 0.00004 | < 0.00007 | < 0.00012      | <0.00005  | < 0.00004 | <0.00007  | < 0.00003 | <0.00007  | <0.00009  | -    | 1.89    | 1.38    | 4.4     | -    | -    | -     | -         | -         | -         | -         | -         | -         |          |           |            |
| TotalHxCDF                 |        | <0.00096   | 0.022     | 0.014     | < 0.00076   | < 0.0023   | <0.0017   | <0.0016      | < 0.00003     | <0.00002  | < 0.00002 | <0.00002  | < 0.00002 | >0.00002  | < 0.00002      | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00003  | -    | 23.3    | 18      | 43.1    | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| Total HpCDF                |        | 0.0052     | 0.15      | 0.12      | 0.0039      | 0.019      | 0.0066    | 0.013        | < 0.00004     | < 0.00003 | <0.00005  | <0.00002  | < 0.00004 | < 0.00003 | < 0.00003      | <0.00005  | < 0.00016 | <0.00005  | <0.00005  | < 0.00003 | <0.00004  | -    | 83.4    | 80      | 126     | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      | 1 - 1     |            |
| Total TCDD                 |        | <0.00026   | <0.00058  | < 0.0004  | < 0.00016   | < 0.00013  | <0.00036  | 6 0.018      | < 0.00004     | <0.00002  | < 0.00002 | < 0.00002 | < 0.00002 | <0.00002  | < 0.00003      | <0.00002  | < 0.00002 | <0.00002  | < 0.00002 | <0.00002  | <0.00002  | -    | 0.00184 | 0.00149 | 0.00103 | -    | -    | -     | -         | 1         | -         | -         | -         | -         | -        | [ - J     |            |
| Total PeCDD                |        | <0.0015    | < 0.00079 | <0.002    | <0.00068    | <0.00036   | <0.00081  | 1 0.014      | < 0.00019     | <0.00008  | < 0.00003 | <0.00004  | < 0.00004 | < 0.00007 | < 0.00010      | <0.00005  | <0.00005  | <0.00004  | <0.00003  | <0.00004  | <0.00003  | -    | 0.0221  | 0.0497  | 0.0472  | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| Total HxCDD                |        | < 0.00057  | 0.012     | 0.0083    | <0.00068    | <0.00085   | <0.00069  | 9 0.0035     | <0.00010      | <0.00004  | < 0.00003 | <0.00006  | < 0.00004 | < 0.00003 | < 0.00004      | <0.00003  | <0.00003  | <0.00005  | < 0.00004 | <0.00003  | <0.00003  | -    | 7.15    | 5.83    | 8.2     | -    | -    |       | -         | 1         | -         | -         | -         | -         | -        | [ - J     | -          |
| Total HpCDD                |        | 0.015      | 0.18      | 0.15      | 0.013       | 0.031      | 0.017     | 0.023        | < 0.00012     | <0.00004  | < 0.00007 | <0.00004  | <0.00003  | < 0.00004 | < 0.00005      | <0.00004  | <0.00004  | <0.00014  | <0.00004  | <0.00004  | <0.00004  | -    | 141     | 99.2    | 136     | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 2,3,7,8-TCDD               | 1      | <0.00026   | <0.00058  | < 0.0004  | < 0.00016   | < 0.00013  | < 0.0036  | < 0.00064    | < 0.00004     | <0.00002  | <0.00002  | <0.00002  | < 0.00002 | <0.00002  | < 0.00003      | < 0.00002 | < 0.00002 | <0.00002  | <0.00002  | <0.00002  | <0.00002  | -    | 0.00037 | 0.00049 | 0       | -    | -    | -     | -         | 1         | -         | -         | -         | -         | -        | [ - J     | -          |
| 1,2,3,7,8-PeCDD            | 0.5    | < 0.0015   | < 0.00079 | <0.002    | <0.00068    | < 0.00036  | <0.00081  | 1 <0.0016    | < 0.00019     | <0.00008  | < 0.00003 | < 0.00004 | <0.00003  | < 0.00007 | < 0.00010      | <0.00005  | < 0.00005 | <0.00004  | <0.00003  | < 0.00004 | <0.00003  | -    | 0.0106  | 0.0249  | 0.0228  | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        | <u> </u>  |            |
| 1,2,3,4,7,8-HxCDD          | 0.1    | < 0.00029  | < 0.00067 | <0.00066  | < 0.00016   | < 0.00014  | < 0.00065 | 5 <0.00094   | <0.00010      | <0.00004  | < 0.00004 | <0.00006  | < 0.00004 | <0.00002  | < 0.00004      | <0.00003  | <0.00003  | <0.00005  | <0.00004  | <0.00003  | <0.00003  | -    | 0.1     | 0.142   | 0.135   | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 1,2,3,6,7,8-HxCDD          | 0.1    | < 0.00037  | 0.0061    | 0.0043 J  | < 0.00047   | <0.00085   | < 0.00069 | 9 <0.0012    | <0.00008      | < 0.00003 | < 0.00003 | <0.00005  | < 0.00003 | < 0.00002 | < 0.00003      | <0.00003  | < 0.00003 | <0.00004  | < 0.00003 | <0.00003  | < 0.00003 | -    | 3.19    | 2.48    | 3.91    | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        | <u> </u>  |            |
| 1,2,3,7,8,9-HxCDD          | 0.1    | < 0.00027  | < 0.0027  | <0.0013   | < 0.00026   | <0.00024   | < 0.00064 | 4 <0.00092   | <0.00008      | < 0.00003 | <0.00003  | <0.00005  | >0.00004  | < 0.00003 | < 0.00004      | <0.00003  | <0.00003  | <0.00004  | < 0.00003 | <0.00003  | <0.00003  | -    | 0.2     | 0.284   | 0.271   | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 1,2,3,4,6,7,8-HpCDD        | 0.01   | 0.0098     | 0.12      | 0.099     | 0.008       | 0.019      | 0.012     | 0.017        | < 0.00012     | <0.00004  | <0.00007  | <0.00004  | <0.00004  | < 0.00004 | < 0.00005      | <0.00004  | <0.00004  | <0.00014  | <0.00004  | <0.00004  | <0.00004  | -    | 90.5    | 63.9    | 89.1    | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        |           | -          |
| OCDD                       | 0.0001 | 0.063      | 0.55      | 0.5       | 0.05        | 0.16       | 0.045     | 0.042        | 0.00022 J     | < 0.00003 | < 0.00004 | <0.00004  | <0.00003  | < 0.00003 | 0.00014 JS     | <0.00003  | < 0.00003 | <0.00003  | <0.00005  | <0.00003  | <0.00003  | -    | 815     | 518     | 693     | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 2,3,7,8-TCDF               | 0.1    | <0.0003    | <0.00036  | <0.00029  | < 0.00027   | < 0.00019  | < 0.00025 | 5 <0.00052   | < 0.00002     | <0.00002  | <0.00002  | <0.00002  | <0.00001  | <0.00001  | <0.00011       | <0.00002  | <0.00001  | <0.00002  | <0.00001  | <0.00002  | <0.00002  | -    | 0.0564  | 0.0395  | 0.135   | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 1,2,3,7,8-PeCDF            | 0.05   | < 0.00024  | <0.00058  | <0.00056  | < 0.00015   | < 0.00014  | < 0.0004  | < 0.00079    | < 0.00031     | <0.00004  | < 0.00004 | <0.00005  | < 0.00004 | < 0.00007 | < 0.00012      | <0.00005  | < 0.00004 | <0.00007  | <0.00003  | <0.00007  | < 0.00009 | -    | 0.36    | 0.241   | 0.863   | -    | -    | -     | -         | -         | -         | -         | -         | -         | -        | <u> </u>  |            |
| 2,3,4,7,8-PeCDF            | 0.5    | < 0.00024  | < 0.00056 | < 0.00056 | < 0.00015   | < 0.00014  | < 0.0004  | < 0.00079    | < 0.00030     | <0.00004  | < 0.00004 | <0.00005  | < 0.00004 | < 0.00007 | < 0.00011      | < 0.00005 | < 0.00004 | < 0.00007 | < 0.00003 | < 0.00007 | < 0.00009 | -    | 0.25    | 0.179   | 0.577   | -    | -    | •     | -         | 1         | -         | -         | -         | -         |          | <u> </u>  |            |
| 1,2,3,4,7,8-HxCDF          | 0.1    | <0.00016   | <0.0011   | < 0.0012  | < 0.00017   | <0.0002    | <0.00049  | 9 <0.001 J   | <0.00002      | <0.00002  | <0.00002  | <0.00002  | <0.00001  | <0.00002  | < 0.00002      | < 0.00002 | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | -    | 1.17    | 0.821   | 2.65    | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 1,2,3,6,7,8-HxCDF          | 0.1    | <0.00028   | < 0.00092 | <0.00046  | < 0.00017   | < 0.000075 | < 0.00043 | 3 <0.00087 J | < 0.00003     | <0.00001  | <0.00001  | <0.00001  | <0.00001  | <0.00001  | < 0.00002      | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | -    | 0.38    | 0.308   | 0.837   | -    | -    | -     | -         | =         | -         | -         | -         | -         | -        |           |            |
| 2,3,4,6,7,8-HxCDF          | 0.1    | <0.00017   | <0.0011   | <0.0007   | <0.00018    | <0.000084  | <0.00054  | 4 <0.0011 J  | < 0.00003     | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | < 0.00002      | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00003  | -    | 0.116   | 0.0681  | 0.241   | -    | -    | -     | -         | -         | -         | -         | -         | -         |          |           |            |
| 1,2,3,7,8,9-HxCDF          | 0.1    | <0.00018   | < 0.0012  | < 0.0033  | <0.0002     | <0.00009   | < 0.00057 | 7 <0.0012 J  | < 0.00003     | <0.00002  | <0.00002  | <0.00002  | <0.00001  | <0.00002  | < 0.00002      | < 0.00002 | <0.00002  | <0.00002  | <0.00002  | <0.00002  | <0.00002  | -    | 0.281   | 0.201   | 0.591   | -    | -    | -     | -         | -         | -         | -         | -         | -         | - 1      |           | -          |
| 1,2,3,4,6,7,8-HpCDF        | 0.01   | <0.0016    | 0.03      | 0.024     | <0.002      | 0.0037 J   | <0.0022   | 0.0034 J     | < 0.00003     | <0.00003  | <0.00005  | <0.00002  | <0.00004  | <0.00002  | < 0.00003      | <0.00004  | < 0.00013 | <0.00004  | <0.00004  | <0.00003  | <0.00004  | -    | 17.8    | 15.7    | 28.2    | -    | -    | -     | =         | -         | -         | -         | -         | -         | -        | -         | -          |
| 1,2,3,4,7,8,9-HpCDF        | 0.01   | <0.00093   | < 0.002   | <0.0038   | <0.00046    | <0.0046    | <0.0006   | <0.00083     | <0.00004      | <0.00003  | <0.00005  | <0.00002  | <0.00004  | < 0.00003 | < 0.00003      | <0.00005  | <0.00016  | <0.00005  | <0.00005  | <0.00003  | <0.00004  | - 1  | 1.3     | 1.03    | 2.04    | -    | -    | -     | -         | -         | -         | -         | - [       | -         |          |           |            |
| OCDF                       | 0.0001 | 0.0077 J   | 0.18      | 0.16      | 0.0056 J    | 0.021      | 0.0073 J  | J 0.011 J    | < 0.00003     | <0.00002  | <0.00003  | <0.00003  | <0.00002  | <0.00004  | < 0.00003      | <0.00003  | <0.00003  | <0.00003  | <0.00003  | <0.00003  | <0.00003  | -    | 78.1    | 82.7    | 102     | -    | -    | -     | =         | -         | =         | -         | -         | -         | -        | - 1       | -          |
| 2,3,7,8-TCDD Equivalance   | 1.0    | 0.000105 J | 0.002183  | 0.001726  | 0.0000856 J | 0.000245 J | 0.000125  | J 0.000209 J | 0.000000022 J | BDL       | BDL       | BDL       | BDL       | BDL       | 0.000000014 JS | BDL       | BDL       | BDL       | BDL       | BDL       | BDL       | -    | 2.7     | 1.9     | 3.32    | -    | -    | -     | -         | -         | -         | -         | -         | -         |          |           | -          |

Notes:

\*\*PB results from PIR PCP Immunoassay Results

Bold Text=Analyte detected above laboratory method detection limit

Shaded Text=Exceedence of TAGM soil cleanup objectives to protect groundwater quality

Only analytes detected at or above laboratory method detection limits included on tables

Dioxins Data Qualifiers:

All results in ng/g
D=Result obtained from dilution
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

SVOC Data Qualifiers:
All results in mg/kg
<U=Analyte was not detected above laboratory detection limits
J=Estimated Value
B=Analyte was found in method blank as well as the sample

Table 4
Preliminary Investigation Groundwater Sampling Event Analytical Results
Camp Pharsalia

| Analyte (Units)          | TOGS   | PMW-1         | PMW-2           | PMW-3   | PMW-4          | PMW-5        |
|--------------------------|--------|---------------|-----------------|---------|----------------|--------------|
| VOCs (ug/L)              |        |               |                 |         |                |              |
| Acetone                  | 50     | 3.1 J         | ND              | 6.2 J   | ND             | 3.4 J        |
| SVOCs (ug/L)             |        |               |                 |         |                |              |
| Flourene                 | 50     | ND            | ND              | ND      | ND             | 1.6 J        |
| 2-Methylnaphthalene      | NA     | ND            | ND              | ND      | ND             | 1.6 J        |
| Phenanthrene             | 50     | ND            | ND              | ND      | ND             | 1.8 J        |
| Metals (mg/L)            | u.     |               |                 |         |                | J.           |
| Aluminum                 | 0.1    | 24.5          | 53.7            | 111     | 6.96           | 4.56         |
| Arsnic                   | 0.025  | 0.0634        | 0.0925          | 0.151   | 0.0406         | 0.0266       |
| Barium                   | 1      | 0.265         | 0.481           | 2.32    | 0.237          | 0.101        |
| Berillium                | 0.003  | ND            | ND              | 0.00585 | ND             | ND           |
| Cadmium                  | 0.005  | ND            | ND              | 0.018   | ND             | ND           |
| Calcium                  | NA     | 99.3          | 89              | 118     | 94.4           | 112          |
| Chromium                 | 0.05   | 0.0429        | 0.104           | 0.457   | 0.0199         | 0.01         |
| Cobalt                   | NA     | ND            | 0.0552          | 0.17    | ND             | ND           |
| Copper                   | 0.2    | 0.0434        | 0.0862          | 0.26    | ND             | ND           |
| Iron                     | 0.3    | 57.2          | 124             | 318     | 17             | 11.1         |
| Lead                     | 0.025  | 0.0354        | 0.0797          | 0.185   | 0.00993        | ND           |
| Magnesium                | 35     | 25.8          | 30.8            | 52.2    | 19.6           | 30           |
| Maganese                 | 0.3    | 1.99          | 3.04            | 7.11    | 1.29           | 1.47         |
| Nickel                   | 0.1    | 0.0589        | 0.124           | 0.841   | ND             | ND           |
| Potassium                | NA     | 3.9           | 10.8            | 15.4    | 3.04           | 2.84         |
| Selenium                 | 0.01   | ND            | ND              | 0.0456  | ND             | ND           |
| Silver                   | 0.05   | ND            | ND              | 0.0352  | ND             | ND           |
| Sodium                   | 20     | 8.63          | 172             | 31.6    | 29.8           | 6.24         |
| Thallium                 | 0.0005 | 0.0218        | 0.0257          | 0.0297  | 0.017          | 0.0187       |
| Vanadium                 | NA     | ND            | 0.0685          | 0.129   | ND             | ND           |
| Zinc                     | 2      | 0.137         | 0.26            | 0.597   | 0.0456         | 0.04         |
| Dioxins/Furans (ng/L)    | TEF's  |               |                 |         |                | J.           |
| 2,3,7,8-TCDD             | 1      | <0.00013      | 0.00026         | -       | 0.00055        | <0.001       |
| 1,2,3,7,8-PeCDD          | 0.5    | 0.00019 EMPC  | 0.00029         | -       | 0.00055 EMPC   | 0.00916      |
| 1,2,3,4,7,8-HxCDD        | 0.1    | 0.00027       | 0.00036         | -       | 0.0005         | 0.0295       |
| 1,2,3,6,7,8-HxCDD        | 0.1    | 0.00213       | 0.00069         | _       | 0.00098        | 0.185        |
| 1,2,3,7,8,9-HxCDD        | 0.1    | 0.00085       | 0.00083         | -       | 0.0009         | 0.0671       |
| 1,2,3,4,6,7,8-HpCDD      | 0.01   | 0.0543        | 0.00974         | -       | 0.0177         | 6.56         |
| OCDD                     | 0.001  | 0.468         | 0.129           | -       | 0.256          | 58.6         |
| 2,3,7,8-TCDF             | 0.1    | 0.00321       | 0.00329         | -       | 0.00364        | 0.00507      |
| 1,2,3,7,8-PeCDF          | 0.05   | 0.00021       | 0.0003          | -       | 0.00065        | 0.00999      |
| 2,3,4,7,8-PeCDF          | 0.5    | 0.00047       | <0.0001         | -       | 0.00077        | 0.00946      |
| 1,2,3,4,7,8-HxCDF        | 0.1    | 0.00071       | 0.00059         | -       | 0.00062        | 0.0457       |
| 1,2,3,6,7,8-HxCDF        | 0.1    | 0.00035 EMPC  | 0.00027 EMPC    | -       | 0.00042        | 0.0198       |
| 1,2,3,7,8,9-HxCDF        | 0.1    | <0.00010      | 0.00016 EMPC    | -       | 0.00013        | <0.00287     |
| 2,3,4,6,7,8-HxCDF        | 0.1    | 0.00031 EMPC  | 0.0003          | -       | 0.00023        | 0.012 EMPC   |
| 1,2,3,4,6,7,8-HpCDF      | 0.01   | 0.00963       | 0.00176         | -       | 0.00255        | 1.18         |
| 1,2,3,4,7,8,9-HpCDF      | 0.01   | 0.00063       | 0.00019         | -       | <0.00015       | 0.0919       |
| OCDF                     | 0.001  | 0.0625        | 0.00611         | -       | 0.00826        | 7.11         |
| Total Tetra-Dioxins      | -      | 0.00028       | 0.00026         | -       | 0.00257        | 0.0127       |
| Total Penta-Dioxins      | -      | 0.00028       | 0.00124         | -       | 0.00107        | 0.0258       |
| Total Hexa-Dioxins       | -      | 0.00795       | 0.00666         | -       | 0.0102         | 0.612        |
| Total Hepta-Dioxins      | -      | 0.0927        | 0.0211          | -       | 0.0361         | 10.3         |
| Total Tetra-Furans       | -      | 0.0049        | 0.00836         | -       | 0.00945        | 0.00907      |
| Total Penta-Furans       | -      | 0.00176       | 0.00108         | -       | 0.00203        | 0.128        |
| Total Hexa-Furans        | ┨ -    | 0.0109        | 0.00189         | -       | 0.00432        | 1.19         |
| Total Hepta-Furans       | _      | 0.0397        | 0.00599         | -       | 0.00725        | 5.27         |
| 2,3,7,8-TCDD Equivalence | 0.0007 | 0.0023 EMPC   | 0.00132 EMPC    | -       | 0.00245 EMPC   | 0.19 EMPC    |
| Equivalence              | 0.0007 | 0.0023 EIVIFG | U.UU IJZ EIVIFU |         | J.UUZ43 EIVIPU | U. 13 EIVIPC |

Notes:

Data taken form the NYSDEC Preliminary Investigation Report

Table 5
December 2001 Groundwater Sampling Event Analytical Results
Camp Pharsalia

| Analyte (Units)      | TOGS | PMW-1  | PMW-2  | PMW-3  | PMW-4 | PMW-5  |
|----------------------|------|--------|--------|--------|-------|--------|
| SVOCs (ug/L)         |      |        |        |        |       |        |
| Anthracene           | 50   | <10 J  | <10 J  | <10 J  | <10 J | 0.5 J  |
| Di-n-octyl phthalate | 50   | 1J     | <10 J  | 0.7 J  | <10 J | <10 J  |
| Hexochloroethane     | 5    | <10 J  | <10 J  | <10 J  | <10 J | 2 J    |
| Phenanthrene         | 50   | <10 J  | <10 J  | <10 J  | <10 J | 0.5 J  |
| Total SVOCs          |      | 1 J    | BDL    | 0.7 J  | BDL   | 3 J    |
| Pesticides (ug/L)    |      |        |        |        |       |        |
| Heptachlor epoxide   | 0.03 | <0.054 | <0.049 | <0.049 | 0.11  | <0.050 |
| Fuel Oil             |      | 1100 J | <5000  | <5000  | <5000 | <5000  |

Notes: All results in ug/L

Bold Text=Analyte detected above laboratory method detection limit

Shaded Text=Exceedence of TOGS 1.1.1 guidance values

Only analytes detected at or above laboratory method detection limits included on tables

<U=Analyte was not detected above laboratory detection limits

J=Estimated Value

**BDL=Below Detection Limits** 

Table 6
November 2002 Groundwater Sampling Event Analytical Results
Camp Pharsalia

| Analyte <i>ug/L</i>         | TOGS   | PMW-1    | PMW-2     | PMW-3 | PMW-4     | PMW-5    | PMW-5<br>Filtered | PMW-6A   | PMW-6A<br>Filtered |
|-----------------------------|--------|----------|-----------|-------|-----------|----------|-------------------|----------|--------------------|
| Turbidity at time of sample | -      | 29       | 600       | 6     | 0         | 0        | 0                 | 730      | 615                |
| Diesel Range Organics       | -      | <303     | <309      | <303  | <303      | 340      | 290 J             | 140 J    | 190 J              |
| Motor Oil                   | -      | <303     | <309      | <303  | <303      | <309     | <309              | <303     | <303               |
| SVOCs ug/L                  |        |          |           | •     |           | •        |                   | •        |                    |
| Naphthalene                 | 10     | 0.5 J    | <10       | <10   | <10       | <10      | <10               | <10      | <10                |
| Bis(2-ethylhexyl)phthalate  | 5      | 13 B     | 38 B      | 6 JB  | 5 JB      | 5 JB     | 5 JB              | 6 JB     | 12 JB              |
| Dioxins ng/L                | TEF    | PMW-1    | PMW-2     | PMW-3 | PMW-4     | PMW-5    | PMW-5<br>Filtered | PMW-6A   | PMW-6A<br>Filtered |
| 2.3.7.8-TCDD                | 1      | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,7,8-PeCDD             | 0.5    | ND<br>ND | ND<br>ND  | ND    | ND<br>ND  | ND       | ND<br>ND          | ND       | ND<br>ND           |
| 1,2,3,7,6-1 eCDD            | 0.3    | ND       | ND        | ND    | ND<br>ND  | ND       | ND                | ND       | ND                 |
| 1,2,3,6,7,8-HxCDD           | 0.1    | ND       | ND<br>ND  | ND    | ND<br>ND  | ND       | ND                | ND       | ND                 |
| 1,2,3,7,8,9-HxCDD           | 0.1    | 0.0012   | ND        | ND ND | ND<br>ND  | ND<br>ND | ND                | ND       | ND                 |
| 1,2,3,4,6,7,8-HpCDD         | 0.01   | 0.0076   | ND        | ND    | ND        | 0.0213   | ND                | 0.00606  | ND                 |
| OCDD                        | 0.001  | 0.0274   | 0.0443    | ND    | 0.0251    | ND       | 0.0114            | 0.0415   | ND                 |
| 2,3,7,8-TCDF                | 0.1    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,7,8-PeCDF             | 0.05   | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 2,3,4,7,8-PeCDF             | 0.5    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,4,7,8-HxCDF           | 0.1    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,6,7,8-HxCDF           | 0.1    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,7,8,9-HxCDF           | 0.1    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 2,3,4,6,7,8-HxCDF           | 0.1    | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,4,6,7,8-HpCDF         | 0.01   | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| 1,2,3,4,7,8,9-HpCDF         | 0.01   | ND       | ND        | ND    | ND        | ND       | ND                | ND       | ND                 |
| OCDF                        | 0.001  | ND       | ND        | ND    | ND        | 0.0296   | ND                | ND       | ND                 |
| 2,3,7,8-TCDD Equivalance    | 0.0007 | 0.000223 | 0.0000443 | BDL   | 0.0000251 | 0.000359 | 0.0000114         | 0.000102 | BDL                |

#### Notes:

Bold Text=Analyte detected above laboratory method detection limit

Shaded Text=Exceedence of TOGS 1.1.1 guidance values

Only analytes detected at or above laboratory method detection limits included on tables

<=Analyte was not detected above laboratory detection limits

J=Estimated Value

**BDL=Below Detection Limits** 

B=Analyte was found in method blank as well as the sample

#### **FIGURES**

## APPENDIX A

**DRILLING LOGS** 



Monitoring Well

PMW-6

Page: 1 of 1 Project Camp Pharsalia COMMENTS Owner New York State Dept. of Environmental Cons. Location Chenango county, New York \_\_\_\_ Proj. No. <u>830271</u> Surface Elev. NA \_\_\_\_ Total Hole Depth <u>16.0 ft.</u> North . \_\_ Water Level Initial \_NA\_\_\_\_ Top of Casing NA Static <u>7.5 ft.</u> Diameter 4.25 in. Type/Size PVC/0.010 in. Screen: Dia 2 in. Length 10.5 ft. Type PVC Casing: Dia \_2 in.\_ \_ Length <u>5.5 ft.</u> Fill Material OO Morie sand, bentonite, grout. \_ Rig/Core \_ Drill Co. Parratt Wolff Method Hollow Stem Auger \_\_\_\_\_ Log By \_*J. LaRock* \_\_\_\_ Date <u>10/16/02</u> Permit # <u>NA</u> Driller . Checked By \_ License No. Blow Count Recovery Description Graphic Log Depth (ft.) P (mdd (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS. 0-0.5' Asphalt. 0.5-2.0' Gray-brown, silt and subangular pepples, trace fine grain, 0.0 50% sand, dry. 2.0-4.0' Gray-brown, silt and subangular pepples, trace fine grain, sand, dry. 0.0 ML 75% 4.0-6.0' Reddish brown - brown silt and clay, some subrounded pepples, inversely grades with depth to brown, fine grain, sand, 0.0 CL 50% little subangular cobble, moist. 6.0-7.5' Tan till; tan, coarse grain sand and silt, some subangular ML pepples, wet. 0.0 75% 7.5-8.0' No recovery. 8.0-10.0' Brown Till; Brown coarse to fine grain sands and silt, some subangular pepples; dense, dry. 0.0 SPg 50% 10 10.0-11.5' High plasticity clay and silt, some subrounded pepples, ÇL dry. 0.0 35% GP 11.5-12.0' Subrounded gravels and subangular rock fragments, 12 trace fine grain, sand, moist. GΡ 12.0-13.0' Brown, coarse to fine grain sands and silt, wet. 0.0 65% 13.0-16.0' Brown, high density till; Brown clay and silt, little coarse grain sand, little subrounded pepples, dry. ML 0.0 50% CORP.GDT 16 18 PHAR.GPJ 20



Soil Boring \$

**SB-1** Page: 1 of 1

| Project              | <br>Camp Pi     | harsalia                |                        | -0                 |             | Owner                         | New York Stat                          | te Dept. c             | of Environi             | mental Cons.         | COMMENTS                 |
|----------------------|-----------------|-------------------------|------------------------|--------------------|-------------|-------------------------------|--|------------------------|-------------------------|----------------------|--------------------------|
|                      |                 |                         |                        |                    |             | Owner                         |  |                        |                         |                      |                          |
|                      |                 |                         |                        |                    |             | 17.0 ft.                      |  |                        |                         |                      |                          |
| Top of Ca            | sing _ <i>N</i> | <u> </u>                | _ Wa                   | ater Level         | Initia      | I _ <i>NA</i>                 | Static <u>¥</u> 9                      | 0.0 ft. [              | Diameter                | 4.25 in.             |                          |
|                      |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
|                      |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
|                      |                 |                         |                        |                    |             | Rig/Core                      |  |                        |                         |                      |                          |
|                      |                 |                         |                        |                    |             | Direct push/Air               |  |                        |                         |                      |                          |
|                      |                 |                         |                        | -                  |             | croce                         |  |                        |                         |                      |                          |
| Checked I            | Зу              |                         |                        |                    | _           | icense No                     |  |                        |                         |                      |                          |
| Depth<br>(ft.)       | Old<br>(bpm)    | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log     | USCS Class. |                               |  | [                      | Descript                | tion                 |                          |
| De (#)               | 급효              | Sams<br>Rec             | llow (<br>Recc         | Gra                | scs         |                               |  | (Color,                | Texture,                | Structure)           |                          |
|                      |                 | 0/1%                    |                        |                    | š           | Geo                           | ologic descriptions                    | are based              | on ASTM                 | Standard D 248       | 7-93 and the USCS.       |
| 0 -                  |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
| $\Gamma$             |                 |                         | X                      | 31, 31,<br>8889888 |             | Top soil.                     | fine analy se                          |                        | -:!4:                   | .1                   |                          |
| -                    | 4.0             | 50%                     | H                      |                    | SM          | an-prown,                     | fine grain, sa                         | ana ana                | SIIT, MOIS              | St.                  |                          |
| - 2 -                |                 |                         | X                      |                    |             | Tan-grav fi                   | ne grain, san                          | d and si               | It little d             | lav little fine      | e to coarse gravel and   |
|                      | 8.4             | 25%                     |                        |                    |             | shale (till), r               | noist.                                 | a ana o                | it, iitio o             | iay, iitao iiin      | o to occurse graves and  |
| L 4 -                |                 | 2576                    |                        |                    |             |                               |  |                        |                         |                      |                          |
|                      |                 |                         | M                      |                    |             | Tan-gray w                    | et silt and fine                       | e sand, l              | ittle clay              | , water table        | @ 5 feet, petro - like   |
| t 1                  | 16.3            | 50%                     | П                      |                    |             | odor at wate                  | er table, high                         | graveic                | ontent 5                | to o teet (ti        | II).                     |
| - 6 -<br>            | 19.0            | 50%                     | X                      |                    |             | Tan silt and<br>in 6 to 7 foo | l fine sand, litt<br>ot interval, slig | tle clay a<br>tht shee | and fine<br>n (till), m | to coarse g<br>oist. | ravel, petro - like odor |
| <b>⊢</b> 8 <b>⊣</b>  |                 |                         |                        |                    |             | Davidan at (                  | ) foot                                 | 1- 40 f-               | _4                      |                      |                          |
|                      | 14.3            |                         |                        |                    |             | petro - like                  | ə teet, wet tili '<br>odor.            | to 10 te               | et with a               | present sno          | een and associative      |
| -                    | 14.5            | 5%                      |                        |                    |             |                               |  |                        |                         |                      |                          |
| - 10 -               |                 |                         | И                      |                    |             | Moist silt, s                 | ome clay and                           | fine gra               | in sand,                | petro - like         | odor and sheen.          |
| ┞╶┤                  | 25.0            | 50%                     | H                      |                    |             |                               | •                                      |                        |                         |                      |                          |
| <b>12</b> -          |                 |                         | Н                      |                    |             | Sama aa ab                    | vovo ochble :                          | nt 10 fc               | <b>.</b>                |                      |                          |
| <u> </u>             | 21.5            |                         | X                      |                    |             | Same as at                    | ove, cobble a                          | at 13 106              | ∌ા.                     |                      |                          |
| ] ,, ]               | -1.5            | 60%                     | Ħ                      |                    |             |                               |  |                        |                         |                      |                          |
| - 14 <b>-</b>        |                 |                         | Н                      |                    |             | Over drilled                  | 14 feet to 15                          | feet, no               | sample                  | ) <b>.</b>           |                          |
| ╟ ┥                  |                 | 0%                      |                        |                    |             |                               |  |                        |                         |                      |                          |
| <b>–</b> 16 <b>–</b> |                 |                         |                        |                    |             | Doulder of f                  | 16 foct t "                            | ab4 4:0 '              |                         |                      |                          |
|                      |                 |                         | M                      |                    |             | boulder at 1                  | 16 feet, tan, ti                       | gnt till, t            | race clay               | у.                   |                          |
|                      |                 | 20%                     |                        |                    |             |                               |  |                        |                         |                      |                          |
| <b>–</b> 18 –        |                 |                         | 닉                      |                    |             |                               |  |                        |                         |                      |                          |
| -                    |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
| _ 20 _               |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
|                      |                 | ļ                       | 1                      |                    |             |                               |  |                        |                         |                      |                          |
| [ ]                  |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
| <b>- 22 -</b>        |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
| -                    |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |
| - 24 -               |                 |                         |                        |                    |             |                               |  |                        |                         |                      |                          |



Soil Boring

**SB-2** Page: 1 of 1

| Project Camp  | Pharsalia            |                                       | Owner New York State Dept. of Environmental Cons. COMMENTS |             |  |  |  |  |  |  |  |  |  |
|---|----------------------|---------------------------------------|--|-------------|--|--|--|--|--|--|--|--|--|
|   |                      | y, New                                | York   |             | Proj. No   |  |  |  |  |  |  |  |  |
| Surface Elev.   | NA                   | Tot                                   | al Hole [  | Depth       |  |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | NA Static <u>5.0 ft.</u> Diameter 4.25 in.   |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | Type/Size NA   |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | Type   |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | Rig/Core   |  |  |  |  |  |  |  |  |
| Drill Co. Amer  | ican Auger           |                                       | M  | lethoo      | Direct Push/Air Rotary   |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | croce Date Date Permit #   |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | icense No.   |  |  |  |  |  |  |  |  |
|   |                      | · · · · · · · · · · · · · · · · · · · |  |             |  |  |  |  |  |  |  |  |  |
| _   _   | Sample ID % Recovery | Blow Count<br>Recovery                | <u>.</u> 0   | ass.        | Description  |  |  |  |  |  |  |  |  |
| Depth (ft.)   |                      | S & S                                 | Graphic<br>Log   | USCS Class. | (Color, Texture, Structure)  |  |  |  |  |  |  |  |  |
|   | SIN SIN              | 8 %                                   | g  | OSO         | Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.                               |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
|   |                      | Ì                                     |  |             |  |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             | •  |  |  |  |  |  |  |  |  |
|   |                      | Ø                                     | 71 VIV   |             | Brown top soil.  |  |  |  |  |  |  |  |  |
| 1 0   | 20%                  |                                       |  |             | Brown, medium and fine grain sand, some silt, dry.   |  |  |  |  |  |  |  |  |
| <b>-</b> 2 →  |                      | Ш                                     |  | <b></b>     |  |  |  |  |  |  |  |  |  |
|   |                      | XI                                    |  |             | Boulder, shale.  |  |  |  |  |  |  |  |  |
| 1 0   | 50%                  | П                                     |  |             | Tan, silty till, dry with some fine grain sand.  |  |  |  |  |  |  |  |  |
| <b>├ 4 -</b>  |                      | Н                                     |  | $\vdash$    | Tan, silt, some fine grain sand and silt and fine to medium grain sand, petro                          |  |  |  |  |  |  |  |  |
| 45.0  | 90%                  | IXI                                   |  |             | - like odor, moist.  |  |  |  |  |  |  |  |  |
| L 6 -   | 10070                |                                       |  |             |  |  |  |  |  |  |  |  |  |
|   |                      | M                                     |  |             | Tan, till, silt and fine grain sand, trace cobble and medium grain sand                                |  |  |  |  |  |  |  |  |
| 84.2  | 70%                  | М                                     |  |             |  |  |  |  |  |  |  |  |  |
| - 8 -   |                      | М                                     |  |             | 8-9' Silt and medium grain sand, some clay, petro - like odor, moist.                                  |  |  |  |  |  |  |  |  |
| l NA  | 50%                  | Д                                     |  |             |  |  |  |  |  |  |  |  |  |
| 10  | 30%                  |                                       |  |             | 9-10' Gray clay, some silt and fine to coarse grain sand, strong petro - like odor, moist, water @ 9'. |  |  |  |  |  |  |  |  |
| - 10 -  | į                    | М                                     |  |             | Unsorted wet gravel top foot of sample, tan, till below sheen and strong                               |  |  |  |  |  |  |  |  |
| 110.  | 60%                  | М                                     |  |             | petro - like odor, dry 11.5 to 12 foot, petroleum odor, medium to coarse grain, sand and silt.         |  |  |  |  |  |  |  |  |
| <b>–</b> 12 <b>–</b>  |                      | ×                                     |  | <u> </u>    | Pushed shale boulder.  |  |  |  |  |  |  |  |  |
| 108.  | ,                    |                                       |  |             | i usileu silale pouluel.   |  |  |  |  |  |  |  |  |
|   | 10%                  |                                       | 3  |             |  |  |  |  |  |  |  |  |  |
| 70 - 14 - 11.0  |                      | Ø                                     |  |             | Dry, tan, silt and fine grain sand, some medium to coarse gravel, trace                                |  |  |  |  |  |  |  |  |
|   | 25%                  |                                       |  |             | cobble, shale.   |  |  |  |  |  |  |  |  |
| <del>8</del> 16 —   |                      |                                       |  | $\square$   | 0  |  |  |  |  |  |  |  |  |
| S   13  |                      | M                                     |  |             | Change to gray, clay @ 16.5 feet; medium to coarse gravel, faint petoleum odor.                        |  |  |  |  |  |  |  |  |
| 10.5  | 30%                  |                                       |  |             |  |  |  |  |  |  |  |  |  |
| 급 18 -  |                      | 닉                                     |  | $\vdash$    |  |  |  |  |  |  |  |  |  |
| ₩ - H   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
| § 20 -  |                      | 1                                     |  |             |  |  |  |  |  |  |  |  |  |
| 20  |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
| <u>ــــــــــــــــــــــــــــــــــــ</u>   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
|   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |
| COMMERCIAL Rev. 126/99 PHAR.GPU II CORP.GDT   - 81   - 126/99 PHAR.GPU II CORP.GDT   - 126/99 |                      | 1                                     |  |             |  |  |  |  |  |  |  |  |  |
| ଚ୍ଚି 24 −   |                      |                                       |  |             |  |  |  |  |  |  |  |  |  |



Soil Boring SB-3

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| Project Camp Pharsalia Owner New York State Dept. of Environmental Cons. COMME                                     | IENTS           |
|--|-----------------|
| Location Chenango county, New York Proj. No. 830271  |                 |
| Surface Elev. NA Total Hole Depth 12.0 ft. North East  |                 |
| Top of Casing NA Water Level Initial NA Static 3.0 ft. Diameter 4.25 in.   |                 |
| Screen: DiaNA LengthNA Type/SizeNA   |                 |
| Casing: Dia NA Length NA Type NA   |                 |
| Fill Material Bentonite. Rig/Core  |                 |
| Drill Co. American Auger Method Direct Push/Air Rotary   |                 |
| Driller Log By J.Santacroce Date 11/15/01 Permit # NA  |                 |
| Checked By License No  |                 |
| Checked by Elderise NO.  |                 |
| Description  |                 |
| 휴요   유료   웹슐 8 8   호   호   |                 |
| (Color, Texture, Structure)  | 1 th - 11000    |
| Geologic descriptions are based on ASTM Standard D 2487-93 and t   | the USCS.       |
|  |                 |
|  |                 |
|  |                 |
|  |                 |
| Ton till modium to coorse grain and ailt day   |                 |
| Tan, till, medium to coarse grain sand and six, dry.   |                 |
| Top till tight silt and fine grain cond atrong nature like adea  | - d             |
| Tan, til, tight silt and fine grain sand, strong petro - like odor,  | r, ary          |
|  | and and gravel, |
| water table at 3 feet bgs, petro - like odor.  Tan, till, silt and fine grain sand, slight petro -like odor, moist | n+              |
|  | <b>5</b> (.     |
|  |                 |
| Tan, till, dry silt and fine grain sand, some medium grain sar   | and gravel.     |
| slight petro - like odor   | <b>3</b> ,      |
| I I I I I I I I I I I I I I I I I I I  |                 |
| Cobbles, tan till, dry silt and fine grain sand, some medium g   | grain sand and  |
| gravel. Boulder 8.5 to 10 feet.  |                 |
|  |                 |
| Gray day and line to coarse grain graver and coobles (till).   |                 |
| - 12.0 <sub>25%</sub>  |                 |
|  |                 |
|  |                 |
|  |                 |
| <del>                   </del>   |                 |
|  |                 |
|  |                 |
| - 16 -   |                 |
| }  |                 |
|  |                 |
| - 18 -   |                 |
| } -  |                 |
| - 20 -   |                 |
|  |                 |
| F -  |                 |
| _ 22 _   |                 |
|  |                 |
|  |                 |
| - 24 -   |                 |



Soil Boring SB-4

Page: 1 of 1

| Project C  | amp Pl       | harsalia                | • •                    |                |  | Owner New York State Dept. of Environmental Cons. COMMENTS                    |
|--|--------------|-------------------------|------------------------|----------------|--|---|
| Location (   | Chenar       | ngo county              | <br>/. <i>Ne</i> и     | York           |  | Proj. No. <u>830271</u>   |
|  |              |                         |                        |                |  | 10.0 ft. North East   |
|  |              |                         |                        |                |  | al <u>NA</u> Static <u>¥ 6.0 ft.</u> Diameter <u>4.25 in.</u>                 |
|  |              |                         |                        |                | Type/Size NA                                   |   |
|  |              |                         |                        |                |  | Type <i>NA</i>  |
| Fill Material  | Bent         | tonite.                 |                        |                |  | Rig/Core  |
|  |              |                         |                        |                |  | Direct Push/Air Rotary  |
|  |              |                         |                        |                | acroce Date <u>11/16/01</u> Permit # <u>NA</u> |   |
| Checked By   | y            |                         |                        |                | L  | License No.   |
| Depth<br>(ff.)   | PID<br>(ppm) | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log | USCS Class.                                    | Description (Color, Texture, Structure)                                       |
|  |              | 21%                     |                        |                | ž  | Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.      |
| - 0 -  |              |                         | ×                      | 37 K. 12 K.    |  | Brown top soil.   |
| <b> </b>   | 0            | 25%                     |                        | N.             |  | Boulder and cobbles.  |
| - 2 -  |              | 25%                     |                        |                |  |   |
| "  |              |                         | M                      |                |  | Tan, till, silt and fine grain sand, some fine to coarse garvel top 1.5 feet. |
|  | 0            | 100%                    | M                      |                |  |   |
| F 4 -  |              |                         | X                      |                |  | Tan, till, silt and fine grain sand, dry.                                     |
| <u> </u>   | 1.6          | 40%                     | Ħ                      |                |  |   |
| ⊢ 6 <del>▼</del>   |              |                         | Н                      |                |  | Tan, till, saturate silt and fine grain sand, some coarse gravel and cobble,  |
| + -  | 1.0          | 75%                     | X                      |                |  | wet.  |
| <b>⊢</b> 8 <b>−</b>                                      |              | 1000                    | H                      |                |  |   |
|  |              |                         | X                      |                |  | Tan, till, silt and fine grain sand and cobble, wet.                          |
| 10   | ا            | 75%                     | H                      |                |  |   |
| 10   |              |                         | 4                      | 2.77 N. e.     |  | Hole terminated @ 10 feet due to boulder. No odor or sheen throughout         |
| <b>├</b> ∜   |              |                         |                        |                |  | boring.   |
| - 12 -   |              |                         |                        |                |  |   |
| <b>-</b>   |              |                         |                        |                |  |   |
| 일 14 -   |              |                         | 1                      |                |  | ·   |
| 11/21  |              |                         |                        |                |  |   |
| [ 40   |              |                         |                        |                |  |   |
| <u>9</u> 16  |              |                         |                        |                |  |   |
| 합 1  |              |                         |                        |                |  |   |
| 로 18 →   |              |                         |                        |                |  |   |
| ¥H →   |              |                         |                        |                |  |   |
| § - 20 -   |              |                         |                        |                |  |   |
| 12/6   |              |                         |                        |                |  |   |
| 22 —   |              |                         |                        |                |  |   |
| 3CIAL  |              |                         |                        |                |  |   |
| MME  |              |                         |                        |                |  |   |
| TI_COMMERCIAL_Rev. 1216/99 PHAR.GPJ IT_CORP.GDT 11/21/02 |              |                         |                        |                |  |   |



Soil Boring SB-5

| `  |               | OOM C                   | ורעונ                  | 1014                |          | •  | Page: 1 of 1         |
|--|---------------|-------------------------|------------------------|---------------------|----------|--|----------------------|
| Project _                                      |               |                         |                        |                     |          | Owner New York State Dept. of Environmental Cons.  | COMMENTS             |
| Location .                                     | Chena         | ngo count               | y, Neu                 | York                |          | Proj. No. <u>830271</u>  |                      |
|  |               |                         |                        |                     |          | East   |                      |
|  |               |                         |                        |                     |          | NA Static <u>F 6.0 ft.</u> Diameter 4.25 in.   |                      |
|  |               |                         |                        |                     |          | Type/Size NA   |                      |
|  |               |                         |                        |                     |          |  |                      |
|  |               |                         |                        |                     |          | Type   |                      |
| Fill Materia                                   | al <u>Der</u> | itonite.                |                        |                     |          | Rig/Core   |                      |
| Drill Co                                       | Americ        | an Auger                |                        | M                   | lethoc   | Direct Push/Air Rotary   |                      |
|  |               |                         |                        |                     |          | croce Date 11/16/01 Permit # NA  |                      |
| Checked E                                      | Зу            |                         |                        |                     | L        | icense No.   |                      |
|  |               |                         |                        |                     | "i       |  |                      |
| €  | 25            | Sample ID<br>% Recovery | Blow Count<br>Recovery | je c                | Class.   | Description  |                      |
| Depth<br>(ft.)                                 | PID<br>(ppm)  |                         | Ş §                    | Graphic<br>Log      | 38.0     | (Color, Texture, Structure)  |                      |
|  | -             | N SI N N                | 용윤                     | 9                   | nscs     | Geologic descriptions are based on ASTM Standard D 248   | 7-93 and the USCS    |
|  |               | <del>  -</del>          |                        | <del>  </del>       | _        |  |                      |
|  |               |                         |                        |                     |          |  |                      |
|  |               |                         |                        |                     |          |  |                      |
|  |               |                         |                        |                     |          |  |                      |
| <b>├ 0</b> ┥                                   |               |                         | Ø                      | 31/2: 31/2:         | $\vdash$ | Dark brown top soil.   |                      |
| L  | _             |                         |                        |                     | $\vdash$ | Tan, till, silt and fine grain sand, dry.  |                      |
|  | 0             | 10%                     |                        |                     |          | and the state of t |                      |
| <b>├</b> 2 <b>-</b>                            |               |                         | M                      |                     | $\vdash$ | Tan till silt and fine grain sand trace subrounded as  | ovol des             |
| L  | 0             |                         | Ħ                      |                     |          | Tan, till, silt and fine grain sand, trace subrounded gr   | avei, dry.           |
|  | 0             | 25%                     |                        |                     | i I      |  |                      |
| <b>├</b> 4 →                                   |               |                         | X                      |                     |          | Tan, till, silt and fine grain sand, trace clay, trace fine  | to modium graval     |
| LJ   | 0             |                         | η                      |                     |          | moist.   | to medium gravei,    |
|  |               | 25%                     |                        |                     |          |  |                      |
| - 6 <del>▼</del>                               |               | i                       | Н                      |                     | $\vdash$ | Tan, till, saturated silt and fine grain sand and gray c   | av wet               |
|  | 0.2           |                         | M                      |                     |          |  | •                    |
|  | V.2           | 50%                     |                        | $\mathcal{H}$       |          | Shale boulder, with unknown brown-orange, subroun  | ded granuals.        |
| <b>⊢</b> 8 ⊢                                   |               |                         | М                      |                     |          | Tan, till, medium to coarse gravel, slight petro-like od   | or, moist.           |
| <b>├</b>                                       | 13.2          | 75%                     | X                      |                     |          |  | ,                    |
|  |               | 1 5%                    | Н                      | <i>\$1.181.17</i> ) |          | Shale, cobbles.  |                      |
| <b>-</b> 10 <b>-</b>                           |               | 1                       | М                      |                     |          | Tan, till, very tight, silt and fine grain sand, little medi   | um sand, trace clav. |
| ┡╶┤  | 5.7           | 80%                     | IXI                    |                     |          | slight odor.   | ,,, ,                |
| L 40   |               | 30,70                   | Н                      |                     |          |  |                      |
| - 12 -   |               | <u> </u>                | X                      |                     |          | Tan, till, silt, little medium to coarse grain sand, very  | tight, little coarse |
| ⊦  | 4.1           | 30%                     | П                      |                     |          | gravel, no odor.   |                      |
| - 14 -   |               |                         |                        |                     |          |  |                      |
| 14   |               |                         |                        |                     |          |  |                      |
| - 14 -<br>                                     |               | <b> </b>                |                        |                     |          |  |                      |
| − 16 <b>−</b>                                  |               | 1                       |                        |                     |          |  |                      |
| '0   |               |                         |                        |                     |          |  |                      |
| ┟╢   |               | II.                     |                        |                     |          |  |                      |
| - 18 <del>-</del>                              |               |                         |                        |                     |          |  |                      |
| '`   |               | ĺ                       | į                      |                     |          |  |                      |
| ┣  |               |                         |                        |                     |          |  |                      |
| 20 -   |               |                         |                        |                     |          |  |                      |
| ~  |               |                         | . !                    |                     |          |  |                      |
| ┞╢   |               |                         | - 1                    |                     |          |  |                      |
| - 22 -   |               |                         |                        |                     |          |  |                      |
|  |               | l                       | l                      |                     |          |  |                      |
| ┌──┤   |               |                         |                        |                     |          |  |                      |
| - 16 -<br>- 18 -<br>- 20 -<br>- 22 -<br>- 24 - |               |                         |                        |                     |          |  |                      |
|  |               | <u>L</u>                |                        |                     |          |  |                      |



Soil Boring SB-6

|  |              | OUNIC                   |                        |                |             | Page: 1 of 1  |
|--|--------------|-------------------------|------------------------|----------------|-------------|---|
| Project _                                      |              |                         |                        |                |             | Owner New York State Dept. of Environmental Cons. COMMENTS  |
| Location                                       | Chenai       | ngo count               | у, Иеи                 | v York         |             | Proj. No. <u>830271</u>   |
| Surface E                                      | levNA        | ٩                       | _ Tot                  | tal Hole D     | epth        | North East  |
| Top of Ca                                      | sing _N      | A                       | _ Wa                   | ater Level     | l Initia    | NA Static <u>V</u> 5.0 ft. Diameter <u>4.25 in.</u>   |
|  |              |                         |                        |                |             | Type/Size NA  |
|  |              |                         |                        |                |             | Type  |
| Fill Materi                                    | al Beni      | tonite.                 |                        | ·9··· —        |             | Rig/Core  |
| Drill Co                                       | America      | an Auger                |                        | 8.4            | ath a c     | Nigreote  |
|  |              |                         |                        |                |             | croce Date _11/16/01 Permit # _NA   |
|  |              |                         |                        |                |             |   |
| Checked  | эу           |                         |                        |                |             | icense No.  |
| _  |              | <u>∳</u>                | Blow Count<br>Recovery | ی              | ass.        | Description   |
| Depth<br>(ft.)                                 | OIA<br>(mdd) | Sample ID<br>% Recovery | , Co                   | Graphic<br>Log | USCS Class. | ·   |
|  |              | San<br>R.R.             | Blow                   | 5              | SC          | (Color, Texture, Structure)   |
|  |              |                         |                        |                | _           | Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.  |
|  |              |                         |                        |                |             |   |
|  |              |                         |                        |                |             | ·   |
|  |              |                         |                        |                |             |   |
| <b>├</b> 0 <b>−</b>                            |              | ľ                       | ×                      | 31.31.         | $\vdash$    | Brown top soil.   |
| - 2 -  | 0            |                         |                        | W              |             | Boulder.  |
|  |              | 10%                     |                        |                |             |   |
| - 2 -  |              |                         | $\boxtimes$            |                |             | Tan, till, silt, some fine grain to medium grain sand and cobble, dry.  |
| <u> </u>                                       | 0            | 20%                     |                        |                |             | ,   |
| 1  |              | 20%                     |                        |                |             |   |
| 4  |              |                         | X                      |                | Н           | Same as above, saturated, water table at 5 feet bgs.  |
| <b>_ ▼</b>                                     | 0            | 30%                     | П                      |                |             |   |
|  |              | 30%                     |                        |                |             |   |
| <del> </del> 6 -                               |              |                         | М                      |                |             | Weathered shale.  |
| } -  | 0            | 50%                     | <b>P</b>               |                |             |   |
| <b>-</b> 8 -                                   |              |                         |                        |                |             |   |
|  |              |                         | M                      |                |             | Till, silt and fine grain sand, some medium to coarse gravel, dry.  |
| -  | 0            | 60%                     | <u> </u>               |                |             |   |
| 10 -   |              |                         | Ц                      |                |             |   |
| '  |              |                         | X                      |                |             | Till, tight silt and fine grain sand, trace clay.   |
| <b>-</b>                                       | 0            | 40%                     | П                      |                |             |   |
| <del>-</del> 12 -                              |              |                         |                        |                |             | 40.401.0  |
|  |              |                         | П                      |                |             | 12-13' Gray clay and silt, tan and gray shale cobbles, trce fine grain sand, high clay content, Refusal at 13 feet. |
| _  | 0            | 10%                     |                        |                |             | ingli day dentent, Netada at 10 leet.   |
| <b>├</b> 14 −                                  |              |                         | Ч                      | 1              |             |   |
|  |              |                         |                        |                |             |   |
| 5  |              |                         |                        |                |             |   |
| - 16 -   |              |                         |                        |                |             |   |
|  |              |                         |                        |                |             |   |
|  |              |                         |                        |                |             |   |
| - 18 -   |              |                         |                        |                |             |   |
| <u> </u>                                       | :            |                         |                        |                |             |   |
|  | ļ            |                         |                        |                |             |   |
| <u> </u>                                       |              |                         |                        |                |             |   |
| <u>-</u>                                       | <b>[</b> ]   |                         |                        |                |             |   |
| 20   |              |                         |                        |                |             |   |
| <u> </u>                                       |              |                         |                        |                |             |   |
| ∯ <del>-</del> -                               |              |                         |                        |                |             |   |
| _ 24 _   |              |                         |                        |                |             | •   |
| ? <b>                                     </b> |              |                         |                        |                |             |   |



Soil Boring SB-7

**SB-7** Page: 1 of 1

|                             |                | · · · · ·               | ,                      |                 |                 | rage. 1 of 1   |
|-----------------------------|----------------|-------------------------|------------------------|-----------------|-----------------|--|
| Project                     |                |                         |                        |                 |                 | Owner New York State Dept. of Environmental Cons. COMMENTS   |
|                             |                |                         |                        |                 |                 | Proj. No. <u>830271</u>  |
| Surface El                  | ev. <u>N</u> / | <u> </u>                | Tot                    | al Hole D       | epth            | <u>12.0 ft.</u> North East   |
| Top of Cas                  | sing N         | 4                       | . Wa                   | ter Level       | Initia          | NA Static <u> 3.0 ft.</u> Diameter <u>4.25 in.</u>   |
|                             |                |                         |                        |                 |                 | Type/Size _ <i>NA</i>  |
|                             |                |                         |                        |                 |                 | Type <i>NA</i>   |
|                             |                |                         | Rig/Core               |                 |                 |  |
|                             |                |                         |                        |                 |                 | Direct Push/Air Rotary   |
|                             |                |                         |                        |                 |                 | croce Date 11/16/01 Permit # NA  |
|                             |                |                         |                        |                 |                 |  |
| Checked                     | зу             |                         |                        |                 |                 | cense No.  |
| Depth<br>(ft.)              | PID<br>(mdd)   | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log  | USCS Class.     | Description  (Color, Texture, Structure)  Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS. |
| - 0 -                       |                |                         | <u>×</u>               | <u> 38</u> 37.  |                 | Brown top soil.  |
| - 2 <u>-</u>                | 0              | 10%                     | ×                      | <u></u>         | SM              | Brown silt, some medium to fine grain, sand, gravel lense at 3 feet, cobbles and saturated at 3 feet.              |
| ├ 폭                         | 0              | 20%                     |                        | المائ           | GP              | Saturated gravel, silt and sand, water table at 3 feet bgs.  |
| $\perp$ $_{4}$ $\downarrow$ |                |                         | Ц                      | 6 <b>0</b> 6143 | GM              |  |
| ]                           |                |                         | X                      |                 |                 | Boulder 4 to 5 feet bgs.   |
| <b>†</b> †                  | 0              | 30%                     |                        |                 | $\vdash$        | Tan, till, silt and fine grain sand, some fine to medium gravel, moist.  |
| <b>├</b> 6 -                |                | Ė                       | Ц                      |                 |                 | -  |
|                             |                |                         | M                      |                 |                 | Tan, till, same as above, trace clay at 7 feet bgs, dry 7 to 8 feet bgs.   |
| 1                           | 0              | 25%                     | - 11                   |                 |                 |  |
| <b>⊢</b> 8 −                |                |                         | H                      |                 |                 | Tight silt and fine grain cond. little fine gravel, day  |
|                             | 0              |                         | X                      |                 |                 | Tight silt and fine grain sand, little fine gravel, dry.   |
|                             |                | 50%                     |                        |                 |                 |  |
| ├ 10 ┤                      |                |                         | Н                      |                 | $\vdash \dashv$ | Same as above.   |
| <u> </u>                    | 0              |                         | X                      |                 |                 | came ac above.   |
|                             |                | 60%                     | П                      |                 |                 |  |
| - 12 -                      |                |                         | 닉                      | 27777232        | $\dashv$        |  |
| <b>∤</b> ↓                  |                |                         |                        |                 |                 |  |
|                             |                |                         |                        |                 |                 |  |
| - 14                        |                |                         |                        |                 |                 |  |
| <b>├</b> -∜                 |                |                         |                        |                 |                 |  |
| - 16 -                      |                | ]                       |                        |                 |                 |  |
| ''                          |                |                         |                        |                 |                 |  |
| <b>-</b> 1                  |                | -                       |                        |                 |                 |  |
| <u> </u>                    |                |                         |                        |                 |                 |  |
| ``                          |                |                         |                        |                 |                 |  |
| <b>,</b> 1                  |                |                         |                        |                 |                 |  |
| 20 -                        |                |                         |                        |                 |                 |  |
|                             |                |                         |                        | ] [             |                 |  |
| [ 1                         |                |                         |                        |                 |                 |  |
| - 22 -                      |                |                         |                        |                 |                 |  |
| <u> </u>                    |                |                         |                        |                 |                 |  |
| 7                           |                | ĺ                       |                        |                 |                 |  |
| <u> </u> 24                 |                |                         |                        |                 |                 |  |



Soil Boring

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| Project _   | Camp Pl      | narsalia                |                        |                |             | Owner New York State Dept. of Environmental Cons. COMMENTS  |
|-------------|--------------|-------------------------|------------------------|----------------|-------------|---|
| Location .  | Chenar       | igo count               |                        |                |             | Proj. No. 830271 Water level difficult to determine due to drilling technique and   |
|             |              |                         |                        |                |             |   |
|             |              |                         |                        |                |             | NA Static NA Diameter 4.25 in.  |
| Screen: Di  | ia <i>NA</i> |                         | _ Len                  | igth NA        |             | Type/Size _ <i>NA</i>   |
|             |              |                         |                        |                |             | Type  |
|             |              |                         |                        |                |             | Rig/Core  |
|             |              |                         |                        |                |             | Direct Push/Water Rotary  |
| Driller     |              |                         | _ Log                  | Ву             | LaRo        | ck Date 10/16/02 Permit # NA  |
| Checked E   | Зу           |                         |                        |                | _ L         | icense No   |
| Depth (ft.) | PID<br>(mdd) | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log | USCS Class. | Description  (Color, Texture, Structure)  Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.                  |
| - 0 -       |              |                         | X                      | <u> </u>       |             | 0-0.5' Topsoil 0.5-4.0' Fine grain, sand and subrouned gravel, dry.   |
|             | 0.0          | 50%                     | П                      | ۰٥۰            |             | olo illo i illo grani, saila alla sasioalisa grafol, aly.   |
| - 2 -<br>   | 0.0          | 50%                     | X                      | K : 1          | SP          |   |
| - 4 -       |              |                         |                        | ه ۸۰           |             |   |
|             | 0.0          | 40%                     | X                      | . O.           | SP          | 4.0-6.0' Coarse to fine grain, sand and subrounded gravel, some subangular cobble, dry  |
| - 6 -<br>   | 0.0          | 60%                     | X                      | • O •          |             | 6.0-10.0' Coarse to fine grain, sand, some subrounded gravel, dry.  |
| - 8 -<br>   | 0.0          | 80%                     | X                      | , O (          | SP          |   |
| - 10 -      | 0.0          | 75%                     |                        |                | SP          | 10.0-12.0' Coarse grain sand and subrounded gravel, lense about 3-4" in thickness; high density but closer to clast supported, dry. |
| - 12 -      |              | 7 3 76                  |                        | اه ها          |             |   |
|             | 0.0          | 40%                     | X                      | , O.           | SP          | 12.0-14.0' Coarse grain, sand and subrounded gravel, some subangular cobble, dry.   |
| - 14 -<br>  | 0.0          | 90%                     | M                      | . O .          | SP          | 14.0-16.0' Coarse to fine grain, sand and silt, some subrounded gravel, little subangular cobble, dry.                              |
| - 16 -<br>- |              |                         |                        | 6 0            |             |   |
| — 18 —      |              |                         |                        |                |             |   |
| 20 –        |              |                         |                        |                |             |   |
| – 22 –      |              |                         |                        |                |             |   |
| – 24 –      |              |                         |                        |                |             |   |



Soil Boring

**SB-9** 

Page: 1 of 1 Project Camp Pharsalia Owner New York State Dept. of Environmental Cons. **COMMENTS** Location Chenango county, New York \_\_ Proj. No. <u>8302</u>71 Surface Elev. NA \_\_ Total Hole Depth <u>16.0 ft.</u> North \_\_\_ East \_ Top of Casing NA Water Level Initial NA Static NA Diameter 4.25 in. Screen: Dia NA Length NA Type/Size NA Casing: Dia NA Length NA Type NA Fill Material <u>Cement grout slurry</u>. Rig/Core Drill Co. Parratt Wolff Method \_Direct Push/Water Rotary \_\_\_\_\_ Log By \_*J. LaRock* Driller . Checked By \_ License No. \_ Blow Count Recovery USCS Class Description Graphic Log P (mdd) (#) (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS. 0 11/2 11/ 0-1.0' Topsoil 0.0 40% 1.0-2.0' Brown/tan, fine grain, sand, some subangular gravel, dry. SP 2 GP 2.0-2.4' Brown/tan, coarse grain sand and angular gravel, dry. 2.4-4.0' Tan/brown, fine grain, sand and silt, some subrounded gravel, dry. 0.0 60% SP 4.0-8.0' Tan, fine grain, sand, some silt, little subrounded gravel, dry. 0.0 75% 6 SP 0.0 20% 8 8.0-10.0' Tan, fine grain, sand and silt, some subrounded gravel, dry. SP 0.0 80% 10 SP 10-10.5' Tan, coarse to fine grain, sand and silt, some subrounded gravel, 0.0 GΡ 100% 10.5-11.5' Tan, fine grain, sand and silt, some subrounded gravel, trace CL subangular cobble, moist. 12 11.5-12.0' Brown, clay, low plasticity. 12.0-12.25' Coarse grain, sand and subrounded gravel; moderately sorted; 0.0 100% 14 SP 12.25-12.5' Coarse grain, sand and angular gravel, dry. SM 12.5-16.0' Brown, fine grain, sand and silt, some subrounded gravel, dry. 0.0 50% GDT 16 18 20 22



Soil Boring SB-

Page: 1 of 1

|  |              | 00111                                      | J 1 1/ 1/ 1            |                |             | rage. 1 01 1  |
|--|--------------|--|------------------------|----------------|-------------|---|
| Project _  | Camp Pl      | harsalia                                   |                        |                |             | Owner New York State Dept. of Environmental Cons. COMMENTS                                  |
|  |              |  |                        |                |             | Proj. No. <u>830271</u>   |
|  |              |  |                        |                |             |   |
|  |              |  |                        |                |             |   |
|  |              |  |                        |                |             | NA Static <u>12.5 ft.</u> Diameter <u>4.25 in.</u>  |
|  |              |  |                        | -              |             | Type/Size <u>NA</u>   |
|  |              |  |                        |                |             | Type  |
| Fill Materia   | l Cen        | nent grou                                  | t slurry.              |                |             | Rig/Core  |
| Drill Co   | Parratt      | Wolff                                      |                        | M              | lethod      | Direct Push/Water Rotary  |
|  |              |  |                        |                |             | ck Date 10/17/02 Permit # NA  |
|  |              |  |                        |                |             | icense No.  |
| CHOCKEG I  | · · · · · ·  |  |                        |                |             | incerise No.  |
| ŧ.   | o€           | Sample ID<br>% Recovery                    | Blow Count<br>Recovery | Graphic<br>Log | USCS Class. | Description   |
| Depth<br>(ft.)   | PID<br>(ppm) |  | § 60 0                 | Srap<br>Lo     | ) SS        | (Color, Texture, Structure)   |
|  |              | <u>                                   </u> | ᄶ                      |                | ısn         | Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.                    |
|  |              | <del> </del>                               |                        |                |             |   |
| - 0 -  | 0.0          |  | X                      | <u> </u>       |             | 0-0.5' Topsoil<br>0.5-2.0' Tan-gray fine grain sand and silt, some coarse grain, sand, some |
|  |              | 60%  | П                      |                | SP          | subanglular pebbles, dry.   |
| <b>├</b> 2 ┤   |              |  | М                      |                |             | 2.0-4.0' Tan-gray, fine grain, sand and silt, some coarse grain, sand, some                 |
| 1 1  | 0.0          | 75%  | XI                     |                | SP          | subangular pepple, bottom two inches encounter subangular cobble, high                      |
|  |              | 1/5%                                       | Н                      |                |             | density, dry.   |
| 4  |              | :  | М                      |                | SP          | 4.0-4.5' Brown-gray coarse to fine grain, sand, moist.                                      |
|  | 0.0          | 500/                                       | Μ                      |                |             | 4.5-10.0' Brown- gray, silt and fine grain, sand, some coarse grain, sand,                  |
|  |              | 50%  |                        |                |             | some subrounded gravel, moisture on acetate liner, dry.                                     |
| <b>├</b> 6 <b>⊣</b>  |              |  | М                      |                |             |   |
|  | 0.0          | 500/                                       | Δ                      |                |             |   |
|  |              | 50%  |                        |                | SP          |   |
| F 8 -  |              |  | M                      |                |             |   |
|  | 0.0          | 40%  | H                      |                |             |   |
| 1  |              | 40%  |                        |                |             |   |
| <del>-</del> 10 −  |              |  | М                      |                |             | 10.0-12.5' Brown- gray, very fine grain, sand, some silt; some subrounded                   |
| <b>-</b> -   | 0.0          | 050/                                       | IXI                    |                |             | gravel, moist.  |
| ,_   |              | 95%  | W                      |                | SP          |   |
| − 12 <u>▼</u>  |              |  | Ħ                      |                |             |   |
|  | 0.0          | 75%  | IXI                    |                | GP          | 12.5-13.25' Subrounded gravel and subangular cobble, wet                                    |
| α 4.   |              | 7 3 70                                     | . Н                    |                |             | 13.25-16.0' Brown-gray, fine grain, sand and silt, some subrounded gravel,                  |
| [ 14 -   |              |  | М                      |                |             | high density, wet.  |
| = -  | 0.0          | 50%  | М                      |                | SP          |   |
|  |              | 30 76                                      |                        |                |             |   |
| [ 16 <del>-</del>  |              |  | ᅥ                      |                | П           | ·   |
| 의 -  |              |  |                        |                |             |   |
| 5 40   |              |  |                        |                |             |   |
| 급 18 -   |              |  |                        |                |             | ·   |
| 똵  |              |  |                        |                |             |   |
| COMMERCIAL Rev. 126/99 PHAR.GPJ II_CORP.GDT 11/21/02   1 |              |  |                        | j ,            |             |   |
| 89 − 20 <del>−</del>   |              |  |                        |                |             |   |
| <del>-</del> -   |              |  |                        |                |             |   |
| ® 22   |              |  |                        |                |             |   |
| - 22 -   |              |  |                        |                |             |   |
| 화 -  |              |  |                        |                |             |   |
| S 24   |              |  |                        |                |             |   |
| 화 24 -   |              |  |                        |                |             | ·   |
|  |              |  |                        |                |             | 1   |



Soil Boring

**SB-11**Page: 1 of 1

| Project _  | Camp Pi  | harsalia                |                        |                |             | Owner New York State Dept. of Environmental Cons.  | COMMENTS Located in front of the storage |
|--|--|-------------------------|------------------------|----------------|-------------|--|--|
| Location .   | Location Chenango county, New York Proj. No. 830271  |                         |                        |                |             |  |  |
| Surface El   | ev. NA   | 4                       | Tot                    | al Hole [      | Depth       | 12.0 ft. North East  | building                                 |
|  | Top of Casing NA Water Level Initial NA  |                         |                        |                |             | _  |  |
| -  |  |                         |                        |                |             |  |  |
|  | Screen: Dia         NA         Length         NA         Type/Size         NA           Casing: Dia         NA         Length         NA         Type         NA |                         |                        |                |             |  | ,  |
|  |  |                         |                        |                |             | Rig/Core   |  |
|  |  |                         |                        |                |             |  |  |
|  |  |                         |                        |                |             | Direct Push/Water Rotary   |  |
|  |  |                         |                        | -              |             | Date <u>10/18/02</u> Permit # <u>NA</u>  |  |
| Checked E  | Ву   |                         |                        |                | L           | cense No.  |  |
|  |  | ~ >                     | <b>#</b> .             |                | S.          | Description  |  |
| Depth<br>(ft.)   | ۵Ê   | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log | USCS Class. | Description  |  |
| De ⊟   | PID<br>(mdd)   | E  S                    | § ⊗                    | Grap           | S           | (Color, Texture, Structure)  |  |
|  |  | v %                     | ۳ °                    | -              | S           | Geologic descriptions are based on ASTM Standard D 248                                   | 7-93 and the USCS.                       |
|  |  | 1                       |                        |                |             | <u> </u>   |  |
|  |  |                         |                        |                |             |  |  |
|  |  |                         |                        |                |             |  |  |
| _  |  |                         |                        |                |             |  |  |
| F 0 -  |  |                         | М                      | 11 TV          |             | 0-0.5' Topsoil   |  |
| ▼  | 15.6   | 50%                     | Α                      |                | SM          | 0.5-1.0' Gray - tan, very fine grain sand and silt, dry.                                 |  |
|  |  | 30%                     | .                      |                | SM          | 1.0-1.25' Wood chips; strong odor; wet.<br>1.25-2.0' Very fine grain sand and silt, wet. |  |
| 2  |  |                         | М                      | , C.           | GP          | 2.0-2.75' Coarse grain sand, some subrounded grav  | el little angular cobble                 |
|  | 17.3   | 60%                     | М                      | 0,000          |             | saturated with a sheen and a strong odor, wet.   |  |
|  |  | 00 /0                   |                        |                | SP          | 2.75-4.0' Gray - tan, coarse to fine grain, sand, some                                   | subrounded gravel,                       |
| 4  |  |                         | М                      |                |             | moist. 4.0-8.0' Gray silt and very fine grain, sand, some sub                            | rounded gravel dry                       |
| + -  | 29.8   | 75%                     | M                      |                |             | 4.0 0.0 Oray sin and very line grain, saind, some sur                                    | irounded graver, dry.                    |
| <b>-</b> 6 -   |  |                         |                        |                | SP          |  |  |
|  |  |                         | M                      |                | "           |  |  |
| <b>-</b> -   | 18.2   | 50%                     | H                      |                |             |  |  |
| 8 -  |  |                         | Ш                      | ×11 1          | Ш           | 00000  |  |
|  |  |                         | M                      |                | GP          | 8.0-9.0' Gray, coarse to fine grain, sand, some subro                                    | ounded gravel, moist.                    |
|  | 2.5  | 75%                     | Δ                      |                |             | 9.0-12.0' Gray, fine grain, sand, some subrounded g                                      | ravel, high density, dry.                |
| <del>-</del> 10 <del>-</del>                             | ,  |                         | Н                      |                |             |  |  |
| L  | 0.0  |                         | M                      |                | SP          |  |  |
|  | 0.0  | 50%                     |                        |                |             |  |  |
| - 12 -   |  |                         | 닉                      | 1.11.11111.1   | H           |  |  |
|  |  |                         |                        |                |             |  |  |
|  |  |                         |                        |                |             |  |  |
| 일 14 -   |  |                         |                        |                |             |  |  |
| <b>₹</b> - ↓   |  |                         |                        |                |             |  |  |
| ±00 4.0  |  |                         |                        |                |             |  |  |
| [ 16 -   |  |                         |                        |                |             |  |  |
| 위 네  |  |                         |                        |                |             |  |  |
| 로 18 —   |  |                         | ļ                      |                |             |  |  |
|  |  |                         |                        |                |             |  |  |
| 불  |  |                         |                        |                |             |  |  |
| § - 20 -   |  |                         |                        |                |             |  |  |
| 12/6/  |  |                         |                        |                |             |  |  |
| []   | i  |                         |                        |                |             |  | İ  |
| ے 22 اے  |  |                         |                        |                |             |  |  |
| ISCIAL   |  |                         |                        |                |             |  |  |
| П_ COMMERCIAL Rev: 12/6/99 РНАК.GPJ П_ CORP.GDT 11/21/02 |  |                         |                        |                |             |  |  |
| § 24 -   |  |                         |                        |                |             |  |  |
| Ē  |  |                         |                        |                |             |  |  |



Soil Boring SB

**SB-12**Page: 1 of 1

| Project _                  |              |                         |                        |  |             | Owner New York State Dept. of Environmental Cons. COMMENTS  |  |  |
|----------------------------|--------------|-------------------------|------------------------|--|-------------|---|--|--|
|                            |              | Proj. No. <u>830271</u> |                        |  |             |   |  |  |
| Surface Elev. NA           |              |                         |                        |  |             | North East  |  |  |
| Top of Casing NA           |              |                         |                        | Water Level Initial NA Static NA Diameter 4.25 in. |             |   |  |  |
| Screen: Dia NA             |              |                         |                        | _  |             | Type/Size <u>NA</u>   |  |  |
| Casing: Dia NA             |              |                         |                        | -  |             | Type _ <i>NA</i>  |  |  |
|                            |              |                         |                        |  |             | Rig/Core  |  |  |
|                            |              |                         |                        |  |             | Direct Push/Water Rotary  |  |  |
|                            |              |                         | _                      | -  |             | ck Date <u>10/18/02</u> Permit # <u>NA</u>  |  |  |
| Checked E                  | Ву           |                         |                        |  | Li          | icense No.  |  |  |
| Depth<br>(ft.)             | Old<br>(mdd) | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log                                     | USCS Class. | Description  (Color, Texture, Structure)  Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.  |  |  |
| - 0 -                      |              |                         |                        |  |             |   |  |  |
|                            |              |                         | M                      | 7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.          |             | 0-0.75' Topsoil   |  |  |
| 「                          | 0.0          | 65%                     | Н                      |  | sм          | 0.75-2.0' Tan-brown, fine grain, sand and silt, high density, dry.  |  |  |
| <b>├</b> 2 <b>-</b>        |              |                         | М                      |  |             | 2.0-6.0' Brown-tan, fine grain, sand and silt, some subrounded gravel, dry.   |  |  |
| ┡╶┤                        | 0.0          | 50%                     | Α                      |  |             |   |  |  |
| L 4 -                      |              |                         |                        |  | SP          |   |  |  |
| '                          |              |                         | M                      |  | SM          |   |  |  |
| 1                          | 0.0          | 80%                     | Δ                      |  |             | ·   |  |  |
| ├ 6 ┤                      |              |                         | X                      |  |             | 6.0-14.0' Brown-tan, fine grain, sand and silt, some subrounded gravel, dry.  |  |  |
| <b>├</b>                   | 0.0          | 25%                     |                        |  |             | g   |  |  |
| <br> - 8                   |              | 2576                    |                        |  |             |   |  |  |
| $\Gamma$ $^{\circ}$ $\neg$ |              |                         | A                      |  |             |   |  |  |
| r 1                        | 0.0          | 25%                     | 11                     |  |             |   |  |  |
| <b>├</b> 10 <b>┤</b>       |              |                         | $\forall$              |  | SP<br>SM    |   |  |  |
| L J                        | 0.0          |                         | П                      |  | J           |   |  |  |
| 4.0                        |              | 25%                     |                        |  |             |   |  |  |
| - 12 -                     |              |                         | М                      |  |             |   |  |  |
| ┞┤                         | 0.0          | 50%                     | H                      |  |             |   |  |  |
| - 14 -                     |              |                         | Ц                      |  | $\sqcup$    | 44.0.46.0! Drawn tan fine arein and and archaeolad arrest d   |  |  |
| L                          | ,,           |                         | M                      |  | SP          | 14.0-16.0' Brown-tan, fine grain, sand and subrounded gravel, dry. Large subangular rock fragments from 15.5-15.8'. |  |  |
|                            | 0.0          | 75%                     | $\Delta$               |  | ا ۵۲        | <u> </u>  |  |  |
| - 16 -                     |              |                         | Ч                      | 1, 11, 116   |             |   |  |  |
| ┟┤                         |              |                         |                        |  |             |   |  |  |
| - 18 -                     |              |                         |                        |  |             |   |  |  |
| '                          |              |                         |                        |  |             |   |  |  |
| <b> </b>                   |              |                         |                        | .  |             |   |  |  |
| 20 -                       |              |                         |                        |  |             |   |  |  |
| <u> </u>                   |              |                         |                        |  |             |   |  |  |
|                            |              |                         |                        |  |             |   |  |  |
| <u> </u>                   |              |                         |                        |  |             |   |  |  |
| <b> </b>                   |              |                         | ]                      |  |             |   |  |  |
| <u> </u>                   |              |                         | ļ                      |  |             |   |  |  |



Soil Boring SB-13

**SB-13** Page: 1 of 1

| Project _        |              |                         |                        |   |                | Owner New York State Dept. of Environmental Cons.   | COMMENTS           |  |  |
|------------------|--------------|-------------------------|------------------------|---|----------------|---|--------------------|--|--|
|                  |              |                         |                        | Proj. No. <u>830271</u>   |                |   |                    |  |  |
|                  |              |                         |                        | Total Hole Depth 16.0 ft. North East  |                |   |                    |  |  |
| _                |              |                         |                        | Water Level Initial NA Static <u> 8.5 ft.</u> Diameter <u>4.25 in.</u> Length NA Type/Size NA |                |   |                    |  |  |
|                  |              |                         |                        | -   |                |   |                    |  |  |
|                  |              |                         |                        |   |                | Type _ <i>NA</i> Rig/Core   |                    |  |  |
|                  |              |                         |                        |   |                | Direct Push/Water Rotary  |                    |  |  |
|                  |              |                         |                        |   |                | ck Date 10/17/02 Permit # NA  |                    |  |  |
|                  |              |                         |                        |   |                | icense No.  |                    |  |  |
| Checked          | эу <u>——</u> | Ι.                      | - 1                    |   |                | icerise No.   | -                  |  |  |
| Depth<br>(ft.)   | Old<br>(mdd) | Sample ID<br>% Recovery | Blow Count<br>Recovery | Graphic<br>Log  | USCS Class.    | Description<br>(Color, Texture, Structure)<br>Geologic descriptions are based on ASTM Standard D 2487   | -93 and the USCS.  |  |  |
| - 0 -            |              |                         |                        |   |                |   |                    |  |  |
| -<br>- 2 -       | 0.0          | 75%                     |                        | <u>** **</u>  |                | 0-0.5' Topsoil 0.5-4.0' Tan- brown, fine grain, sand, some silt, some dry.  | subrounded gravel, |  |  |
| -<br>-<br>- 4 -  | 0.0          | 50%                     | X                      |   | SP             |   |                    |  |  |
| - 6 -            | 0.0          | 75%                     | M                      |   |                | 4.0-8.5' Tan-brown, fine grain, sand and silt, some su moist.   | ibrounded gravel,  |  |  |
| - 8 <del>-</del> | 0.0          | 50%                     | X                      |   | SP             |   |                    |  |  |
| - 10 -           | 0.0          | 100%                    |                        |   | ML<br>GP       | 8.5-8.8' Tan-brown, fine grain, sand, some subrounde<br>8.8-9.5' Tan-brown, fine grain, sand and subrounded<br>subangular gravel, moist.                              | gravel, some       |  |  |
| 12 -             | 0.0          | 60%                     | X                      |   | SP             | 9.5-14.0' Tan-gray, coarse grain, sand, some subrour density, dry.  | nded gravel, high  |  |  |
| - 14 -           | 0.0          | 50%                     |                        |   |                |   |                    |  |  |
| - 16 -           | 0.0          | 100%                    | M                      | ,<br>C  | SP<br>GP<br>SP | 14.0-14.5' Tan-gray, coarse grain, sand, some subrout 14.5-15.0' Gray-tan, fine grain, sand and angular graves 15.0-16.0' Gray-tan fine grain, sand and silt, some su | vel, dry.          |  |  |
| - 18 -           |              |                         |                        |   |                |   |                    |  |  |
| - 20 -           |              |                         |                        |   |                |   |                    |  |  |
| - 22 -<br>       |              |                         |                        |   |                |   |                    |  |  |
| - 24 -           |              |                         |                        |   |                |   |                    |  |  |

#### **APPENDIX B**

#### **GAUGING DATA**

| Groundwater Well Purging Data Sheet   |   |                          |   |  |  |  |
|---|---|--------------------------|---|--|--|--|
| Project Name:   | Well ID   | Mu-\ Date: M             | 702   |  |  |  |
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water co | Time: 14:18<br>16:50<br>2-95<br>lumn: 13.35                                 |                          | •   |  |  |  |
| 1 well volume =   | 3 well volu   | imes= <b>歩</b> んの        | 5 well volumes= 11.00   |  |  |  |
| Purge Data<br>Method: Wolk  | fung  | Flow: 10,28              | gallons per minute  |  |  |  |
| 1/2 gallon<br>Turb: <u>らい</u>   | 1 gallon<br>Turb: 45<br>pH: 6.90<br>Cond: 0.455<br>Temp: 10.79<br>DO: 0.40  | 1 1/2 gallon<br>Turb: 46 | 2 gallons Turb: (, 0 pH: (, 9) Cond: 0, 450 Temp: 10, 16 DO: 0, 9 |  |  |  |
| 2 1/2 gallons<br>Turb:  | 3 gallons<br>Turb: 47<br>pH: 6, 90<br>Cond: 457<br>Temp: 10, 44<br>DO: 1,37 | 3 1/2 gallons<br>_Turb:  | 4 gallons Turb:   |  |  |  |
| Did Well Dry Out?   | <u> </u>  | How Many Times?          |   |  |  |  |
| Time Purging ended:_  | 14:50   |                          |   |  |  |  |
| Observations: Color: 6004 - 2   | Closen Sheen?:  | d                        | Odor?:  |  |  |  |
| Personnel: 18   |   |                          |   |  |  |  |

| Project Name: Camp Phassing Well ID: PMW - Q Date: 11/7/02   |
|--|
| Water Level Data Time: 1597  A) Depth To Bottom: 16.0  B) Depth To Water: 4.6  C) Height of water column: 11.4 |
| 1 well volume = 1.86 3 well volumes= 5, 58 5 well volumes=   |
| Purge Data  Method: Low Flow: 13 gallons per minute  |
| 1/2 gallon   |
| 2 1/2 gallons 3 gallons 3 1/2 gallons 4 gallons Turb: 0 Turb: 0 Turb: 0 Turb: 0  pH: 6.29                      |
| Did Well Dry Out? How Many Times?  |
| Time Purging ended: 1550   |
| Observations: Color: 4 Bm Sheen?: N Odor?: N   |
| Comments: Clears quickly. Miss a gall - ady flow   |
| Personnel: MCF   |

| Project Name: Phacadia Well ID:   | Mu-3 Date: 1   | 1/13               |
|---|--|--------------------|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water column:  741  741  7360  734  7360 | -  |                    |
| 1 well volume = 1,29 3 well volu  | mes= <u>387</u>  | 5 well volumes=645 |
| Purge Data Method: Local Comp   | Flow: 0,25   | gallons per minute |
| 1/2 gallon  | 1 1/2 gallon<br>_Turb:   | 2 gallons Turb:    |
| 2 1/2 gallons 3 gallons Turb: O  pH: 6.11  Cond: 0.774  Temp: 7.7  DO: 8,93                                   | 3 1/2 gallons<br>_Turb: <i>O</i>   | 4 gallons Turb:    |
| Did Well Dry Out?   | How Many Times?  |                    |
| Time Purging ended: 1956  |  |                    |
| Observations: Color: Character Sheen?:  | and the second s | Odor?:             |
| Comments:   |  |                    |
| Personnal: A P  |  |                    |

| Project Name: Pha   | realia Well ID:   | MW-4 Date: 11            | /13/02   |       |                         |
|---|---|--------------------------|--|-------|-------------------------|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water co | 5/12  | <u>-</u>                 |  |       |                         |
| 1 well volume =   | 3 well volu   | umes=_ ゟ. ろ】             | 5 well volumes=  |       |                         |
| Purge Data Method:  | Flow  | Flow: 1-4                | _gallons per minute  |       |                         |
| 1/2 gallon<br>Turb: <u>999</u>  | 1 gallon Turb: 376 © pH: 6.34 Cond: 7/2 Temp: 10.2 DO: 8.01 | 1 1/2 gallon<br>Turb:    | 2 gallons Turb: \$13.0  pH: 6.74  Cond: 654  Temp: 9.6  DO: 8.07 | Recal |                         |
| 2 1/2 gallons<br>Turb:  | 3 gallons Turb: 0 pH: 6.12 Cond: 727 Temp: 10 q DO: 7.28    | 3 1/2 gallons<br>Turb: O | 4 gallons Turb: 0 pH: 6.55 Cond: 68/ Temp: /0.8 DO: 7.23         | 41/2  | 5<br>6 97<br>10<br>7 03 |
| Did Well Dry Out?   | N   | How Many Times?          | ·<br>  |       |                         |
| Time Purging ended:   | 1803  |                          |  |       |                         |
| Observations: Color: Lt brow Comments: At a                                   |   |                          | Odor?: N<br>Sensor oft reco                                      | a     |                         |
| Personnel: MEF  | •   |                          |  | •     |                         |
|   |   |                          |  |       |                         |

4

.

| Project Name: Phace   | salia Well ID:_  | PMw-5 Date:                                  | 1/13/02  |
|---|--|--|--|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water co | 5.06   | <b>_</b>                                     | •  |
| 1 well volume =   | .पं८ 3 well volu   | umes= 4.38                                   | 5 well volumes=7.30  |
| Purge Data<br>Method: <u>wale</u>   | pump   | Flow: 10.25                                  | gallons per minute   |
| 1/2 gallon<br>Turb: <u>217</u>  | 1 gallon Turb:  59 pH: (,,62 Cond: 0,99 Temp: /0,3 DO: 9,37  | 1 1/2 gallon<br>_ Turb: <u>2フゼ</u><br>-<br>- | 2 gallons Turb: 54.0 pH: 6.42 Cond: 6.99 Temp: 10.4 DO: 9.47 |
| 2 1/2 gallons<br>Turb:  | 3 gallons Turb:  pH:  Cond:  Cond:  Cond:  DO:  Cond:  Con | 3 1/2 gallons<br>_ Turb: <b>O</b>            | 4 gallons Turb: 0 pH: 6.47 Cond: 0.49 Temp: 10.4 DO: 9.74    |
| Did Well Dry Out?   | NO   | How Many Times?                              |  |
| Time Purging ended:   | 7100   |  |  |
|   | Sheen?:_   |  | Odor?:   |
| Porsonnali MP   |  |  |  |

| Project Name: Phas  | <u>ടുപി i u</u> Well ID:_                                     | PMW-6 Date:                        | 11/13/02  |       |
|---|---|------------------------------------|---|-------|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water co | Time: 1940<br>15,60<br>Iumn: 13 0 0                           | 2.60                               |   |       |
| 1 well volume = 2   | 3 well volu   | umes= <u>6.33</u>                  | 5 well volumes=   | ·     |
| Purge Data<br>Method: <u>Low</u>  | Flow  | Flow:~1/4                          | _gallons per minute   |       |
| 1/2 gallon<br>Turb: <u>999</u>  | 1 gallon Turb:  | 1 1/2 gallon<br>Turb:\$ 0 0<br>    | 2 gallons  Turb: 999  pH: 7.04  Cond: -838  Temp: 12.7 (7)  DO: 6.23                      |       |
| 2 1/2 gallons<br>Turb:  | 3 gallons Turb: —  pH: 7.07  Cond: .865  Temp: 12.7  DO: 6.69 | 3 1/2 gallons<br>_Turb:9 จู ๔<br>- | 4 gallons Turb: pH:7, & \( \delta \) Cond: 885 Temp:1\( \delta \), \( \delta \) DO: 6, 93 | 41/2  |
| Did Well Dry Out?   | N   | How Many Times?                    |   | 5/2   |
| Time Purging ended:_  | २००५  |                                    |   | Allen |
|   | -some fun Sheen?:_  |                                    | Odor?: N  | ·     |
|   | see through line  |                                    | high turb - however   |       |
|   |   | ( curb sensor ! )                  |   |       |
| Personnel: M.   | <u> </u>  |                                    |   |       |

# APPENDIX C GROUNDWATER SAMPLE COLLECTION LOGS

| Water Level Data  Time: 15.30  A) Depth To Bottom: 16.30  B) Depth To Water: 2.90  C) Height of water column: 15.40 |             |
|---|-------------|
| Sampling Method  Method: Flow: Flow: gallons per minute   | )           |
| Prior to sampling:  Turb: 39 2 Turb: 37.6  pH: 6.91 (out of jar)  Cond: 0.400  Temp: 10.59  DO: 1.30                |             |
| Constituents Sampled    Filtered? (Circle yes   1   |             |
| Did Well Dry Out? 30 How Many Times?  |             |
| Observations:  Color: Sheen?: Odor?:  |             |
| Personnel: AP   | <del></del> |

| Project Name: Camp Pharsalia  | Well ID: PM N Q Dat                | e: 11/7/02                                    |   |
|---|------------------------------------|---|---|
| Water Level DataTime: 15A) Depth To Bottom:16B) Depth To Water:1.C) Height of water column:11 | 0                                  |   |   |
| Sampling Method  Method: ∠ ← () ⇒ ()  | Flow:                              | gallons per minute                            |   |
| Prior to sampling:  Turb: 0  pH: 6.30  Cond: 303  Temp: 11.2  DO: 7.33                        | Dioxin Sample: Turb:  (out of jar) | ·   |   |
| SVOC<br>Fuel Oil  | # of Amber Liters Collected        | Filtered? (Circle of yes yes no yes no yes no | 3 |
| Did Well Dry Out?   | How Many Tim                       | yes no  |   |
| Observations: Color: Clack  | Sheen?:                            | Odor?:  |   |
| Comments:   |                                    |   |   |
| Personnel: MEF  |                                    |   |   |

| Project Name: Phacsalia  | Well ID: P                          | MW-3         | Date: 11 | /13/02  |   |
|--|-------------------------------------|--------------|----------|---|---|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water column: | .60                                 |              |          |   |   |
| Sampling Method  Method:   | ÷ .                                 | Flow:        | 0.25     | _gallons per mi                                   | nute  |
| Prior to sampling: Turb:  pH: 5,99  Cond: 0,789  Temp: 9,4  DO: 8,92               | Dioxin Sam<br>Turb:<br>(out of jar) | 10           | -        |   |   |
| Constituents Sampled  Dioxin  BLOR  310.13   | <u>Z</u>                            | Liters Colle |          | Filtered? (Cir<br>yes<br>yes<br>yes<br>yes<br>yes | cle one)<br>(CO)<br>(CO)<br>(CO)<br>(CO)<br>(CO)<br>(CO)<br>(CO)<br>(CO |
| Did Well Dry Out?_ 20  |                                     | How Many     | Times?   | · • • • • • • • • • • • • • • • • • • •           |   |
| Observations: Color: Clea- Comments: Shupucl                                       | Sheen?:                             |              |          | Odor?:  |   |
| Personnel:   |                                     |              |          |   |   |

| Project Name: Phacsalia  | Well ID: PMW 4 Date: 11                 | 1/13/02             |
|--|---|---------------------|
| Water Level Data A) Depth To Bottom: B) Depth To Water: C) Height of water column: | .0                                      |                     |
| Sampling Method<br>Method: <u>そのい チョル</u>  | Flow: ~ 「4                              | _gallons per minute |
| Prior to sampling:  Turb:  | Dioxin Sample: Turb: Q (out of jar)     |                     |
| Constituents Sampled Dioxins Syoc Fire   Oil                                       | # of Amber Liters Collected<br>ଥି<br>ଥି | yes no yes yes      |
| Did Well Dry Out? N  | How Many Times?_                        |                     |
| Observations: Color: Clear   | Sheen?: N                               | Odor?: N            |
| Comments:  |   |                     |
| Personnel: MEF   |   |                     |

| Project Name: Phacsalla   | Well ID: <u>PMW - 5</u> Date: <u>11</u> | /13/0a   |
|---|---|--|
| Water Level Data  A) Depth To Bottom: B) Depth To Water: C) Height of water column: | 6:11<br>14:05<br>5:06<br>8:99           |  |
| Sampling Method<br>Method:  | Flow: 0,25                              | _gallons per minute                                |
| Prior to sampling: Turb:  PH:  Cond:  O:  Temp:  DO:  9:74                          | Dioxin Sample: Turb: (out of jar)       | 7:45 7:00  |
| Constituents Sampled D.oxin 310.13 BNA  | # of Amber Liters Collected             | Filtered? (Circle one)  Ves  yes  yes  no  yes  no |
| Did Well Dry Out? 120   | How Many Times?_                        |  |
| Observations: Color:Clear.  | Sheen?:N                                | Odor?: N   |
| Comments:   | •.                                      |  |
| Personnel: <del>Q</del>   |   |  |

| Project Name: Pharsalia            | Well ID: PMW-6 Date: 11     | /13. /09                              |
|------------------------------------|-----------------------------|---------------------------------------|
| •                                  | PMW-6F                      |                                       |
| Water Level Data Time:             | 1940                        | •                                     |
| A) Depth To Bottom:                | 5.60                        |                                       |
| B) Depth To Water:                 | 2.60                        |                                       |
| C) Height of water column:         |                             |                                       |
|                                    |                             |                                       |
| Sampling Method                    | 21,                         |                                       |
| Method: Low Flow                   | Flow:                       | gallons per minute                    |
| •                                  |                             |                                       |
| Prior to sampling:                 | Dioxin Sample:              |                                       |
| Turb: <u> 730</u>                  | Turb: 615                   |                                       |
| pH: <u>7.34</u><br>Cond: <u>94</u> | (out of jar)                |                                       |
| Cond: <u>94</u> /                  |                             |                                       |
| Temp: <u>/3. ⊉</u>                 |                             |                                       |
| DO: 6.83                           |                             |                                       |
|                                    |                             |                                       |
| Constituents Sampled               | # of Amber Liters Collected |                                       |
| Dioxins                            | 2/2                         | (yes) (no)                            |
| 5700                               | ચે/ચે                       | (ves) (no)                            |
| Fuel OIL                           | ର / ଧ                       | (yes) (no)                            |
|                                    |                             | yes no                                |
|                                    |                             | yes no                                |
| <b>5</b>                           |                             |                                       |
| Did Well Dry Out?                  | How Many Times?             | · · · · · · · · · · · · · · · · · · · |
| Observations                       |                             |                                       |
| Observations:                      | 01 0 01                     |                                       |
| Color: Clear                       | Sheen?:                     | Odor?: N                              |
| Comments:                          |                             |                                       |
| Commonto.                          |                             |                                       |
|                                    |                             |                                       |
|                                    |                             |                                       |
| Personnel: MEF                     |                             |                                       |

# APPENDIX D QUALITATIVE EXPOSURE ASSESSMENT

#### **APPENDIX D**

#### QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT for the CAMP PHARSALIA SITE PHARSALIA, NEW YORK

DEC Site No. 7-09-013

February 26, 2003



Prepared for:
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7015

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#### 1.0 BACKGROUND

Exposure assessment is the process of identifying potential current and future receptors, and characterizing the nature of their contact with a chemical. A qualitative exposure assessment was performed for the Camp Pharsalia site in order to determine potential exposure pathways associated with current site conditions and to evaluate their potential significance.

The qualitative exposure assessment results in the creation of site-specific exposure profiles, which provide the narrative description of the mechanisms by which exposure to contaminants may occur at a site. Chemical, physical, and toxicological parameters for the chemicals of concern are also identified and taken into account when developing the exposure profiles. The potential significance of the identified exposures is evaluated in a qualitative manner.

#### 2.0 EXPOSURE SETTING

The exposure setting is evaluated with respect to both current and potential future land uses of the site and surrounding area in order to aid in the identification of potential receptors, exposure points and exposure pathways.

Camp Pharsalia is a large complex of NYSDEC crew headquarters and an active NYDCS incarceration facility, situated in the town of Pharsalia, Chenango County, NY. The surrounding area is rural, generally consisting of farmland and undeveloped forest. Wood treatment operations were conducted at Camp Pharsalia between 1960 and 1977. The area of concern includes the former wood treatment plant and staging area, which is located immediately northwest of the former treatment plant.

#### 3.0 IDENTIFICATION OF EXPOSURE PATHWAYS

For identified receptors to be exposed to a chemical of concern at the site, a current or reasonable future exposure pathway must be established leading from the source to the

receptor. The exposure pathway is the route that the chemical takes from the source of the material to the receptor of concern. An exposure pathway has five elements:

- a contaminant of significance
- contaminant release and transport mechanisms
- · a point of exposure
- a route of exposure
- a potential receptor

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is possible, but not documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future.

#### 3.1 Source of Contamination

One of the work projects at Camp Pharsalia was the operation of a wood treatment facility and sawmill, which operated between 1960 and 1977. During this time, pentachlorophenol (PCP) was the primary chemical biocide used in treating lumber at the site. During the treatment process, PCP and No. 2 fuel oil were combined in the dip tanks. After treatment, poles were hoisted from the tank and allowed to drip over the tank for a period of time. Poles were then moved to outside the western end of the treatment plant and allowed to dry. They were then moved to a designated treated material storage area, located south of the treatment plant. Therefore, the sources of release to the environment are historical surficial spills of wood treatment products (PCP and fuel oil) to soil.

#### 3.2 Fate and Transport

Contaminant release and transport mechanisms may carry contaminants from the source to points where individuals may be exposed. Chemical migration between media such as soil and groundwater is influenced by chemical parameters such as water solubility or molecular size or shape, in addition to the chemical and physical characteristics particular to a site's media. This

section discusses information about the fate and transport of the source chemicals present at the site.

#### Pentachlorophenol

Pentachlorophenol is a moderately acidic substance, and thus its fate is strongly influenced by pH. At a neutral pH it is almost completely found in the ionized form, the pentachlorophenate anion, which is much more mobile than PCP (ATSDR, 2000). PCP has a low water solubility and a strong tendency to adsorb onto soil or sediment particles in the environment. Adsorption to soils and sediments is dependent on pH and organic content. Adsorption at a given pH increases with increasing organic content of soil or sediment. No adsorption occurs at pH values above 6.8 (ATSDR, 2000; Howard, 1991). Since it is expected that soils at the site are acidic (less than 7.0) based on soil type (no pH data is available) and soils are low in organic content, (TOC is 0.0439% in SB-11 [8-10']), some adsorption is likely to occur, but it may be limited.

The ionized form of pentachlorophenol may be rapidly photolyzed by sunlight; PCP may also undergo biodegradation by microorganisms, animals, and plants, although degradation is generally slow (Howard, 1991). Given that at expected pH conditions a portion of PCP will be present in the ionized form, photolysis may be an important degradation pathway at this site in shallow soils.

PCP has an octanol-water partition coefficient (Kow) of 100,000 (Howard, 1991), which indicates that it is lipid-soluble and therefore has a tendency to bioaccumulate in organisms. Bioaccumulation is largely pH-dependent, with considerable variation among species. Bioconcentration factors (BCFs) for PCP in aquatic organisms are generally under 1,000, but some studies have reported BCFs up to 10,000. BCFs, however, for earthworms in soil were 3.4-13 (ATSDR, 2000). Significant biomagnification of PCP in either terrestrial or aquatic foodchains, however, has not been demonstrated (ATSDR, 2000).

Pentachlorophenol products often contain chlorophenols, dioxins, and furans. Once released to the environment, the chlorinated dibenzo-p-dioxins (CDDs) and dibenzofurans (CDFs) are persistent and generally adsorb to soil or sediment particles, due to their low water solubilities. Adsorption is generally the predominate fate process affecting these chemicals, with the potential for adsorption related to the organic carbon content. CDDs and CDFs may undergo degradation through biological action or by photolysis, with a half-life ranging from weeks to months. Photolysis and hydrolysis are generally not significant processes, however, as these compounds persist in the adsorbed phase (USEPA, 2002).

Due to their high adsorption rate, CDDs are not expected to leach from soil, although some leaching of disassociated forms of the compound may occur, especially at lower pHs (USEPA, 2002). Since the pH of site soils are not known but are not expected to be highly acidic, leaching of CDDs and CDFs is unlikely. Migration of CDD-contaminated soil may occur through erosion and surface runoff. Upon reaching surface waters, additional adsorption may occur due to the typically higher levels of organic matter content of sediments as compared to surface soils (ATSDR 2000). Volatilization from either subsurface soil or water is not expected to be a major transport pathway, although it may occur from surface soils (ATSDR, 2000). As with PCP and other lipophilic pesticides, CDDs and CDFs tend to bioaccumulate in exposed organisms, with BCFs for aquatic organisms ranging from 5,000 to 10,000 (Montgomery, 1996). Uptake from soil by plants can occur, although it is limited by the strong adsorption of these compounds to soils. BCFs in plants have been measured to be 0.0002, with most accumulation occurring in the roots with little translocated to the foliage (ATSDR, 2000). Terrestrial organisms may accumulate CDDs and CDFs as a result of direct ingestion and contact with soils.

At the Pharsalia site, PCP is expected to be adsorbed to soil organic matter content, although leaching may occur due to the expected pH (slightly acidic) and low organic matter content in site soils (TOC 0.0439% in SB-11 [8-10']). However, leaching is most likely not occurring as there has been no PCP detected in any of the monitoring wells. Some photolysis of PCP from surface soils can be expected. Uptake of PCP from soil by plants or terrestrial organisms may occur, but biomagnification is not expected. CDDs and CDFs are expected to be strongly sorbed to soil, as well as persistent. Leaching of these compounds is likely to be limited. Accumulation of these compounds in plants as a result of root uptake is unlikely to be significant.

#### Fuel Oil

At the site, PCP was mixed with No. 2 fuel oil for wood treatment application. Fuel oils are mixtures of numerous aliphatic and aromatic hydrocarbons. Individual components of fuel oil include n-alkanes, branched alkanes, benzene and alkylbenzenes, naphthalenes, and PAHs (ATSDR, 2000). Primary constituents identified in soil and/or groundwater at the site are PAHs. Soil adsorption, volatilization to air, and leaching potential depend on a PAH's individual chemical characteristics; however, as a class of compounds, they are generally insoluble in water, with a strong tendency to bind to soil or sediment particles. Some of the lighter-weight PAHs (such as naphthalene, acenaphthene, and phenanthrene) may volatilize from soil or groundwater into the air. Degradation may occur through photolysis, oxidation, biological action, and other mechanisms. Microbial degradation appears to be a major degradation pathway in soil (ATSDR, 2000).

As nonpolar, organic compounds, PAHs may be accumulated in aquatic organisms from water, soil, sediments, and food. BCFs vary among PAHs and receptor species, but in general, bioconcentration is greater for the higher molecular weight compounds than for the lower molecular weight compounds (ATSDR, 2000). BCFs for accumulation of PAHs by plants from soil are low, with values of 0.001 to 0.18 reported for total PAHs (ATSDR, 2000). Accumulation of PAHs from soil by terrestrial organisms is also limited, with BCF values for voles of 12 reported for phenanthrene and 31 for acenapthene.

At this site, PAHs, the primary fuel oil constituents of interest, are expected to be adsorbed to soil, with limited potential for leaching. Microbial degradation may occur, with other degradation processes less important in soil. Uptake of PAHs from soil by terrestrial organisms or plants may occur, but bioconcentration is expected to be limited.

#### 3.3 Points of Exposure

The exposure point is a location where actual or potential human contact with a contaminated medium may occur. Analytical results for samples collected at Camp Pharsalia indicate that soil and to a lesser extent, groundwater, have been impacted by:

- Pentachlorophenol (PCP);
- Polychlorinated dioxins (CDDs) and dibenzofurans (CDFs); and
- Fuel oil.

Analytical results from samples collected across the site indicate that contaminants have been identified in surface soils (0-2 inches bgs) northwest of the treatment plant. Pentachlorophenol was detected at SS-5 to SS-9 at concentrations up to 270 mg/kg, but not at the other 4 shallow soil sampling locations northwest of the treatment plant. Previous investigations showed that soil samples under the building detected PCP up to 330 mg/kg based on immunoassay analysis, with one sample submitted for laboratory analysis showing PCP of 47 mg/kg. Other semi-volatile organic compounds (including polycyclic aromatic hydrocarbons and phthalate esters) were only detected infrequently at estimated concentrations below the reporting limit. Pyrene, however, was detected at concentrations above the reporting limit at SS-5 and SS-6. Polychlorinated dioxins and furans were detected at all surface soil sampling locations, with the highest concentrations at SS-5 and SS-6, the same locations where the highest concentrations of PCP were detected. Metals were detected at all sampling locations, however, concentrations were generally less than or similar to background concentrations in New York State or the eastern United States (NYDEC, 1994). Lead was detected at a concentration of 145 mg/kg at

SS-9, however, this metal is not known to be related to wood treatment activities and may represent natural concentrations.

Subsurface soil samples also showed infrequent detection of SVOCs at, for the most part, estimated concentrations below the reporting limit. PCP was not detected in subsurface soils in this investigation. However, PCP was detected in the previous investigation in Test Pit 9 (PTP-9), west of the treatment plant, at 40 mg/kg and in four sampling locations beneath the treatment plant. Polychlorinated dioxins and furans were detected above the 1 ppb screening level in the sampling locations beneath the treatment plant. Points of exposure for soil are limited to the surface soil west and adjacent to the treatment plant.

Groundwater samples showed low concentrations of a few semi-volatile organic conpounds that were detected at estimated concentrations below the reporting limit. PCP was not detected in any groundwater sample during any sampling event. Fuel oil components were detected in PMW-1, PMW-5 and PMW-6A.

Dioxins and furans were detected above the 0.0007 ng/L 2,3,7,8-TCDD guidance value in the four wells in which they were analyzed (PMW-1, PMW-2, PMW-4, and PMW-5) during the sampling event conducted in 1999. Concentrations ranged from 0.19 ng/L (PMW-5) to 0.00132 ng/L (PMW-2). Groundwater samples from this round were also analyzed for metals. While concentrations were detected above screening criteria, as reported in the Preliminary Investigation Report, they were attributed to background conditions, since they are not known to be site related.

The water supply well used by the facility is located at the site located approximately 250 feet northeast of the treatment plant. It was installed in bedrock at a depth of 300 feet below grade, as compared to the monitoring wells at the site that are screened at depths of 6-16 feet below grade. This well was previously sampled by New York State Department of Health in May 1998 and analyzed for VOCs, SVOCs, pesticides and PCBs, and metals. No volatiles, pesticides, PCP, or PCBs were detected, and does not appear to be impacted by the site. Sampling of this well in June 2001 and analysis for ketones and petroleum products and herbicides (including PCP), confirmed that this well was not impacted by fuel oil or PCP.

#### 3.4 Potential Receptors and Exposure Routes

Exposure assessment includes a description of the potentially exposed persons who live, work, play, visit, or otherwise come to the site or surrounding environment. Consideration is given to

the characteristics of the current populations (including sensitive subpopulations) as well as those of any potential future populations that may be exposed under any reasonable foreseeable future site activities and uses.

Camp Pharsalia is currently maintained as a NYSDEC management area and as a NYSDCS correctional facility, and is located in a heavily wooded, rural area. Inmates at Camp Pharsalia and NYSDEC employees conduct no activities in the impacted area. In fact, inmates have been instructed not to go in this area. This area is, however, currently accessible (i.e. no fence or gate limits access), nor are there any deed restrictions on the property that would restrict future land use. Therefore, the following receptors have been identified for the site under current and reasonable foreseeable future land use scenarios:

#### **Current Use**

Adult inmates and staff at Camp Pharsalia (infrequent); and

#### **Future Use**

- Construction workers performing excavation activities
- NYSDEC Maintenance and Operations activities

The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption). Based on the nature of the chemicals of potential concern, the types of media impacted at the site, and land use scenarios, the following exposure routes were identified:

- Direct contact with exposed surficial soil. Exposure routes include incidental ingestion of and dermal contact with impacted soil and the inhalation of particulatebound contaminants.
- Direct contact with subsurface soil and/or groundwater, although impacts to surface soil are more significant than subsurface soil. Future activities involving excavation in the area of concern may allow exposure to impacted soil and shallow groundwater. Exposure routes include incidental ingestion of and dermal contact with soil and groundwater, and the inhalation of particulate-bound contaminants.
- Direct contact with groundwater used as a future drinking water source. Routes of
  exposure include ingestion and dermal contact. Currently, there are three active
  bedrock water supply wells located at the site, upgradient of the area of concern.
  Samples previously collected from two of these wells confirmed that contaminants
  related to the wood processing activities were not present at detectable levels, and
  the third well is located further upgradient. However, there are no restrictions on the
  property that would limit the future placement of a water supply well in any area of
  the site.

There is some potential for the uptake of site contaminants (PCP and dioxins) by terrestrial organisms that may then be consumed as game species. Terrestrial game likely to be hunted in this area would include species such as white-tailed deer and turkey. Both species consume vegetation; additionally, turkeys are opportunistic feeders that will also include invertebrates to their diet. As discussed above, uptake by plants from soil is not expected to result in significant bioaccumulation in plants. In addition, the area of impact is small relative to the expected home range of these two species. White-tailed deer have a home range of 120 to 400 acres (Burnett et al. 2002), while turkey can have a home range of 1000 acres or more (North Caroline State University 1995). Any contribution of site-related contaminants to the body burden of these species is, therefore, expected to be insignificant.

#### 4.0 CONCLUSIONS

Complete exposure pathways have been identified for potential current and future human receptors based on exposure to contaminated soil and groundwater, although such exposures are expected to be very infrequent. The impacted area (PCP and dioxins and furans) is located under the treatment plant and in a small area of surface soils west of the treatment plant. Due to the narrow area of known contamination and the fact that the treatment plant is abandoned, under current conditions, prison inmates, NYSDEC and NYSDCSS staff, are unlikely to be present in impacted areas.

Concentrations of PCP are above the NYSDOH guidance value for human health of 20 mg/kg at SS-5 and SS-6, and at previous sampling locations in the same area PSS-1 and PSS-3 (immunoassay results). Concentrations of dioxins (as 2,3,7,8-TCDD equivalents) are above the criteria of 1 ug/kg that NYSDEC has used at other sites at SS-5, SS-6, SS-8, and SS-9.

While no site background has been established for metals has been established at this site, background samples taken at Camp Georgetown were used as a point of comparison. Concentrations of lead at several locations are above background concentrations found at Georgetown (7.1 to 16.6 mg/kg), with the maximum detected concentration of 145 mg/kg at SS-9. The presence of lead is unlikely to be related to site releases of wood preservatives, since it was not used at the site, nor does it appear to be related to any fuel oil release based on the low concentrations of PAHs in surface soil. Concentrations of other metals are below the soil cleanup objective or within the range of background concentrations specified in TAGM 4046 (NYSDEC, 1995), and background concentrations at Georgetown.

Given the limited potential for exposure to soil and the relatively small size of the areas where concentrations exceed standards, potential site exposures are unlikely to pose a significant risk to human health under current use. In addition, the soil standards are based on long-term exposure on a frequent basis. Actual exposures at this site are very infrequent, and not likely to occur over an extended period of time. Site concentrations may pose a significant risk in the future if site use were to change, resulting in increased exposure to the area of concern.

Groundwater concentrations of SVOCs from the recent round of sampling were all below either applicable groundwater criteria or standards (NYSDEC, 1998). The concentration of heptachlor epoxide at PMW-4 of 0.11 ug/L was above the groundwater standard of 0.03 ug/L. This pesticide was not detected in any other groundwater sample, nor is it known to be site-related. Historic concentrations of dioxins and furans in the monitoring wells in 1999 were higher than the groundwater standard of 0.0007 ng/L 2,3,7,8-TCDD equivalents. However, no dioxins were detected in the monitoring wells above the 0.0007 ng/L guidance value during the most recent round of groundwater sampling. Also, PCP was not detected in any of the wells in any round of sampling, making the origin of the dioxin congeners unclear. Since there is no use of shallow groundwater for drinking water purposes, the historic presence of dioxins and furans in groundwater does not pose a risk to human health under current use. Site groundwater concentrations may pose a risk in the future if shallow groundwater at the site were to be used for drinking water purposes.

#### 5.0 REFERENCES

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New York State Department of Environmental Conservation (NYSDEC). 1995. *Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels.* HWR-94-4046.

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# APPENDIX E DATA USABILITY SUMMARY REPORT

# DATA REVIEW SUMMARY REPORT

for

# THE SHAW GROUP Environmental & Infrastructure

Latham, New York

NYSDEC - Camp Pharsalia Site

SDG No. A01-C279

Prepared By: Environmental Quality Associates, Inc.

July 24, 2002

The Shaw Group, Environmental & Infrastructure Att: Tanjia Maynard, Project Manager 13 British – American Boulevard Latham, New York 12110

Re: NYSDEC / Camp Pharsalia Laboratory Analytical Data

Dear Ms. Maynard,

This cover letter, and the attached documents, detail the data validation findings associated with the following sample analytical results contained in the above-referenced deliverables set.

Site Name:

Camp Pharsalia

**Fractions** 

Semi-Volatiles, 8270

Laboratory:

Severn Trent

SDG No.: A01-C279

Matrix:

Aqueous

Pesticide / PCBs, 8081 / 8082

Laboratory:

Severn Trent

SDG No.: A01-C279

Matrix:

Aqueous

Reviewer:

Chris Taylor

Prepared by: Environmental Quality Associates, Inc.

#### SECTION A Sample Information

The above-noted project samples were analyzed by Severn Trent Laboratories, Inc., Amherst, NY. Semivolatile Organics were analyzed by USEPA SW-846 Method 8270, and Pesticide/PCB Organics were analyzed by USEPA SW-846 Methods 8081 and 8082, respectively.

A summary table of samples analyzed is presented below; samples listed are exclusive of MS / MSD analyses performed.

It is noted that the cover letter of the laboratory narrative contained on the reviewer's CD-ROM associated with this SDG contained several errors, as follow: (1) the SDG was incorrectly referenced as A01-B882, rather than A01-C279; (2) the matrix was incorrectly identified as soil, rather than water; (3) the Project Name was incorrectly identified as Camp Summit, rather than Camp Pharsalia; (4) the dates of sample collection and receipt were incorrect. Other information within the narrative was correct, based on review of the chain-of-custody and other supporting raw data.

All samples were received at 11 degrees C, which exceeds the industry-standard sample temperature range of 4 +/- 2 degrees C; therefore, all reported results for all organic fractions were qualified 'UJ' or 'J', with potential negative bias suggested. It is noted that the laboratory has no control over over sample shipping and preservation practices, unless the samples are collected by laboratory staff. Proper sample preservation practices should be reviewed with the sample collection staff.

|                 |          |        | Date      | An       | alyses            |
|-----------------|----------|--------|-----------|----------|-------------------|
| Sample ID       | Lab ID   | Matrix | Collected | Semi-VOA | Pesticides / PCBs |
| EQUIPMENT BLANK | A1C27902 | A      | 12/06/01  | Х        | Х                 |
| MW-1            | A1C27903 | A      | 12/06/01  | X        | X                 |
| MW-2            | A1C27904 | Α      | 12/06/01  | X        | X                 |
| MVV-3           | A1C27905 | Α      | 12/06/01  | X        | X                 |
| MW-4            | A1C27906 | Α      | 12/06/01  | X        | X                 |
| MW-5            | A1C27907 | A      | 12/06/01  | x        | X                 |
| MW-500          | A1C27908 | A      | 12/06/01  | x        | X                 |
| WASTE DISPOSAL  | A1C27901 | A      | 12/06/01  | x        | X                 |

A = Aqueous Matrix

Total Samples =

8

8

#### SECTION B Semi-volatile Fraction (8270)

Several target compounds exceeded the maximum %RSD value of 15.0% during the initial calibration sequences; since none of these compounds were positive in associated samples, no data qualifiers were necessary.

The %D for 2,4-dinitrophenol in the continuing calibration of 12/20/01 exceeded 20.0%; this compound was qualified (U) 'J', as quantitatively estimated, in all associated samples.

Blank spike recoveries were within acceptable limits. It is noted that the laboratory used the CLP spike compound set in matrix and blank spike samples. SW-846 protocol calls for spiking with all compounds of interest, generally taken to mean all method target compounds being reported. Also, the laboratory is reporting the same recovery limits for both matrix and blank spikes, whereas blank spikes should have a tighter recovery range based upon absence of matrix effects. Although no data qualifiers are warranted based on these protocol excursions, the laboratory should take steps to ensure that method requirements are followed.

# SECTION C Pesticide Fraction (8081)

All samples were extracted and analyzed within NYSDEC-ASP holding times.

The laboratory utilized linear regression for the initial calibration sequence; all correlation coefficients were above the required minimum value of 0.99. The %Ds for 4,4'-DDE, Endosulfan I, delta-BHC and Methoxychlor exceeded 15.0% in the calibration verification standards (CCV); these analytes were qualified (U) 'J' in associated samples.

#### SECTION D PCB Fraction (8082)

All samples were extracted and analyzed within NYSDEC-ASP holding times.

The laboratory utilized linear regression for the initial calibration sequence; all correlation coefficients were above the required minimum value of 0.99. All associated CCV %Ds were below 15.0%. No positive Aroclors were reported.

# SECTION E Overall Recommendations

The results of the review and validation process for the above organic fraction and associated samples are summarized on the attached OC Summary Tables, in order to facilitate the end-user's' review of these data.

Very truly yours,

Environmental Quality Associates, Inc.

Chris W. Taylor

Vice President

Attachments

# REVIEWED & QUALIFIED ANALYTE SUMMARY FORMS

Camp Pharsalia Site

SDG No. A01-C279

# 000019

| ab Name: <u>STL Buffalo</u>     |                                   | <del></del>      | EQUIPMENT BLANK       |
|---------------------------------|-----------------------------------|------------------|-----------------------|
| ab Code: <u>RECNY</u> Case No.: | SAS No.:                          | SDG No.:         |                       |
| atrix: (soil/water) WATER       |                                   | Lab Sample ID:   |                       |
| ample wt/vol: 1000.0            | (g/mL <sub>1</sub> )- <u>ML</u> , | Lab File ID:     | W46154.RR             |
| evel: (low/med) <u>LOW</u>      |                                   | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture: decante               |                                   | Date Extracted:  | 12/12/2001            |
| procentrated Extract Volume:    | _ <u>1000</u> (பட)                | Date Analyzed:   | 12/19/2001            |
| njection Volume: 1.00 (ul       | ,)                                | Dilution Factor: | 1.00                  |
| PC Cleanup: (Y/N) N pH:         | _7.0                              |                  |                       |

|                   | COMPOUND                     | (ug/L or ug/Kg) | UG/L | Q        |
|-------------------|------------------------------|-----------------|------|----------|
| 83-32-9           | Acenaphthene                 |                 | 10   | u l      |
| 208-96-8          | Acenaphthylens               |                 | 10   | บ็       |
| 120-12-7          | Anthracene                   |                 | 10   | ן ט      |
|                   | Benzo (a) anthracene         |                 | 10   | Ü        |
| 205-99-2          | Benzo (b) fluoranthene       | ·               | 10   | U        |
| 207-08-9          | Benzo (k) fluoranthene       | -               | 10   | U        |
| 191-24-2          | Benzo (qhi) pervlene         |                 | 10   | υ        |
| 50-32-8           | Benzo(a) pyrene              | 70.             | 10   | Ū        |
| 55-85-0           | Benzoic acid                 |                 | 50   | <u>ט</u> |
| 100-51~6          | Benzyl alcohol               |                 | 20   | บิโ      |
| 111-91-1          | Bis(2-chloroethoxy) methane  |                 | 10   | Ū        |
| 111-44-4          | Bis(2-chloroethyl) ether     |                 | 10   | U        |
| 108-60-1          | 2,2'-Oxybis(1-Chloropropane) |                 | 10   | <u>ט</u> |
| 117-81-7          | Bis(2-ethylhexyl) phthalate  |                 | 10   | υŧ.      |
| L01-55-3          | 4-Bromophenyl phenyl ether   |                 | 10   | U \      |
| 35-68-7           | Butyl benzyl phthalate       |                 | 10   | ŭ        |
| L06-47-8- <i></i> | 4-Chloroaniline              |                 | 10   | ľul      |
| 59-50-7           | 4-Chloro-3-methylphenol      |                 | 10   | υ        |
| 91-58-7           | 2-Chloronaphthalenc          |                 | 10   | Ü        |
| 95-57-8           | 2-Chlorophenol               |                 | 10   | ប        |
| 7005-72-3         | 4-Chlorophenyl phenyl ether  |                 | 10   | lu l     |
| 218-01-9          | Chrysene                     |                 | 10   | υ        |
|                   | Dibenzo (a, h) anthracene    | ·               | 10   | TI F     |
|                   | Dibenzofuran                 |                 | 10   | U        |
|                   | Di-n-butyl phthalate         |                 | 10   | บ        |
| 95-50-1           | 1,2-Dichlorobenzene          |                 | 10   | U        |
| 41-73-1           | 1,3-Dichlorobenzene          |                 | 10   | וֹט      |
| 06-46-7           | 1,4-Dichlorobenzene          | <del></del>     | 10   | III      |
| 1-94-1            | 3,3'-Dichlorobenzidine       |                 | 20   | U        |
| 20-83-2           | 2,4-Dichlorophenol           |                 | 10   | U        |
| 34-66-2           | Diethyl phthalate            |                 | 10   | υ        |
| .05-67-9          | 2,4-Dimethylpherol           |                 | 10   | υ        |

# 000020

| ab Name: STT, Buffalo         | Contract:              |                  | EQUIPMENT BLANK       |
|-------------------------------|------------------------|------------------|-----------------------|
| ab Code: <u>RECNY</u> Case No | O.: SAS No.:           | SDG No.:         | <del></del>           |
| atrix: (soil/water) WATER     |                        | Lab Sample ID:   | A1C27902              |
| ample wt/vol: 1000.           | 0 (g/mL) <u>Mr</u>     | Tab File ID:     | W46154.RR             |
| evel: (low/med) <u>LOW</u>    |                        |                  | 12/06/2001 12/08/2001 |
| Moisture: decan               | ted: (Y/N) <u>N</u>    | Date Extracted:  | <del></del>           |
| oncentrated Extract Volum     | e:_ <u>1000</u> (เป้า) | Date Analyzed:   | <del>-</del>          |
| ijection Volume: 1.00(        | uL)                    | Dilution Factor: |                       |
| C Clearup: (Y/N) N pH         | : <u>7.0</u>           |                  | <del></del>           |

| 131-11-3Dimethyl phthalate 534-52-14,6-Dinitro-2-methylphenol 51-28-52,4-Dinitrophenol 50 U | CAS NO.  | COMPOUND  | CONCENTRATION UNIT |   | _ |           |
|---|--|---|--------------------|---|---|-----------|
| 121-14-22,4-Dinitrotoluene  | 534-52-1 51-28-5 121-14-2 606-20-2 117-84-0 206-44-0 86-73-7 118-74-1 87-68-3 193-39-5 193-39-5 193-39-5 91-57-6 91-57-6 91-20-3 91-20-3 106-44-5 91-20-3 88-74-4 99-09-2 100-01-6 98-95-3 88-75-5 100-02-7 86-30-6 621-64-7 87-86-5 87-86-5 108-95-2 120-82-1 | Dimethyl phthalate4,6-Dinitro-2-methylphenol2,4-Dinitrophenol2,4-Dinitrotoluene2,6-DinitrotolueneDi-n-octyl phthalateFluorentheneFluoreneHexachlorobenzeneHexachlorobenzeneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneHexachlorocyclopentadieneIndeno(1,2,3-cd) pyrene2-Methylphenol4-Methylphenol4-Methylphenol4-Methylphenol3-Nitroaniline4-Nitroaniline4-Nitrobenzene2-Nitrophenol4-NitrosodiphenylamineN-nitrosodiphenylamineN-nitroso-Di-n-propylaminePentachlorophenolPhenanthrenePhenolPyrene1,2,4-Trichlorobenzene | (ug/L or ug/kg)    | 50<br>50<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>1 |   | OTIZILOW. |

# 000021

| ab Name:  | STL Buffa  | <u>alo</u> Cont                        | ract:  |  | EQUIPMENT BLANK                                |
|-----------|------------|--|--|--|--|
| ab Code:  | RECNY      | Case No.:s                             | AS No.:  | SDG No.:                                   |  |
| itrix: (s | :Oil/water | ·) WATER                               |  | Lab Sample ID:                             | A1C27902                                       |
| mple wt/  | vol:       | <u>1000.0 (g/mL) мт</u>                | The second secon | Lab File ID:                               | W46154.RR                                      |
| i (       | TOM/We(f)  | <u>LOW</u>                             |  |  | 12/06/2001 12/08/2001                          |
|           |            | decanted: (Y/N) N                      |  | Date Extracted:                            | 12/12/2001                                     |
| i i       |            | t Volume: <u>1000</u> (uL)<br>1.00(uL) |  | Date Analyzed:                             | ··· <del>·</del>                               |
| 1         |            | <u>N</u> pH: <u>7.0</u>                |  | Dilution Factor:                           | 1.00   |
| · -       |            | COMPOUND                               | . (u <u>c</u>  | Entration units:<br>1/L or ug/kg) <u>[</u> | <u>c/l                                    </u> |
| , 83      | 3-06-2     | 2,4,6-Trichloroph                      | enol   |  | 10 U 🗸   |
| į         | ·          |  |  | •  |  |

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

# 000022

| ab Name | ≘: <u>SIL Buffalo</u>    | Contract:           |                           |                  | FQUIPME           | NI BL | ANK            |
|---------|--------------------------|---------------------|---------------------------|------------------|-------------------|-------|----------------|
| ab Code | e: <u>RECNY</u> Case No  | O.: SAS No.:        |                           | •                | ·                 | _     | <u> </u>       |
|         | (soil/water) <u>WATE</u> |                     | Lab Samp                  | _                | A1C279            | 02    |                |
| mpile v | /t/vol: 1000.            | .0 (g/mL) <u>МГ</u> | Lab File                  | D:               | W46154            | .RR   |                |
| ivel:   | (10w/med) <u>IOW</u>     |                     |                           |                  |                   |       | <br>L2/08/2001 |
|         | re: decan                |                     | Date Exti                 |                  |                   |       |                |
| į.      | ated Extract Volum       |                     | Date Anal                 | yzed:            | <u>12/19/</u>     | 2001  |                |
| ı       | n Volume: <u>1.00</u>    |                     | Dilution                  |                  |                   |       |                |
| nber T  | ICs found: 0             | _                   | CONCENTRATI<br>(ug/L or u | ON UNIT<br>g/Kg) | s:<br><u>ug/l</u> | -     |                |
| ]       | CAS NO.                  | Compound Name       | RT                        | Est. (           | Conc.             |       |                |
| i       |                          |                     |                           | ======           |                   |       |                |

# 000023

| ab Name: STL Buffalo Contract:       |  |
|--------------------------------------|--|
| Ab Code: RECNY Case No.: SAS No.:    | SDG No.:                                     |
| atrix: (soil/water) <u>WATER</u>     | Lab Sample ID: A1C27903                      |
| nple wt/vol: 1000.0 (g/mL) ML        | Lab File ID: <u>W46155.RR</u>                |
| evel: (low/med) <u>LOW</u>           | Date Samp/Recv: <u>12/06/2001</u> 12/08/2001 |
| Moisture: decanted: (Y/N) N          | Date Extracted: <u>12/12/2001</u>            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed: <u>12/19/2001</u>             |
| jection Volume: 1.00 (uL)            | Dilution Factor:1.00                         |
| C Cleanup: (Y/N) N pH: 6.0           |  |

| CAS NO.             | COMPOUND                       | CONCENTRATION UNIT<br>(ug/T, or ug/Kg)  | S:<br><u>UG/L</u> | Q                       |
|---------------------|--------------------------------|---|-------------------|-------------------------|
| 83-32-9<br>208-96-8 | Acenaphthene<br>Acenaphthylene |   | 10                | U                       |
| 120-12-7            | Anthracene                     |   | 10                | U                       |
| 56-55-3             | Benzo (a) anthracene           |   | 10                | U                       |
| 205-99-2            | Benzo (b) fluoranthene         |   | 10                | U                       |
| 207-08-9            | Benzo (k) fluoranthene         |   | 10                | U                       |
| 191-24-2            | Benzo (ghi) perylene           | ·                                       | 10                | מ                       |
| 50 32-8             | Benzo (a) pyrene               |   | 10<br>10          | ן ט                     |
| 65-85-0             | Benzoic acid                   |   | 50                | U                       |
| 100-51-6            | Benzyl alcohol                 |   | 20                | U                       |
| 111-91-1            | Bis(2-chloroethoxy) methani    | D                                       | 10                | Ü                       |
| 111-44-4            | Bis(2-chloroethv1) ether       | *************************************** | 10                | ט                       |
| 108-60-1            | 2,2'-Oxybis(1-Chloropropage    | =)                                      | 10                | מ                       |
| 117-81-7            | Bis(2-ethvlhexv]) obtbalata    |   | 10                | U                       |
| 101-55-3            | 4-Bromophenvl phenvl ether     |   | 10                | $ \mathcal{C}_{\{u\}} $ |
| 85-68-7             | Butvl benzvl phthalate         |   | 10                | וט                      |
| 106-47-8            | 4-Chlomaniline                 |   | 10                | ט                       |
| 59-50-7             | 4-Chloro-3-methylphenol        |   | 10                | ט                       |
| 91-58-7             | 2-Chloronaphthalene            |   | 10                | القا                    |
| 95-57-8             | 2-Chlorophenol                 |   | 1.0               | Ü                       |
| 7005-72 -3          | 4-(hlorophenyl phenyl ether    |   | 10                | ט                       |
| 218-01-9            | Chrysene                       |   | 10                | lö l                    |
| 53-70-3             | Dibenzo (a.h) anthracene       |   | 10                | ן ט                     |
| 132-64-9            | Dibenzofuran                   |   | 10                | ָט<br>ט                 |
| 84-74 -2            | Di-n-butvl phthalate           |   | 10                | ט                       |
| 95-50-1             | 1,2-Dichlorobenzene            | ···                                     | 10                | ן ט                     |
| 541-73-1            | 1,3-Dichlorobenzene            |   | 10                | U                       |
| 106-46-7            | 1,4-Dichlorobenzene            |   | 10                | 1 - 1 - 1               |
| 9194-1              | 3,3'-Dichlombenzidine          |   | 20                | U                       |
| 120-83-2            | 2,4-Dichlorophenol             | ·                                       | 1.0               | - g                     |
| 84-66-2             | Diethyl phthalate              |   | 10                | U                       |
| 105-67-9            | 2,4-Dimethylphenol             |   | 10                | ע                       |
|                     |                                |   | TO                | ן ט                     |

# 000024

Client No.

| ab Name: <u>STL Buffa</u> | <u>lo</u> Contract:            |                  | MW-1                  |
|---------------------------|--------------------------------|------------------|-----------------------|
| ab Code: <u>RECNY</u> (   | Tase No.: SAS No.: _           | SDG No.:         |                       |
| atrix: (soil/water)       | WATER                          | Lab Sample ID:   | A1C27903              |
| ample wt/vol:             | <u>1000.0</u> (g/mL) <u>ML</u> | Lab File ID:     | W46155,RR             |
| evel: (low/med)           | LOW                            | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:                 | decanted: (Y/N) N              | Date Extracted:  | 12/12/2001            |
| bncentrated Extract       | Volume: <u>1000</u> (uL)       | Date Analyzed:   | 12/19/2001            |
| njection Volume:          | 1.00 (uL)                      | Dilution Factor: | 1.00                  |

C Cleanup: (Y/N) N pH: 6.0

| CAS NO.   | COMPOUND                              | CONCENTRATION UNIT    | rs:<br><u>ug/l</u> | 0        |
|-----------|---------------------------------------|-----------------------|--------------------|----------|
| 777 44 0  |                                       | - (ug) 10 01 ug/ lug/ | <u>0.5/ II</u>     | Q.       |
| 131-11-3  | Dimethyl phthalate                    |                       | 10                 | ן ט      |
| 151 30 F  | 4,6-Dinitro-2-methylphenol            |                       | 50                 | ט        |
| 121 74 2  | 2,4-Dinitrophenol                     |                       | 50                 | ן ט      |
| 121,14-5  | 2,4-Dinitrotoluene                    |                       | 10                 | ט        |
| 117-94-0  | 2,6 Dinitrotoluene                    |                       | 10                 | U        |
| 206-44-0  | Di-n-octyl phthalate                  |                       | 1                  | [J [ ]   |
| 86-73-7   | Fluoranchene<br>Fluorene              |                       | 10                 | ע   ע    |
|           | Hexachlorobenzene                     |                       | 10                 | ט        |
| 87-68-3   | Hexachlorobutadiene                   |                       | 10                 | U        |
| 77-47-4   | Hexachlorocyclopentadiene             | 61                    | 10                 | U        |
| 67-72-1   | Hexacillorocyclopentadiene            |                       | 10                 | U   [    |
| 193-39-5  | Indeno (1,2,3-od) pyrene              |                       | 10                 | U        |
| 78-59-1   | Inde.13(1,2,3dd) pyrene               | ,                     | 10                 | lu   T   |
| 91-57-6   | 2-Methylnaphthalene                   |                       | 10                 | U        |
| 95-48-7   | 2-Methylphenol                        |                       | 10                 | ן בין ס  |
| 106-44-5  | 4-Methylphenol                        |                       | 10                 | U        |
| 91-20-3   | Naphthalene                           |                       | 10                 | U        |
| 88-74-4   | 2-Nitroaniline                        |                       | 10                 | ט        |
| 99-09-2   | 3-Nitroaniline                        |                       | 50                 | U        |
| 100-01-6  | 4-Nitroaniline                        | <del></del>           | 50                 | <u> </u> |
| 98-95-3   | Nitrobenzene                          |                       | 50                 | U        |
| 88-75-5   | 2-Nitrophenol                         |                       | 10                 | U        |
| 100-02 7  | 4-Nitrophenol                         | ····                  | 10                 | ע        |
| 86-30-6   | N-nitrosodiphenylamine                |                       | 50                 | U        |
| 621-64-7  | N-Nitroso-Di-n-propylamine            |                       | 10<br>10           | U        |
| 87-86-5   | Pentachlorophenol                     |                       | 50                 | U        |
| 85-01-8   | Phenanthrene                          |                       | 50<br>10           | U        |
| 108-95-2  | Phenoi                                | <del></del>           |                    | ָּוֹטָן. |
| 129-00-0  |                                       |                       | 10<br>10           | U        |
| 1.20-82-1 | 1,2,4-Trichlorobenzene                |                       |                    | U        |
| 95-95-4   | 2,4,5-Trichlorophenol                 |                       | 10                 | U        |
| <u> </u>  | 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 |                       | 10                 | ט        |

relation

# 000025

| ab Name: <u>STL Buffalo</u> C       | Ontract:   |  | MW-1                                  | _           |
|-------------------------------------|------------|--|---------------------------------------|-------------|
| ab Code: RECNY Case No.:            |            |  | _                                     |             |
| atrix: (soil/water) WATER           |            | Lab Sample ID:                         | A1C27903                              |             |
| imple wt/vol: 1000.0 (g/mL) M       | ᆫ          | Lab File ID:                           | W46155.RR                             | <del></del> |
| evel: (low/med) <u>LOW</u>          |            | Date Samp/Recv:                        | 12/06/2001                            | 12/08/2001  |
| Moisture: decanted: (Y/N            | ) <u>N</u> | Date Extracted:                        | 12/12/2001                            |             |
| ncentrated Extract Volume: 1000 (uL | )          | Date Analyzed:                         | 12/19/2001                            |             |
| njection Volume: 1.00 (uL)          |            | Dilution Factor                        | 1.00                                  |             |
| C Cleanup: (Y/N) N pH: 6.0          |            |  |                                       |             |
| CAS NO. COMPOUND                    |            | INCENTRATION UNITS:<br>(ug/L or ug/Kg) |                                       | Q           |
| 88-06-22,4,6-Trichlor               | ophenol    |  |                                       | 5           |
|                                     |            |  | · · · · · · · · · · · · · · · · · · · | out allow   |

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

# 92000

Client No.

| ab Name: STL Buffalo Contract:           |                    | MW - 1,               |
|--|--------------------|-----------------------|
| ab Code: <u>RECNY</u> Case No.: SAS No.: |                    |                       |
| atrix: (soil/water) WATER                | Lab Sample ID:     | A1C27903              |
| imple wt/vol: 1000.0 (g/mL) ML           | Iab File ID:       |                       |
| ;vel: (low/med) <u>IOW</u>               |                    | 12/06/2001 12/08/2001 |
| Moisture: decanted: (Y/N) N              | Date Extracted:    |                       |
| pncentrated Extract Volume: 1000 (uL)    | Date Analyzed:     | 12/19/2001            |
| rjection Volume: 1.00 (uL)               | Dilution Factor:   | 1.00                  |
| C Cleanup: (Y/N) N pH: 6.0               |                    |                       |
| mber TICs found: 4                       | CONCENTRATION UNIT | Տ։<br><u>ՄG/Ն</u> _   |

| CAS NO. | Compound Name   | RT'   | E∢t. Conc. | Q           |
|---------|---|-------|------------|-------------|
| 1.      | UNKNOWN ORGANIC UNKNOWN ORGANIC UNKNOWN ORGANIC UNKNOWN ORGANIC | 3.20  | 10         | <b>ま</b> ール |
| 2.      |   | 7.63  | 10         | リ           |
| 3.      |   | 17.80 | 11         | リ           |
| 4.      |   | 27.68 | 7          | リ           |

oil end .

000027

| ab Name: <u>STL Buffalo</u>            | Contract:    |                  | MW-2                  |
|--|--------------|------------------|-----------------------|
| ab Code: RECNY Case No.:               |              | <del></del>      |                       |
| atrix: (soil/water) <u>WATER</u>       |              | Lab Sample ID:   | A1C27904              |
| <pre>ample wt/vol: 1020.0 (g/mL)</pre> | ML           | Lab File ID:     | W46158.RR             |
| evel: (low/med) <u>LOW</u>             |              | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture: decanted: (Y/                | /N) <u>N</u> | Date Extracted:  | 12/12/2001            |
| ncentrated Extract Volume: 1000(L      | ıL)          | Date Analyzed:   | 12/19/2001            |
| rjection Volume: 1.00(uL)              |              | Dilution Factor: | 1.00                  |
| C Cleanury (Y/N) N AH. 7 A             |              |                  |                       |

|                 | •                            | CONCENTRATION UNIT | rs:          |     |              |
|-----------------|------------------------------|--------------------|--------------|-----|--------------|
| CAS NO.         | COMPOUND                     | (ug/L or ug/Kg)    | UG/L         | Q   |              |
| 83-32-9         | Acenaphthene                 |                    | 10           | וטו | 1            |
| 208-96-8        | Acenaphthylene               |                    | , 10<br>, 10 | υ   | 1            |
| 120-12-7        | Anthracene                   |                    | 1,0          | Ü   |              |
| 56-55-3         | Benzo (a) anthracene         |                    | 10           | บั  |              |
| 205-99-2        | Benzo (b) fluoranthone       | 7.4                | 10           | Ü   | ,            |
| 207-08-9        | Benzo (k) fluoranthene       |                    | 10           | ן ט |              |
| 1191-24-2       | Benzo(qhi)perylene           | 7                  | 10           | Ū   |              |
| 50-32-8         | Benzo (a) pyrene             |                    | 10           | U   | 1            |
| 65-85-0         | Benzoic acid                 | ·                  | 50           | U   |              |
| 100-51-6        | Benzyl alcohol               |                    | 20           | U   | [            |
| 111-91-1        | Bis(2-chloroethoxy) methane  |                    | 1.0          | Ū   | ĺ            |
| 111-44-4        | Bis(2-chloroethyl) ether     |                    | 10           | ΰ   | 1            |
| 1108-60-1       | 2,2'-Oxybis(1-Chloropropane) | 1                  | 10           | Ū   |              |
| ]TT/-8T-/       | Bis(2-ethylhexyl) phthalate  | -                  | 10           | Ü   |              |
| 101-55-3        | 4-Bromophenvl phenvlether    |                    | 10           |     | and the same |
| 182-68-7        | Butvi benzvi phthalahe       |                    | 10           | U   | entrale      |
| 106-47-8        | 4-Chloroaniline              |                    | 10           | Ü   | la los       |
| 59-50-7~        | 4-Chloro-3·methylphenol      | 1                  | 10           | Ū   |              |
| 91 -58-7        | ·2-Chloronaphthalene         |                    | 1.0          | Ū   |              |
| 95-57-8         | 2-Chlorophenol               |                    | 10           | ŭ   | •            |
| 7005-72-3       | 4-Chlorophenyl phenyl ether  | •——•               | 10           | Ū   |              |
| 218-01-9        | ·Chrysene                    | ·                  | 10           | U   |              |
| 53-70-3         | Dibenzo (a,h) anthracene     |                    | 10           | U   |              |
| 132-64 9        | Dibenzofuran                 |                    | 10           | U   | ı.           |
| 84-74-2         | Di-n-butyl phthalate         |                    | 10           | ן ט |              |
| <b> 95~50-1</b> | 1.2-Dichlorobenzene          |                    | 10           | U U |              |
| 541-73-1        | 1,3-Dichlorobenzene          | <del></del>        | 10           | Ü   | ı            |
| 106-46-7        | 1,4-Dichlorobenzene          |                    | 10           | ט   |              |
| 91-94-1         | 3,3'-Dichlorobenzidine       |                    | 20           | ប   |              |
| 120-83-2        | 2,4-Dichlorophenol           |                    | 10           | ן ט |              |
| 84-66-2         | Diethyl phthalate            |                    | 10           | ן ט |              |
| 105-67-9        | 2,4-Dimethylphenol           | ",,                | 10           | υ.  |              |
|                 | ··                           |                    |              | *   |              |

# 000028

| ab Name: <u>STL Buff</u> a | <u>Lo</u> Contract:            |                  | MW-2                                  |
|----------------------------|--------------------------------|------------------|---------------------------------------|
| ab Code: <u>RECNY</u>      | Case No.: SAS No.:             | SDG No.:         | · · · · · · · · · · · · · · · · · · · |
| atrix: (soil/water         | ) <u>WATER</u>                 | Lab Sample ID:   | <u>A1C27904</u>                       |
| umple wt/vol:              | <u>1020.0</u> (g/mL) <u>ML</u> | Lab File ID:     | <u>W46158.R</u> R                     |
| vel: (low/med)             | TOM                            |                  | 12/06/2001 12/08/2001                 |
| Moisture:                  | decanted: (Y/N) N              | Date Extracted:  | · · · · · · · · · · · · · · · · · · · |
| ncentrated Extract         | : Volume:_1000 (uL)            | Date Analyzed:   |                                       |
| jection Volume:            | _ <u>1.00</u> (uL)             | Dilution Factor: | 1.00                                  |
| Cleanup: (Y/N)             | N pH: 7.0                      |                  | <del></del>                           |

| CAS NO. COMPOUND  | CONCENTRATION UNIT |          |          |          |
|---|--------------------|----------|----------|----------|
|   | (ug/L or ug/Kg)    | UG/L     | Q        |          |
| 131 11-3Dimethyl phthalate                                    |                    | 10       | ט        | 7        |
| 1934-52-14 6-Dinitro-2-methyl-base                            | <u>loi</u>         | 50       | Ü        | 1        |
| 194-48-92 4-Dinitrophenal                                     |                    | 50<br>50 | Ü        |          |
| 1421-14-22.4-Dinitmtolueno                                    |                    | 10       | ן ט      | ļ        |
| 1000-40-22.6-Dinitmbolueno                                    |                    | 10       | Ü        |          |
| 111/-84-0Di-n-octvl phthalaba                                 |                    | 10       | ט        |          |
| 200-44-0Filloranthene   |                    | 10       | שו       |          |
| 86-73-7Fluorene   |                    | 10       | 1 - 1    | -        |
| 118-74-1Hexachlorobenzene                                     |                    |          | U        | 1        |
| 87-68-3Hexachlombutadiene                                     |                    | 10<br>10 | ט        | 1        |
| //-47-4Hexachlonocyclosoptadion                               |                    | 10       | U        |          |
| 0/-/2-1Hevachlonochhana                                       |                    | 10       | U        |          |
| 193-39-5Indepo(1 2 3-cd)                                      |                    | 10       | ū        | i        |
| 10 132 I = "===-IBODHOrone                                    |                    | 10       | υl       |          |
| 91-57-62-Methylnaphthaleno                                    |                    | 10       | U        | <b>†</b> |
| 95-48~72-Methylphenol   |                    | 10       | רלים     |          |
| 106-44-5  |                    | 10       | U        | 1.5      |
| 91-20-3Naphthalene  |                    | 10       | U        | cytylor  |
| 88-/4-42-Nitmaniling  |                    | 10       | Ü        | 011      |
| 99-09-23-Nitroaniline   | <u> </u>           | 50<br>50 | U        | 1        |
| 100-01-64-Nitmaniline   |                    | 50       | U        | 1        |
| 98-95-3Nitrobenzene   |                    | 50       | U        | 1        |
| 88-75-52-Nitrophenol  |                    | 10       | U        | 1        |
| 100-02-74-Nitrophenol   |                    | 10       | <b>ט</b> | 1        |
| 86-30-6N-nitrosodiphenylamine                                 |                    | 50       | U        | ŧ        |
| 621_647 N Missana Di a  |                    | 10       | ע        | 1        |
| 621-64·7N-Nitroso-Di-n-propylamin<br>87-86-5Pentachlorophenol | .e                 | 10       | Ū        | Ĺ        |
| 85-01-8Phenanthrene   |                    | 50       | Ū        | í.       |
| 108-95-2Phenanthrene  |                    | 10       | Ū        | 1        |
| 129-00-0Pyrene — — — — — — — — — — — — — — — — — —            |                    | 10       | Ū        | ı        |
| .29-00-0iyrene  |                    | 10       | U        | 1        |
| 120-82-11,2,4-Trichlorobenzene                                |                    | 10       | וטו      | 1        |
| 95-95-42,4,5 Trichlorophenol                                  |                    | 10       | ט        | ı        |

000029

| ab Name Can m us a                          | MW-2   |
|---|--|
| ab Name: <u>SIL Buffalo</u> Contract:       |  |
| th Code: <u>RECNY</u> Case No.: SAS No.:    | SDG No.:   |
| atrix: (soil/water) <u>WATER</u>            | Lab Sample ID: <u>AlC27904</u>                     |
| mple wt/vol: <u>1020.0</u> (g/mL) <u>ML</u> | Lab File ID: W46158.RR                             |
| evel: (low/med) <u>LOW</u>                  | Date Samp/Recv: 12/06/2001 12/08/2001              |
| Moisture: decanted: (Y/N) N                 | Date Extracted: 12/12/2001                         |
| ncentrated Extract Volume: 1000 (uL)        | Date Analyzed: <u>12/19/2001</u>                   |
| jection Volume: 1.00 (uL)                   | Dilution Factor: 1.00                              |
| Cleanup: (Y/N) N pH: 7.0                    | <u></u>  |
| CAS NO. COMPOUND                            | CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u> Q |
| 88-06-22,4,6-Trichlorophenol                | 10 U1  |
|   | 01/24/00   |

### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

000030

Client No.

| 1                            |                          |                  |                       |
|------------------------------|--------------------------|------------------|-----------------------|
| ab Name: SIL Buffal          | Lo Contract:             |                  | MW-2                  |
| ab Code: <u>RECNY</u>        | Case No.: SAS No.:       | SDG No.:         | _                     |
| itrix: (soil/water)          |                          | Lab Sample ID:   | <u>A1C27904</u>       |
| mple wt/vol:                 |                          | Lab File ID:     | W46158.RR             |
| <pre>zvel: (Low/mod) !</pre> | <u>LOW</u>               | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:                    | decanted: (Y/N) N        | Date Extracted:  |                       |
| procentrated Extract         | Volume: <u>1000</u> (uL) | Date Analyzed:   | <u>12/19/2001</u>     |
| ijection Volume:             | 1.00 (uL)                | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N)             | N pH· 7.0                |                  |                       |

mber TICs found: 9

CONCENTRATION UNITS:

(ug/L or ug/Kg) <u>UG/L</u>

| CAS NO.              | Compound Name   | RT   | Est. Come.                            | Q   |
|----------------------|---|--|---------------------------------------|---|
| 2. 3. 4. 5. 6. 7. 8. | UNKNOWN ORGANIC | 3.20<br>17.80<br>25.08<br>27.61<br>27.68<br>29.93<br>31.55<br>32.03<br>33.50 | 4<br>9<br>7<br>7<br>10<br>9<br>8<br>4 | J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J |

of the

# 000031

Client No.

|   | ab Name: <u>STL Ruffal</u> | <u>.o</u>        | Contract:    |                  | MW-3                  |
|---|----------------------------|------------------|--------------|------------------|-----------------------|
| : | ab Code: RECNY C           | lase No.:        | SAS No.:     | SDG No.:         |                       |
|   | atrix: (soil/water)        | <del></del>      |              | Lab Sample ID:   | <u>A1C27905</u>       |
| • | mple wt/vol:               |                  | <u>vII.,</u> | Lab File ID:     | W46162.RR_            |
|   | rvel: (low/med)            | -                |              | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| į | Moisture:                  | decanted: (Y/N   | 1) <u>Й</u>  | Date Extracted:  | 12/12/2001            |
|   | ncentrated Extract         |                  | (ــ)         | Date Analyzed:   | 12/20/2001            |
|   | jection Volume:            |                  |              | Dilution Factor: | 1.00                  |
| - | C Cleanup: (Y/N) <u>N</u>  | ₫ pH: <u>7.0</u> |              |                  |                       |

| CAS NO.              | COMPOUND                       | CONCENTRATION UNI<br>(ug/L or ug/Kg) | TS:<br><u>UG/</u> L | ^        |
|----------------------|--------------------------------|--------------------------------------|---------------------|----------|
| 83_32. a             | 7                              | (25) 15 01 (3) (43)                  |                     | Q        |
| 208-96-0             | Acenaphthene                   |                                      | 3.0                 | ן טן     |
| 120-12-7             | Acenaphthylene<br>Anthracene   |                                      | 10                  | ΙŪ       |
| TZU-12~/             | Michagene                      |                                      | 10                  | ען       |
| 30E-00 3             | Benzo (a) anthracene           |                                      | 10                  | Ŭ        |
| 203-33-2<br>207 00 0 | Benzo (b) fluoranthene         |                                      | 10                  | <u>י</u> |
| 20/~00 <i>-9</i> -   | Benzo (k) fluoranthene         |                                      | 10                  | Ū        |
| エンエーペチーグ・            | Benzo (ghi) perylene           |                                      | 10                  | lŭ l     |
| JUEDZ-0              | Benzo (a) pyrene               |                                      | 10                  | Ū        |
| 100 E1 6             | Benzoic acid                   |                                      | 50                  | U U      |
| 111 O1 1             | Benzyl alcohol                 |                                      | 20                  | נט       |
| TTT. 31-T            | Bis(2-chloroethoxy) methane    |                                      | 10                  | <u>י</u> |
| 111-44-4             | Bis(2-chloroethy1) ether       |                                      | 10                  | υ        |
| LU8-60-1             | 2,2'-Oxybis(1-Chloropropane)   |                                      | 10                  | ן ט      |
| rτ / -β [ - / · ·    | Bis(2-ethv]hexv]) mb+bala+o 1  |                                      | 10                  | U .      |
| rハエースラースーー - ·       | 4-Bromonherny] phonyl athor "" |                                      | 10                  |          |
| 35-68-1              | Butvi benzvi phthalata         |                                      | 10                  | ט        |
| .06-4/-8             | 4-Chloroaniline                |                                      | 10                  | ט        |
| 9-50-7               | 4-Chloro-3-methylphenol        |                                      | 10                  | U        |
| 91 -58-7             | 2-Chloronaphthalene            |                                      | 10                  | υ        |
| 15-57-8              | 2-Chlorophenol                 |                                      | 10                  | ן ט      |
| 005-72-3             | 4-Chlorophenyl phenyl ether    |                                      | 10                  | Ū        |
| T8-0T · 8            | ···-Chrysene                   |                                      | 10                  | וט       |
| 3-70-3               | Dibenzo(a,h)anthracene         |                                      | 10                  | U        |
| .32-61-9             | Dibenzofuran                   |                                      | 10                  | U        |
| 4-74-2               | Di-n-butyl phthalate           |                                      | 10                  | ו        |
| 5-50-1               | 1,2-Dichlorobenzene            |                                      | 10                  | 1        |
| 41-73-1              | 1,3-Dichlorobenzene            |                                      | 10                  | U        |
| 06-46-7              | -1,4-Dichlorobenzene           |                                      |                     | U        |
| 1-94-1               | 3,3'-Dichlorobenzidine         | <del></del>                          | 10                  | U        |
| 20-83-2              | 2.4-Dichlorophenol             |                                      | 20                  | U        |
| 4-66-2               | Diethyl phthalate              |                                      | 10                  | U        |
| 05-67 -9             | -2,4-Dimethylphenol            |                                      | 10                  | U        |
|                      | ,                              |                                      | 10                  | ן ט      |

Mexico

| ab Name: STL Buffa    | <u>lo</u> a                   | ontract:   |                  | MW-3                                   |
|-----------------------|-------------------------------|------------|------------------|--|
| ab Code: <u>RECNY</u> | Case No.:                     | SAS No.:   | SDG No.:         |  |
| atrix: (soil/water)   | <u>WATER</u>                  |            | Lab Sample ID:   | A1C27905_                              |
| ample wt/vol:         | <u>1000.0</u> (g/mL) <u>M</u> | Ĺ          | Lab File ID:     | W46162.RR                              |
| ≥vel: (low/med)       | LOW                           |            | Date Samp/Recv:  | 12/06/200 <u>1</u> 12/08/2 <u>0</u> 01 |
| Moisture:             | decanted: (Y/N)               | ) <u>N</u> | Date Extracted:  | 12/12/2001                             |
| oncentrated Extract   | Volume: <u>1000</u> (uL)      | •          | Date Analyzed:   | 12/20/2001                             |
| jection Volume:       | 1.00 (uL)                     |            | Dilution Factor: | 1.00                                   |
| C Cleanup: (Y/N)      | <u>N</u> pH: <u>7.0</u>       |            |                  | •                                      |

| and the second |                            | CONCENTRATION UNIT                    | S:   |                  |         |
|----------------|----------------------------|---------------------------------------|------|------------------|---------|
| CAS NO.        | COMPOLIND                  | (ug/L or ug/Kg)                       | UG/L | Q                |         |
| 131-11-3       | Dimethyl phthalate         |                                       | 1,0  | UJ               |         |
| 534-52-1       | 4,6-Dinitro-2-methylphenol |                                       | 50   | UJ               |         |
| 51-28-5        | 2,4-Dinitrophenol          |                                       | 50   | IUT              |         |
| 121-14-2       | 2,4-Dinitrotoluene         | `                                     | 10   | ען               |         |
| 606-20-2       | 2,6-Dinitrotoluene         |                                       | 10   | Ü                | 1       |
| 117-84-0       | Di-n-octyl phthalate       |                                       | 0.7  | J                |         |
| 206-44-0       | Fluoranthene               |                                       | 10   | U I              |         |
| 86-73-7        |                            |                                       | 10   | Ū                | 1       |
| 118-74-1       | Hexachlorobenzene          |                                       | 10   | lu l             |         |
| 87-68-3        | Hexachlorobutadiene        |                                       | 10   | Ū                |         |
| 77-47-4        | Hexachlorocyclopentadiene  |                                       | 10   | Ψ                | :       |
| 67-72-1        | Hexachloroethane           |                                       | 10   | Ü                |         |
| 193-39-5       | Indeno (1, 2, 3-cd) pyrene |                                       | 10   | Ū                |         |
| 78 -59-1       | Isophorone                 | •                                     | 10   | lu l             |         |
| 91-57-6        | 2-Methylnaphthalene        | ·                                     | 10   | Ψ                |         |
| J95-48-7       | 2-Methylphenol             |                                       | 10   | ט ו              | ·       |
| 1106-44-5      | 4-Methylphenol             |                                       | 10   | U                |         |
| 91-20-3        | Naphthalene                |                                       | 10   | Ŭ                |         |
| 88-74-4        | 2-Nitroaniline             |                                       | 50   | UST              | J.      |
| 99-09-2        | 3-Nitroaniline             |                                       | 50   | lu /             | enth    |
| 100-01.6       | 4 Nitroaniline             | .,                                    | 50   | Ū                | 1 Chill |
| 98-95-3        | Nitrobenzene               |                                       | 10   | l <del>ŭ</del> l | 6/4     |
| 88-75-5        | 2-Nitrophenol              | <del></del> -                         | 10   | Ū                |         |
| 100-02-7       | - 4-Nitrophenol            |                                       | 50   | U                |         |
| 86-30-6        | N-nitrosodiphenylamine     | *                                     | 10   | υ                |         |
| 621-64-7       | N-Nitroso-Di-n-propylamine |                                       | 10   | ט                |         |
| 87-86-5        | Pentachiorophenol          |                                       | 50   | Ü                |         |
| 85-01-8        | Phenanthrene               | ———                                   | 10   | บั               |         |
| 108-95-2       | Phonol                     |                                       | 10   | טו               |         |
| 129-00-0       | Pyrene                     | · · · · · · · · · · · · · · · · · · · | 10   | Ü                |         |
| 120-82-1       | 1,2,4-Trichlorobenzene     |                                       | 10   | บ้               |         |
| 95-95-4        | 2,4,5-Trichlorophenol      |                                       | 10   | U                | ·       |
|                |                            |                                       |      | 13.              |         |

#### 000033

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Client No. MW-3ab Name: <u>STL Buffalo</u> Contract: \_\_\_\_ ab Code: RFCNY Case No.: \_\_\_\_ SAS No.: \_\_\_ SDG No.: \_ atrix: (soil/water) WATER Lab Sample ID: A1C27905 Lab File ID: W46162.RR . . zvel: (low/med) LOW Date Samp/Recv: 12/06/2001 12/08/2001 Moisture: \_\_\_\_ decanted: (Y/N) N Date Extracted: 12/12/2001 ncentrated Extract Volume: 1000 (uL) Date Analyzed: <u>12/20/2001</u> rjection Volume: 1.00 (uL) Dilution Factor: 1.00 C Cleanup: (Y/N) N pH: 7.0 CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

88-06-2----2,4,6-Trichlorophenol\_

cuffer or

UJ

1.0

# METHOD 8270 - TCI, SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

000034

| ab Nama | : <u>STL Buffalo</u> | Contract:                  |                             | MW-3                |                |           |
|---------|----------------------|----------------------------|-----------------------------|---------------------|----------------|-----------|
|         |                      | o.: SAS No.:               | =                           |                     | ·              | <u> </u>  |
| itrix:  | (soil/water) WATE    | ₹                          |                             | ID: <u>A1C27</u> 5  | 905            |           |
|         | t/vol: 1000          | <u>.0</u> (g/mL) <u>MT</u> | Lab File TD                 |                     |                |           |
|         | (low/med) <u>Low</u> |                            | Date Samp/R                 | ecv: <u>12/06</u> , | <u>/2001 1</u> | 2/08/2001 |
| Moistu  | re: decar            | oted: (Y/N) <u>N</u>       | Date Extrac                 | ted: <u>12/12</u> / | /2001          |           |
| ncentr  | ated Extract Volum   | ne: <u>1000</u> (uL)       | Date Analyz                 |                     |                |           |
| •       | n Volume:1.00        |                            | Dilution Fac                | etor: <u>1.</u>     | 00             |           |
| C Clear | rup: (Y/N) <u>N</u>  | pH: <u>7.0</u>             |                             |                     |                |           |
| iber T  | ICs found: _5        |                            | CONCENTRATION (ug/L or ug/l |                     |                |           |
| `       | CAS NO.              | Compound Name              | RT' E                       | lst. Conc.          | Q              |           |
|         |                      |                            |                             |                     | <u> </u>       | 1         |

| CAS NO.                            | Compound Name   | RT'                                       | Est. Conc.               | . Q               |
|------------------------------------|---|---|--------------------------|-------------------|
| 1. 90-43-7<br>2.<br>3.<br>4.<br>5. | O-HYDROXYBIPHENYL<br>UNKNOWN HYDROCARBON<br>UNKNOWN HYDROCARBON<br>UNKNOWN HYDROCARBON<br>UNKNOWN HYDROCARBON | 17.78<br>27.21<br>27.66<br>29.91<br>31.60 | 10<br>4<br>16<br>6<br>11 | JN<br>J<br>J<br>J |

# 000035

| ab Name: STL Buffal | o Contract:                    |                  | MW-4                  |
|---------------------|--------------------------------|------------------|-----------------------|
| ab Code: RECNY C    | Case No.: SAS No.:             | SDG No.:         |                       |
| atrix: (soil/water) |                                | Lab Sample ID:   | A1C27906              |
| imple wt/vol:       | <u>1040.0</u> (g/mL) <u>ML</u> | Lab File ID:     | W46163.RR             |
| rvel: (low/med)     | LOW                            | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:           | decanted: (Y/N) N              | Date Extracted:  | 12/12/2001            |
| ncentrated Extract  | Volume: 1000 (uL)              | Date Analyzed:   | 12/20/2001            |
| njection Volume:    |                                | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N)    | N pH: 7.0                      |                  |                       |

|                                       |                              | CONCENTRATION UNI                       | TS:   |       |         |
|---------------------------------------|------------------------------|---|-------|-------|---------|
| CAS NO.                               | COMPOUND                     | (ug/L or ug/Kg)                         | UG/L  | Q     |         |
| 83-32-9                               | Acenaphthene                 |   | 10    | υŀ    | ]       |
| 208-96-8                              | Acenaphthylene               |   | 10    | ט     |         |
| 120-12-7                              | Anthracene                   | <u></u>                                 | 10    | וט    | j       |
| 56-55-3                               | Benzo (a) anthracene         | 100                                     | 10    | ΙυΙ   |         |
| 205-99-2                              | Benzo (b) finoranthene       |   | 10    | ΙŭΙ   |         |
| 207-08-9                              | Benzo(k) fluoranthene        |   | 10    | Ü     |         |
| 191-24-2                              | Benzo (ahi) pervlene         |   | 10    | Ū     |         |
| 50-32-8                               | Benzo (a) pyrene             |   | 10    | Ū     |         |
| 65-85-0                               | Benzoic acid                 |   | 50    | Ū     | ľ       |
| 100-51-6                              | Benzyl alcohol               |   | 20    | ŭ     |         |
| 111-91-1                              | Bis(2-chloroethoxy) methane  | · · · · · · · · · · · · · · · · · · ·   | 10    | ŭ     | ł       |
| 111-44-4                              | Bis(2-chloroethyl) ether     |   | 10    | Ū     | 1       |
| 108-б0-1                              | 2,2'-Oxybis(1-Chloropropane) |   | 10    | Ū     |         |
| 117-81-7-~-                           | Bis(2 ethylhexyl) phthalate  |   | 10    | U     |         |
| 101-55-3                              | 4-Bromophenyl phenyl ether   |   | 10    | اراتا | _       |
| 85-68-7                               | Butyl benzyl phthalate       | 14                                      | 10    | וט    | A4.V    |
| 106-47-8                              | 4-Chloroaniline              |   | 10    | Ü     | 2/24/02 |
| 59-50-7                               | 4-Chloro 3-methylphenol      |   | 10    | Ū     | 611     |
| 91-58-7                               | 2-Chloronaphthalene          |   | 10    | Ü     |         |
| 95-57-8                               | 2-Chlorophenol               | ,                                       | 10    | Ū     |         |
| 7005-72-3                             | 4-Chlorophenyl phenyl ether  | *************************************** | 10    | Ū     |         |
| 218-01-9                              | Chrysene                     | /                                       | 10    | Ü     |         |
| 53-70-3                               | Dibenzo (a, h) anthracene    |   | 10    | וטו   |         |
| 132-64-9                              | Dibenzofuran                 |   | 10    | Ü     | '       |
| 84-74-2                               | Di-n-butyl phthalate         |   | 10    | Ü     |         |
| 95-50-1                               | 1.2-Dichlorobenzene          |   | 10    | Ū     |         |
| 541-73-1                              | 1,3-Dichlorobenzene          |   | 10    | Ū     |         |
| 106-46-7                              | 1,4-Dichlorobenzene          | ···                                     | 10    | Ü     |         |
| 91-94-1                               | 3,3'-Dichlorobenzidine       | <del></del>                             | 20    | ŭ     |         |
| 1.20-83-2                             | 2,4-Dichlorophenol           |   | 10    | Ü     |         |
| 84-66-2                               | Diethyl phthalate            |   | 1.0   | ΰ     |         |
| 105-67-9                              | 2,4-Dimethylphenol           |   | 10    | U     |         |
| · · · · · · · · · · · · · · · · · · · | * *                          | ·                                       | -t- W | 171   |         |

# 000036

Client No.

| i                          |                                 |          |                  |                       |
|----------------------------|---------------------------------|----------|------------------|-----------------------|
| ab Name: STL Buf           | <u>falo</u> Cor                 | ntract:  | <u>.</u>         | MW-4                  |
| ab Code: <u>RECNY</u>      | Case No.:                       | SAS No.; | SDG No.:         | . •                   |
| átrix: (soil/wat           | er) <u>WATER</u>                |          | Lab Sample ID:   | A1C27906              |
| mple wt/vcl:               | <u>1040.0</u> (g/ml) <u>M</u> L |          | Lab File ID:     | W46163.RR             |
| <pre>avel: (low/med)</pre> | •                               |          | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:                  | decanted: (Y/N)                 | N        | Date Extracted:  | 12/12/2001            |
| ncentrated Extr            | act Volume: <u>1000</u> (uI)    |          | Date Analyzed:   | 12/20/2001            |
| ijection Volume:           | 1.00 (uL)                       |          | Dilution Factor: | 7 00                  |

C Claanup: (Y/N) N pH: 7.0

| cés no.       |                            | CONCENTRATION UNIT                    | TS:      |              |        |
|---------------|----------------------------|---------------------------------------|----------|--------------|--------|
| C             | COMPOUND                   | (ug/L or ug/Kg)                       | UG/L.    | Q            |        |
| 101-11-3      | Dimethyl phthalate         | Ī                                     | 10 ·     | 1,77         | 7      |
| 1.144~52~1~~  | 4.6-Dinitro-2-methylphonol |                                       | 50       | 0}5          |        |
| 5-1-28-5      | 2.4-Dinitrophenol          | ·                                     | 50       | [U, ]        |        |
| :::::-14-2    | 2,4-Dinitrotoluene         |                                       | 10       | ָניטן<br>וטו |        |
| 606-20-2      | 2.6-Dinitrotoluene         |                                       | 10       | <u> </u>     | 1      |
| 117-84-0      | Di-n-octvl phthalate       | <del></del>                           | 10       | 3 - 1        |        |
| ~UU-44-U      | ·Killoranthene             |                                       | .10      | U            |        |
| 86-73-7       | Fluorene                   |                                       | 10       | U            |        |
| 13.8-74-1     | Hexachlorobenzene          |                                       | 10       | U            | ļ      |
| 87-68-3       | Hexachlorobutadiene        | <u>-</u> -                            |          | U            |        |
| 77-47-4       | Hexachlorocyclopentadiona  |                                       | 10<br>10 | U            |        |
| 6/-/2-1       | ···Herachlana              |                                       |          | U            |        |
| 193-39-5      | Indeno (1.2 3-cd) nyrone   |                                       | 10       | u            | ļ      |
|               |                            |                                       | 10       | ט            |        |
| 91-57-6       | 2-Methylnaphthalene        |                                       | 10       | บ            | 1      |
| シンーゼロー / ニューー | Z-Methylpheno/             |                                       | 10       | U            |        |
| 106-44-5      | 4-Methylphenol             | •                                     | 10       | u            |        |
| 91-20-3       | Naphthalene                |                                       | 10       | U            | ,      |
| 88-'74-4      | 2-Nitroaniline             |                                       | 10       | n J          | کاری   |
| 99-09-2       | ·3-Nitroaniline            |                                       | 50       | U            | 000    |
| 100-01-6      | 4-Nitroaniline             |                                       | 50       | ש            | alulor |
| 98-95-3       | Nitrobenzene               |                                       | 50       | U            |        |
| 88-75-5       | 2-Nitrophenol              |                                       | 10       | U            |        |
| 100-02 7      | 4-Nitrophenol              | <del></del>                           | 10       | U            |        |
| 86-30-6       | N-nitrosodiphenylamine     |                                       | 50       | ט            |        |
| 621~64-7      | N-Nitroso-Di-n-propylamine |                                       | 10       | U            |        |
| 87-86-5       | Pentachlorophenol          |                                       | 10       | U            |        |
| 35-01-8       | Phenanthrene               |                                       | 50       | U            |        |
| 108-95-2      | Dhenol                     |                                       | 1,0      | [ט           |        |
| 129-00-0      | Dirrono                    | · · · · · · · · · · · · · · · · · · · | 10       | U            |        |
| 120-82-1      | 1,2,4-Trichlorobenzene     |                                       | 10       | ט            |        |
| 95-95-4       | 2,4,5-Trichlorophenol      |                                       | 10       | ט            |        |
| ,             |                            | ,                                     | 10       | U            |        |

000037

| ub Name: SII. Buffalo Contract       | :   |
|--------------------------------------|---|
| nb Code: RECNY Case No.: SAS N       | •   |
| itrix: (soil/water) <u>WATER</u>     | Lab Sample ID: <u>A1C27906</u>                        |
| mple wt/vol: <u>1040.0</u> (g/mL) ML | Lab File ID: <u>W46163.RR</u>                         |
| rel: (low/med) <u>LOW</u>            | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/2001</u>   |
| Moisture: decanted: (Y/N) N          | Date Extracted: 12/12/2001                            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed: <u>12/20/2001</u>                      |
| jection Volume: 1.00(uL)             | Dilution Factor:1.00                                  |
| Cleanup: (Y/N) N pH: 7.0             |   |
| CAS NO. COMPOUND                     | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>UG/L</u> Q |
| 58-06-22,4,6-Trichlorophenol         | 10 U  |
|                                      |   |
|                                      | entallor  |

# METHOD 8270 TCL SEMT-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

# 000038

| ab Name: SIL Buffalo Contract:       | MW-4  |
|--------------------------------------|---|
| ab Code: RECNY Case No.: SAS No.:    | SDG No.:  |
| atrix: (soil/water) <u>WATER</u>     | Lab Sample ID: A1C27906                             |
| imple wt/vol: 1040.0 (g/mL) ML       | Lab File ID: W46163.RR                              |
| <pre>vel: (low/med) LOW</pre>        | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/200</u>  |
| Moisture: decanted: (Y/N) N          | Date Extracted: <u>12/12/2001</u>                   |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed: <u>12/20/2001</u>                    |
| jection Volume: 1.00 (uL)            | Dilution Factor: 1.00                               |
| C Cleanup: (Y/N) N pH: 7.0           |   |
| mber TICs found: 4                   | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>UG/L</u> |
| CAS NC. Compound Name                | RT Est. Conc. Q                                     |

| CAS NO.                      | Compound Name  | RT                               | Est. Conc.       | Q           |
|------------------------------|--|----------------------------------|------------------|-------------|
| 1. 90-43-7<br>2.<br>3.<br>4. | O-HYDROXYBIPHENYL<br>UNKNOWN HYDROCARBON<br>UNKNOWN HYDROCARBON<br>UNKNOWN HYDROCARBON | 17.78<br>27.60<br>27.66<br>29.91 | 8<br>4<br>7<br>8 | J<br>J<br>J |

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

000039

| ab Name: <u>STI, Buffalo</u> | Contract:                      | _                | MW-5                  |
|------------------------------|--------------------------------|------------------|-----------------------|
| ab Code: RECNY Case          | ≘ No.:                         | SLX; No.:        |                       |
| atrix: (soil/water) W        | A MANAGEME.                    | Iáb Sample ID:   | A1C27907              |
| unple wt/vol: 10             | <u>735.0</u> (g/mū) <u>M</u> L | Lab File ID:     | W46164.RR             |
| . avel: (low/med) IC         | <u>w</u>                       | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture: de                 | ecanted: (Y/N) <u>N</u>        | Date Extracted:  | 12/12/2001            |
| Incentrated Fxtract Vo       | oluma:_1000(uL)                | Date Analyzed:   | <u>12/20/2001</u>     |
| njection Volume: 1.          | <u>00</u> (uL)                 | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N           | pH: <u>8.0</u>                 |                  |                       |

| CAS NO.                                       | COMPOUND   | CONCENTRATION UNIT | rs:<br><u>ug/l</u>  | Q                             | ·       |
|---|--|--------------------|---|-------------------------------|---------|
| 82 ·32 ·9 · · · · · · · · · · · · · · · · · · | AcenaphtheneAcenaphthyleneAcenaphthyleneBenzo(a) anthraceneBenzo(b) fluorantheneBenzo(k) fluorantheneBenzo(ghi) peryleneBenzo(a) pyreneBenzoic acidBenzyl alcoholBis(2-chloroethoxy) methaneBis(2-chloroethyl) ether2,2'-Oxybis(1-Chloropropane)Bis(2-ethylhexyl) phthalate4-Bromophenyl phenyl etherButyl benzyl phthalate4-Chloro-3-methylphenol2-Chlorophenol2-Chlorophenol |                    | 10<br>10<br>0.5<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | מממממממממממממממממממממממממממממ | Charles |

### METHOD 8270 - 'ICL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| ab Name: STL Buff          | alo Contract:                   |                  | MW-5                  |
|----------------------------|---------------------------------|------------------|-----------------------|
| ab Code: <u>RECNY</u>      | Case No.: SAS No.:              | SDG No.;         |                       |
| itrix: (soil/wate          |                                 | Lab Sample ID:   | A1C27907              |
|                            | <u>1035.0</u> (g/mL) <u>M</u> L | Lab File ID:     | •                     |
| <pre>:vel: (low/med)</pre> | •                               | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:                  | decanted: (Y/N) N               | Date Extracted:  | 12/12/2001            |
|                            | ct Volume: 1000 (uL)            | Date Analyzed:   | 12/20/2001            |
| ijection Volume:           |                                 | Dilution Factor: | 1.00                  |
| C Clearup: (Y/N)           | <u>рн: 8.0</u>                  |                  |                       |

| CAS NO.     | CCT FDCT >—                | CONCENTRATION UNIT | rs:        |      |            |
|-------------|----------------------------|--------------------|------------|------|------------|
| CAS NO.     | COMPOUND                   | (ug/L or ug/Kg)    | UG/L       | Q    |            |
| 131-11-3    | Dimethyl phthalate         |                    | 10         | 1,,5 | 7          |
| - 14-52-1   |                            |                    | 50 ·       | ת למ |            |
| コエースターン     | ·                          |                    | 50 ·<br>50 |      | İ          |
| 121-14-2    | 2.4-Diritmotolugae         |                    |            | Tu T |            |
| 606-20-2    | ·2.6 Dinitrotolugue        |                    | 10         | U.   | 1          |
| TT / -84 •0 | Di-n octvl phthalate       | ·                  | 10         | υ    |            |
| 206-44-0    | Fluoranthene               |                    | 10         | U    | 1          |
| 86-73-7     | Fluorene                   |                    | 10         | U    | 1          |
| 118-74-1    | Hexachlombergene           |                    | 10         | ַ    | 1          |
| 87-68-3     | Hexachlorobutadiene        |                    | 10         | U    |            |
| 77-47-4     | Hexachlorocyclopentadiene  |                    | 3.0        | U    | ł          |
| 67-72-1     | Hexachloroethane           |                    | 10         | U ·  | l          |
| 193-39-5    | Indeno (1,2,3-cd) pyrene   |                    | 2          | J    |            |
| 78-59-1     | Isophorone                 |                    | 10         | U-   |            |
| 91-57-6     | 2-Methylnaphthalene        |                    | 10         | U    | !          |
| 95-48-7     | ·2-Methylphenol            |                    | 10         | U    | <b> </b> - |
| 106-44-5    | 4-Methylphenol             | ····               | 10         | UK   |            |
| 91-20-3     | Naphthallene               |                    | 10         | U >  | NW.        |
| 38~74-4     | 2-Nitroaniline             |                    | 1.0        | וטן  | Male       |
| 99-09-2     | 3-Nitroaniline             |                    | 50         | U    | 616        |
| 00-016      | 4-Nitroaniline             |                    | 50         | ט    | l          |
| 38-0E-3-    | Nitrobenzene               |                    | 50         | וטו  |            |
| 19_7E_E     | Nitropenzene               |                    | 10         | טו   |            |
| 00-00-7     | 2 Nitrophenol              |                    | 10         | U    |            |
| .00-02-,/   | 4-Nitrophenol              |                    | 50         | וט   |            |
| 0-30-6      | N-nitrosodiphenylamine     |                    | 10         | U    |            |
| 21-64-7     | N-Nitroso-Di-n-propylamine |                    | 10         | Ū    |            |
| /-86-5      | Pintachi oronhenai         |                    | 50         | ΰ    |            |
| 5-01-8      | Phenanthrene               |                    | 0.5        | J    |            |
| ひロープコームーーー・ | Pnenol                     |                    | 10         | U U  |            |
| 29-00-0     | Pyrene                     |                    | 10         | اقا  |            |
| 20-82-1     | 1,2,4-Trichlorobenzene     |                    | 10         | וט   |            |
| 5-95-4      | 2,4,5 Trichlorophenol      |                    | 10         | U    |            |

## METHOD 8270 - TCL SEMI VOLATILE ORGANICS ANALYSIS DATA SHEET

000041

|   |  | *************************************** |
|---|--|---|
| ab Name: STL Buffalo Contract:              |  | MW-5                                    |
| Ab Code: RECNY Case No.: SAS No.:           |  |   |
| atrix: (soil/water) <u>WATER</u>            | Lab Sample ID:                                   | A1C27907                                |
| mple wt/vol: <u>1035.0</u> (g/mL) <u>ML</u> | Lab File ID:                                     | . <del>_</del>                          |
| vel: (low/med) <u>LOW</u>                   | •  | 12/06/2001 12/08/2001                   |
| Moisture: decanted: (Y/N) N                 | Date Extracted:                                  |   |
| ncentrated Extract Volume: 1000(uL)         | Date Analyzed:                                   | 12/20/2001                              |
| jection Volume: 1.00 (uL)                   | Dilution Factor:                                 | 1.00                                    |
| C Clearup: (Y/N) N pH: 8.0                  |  |   |
| CAS NO. COMPOUND                            | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>(</u> | <b>IJ</b> Į. Q                          |
| 88-06-22,4,6-Trichlorophenol                | Y  | 10 UJ                                   |
|   |  | 01/21/02                                |

#### METHOD 8270 - YOU SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

000042

Client No.

|                             |           | <u></u> |
|-----------------------------|-----------|---------|
| do Name: <u>STL Buffalo</u> | Contract: | MW-5    |
| ib Code, PROVIN             |           |         |

b Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_\_ SDG No.: \_\_\_\_

itrix: (soil/water) <u>WATER</u>
Lab Sample ID: <u>A1C27907</u>

mple wt/vol: 1035.0 (g/mL) MI, Lab File ID: W46164.RR

Moisture: \_\_\_\_ decanted: (Y/N) N Date Extracted: 12/12/2001

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 12/20/2001

jection Volume: 1.00 (uL) Dilution Factor: 1.00

Clearup: (Y/N) N pH: 8.0

ber TICs found: 18 CONCENTRATION

CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>

| CAS NO.  | Compound Name   | RT   | Est. Conc.  | Το  |
|--|---|--|---|---|
| 1. 2. 3. 4. 5. 6. 629~59-4 7. 8. 90-43-7 9. 10. 11. 544-76-3 12. 13. 14. 15. 16. 17. 18. | UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE O-HYDROXYBIPHENYL UNKNOWN ALKANE TRIMETHYLNAPHTHALENE HEXADECANE UNKNOWN ALKANE UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON | 12.83<br>13.06<br>14.01<br>14.43<br>14.71<br>15.93<br>16.83<br>17.80<br>17.98<br>18.26<br>18.70<br>19.33<br>19.96<br>20.05<br>20.50<br>21.16<br>27.66<br>29.91 | 4<br>8<br>13<br>7<br>5<br>8<br>11<br>11<br>4<br>5<br>9<br>16<br>5<br>23<br>5<br>4<br>10 | J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J<br>J |

#### METHOD 8270 · TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

# 000043

| ab Name: <u>STL Buffa</u> | lo Contract:                   |                  | MW-500                |
|---------------------------|--------------------------------|------------------|-----------------------|
| ab Code: <u>RECNY</u>     | Case No.: SAS No.:             | SDG No.:         |                       |
| atrix: (soil/water        | WATER                          | Lab Sample ID:   | A1C27908              |
| mple wt/vol:              | <u>1020.0</u> (g/mL) <u>ML</u> | Lab File ID:     | W46165.RR             |
| evel: (low/med)           | LOW                            | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture:                 | decented: (Y/N) N              | Date Extracted:  |                       |
| ncentrated Extrac         | t Volume: 1000 (uL)            | Date Analyzed:   | 12/20/2001            |
| ijection Volume:          | 1.00 (uL)                      | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N)          | N pH: 7.0                      |                  |                       |

| <b>**</b> ********************************** |                                | CONCENTRATION UN                        | ITS: |      |          |
|--|--------------------------------|---|------|------|----------|
| CAS NO.                                      | COMPOUND                       | (ug/L or ug/Kg)                         |      | Q    |          |
| 83-32-9                                      | Acenaphthene                   |   | 10   | lu   | 7        |
| 208-96-8                                     | Acenaphthylene                 |   | 10   | ט    | İ        |
| 120-12-7                                     | Anthracene                     |   | 10   | U    | i        |
| 56-55-3                                      | Benzo (a) anthracene           |   | 10   | ŭ    | İ        |
| 205-99-2                                     | Benzo(b) fluoranthene          | ***                                     | 10   | ט    | •        |
| 207-08-9                                     | Benzo(k) fluoranthene          | • | 10   | U    |          |
| 191-24-2                                     | Benzo(ahi)pervlane             | <del></del>                             | 10   | Ü    |          |
| 50-32-8                                      | Benzo (a) pyrene               | - N                                     | 10   | ü    |          |
| 65-85-0                                      | Benzoic acid                   |   | 50   | U    | 1        |
| 100-51-6                                     | Benzyl alcohol                 | <del>-</del>                            | 20   | Ü    | İ        |
| 111-91-1                                     | Bis(2-chloroethoxy) methane    |   | 10   |      |          |
| 111-44-4                                     | Bis(2-chloroethv1) ether $^{}$ |   | 10   | U    |          |
| 1108-60-1                                    | 2.2'-0xvbis(1-(hlomonomana)    |   | 10   | ប    | ŀ        |
| TT1-8T-1                                     | Bis(2-ethvlhexvl) phthalate    | \                                       | 10   | ر ان | +        |
| 170T-22-3                                    | 4-Bromophenvi phenvi ether     |   | 10   | UJ   | _        |
| [85-68-7                                     | Butyl benzyl phthalare         |   | 10   | U    | cushion  |
| 1106~47-8                                    | 4-Chloroaniline                |   | 10   | Ü    | hills    |
| 59-50-7                                      | 4-Chloro-3-methylphenol        | •                                       | 10   | Ü    | 01,      |
| 91-58-7                                      | 2-Chloronaphthalene            |   | 10   | Ü    | <u> </u> |
| J95-57-8                                     | 2-Chlorophenol                 |   | 10   | Ü    |          |
| 7005-72-3                                    | 4-Chlorophenyl phenyl ether    |   | 10   | U    | 1        |
| 218-01-9                                     | Chrysene                       | ¬                                       | 10   | Ū    |          |
| 53-70-3                                      | Dibenzo (a.h) anthracene       |   | 10   | Ü    | ł        |
| 132-64-9                                     | Dibenzofuran                   | <del></del>                             | 10   |      |          |
| 84-74-2                                      | Di-n-butyl phthalate           |   |      | U    |          |
| 95-50-1                                      | 1,2-Dichlorobenzene            |   | 10   | U    |          |
| 541-73-1                                     | 1,3-Dichlorobenzone            |   | 10   | U    |          |
| 106-46-7                                     | 1.4-Dichlorobenzeno            |   | 10   | U    |          |
| 91-94-1                                      | 3,3'-Dichlorobenzidine         |   | 10   | Ū    |          |
| 120-83-2                                     | 2,4-Dichlorophenol             |   | 20   | U    |          |
| 84-66-2                                      | Diethyl phthalate              |   | 10   | U    |          |
| 105-67-9                                     | 2,4-Dimethylphenol             | <del></del>                             | 10   | U    |          |
|  |                                |   | 10   | ប    |          |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| b Name: <u>SII Buffa</u>    | lo Contract:                   |                  | MW-500                |
|-----------------------------|--------------------------------|------------------|-----------------------|
| nb Code: <u>RECNY</u>       | Case No.: SAS No.:             | SDG No.:         | • .                   |
| itrix: (soil/water          | ) <u>water</u>                 | Iab Sample ID:   | <u>A1C279</u> 08      |
| mple wt/vol:                | <u>1020.0</u> (g/mL) <u>ML</u> | Lab File ID:     |                       |
| <pre>vel: (low/med) }</pre> | LOW                            |                  | 12/06/2001 12/08/2001 |
| Moisture:                   | decanted: (Y/N) N              | Date Extracted:  | 12/12/2001            |
| ncentrated Extract          | : Volume: 1000 (uL)            | Date Analyzed:   | 12/20/2001            |
| jection Volume:             | <u>1.00</u> (uI,)              | Dilution Factor: | 1.00                  |
| Clearup: (Y/N)              | N DH: 70                       |                  |                       |

| CAS NO.  | COMPOUND   | CONCENTRATION UNIT |  | Q |            |
|----------|--|--------------------|--|---|------------|
| 534-52-1 | luorene  exachlorobenzene exachlorobutadiene exachlorocyclopentadiene exachlorocytlopentadiene exachlorocytlopentadiene exachlorocthane ndeno(1,2,3-cd)pyrene sophorone -Methylnaphthalene -Methylphenol -Methylphenol -Methylphenol -Methylphenol -Mitroaniline -Nitroaniline -Nitroaniline itrobenzene -Nitrophenol -nitrosodiphenylamine -Nitroso-Di-n-propylamine entachlorophenol nenanthrene |                    | 10<br>50<br>50<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |   | On feel or |

### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANVLYSIS DATA SHEET

000045

| b Name: STL Buffalo Contract:               | MW-500  |
|---|---|
| ab Code: <u>RECNY</u> Case No.:SAS No.:     | SDG No.:  |
| trix: (soil/water) <u>WATER</u>             | Lab Sample ID: A1C27908                             |
| mple wt/vol: <u>1020.0</u> (g/mL) <u>ML</u> | Lab File ID: <u>W46165.RR</u>                       |
| vel: (low/med) <u>Low</u>                   | Date Samp/Recv: 12/06/2001 12/08/2001               |
| Moisture: decanted: (Y/N) N                 | Date Extracted: 12/12/2001                          |
| rcentrated Extract Volume: 1000(uL)         | Date Analyzed: 12/20/2001                           |
| jection Volume: 1.00(uL)                    | Dilution Factor:1.00                                |
| Cleanup: (Y/N) N pH: 7.0                    | <del></del>   |
| CAS NO. COMPOUND                            | CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UC/L,</u> Q |
| 88-06-22,4,6-Trichlorophenol_               | 1.0 05  |
|   | aprilor   |

### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

## 000046

| ib Name: STI, Buffalo Contract:              | MW-500  |
|--|---|
| nb Code: RECNY Case No.: SAS No.:            |   |
| trix: (soil/water) <u>WATER</u>              | Lab Sample ID: A1C27908                             |
| mple wt/vol: <u>1020.0</u> (g/mL) <u>ML</u>  | Lab File ID: <u>W46165.RR</u>                       |
| rvel: (low/med) <u>Low</u>                   | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/2001</u> |
| Moisture: decanted: (Y/N) <u>N</u>           | Date Extracted: <u>12/12/2001</u>                   |
| ricentrated Extract Volume: <u>1000</u> (uL) | Date Analyzed: <u>12/20/2001</u>                    |
| jection Volume: <u>1.00</u> (uL)             | Dilution Factor: 1.00                               |
| Cleanup: (Y/N) N pH: 7.0                     |   |
| ober TICs found: 4                           | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>ug/L</u> |

| CAS MO.                     | Compound Name   | RT                              | Est. Conc.         | . Q          |
|-----------------------------|---|---------------------------------|--------------------|--------------|
| 1<br>2. 90-43-7<br>3.<br>4. | UNKNOWN HYDROCARBON O-HYDROXYBIPHENYL UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON | 7.61<br>17.80<br>23.13<br>27.66 | 29<br>11<br>5<br>6 | J<br>JN<br>J |

#### METHOD 8270 - TCL SFMI-VOLATTIE ORGANICS ANALYSIS DATA SHEET

# 000047

| ab Name: SIL Buffalo Contract:       |                  | WASTE DISPOSAL        |
|--------------------------------------|------------------|-----------------------|
| b Code: RECNY Case No.: SAS No.:     | SDG No.:         |                       |
| atrix: (soil/water) <u>WATER</u>     | Lab Sample ID:   | A1C27901              |
| mple wt/vol: <u>650.00</u> (g/mL) ML | Lab File ID:     | W46153.RR             |
| .avel: (low/med) <u>IOW</u>          | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| Moisture: decanted: (Y/N) N          | Date Extracted:  | 12/12/2001            |
| ncentrated Fxtract Volume: 1000(uL)  | Date Analyzed:   | 12/19/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor: | 1.00                  |
| C Clearup: (Y/N) N pH: 7.0           |                  |                       |

|   | CONCENTRATION UNIT | S:   |  | 4       |
|---|--------------------|--|--|---------|
| CAS NO. COMPOUND  | (ug/L or ug/Kg)    |  | Q  | •       |
| 83-32-9   |                    |  | ם<br>מטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט |         |
| 111-91·1Bis(2-chloroethoxy) methane 111-44-4Bis(2-chloroethyl) ether 108-60·12,2'-Oxybis(1-Chloropropane) 117-81-7Bis(2-ethylhexyl) phthalate 101-55-34-Bromophenyl phenyl ether 85-68-'/Butyl benzyl phthalate 106-47-84-Chloroaniline 59-50-74-Chloro-3-methylphenol 91-58·72-Chlorophenol 7005-72-34-Chlorophenyl phenyl ether |                    | 10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | מממממממממממ                                | Challer |
| 218-01-9Chrysene 53-70-3Dibenzo(a,h) anthracene 132-64-9Dibenzofuran 84-74-2Di-n-butyl phthalate 95-50-11,2-Dichlorobenzene 541-73-11,3-Dichlorobenzene 106-46-7l,4-Dichlorobenzene 91-94-13,3'-Dichlorobenzidine 120-83 22,4-Dichlorophenol 84-66-2Diethyl phthalate 105-67-92,4-Dimethylphenol                                  |                    | 10<br>10<br>10<br>10<br>10<br>10<br>10<br>20<br>10 | <u>מפסכסססססס</u>                          |         |

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

# 000048

Date Samp/Recv: 12/06/2001 12/08/2001

Client No.

| b Name: ST  | <u>L Buffalo</u>      | Contract:        |                 | WASTE DISPOSAL        |
|-------------|-----------------------|------------------|-----------------|-----------------------|
| ib Code: RE | CNY Case No.          | : SAS No.:       | SDG No.:        |                       |
| atrix: (soi | l/water) <u>WATER</u> |                  | Lab Sample ID:  | AlC27901              |
| mple wt/vo  | 1: <u>650.00</u>      | (g/mL) <u>ML</u> | Lab File ID:    | W46153.RR             |
| gvel: (lox  | w/med) <u>IOW</u>     |                  | Date Samo/Recur | 12/06/0001 70/00/0001 |

Moisture: \_\_\_\_ decanted: (Y/N) N Date Extracted: 12/12/2001

\_\_ncentrated Extract Volume:\_1000(uL) Date Analyzed: 12/19/2001

jection Volume: 1.00(uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH: 7.0

| CAS NO. COMPOUND                                    | CONCENTRATION UNIT                    |      |                             |           |
|---|---------------------------------------|------|-----------------------------|-----------|
| 131-11-3Dimethyl phthalate                          | (mg/11 Or mg/kg/                      | UG/L | Q                           | _         |
| 5:4-52-14,6-Dinitro-2-methylphenol                  |                                       | 10   | טן                          | 1         |
| 51-28-52,4-Dinitrophenol                            | <del></del>                           | 50   | שׁ                          |           |
| 121-14-22,4-Dinitrotoluene                          |                                       | 50   | U                           |           |
| 606-20-22,6-Dinitrotoluene                          |                                       | 10   | ט                           | 1         |
| 117-84-0Di-n-octyl phthalate                        | ·                                     | 10   | U                           |           |
| 206-44-0Fluoranthene                                |                                       | 10   | U                           |           |
| 86-73-7Fluorene                                     |                                       | 10   | ע                           | 1         |
| 118-74-1Hexachlorobenzene                           | · · · · · · · · · · · · · · · · · · · | 10   | U                           |           |
| 87-68-3Hexachlorobutadiene                          | - <del></del>                         | 10   | U                           |           |
| 77-47-4Hexachlorocyclopentadiene                    |                                       | 10   | U                           |           |
| 67-72-1Hexachloroethane                             |                                       | 10   | ען                          |           |
| 193-39-5Indeno (1, 2, 3-cd) pyrene                  |                                       | 10   | ע                           | ł         |
| 78-59-1Isophorone                                   |                                       | 10   | U                           | İ         |
| 91-57-6- 3 Methyl                                   |                                       | 10   | U  _                        | 4         |
| 91-57-62 Methylnaphthalene<br>95-48-72-Methylphenol |                                       | 10   | C <u< td=""><td>l</td></u<> | l         |
| 106-44-54-Methylphenol                              |                                       | 10   | U                           | 1.6       |
| P1 20 3 Number 1                                    |                                       | 10   | U                           | Dus 24/02 |
| 91-20-3Naphthalene<br>88-74-42-Nitroaniline         |                                       | 1.0  | U                           | 0'11"     |
| 90 00 0   |                                       | 50   | ען                          |           |
| 99-09-23-Nitroaniline                               |                                       | 50   | ט                           |           |
| 100-01-64 Nitroaniline                              |                                       | 50   | וטו                         | 1         |
| 98-95-3 Nitrobenzene                                |                                       | O,F  | U                           |           |
| 88-75-5   |                                       | 10   | ו <b>ט</b> ו                |           |
| 100-02 74-Nitrophenol                               |                                       | 50   | וטו                         |           |
| 86-30-6N-nitrosodiphenylamine                       |                                       | 10   | וטו                         |           |
| 621-64-7N-Nitroso-Di-n-propylamine                  |                                       | 10   | Ŭ                           |           |
| 87-86-5Pentachlorophenol                            |                                       | 50   | Ū                           |           |
| 85-01-8Phenanthrene                                 |                                       | 10   | Ü                           |           |
| rog.32-5  |                                       | 10   | ΰ                           |           |
| 1.29-00-0Pyrene                                     |                                       | 10   | U                           |           |
| 120-82-11,2,4-Trichlorobenzene                      | ·\                                    | 10   | U .                         |           |
| 95-95-42,4,5-Trichlorophenol                        |                                       | 10   | D O                         |           |

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

000049

| ab Namé: <u>STL Buffalo</u> Contract:                     | WASTE DISPOSAL  |
|---|---|
| b Code: RECNY Case No.: SAS No.:                          | SDG No.:  |
| atrix: (soil/water) <u>WATER</u>                          | Lab Sample ID: A1C27901                               |
| mple wt/vol: <u>650.00</u> (g/mI <sub>1</sub> ) <u>ML</u> | Lab File ID: <u>W46153.RR</u>                         |
| vel: (low/med) <u>Low</u>                                 | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/2001</u>   |
| Moisture: decanted: (Y/N) N                               | Date Extracted: <u>12/12/2001</u>                     |
| ncentrated Extract Volume: 1000 (uL)                      | Date Analyzed: 12/19/2001                             |
| ijection Volume: 1.00 (uL)                                | Dilution Factor:1.00                                  |
| Cleanup: (Y/N) N pH: 7.0                                  |   |
| CAS NO. COMPOUND  | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>ug/L</u> Q |
| , 88-06-22,4,6-Trichlorophenol_                           | 10 UJ   |
| j.  | Cust y/or   |

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

# 000050

| b Name: <u>STL Buffalo</u> (      | Contract:   |                     | WASTE DISPOSAL        |
|-----------------------------------|-------------|---------------------|-----------------------|
| b Code: <u>KECNY</u> Case No.:    | SAS No.:    | SDG No.:            |                       |
| atrix: (soil/water) WATER         |             | Lab Sample ID:      | A1C27901              |
| mple wt/vol: <u>650.00</u> (g/mL) | <u>ML</u>   | Lab File ID:        | W46153.RR             |
| Vel: (low/med) <u>LOW</u>         |             | Date Samp/Recv:     | 12/06/2001 12/08/2001 |
| Moisture: decanted: (Y/N          | ı) <u>N</u> | Date Extracted:     | <u>12/12/2001</u>     |
| hoentrated Extract Volume: 1000   | (uL)        | Date Analyzed:      | 12/19/2001            |
| jection Volume: 1.00 (uL)         |             | Dilution Factor:    | 1.00                  |
| Cleanup: (Y/N) N pH:              | 7.0         |                     |                       |
| aber 146c found: <u>5</u>         |             | CONCENTRATION UNITS |                       |

| CAS NO.                    | Compound Name   | RT  | Est. Conc.                | ·Q               |
|----------------------------|---|---|---------------------------|------------------|
| 1.<br>2.<br>3.<br>4.<br>5. | UNKNOWN ORGANIC UNKNOWN ORGANIC UNKNOWN ORGANIC UNKNOWN ORGANIC UNKNOWN ORGANIC | 13.93<br>15.98<br>19.85<br>22.18<br>27.78 | 19<br>7<br>10<br>39<br>10 | J<br>J<br>J<br>J |

## 000051

Client No.

| b Name: STL Buffalo Contract:   |  | EQUIPMENT BLANK       |
|---|--|-----------------------|
| o Code: RECNY Case No.: SAS No.:  | SDG No.;   |                       |
| trix: (soil/water) <u>WATER</u>   | Lab Sample ID:   | A1C27902              |
| mple wt/vol: <u>1025.00</u> (g/mL) ML   | Lab File ID:   | RB12070.TX0           |
| Moisture: decanted: (Y/N) N   | Date Samp/Recv:  | 12/06/2001 12/08/2001 |
| traction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>  | Date Extracted:  | 12/12/2001            |
| centrated Extract Volume: _10000(uL)  | Date Analyzed:   | 12/14/2001            |
| jection Volume: <u>1.00</u> (uL)  | Dilution Factor:   | 1.00                  |
| Cleanup: (Y/N) N pH: 4.00   | Sulfur Cleanup:  | (A\n)                 |
|   | TION UNITS:<br>ug/Kg) <u>UG/L</u>  | Q                     |
| 309-00-2Aldrin 319-84-6alpha-EHC 319-85-7beta-EHC 58-89-9gamma-EHC (Lindane) 319-86-8 | 0.049<br>0.49<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049 | 1 1 1                 |

Capalos

# 000052

Client No.

| b Name: STL Buffalo Contract: _       |   | MW-1                                   |
|---------------------------------------|---|--|
| Code: RECNY Case No.: SAS No.:        |   | <del> </del>                           |
| trix: (soil/water) <u>WATER</u>       | Lab Sample ID:  | <u>A1C</u> 27903                       |
| ple wt/vol: 925.00 (g/mL) ML          | Lab File ID:  | · <del>·</del>                         |
| voisture: decanted: (Y/N) N           | Date Samp/Recv:   | 12/06/2001 12/08/2001                  |
| raction: (SepF/Cont/Sonc/Soxh): SEPF  | Date Extracted:   |  |
| centrated Extract Volume: 10000 (ut.) | Date Analyzed:  | 12/14/2001                             |
| jection Volume: <u>1.00</u> (uL)      | Dilution Factor:  | 1.00                                   |
| Cleanup: (Y/N) N pH: <u>7.00</u>      | Sulfur Cleanup:   | (A/N)                                  |
| CAS NO. COMPOUND CON                  | CENTRATION UNITS:<br>g/L or ug/kg) <u>UC/L</u>  | Q                                      |
| 319-84-6                              | 0.054<br>0.54<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054<br>0.054 | ממממממממממממממממממממממממממממממממממממממ |

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# 000053

| b Code: RECNY  | 1                                     |            |  | The same of the sa |
|--|---------------------------------------|------------|--|--|
| D Code: RETNY   Case No.:   SAS No.:   SDG No.:  | b Name: <u>STL Buffalo</u>            | Contract:  | <del></del>  | MW-2   |
| Dete      | o Code: RECNY Case No.: gr            | As No.:sdx | 3 No.:   |  |
| Date      | trix: (soil/water) WATER              | Le         | ab Sample ID:  | <u>A1C27904</u>  |
| Moisture:  | ple wt/vol:1020.00 (g/mL) ML          |            |  |  |
| Date Extracted: 12/12/2001   Date Extracted: 12/14/2001   Date Analyzed: 12/14/2001    | Moisture: decanted: (Y/N) N           |            |  |  |
| Date Analyzed: 12/14/2001   Date Analyzed: 12/14/2001   Date Analyzed: 12/14/2001   Date Analyzed: 1.00   Date Analyzed: (Y/N) N   Date Analyzed: 1.00   Date Analyzed: (Y/N) N   Date Analyzed: 1.00   Date Analyzed: (Y/N) N     | Eraction: (SepF/Cont/Sonc/Soxh): SEPF |            |  |  |
| Coleanup: (Y/N) N pH: 7.00   Sulfur Cleanup: (Y/N) N   | icentrated Extract Volume: 10000 (uL) |            |  |  |
| CAS NO. COMPOUND (Ug/L or ug/Kg) UG/L Q  309-00-2Aldrin 0.049 U 319-84-6alpha-EHC 0.049 U 58-89-9gamma-EHC (Lindane) 0.049 U 319-86-8delta-EHC 0.049 U 57-74-9Chlordane 0.49 U 72-54-84, 4'-DDD 0.049 U 72-54-84, 4'-DDD 0.049 U 50-29-34, 4'-DDT 0.049 U 60-57-1Dieldrin 0.049 U 959-98-8   | jection Volume:1.00(uL)               |            |  |  |
| CAS NO.   COMPOIND   (ug/L or ug/Kg)   Ug/L   Q  | Clearup: (Y/N) N pH: 7.00             | Şu         | lfur Cleanup:  | (Y/N) N  |
| 319-84-6alpha-EHC  | CAS NO. COMPOUND                      |            |  | Q  |
| months of the state of the stat | 319-84-6                              |            | 0.049<br>0.049<br>0.049<br>0.49<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049 | מממחממחחחח משל מחחחחח  |
|  |                                       |            |  | Carpellor  |

000054

Client No.

| o Name: STL Buffalo   | Contract:                             | <u></u>   | MW-3                                   |             |
|---|---------------------------------------|---|--|-------------|
| Code: RECNY Case No.: S   | AS No.: SDO                           | 3 No.:  |  |             |
| trix: (soil/water) WATER  | Lá                                    | ab Sample ID:   | A1C27905                               |             |
| ple wt/vol: <u>1025.00</u> (g/mL) ML                              |                                       | b File ID:  | RB12073.TX0                            |             |
| Moisture: decanted: (Y/N) N                                       | Da                                    | ite Samp/Recv:  | 12/06/2001 12/08/2                     | <u>:001</u> |
| draction: (SepF/Cont/Sonc/Soxh): SEPF                             | Da                                    | te Extracted:   | 12/12/2001                             |             |
| centrated Extract Volume: 10000 (uL)                              | Da                                    | te Analyzed:  | 12/14/2001                             |             |
| jection Volume: 1.00(uL)  | D <u>i</u>                            | lution Factor:  | 1.00                                   |             |
| Cleanup: (Y/N) N pH: 7.00   | Su                                    | lfur Cleanup:   | (Y/N) <u>N</u>                         |             |
| CAS NO. COMPOUND  | CONCENTRATION (ug/L or ug/)           | UNITS:<br>Kg) <u>UG/L</u>   | Q                                      |             |
| 76-44-8Heptachlor 1024-57-3Heptachlor epoxide 72-43-5Methoxychlor |                                       | 0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049<br>0.049 | ממממממממממממממממממממממממממממממממממממממ |             |
| 8001-35-2Toxaphene  | · · · · · · · · · · · · · · · · · · · | 0.98  | וויולו                                 |             |

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# 000055

Client No.

| ub Name: <u>STL Buffalo</u> Cont   | mw-4  |
|--|---|
| Code: RECNY Case No.: SAS N  |   |
| trix: (soil/water) <u>WATER</u>  | Lab Sample ID: A1C27906   |
| nple wt/vol: 1030.00 (g/mL) ML   | Lab File ID: RB12074.TX0  |
| Yoisture: decanted: (Y/N) N  | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/200</u>  |
| traction: (SepF/Cont/Sonc/Soxh): SEPF  | Date Extracted: <u>12/12/2001</u>   |
| ncentrated Extract Volume: 10000 (uL)  | Date Analyzed: <u>12/14/2001</u>  |
| jection Volume: 1.00 (uL)  | Dilution Factor: 1.00   |
| Cleanup: (Y/N) N pH: 7.00  | Sulfur Cleanup: (Y/N) N   |
| CAS NO. COMPOUND   | CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u> Q  |
| 319-84-6alpha-EHC 319-85-7beta-EHC 58-89-9gamma-EHC (Lindane) 319-86-8delta-EHC 57-74-9Chlordane 72-54-84,4'-DDD 72-55-94,4'-DDT 60-57-1Dieldrin 959-98-8Endosulfan I 33213-65-9Endosulfan Sulfate | 0.048 U 0.048 |
| ovut-35-2Toxaphene   | 0.97 US   |

whylor

|  | MW-5   |
|--|--|
|  |  |
|  | A1C27907   |
| Lab File ID:   | RB12079.TX0  |
| Date Samp/Recv:  | 12/06/2001 12/08/2001  |
| Date Extracted:  | 12/12/2001   |
| Date Analyzed:   | 12/14/2001   |
| Dilution Factor:   | 1.00   |
| Sulfur Cleanup:  | (Y/N) <u>Y</u>   |
| TON UNITS:<br>ug/Kg) <u>UG/L</u>   | Q  |
| 0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050<br>0.050 | 4 4 4 4 6  |
|  | Date Extracted:  Date Analyzed:  Dilution Factor:  Sulfur Cleanup:  TCN UNITS:  ug/Kg) UG/L  0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 |

## 000057

Client No.

| 4   | MW-500  |
|---|---|
| ib Name: STL Buffalo Contract:  |   |
| b Code: RECNY Case No.: SAS No.:  | SDG No.:  |
| atrix: (soil/water) <u>WATER</u>  | Lab Sample ID: AlC27908   |
| mple wt/vol: 1030.00 (g/mL) ML  | Lab File ID: RB12080.TX0  |
| Moisture: decanted: (Y/N) N   | Date Samp/Recv: <u>12/06/2001</u> <u>12/08/200</u>  |
| traction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>  | Date Extracted: <u>12/12/2001</u>   |
| ncentrated Extract Volume: 10000 (uL)   | Date Analyzed: <u>12/14/2001</u>  |
| jection Volume: 1.00 (uL)   | Dilution Factor: 1.00   |
| C Clearup: (Y/N) N pH: 7.00   | Sulfur Cleanup: (Y/N) N   |
|   | ENIRATION UNITS:<br>/Lorug/Kg) <u>UG/L</u> Q  |
| 309-00-2Aldrin 319-84-6alpha-BHC 319-85-7beta-BHC 58-89-9gamma-BHC (Lindane) 319-86-8Chlordane 72-54-84,4'-DDD 72-55-94,4'-DDT 60-57-1Dieldrin 959-98-8Endosulfan I 33213-65-9Endosulfan Sulfate 72-20-8Endrin 7421-93-4Endrin aldehyde 76-44-8 | 0.048 U J O.048 |

Cultylor

000058 Client No.

| )<br>b Name: <u>STL</u> | Buffalo Contract: _            |   | WAS                | TE DISPOSAL   |       |
|-------------------------|--------------------------------|---|--------------------|---------------|-------|
| o Code: RECN            | Y Case No.: SAS No.:           | SDG No.:                                      |                    |               |       |
| trix: (soil/            | water) <u>WATER</u>            | Lab Sample                                    | ID: AlC            | 27901         |       |
| mple wt/vol:            | <u>540.00</u> (g/mL) <u>ML</u> | Lab File II                                   | ): <u>RB1</u>      | 2069.TX0      |       |
| Moisture:               | decanted: (Y/N) N              | Date Samp/R                                   | lecv: <u>12/</u>   | 06/2001 12/08 | /2001 |
| traction: (S            | SepF/Cont/Sonc/Soxh): SEPF     | Date Extra                                    | :ted: <u>12/</u>   | 12/2001       |       |
| ncentrated E            | extract Volume: 10000 (uL)     | Date Analyz                                   | zed: <u>12/</u>    | 14/2001       |       |
| jection Volu            | me: <u>1.00</u> (uL)           | Dilution Fa                                   | actor:             | 1.00          |       |
| C Cleanup:              | (Y/N) <u>N</u> pH: <u>7.00</u> | Sulfur Clea                                   | anup: (Y/          | N) <u>N</u>   |       |
| CAS NO.                 |                                | ENTRATION UNITS:<br>g/L or ug/Kg) <u>UG/L</u> |                    | Q             |       |
| 309-00-2                | Aldrin                         |   | 0.092 U            |               |       |
| , 319-84-6<br>319-85-7  | alpha-EHC<br>beta-BHC          |   | 0.092 U<br>0.092 U | T             |       |
| ,  58-89-9              | gamma-BHC (Lindane)            |   | 0.092 U            | リイー           |       |
| 319-86-8                | delta-BHC                      |   | 0.092   U          | /     ,       |       |
| 121-12-2                | Chlordane                      | ,   | L L                |               |       |
| 1                       | A A A POPUT                    | <del></del> [                                 |                    |               |       |
|                         | 4,4'-DDE<br>4,4'-DDT           | ····  |                    |               |       |
|                         | D1 - 1 -1 - 1 - 1              |   |                    |               |       |
|                         |                                |   |                    | 5             |       |
| 33213-65-0              | Deden Ifon TT                  |   | 0.092 U            |               |       |
| 1031-07-8-              | Endosulfan Sulfate             | , , , , , , , , , , , , , , , , , , ,         | 0.092 U            |               |       |
| . 1 <b>72-</b> 20-8     | Endrin                         | i i   | 0.092 U            |               |       |
| 7421-93-4-              | Endrin aldehyde                |   | 0.092 U            | J             |       |
| 76-44-8                 | Heptachlor                     |   | 0.092 U            | r             |       |
| 1024-57-3-              | Heptachlor epoxide             | ·   | 0.092 U            | ŢĬ            |       |
| 72-43-5                 | Methoxychlor                   |   |                    |               |       |
| 19001_35_2              | Trvsylene                      |   | וזו פור            | TIATI         |       |

Wexlow 01/04/07

000059 Client No.

EXUIPMENT BLANK b Name: STL Buffalo Contract: \_\_\_\_ Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_\_ SDG No.: \_\_\_ Lab Sample ID: AlC27902 trix: (soil/water) WATER Inple wt/vol: 975.00 (g/mL) ML Lab File ID: PA17214.TX0 Moisture: \_\_\_\_ decanted: (Y/N) N Date Samp/Recv: <u>12/06/2001</u> <u>12/08/2001</u> fraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: <u>12/13/2001</u> Date Analyzed: 12/14/2001 ncentrated Extract Volume: 10000 (uL) Dilution Factor: 1.00 jection Volume: 1.00 (uL) C Clearup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N CONCENTRATION UNITS: (ug/Lorug/Kg) <u>UG/L</u> CAS NO. Q COMPOUND 12674-11-2---Aroclor 1016 0.51 U U 11104-28-2----Aroclor 1221 0.51 11141-16-5----Aroclor 1232 0.51 U U 53469-21-9----Aroclor 1242 0.51 U 12672-29-6----Aroclor 1248 0.51 U 0.51 11097-69-1----Aroclor 1254 U 0.51 11096-82-5----Aroclor 1260

Contrator

## 000060

Client No.

| b Name: STL Buffalo Contract:  |  | MW-1                  |
|--|--|-----------------------|
| Code: RECNY Case No.: SAS No.:   | SDG No.:                                     |                       |
| trix: (soil/water) <u>WATER</u>  | Lab Sample ID:                               | A1C27903              |
| ple wt/vol: 1020.00 (g/mL) ML  | Lab File ID:                                 | PA17217.TX0           |
| Yoisture: decanted: (Y/N) N  | Date Samp/Recv:                              | 12/06/2001 12/08/2001 |
| traction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>   | Date Extracted:                              | 12/13/2001            |
| centrated Extract Volume: 10000 (uL)   | Date Analyzed:                               | 12/14/2001            |
| jection Volume: 1.00 (uL)  | Dilution Factor;                             | 1.00                  |
| Cleanup: (Y/N) N pH: 7.00  | Sulfur Cleanup:                              | (Y/N) <u>N</u>        |
| CAS NO. COMPOUND CONCENTRAT  | ION UNITS:<br>ug/Kg) <u>UG/L</u>             | Q                     |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5Aroclor 1260 | 0.50<br>0.50<br>0.50<br>0.50<br>0.50<br>0.50 | מממממממ               |

Cultulor

| b Name: STL Buffalo Contr                                      | ract:   |
|--|---|
| Code: RECNY Case No.: SAS No.                                  | o.: SDG No.:  |
| trix: (soil/water) <u>WATER</u>                                | Lab Sample ID: A1C27904   |
| ple wt/vol: 1010.00 (g/mL) ML                                  | Lab File ID: PA17218.TX0  |
| Yoisture: decanted: (Y/N) N                                    | Date Samp/Recv: 12/06/2001 12/08/200  |
| traction: (SepF/Cont/Sonc/Soxh): SEPF                          | Date Extracted: <u>12/13/2001</u>   |
| scentrated Extract Volume: 10000 (uL)                          | Date Analyzed: <u>12/14/2001</u>  |
| jection Volume:1.00(uL)  | Dilution Factor:1.00  |
| Cleanup: (Y/N) N pH: 7.00                                      | Sulfur Cleanup: (Y/N) N   |
| CAS NO. COMPOUND   | CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u> Q  |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5 | 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U 0.50 U U |
| ;  | On harles   |

## 000062

Client No.

| o Name: <u>SIL Buffalo</u> Contract:   |  | MW-3                  |
|--|--|-----------------------|
| Code: RECNY Case No.: SAS No.:   | SDG No.:   |                       |
| trix: (soil/water) <u>WATER</u>  | Lab Sample ID:                                       | A1C27905              |
| ple wt/vol: 1000.00 (g/mL) ML  | Lab File ID:   | PA17219.TX0           |
| Moisture: decanted: (Y/N) N  | Date Samp/Recv:                                      | 12/06/2001 12/08/2001 |
| craction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>   | Date Extracted:                                      | 12/13/2001            |
| centrated Extract Volume: _10000(uL)   | Date Analyzed:                                       | 12/14/2001            |
| jection Volume: 1.00 (uL)  | Dilution Factor:                                     | 1.00                  |
| Cleanup: (Y/N) N pH: 7.00  | Sulfur Cleanup:                                      | (Y/N) <u>N</u>        |
|  | TION UNITS:<br>ug/kg) <u>UG/L</u>                    | Q                     |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5Aroclor 1260 | 0.50<br>0.50<br>0.50<br>0.50<br>0.50<br>0.50<br>0.50 | ממממממ                |

Control los

000063

|  | MW-4   |            |
|--|--|------------|
| b Name: <u>STL Buffalo</u> Contract:   |  |            |
| Code: RECNY Case No.: SAS No.:   | SDG No.:   |            |
| trix: (soil/water) WATER   | Lab Sample ID: A1C27906                              |            |
| mple wt/vol: 1020.00 (g/mL) ML   | Lab File ID: PA17220.TX0                             |            |
| Moisture: decanted: (Y/N) N  | Date Samp/Recv: <u>12/06/2001</u> 12/08/20           | <u>)01</u> |
| traction: (SepF/Cont/Sonc/Soxh): SEPF  | Date Extracted: <u>12/13/2001</u>                    |            |
| ncentrated Extract Volume: 10000 (uL)  | Date Analyzed: <u>12/14/2001</u>                     |            |
| ijection Volume: 1.00 (uL)   | Dilution Factor: 1.00                                |            |
| с Clearup: (Y/N) <u>N</u> рн: <u>7.00</u>  | Sulfur Cleanup: (Y/N) N                              |            |
|  | ONCENIRATION UNITS:<br>(ug/L or ug/Kg) <u>UG/L</u> Q |            |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5Aroclor 1260 | 0.50 U U U U U U U U U U U U U U U U U U U           |            |

# 000064

Client No.

| b Name: STL Buffalo Contract:  |  | MW-5                  |
|--|--|-----------------------|
| Code: RECNY Case No.: SAS No.:   | SDG No.:                                     |                       |
| trix: (soil/water) <u>WATER</u>  | Lab Sample ID:                               | A1C27907              |
| nple wt/vol: 1000.00 (g/mL) ML   | Lab File ID:                                 | PA17221.TX0           |
| Moisture: decanted: (Y/N) N  | Date Samp/Recv:                              | 12/06/2001 12/08/2001 |
| traction: (SepF/Cont/Sonc/Soxh): SEPF  | Date Extracted:                              | 12/13/2001            |
| ncentrated Extract Volume: 10000 (uL)  | Date Analyzed:                               | 12/14/2001            |
| jection Volume: 1.00 (uL)  | Dilution Factor:                             | 1.00                  |
| Cleanup: (Y/N) N pH: 7.00  | Sulfur Cleanup:                              | (Y/N) <u>N</u>        |
|  | TION UNITS:<br>ug/Kg) <u>uG/L</u>            | Q                     |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5 | 0.50<br>0.50<br>0.50<br>0.50<br>0.50<br>0.50 | ממממממ                |

Chelles for

## 000065

|  |  | MW-500                |
|--|--|-----------------------|
| b Name: <u>STL Buffalo</u> Contrac   | t:   |                       |
| Code: RECNY Case No.: SAS No.:   | SDG No.:   |                       |
| trix: (soil/water) <u>WATER</u>  | Lab Sample ID:                                       | A1C27908              |
| mple wt/vol: 900.00 (g/mL) ML  | Lab File ID:   | PA17224.TX0           |
| Yoisture: decanted: (Y/N) N  | Date Samp/Recv:                                      | 12/06/2001 12/08/2001 |
| traction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>   | Date Extracted:                                      | 12/13/2001            |
| ncentrated Extract Volume: 10000 (uL)  | Date Analyzed:                                       | 12/14/2001            |
| njection Volume:1.00(uL)   | Dilution Factor:                                     | 1.00                  |
| Cleanup: (Y/N) N pH: 7.00  | Sulfur Cleanup:                                      | (Y/N) <u>N</u>        |
| CAS NO. COMPOUND   | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>UG/L</u>  | Q                     |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5Aroclor 1260 | 0.56<br>0.56<br>0.56<br>0.56<br>0.56<br>0.56<br>0.56 | ממממממ                |
|  |  | collect               |

000066

Client No.

| b Name: <u>SIL Buffalo</u> Contract:   |  | WASTE DISPOSAL        |
|--|--|-----------------------|
| Code: RECNY Case No.: SAS No.:   |  |                       |
| trix: (soil/water) WATER   | Lab Sample ID:                             | A1C27901              |
| mple wt/vol: 440.00 (g/mL) ML  | Lab File ID:                               | PA17213.TX0           |
| Moisture: decanted: (Y/N) N  | Date Samp/Recv:                            | 12/06/2001 12/08/2001 |
| traction: (SepF/Cont/Sonc/Soxh): <u>SEPF</u>   | Date Extracted:                            | 12/13/2001            |
| ncentrated Extract Volume: _10000(uL)  | Date Analyzed:                             | 12/14/2001            |
| njection Volume:1.00 (uL)  | Dilution Factor:                           | 1.00                  |
| Cleanup: (Y/N) N pH: _7.00   | Sulfur Cleanup:                            | (Y/N) <u>N</u>        |
|  | VIRATION UNITS:<br>L or ug/Kg) <u>UG/L</u> | Q                     |
| 12674-11-2Aroclor 1016<br>11104-28-2Aroclor 1221<br>11141-16-5Aroclor 1232<br>53469-21-9Aroclor 1242<br>12672-29-6Aroclor 1248<br>11097-69-1Aroclor 1254<br>11096-82-5Aroclor 1260 | 1.1<br>1.1<br>1.1<br>1.1<br>1.1<br>1.1     | ממממממ                |

Colleges

# ORGANIC QC SUMMARY FORMS

Camp Pharsalia Site

SDG No. A01-C279

#### **SEMI-VOLATILE ORGANICS** QC PARAMETER / QUALIFIER SUMMARY **SW846 METHOD 8270 C**

CLIENT: SHAW E&I - LATHAM, NY

PROJECT: NYSDEC - CAMP PHARSALIA

SDG No.: A01-C279

HOLDING TIMES (NYSDEC-ASP) A.

> NON-AQUEOUS MATRIX: **AQUEOUS MATRIX:** ALL MATRICES:

10 DAYS MAXIMUM FROM VTSR TO EXTRACTION 5 DAYS MAXIMUM FROM VTSR TO EXTRACTION 40 DAYS MAXIMUM FROM EXTRACTION TO ANALYSIS

NOTE: samples were received at the laboratory at 11 degrees C; therefore all reported sample results are qualified 'UJ' or 'J', with potential negative bias or false-negatives suggested.

B. METHOD BLANKS Blank ID S BLK File ID <u>Matrix</u> Analytes Present Conc., ug/L W46136 aqueous TIC @ RT=3.20 80 J ACTION: If sample concentration >CRQL, but <10x Blank value, flag result with 'U'

If sample concentration <CRQL, and <10x Blank value, report CRQL and flag with 'U' If sample concentration >CRQL, and >10x Blank value, no qualification necessary

C. SURROGATE RECOVERY Sample ID Surrogate <u>Bias</u> Surrogate **ACTION** Bias MW-5 2-fluorobiphenyl high 2,4,6-triBrphenol high Qualify 'J' positive acids & base-neutrals D. Spike Compound MATRIX SPIKE / DUPLICATE Sample ID MS or MSD **Bias ACTION** MW-1 2,4-diNO2toluene high Qualify 'J' positive2,4-diNO2toluene in MW-1 only Note: only CLP spike compounds were added. E. **BLANK SPIKE** Sample ID Spike Compound **Bias ACTION** All MSB recoveries were within acceptable limits. MSB Note: only CLP spike compounds were added. INTERNAL STANDARDS F. Sample ID Internal Standard **Bias ACTION** All IS recoveries & RTs were within acceptable limits G. **INSTRUMENT TUNES** <u>Date</u> m/z abundance < 12-hrs. **ACTION** 12/15/01 OΚ yes 12/18/01 OΚ ves 12/19/01 OK yes 12/20/01 OK yes Reported Calculated H. SAMPLE RESULT Sample ID Compound Conc., ug/L Conc., ug/L VERIFICATION MW-1 MS pyrene 300 297 ۷t Df **GPC** Conc., ug/L = 4075347 1000 40.0 1.0 1.0 Ais

۷o

320

Vi

1.0

RRE

1.138

1508995

#### SEMI-VOLATILE ORGANICS CALIBRATION SUMMARY SW846 METHOD 8270C

CLIENT: SHAW E&I - LATHAM, NY PROJECT: NYSDEC - CAMP PHARSALIA SDG No.: A01-C279

#### A. INITIAL CALIBRATION

Benzo(a)pyrene

Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %RSD = 30.0%

| CALIBRATION DATE :         |                             |
|----------------------------|-----------------------------|
| FILE IDs :                 | W46108 - 112                |
| ALL RRFs > 0.05 ?          | Yes                         |
| SPCC RRFs >0.05 ?          | Yes                         |
| CCC %RSDs < 30% ?          | Yes                         |
| All Targets < 15% RSD?     | NO                          |
| (If No, list compounds)    | benzyl alcohol              |
| SPCC Compounds             | 4-chloroaniline             |
| N-Nitroso-di-n-propylamine | hexachlorocyclopentadiene   |
| Hexachlorocyclopentadiene  | 2-nitroaniline              |
| 2,4-Dinitrophenol          | 2,6-dinitrotoluene          |
| 4-Nitrophenol              | 3-nitroaniline              |
| MINIMUM RRF = 0.050        | 2,4-dinitrophenol           |
|                            | 4,6-dinitro-2-metyhylphenol |
| CCC Compounds              | 3,3'-dichlorobenzidine      |
| Base/Neutrals              | benzo(b)fluoranthene        |
| Acenaphthene               | benzo(k)fluoranthene        |
| 1,4-Dichlorobenzene        |                             |
| Hexachlorobutadiene        | ACTION : Qualify 'J' all    |
| Diphenylamine              |                             |
| Di-n-octylphthalate        |                             |
| Fluoranthene               |                             |
| la                         |                             |

ACTION: Qualify 'J' all positive compounds which exceed 15% RSD in associated samples.

В.

#### **CONTINUING CALIBRATIONS**

| SPCC Compounds N-Nitroso-di-n-propylamine | CALIBRATION DATE :<br>FILE IDs : | <u>12/18/01</u><br>W46131 | 12/19/01<br>W46145 | 12/20/01<br>W46160 |
|---|----------------------------------|---------------------------|--------------------|--------------------|
| Hexachlorocyclopentadiene                 | ALL RRFs > 0.05 ?                | Yes                       | Yes                | Yes                |
| 2,4-Dinitrophenol                         | SPCC RRFs >0.05 ?                | Yes                       | Yes                | Yes                |
| 4-Nitrophenol                             | CCC %Ds < 20% ?                  | Yes                       | Yes                | Yes                |
| MINIMUM RRF = 0.050                       | All Targets < 20%D?              | Yes                       | Yes                | NO                 |
|   | (If No, list compounds)>         |                           |                    | 2.4-dinitrophenol  |

CCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachlorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
2-Nitrophenol
Phenol
Pentachlorophenol
2,4,6-Trichlorophenol
MAXIMUM %D = 20.0%

ACTION:

Qualify 'J' or 'UJ' all reported results for compounds which exceed 20%D in associated samples.

# CHLORINATED PESTICIDES QC PARAMETER / QUALIFIER SUMMARY SW846 METHOD 8081

For: SHAW E&I - LATHAM, NY

Project:

NYSDEC - Camp Pharsalia

SDG No.:

A01-C279

A. HOLDING TIMES

AQUEOUS MATRIX: NON-AQUEOUS MATRIX: ALL MATRICES: 5 DAYS MAXIMUM FROM VTSR TO EXTRACTION 10 DAYS MAXIMUM FROM VTSR TO EXTRACTION 40 DAYS MAXIMUM FROM EXTRACTION TO ANALYSIS

NOTE: samples were received at the laboratory at 11 degrees C/ therefore all reported sample results are qualified 'UJ' or 'J', with potential negative bias of false-negatives suggested.

B. METHOD BLANKS

The method blank was free of target compound contamination; no QA action was necessary.

C. SURROGATE RECOVERY

SURROGATE ID (Col #) SAMPLE ID **BIAS ACTION** MSB TCMX none required low MSBD TCMX low none required MB1212 **TCMX** low none required MW-2 TCMX low none required MW-4 TCMX tow none required MW-500 **TCMX** low none required

D. MATRIX SPIKE / DUPLICATE

SAMPLE ID

**OUTLIERS** 

BIAS

COMMENT

No MS/MSD analyzed no estimation of potential matrix effects may be made:

E. LABORATORY QC SPIKE

(LCS control samples; 1 ppb)

SAMPLE ID MBLK1212 S MBLK1212 SD OUTLIERS none none <u>BIAS</u>

ACTION none required none required

**ACTION** 

#### CHLORINATED PESTICIDES CALIBRATION SUMMARY SW846 METHOD 8081

For:

SHAW E&I - LATHAM, NY

Project:

NYSDEC - Camp Pharsalia

SDG No.:

A01-C297

#### A. <u>INITIAL CALIBRATION</u>

| CALIBRATION DATE :                    | 12/12/01      |
|---------------------------------------|---------------|
|                                       | RB11507 - 511 |
| All Targets < 20% RSD? Or, for linear |               |
| regression, r-squared >0.99 ?         | Yes           |
| (If No, list compounds) ==>           |               |

 $\label{eq:action} \mbox{ACTION: Qualify 'J' all positive compounds > 20\% RSD or < 0.99 \ r-squared in associated samples.}$ 

#### B. <u>CONTINUING CALIBRATIONS</u>

| CALIBRATION DATE :          | 12/14/01     | 12/14/01     | $\neg$ |
|-----------------------------|--------------|--------------|--------|
| FILE ID :                   | RA12064      | RA12076      |        |
| All Targets < 15% D?        | NO           | NO           | $\neg$ |
| (If No, list compounds) ==> | 4,4'-DDE     | 4,4'-DDE     |        |
|                             | Endosulfan 1 | Endosulfan I | - 1    |
|                             |              | Methoxychlor | - 1    |

Affects: Waste Disposal Equipment Blank MW-1 MW-2 MW-3 MW-4

| CALIBRATION DATE : FILE ID : |              | 12/14/01<br>RA12085 |
|------------------------------|--------------|---------------------|
| All Targets < 15% D?         | NO NO        | NO                  |
| (If No, list compounds) ==>  | 4,4'-DDE     | delta-BHC           |
|                              | Endosulfan I | 4,4'-DDE            |
|                              | Methoxychlor | Endosulfan I        |

ACTION: Qualify 'UJ' or 'J' reported values for above compounds in associated samples.

#### POLYCHLORINATED BIPHENYLS (PCBs) QC PARAMETER / QUALIFIER SUMMARY SW846 METHOD 8082

For: SHAW E&I - LATHAM, NY

Project:

NYSDEC - Camp Pharsalia

SDG No.:

COMMENTS

A01-C279

A. HOLDING TIMES

ALL MATRICES:

AQUEOUS MATRIX: NON-AQUEOUS MATRIX: NYSDEC-ASP

5 DAYS MAXIMUM FROM VTSR TO EXTRACTION 10 DAYS MAXIMUM FROM VTSR TO EXTRACTION 40 DAYS MAXIMUM FROM EXTRACTION TO ANALYSIS

NOTE: samples were received at the laboratory at 11 degrees C; therefore all reported sample results are qualified 'UJ' or 'J'; with potential negative bias or false-negatives suggested.

B. <u>METHOD BLANKS</u>

The method blank was free of target compound contamination; no QA action was necessary.

C. SURROGATE RECOVERY

SAMPLE ID

SURROGATE ID (Col #) BIAS

ACTION

All surrogate recoveries were within acceptable limits; no data qualifiers were necessary.

D. MATRIX SPIKE / DUPLICATE

E.

SAMPLE ID MW-5 MS MW-5 MSD OUTLIERS none

<u>BIAS</u>

<u>ACTION</u>

none required none required

LABORATORY QC SPIKE (LC

(LCS control samples; 1 ppb)

SAMPLE ID MBLK1213 S OUTLIERS none

<u>BIAS</u>

ACTION none required

IT-CMPHRS-8082QC-C279

### POLYCHLORINATED BIPHENYLS (PCBs) CALIBRATION SUMMARY SW846 METHOD 8082

NYSDEC - Camp Pharsalia SDG No.: A01-C279

**INITIAL CALIBRATION** 

SHAW E&I - LATHAM, NY

For:

| CALIBRATION DATE                      | 10/14/01        |  |
|---------------------------------------|-----------------|--|
| FILE IDs                              | : P 14159 - 178 |  |
| All Targets < 20% RSD? Or, for linear | 1               |  |
| regression, r-squared >0.99?          | Yes             |  |
| (If No, list compounds) ==>           |                 |  |

ACTION: Qualify 'J' all positive compounds >20% RSD or <0.99 r-squared in associated samples.

#### **CONTINUING CALIBRATIONS**

| CALIBRATION DATE            | : 12/13/01 | 12/13/01 | 12/13/01 | 12/14/01 | 12/14/01 |
|-----------------------------|------------|----------|----------|----------|----------|
| FILE II                     | ): P 17201 | P 17203  | P17204   | P 17215  | P 17225  |
| All Targets < 15% D?        | Yes        | Yes      | Yes      | Yes      | Yes      |
| (If No. list compounds) ==> |            |          |          |          |          |

ACTION: No QA action necessary.

Project:

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## DATA REVIEW SUMMARY REPORT

for

## THE SHAW GROUP Environmental & Infrastructure

Latham, New York

NYSDEC - Camp Pharsalia Site

SDG No. A01-B630

Prepared By: Environmental Quality Associates, Inc.

July 23, 2002

The Shaw Group, Environmental & Infrastructure Att: Tanjia Maynard, Project Manager 13 British – American Boulevard Latham, New York 12110

Re: NYSDEC / Camp Pharsalia Laboratory Analytical Data

Dear Ms. Maynard,

This cover letter, and the attached documents, detail the data validation findings associated with the following sample analytical results contained in the above-referenced deliverables set.

Site Name: Camp Pharsalia

**Fractions** 

Semi-Volatiles, 8270 Laboratory: Severn Trent

SDG No.: A01-B630 Matrix: Non-Aqueous

Metals, 6010 & 7471 Laboratory: Severn Trent

SDG No.: A01-B630 Matrix: Non-Aqueous

Reviewer: Chris Taylor

Prepared by: Environmental Quality Associates, Inc.

## SECTION A Sample Information

The above-noted project samples were analyzed by Severn Trent Laboratories, Inc., Amherst, NY. Semi-volatile Organics were analyzed by USEPA SW-846 Method 8270; metals were analyzed by USEPA SW-846 Methods 6010 (ICP) and 7471 (Hg by CVAA). A summary table of samples analyzed is presented below; samples listed are exclusive of MS / MSD analyses performed.

No field (equipment) blank results were reported with the data deliverables package. Therefore, potential sample contamination from sampling equipment cannot be assessed.

|              |          |        | Date      | Analy    | ses    |
|--------------|----------|--------|-----------|----------|--------|
| Sample ID    | Lab ID   | Matrix | Collected | Semi-VOA | Metals |
| SB-1 (10-12) | A1B63013 | S      | 11/15/01  | X        |        |
| SB-2 (10-12) | A1B63014 | s      | 11/15/01  | x        |        |
| SB-3 (10-12) | A1B63015 | s      | 11/15/01  | x        |        |
| SB-4 (6-8)   | A1B63016 | s      | 11/16/01  | x        | •      |
| SB-5 (8-10)  | A1B63017 | s      | 11/16/01  | x        |        |
| SB-6 (4-6)   | A1B63018 | s      | 11/16/01  | · x      |        |
| SB-7 (2-4)   | A1B63019 | s      | 11/16/01  | X        |        |
| SB-700 (2-4) | A1B63020 | s      | 11/16/01  | x        |        |
| SS-1         | A1B63001 | s      | 11/16/01  | x        | X      |
| SS-2         | A1B63002 | s      | 11/16/01  | x        | X      |
| SS-3         | A1B63003 | s      | 11/16/01  | x        | X      |
| SS-4         | A1B63004 | s      | 11/16/01  | x        | X      |
| SS-5         | A1B63005 | s      | 11/16/01  | x        | X      |
| SS-6         | A1B63006 | s      | 11/16/01  | x        | X      |
| SS-7         | A1B63007 | s      | 11/16/01  | x        | Х      |
| SS-700       | A1B63010 | s      | 11/16/01  | x        | X      |
| SS-8         | A1B63008 | s      | 11/16/01  | x        | X      |
| SS-9         | A1B63009 | s      | 11/16/01  | x        | Χ      |

S = Non-Aqueous Matrix

Total Samples =

18

10

#### SECTION B Semi-volatile Fraction (8270)

Several target compounds exceeded the maximum %RSD value of 15.0% during the initial calibration sequences; since none of these compounds were positive in associated samples, no data qualifiers were necessary.

The %D for 2,4-dinitrophenol, isophorone and benzo(k)fluoranthene in the continuing calibration of 12/03/01 exceeded 20.0%; these compounds were qualified (U) 'J', as quantitatively estimated, in all associated samples.

Blank spike recoveries were within acceptable limits. It is noted that the laboratory used the CLP spike compound set in matrix and blank spike samples. SW-846 protocol calls for spiking with all compounds of interest, generally taken to mean all method target compounds being reported. Also, the laboratory is reporting the same recovery limits for both matrix and blank spikes, whereas blank spikes should have a tighter recovery range based upon absence of matrix effects. Although no data qualifiers are warranted based on these protocol excursions, the laboratory should take steps to ensure that method requirements are followed.

The presence of 1,1,2,2-tetrachloroethane as a non-target (TIC) compound in several samples is noted. It is "industry-standard" practice to disallow the presence of target compounds from the volatile fraction as TICs in the semi-volatile fraction; therefore, this compound has been red-lined and rejected 'R' in samples where it was reported as a TIC.

Several samples were analyzed at initial dilutions of 5x (SS-4, SS-9) or 10x (SS-3); these dilutions were attributed to 'Code 012', 'sample viscosity', by the laboratory (see p. 000009 of the lab deliverables). It is noted that (a) the laboratory did not adjust the reported Form 1 PQL values to reflect these dilutions, and (b) that no target compounds which would have exceeded the undiluted sample calibration range were present in the above-noted diluted samples. Therefore, the data user is alerted to compare the adjusted PQL values to the site action levels for these compounds to determine if required quantitation levels have been met, since a reported non-detect value which is greater than an action-level concentration is of no utility.

#### SECTION C Metals Analysis

No matrix spike (MS) or matrix duplicate (MD) results were reported. Inspection of the sample prep log indicated that no samples from this SDG were selected for MS or MD analysis; therefore no assessment may be made of potential sample matrix effects on analytical accuracy or precision. Digestate spike recovery for barium was above 125%, which is indicative of a positive analytical bias for these analytes; reported positive values for Ba were qualified 'J', with positive bias suggested.

Serial Dilution sample precision values exceeded 10.0% difference for all analytes <u>except</u> antimony, arsenic, beryllium, cadmium, selenium, silver, sodium and thallium, while undiluted sample results were above 10x analyte IDL values. Reported results for these analytes above either 10x analyte IDL values, or their respective CRDL levels (if 10x analyte IDL was < CRDL) were qualified 'J', as quantitatively estimated values. Since all the diluted concentrations for the above-noted analytes were above the undiluted values, potential negative bias for reported results is suggested.

ICSA solution values for thallium were reported at -47, -36 and -36 ug/L; this is indicative of a negative interference on Tl which exceeds 2x the (absolute) CRDL concentration of 10 ug/L. Therefore, all reported Tl values were qualified 'UJ' or 'J', with potential negative bias suggested.

#### SECTION D Other Issues

It is noted that the samples were collected on 11/15 and 11/16/2001, and not received at the laboratory (VTSR) until 11/21/2001; this represents a five to six-day delay between sample collection and VTSR, which is considered excessive. Since the NYSDEC-ASP protocol uses VTSR as the start of holding-time measurement, and samples were received at 2 degrees Celsius, no data qualifiers were applied. However sampling teams should be made aware of the importance of timely transit to the laboratory after sample collection.

## SECTION E Overall Recommendations

The results of the review and validation process for the above organic fraction and associated samples are summarized on the attached QC Summary Tables, in order to facilitate the end-user's' review of these data.

Very truly yours,

Environmental Quality Associates, Inc.

Chris W Taylor Vice President

Attachments

# REVIEWED & QUALIFIED ANALYTE SUMMARY FORMS

Camp Pharsalia Site

SDG No. A01-B630

Client No.

| h 37                      |                       |                  | SB-1 (10-12)          |
|---------------------------|-----------------------|------------------|-----------------------|
| b Name: <u>STL Buffal</u> | o Contract:           | _                |                       |
| b Code: <u>RECNY</u> C    | ase No.:              | SDG No.:         |                       |
| trix: (soil/water)        | SOIL                  | Lab Sample ID:   | A1B63013              |
| mple wt/vol:              | 30.47 (g/mL) <u>G</u> | Lab File ID:     | Y49865,RR             |
| vel: (low/med)            | LOW                   | Date Samp/Recv:  | 11/15/2001 11/21/2001 |
| Moisture: <u>11.2</u>     | decanted: (Y/N) N     | Date Extracted:  | 11/28/2001            |
| ncentrated Extract        | Volume: 1000 (uL)     | Date Analyzed:   | 12/04/2001            |
| jection Volume:           | <u>1.00</u> (uL)      | Dilution Factor: | 1.00                  |

C Cleamp: (Y/N) N pH; \_\_\_\_

|           |                              | CONCENTRATION UNI |              |          |
|-----------|------------------------------|-------------------|--------------|----------|
| CAS NO.   | COMPOUND                     | (ug/L or ug/Kg)   | <u>UG/KG</u> | Q        |
|           | Acenaphthene                 |                   | 330          | U        |
|           | Acenaphthylene               |                   | 330          | ט        |
| 120-12-7  |                              |                   | 330          | U        |
|           | Benzo (a) anthracene         |                   | 330          | U        |
|           | Benzo (b) fluoranthene       |                   | 330          | <u>"</u> |
|           | -Benzo (k) fluoranthene      |                   | 330          | UJ       |
|           | Benzo(ghi)perylene           |                   | 330          | U        |
|           | Benzo (a) pyrene             |                   | 330          | U        |
|           | Benzoic acid                 |                   | 1,600        | ប        |
|           | Benzyl alcohol               |                   | 330          | U        |
|           | Bis(2-chloroethoxy) methane  |                   | 330          | U        |
|           | Bis(2-chloroethyl) ether     |                   | 330          | U        |
|           | 2,2'-Oxybis(1-Chloropropane) |                   | 330          | Ū        |
|           | Bis(2-ethylhexyl) phthalate_ |                   | 330          | U        |
|           | 4-Bromophenyl phenyl ether_  |                   | 330          | ַ ע      |
|           | Butyl benzyl phthalate       |                   | 330          | ប        |
|           | 4-Chloroaniline              |                   | 330          | U        |
|           | 4-Chloro-3-methylphenol      |                   | 330          | υ        |
|           | 2-Chloronaphthalene          |                   | 330          | U        |
| 95-57-8   | 2-Chlorophenol               |                   | 330          | U        |
| 7005-72-3 | 4-Chlorophenyl phenyl ether  |                   | 330          | ט        |
| 218-01-9  | Chrysene                     |                   | 330          | U        |
|           | Dibenzo (a,h) anthracene     |                   | 330          | U        |
| 132-64-9  | Dibenzofu <del>ra</del> n    |                   | 330          | U        |
| 84-74-2   | Di-n-butyl phthalate         |                   | 330          | ប        |
| 95-50-1   | 1,2-Dichlorobenzene          |                   | 330          | U        |
| 541-73-1  | 1,3-Dichlorobenzene          |                   | 330          | υ        |
| 106-46-7  | 1,4-Dichlorobenzene          |                   | 330          | U        |
| 91-94-1   | 3,3'-Dichlorobenzidine       |                   | 660          | U        |
|           | 2,4-Dichlorophenol           |                   | 330          | ט        |
|           | Diethyl phthalate            |                   | 330          | U        |
|           | 2,4-Dimethylphenol           |                   | 330          | U        |

01/23/02

Client No.

| b Name: STL Buffalo Contract:             |                  | SB-1 (10-12)          |
|---|------------------|-----------------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:   | A1B63013              |
| mple wt/vol: <u>30.47</u> (g/mL) <u>G</u> | Lab File ID:     | Y49865.RR             |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/15/2001 11/21/2001 |
| Moisture: <u>11.2</u> decanted: (Y/N) N   | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)                 | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N pH:                    |                  |                       |

|          |                            | CONCENIRATION UNIT |       |                |
|----------|----------------------------|--------------------|-------|----------------|
| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg)    | UG/KG | Q              |
| 131-11-3 | Dimethyl phthalate         |                    | 330   | υ              |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |                    | 1600  | ט              |
| 51-28-5  | 2,4-Dinitrophenol          |                    | 1600  | UJ             |
| 121-14-2 | 2,4-Dinitrotoluene         |                    | 330   | บ              |
| 606-20-2 | 2,6-Dinitrotoluene         |                    | 330   | lΰ             |
| 117-84-0 | Di-n-octyl phthalate       |                    | 330   | Ū              |
| 206-44-0 | Fluoranthene               |                    | 330   | โบ             |
|          | Fluorene                   |                    | 25    | J              |
|          | Hexachlorobenzene          |                    | 330   | U              |
|          | Hexachlorobutadiene        |                    | 330   | บ              |
| 77-47-4  | Hexachlorocyclopentadiene  |                    | 330   | บ              |
|          | Hexachloroethane           |                    | 330   | U              |
| 193-39-5 | Indeno (1,2,3-cd) pyrene   |                    | 330   | lŪ             |
|          | Isophorone                 |                    | 330   | UJ             |
| 91-57-6  | 2-Methylnaphthalene        |                    | 330   | U              |
| 95-48-7  | 2-Methylphenol             |                    | 330   | Ι <del>υ</del> |
| 106-44-5 | 4-Methylphenol             |                    | 330   | Ιū             |
| 91-20-3  | Naphthalene                |                    | 330   | Ū              |
| 88-74-4  | 2-Nitroaniline             |                    | 1600  | Ū              |
| 99-09-2  | 3-Nitroaniline             |                    | 1600  | Ü              |
| 100-01-6 | 4-Nitroaniline             |                    | 1600  | U              |
|          | Nitrobenzene               |                    | 330   | lσ             |
| 88-75-5  | 2-Nitrophenol              |                    | 330   | ប៊             |
| 100-02-7 | 4-Nitrophenol              |                    | 1600  | II -           |
|          | N-nitrosodiphenylamine     |                    | 330   | Ū              |
| 621-64-7 | N-Nitroso-Di-n-propylamine |                    | 330   | บั             |
| 87-86-5  | Pentachlorophenol          |                    | 1600  | บั             |
| 85-01-8  | Phenanthrene               |                    | 100   | J              |
| 108-95-2 |                            |                    | 330   | Ü              |
| 129-00-0 | Pvrene                     |                    | 330   | Ŭ              |
|          | 1,2,4-Trichlorobenzene     |                    | 330   | υ              |
|          | 2,4,5-Trichlorophenol_     |                    | 800   | Ū              |

was allow

#### 000013

| ub Name: <u>STL Buffalo</u>     | Contract:      |  | SB-1 (1         | 0-12)         |
|---------------------------------|----------------|--|-----------------|---------------|
| b Code: RECNY Case No.:         | SAS No.:       | SDG No.:                               | _               |               |
| trix: (soil/water) SOIL         |                | Lab Sample ID:                         | A1B63013        |               |
| mple wt/vol: 30.47 (g/m         | nL) <u>G</u>   | Lab File ID:                           | <u>Y49865.R</u> | R             |
| rvel: (low/med) <u>LOW</u>      |                | Date Samp/Recv:                        | 11/15/20        | 01 11/21/2001 |
| Moisture: 11.2 decanted:        | (Y/N) <u>N</u> | Date Extracted:                        | 11/28/200       | <u>01</u>     |
| incentrated Extract Volume: 100 | <u>00</u> (uL) | Date Analyzed:                         | 12/04/200       | <u>01</u>     |
| jection Volume; 1.00 (uL)       |                | Dilution Factor:                       | 1.00            |               |
| C Cleanup: (Y/N) N pH:          |                |  |                 |               |
| CAS NO. COMPOUND                |                | INCENTRATION UNITS:<br>(ug/L or ug/Kg) |                 | Q             |
| 88-06-22,4,6-Tri                | chlorophenol.  |  | 330             | ប             |

#### METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

|       |     |      | <br> |
|-------|-----|------|------|
| OOD 1 | /10 | 461  |      |
| \$B-1 | (TO | -14) |      |
|       | -   | -    |      |

b Name: STL Buffalo | Contract: | SDG No.: | SDG No.: | SDG No.: | SDG No.: | SDG No.: | Lab Sample ID: | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B63013 | A1B6

jection Volume: 1.00 (uL)

Dilution Factor: 1.00

C Cleanup: (Y/N) N pH: \_\_\_\_

mber TICs found: 20

#### CONCENTRATION UNITS:

(ug/L or ug/Kg) <u>UG/KG</u>

| CAS NO.    | Compound Name               | RT    | Est. Conc. | Q    |
|------------|-----------------------------|-------|------------|------|
| 1. 79-34-5 | 1,1,2,2 TERRACHIOROFHIANE   | 6.98  | 250        | JN R |
| 2.         | UNKNOWN ALKANE              | 12.58 | 140        | J '  |
| 3.         | UNKNOWN ALKANE              | 13.53 | 300        | J    |
| 4.         | UNKNOWN HYDROCARBON         | 14.70 | 200        | IJ   |
| 5.         | DIMETHYLNAPHTHALENE ISOMER  | 15.96 | 160        | J    |
| 6.         | UNKNOWN ALKANE              | 16.15 | 150        | J    |
| 7.         | UNKNOWN CYCLOHEXANE DER.    | 16.20 | 150        | J    |
| 8.         | UNKNOWN ALKANE              | 16.33 | 550        | J    |
| 9.         | TRIMETHYLNAPHTHALENE ISOMER | 17.43 | 210        | J    |
| 10.        | TRIMETHYLNAPHTHALENE ISOMER | 17.51 | 160        | J    |
| 11.        | UNKNOWN CYCLOHEXANE DER.    | 17.63 | 180        | J    |
| 12.        | TRIMETHYINAPHTHALENE ISOMER | 17.73 | 420        | J    |
| 13.        | TRIMETHYLNAPHTHALENE ISOMER | 17.96 | 160        | J    |
| 14.        | UNKNOWN NAPHTHALENE DER.    | 18.43 | 270        | J    |
| <b>15.</b> | UNKNOWN BENZENE DER.        | 18.51 | 130        | J    |
| 16.        | UNKNOWN ALKANE              | 18.80 | 720        | J    |
| <b>17.</b> | UNKNOWN ALKANE              | 19.51 | 960        | J    |
| 18.        | UNKNOWN PAH DER.            | 19.83 | 150        | J    |
| 19.        | UNKNOWN ALKANE              | 19.96 | 210        | J    |
| 20.        | UNKNOWN ALKANE              | 21.70 | 140        | J    |

cultural or

Client No.

| b Name: STL Buffal      | Lo Contract:           | <del></del>      | SB-2 (10-12)          |
|-------------------------|------------------------|------------------|-----------------------|
| ib Code: <u>RECNY</u> C | Case No.:              | SDG No.:         |                       |
| trix: (soil/water)      | SOIL                   | Lab Sample ID:   | A1B63014              |
| mple wt/vol:            | _30.37 (g/mL) <u>G</u> | Lab File ID:     | Y49866.RR             |
| vel: (low/med)          | LOW                    | Date Samp/Recv:  | 11/15/2001 11/21/2001 |
| Moisture: <u>15.5</u>   | decanted: (Y/N) N      | Date Extracted:  | 11/28/2001            |
| ncentrated Extract      | : Volume: 1000 (uL)    | Date Analyzed:   | 12/04/2001            |
| jection Volume:         | 1.00 (uL)              | Dilution Factor: | 1.00                  |

C Cleanup: (Y/N) N pH: \_\_\_\_

| CONCENTRATION UN | ITS: |
|------------------|------|
|------------------|------|

Dilution Factor: 1.00

|                          |                               | CONCENTRATION U |                |            |
|--------------------------|-------------------------------|-----------------|----------------|------------|
| CAS NO.                  | COMPOUND                      | (ug/L or ug/Kg  | ) <u>UG/KG</u> | Q          |
| 83-32-9                  | Acenaphthene                  |                 | 130            | J          |
|                          | Acenaphthylene                |                 | 330            | Ų          |
| 120-12-7                 |                               |                 | 330            | บ          |
| 56-55-3                  | Benzo (a) anthracene          |                 | 330            | Ų          |
| 205-99-2                 | Benzo (b) fluoranthene        |                 | 330            | U          |
|                          | -Benzo(k) fluoranthene        |                 | 330            | ע ע        |
| 191-24-2                 | Benzo(ghi)perylene            |                 | 330            | ט          |
| 50-32-8                  | -Benzo (a) pyrene             |                 | 330            | ט          |
| 65-85-0                  | -Benzoic acid                 |                 | 1600           | ן טו       |
| 100-51-6                 | -Benzyl alcohol               |                 | 330            | U          |
| 111-91-1                 | -Bis(2-chloroethoxy) methane  |                 | 330            | ט ו        |
| 111-44-4                 | -Bis(2-chloroethyl) ether     |                 | 330            | ט ו        |
| 108-60-1                 | -2,2'-Oxybis(1-Chloropropane) |                 | 330            | lu l       |
| 117-81-7                 | -Bis(2-ethylhexyl) phthalate  |                 | 330            | Ū          |
| 101-55-3                 | -4-Bromophenyl phenyl ether   |                 | 330            | U          |
| 85 <b>-</b> 68 <b>-7</b> | -Butyl benzyl phthalate       |                 | 330            | U          |
| 106-47-8                 | -4-Chloroaniline              |                 | 330            | Ū          |
| 59-50-7                  | -4-Chloro-3-methylphenol      |                 | 330            | U          |
| 91-58-7                  | -2-Chloronaphthalene          | ·····           | 330            | Ū          |
| 95-57-8                  | -2-Chlorophenol               |                 | 330            | Ū          |
| 7005-72-3                | -4-Chlorophenyl phenyl ether  |                 | 330            | เบ็        |
| 218-01-9                 | Chrysene                      |                 | 330            | <u>י</u> ד |
| 53-70-3                  | -Dibenzo (a, h) anthracene    | ···             | 330            | Ū          |
|                          | -Dibenzofuran                 |                 | 81             | J          |
| 84-74-2                  | -Di-n-butyl phthalate         |                 | 75             | J          |
| 95-50-1                  | -1,2-Dichlorobenzene          | <del></del>     | 330            | Ū          |
| 541-73-1                 | -1,3-Dichlorobenzene          |                 | 330            | ט          |
| 106-46-7                 | -1,4-Dichlorobenzene          |                 | 330            | ט l        |
|                          | -3,3'-Dichlorobenzidine       |                 | 660            | ŭ          |
|                          | -2,4-Dichlorophenol           |                 | 330            | U          |
|                          | -Diethyl phthalate            |                 | 330            | ט          |
| 105-67-9                 | -2,4-Dimethylphenol           |                 | 330<br>330     | lu l       |
|                          |                               |                 |                | 1          |

Client No.

| b Name: SIL Buffalo Contract:                  | SB-2 (10-12)  |
|--|---|
| b Code: RECNY Case No.: SAS No.:               | SDG No.:  |
| trix: (soil/water) <u>SOIL</u>                 | Lab Sample ID: A1B63014                             |
| mple wt/vol: <u>30.37</u> (g/mL) <u>G</u>      | Lab File ID: Y49866.RR                              |
| vel: (low/med) <u>LOW</u>                      | Date Samp/Recv: <u>11/15/2001</u> <u>11/21/2001</u> |
| Moisture: <u>15.5</u> decanted: (Y/N) <u>N</u> | Date Extracted: <u>11/28/2001</u>                   |
| ncentrated Extract Volume: 1000 (uL)           | Date Analyzed: <u>12/04/2001</u>                    |
| jection Volume: 1.00 (uL)                      | Dilution Factor: 1.00                               |

CONCENTRATION UNITS: CAS NO

C Cleanup: (Y/N) N pH; \_\_\_\_

| CAS NO.  | COMPOUND                   | (ug/Lorug/Kg)                         | UG/KG      | Q   |
|----------|----------------------------|---------------------------------------|------------|-----|
| 131-11-3 | Dimethyl phthalate         |                                       | 330        | U   |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |                                       | 1600       | שׁו |
| 51-28-5  | 2,4-Dinitrophenol          |                                       | 1600       | UJ  |
| 121-14-2 | 2,4-Dinitrotoluene         |                                       | 330        | ប   |
| 606-20-2 | 2,6-Dinitrotoluene         | <u> </u>                              | 330        | U   |
| 117-84-0 | Di-n-octyl phthalate       |                                       | 330        | υ   |
| 206-44-0 | Fluoranthene               |                                       | 330        | ប   |
|          | Fluorene                   |                                       | 300        | J   |
| 118-74-1 | Hexachlorobenzene          |                                       | 330        | U   |
| 87-68-3  | Hexachlorobutadiene        |                                       | 330        | U   |
| 77-47-4  | Hexachlorocyclopentadiene  |                                       | 330        | U   |
| 67-72-1  | Hexachloroethane           |                                       | 330        | U   |
| 193-39-5 | Indeno (1,2,3-cd) pyrene   |                                       | 330        | U   |
| 78-59-1  | Isophorone                 |                                       | 330        | UJ  |
| 91-57-6  | 2-Methylnaphthalene        |                                       | 140        | J   |
| 95-48-7  | 2-Methylphenol             |                                       | 330        | U   |
| 106-44-5 | 4-Methylphenol             |                                       | 330        | Ū   |
| 91-20-3  | Naphthalene                |                                       | 330        | U   |
| 88-74-4  | 2-Nitroaniline             |                                       | 1600       | υ   |
| 99-09-2  | 3-Nitroaniline             |                                       | 1600       | lū  |
| 100-01-6 | 4-Nitroaniline             | · · · · · · · · · · · · · · · · · · · | 1600       | U   |
| 98-95-3  | Nitrobenzene               |                                       | 330        | Ū   |
| 88-75-5  | 2-Nitropherol              |                                       | 330        | ַ   |
| 100-02-7 | 4-Nitrophenol              |                                       | 1600       | U   |
| 86-30-6  | N-nitrosodiphenylamine     |                                       | 330        | Ū   |
| 621-64-7 | N-Nitroso-Di-n-propylamine |                                       | 330        | Ū   |
| 87-86-5  | Pentachlorophenol          |                                       | 1600       | Ū   |
| 85-01-8  | Phenanthrene               |                                       | 640        |     |
| 108-95-2 |                            | ····                                  | 330        | ប   |
| 129-00-0 |                            |                                       | 46         | J   |
|          | 1,2,4-Trichlorobenzene     |                                       | 330        | บ   |
|          | 2,4,5-Trichlorophenol      | <del></del>                           | 800        | บ   |
|          |                            |                                       | <b>QUO</b> | 1   |

#### UUUUI7

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| ub Name: SIL Buffalo Contract:       | <del></del>                                     | SB-2 (10-12)          |
|--------------------------------------|---|-----------------------|
| ub Code: RECNY Case No.: SAS No.:    | _ SDG No.;                                      |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:                                  | A1B63014              |
| mple wt/vol: $30.37$ (g/mL) G        | Lab File ID:                                    |                       |
| vel: (low/med) <u>low</u>            |   | 11/15/2001 11/21/2001 |
| Moisture: 15.5 decanted: (Y/N) N     | Date Extracted:                                 |                       |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:                                  | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor:                                | · <del></del>         |
| CCleanup: (Y/N) N pH:                |   | ···                   |
| CAS NO. COMPOUND                     | ONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>u</u> | IG/KG_Q               |
| 88-06-22,4,6-Trichlorophenol         | 3   | 30 U                  |

#### T T COURT METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

| (10-12) | i       |
|---------|---------|
|         | (10-12) |

b Name: <u>STL Buffalo</u> Contract:

ib Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_ SDG No.: \_\_\_

trix: (soil/water) SOIL Lab Sample ID: A1B63014

mple wt/vol: <u>30.37</u> (g/mL) G Lab File ID: Y49866.RR

.,vel: (low/med) <u>LOW</u> Date Samp/Recv: <u>11/15/2001</u> <u>11/21/2001</u>

Moisture: 15.5 decanted: (Y/N) N Date Extracted: <u>11/28/2001</u>

incentrated Extract Volume: 1000 (uL) Date Analyzed: <u>12/04/2001</u>

rjection Volume: 1.00 (uL) Dilution Factor: \_\_\_\_1.00

C Cleanup: (Y/N) N pH: \_\_\_\_

CONCENIRATION UNITS:

mber TICs found: 20 (ug/L or ug/Kg) UG/KG

| CAS NO. | Compound Name               | RT    | Est. Conc.  | Q |
|---------|-----------------------------|-------|-------------|---|
| 1.      | UNKNOWN ALKANE              | 12.58 | 1200        | J |
| 2.      | UNKNOWN CYCLOHEXANE DER.    | 13.06 | 890         | J |
| 3.      | UNKNOWN HYDROCARBON         | 13.23 | 970         | J |
| 4.      | UNKNOWN HYDROCARBON         | 13.31 | 710         | J |
| 5.      | UNKNOWN ALKANE              | 13.53 | 2300        | J |
| 6.      | UNKNOWN HYDROCARBON         | 14.16 | 980         | J |
| 7.      | UNKNOWN ALKANE              | 14.23 | 700         | J |
| 8.      | UNKNOWN HYDROCARBON         | 14.41 | 990         | J |
| 9.      | UNKNOWN CYCLOHEXANE DER.    | 14.70 | 1200        | J |
| 10.     | UNKNOWN ALKANE              | 15.51 | 720         | J |
| 11.     | UNKNOWN HYDROCARBON         | 15.60 | 830         | J |
| 12.     | DIMETHYLNAPHTHALENE ISOMER  | 15.75 | <b>74</b> 0 | J |
| 13.     | DIMETHYLNAPHTHALENE ISOMER  | 15.98 | 1200        | J |
| 14.     | UNKNOWN ALKANE              | 16.35 | 2000        | J |
| 15.     | TRIMETHYLNAFHTHALENE ISOMER | 17.53 | 1100        | J |
| 16.     | TRIMETHYLNAPHTHALENE ISOMER | 17.75 | 1600        | J |
| 17.     | Unknown Pah Der.            | 18.76 | <b>75</b> 0 | J |
| 18.     | UNKNOWN ALKANE              | 18.83 | 1300        | J |
| 19.     | UNKNOWN ALKANE              | 19.55 | 1800        | J |
| 20.     | UNKNOWN                     | 30.05 | 1300        | J |

#### 000019

| ib Name: SIL Buffalo Contract:            |                  | SB-3 (10-12)          |
|---|------------------|-----------------------|
| ib Code: RECNY Case No.:SAS No.:          | SDG No.:         | -                     |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:   | A1B63015              |
| mple wt/vol: <u>30.91</u> (g/mL) <u>G</u> | Lab File ID:     | Y49867.RR             |
| svel: (low/med) <u>LOW</u>                | Date Samp/Recv:  | 11/15/2001 11/21/2001 |
| Moisture: <u>10.9</u> decanted: (Y/N) N   | Date Extracted:  | 11/28/2001            |
| excentrated Extract Volume: 1000 (uL)     | Date Analyzed:   | 12/04/2001            |
| rjection Volume: 1.00 (uL)                | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N pH:                    |                  |                       |

| CAS NO.                 | COMPOUND                                  | (ug/L or ug/Kg) | UG/KG | Q   |
|-------------------------|---|-----------------|-------|-----|
| 83-32-0                 | Acenaphthene                              |                 |       |     |
| 208-96-8                | Acenaphthylene                            |                 | 46    | J   |
| 120-12-7                | Anthracene                                |                 | 330   | U   |
| 56-55-3                 | Benzo (a) anthracene                      |                 | 330   | U   |
| 205-99-2                | Benzo(b) fluoranthene                     |                 | 330   | U   |
| 207-08-9                | Benzo(k) fluoranthene                     | <del></del>     | 330   | U   |
| 191-24-2                | Benzo(ghi) perylene                       |                 | 330   | u J |
| 50-32-8                 | Benzo (a) pyrene                          |                 | 330   | ū   |
| 55-85-0                 | Benzoic acid                              |                 | 330   | U   |
| 100-51-6                | Benzyl alcohol                            |                 | 1600  | U   |
| 111_01_1                | Bis(2-chloroethoxy) methane               |                 | 330   | U   |
| 111 <i>-44-4</i>        | Bis(2-chloroethyl) ether                  | 1 t             | 330   | Ü   |
| 100-60-1                | "Bra(z-Girotoetriyr) etrer                |                 | 330   | ט   |
| 117_01_7                | 2,2'-Oxybis (1-Chloropropane)             | ····            | 330   | U   |
| 14) EE 3<br>TT\-0T-\-0- | Bis(2-ethylhexyl) phthalate               | <del></del>     | 330   | บ   |
| 70T-22-2-~~             | 4-Bromophenyl phenyl ether                |                 | 330   | Ū   |
| DD=00*/                 | Butyl benzyl phthalate<br>4-Chloroaniline |                 | 330   | U   |
|                         |   | <del></del> .   | 330   | ט   |
| つダーコU-/                 | 4-Chloro-3-methylphenol                   |                 | 330   | U   |
| 3T-28-/                 | 2-Chloronaphthalene                       |                 | 330   | Ų   |
| 700E 770 3              | 2-Chlorophenol                            |                 | 330   | U   |
| /UU=-/2-3               | 4-Chlorophenyl phenyl ether               |                 | 330   | U   |
| 518-01-2                | Chrysene                                  |                 | 330   | ט   |
| 03-/U-3 <del>-</del>    | Dibenzo (a,h) anthracene                  |                 | 330   | U   |
|                         | Dibenzofuran                              | 14 <del> </del> | 39    | J   |
| 34-74-2                 | Di-n-butyl phthalate                      |                 | 330   | U   |
| 95-50-1                 | 1,2-Dichlorobenzene                       |                 | 330   | U   |
|                         | 1,3-Dichlorobenzene                       |                 | 330   | U   |
|                         | 1,4-Dichlorobenzene                       |                 | 330   | שׁ  |
| 91-94-1                 | 3,3'-Dichlorobenzidine                    |                 | 660   | ប   |
| L20-83-2                | 2,4-Dichlorophenol                        |                 | 330   | ט   |
| 34-66-2                 | Diethyl phthalate                         |                 | 330   | U   |
| L05-67-9                | 2,4-Dimethylphenol                        |                 | 330   | U   |

Client No.

| ab Name: STL Buffalo Contract:            |                  | SB-3 (10-12)          |
|---|------------------|-----------------------|
| ab Code: RECNY Case No.: SAS No.:         | <del></del>      |                       |
| atrix: (soil/water) <u>SOIL</u>           | Lab Sample ID:   | A1B63015              |
| mple wt/vol: <u>30.91</u> (g/mL) <u>G</u> | Lab File ID:     | Y49867.RR             |
| evel: (low/med) <u>LOW</u>                | Date Samp/Recv:  | 11/15/2001 11/21/2001 |
| Moisture: 10.9 decanted: (Y/N) N          | Date Extracted:  | 11/28/2001            |
| moentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| njection Volume: 1.00 (uL)                | Dilution Factor: | 1.00                  |

C Cleanup: (Y/N) N pH: \_\_\_

| <b></b>  |                            | CONCENTRATION UNI                       | TS:   |          |
|----------|----------------------------|---|-------|----------|
| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg)                         | UG/KG | Q        |
| 131-11-3 | Dimethyl phthalate         |   | 330   | ט        |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |   | 1600  | Ū        |
| 51-28-5  | 2,4-Dinitrophenol          |   | 1600  | UJ       |
| 121-14-2 | 2,4-Dinitrotoluene         |   | 330   | ָ ט      |
| 606-20-2 | 2,6-Dinitrotoluene         |   | 330   | ΙŪ       |
| 117-84-0 | Di-n-octyl phthalate       |   | 330   | Ū        |
| 206-44-0 | Fluoranthene               |   | 330   | Ū        |
|          | Fluorene                   |   | 150   | IJ       |
| 118-74-1 | Hexachlorobenzene          |   | 330   | Ū        |
| 87-68-3  | Hexachlorobutadiene        |   | 330   | Ū        |
| 77-47-4  | Hexachlorocyclopentadiene  |   | 330   | יט<br>יט |
| 67-72-1  | Hexachloroethane           |   | 330   | Ū        |
| 193-39-5 | Indeno (1, 2, 3-cd) pyrene |   | 330   | Ū        |
| 78-59-1  | Isophorone                 | *************************************** | 330   | UJ       |
| 91-57-6  | 2-Methylnaphthalene        |   | 19    | J        |
| 95-48-7  | 2-Methylphenol             |   | 330   | บ        |
| 106-44-5 | 4-Methylphenol             |   | 330   | Ŭ        |
| 91-20-3  | Naphthalene                |   | 330   | บ        |
|          | 2-Nitroaniline             |   | 1600  | lū       |
|          | 3-Nitroaniline             |   | 1600  | Ū        |
| 100-01-6 | 4-Nitroaniline             |   | 1600  | Ū        |
| 98-95-3  | Nitrobenzene               |   | 330   | Ü        |
| 88-75-5  | 2-Nitrophenol              |   | 330   | Ū        |
| 100-02-7 | 4-Nitrophenol              |   | 1600  | Ū        |
| 86-30-6  | N-nitrosodiphenvlamine     |   | 330   | Ū        |
| 621-64-7 | N-Nitroso-Di-n-propylamine |   | 330   | บั       |
| 87-86-5  | Pentachlorophenol          | <del></del>                             | 1600  | Ϊ́υ      |
| 85-01-8  | Phenanthrene               |   | 400   | ١٠       |
| 108-95-2 |                            | ···                                     | 330   | U        |
| 129-00-0 |                            |   | 18    | J        |
| 120-82-1 | 1,2,4-Trichlorobenzene     |   | 330   | Ü        |
| 95-95-4  | 2,4,5-Trichlorophenol      |   | 800   | Ü        |

White of

## 000021

| ib Name: STL Buffalo Contract:       |   | SB-3 (10-12)          |
|--------------------------------------|---|-----------------------|
| lo Code: RECNY Case No.: SAS No.:    | _ SDG No.:                              |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:                          | A1B63015              |
| mple wt/vol: 30.91 (g/mL) <u>G</u>   | Lab File ID:                            | <u>Y49867.RR</u>      |
| rvel: (low/med) <u>LOW</u>           | Date Samp/Recv:                         | 11/15/2001 11/21/2001 |
| Moisture: 10.9 decanted: (Y/N) N     | Date Extracted:                         | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:                          | 12/04/2001            |
| rjection Volume: 1.00 (uL)           | Dilution Factor:                        | 1.00                  |
| C Cleanup: (Y/N) N pH:               |   |                       |
| CAS NO. COMPOUND                     | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) | UG/KG O               |
| 88-06-22,4,6-Trichlorophenol         |   | 330 U                 |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

b Name: SIL Buffalo Contract: \_\_\_\_

ub Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_ SDG No.: \_\_\_

trix: (soil/water) SOIL Lab Sample ID: A1B63015

| mple wt/vol: 30.91 (g/mL) G | Lab File ID: Y49867.RR

rvel: (low/med) <u>LOW</u> Date Samp/Recv: <u>11/15/2001</u> <u>11/21/2001</u>

Moisture: 10.9 decanted: (Y/N) N Date Extracted: 11/28/2001

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 12/04/2001

rjection Volume: 1.00 (uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

mber TICs found: <u>20</u> (ug/L or ug/Kg) <u>UG/KG</u>

| CAS NO.     | Compound Name               | RT    | Est. Conc. | Q |
|-------------|-----------------------------|-------|------------|---|
| 1.          | UNKNOWN ALKANE              | 12.58 | 690        | J |
| 2.          | UNKNOWN CYCLOHEXANE DER.    | 13.06 | 480        | J |
| 3.          | UNKNOWN HYDROCARBON         | 13.23 | 450        | J |
| 4.          | UNKNOWN ALKANE              | 13.53 | 1000       | J |
| 5.          | UNKNOWN ALKANE              | 14.71 | 740        | J |
| 6.          | ETHYLNAPHTHALFNE ISOMER     | 15,58 | 520        | J |
| 7.          | DIMETHYLNAPHTHALENE ISOMER  | 15.75 | 490        | J |
| 8.          | DIMETHYLNAPHTHALENE ISOMER  | 15.96 | 760        | J |
| 9.          | UNKNOWN                     | 16.05 | 460        | J |
| 10.         | UNKNOWN ALKANE              | 16.33 | 1400       | J |
| 11.         | TRIMETHYLNAPHTHALFNE ISOMER | 17.15 | 490        | J |
| 12.         | TRIMETHYINAPHTHALENE ISOMER | 17.45 | 720        | J |
| 13.         | TRIMETHYLNAPHIHALENE ISOMER | 17.51 | 780        | J |
| 14.         | UNKNOWN ALKANE              | 17.60 | 460        | J |
| <b>1</b> 5. | TRIMETHYLNAPHTHALENE ISOMER | 17.75 | 1200       | J |
| 16.         | TRIMETHYLNAPHTHALENE ISOMER | 17.96 | 470        | J |
| 17.         | UNKNOWN ALKANE              | 18.81 | 1800       | J |
| <b>1</b> 8. | UNKNOWN ALKANE              | 19.53 | 2800       | J |
| 19.         | UNKNOWN PAH DER.            | 19.83 | 610        | J |
| 20.         | UNKNOWN ALKANE              | 19.98 | 570        | J |

Client No.

| 1 |      |       |  |
|---|------|-------|--|
|   | SB-4 | (6-8) |  |
|   |      |       |  |

| o Name: | <u>STL Buffalo</u> | Contract: |  |
|---------|--------------------|-----------|--|
|---------|--------------------|-----------|--|

b Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_\_ SDG No.: \_\_\_\_

trix: (soil/water) <u>SOIL</u> Lab Sample ID: <u>A1B63016</u>

mple wt/vol: 30.47 (g/mL) G Lab File ID: Y49884.RR

vel: (low/med) <u>IOW</u> Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u>

Moisture: <u>18.6</u> decanted: (Y/N) N Date Extracted: <u>11/28/2001</u>

Incentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/2001

jection Volume: 1.00(uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH: \_\_\_\_

#### CONCENTRATION UNITS:

|           |                              | CONCENTRATION UNI                     |              |   |
|-----------|------------------------------|---------------------------------------|--------------|---|
| CAS NO.   | COMPOUND                     | (ug/L or ug/Kg)                       | <u>ug/kg</u> | Q |
| 83-32-9   | Acenaphthene                 |                                       | 330          | U |
| 208-96-8  | Acenaphthylene               |                                       | 330          | U |
| 120-12-7  | Anthracene                   |                                       | 330          | Ü |
| 56-55-3   | Benzo (a) anthracene         |                                       | 330          | U |
|           | Benzo (b) fluoranthene       |                                       | 330          | U |
| 207-08-9  | Benzo(k)fluoranthene         |                                       | 330          | U |
|           | Benzo(ghi)perylene           |                                       | 330          | U |
| 50-32-8   | Benzo (a) pyrene             |                                       | 330          | U |
| 65-85-0   | Benzoic acid                 |                                       | 1600         | U |
| 100-51-6  | Benzyl alcohol               |                                       | 330          | ט |
| 111-91-1  | Bis(2-chloroethoxy) methane  |                                       | 330          | ប |
| 111-44-4  | Bis(2-chloroethyl) ether     |                                       | 330          | บ |
| 108-60-1  | 2,2'-Oxybis(1-Chloropropane) |                                       | 330          | ប |
| 117-81-7  | Bis(2-ethylhexyl) phthalate  |                                       | 330          | Ü |
| 101-55-3  | 4-Bromophenyl phenyl ether   |                                       | 330          | ט |
|           | Butyl benzyl phthalate       |                                       | 330          | ט |
| 106-47-8  | 4-Chloroaniline              |                                       | 330          | ט |
| 59-50-7   | 4-Chloro-3-methylphenol      |                                       | 330          | U |
| 91-58-7   | 2-Chloronaphthalene          |                                       | 330          | U |
|           | 2-Chlorophenol               |                                       | 330          | U |
| 7005-72-3 | 4-Chlorophenyl phenyl ether  |                                       | 330          | Ų |
| 218-01-9  |                              |                                       | 330          | U |
| 53-70-3   | Dibenzo (a, h) anthracene    |                                       | 330          | ַ |
| 132-64-9  | Dibenzofuran                 |                                       | 330          | U |
| 84-74-2   | Di-n-butyl phthalate         |                                       | 330          | Ų |
|           | 1,2-Dichlorobenzene          |                                       | 330          | U |
| 541-73-1  | 1,3-Dichlorobenzene          |                                       | 330          | ט |
|           | 1,4-Dichlorobenzene          |                                       | 330          | ប |
|           | 3,3'-Dichlorobenzidine       | · · · · · · · · · · · · · · · · · · · | 660          | U |
| 1         | 2,4-Dichlorophenol           |                                       | 330          | U |
|           | Diethyl phthalate            |                                       | 330          | U |
|           | 2,4-Dimethylphenol           |                                       | 330          | U |

Client No.

| b Name: <u>STL Buffalo</u> | Contract:                | <u> </u>         | SB-4 (6-8)            |
|----------------------------|--------------------------|------------------|-----------------------|
| ib Code: <u>RECNY</u> Cas  | se No.: SAS No.:         | SDG No.:         |                       |
| trix: (soil/water) §       | <u>501L</u>              | Lab Sample ID:   | A1B63016              |
| mple wt/vol: _             | 30.47 (g/mL) <u>G</u>    | Lab File ID:     | Y49884.RR             |
| rvel: (low/med) <u>I</u>   | LOW                      | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: <u>18.6</u>      | decanted: (Y/N) <u>N</u> | Date Extracted:  | 11/28/2001            |
| ncentrated Extract V       | Volume: 1000 (uL)        | Date Analyzed:   | 12/05/2001            |
| jection Volume: 1          | <u>l.00</u> (uL)         | Dilution Factor: | 1.00                  |

C Cleanup: (Y/N) N pH: \_\_\_\_

|          |                            | CONCENTRATION UN                       | rrs:  |     |
|----------|----------------------------|--|-------|-----|
| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg)                        | UG/KG | Q   |
| 131-11-3 | Dimethyl phthalate         |  | 330   | Ų   |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |  | 1600  | שׁו |
| 51-28-5  | 2,4-Dinitrophenol          |  | 1600  | lυ  |
| 121-14-2 | 2,4-Dinitrotoluene         |  | 330   | ַ   |
|          | 2,6-Dinitrotoluene         |  | 330   | ט   |
| 117~84-0 | Di-n-octyl phthalate       |  | 330   | שו  |
| 206-44-0 | Fluoranthene               |  | 330   | U   |
| 86-73-7  |                            |  | 330   | υ   |
| 118-74-1 | Hexachlorobenzene          |  | 330   | Ų   |
|          | Hexachlorobutadiene        |  | 330   | lυ  |
| 77-47-4  | Hexachlorocyclopentadiene  |  | 330   | υ   |
|          | Hexachloroethane           |  | 330   | บ   |
| 193-39-5 | Indeno(1,2,3-cd)pyrene     |  | 330   | υ   |
| 78-59-1  | Isophorone                 |  | 330   | บ   |
| 91-57-6  | 2-Methylnaphthalene        |  | 330   | lυ  |
| 95-48-7  | 2-Methylphenol             | W                                      | 330   | טן  |
| 106-44-5 | 4-Methylphenol             |  | 330   | ט   |
| 91-20-3  | Naphthalene                |  | 330   | lυ  |
| 88-74-4  | 2-Nitroaniline             |  | 1600  | ט   |
| 99-09-2  | 3-Nitroaniline             |  | 1600  | Ū   |
|          | 4-Nitroaniline             |  | 1600  | U   |
| 98-95-3  | Nitrobenzene               |  | 330   | U   |
| 88-75-5  | 2-Nitrophenol              |  | 330   | Ū   |
|          | 4-Nitrophenol              |  | 1600  | Ū   |
| 86-30-6  | N-nitrosodiphenylamine     |  | 330   | Ū   |
|          | N-Nitroso-Di-n-propylamine |  | 330   | Ū   |
|          | Pentachlorophenol          | *** ********************************** | 1600  | υ   |
|          | Phenanthrene               |  | 330   | Ū   |
| 108-95-2 |                            |  | 330   | Ŭ   |
| 129-00-0 |                            | ···                                    | 330   | Ŭ   |
|          | 1,2,4-Trichlorobenzene     |  | 330   | Ū   |
|          | 2,4,5-Trichlorophenol      |  | 800   | ΰ   |

#### 000025

| b Name: STL Buffalo Contract:             |   | SB-4 (6-  | -8)           |
|---|---|-----------|---------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:                                | _         |               |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                          | A1B63016  |               |
| mple wt/vol: <u>30.47</u> (g/πL) <u>G</u> | Lab File ID:                            | Y49884.RE | 2             |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:                         | 11/16/200 | 01 11/21/2001 |
| Moisture: <u>18.6</u> decanted: (Y/N) N   | Date Extracted:                         | 11/28/200 | <u>)1</u>     |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:                          | 12/05/200 | <u>)1</u>     |
| jection Volume: 1.00(uL)                  | Dilution Factor:                        | 1.00      |               |
| C Cleanup: (Y/N) N pH:                    | •                                       |           |               |
| CAS NO. COMPOUND                          | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |           | Q             |
| 88-06-22,4,6-Trichlorophenol_             |   | 330       | Ū             |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

| b Name                               | : STL Buffalo            | Contract:           |                           |        | SB-4 (6       | -8)          |            |
|--------------------------------------|--------------------------|---------------------|---------------------------|--------|---------------|--------------|------------|
| b Code                               | : <u>RECNY</u> Case No   | .: SAS No.:         | _ SDG No.: _              |        |               |              |            |
| trix:                                | (soil/water) <u>SOIL</u> |                     | Lab Sampl                 | le ID: | <u>A1B630</u> | 16           |            |
| nple w                               | t/vol: _30.4             | 7 (g/m∐) <u>G</u>   | Lab File                  | ID:    | <u>¥49884</u> | .RR          |            |
| vel:                                 | (low/med) <u>LOW</u>     |                     | Date Samp                 | /Recv: | 11/16/        | 20 <u>01</u> | 11/21/2001 |
| Moistu                               | re: <u>18.6</u> decan    | ted: (Y/N) <u>N</u> | Date Extr                 | acted: | 11/28/        | 2001         |            |
| ncentrated Extract Volume: 1000 (uL) |                          | Date Anal           | yzed:                     | 12/05/ | 2001          |              |            |
| jection Volume: 1.00 (uL)            |                          | Dilution            | Factor                    | :1.    | 00            |              |            |
| C Clear                              | TLIP: (Y/N) <u>N</u>     | pH:                 |                           |        |               |              |            |
| mber T                               | ICs found: <u>1</u>      |                     | CONCENTRATI<br>(ug/L or u | _      |               | -            |            |
|                                      | CAS NO.                  | Compound Name       | RT                        | Est.   | Conc.         | Q            |            |
|                                      | 1.                       | UNKNOWN             | 30.40                     |        | 400           | J            |            |

Client No.

| b Name: <u>STL Buffal</u> c | Contract:                    |                  | SB-2 (8-10)           |
|-----------------------------|------------------------------|------------------|-----------------------|
| b Code: <u>RECNY</u> C      | ase No.: SAS No.:            | SDG No.:         |                       |
| trix: (soil/water)          | SOIL                         | Lab Sample ID:   | <u>A1B63017</u>       |
| mple wt/vol:                | <u>30.97</u> (g/mL) <u>G</u> | Lab File ID:     | Y49885.RR             |
| wel: (low/med)              | LOW                          | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 10.9              | decanted: (Y/N) N            | Date Extracted:  | 11/28/2001            |
| ncentrated Extract          | Volume: 1000 (uL)            | Date Analyzed:   | 12/05/2001            |
| jection Volume:             | 1.00 (uL)                    | Dilution Factor: | 1.00                  |
|                             |                              |                  |                       |

C Cleanup: (Y/N) N pH: \_\_\_\_

|           | α                            | NCENTRATION UNIT | rs:   |          |
|-----------|------------------------------|------------------|-------|----------|
| CAS NO.   | COMPOUND (                   | ug/Lorug/Kg)     | UG/KG | Q        |
| 83-32-9   | Acenaphthene                 |                  | 330   | U        |
| 208-96-8  | Acenaphthylene               |                  | 330   | ט        |
|           | Anthracene                   |                  | 330   | U        |
| 56-55-3   | Benzo (a) anthracene         | ·                | 330   | υ        |
| 205-99-2  | Benzo (b) fluoranthene       |                  | 330   | ט        |
| 207-08-9  | Benzo(k)fluoranthene         |                  | 330   | ט        |
| 191-24-2  | Benzo(ghi)perylene           |                  | 330   | U        |
| 50-32-8   | Benzo (a) pyrene             |                  | 330   | ש        |
|           | Benzoic acid                 |                  | 1600  | U        |
|           | Benzyl alcohol               |                  | 330   | ע        |
|           | Bis(2-chloroethoxy) methane  |                  | 330   | บ        |
|           | Bis(2-chloroethyl) ether     |                  | 330   | U        |
|           | 2,2'-Oxybis(1-Chloropropane) |                  | 330   | יט       |
|           | Bis(2-ethylhexyl) phthalate  |                  | 330   | U        |
| 101-55-3  | 4-Bromophenyl phenyl ether   |                  | 330   | U        |
|           | Butyl benzyl phthalate       |                  | 330   | U        |
|           | 4-Chloroaniline              |                  | 330   | ט        |
|           | 4-Chloro-3-methylphenol      |                  | 330   | U        |
| 91-58-7   | 2-Chloronaphthalene          |                  | 330   | ប        |
| 95-57-8   | 2-Chlorophenol               |                  | 330   | U        |
| 7005-72-3 | 4-Chlorophenyl phenyl ether  |                  | 330   | U        |
| 218-01-9  | Chrysene                     |                  | 330   | U        |
|           | Dibenzo (a, h) anthracene    | <del></del>      | 330   | Ţ        |
| 132-64-9  | Dibenzofuran                 |                  | 330   | U        |
| 84-74-2   | Di-n-butyl phthalate         |                  | 330   | U        |
| 95-50-1   | 1,2-Dichlorobenzene          |                  | 330   | <b>ט</b> |
| 541-73-1  | 1,3-Dichlorobenzene          |                  | 330   | U        |
|           | 1,4-Dichlorobenzene          |                  | 330   | U        |
|           | 3,3'-Dichlorobenzidine       |                  | 660   | ប        |
| 120-83-2  | 2,4-Dichlorophenol           |                  | 330   | υ        |
| 84-66-2   | Diethyl phthalate            |                  | 330   | U        |
|           | 2,4-Dimethylphenol           |                  | 330   | Ū        |

| ab Name: STL Buff  | <u>alo</u>                | Contract: |                  | SB-5 (8-10)           |
|--------------------|---------------------------|-----------|------------------|-----------------------|
| ab Code: RECNY     | Case No.:                 | SAS No.:  | SDG No.:         | _                     |
| atrix: (soil/wate  | er) <u>SOIL</u>           |           | Lab Sample ID:   | A1B63017              |
| ample wt/vol:      | 30.97 (g/mL)              | <u>G</u>  | Lab File ID:     | Y49885.RR             |
| . evel: (low/med)  | LOW                       |           | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 10.9     | decanted: (Y/             | N) Ñ      | Date Extracted:  | 11/28/2001            |
| _bncentrated Extra | ct Volume: <u>1000</u> (u | L)        | Date Analyzed:   | 12/05/2001            |
| rjection Volume:_  | 1.00 (uL)                 |           | Dilution Factor: | 1.00                  |
| PC Cleanup: (Y/N   | ) <u>N</u> pH:            |           |                  |                       |

|                    |   | CONCENTRATION UNI                      | TS:          |         |
|--------------------|---|--|--------------|---------|
| CAS NO.            | COMPOUND  | (ug/L or ug/Kg)                        | <u>ug/kg</u> | Q       |
| 131-11-3           | Dimethyl phthalate  |  | 330          | U       |
| 534-52-1           | 4,6-Dinitro-2-methylphenol  |  | 1600         | Ŭ       |
| 51-28-5            | 2,4-Dinitrophenol   |  | 1600         | บี      |
| 121-14-2           | 2,4-Dinitrotoluene  |  | 330          | ט       |
| 606-20-2           | 2,6-Dinitrotoluene  |  | 330          | ϋ       |
| 117-84-0           | Di-n-octyl phthalate  |  | 330          | υ       |
| 206-44-0           | Fluoranthene  |  | 330          | ָט<br>ט |
| 86-73-7            | Fluorene  |  | 330          | Ü       |
| 118-74-1           | Hexachlorobenzene   | ************************************** | 330          | υ       |
| 87 <b>-</b> 68-3   | Hexachlorobutadiene   |  | 330          | u       |
| 77-47 <b>-4-</b>   | Hexachlorocyclopentadiene   |  | 330          | Ū       |
| 67-72-1- <b></b> - | Hexachloroethane  |  | 330          | ϋ       |
| 193-39-5           | Indeno (1,2,3-cd) pyrene  |  | 330          | ΰ       |
| 78-59-1            | Isophorone  |  | 330          | ប       |
| 91 <b>-</b> 57-6   | 2-Methylnaphthalene   | ·                                      | 330          | Ŭ       |
| 95-48-7            | 2-Methylphenol  |  | 330          | บ       |
| 106-44-5           | 4-Methylphenol  |  | 330          | Ü       |
| <b>91-20-3</b> -   | Naphthalene   |  | 330          | lΰ      |
| 88-74-4            | 2-Nitroaniline  |  | 1600         | Ü       |
| 99-09-2            | 3-Nitroaniline  | <del></del>                            | 1600         | Ü       |
| 100-01-6           | 4-Nitroaniline  |  | 1600         | บ       |
| 98-95-3            | Nitrobenzene  | ·                                      | 330          | บ       |
| 88-75-5            | 2-Nitrophenol   |  | 330          | บ       |
| 100-02-7           | 4-Nitrophenol   | ·                                      | 1600         | Ü       |
| 86-30-6            | N-nitrosodiphenylamine  |  | 330          | Ü       |
| 621-64-7           | N-Nitroso-Di-n-propylamine  | · · · · · · · · · · · · · · · · · · ·  | 330          | Ü       |
| 87-86-5            | Pentachlorophenol   |  | 1600         | υ       |
| 85-01-8            | Phenanthrene  |  | 330          | 1 -     |
| 108-95-2           |   |  | 330<br>330   | U       |
| 129-00-0           |   |  |              | U       |
| 120-82-1           | 1,2,4-Trichlorobenzene  | <del></del>                            | 330          | U       |
| 95-95-4 <b></b>    | 2,4,5-Trichlorophenol   | ····                                   | 330          | บ       |
|                    | -/-/2 III ( III ( III )   III | *****                                  | 800          | ט       |

| ib Name: STL Buffalo Contract:       |   | SB-5 (8  | -10)           |        |
|--------------------------------------|---|----------|----------------|--------|
| ib Code: RECNY Case No.: SAS No.:    |   |          |                |        |
| strix: (soil/water) <u>SOIL</u>      | Lab Sample ID;                          | A1B63017 |                |        |
| mple wt/vol: 30.97 (g/mL) <u>G</u>   | Lab File ID:                            | Y49885.R | <u>R</u>       |        |
| vel: (low/med) <u>LOW</u>            | Date Samp/Recv:                         | 11/16/20 | <u>01 11/2</u> | 1/2001 |
| Moisture: 10.9 decanted: (Y/N) N     | Date Extracted:                         | 11/28/20 | <u>01</u>      |        |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:                          | 12/05/20 | <u>01</u>      |        |
| gection Volume: 1.00 (uL)            | Dilution Factor:                        | 1.00     |                |        |
| C Cleanup: (Y/N) N pH:               |   |          |                |        |
| CAS NO. COMPOUND                     | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |          | Q              |        |
| 88-06-22,4,6-Trichlorophenol         |   | 330      | U              |        |

#### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

| ab Name: SIL Buffalo Contract: | SB-5 (8-10) |
|--------------------------------|-------------|
|--------------------------------|-------------|

ib Code: RECNY Case No.: \_\_\_\_ SAS No.: \_\_\_ SDG No.: \_\_\_

trix: (soil/water) SOIL Lab Sample ID: A1B63017

mple wt/vol: 30.97 (g/mL) G Lab File ID: Y49885.RR

wel: (low/med) <u>LOW</u> Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u>

Moisture: 10.9 decanted: (Y/N) N Date Extracted: 11/28/2001

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/2001

rjection Volume: 1.00 (uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH:

ther TICe forms. 10

mber TICs found: 10 (ug/L or ug/Kg) <u>UG/KG</u>

| CAS NO. | Compound Name  | RT    | Est. Conc. | Q  |
|---------|----------------|-------|------------|----|
| 1.      | UNKNOWN ALKANE | 16.61 | 200        | J  |
| 2.      | UNKNOWN ALKANE | 18.46 | 280        | J  |
| 3.      | ÜNKNOWN        | 18.56 | 150        | J  |
| 4.      | UNKNOWN ALKANE | 19.10 | 400        | J  |
| 5.      | UNKNOWN ALKANE | 19.73 | 280        | ĴJ |
| 6.      | UNKNOWN ALKANE | 19.81 | 570        | J  |
| 7.      | UNKNOWN ALKANE | 20.93 | 250        | J  |
| 8.      | UNKNOWN ALKANE | 22.08 | 260        | J  |
| 9.      | UNKNOWN ALKANE | 23.16 | 180        | J  |
| 10.     | UNKNOWN        | 30.41 | 220        | J  |

| ab Name: STL Buffalo Contract:       |                  | \$B-6 (4-6)           |
|--------------------------------------|------------------|-----------------------|
| ab Code: RECNY Case No.: SAS No.:    | SDG No.:         |                       |
| atrix: (soil/water) <u>SOIL</u>      | Lab Sample ID:   | A1B63018              |
| mple wt/vol: _30.51 (g/mL) <u>G</u>  | Lab File ID:     | Y49886.RR             |
| evel: (low/med) <u>LOW</u>           | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 13.6 decanted: (Y/N) N     | Date Extracted:  | 11/28/2001            |
| xcentrated Extract Volume: 1000 (uL) | Date Analyzed:   | 12/05/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor: | 1.00                  |
| C Clearup: (Y/N) N pH:               |                  |                       |

|                                       |                              | CONCENIRATION UNI                      | TS:   |                |
|---------------------------------------|------------------------------|--|-------|----------------|
| CAS NO.                               | COMPOUND                     | (ug/Lorug/Kg)                          | UG/KG | Q              |
| 83-32-9                               | Acenaphthene                 |  | 330   | U              |
| 208-96-8                              | Acenaphthylene               |  | 330   | บั             |
|                                       | Anthracene                   |  | 330   | Ū              |
| 56-55-3                               | Benzo (a) anthracene         |  | 330   | Ū              |
| 205-99-2                              | Benzo (b) fluoranthene       |  | 330   | Ū              |
| 207-08-9                              | Benzo (k) fluoranthene       |  | 330   | Ū              |
| 191-24-2                              | Benzo(ghi)perylene           | · · · · · · · · · · · · · · · · · · ·  | 330   | Ū              |
| 50-32-8                               | Benzo(a) pyrene              | ······································ | 330   | Ū              |
| 65-85-0                               | Benzoic acid                 |  | 1600  | Ū              |
| 100-51-6                              | Benzyl alcohol               |  | 330   | υ              |
| 111-91-1                              | Bis(2-chloroethoxy) methane  |  | 330   | Ū              |
| 111-44-4                              | Bis(2-chloroethy1) ether     |  | 330   | ָ <sup>¯</sup> |
| 108-60-1                              | 2,2'-Oxybis(1-Chloropropane) | · · · · · · · · · · · · · · · · · · ·  | 330   | Ū              |
| 117-81-7                              | Bis(2-ethylhexyl) phthalate  |  | 330   | Ū              |
| 101-55-3                              | 4-Bromophenyl phenyl ether   |  | 330   | Ū              |
| 85-68 <b>-7</b>                       | Butyl benzyl phthalate       |  | 330   | U              |
|                                       | 4-Chloroaniline              |  | 330   | บ              |
| 59-50-7                               | 4-Chloro-3-methylphenol      |  | 330   | Ū              |
| 91-58-7                               | 2-Chloronaphthalene          |  | 330   | U              |
| 95-57-8                               | 2-Chlorophenol               |  | 330   | Ū              |
| 7005~72-3                             | 4-Chlorophenyl phenyl ether  | -7-77                                  | 330   | บั             |
| 218-01-9                              | Chrysene                     |  | 330   | ΙŪ             |
| 53-70-3                               | Dibenzo (a, h) anthracene    | <del></del>                            | 330   | Ü              |
| 132-64-9                              | Dibenzofuran                 |  | 330   | Ü              |
|                                       | Di-n-butyl phthalate         |  | 330   | บ              |
| 95-50-1                               | 1,2-Dichlorobenzene          |  | 330   | Ū              |
| 541-73-1                              | 1,3-Dichlorobenzene          |  | 330   | บั             |
| 106-46-7                              | 1,4-Dichlorobenzene          |  | 330   | ָט<br>ע        |
|                                       | 3,3'-Dichlorobenzidine       | A.H                                    | 660   | ϋ              |
|                                       | 2,4-Dichlorophenol           |  | 330   | Ιŭ             |
|                                       | Diethyl phthalate            |  | 330   | Ü              |
| 105-67-9                              | 2,4-Dimethylphenol           |  | 330   | 11             |
| · · · · · · · · · · · · · · · · · · · |                              |  |       | ľ              |

Client No.

|                                |                |                 | SB-6 (4-6)            |
|--------------------------------|----------------|-----------------|-----------------------|
| b Name: <u>STL Buffalo</u>     | Contract:      | <del></del>     |                       |
| b Code: <u>RECNY</u> Case No.: | SAS No.:       | SDG No.:        |                       |
| trix: (soil/water) <u>SOIL</u> |                | Lab Sample ID:  | A1B63018              |
| mple wt/vol:30.51 (g/m         | L) <u>G</u>    | Lab File ID:    | Y49886.RR             |
| vel: (low/med) <u>LOW</u>      |                | Date Samp/Recv: | 11/16/2001 11/21/2001 |
| Moisture: 13.6 decanted:       | (Y/N) <u>N</u> | Date Extracted: | 11/28/2001            |
| ncentrated Extract Volume: 100 | 0 (517.)       | Date Analyzed:  | 12/05/2001            |

C Cleanup: (Y/N) N pH: \_\_\_

jection Volume: 1.00(uL)

#### CONCENIRATION UNITS:

Dilution Factor: \_\_\_\_1.00

| CAS NO.  | COMPOUND                    | (ug/L or ug/Kg) | <u>UG/KG</u> | Q  |
|----------|-----------------------------|-----------------|--------------|----|
| 131-11-3 | Dimethyl phthalate          |                 | 330          | U  |
| 534-52-1 | 4,6-Dinitro-2-methylphenol_ |                 | 1600         | U  |
|          | 2,4-Dinitrophenol_          |                 | 1600         | U  |
|          | 2,4-Dinitrotoluene          |                 | 330          | U  |
| 606-20-2 | 2,6-Dinitrotoluene          |                 | 330          | Ψ  |
| 117-84-0 | Di-n-octyl phthalate        | 7 3.47 1.11     | 330          | U  |
| 206-44-0 | Fluoranthene                |                 | 330          | U  |
| 86-73-7  | Fluorene                    |                 | 330          | U  |
| 118-74-1 | Hexachlorobenzene           |                 | 330          | ϋ  |
| 87-68-3  | Hexachlorobutadiene         |                 | 330          | U  |
| 77-47-4  | Hexachlorocyclopentadiene   |                 | 330          | υ  |
| 67-72-1  | Hexachloroethane            |                 | 330          | U  |
| 193-39-5 | Indeno (1, 2, 3-cd) pyrene  |                 | 330          | U  |
| 78-59-1  | Isophorone                  |                 | 330          | U  |
| 91-57-6  | 2-Methylnaphthalene         |                 | 330          | ע  |
| 95-48-7  | 2-Methylphenol              |                 | 330          | U  |
|          | 4-Methylphenol              |                 | 330          | บ  |
| 91-20-3  | Naphthalene                 |                 | 330          | ប  |
| 88-74-4  | 2-Nitroaniline              |                 | 1600         | ប  |
| 99-09-2  | 3-Nitroaniline              |                 | 1600         | U  |
| 100-01-6 | 4-Nitroaniline              |                 | 1600         | U  |
| 98-95-3  | Nitrobenzene                | 1 - 11          | 330          | υ  |
| 88-75-5  | 2-Nitrophenol               |                 | 330          | lυ |
|          | 4-Nitrophenol               |                 | 1600         | ប  |
|          | N-nitrosodiphenylamine      | * **            | 330          | ט  |
| 621-64-7 | N-Nitroso-Di-n-propylamine  | <del></del>     | 330          | υ  |
|          | Pentachlorophenol           | ·               | 1600         | U  |
|          | Phenanthrene                |                 | 330          | ט  |
| 108-95-2 |                             | ···-            | 330          | U  |
| 129-00-0 |                             |                 | 330          | U  |
| 120-82-1 | 1,2,4-Trichlorobenzene      | ···             | 330          | ט  |
|          | 2,4,5-Trichlorophenol       |                 | 800          | U  |

000033

| b Name: STL Buffalo Contract:             |   | SB-6 (4   | -6)           |
|---|---|-----------|---------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:                                |           |               |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                          | A1B63018  | <del></del>   |
| mple wt/vol: <u>30.51</u> (g/mL) <u>G</u> | Lab File ID:                            | Y49886.RI | ₹             |
| rvel: (low/med) <u>Low</u>                | Date Samp/Recv:                         | 11/16/200 | 01 11/21/2001 |
| Moisture: 13.6 decanted: (Y/N) N          | Date Extracted:                         | 11/28/200 | <u>01</u>     |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:                          | 12/05/200 | <u>01</u>     |
| rjection Volume: 1.00 (uL)                | Dilution Factor:                        | 1.00      |               |
| C Cleanup: (Y/N) N pH:                    |   |           |               |
| CAS NO. COMPOUND                          | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |           | Q             |
| 88-06-22,4,6-Trichlorophenol              |   | 330       | υ             |

## I T CORP MEIHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENIATIVELY IDENTIFIED COMPOUNDS

000034

|                                      | (uL)                        | Date Extract  Date Analyze  Dilution Fac  CONCENTRATION  (ug/L or ug/K | ed: <u>12/05/</u><br>etor: <u>1.</u><br>UNITS: | <u>2001</u><br><u>00</u>       |                                |
|--------------------------------------|-----------------------------|--|--|--------------------------------|--------------------------------|
| 13.6 decant Extract Volume Lume:1.00 | e: <u>1000</u> (vL)<br>(vL) | Date Extract   | ed: <u>12/05/</u>                              | <u> 2001</u>                   |                                |
| 13.6 decant                          | ≘: <u>1000</u> (uL)         | Date Extract   | ed: <u>12/05/</u>                              | <u> 2001</u>                   |                                |
| 13.6 decant                          | · —                         | Date Extract   |  |                                |                                |
|                                      | ted: (Y/N) <u>N</u>         | F :  | ed: <u>11/28/</u>                              | <u>2001</u>                    |                                |
|                                      |                             | <b>_</b>   |  |                                |                                |
| v/med) <u>LOW</u>                    |                             | Date Samo/Re   | ecv: <u>11/16/</u>                             | 2001 <u>11/21</u>              | /2001                          |
| l: <u>30.51</u>                      | <u>l</u> (g/mL) <u>G</u>    | Lab File ID:   | <u>¥49886</u>                                  | RR                             |                                |
| L/water) <u>SOIL</u>                 |                             | Lab Sample I   | D: <u>A1B630</u>                               | 18                             |                                |
| <u>NY</u> Case No.                   | .: SAS No.:                 | _ SDG No.:   |  |                                |                                |
| <u> Buffalo</u>                      | Contract:                   |  | SB-6 (4  | -6)<br><del></del>             |                                |
|                                      | NY Case No                  | NY Case No.: SAS No.:  |  | NY Case No.: SAS No.: SDG No.: | NY Case No.: SAS No.: SDG No.: |

## IT CORP

#### METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS ANALYSIS DATA SHEET

| b Name: STL Buffalo Contract:           |                  | \$B-7 (2-4)           |
|---|------------------|-----------------------|
| b Code: <u>RECNY</u> Case No.: SAS No.: | SDG No.;         |                       |
| trix: (soil/water) <u>SOIL</u>          | Lab Sample ID:   | A1B63019              |
| mple wt/vol: 30.68 (g/mL) G             | Lab File ID:     | Y49887.RR             |
| wel: (low/med) <u>LOW</u>               | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: <u>12.6</u> decanted: (Y/N) N | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)    | Date Analyzed:   | 12/05/2001            |
| jection Volume: 1.00 (uL)               | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N pH:                  |                  |                       |

|                   |                              | CONCENTRATION UNIT                    | rs:   |         |
|-------------------|------------------------------|---------------------------------------|-------|---------|
| CAS NO.           | COMPOUND                     | (ug/L or ug/Kg)                       | UG/KG | Q       |
| 83-32-9           | Acenaphthene                 |                                       | 330   | Ų       |
| 208-96-8          | Acenaphthylene               | 1000                                  | 330   | U       |
|                   | Anthracene                   |                                       | 330   | U       |
|                   | Benzo (a) anthracene         |                                       | 330   | U       |
| 205-99-2          | Benzo (b) fluoranthene       |                                       | 330   | ט       |
| 207-08-9          | Benzo (k) fluoranthene       |                                       | 330   | U       |
| <b>191-24-2</b> - | Benzo (ghi) perylene         |                                       | 330   | U       |
| 50-32-8           | Benzo (a) pyrene             |                                       | 330   | υ       |
|                   | Benzoic acid                 |                                       | 1600  | ប       |
| 100-51-6          | Benzyl alcohol               |                                       | 330   | שו      |
| 111-91-1          | Bis(2-chloroethoxy) methane  |                                       | 330   | ប       |
| 111-44-4          | Bis(2-chloroethyl) ether     |                                       | 330   | U       |
| 108-60-1          | 2,2'-Oxybis(1-Chloropropane) |                                       | 330   | U       |
| 117-81 <i>-7</i>  | Bis(2-ethylhexyl) phthalate  |                                       | 330   | Ū       |
| 101-55-3          | 4-Bromophenyl phenyl ether   |                                       | 330   | U       |
| 85-68-7           | Butyl benzyl phthalate       | <del></del>                           | 330   | ΙŪ      |
| 106-47-8          | 4-Chloroaniline              |                                       | 330   | Ū       |
| 59 <b>-</b> 50-7  | 4-Chloro-3-methylphenol      |                                       | 330   | Ū       |
| 91-58-7           | 2-Chloronaphthalene          |                                       | 330   | lυ      |
|                   | 2-Chlorophenol               | ······                                | 330   | Ū       |
|                   | 4-Chlorophenyl phenyl ether  |                                       | 330   | ַ<br>עו |
| 218-01-9          | Chrysene                     |                                       | 330   | ΙŪ      |
|                   | Dibenzo(a,h)anthracene       | ****                                  | 330   | Ū       |
|                   | Dibenzofuran                 | - /                                   | 330   | ប       |
|                   | Di-n-butyl phthalate         |                                       | 330   | اق      |
| 95-50-1           | 1,2-Dichlorobenzene          |                                       | 330   | Ü       |
| 541-73-1          | 1,3-Dichlorobenzene          | · · · · · · · · · · · · · · · · · · · | 330   | Ū       |
| 106-46-7          | 1,4-Dichlorobenzene          |                                       | 330   | Ιΰ      |
|                   | 3,3'-Dichlorobenzidine       |                                       | 660   | ט       |
|                   | 2,4-Dichlorophenol           |                                       | 330   | U       |
| 84-66-2           | Diethyl phthalate            |                                       | 330   | U       |
| 105-67-9          | 2,4-Dimethylphenol           |                                       |       | Ti      |
|                   |                              |                                       | 330   | Ιυ      |

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#### I T CORP METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS ANALYSIS DATA SHEET

| b Name: STL Buffalo Contract:             |  | SB-7 (2-4  | 4)          |
|---|--|------------|-------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:                               |            |             |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                         | A1B63019   | _           |
| mple wt/vol: <u>30.68</u> (g/mL) <u>G</u> | Lab File ID:                           | Y49887.RR  | <del></del> |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:                        | 11/16/2001 | 11/21/2001  |
| Moisture: 12.6 decanted: (Y/N) N          | Date Extracted:                        | 11/28/2001 | <u>L</u>    |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:                         | 12/05/2001 | Ĺ           |
| jection Volume: 1.00 (uL)                 | Dilution Factor:                       | 1.00       |             |
| C Cleanup: (Y/N) N pH:                    |  |            |             |
|   | ONCENTRATION UNITS:<br>(ug/L or ug/Kg) |            | Q           |
| 88-06-22,4,6-Trichlorophenol              |  | 330 U      | J           |

### METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

|                              |                      |                                       | SB-7 (2-4)   |           |
|------------------------------|----------------------|---------------------------------------|--------------|-----------|
| b Name: STL Buffalo          | Contract:            |                                       |              |           |
| b Code: <u>RECNY</u> Case No | o.: SAS No.:         | SDG No.:                              |              |           |
| trix: (soil/water) SOIL      |                      | Lab Sample ID:                        | A1B63019     |           |
| mple wt/vol: 30.6            | 58 (g/mL) <u>G</u>   | Lab File ID:                          | Y49887_RR    | _         |
| vel: (low/med) <u>LOW</u>    |                      | Date Samp/Recv:                       | 11/16/2001 1 | 1/21/2001 |
| Moisture: <u>12.6</u> decar  | nted: (Y/N) <u>N</u> | Date Extracted:                       | 11/28/2001   |           |
| ncentrated Extract Volum     | ne: <u>1000</u> (uL) | Date Analyzed:                        | 12/05/2001   |           |
| jection Volume:1.00          | ) (ນັ້ນ)             | Dilution Factor:                      | 1.00         |           |
| C Cleanup: (Y/N) N           | pH:                  |                                       |              |           |
| mber TICs found: _1          |                      | CONCENTRATION UNIT<br>(ug/L or ug/Kg) | • •          |           |
| CAS NO.                      | Compound Name        | RT Est.                               | Conc. Q      | ]         |

| CAS NO.               | Compound Name          | RT    | Est. Conc. | Q    |
|-----------------------|------------------------|-------|------------|------|
| 1. <del>79 34 5</del> | 1,1,2,2 THRACLOROEHANE | - AND | <u> </u>   | ON R |

Client No.

|                             |           | SB-700 (2-4) |
|-----------------------------|-----------|--------------|
| ib Name: <u>STL Buffalo</u> | Contract: |              |

ib Code: REXINY Case No.: \_\_\_\_ SAS No.: \_\_\_ SDG No.: \_\_\_\_

utrix: (soil/water) SOIL Lab Sample ID: A1B63020

mple wt/vol: \_\_30.60 (g/mL) <u>G</u> Lab File ID: \_\_Y49888.RR

. svel: (low/med) <u>IOW</u> Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u>

Moisture: 12.7 decanted: (Y/N) N Date Extracted: 11/28/2001

ricentrated Extract Volume: 1000 (uL) Date Analyzed: 12/05/2001

rjection Volume: 1.00 (uL) Dilution Factor: 1.00

C Cleanup: (Y/N) N pH: \_\_\_\_

#### CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q 83-32-9----Acenaphthene 330 U 208-96-8-----Acenaphthylene 330 U 120-12-7----Anthracene 330 U 56-55-3----Benzo (a) anthracene U 330 205-99-2----Benzo (b) fluoranthene 330 U 207-08-9----Benzo(k) fluoranthene U 330 191-24-2----Benzo (ghi) perylene U 330 50-32-8-----Benzo (a) pyrene U 330 65-85-0-----Benzoic acid U 1600 100-51-6----Benzyl alcohol 330 U 111-91-1----Bis(2-chloroethoxy) methane 330 U 111-44-4----Bis(2-chloroethyl) ether 330 U 108-60-1----2,2'-Oxybis(1-Chloropropane) U 330 117-81-7----Bis(2-ethylhexyl) phthalate U 330 101-55-3----4-Bromophenyl phenyl ether U 330 85-68-7----Butyl benzyl phthalate 330 Ü 106-47-8----4-Chloroaniline 330 U 59-50-7----4-Chloro-3-methylphenol 330 U 91-58-7----2-Chloronaphthalene U 330 95-57-8----2-Chlorophenol U 330 7005-72-3----4-Chlorophenyl phenyl ether 330 U 218-01-9-----Chrysene U 330 53-70-3----Dibenzo(a,h)anthracene U 330 132-64-9-----Dibenzofuran U 330 84-74-2----Di-n-butyl phthalate 330 U 95-50-1----1,2-Dichlorobenzene U 330 541-73-1----1,3-Dichlorobenzene U 330 106-46-7----1,4-Dichlorobenzene U 330 91-94-1----3,3'-Dichlorobenzidine U 660 120-83-2----2,4-Dichlorophenol 330 U 84-66-2----Diethyl phthalate U 330 105-67-9----2,4-Dimethylphenol 330 U

Client No.

| · h Nome - Cott Trace-1 |                    |                |                 | SB-700 (2-4)          |
|-------------------------|--------------------|----------------|-----------------|-----------------------|
| b Name: STL Buffal      | <u>o</u> (         | bntract:       | <u> </u>        |                       |
| b Code: RECNY C         | lase No.:          | SAS No.:       | SDG No.:        |                       |
| trix: (soil/water)      | SOIL               |                | Lab Sample ID:  | A1B63020              |
| mple wt/vol:            | 30.60 (g/mL) (     | <del>}</del> . | Lab File ID:    | <u>Y49888.RR</u>      |
| _vel: (low/med)         | TOM                |                | Date Samp/Recv: | 11/16/2001 11/21/2001 |
| Moisture: 12.7          | decanted: (Y/N     | ı) <u>N</u>    | Date Extracted: | 11/28/2001            |
| ncentrated Extract      | . Volume: 1000 (uI | ر.             | Date Analyzed:  | 12/05/2001            |

jection Volume: 1.00 (uL)

C Clearup: (Y/N) N pH; \_\_\_\_

CONCENTRATION UNITS:

Dilution Factor: 1.00

| AT A 144  | abasha saka dasa menuni    | CONCENTRATION UNITS: |                | _    |
|-----------|----------------------------|----------------------|----------------|------|
| CAS NO.   | COMPOUND                   | (ug/L or ug/Kg       | ) <u>ug/kg</u> | Q    |
| 131-11-3  | Dimethyl phthalate         |                      | 330            | υ    |
|           | 4,6-Dinitro-2-methylphenol |                      | 1600           | ប    |
|           | 2,4-Dinitrophenol          |                      | 1600           | ט ו  |
| 121-14-2  | 2,4-Dinitrotoluene         |                      | 330            | U    |
| 606-20-2  | 2,6-Dinitrotoluene         |                      | 330            | ן טן |
| 117-84-0  | Di-n-octyl phthalate       |                      | 330            | ט    |
| 206-44-0  | Fluoranthene               |                      | 330            | ט    |
| 86-73-7   | Fluorene                   |                      | 330            | ט    |
| 118-74-1  | Hexachlorobenzene          |                      | 330            | Ų    |
| 87-68-3   | Hexachlorobutadiene        |                      | 330            | U    |
| 77-47-4   | Hexachlorocyclopentadiene  |                      | 330            | ט    |
| 67-72-1   | Hexachloroethane           |                      | 330            | Ų    |
| 193-39-5  | Indeno(1,2,3-cd)pyrene     | 101.00.00.00.00      | 330            | U    |
| 78-59-1   | Isophorone                 |                      | 330            | U    |
| 91-57-6   | 2-Methylnaphthalene        |                      | 330            | ט    |
| 95-48-7   | 2-Methylphenol             |                      | 330            | ט    |
| 106-44-5  | 4-Methylphenol             |                      | 330            | ט    |
|           | Naphthalene                |                      | 330            | ט    |
|           | 2-Nitroaniline             |                      | 1600           | ט    |
| 99-09-2   | 3-Nitroaniline             |                      | 1600           | ט    |
| 100-01-6  | 4-Nitroaniline             |                      | 1600           | U    |
|           | Nitrobenzene               |                      | 330            | ן ט  |
| 88-75-5   | 2-Nitrophenol              |                      | 330            | U    |
| 100-02-7  | 4-Nitrophenol              | 1. A                 | 1600           | U    |
|           | N-nitrosodiphenylamine     |                      | 330            | lų l |
|           | N-Nitroso-Di-n-propylamine |                      | 330            | ט    |
|           | Pentachlorophenol          |                      | 1600           | U    |
|           | Phenanthrene               |                      | 330            | υ    |
| 108-95-2  |                            | ;                    | 330            | บ    |
| 1.29-00-0 | Pyrene                     |                      | 330            | U    |
| 120-82-1  | 1,2,4-Trichlorobenzene     |                      | 330            | U    |
|           | 2,4,5-Trichlorophenol      |                      | 800            | บ    |

#### 000041

| b Name: <u>STL Buffalo</u> Contract:      |                                      | SB-700    | (2-4)         |
|---|--------------------------------------|-----------|---------------|
| b Code: RECNY Case No.: SAS No.:          | <u></u>                              | ,         | ,             |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                       | A1B63020  | ,<br>         |
| mple wt/vol: <u>30.60</u> (g/mL) <u>G</u> | Lab File ID:                         | Y49888.RI | <u> </u>      |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:                      | 11/16/200 | 01 11/21/2001 |
| Moisture: 12.7 decanted: (Y/N) N          | Date Extracted:                      | 11/28/200 | <u>01</u>     |
| ocentrated Extract Volume: 1000 (uL)      | Date Analyzed:                       | 12/05/200 | <u>)1</u>     |
| jection Volume: 1.00 (uL)                 | Dilution Factor:                     | 1.00      |               |
| C Cleanup: (Y/N) N pH:                    |                                      |           |               |
|   | NCENTRATION UNITS:<br>ug/L or ug/Kg) |           | Q             |
| 88-06-22,4,6-Trichlorophenol              |                                      | 330       | U             |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENIATIVELY IDENTIFIED COMPOUNDS

## 000042

| 'n Manne Citt to-EE- | .T _           | -                 |               |          |                          |             | SB-700 (2 | :-4)        |             |
|----------------------|----------------|-------------------|---------------|----------|--------------------------|-------------|-----------|-------------|-------------|
| b Name: STL Buffa    | <u>110</u>     | Q                 | mtract:       |          |                          | 1           |           |             |             |
| b Code: <u>REXNY</u> | Case No.       | :                 | SAS No.: _    |          | SDG No.: _               | <del></del> |           |             |             |
| trix: (soil/water    | c) <u>soil</u> |                   |               |          | Lab Sampl                | le ID:      | A1B63020  | <u> </u>    |             |
| mple wt/vol:         | 30.60          | ) (g/mL) <u>(</u> | 3             |          | Lab File                 | ID:         | Y49888.R  | IR .        |             |
| vel: (low/med)       | LOW            |                   |               |          | Date Samp                | /Recv:      | 11/16/20  | 01 11/21/20 | <u> 201</u> |
| Moisture: 12.7       | decant         | ed: (Y/N)         | <u> N</u>     |          | Date Extr                | acted:      | 11/28/20  | <u>101</u>  |             |
| ncentrated Extra     | t Volume       | : <u>1000</u>     | (uL)          |          | Date Anal                | yzed:       | 12/05/20  | <u>100</u>  |             |
| jection Volume: _    | 1.00           | (uL)              |               |          | Dilution                 | Factor      | 1.00      | !           |             |
| C Cleanup: (Y/N      | 1) <u>N</u>    | pH:               |               |          |                          |             |           |             |             |
| mber TICs found:     | _1             |                   |               | C        | XXXENIRATI<br>(ug/L or u |             |           |             |             |
| CAS                  | NO.            | (                 | Compound Name | <u>.</u> | RT                       | Est.        | Conc.     | 0           |             |

| CAS INO.               | Compound Name            | RT   | Est. Conc. | Q   |
|------------------------|--------------------------|------|------------|-----|
| 1. <del>79-34-</del> 5 | 1,1,2,2 THINACH CROPHENE | 7.35 | 260        | # K |

| h Nome Cur Deffela                      |                  | \$S-1                 |
|---|------------------|-----------------------|
| b Name: SIL Buffalo Contract:           |                  |                       |
| b Code: RECNY Case No.: SAS No.:        | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>          | Lab Sample ID:   | A1B63001              |
| mple wt/vol: 30.17 (g/mL) G             | Lab File ID:     | Y49853.RR             |
| vel: (low/med) <u>LOW</u>               | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: <u>16.4</u> decanted: (Y/N) N | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)    | Date Analyzed:   | 12/03/2001            |
| jection Volume: 1.00(uL)                | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N pH:                  |                  |                       |

|                           | CONCENTRATION UNITS:         |                                       |              |     |  |  |
|---------------------------|------------------------------|---------------------------------------|--------------|-----|--|--|
| CAS NO.                   | COMPOUND                     | (ug/L or ug/Kg)                       | <u>ug/kg</u> | Q   |  |  |
| 83-32-9                   | Acenaphthene                 |                                       | 330          | υ   |  |  |
| 208-96-8                  | Acenaphthylene               |                                       | 330          | U   |  |  |
|                           | Anthracene                   |                                       | 330          | ប   |  |  |
| 56-55-3                   | Benzo (a) anthracene_        |                                       | 330          | ប   |  |  |
| 205-99-2                  | Benzo (b) fluoranthene       |                                       | 330          | U   |  |  |
| 207-08-9                  | Benzo (k) fluoranthene       |                                       | 330          | UJ  |  |  |
| 191-24-2                  | Benzo(ghi)perylene           |                                       | 330          | U   |  |  |
| 50 <b>-</b> 32 <b>-</b> 8 | Benzo (a) pyrenė             |                                       | 330          | ប   |  |  |
| 65-85-0                   | Benzoic acid                 |                                       | 1600         | lσ  |  |  |
| 100-51-6                  | Benzyl alcohol               |                                       | 330          | Ų   |  |  |
| 111 <b>-9</b> 1-1         | Bis(2-chloroethoxy) methane  |                                       | 330          | U   |  |  |
| 111-44-4                  | Bis(2-chloroethyl) ether     |                                       | 330          | U   |  |  |
| 108-60-1                  | 2,2'-Oxybis(1-Chloropropane) |                                       | 330          | ט   |  |  |
| 117-81-7                  | Bis(2-ethylhexyl) phthalate  |                                       | 330          | U   |  |  |
| 101-55-3                  | 4-Bromophenyl phenyl ether   |                                       | 330          | U   |  |  |
| 85-68-7                   | Butyl benzyl phthalate       |                                       | 330          | U   |  |  |
| 106-47-8                  | 4-Chloroaniline              |                                       | 330          | U   |  |  |
| 59-50-7                   | 4-Chloro-3-methylphenol      |                                       | 330          | U   |  |  |
| 91-58-7                   | 2-Chloronaphthalene          |                                       | 330          | ט   |  |  |
| 95-57-8                   | 2-Chlorophenol               |                                       | 330          | U   |  |  |
| 7005-72-3                 | 4-Chlorophenyl phenyl ether  |                                       | 330          | U   |  |  |
|                           | Chrysene                     |                                       | 330          | U   |  |  |
| 53-70-3                   | Dibenzo (a, h) anthracene    |                                       | 330          | Ū   |  |  |
|                           | Dibenzofuran                 |                                       | 330          | Ū   |  |  |
| 84-74-2                   | Di-n-butyl phthalate         | · · · · · · · · · · · · · · · · · · · | 330          | บิ  |  |  |
|                           | 1,2-Dichlorobenzene          |                                       | 330          | υ U |  |  |
|                           | 1,3-Dichlorobenzene          |                                       | 330          | טֿו |  |  |
|                           | 1,4-Dichlorobenzene          | A A A A A A A A A A A A A A A A A A A | 330          | บั  |  |  |
|                           | 3,3'-Dichlorobenzidine       |                                       | 660          | lσ  |  |  |
|                           | 2,4-Dichlorophenol           |                                       | 330          | Ιŏ  |  |  |
|                           | Diethyl phthalate            |                                       | 330          | ŭ   |  |  |
|                           | 2,4-Dimethylphenol           |                                       | 330          | lσ  |  |  |
| 103-07-9                  |                              |                                       | <u> Λ</u>    | 1   |  |  |

## T. T. COKE

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| ·<br>}   |                     | SS-1                  |
|--|---------------------|-----------------------|
| b Name: STL Buffalo Contract:                  | <del></del>         | <u> </u>              |
| b Code: RECNY Case No.: SAS No.:               | SDG No.:            |                       |
| trix: (soil/water) SOIL                        | Lab Sample ID:      | A1B63001              |
| mple wt/vol: <u>30.17</u> (g/πL) <u>G</u>      | Lab File ID:        | ¥49853.RR             |
| rvel: (low/med) <u>LOW</u>                     | Date Samp/Recv:     | 11/16/2001 11/21/2001 |
| Moisture: <u>16.4</u> decanted: (Y/N) <u>N</u> | Date Extracted:     | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)           | Date Analyzed:      | 12/03/2001            |
| gection Volume: 1.00 (uL)                      | Dilution Factor:    | 1.00                  |
| C Cleanup: (Y/N) N pH:                         |                     |                       |
| ,  | ONCENIRATION UNITS: |                       |

|             | CONCENTRATION UNITS:       |                 |              |     |  |
|-------------|----------------------------|-----------------|--------------|-----|--|
| CAS NO. COM | POUND                      | (ug/L or ug/Kg) | <u>UG/KG</u> | Q   |  |
| 131-11-3Dim |                            |                 | 330          | U   |  |
|             | -Dinitro-2-methylphenol_   |                 | 1600         | ַ ע |  |
| 51-28-52,4  | -Dinitrophenol             |                 | 1600         | UJ  |  |
| 121-14-22,4 | -Dinitrotoluene            |                 | 330          | שׁ  |  |
| 606-20-22,6 |                            |                 | 330          | ប   |  |
|             | n-octyl phthalate          |                 | 330          | [ט  |  |
| 206-44-0Flu | oranthene                  |                 | 330          | ט   |  |
| 86-73-7Flu  | orene                      |                 | 330          | ט   |  |
| 118-74-1Hex | achlorobenzen <del>e</del> |                 | 330          | ט   |  |
| 87-68-3Hex  |                            |                 | 330          | ט   |  |
| 77-47-4Hex  | achlorocyclopentadiene     |                 | 330          | ט   |  |
| 67-72-1Hex  | achloroethane              |                 | 330          | U   |  |
| 193-39-5Ind | eno(1,2,3-cd)pyrene        |                 | 330          | U _ |  |
| 78-59-1Isc  |                            |                 | 330          | UJ  |  |
| 91-57-62-M  | ethylnaphthalene           |                 | 330          | U   |  |
| 95-48-72-M  | ethylphenol                |                 | 330          | U   |  |
| 106-44-54-M | ethylphenol_               |                 | 330          | U   |  |
| 91-20-3Nar  | hthalene                   |                 | 330          | U   |  |
| 88-74-42-N  | itroaniline                |                 | <b>T</b> 600 | U   |  |
| 99-09-23-N  | litroaniline               |                 | 1600         | שׁן |  |
| 100-01-64-N | Mitroaniline               |                 | 1600         | U   |  |
| 98-95-3Nit  | robenzene                  |                 | 330          | [ט  |  |
| 88-75-52-N  | [itrophenol                |                 | 330          | U   |  |
| 100-02-74-N |                            |                 | 1600         | U   |  |
|             | itrosodiphenylamine        |                 | 330          | U   |  |
| 621-64-7N-N | litroso-Di-n-propylamine   |                 | 330          | U   |  |
| 87-86-5Per  |                            |                 | 1600         | ט   |  |
| 85-01-8Phe  |                            |                 | 330          | U   |  |
| 108-95-2Phe |                            |                 | 330          | U   |  |
| 129-00-0Py1 |                            |                 | 330          | ប   |  |
|             | 4-Trichlorobenzene         |                 | 330          | ប   |  |
|             | ,5-Trichlorophenol         |                 | 800          | U   |  |

## 000045

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| b Name: STL Buffalo Contract:             |                      | SS-1             |              |
|---|----------------------|------------------|--------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:             |                  |              |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:       | <u>A1B63001</u>  | _            |
| mple wt/vol: <u>30.17</u> (g/mL) <u>G</u> | Lab File ID:         | <u>Y49853.RR</u> |              |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:      | 11/16/200        | 1 11/21/2001 |
| Moisture: 16.4 decanted: (Y/N) N          | Date Extracted:      | 11/28/200        | <u>1</u>     |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:       | 12/03/200        | 1            |
| jection Volume: 1.00 (uL)                 | Dilution Factor:     | 1.00             |              |
| C Cleanup: (Y/N) N pH:                    |                      |                  |              |
| CAS NO. COMPOUND                          | CONCENTRATION UNITS: | UG/KG            | Q            |
| 88-06-22,4,6-Trichlorophenol              |                      | 330              | U            |

## METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

000046

Client No.

| b Name: STL Buffalo Contract:             | SS-1  |
|---|---|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:  |
| trix: (soil/water) SOIL                   | Lab Sample ID: AlB63001                             |
| mple wt/vol: <u>30.17</u> (g/mL) <u>G</u> | Lab File ID: Y49853.RR                              |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u> |
| Moisture: 16.4 decanted: (Y/N) N          | Date Extracted: <u>11/28/2001</u>                   |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed: <u>12/03/2001</u>                    |
| jection Volume: 1.00 (uL)                 | Dilution Factor:1.00                                |
| C Clearup: (Y/N) N pH:                    |   |

CONCENTRATION UNITS:

(ug/L or ug/Kg) <u>UG/KG</u>

| CAS NO.                                 | Compound Name   | RT  | Est. Conc.   | Q                                       |
|---|---|---|--|---|
| 1. <del>79 34 5</del> 2. 3. 4. 5. 6. 7. | 1,1,2,2 TETRACTIOROUTIANE UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE UNKNOWN ALKANE | 6.98<br>27.65<br>29.36<br>30.45<br>30.88<br>32.36<br>33.80<br>34.40 | 240<br>170<br>250<br>320<br>190<br>220<br>160<br>180 | 3N K<br>J<br>J<br>J<br>J<br>J<br>J<br>J |

mber TICs found: 8

81123 av

| b Name: STL Buffalo Contract:             |                  | \$\$-2                |
|---|------------------|-----------------------|
| b Name: STL Buffalo Contract:             |                  |                       |
| o Code: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| trix: (soil/water) SOIL                   | Lab Sample ID:   | A1B63002              |
| mple wt/vol: <u>30.53</u> (g/mL) <u>G</u> | Lab File ID:     | <u>Y49856.RR</u>      |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 13.7 decanted: (Y/N) N          | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)                 | Dilution Factor: | 1.00                  |
| C Clearup: (Y/N) N pH:                    |                  |                       |

| CON | $\mathbf{CENI}$ | RATI( | N. | UNIT | S: |
|-----|-----------------|-------|----|------|----|
|     |                 |       |    |      |    |

| CONCENTRATION UNITS: NO. COMPOUND (ug/L or ug/Kg) UG/KG |   |  |  |  |
|---|---|--|--|--|
| COMPOUND  | (ug/L or ug/kg)   | UG/KG  | Q  |  |
| Acenaphthene  |   | 330  | ט  |  |
| Acenaphthylene  |   | 330  | ט  |  |
| Anthracene  |   | 330  | U  |  |
| Benzo (a) anthracene                                    |   | 330  | - ប  |  |
| Benzo (b) fluoranthene                                  |   | 330  | ַ <b>ט</b>   |  |
| Benzo (k) fluoranthene                                  |   | 330  | U J  |  |
| Benzo(ghi) perylene                                     |   | 330  | ប  |  |
| Benzo (a) pyrene  |   | 330  | U  |  |
|   |   | 1600   | U  |  |
| Benzyl alcohol  |   | 330  | U  |  |
| Bis(2-chloroethoxy) metl                                | nane  | 330  | U  |  |
| Bis(2-chloroethyl) ether                                | r   | 330  | U  |  |
| 2,2'-Oxybis(1-Chloropro                                 | oane)   | 330  | U  |  |
| Bis(2-ethylhexyl) phtha                                 | late  | 330  | ט  |  |
| 4-Bromophenyl phenyl etl                                | ner   | 330  | U  |  |
| Butyl benzyl phthalate                                  |   | 330  | U  |  |
| 4-Chloroaniline   |   | 330  | υ  |  |
| 4-Chloro-3-methylphenol                                 |   | 330  | U  |  |
| 2-Chloronaphthalene                                     |   | 330  | U  |  |
| 2-Chlorophenol  |   | 330  | U  |  |
| 4-Chlorophenyl phenyl e                                 | ther  | 330  | Įΰ   |  |
| Chrysene  |   | 330  | Ū  |  |
|   |   | 330  | U  |  |
| Dibenzofuran  |   | 330  | ט  |  |
| Di-n-butyl phthalate                                    |   | 330  | U  |  |
|   |   | 330  | ט  |  |
| 1.3-Dichlorobenzene                                     |   | 330  | U  |  |
|   |   | 330  | ט  |  |
|   |   | 660  | U  |  |
|   |   |  | U  |  |
|   |   |  | U  |  |
|   |   | 330  | Ū  |  |
|   | Bis(2-chloroethyl) ether2,2'-Oxybis(1-Chloropro)Bis(2-ethylhexyl) phtha4-Bromophenyl phenyl etherButyl benzyl phthalate4-Chloroaniline4-Chloro-3-methylphenol2-Chlorophenol | COMPOUND (ug/L or ug/Kg) AcenaphtheneAcenaphthyleneAnthraceneBenzo (a) anthraceneBenzo (b) fluorantheneBenzo (ch) fluorantheneBenzo (ch) peryleneBenzo (ch) perylene | CCMPCUND         (ug/L or ug/Kg)         UG/KG          Acenaphthene         330          Acenaphthylene         330 |  |

## TIME METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

ANALYSIS DATA SHEET

Client No.

| is a second                          |         |                  | SS-2                  |
|--------------------------------------|---------|------------------|-----------------------|
| o Name: <u>STL Buffalo</u> Cont      | ract:   | _                |                       |
| Code: RECNY Case No.: S              | AS No.: | SDG No.:         |                       |
| trix: (soil/water) SOIL              |         | Lab Sample ID:   | A1B63002              |
| mple wt/vol: 30.53 (g/mL) G          |         | Lab File ID:     | Y49856.RR             |
| vel: (low/med) <u>LOW</u>            |         | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 13.7 decanted: (Y/N) N     | 1       | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) |         | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)            |         | Dilution Factor: | 1.00                  |
| Cleanup: (Y/N) N pH:                 |         |                  |                       |

CONCENTRATION UNITS:

| CAS NO.  | COMPOUND                    | (ug/L or ug/Kg) | UG/KG | Q   |
|----------|-----------------------------|-----------------|-------|-----|
| CD 110.  | COLL COLD                   | (43/2 42 43/-9/ |       | -1  |
| 131-11-3 | Dimethyl phthalate          |                 | 330   | ט   |
| 534-52-1 | 4,6-Dinitro-2-methylphenol_ |                 | 1600  | ע ש |
| 51-28-5  | 2,4-Dinitrophenol           |                 | 1600  | UJ  |
|          | 2,4-Dinitrotoluene          |                 | 330   | ש   |
|          | 2,6-Dinitrotoluene          |                 | 330   | U   |
| 117-84-0 | Di-n-octyl phthalate        |                 | 330   | ט   |
|          | Fluoranthene                |                 | 330   | U   |
|          | Fluorene                    |                 | 330   | ប   |
| 118-74-1 | Hexachlorobenzene           |                 | 330   | U   |
|          | Hexachlorobutadiene         |                 | 330   | U   |
| 77-47-4  | Hexachlorocyclopentadiene   |                 | 330   | U   |
| 67-72-1  | Hexachloroethane            |                 | 330   | U   |
| 193-39-5 | Indeno (1,2,3-cd) pyrene    |                 | 330   | U   |
| 78-59-1  | ~-Isophorone                |                 | 330   | UJ  |
| 91-57-6  | 2-Methylnaphthalene         |                 | 330   | ប   |
| 95-48-7  | 2-Methylphenol              |                 | 330   | U   |
|          | 4-Methylphenol              |                 | 330   | U   |
| 91-20-3  | Naphthalene                 |                 | 330   | ש   |
| 88-74-4  | 2-Nitroaniline              |                 | 1600  | ប   |
| 99-09-2  | 3-Nitroaniline              |                 | 1600  | ט   |
| 100-01-6 | 4-Nitroaniline              |                 | 1600  | U   |
| 98-95-3  | Nitrobenzene                |                 | 330   | U   |
| 88-75-5  | 2-Nitrophenol               |                 | 330   | ט   |
|          | 4-Nitrophenol               |                 | 1600  | σ   |
| 86-30-6  | N-nitrosodiphenylamine      |                 | 330   | U   |
| 621-64-7 | N-Nitroso-Di-n-propylamine  |                 | 330   | ט   |
| 87-86-5  | Pentachlorophenol           |                 | 1600  | U   |
| 85-01-8  | Phenanthrene                |                 | 330   | Ū   |
| 108-95-2 |                             |                 | 330   | U   |
| 1        | Pyrene                      |                 | 330   | U   |
| 120-82-1 | 1,2,4-Trichlorobenzene      |                 | 330   | ט   |
| 95-95-4  | 2,4,5-Trichlorophenol_      |                 | 800   | ט   |
| T T T    | -/-/ <u></u>                | <del></del>     |       |     |

confisher

000049

| b Name: STL Buffalo Contract:             |   | SS-2              |            |
|---|---|-------------------|------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:                                |                   |            |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                          | A1B63002          | _          |
| mple wt/vol: <u>30.53</u> (g/mL) <u>G</u> | Lab File ID:                            | <u> Y49856.RR</u> | <u> </u>   |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:                         | 11/16/200         | 11/21/2001 |
| Moisture: <u>13.7</u> decanted: (Y/N) N   | Date Extracted:                         | 11/28/200         | <u>)1</u>  |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:                          | 12/04/200         | <u>)1</u>  |
| jection Volume: 1.00(uL)                  | Dilution Factor:                        | 1.00              |            |
| C Cleanup: (Y/N) N pH:                    |   |                   |            |
| CAS NO. COMPOUND                          | CONCENTRATION UNITS:<br>(ug/L or ug/kg) | _                 | Q          |
| 88-06-22,4,6-Trichlorophenol              |   | 330               | U          |

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

| <u>}</u><br>:<br>!                   |                                       | SS-2                  |
|--------------------------------------|---------------------------------------|-----------------------|
| b Name: STL Buffalo Contract:        | - '                                   |                       |
| b Code: RECNY Case No.: SAS No.:     | SDG No.:                              |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:                        | A1B63002              |
| mple wt/vol: 30.53 (g/mL) G          | Lab File ID:                          | Y49856.RR             |
| vel: (low/med) <u>LOW</u>            | Date Samp/Recv:                       | 11/16/2001 11/21/2001 |
| Moisture: 13.7 decanted: (Y/N) N     | Date Extracted:                       | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:                        | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor:                      | 1.00                  |
| C Cleanup: (Y/N) N pH:               |                                       |                       |
| mber TICs found: _3                  | CONCENTRATION UNIT<br>(ug/L or ug/Kg) | _                     |
|                                      |                                       |                       |

| CAS NO.        | Compound Name   | RT                      | Est. Conc.        | Q      |
|----------------|---|-------------------------|-------------------|--------|
| 1.<br>2.<br>3. | UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON | 27.65<br>29.35<br>30.45 | 200<br>250<br>170 | J<br>J |

Client No.

| b Name: STL Buffalo Contract:             | -                  | SS-3                  |
|---|--------------------|-----------------------|
| o Code: RECNY Case No.: SAS No.:          | SDG No.:           |                       |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:     | A1E63003              |
| mple wt/vol: <u>30.04</u> (g/mL) <u>G</u> | Lab File ID:       | <u>Y49857.RR</u>      |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:    | 11/16/2001 11/21/2001 |
| Moisture: 15.8 decanted: (Y/N) N          | Date Extracted:    | 11/28/2001            |
| ocentrated Extract Volume: 1000 (uL)      | Date Analyzed:     | 12/04/2001            |
| jection Volume: 1.00(uL)                  | Dilution Factor:   | 10.00                 |
| C Cleanup: (Y/N) N pH:                    |                    |                       |
| ·   | NCENTRATION UNITS: |                       |

| CAS NO.    | COMPOUND                   | (ug/L or ug/Kg) | UG/KG        | Q  |
|------------|----------------------------|-----------------|--------------|----|
|            | Acenaphthene               |                 | 400          | U  |
|            | Acenaphthylene             |                 | 400          | U  |
|            | Anthracene                 |                 | 400 4000     | ប  |
|            | Benzo (a) anthracene       |                 | 400          | U  |
|            | Benzo (b) fluoranthene     |                 | 4 <b>q</b> 0 | V  |
|            | Benzo (k) fluoranthene     |                 | 4 <b>0</b> 0 | UJ |
|            | Benzo (ghi) perylene       | ~               | 400          | IJ |
|            | Benzo (a) pyrene           |                 | 400          | ប  |
|            | Benzoic acid               |                 | 1600 6000    |    |
|            | Benzyl alcohol             |                 | 1600 16000   | Ü  |
|            | Bis(2-chloroethoxy) metha  | ne              | 409 4000     | ប  |
| 111-44-4   | Bis(2-chloroethyl) ether   |                 | 490 4 4000 U | U  |
| 108-60-1   | 2,2'-Oxybis(1-Chloropropa  | ne)             | 400          | U  |
| 117-81-7   | Bis(2-ethylhexyl) phthala  | te              | 5905900      | U  |
| 101-55-3   | 4-Bromophenyl phenyl ether | r               | 5905900      | U  |
| 85-68-7    | Butyl benzyl phthalate     |                 | 4007         | ប  |
| 106-47-8   | 4-Chloroaniline            |                 | 400          | υ  |
| 59-50-7    | 4-Chloro-3-methylphenol    |                 | 400          | U  |
|            | 2-Chloronaphthalene        |                 | 400          | ប  |
| 95-57-8    | 2-Chlorophenol             |                 | 400          | ប  |
| 7005-72-3- | 4-Chlorophenyl phenyl eth  | er              | 400 4000     | ប  |
|            | Chrysene                   |                 | 400 U        | ប  |
|            | Dibenzo (a,h) anthracene   |                 | 4 <b>d</b> 0 | U  |
| 132-64-9   | Dibenzofuran               |                 | 4 <b>0</b> 0 | υ  |
|            | Di-n-butyl phthalate       |                 | 400          | υ  |
|            | 1,2-Dichlorobenzene        |                 | 400          | บ  |
|            | 1,3-Dichlorobenzene        |                 | 400          | ט  |
| 1          | 1,4-Dichlorobenzene        |                 | 400          | U  |
|            | 3,3'-Dichlorobenzidine     |                 | 560 6600     | Ū  |
|            | 2,4-Dichlorophenol         |                 | 320 3300     | Ū  |
|            | Diethyl phthalate          |                 | 400 YOUQ     | Ū  |
|            | 2,4-Dimethylphenol         |                 | 590 5940     | บ  |
| 103-07-34- | Z, T-DIRGGIYTERENT         |                 | 200 2 (40    |    |

was

00005.2

Client No.

|       | <u></u>                 |                              |         |                 | SS-3                  |
|-------|-------------------------|------------------------------|---------|-----------------|-----------------------|
|       | b Name: STL Buffalo     |                              | ract:   | _               | L                     |
| -4    | b Code: <u>RECNY</u> Ca | ase No.: S                   | As No.: | SDG No.:        |                       |
| s     | trix: (soil/water)      | SOIL                         |         | Lab Sample ID:  | A1B63003              |
| 1     | mple wt/vol:            | <u>30.04</u> (g/mL) <u>G</u> |         | Lab File ID:    | Y49857.RR             |
| đ     | vel: (low/med)          | TOM                          |         | Date Samp/Recv: | 11/16/2001 11/21/2001 |
| 1     | Moisture: 15.8          | decanted: (Y/N) N            | ŗ       | Date Extracted: | 11/28/2001            |
| e<br> | ncentrated Extract      | Volume: 1000 (uL)            |         | Date Analyzed:  | <u>12/04/2001</u>     |

jection Volume: 1.00(uL)

Dilution Factor: \_

10.00

C Cleanup: (Y/N) N pH: \_\_\_\_

### CONCENTRATION UNITS:

| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg) |                                       | Q   |
|----------|----------------------------|-----------------|---------------------------------------|-----|
|          | Dimethyl phthalate         |                 | 400 4000                              | 9 ' |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |                 | 1600 /6000                            |     |
|          | 2,4-Dinitrophenol          |                 | 1600/6000                             | UJ  |
| 121-14-2 | 2,4-Dinitrotoluene         |                 | 400-4000                              |     |
| 606-20-2 | 2,6-Dinitrotoluene         |                 | 590 <i>590</i> 0                      |     |
|          | Di-n-octyl phthalate       |                 | 4000                                  | บ   |
|          | Fluoranthene               |                 | <b>590</b> 5900                       | U   |
| 86-73-7  | Fluorene                   |                 | 590 5 400                             | ט   |
| 118-74-1 | Hexachlorobenzene          |                 | 100 4000                              | U   |
| 87-68-3  | Hexachlorobutadiene        |                 | 400 4000                              |     |
| 77-47-4  | Hexachlorocyclopentadiene  |                 | 590-5900                              |     |
|          | Hexachloroethane           |                 | 200 370                               | υ   |
|          | Indeno (1,2,3-cd) pyrene   |                 | 7907900                               | U _ |
|          | Isophorone                 |                 | 400 4000                              | UJ  |
|          | 2-Methylnaphthalene        |                 | 400 4000                              | lυ  |
|          | 2-Methylphenol             |                 | 7907900                               | U   |
|          | 4-Methylphenol             |                 |                                       | U   |
|          | Naphthalene                |                 | 400 4000                              |     |
|          | 2-Nitroeniline             |                 | 160000                                | U   |
|          | 3-Nitroaniline             |                 | 1600 16000                            | U   |
|          | 4-Nitroaniline             |                 | 1600                                  | U   |
|          | Nitrobenzene               |                 | 220 7100                              | טו  |
| ,        | 2-Nitrophenol              |                 | 400 4000                              | ט   |
|          | 4-Nitrophenol              |                 | 1600 16000                            |     |
|          | N-nitrosodiphenylamine     |                 | 400 4000                              |     |
|          | N-Nitroso-Di-n-propylamine |                 | 360 7600                              |     |
|          | Pentachlorophenol          |                 | 1600 16000                            | 1   |
|          | Phenanthrene               |                 | 409 4000                              | U   |
| 108-95-2 |                            |                 | 298 7900                              | lū  |
|          | Pyrene                     |                 | 590 5400                              | līī |
|          | 1,2,4-Trichlorobenzene     |                 | 330 3300                              |     |
|          |                            |                 | 800 8000                              |     |
| 75-75-4  | 2,4,5-Trichlorophenol      |                 | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |     |

# 000053

| b Name: <u>STL Buffalo</u> Contract:    |   | SS-3                  |
|---|---|-----------------------|
| D Code: RECNY Case No.: SAS No.:        |   | -                     |
| trix: (soil/water) <u>SOIL</u>          | Lab Sample ID:                          | A1B63003              |
| mple wt/vol: 30.04 (g/mL) <u>G</u>      | Lab File ID:                            | Y49857.RR             |
| vel: (low/med) <u>LOW</u>               | Date Samp/Recv:                         | 11/16/2001 11/21/2001 |
| Moisture: <u>15.8</u> decanted: (Y/N) N | Date Extracted:                         | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)    | Date Analyzed:                          | 12/04/2001            |
| jection Volume: 1.00 (uL)               | Dilution Factor:                        | 10.00                 |
| C Cleanup: (Y/N) N pH:                  |   |                       |
| CAS NO. COMPOUND                        | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |                       |
| 88-06-22,4,6-Trichlorophenol            |   | 1200 /2000 U          |
|   |   |                       |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

## 000C54

| la BTana. | COURT TO SEC. 1.         | On the same of the       |                           | SS-3                          |           |        |
|-----------|--------------------------|--------------------------|---------------------------|-------------------------------|-----------|--------|
| D Name:   | SIL BUITALO              | Contract:                | <del></del>               | I                             |           |        |
| b Code:   | RECNY Case No            | .: SAS No.:              | SDG No.:                  | · <del></del>                 |           |        |
| trix: (   | (soil/water) <u>SOIL</u> |                          | Lab Sample                | ID: <u>AlB630</u>             | 03        |        |
| mple w    | /vol: <u>30.0</u>        | <u>1</u> (g/mL) <u>G</u> | Lab File I                | D: <u>Y49857</u>              | .RR       |        |
| vel:      | (low/med) <u>LOW</u>     |                          | Date Samp/                | Recv: <u>11/16/</u>           | 2001 11/2 | 1/2001 |
| Moistur   | re: <u>15.8</u> decan    | ted: (Y/N) <u>N</u>      | Date Extra                | cted: <u>11/28/</u>           | 2001      |        |
| ncentra   | ated Extract Volum       | e: <u>1000</u> (uL)      | Date Analy                | zed: <u>12/04/</u> :          | 2001      |        |
| jection   | ı Volume: <u>1.00</u>    | (uL)                     | Dilution F                | actor: 10.                    | 00        |        |
| C Clear   | nup: (Y/N) N             | рн:                      |                           |                               |           |        |
| mber 11   | (Cs found: _0            |                          | CONCENTRATION (ug/L or ug | n Units:<br>/kg) <u>UG/kG</u> | _         |        |
| 1<br>'    | CAS NO.                  | Compound Name            | RT                        | Est. Conc.                    | Q         |        |
| i         |                          |                          |                           |                               |           |        |

Client No.

|   |                  | SS-4                  |
|---|------------------|-----------------------|
| b Name: STL Buffalo Contract:             |                  |                       |
| o Code: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:   | A1B63004              |
| mple wt/vol: <u>30.40</u> (g/mL) <u>G</u> | Lab File ID:     | Y49858.RR             |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 7.2 decanted: (Y/N) N           | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)                 | Dilution Factor: | 5.00                  |
| C Cleanup: (Y/N) N pH:                    |                  |                       |

ent propos

000056

| o Name: SIL Buffalo Contract:        |                  | SS-4                  |
|--------------------------------------|------------------|-----------------------|
| o Code: REKNY Case No.: SAS No.:     | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:   | A1B63004              |
| mple wt/vol: _30.40 (g/πL) G         | Lab File ID:     | Y49858.RR             |
| vel: (low/med) <u>LOW</u>            | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 7.2 decanted: (Y/N) N      | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor: | 5.00                  |
| Cleanup: (Y/N) N pH:                 |                  |                       |

| CAS NO. COMPOUND                   | (ug/L or ug/Kg) | UG/KG                | Q    |
|------------------------------------|-----------------|----------------------|------|
| 1                                  | <u> </u>        |                      |      |
| 131-11-3Dimethyl phthalate         |                 | 338-1650             | ן ט  |
| 534-52-14,6-Dinitro-2-methylphenol |                 | 1690 8000            | U [  |
| 51-28-52,4-Dinitrophenol           |                 | 1800 80 K            | UT   |
| 121-14-22,4-Dinitrotoluene         |                 | β3p ]                | U    |
| 606-20-22,6-Dinitrotoluene         |                 | \$3/0 /              | U    |
| 117-84-0Di-n-octyl phthalate       |                 | <b>\$3</b> 0         | ע    |
| 206-44-0Fluoranthene               |                 | 100                  | ן ט  |
| 86-73-7Fluorene                    |                 | 330                  | ן ט  |
| 118-74-1Hexachlorobenzene          |                 | 300 1650             | U    |
| 87-68-3Hexachlorobutadiene         |                 | 380 U                | lo l |
| 77-47-4Hexachlorocyclopentadiene   |                 | 3 <b>8</b> 0         | ט    |
| 67-72-1Hexachloroethane            |                 | 3/30                 | ט    |
| 193-39-5Indeno(1,2,3-cd)pyrene     |                 | 350                  | ן ע  |
| 78-59-1Isophorone                  |                 | 330                  | บป   |
| 91-57-62-Methylnaphthalene         |                 | 330                  | ט    |
| 95-48-72-Methylphenol              |                 | <b>\$5b</b>          | ប    |
| 106-44-54-Methylphenol             |                 | взЫ                  | ן טן |
| 91-20-3Naphthalene                 |                 | 330                  | U    |
| 88-74-42-Nitroaniline              |                 | 16007                | ט    |
| 99-09-23-Nitroaniline              |                 | 1600 8000            | ן ט  |
| 100-01-64-Nitroaniline             |                 | 1,600) W             | U    |
| 98-95-3Nitrobenzene                |                 | 33/0 1650 W          | U    |
| 88-75-52-Nitrophenol               |                 | 3011                 | IV I |
| 100-02-74-Nitrophenol              |                 | 1600 8000            | U    |
| 86-30-6N-nitrosodiphenylamine      |                 | 330 1640<br>330 1640 | U    |
| 621-64-7N-Nitroso-Di-n-propylamine |                 | 3/30) 1° H           | ט    |
| 87-86-5Pentachlorophenol           |                 | 1600 8000            | υ    |
| 85-01-8Phenanthrene                |                 | \$307                | U    |
| 108-95-2Phenol                     |                 | 350 1 1650           | ט    |
| 129-00-0Pyrene                     |                 | 3 <b>3</b> 0 ( "VL   | U    |
| 120-82-11,2,4-Trichlorobenzene     |                 | 366/                 | U    |
| 95-95-42,4,5-Trichlorophenol       |                 | 800 Y600             | U    |

000057

Client No.

|                                      | SS-4  |
|--------------------------------------|---|
| b Name: STL Buffalo Contract:        | <u> </u>  |
| o Code: RECNY Case No.: SAS No.:     | _ SDG No.:  |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID: A1B63004                             |
| mple wt/vol: $30.40$ (g/mL) G        | Lab File ID: Y49858.RR                              |
| vel: (low/med) <u>LOW</u>            | Date Samp/Recv: <u>11/16/2001</u> 11/21/2001        |
| Moisture:7.2 decanted: (Y/N) N       | Date Extracted: <u>11/28/2001</u>                   |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed: 12/04/2001                           |
| jection Volume: 1.00 (uL)            | Dilution Factor:                                    |
| C Cleanup: (Y/N) N pH:               |   |
| CAS NO. COMPOUND                     | CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/KG</u> Q |
| 88-06-22,4,6-Trichlorophenol         | 530 2650 U  |
|                                      | No 102 low  |

00/12

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENIATIVELY IDENTIFIED COMPOUNDS

|                                     |                                       | Client No.            |
|-------------------------------------|---------------------------------------|-----------------------|
| Name: SIL Buffalo Contract:         |                                       | SS-4                  |
| Code: RECNY Case No.: SAS No.:      | SDG No.:                              |                       |
| rix: (soil/water) <u>SOIL</u>       | Lab Sample ID:                        | A1B63004              |
| ple wt/vol: 30.40 (g/mL) <u>G</u>   | Lab File ID:                          | Y49858.RR             |
| rel: (low/med) <u>LOW</u>           | Date Samp/Recv:                       | 11/16/2001 11/21/2001 |
| bisture:7.2 decanted: (Y/N) N       | Date Extracted:                       | 11/28/2001            |
| centrated Extract Volume: 1000 (uL) | Date Analyzed:                        | 12/04/2001            |
| ection Volume: 1.00 (uL)            | Dilution Factor:                      | 5.00                  |
| Cleanup: (Y/N) N pH:                |                                       |                       |
| ber TICs found:0                    | CONCENTRATION UNIT<br>(ug/L or ug/kg) |                       |
| <b></b>                             |                                       |                       |

RT

Est. Conc.

Q

Compound Name

CAS NO.

| o Name: <u>STL Buff</u> | alo Contract:                |                  | \$S-5                 |
|-------------------------|------------------------------|------------------|-----------------------|
| P Code: RECNY           | Case No.: SAS No.:           | SDG No.;         |                       |
| rix: (soil/water        | <del></del>                  | Lab Sample ID:   | <u>A1B63005</u>       |
|                         | <u>30.54</u> (g/mL) <u>G</u> | Lab File ID:     | Y49859.RR             |
| rel: (low/med)          | <u>LCW</u>                   | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| bisture: <u>6.1</u>     | decanted: (Y/N) N            | Date Extracted:  | 11/28/2001            |
| centrated Extra         | t Volume: 1000 (uL)          | Date Analyzed:   | 12/04/2001            |
| ection Volume:          |                              | Dilution Factor: | 10.00                 |
| Cleanup: (Y/N)          | <u>N</u> pH:                 |                  |                       |

| CAS NO.                       | COMPOUND                           | CONCENIRATION UNIT                    | • •                         |                |
|-------------------------------|------------------------------------|---------------------------------------|-----------------------------|----------------|
|                               |                                    | (ug/L or ug/Kg)                       | <u>UG/KG</u>                | Q              |
| 83-32-9                       | Acenaphthene                       |                                       | 25/2                        | T              |
| 208-96-8                      | Acenaphthylene                     |                                       | 350                         | U              |
| 120-12-7                      | Anthracene                         |                                       | 350                         | U              |
| 56-55-3                       | Benzo (a) anthracero               |                                       | 390                         | Ü              |
| 205-99-2                      | -Benzo (b) fluorenthemo            |                                       | 350 3500                    | ប្រ            |
| 1207-08-9                     | Benzo(k) fluoranthone              |                                       | 359 u                       | U              |
| 191-24-2                      | Benzo (dhi) pervlene               | <del></del>                           | 320                         | U              |
| 50-32-8                       | Benzo (a) nyrrene                  | ·                                     | 350                         | U              |
| 165-85-0                      | -Benzoic acid                      |                                       | 1500 16000                  | 1              |
| 1100-51-6                     | -Renzyl alcohol                    |                                       | 1400 /4000                  |                |
| <b>  111-91-1</b>             | ·-Bis (2-ch]omethows) methano      |                                       | h                           | 1.             |
|                               | -Bis(2-chlomethyl) ether           |                                       | 350 3500                    | ប              |
| T08-60-1                      | ·-2.2'-Ostabia (1-Chlorennes)      |                                       | 350                         | ט              |
|                               | -Bis(2-ethy)hevy)) nhthalata [     |                                       | 528 5200                    |                |
| エハナーココーマー・・・                  | -4-Brosporthernel pharmel at hem - |                                       | 520 5200                    | ט              |
| 100-00-/                      | -BUTVI henzyl mbtbalata            | · · · · · · · · · · · · · · · · · · · | 3507                        | Ü              |
| 1700-41-8                     | -4-Chlomanilina                    |                                       | <b>36</b> 0 \               | ŭ              |
| 59-50 <b>-7-</b> -            | -4-Chloro-3-methylphenol           |                                       | 350 3500<br>350 3500<br>350 | Ü              |
| YI-58-7                       | -2-Chlompanhthalone                |                                       | 350. (2500                  | ŭ              |
| 35-57-8                       | -2-Chlorophenol                    |                                       | 357 / U                     | υ              |
| 7005-72-3                     | -4-Chlorophenyl phersyl achor      |                                       | 350                         | ט l            |
| <i>4</i> 18-01-9              | -Chrysene                          |                                       | 260                         | J              |
| 53-70-3                       | -Dibenzo (a, h) anthracene         |                                       | 35ø]                        | ם<br>מ         |
| 132-64-9                      | -Dibenzofuran                      |                                       |                             | Ü              |
| 84-74-2                       | -Di-n-butyl phthalate              |                                       | 350 3500                    | מ              |
| 75-50-1                       | -1.2-Dichlorobenzene               |                                       | 380                         | Ü              |
| 5 <del>4</del> 1-73 <b>-1</b> | -1.3-Dichlombenzene                |                                       | 350                         | ט ט            |
| 106-46-7                      | -1,4-Dichlombenzene                |                                       | 350                         | ָ <sup>ט</sup> |
| 91-94-1                       | -3.3'-Dichlomberziding             |                                       | CON / (A)                   |                |
| 120-83-2                      | -2,4-Dichlorophenol                |                                       | 330 3300                    | ប              |
| 84-66-2                       | -Diethyl phthalate                 |                                       |                             |                |
| 105-67-9                      | -2,4-Dimethylphenol                |                                       | 350 3 500                   | ប              |
|                               |                                    |                                       | 5/20 5200                   | υ              |

Client No.

| b Name: STL Buffalo Contract:          |   | <b>S</b> S-5          |
|--|---|-----------------------|
| b Code: RECNY Case No.: SAS No.:       | SDG No.:                                | <b>,</b>              |
| trix: (soil/water) <u>SOIL</u>         | Lab Sample ID:                          | A1B63005              |
| mple wt/vol: 30.54 (g/mL) <u>G</u>     | Lab File ID:                            | Y49859.RR             |
| wel: (low/med) <u>LOW</u>              | Date Samp/Recv:                         | 11/16/2001 11/21/2001 |
| Moisture: <u>6.1</u> decanted: (Y/N) N | Date Extracted:                         | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)   | Date Analyzed:                          | 12/04/2001            |
| dection Volume: 1.00 (uL)              | Dilution Factor:                        | 10.00                 |
| C Cleanup: (Y/N) N pH:                 |   |                       |
| CAS NO. COMPOUND                       | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |                       |

| CAS NO.  | COMPOUND                   | (ug/L on ug/K | g) <u>UG/KG</u>          | Q   |
|----------|----------------------------|---------------|--------------------------|-----|
| 131-11-3 | Dimethyl phthalate         |               | 350 3500                 |     |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |               | 1600 /6000               | U   |
| 51-28-5  | 2,4-Dinitrophenol          |               | 1600 10000               | UJ  |
| 121-14-2 | 2,4-Dinitrotoluene         |               | 2503500                  | U   |
|          | 2,6-Dinitrotoluene         |               | <b>52</b> 0 S200         | υ   |
| 117-84-0 | Di-n-octyl phthalate       |               | 350 3500                 | U   |
|          | Fluoranthene               |               | 310                      | J   |
|          | Fluorene                   |               | 5205200                  | ט   |
|          | Hexachlorobenzene          |               | 350/3500<br>350          | ט ו |
| 87-68-3  | Hexachlorobutadiene        |               | 350 300 ii               | U   |
|          | Hexachlorocyclopentadiene  |               | 320 5200                 |     |
|          | Hexachloroethane           |               | 330 FS 06                | ט   |
| 193-39-5 | Indeno (1,2,3-cd) pyrene   |               | 780 7000                 |     |
|          | Isophorone                 |               | 3503500                  | UJ  |
|          | 2-Methylnaphthalene        |               | <b>J</b> 200             | U   |
|          | 2-Methylphenol             |               | 2007,000                 | U   |
|          | 4-Methylphenol             |               | 350 7500                 | U   |
|          | Naphthalene                |               | .aov.                    | ַ ט |
| 88-74-4  | 2-Nitroaniline             |               | 1600 16000<br>1600 16000 | U   |
|          | 3-Nitroaniline             |               | 1600                     | ט   |
| 100-01-6 | 4-Nitroaniline             |               | TROO                     | υ   |
|          | Nitrobenzene               |               | 6396300                  | ប   |
| 88-75-5  | 2-Nitrophenol              |               | 1600 16000               | U   |
|          | 4-Nitrophenol              |               | 1800 16000               | U   |
| 86-30-6  | N-nitrosodiphenylamine     |               | 250 5000                 | ប   |
| 621-64-7 | N-Nitroso-Di-n-propylamine |               | 300 - 700                | U   |
| 87-86-5  | Pentachlorophenol          | 270 000       | 210000                   | E-  |
|          | Phenanthrene               | \             | 350 7500                 | ប   |
| 108-95-2 |                            |               | 700-7000                 | ប   |
| 129-00-0 |                            |               | 1300                     | 1   |
| 120-82-1 | 1,2,4-Trichlorobenzene     |               | 338 3300                 | U   |
|          | 2,4,5-Trichlorophenol      |               | 800 8000                 | υ   |
| L        | -                          |               | -                        |     |

FORM I - GC/MS ENA of portuble of resit of 100x publish of 100x publish of 100x

## 000081

#### 1 T CORP METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

| b Name: <u>STL Buffalo</u> Contrac     | st:   |
|--|---|
| o Code: <u>RECINY</u> Case No.: SAS    |   |
| trix: (soil/water) SOIL                | Lab Sample ID: <u>A1B63005</u>                      |
| terry (port) waret sonn                | nan sample in: MIB03003                             |
| mple wt/vol: 30.54 (g/mL) <u>G</u>     | Lab File ID: Y49859.RR                              |
| vel: (low/med) <u>LOW</u>              | Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u> |
| Moisture: <u>6.1</u> decanted: (Y/N) N | Date Extracted: <u>11/28/2001</u>                   |
| ncentrated Extract Volume: 1000 (uL)   | Date Analyzed: <u>12/04/2001</u>                    |
| jection Volume: 1.00(uL)               | Dilution Factor: 10.00                              |
| C Cleanup: (Y/N) <u>N</u> pH;          |   |
| ĭ                                      | CONCENIRATION UNITS:                                |
| CAS NO. COMPOUND                       | (ug/Lorug/Kg) <u>UG/KG</u> Q                        |
| 88-06-22,4,6-Trichloropher             | 1000 U  |
| ,                                      | ON 122 ISV  |
| <b>)</b>                               |   |

#### I T CORP METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

000052 Client No.

| -   |      | ····· |
|-----|------|-------|
| į   |      |       |
| -   | SS-5 |       |
| - 3 | 1    |       |

| Name: | SIL_Buffalo | Contract: | V-11471 |
|-------|-------------|-----------|---------|
|-------|-------------|-----------|---------|

Ocode: RECONY Case No.: \_\_\_\_ SAS No.: \_\_\_\_ SDG No.: \_\_\_\_

rix: (soil/water) SOIL Lab Sample ID: A1B63005

mple wt/vol: 30.54 (g/mL) G Lab File ID: Y49859.RR

| rel: (low/med) <u>LOW</u> Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u>

Woisture: 6.1 decanted: (Y/N) N Date Extracted: 11/28/2001

ncentrated Extract Volume: 1000 (uL) Date Analyzed: 12/04/2001

jection Volume: 1.00 (uL) Dilution Factor: 10.00

C Cleanup: (Y/N) N pH: \_\_\_\_

CONCENTRATION UNITS:

inber TICs found: <u>20</u> (ug/L or ug/Kg) <u>UG/KG</u>

| CAS NO. | Compound Name       | RT    | Est. Conc. | Q  |
|---------|---------------------|-------|------------|----|
| 1.      | UNKNOWN ALKANE      | 12.58 | 6600       | J  |
| 2.      | UNKNOWN HYDROCAREON | 12.85 | 4400       | J  |
| 3.      | UNKNOWN HYDROCARBON | 13.23 | 6300       | J  |
| 4.      | UNKNOWN ALKANE      | 13.53 | 22000      | ្រ |
| 5.      | UNKNOWN ALKANE      | 14.23 | . 8600     | J  |
| 6.      | UNKNOWN HYDROCARBON | 14.38 | 6500       | J  |
| 7.      | UNKNOWN HYDROCARBON | 14.50 | 5500       | J  |
| 8.      | UNKNOWN ALKANE      | 15.46 | 8600       | J  |
| 9.      | UNKNOWN ALKANE      | 16.36 | 9100       | J  |
| 10.     | UNIQUOMN ALKANE     | 17.73 | 4300       | J  |
| 11.     | UNKNOWN ALKANE      | 18.21 | 10000      | J  |
| 12.     | UNKNOWN ALKANE      | 18.85 | 17000      | J  |
| 13.     | UNKNOWN ALKANE      | 19.48 | 13000      | J  |
| 14.     | UNKNOWN ALKANE      | 19.56 | 20000      | J  |
| 15.     | UNKNOWN ALKANE      | 20.01 | 6400       | J  |
| 16.     | UNKNOWN ALKANE      | 20.66 | 11000      | J  |
| 17.     | UNKNOWN ALKANE      | 21.80 | 9800       | J  |
| 18.     | UNKNOWN ALKANE      | 22.88 | 8000       | J  |
| 19.     | UNKNOWN ALKANE      | 24.90 | 13000      | J  |
| 20.     | UNKNOWN ALKANE      | 25.85 | 5500       | J  |

000055 Client No.

|                  | SS-6                  |
|------------------|-----------------------|
|                  |                       |
| SDG No.:         |                       |
| Lab Sample ID:   | A1B63006              |
| Tab File ID:     | Y49860.RR             |
| Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Date Extracted:  | 11/28/2001            |
| Date Analyzed:   | 12/04/2001            |
| Dilution Factor: | 5.00                  |
|                  |                       |
|                  | Lab Sample ID:        |

| 83-32-9  |   |
|--|---|
| 208-96-8Acenaphthylene   230   U   120-12-7Anthracene   330   U   U   56-55-3Benzo (a) anthracene   330   U   U   U   205-99-2Benzo (b) fluoranthene   330   U   U   U   U   U   U   U   U   U   | Q |
| 208-96-8Acenaphthylene   230   150   U   120-12-7Anthracene   330   150   U   56-55-3  |   |
| 10   |   |
| 10   |   |
| 205-99-2Benzo (b) fluoranthene   330   U   207-08-9Benzo (k) fluoranthene   330   U   191-24-2Benzo (ghi) perylene   330   U   50-32-8Benzo (a) pyrene   330   U   65-85-0Benzoic acid   1600   2000   U   100-51-6Benzyl alcohol   270   36 50   U   111-91-1Bis (2-chloroethoxy) methane   330   U   111-44-4Bis (2-chloroethyl) ether   330   U   117-81-7Bis (2-chloropropane)   370   U   117-81-7Bis (2-chloropropane)   370   U   117-81-7Bis (2-chloropropane)   370   U   117-81-7Bis (2-chloropropane)   370   U   U   370   U   U   370   U   U   370   U   U   U   U   U   U   U |   |
| 191-24-2Benzo (ghi) perylene   330   U   50-32-8Benzo (a) pyrene   360   U   U   65-85-0Benzoic acid   1600 2000   U   100-51-6Benzyl alcohol   750 3650   U   111-91-1Bis (2-chloroethoxy) methane   330   U   111-44-4Bis (2-chloroethyl) ether   330   U   117-81-7Bis (2-ethylhexyl) phthalate   170   J   101-55-34-Bromophenyl phenyl ether   330   U   85-68-7  |   |
| 50-32-8Benzo(a) pyrene   330   U   65-85-0Benzoic acid   1600 \ 2000   U   100-51-6Benzyl alcohol   330   U   U   111-91-1Bis (2-chloroethoxy) methane   330   U   U   111-44-4Bis (2-chloroethyl) ether   330   U   U   117-81-7Bis (2-cthylhexyl) phthalate   170   J   101-55-34-Bromophenyl phenyl ether   330   U   85-68-7   | 1 |
| 65-85-0Benzoic acid 100-51-6Benzyl alcohol 111-91-1Bis(2-chloroethoxy) methane 111-44-4Bis(2-chloroethyl) ether 108-60-12,2'-Oxybis(1-Chloropropane) 117-81-7Bis(2-ethylhexyl) phthalate 170 101-55-34-Bromophenyl phenyl ether 85-68-7Butyl benzyl phthalate 330 U  | i |
| 100-51-6Benzyl alcohol   | , |
| 111-91-1Bis (2-chloroethoxy) methane   330   U   U   U   U   U   U   U   U   U   | • |
| 111-44-4Bis(2-chloroethyl) ether   330   1030   U   108-60-12,2'-Oxybis(1-Chloropropane)   370   U   U   117-81-7Bis(2-ethylhexyl) phthalate   170   J   U   101-55-34-Bromophenyl phenyl ether   330   U   85-68-7  |   |
| 108-60-12,2'-Oxybis(1-Chloropropane)   |   |
| 117-81-7Bis(2-ethylhexyl) phthalate  |   |
| 101-55-34-Bromophenyl phenyl ether   330   U   85-68-7Butyl benzyl phthalate   330   U   |   |
| 85-68-7Butyl benzyl phthalate 330 U  |   |
|  |   |
| 1000 and 0 48 7 17 1   |   |
| 106-47-84-Chloroaniline   330   U  |   |
| 59-50-74-Chloro-3-methylphenol   |   |
| 91-58-72-Chloronaphthalene   |   |
| 95-57-82-Chlorophenol 380 (650 U   |   |
| 7005-72-34-Chlorophenyl phenyl ether   |   |
| 218-01-9Chrysene   330   U   |   |
| 53-70-3Dibenzo (a, h) anthracene   3/20   U  |   |
| 132-64-9Dibenzofuran   |   |
| 84-74-2Di-n-butyl phthalate   330   U  |   |
| 95-50-11,2-Dichlorobenzene 380 U   |   |
| 541-73-11,3-Dichlorobenzene \$30 U   |   |
| 106-46-71,4-Dichlorobenzene 330/ U   |   |
| 91-94-13,3'-Dichlorobenzidine  |   |
| 120-83-22,4-Dichlorophenol 338 1650 U  |   |
| 84-66-2Diethyl phthalate   |   |
| 105-67-92,4-Dimethylphenol   |   |

Orhison

| ib Name: STL Buffalo Contract:            | SS-6   |
|---|--|
| b Code: RECNY Case No.: SAS No.: _        | SDG No.:                                     |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID: A1B63006                      |
| mple wt/vol: <u>30.91</u> (g/mL) <u>G</u> | Lab File ID: Y49860.RR                       |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv: <u>11/16/2001</u> 11/21/2001 |
| Moisture: 10.9 decanted: (Y/N) N          | Date Extracted: <u>11/28/2001</u>            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed: <u>12/04/2001</u>             |
| jection Volume: 1.00 (uL)                 | Dilution Factor: 5.00                        |
| C Cleanup: (Y/N) N pH:                    |  |

|  | 320 /650<br>1600 78000<br>1600 330<br>330 7650<br>320<br>120<br>330<br>330 | U T   |
|--|--|---|
|  | 1600 Z 8000<br>1600 Z 8000<br>330 7650<br>330 7650                         | 0 <b>1</b> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0      |
|  | 330<br>330<br>380<br>120   | ם<br>ם<br>ם   |
|  | 330<br>330<br>380<br>120   | ם<br>ם<br>ם   |
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|  | 120  | J   |
|  | 120  | J   |
|  |  |   |
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|  | 320  | ΰ   |
|  | 60   | Ū   |
|  | 330 1.00   | ŭ   |
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|  | 360  | Ü   |
|  | 2507   | บั  |
|  | 330  | Ü   |
|  | 1600   | 177   |
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| <del></del>                            | 1600 8000  | บั  |
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|  | 330 E 10 14  | Ū   |
| TACIAN                                 | FOODE  | 1 -   |
| 7000                                   | 220 /610   | U   |
| <del></del>                            | 346 1650   | 11  |
|  | 570  | ال  |
|  |  | lυ  |
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|  | 700 4 000  | u<br>in   |
|  | 70000  ** Parta Cl p  FINA result for                                      | 200 1650<br>200 1650<br>570 J<br>320 1650<br>800 4006 |

## OBUSAA

# METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS ANALYSIS DATA SHEET

| i e e e e e e e e e e e e e e e e e e e       |   |                       |
|---|---|-----------------------|
| Name: STL Buffalo Contract:                   |   | SS-6                  |
| Code: RECNY Case No.: SAS No.:                |   |                       |
| rix: (soil/water) <u>SOIL</u>                 | Lab Sample ID:                          | A1B63006              |
| ple wt/vol: <u>30.91</u> (g/mL) <u>G</u>      | Lab File ID:                            | Y49860.RR             |
| mel: (low/med) <u>LOW</u>                     | Date Samp/Recv:                         | 11/16/2001 11/21/2001 |
| bisture: <u>10.9</u> decanted: (Y/N) <u>N</u> | Date Extracted:                         | 11/28/2001            |
| centrated Extract Volume: 1000(uL)            | Date Analyzed:                          | 12/04/2001            |
| ection Volume: 1.00 (uL)                      | Dilution Factor:                        | 5.00                  |
| Cleanup: (Y/N) N pH:                          |   |                       |
| CAS NO. COMPOUND                              | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |                       |
| 88-06-22,4,6-Trichlorophenol_                 |   | 540 2700 U            |
|   |   | Out 01/28/02          |

# METHOD 8270 - TCL SEMI-VOLATTIE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

009089

Client No.

| Name: STL Buffalo                 | Contract:      |                  | SS-6                  |
|-----------------------------------|----------------|------------------|-----------------------|
| Code: RECNY Case No.:             | SAS No.:       | SDG No.:         |                       |
| rix: (soil/water) <u>SOIL</u>     |                | Lab Sample ID:   | A1B63006              |
| ple wt/vol: <u>30.91</u> (g/mI    | L) <u>G</u>    | Lab File ID:     | Y49860.RR             |
| mel: (low/med) <u>low</u>         |                | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| pisture: <u>10.9</u> decanted: (Y | Y/N) <u>N</u>  | Date Extracted:  | 11/28/2001            |
| centrated Extract Volume: 100     | <u>00</u> (uL) | Date Analyzed:   | 12/04/2001            |
| ection Volume: 1.00 (uL)          | •              | Dilution Factor: | 5.00                  |

\_\_\_\_\_<del>\_</del>

(Y/N) <u>N</u> pH: \_\_\_\_

Clearup:

ber TICs found: 20

CONCENTRATION UNITS:

(ug/Lorug/Kg) <u>UG/KG</u>

CAS NO. Compound Name RT Est. Conc. Q 1. UNKNOWN HYDROCARBON 13.23 2200 J 2. UNKNOWN ALKANE 13.53 7400 3. UNKNOWN ALKANE 14.23 3400 J 4. UNKNOWN HYDROCARBON 14.38 3000 5. UNKNOWN ALKANE 14.48 2200 6. UNKNOWN ALKANE 15.46 4300 7. **UNKNOWN** 16.06 2200 8. UNKNOWN ALKANE 16.36 3700 9. UNKNOWN 16.58 2500 10. UNKNOWN ALKANE 17.73 3000 J 11. UNKNOWN ALKANE 18.85 5400 J 12. unknown alkane 19.48 6300 13. unknown alkane 20.01 3100 14. UNKNOWN ALKANE J 20.68 5600 15. UNKNOWN ALKANE 20.81 7300 16. UNKNOWN ALKANE 21.75 2400 J 17. UNKNOWN ALKANE 21.83 5000 18. UNKNOWN ALKANE 22.90 4200 J 19. UNKNOWN ALKANE 24.91 7900 J 20. UNKNOWN ALKANE 25.86 3500

Client No.

| Name: STL Buffalo Contract:             |                  | SS-7                  |
|---|------------------|-----------------------|
| Code: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| rix: (soil/water) <u>SOIL</u>           | Lab Sample ID:   | <u>A1B63007</u>       |
| ple wt/vol: 30.26 (g/mL) G              | Lab File ID:     | <u>Y49861.RR</u>      |
| rel: (low/med) <u>LOW</u>               | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| foisture: <u>23.1</u> decanted: (Y/N) N | Date Extracted:  | 11/28/2001            |
| centrated Extract Volume: 1000 (uL)     | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)               | Dilution Factor: | 1.00                  |
| Clearup: (Y/N) N pH:                    |                  |                       |

|                   | CONCENIRATION UNITS:         |               |       |       |
|-------------------|------------------------------|---------------|-------|-------|
| CAS NO.           | COMPOUND                     | (ug/Lorug/Kg) | UG/KG | Q     |
| 83-32-9           | Acenaphthene                 |               | 330   | บ     |
| 208-96-8          | Acenaphthylene               |               | 330   | U     |
| 120-12-7          |                              |               | 330   | ט     |
| 56-55-3           | Benzo (a) anthracene         |               | 330   | U     |
| 205-99-2          | Benzo (b) fluoranthene       |               | 330   | ប     |
| 207-08-9          | Benzo(k) fluoranthene        |               | 330   | UJ    |
| 191-24-2          | Benzo (ghi) perylene         |               | 330   | ប     |
| 50-32-8           | Benzo (a) pyrene             |               | 330   | ן ט   |
| 65-85-0           | Benzoic acid                 |               | 1600  | ַ     |
| 100 <b>-</b> 51-6 | Benzyl alcohol               |               | 330   | ט     |
| 111-91-1          | Bis(2-chloroethoxy) methane  |               | 330   | U     |
| 111-44-4          | Bis(2-chloroethyl) ether     |               | 330   | ַ   ט |
| <b>108-</b> 60-1  | 2,2'-Oxybis(1-Chloropropane) |               | 330   | ប     |
| 117-81-7          | Bis(2-ethylhexyl) phthalate  |               | 330   | U     |
| 101-55-3          | 4-Bromophenyl phenyl ether   |               | 330   | U     |
| 85-68-7           | Butyl benzyl phthalate       |               | 330   | ש     |
|                   | 4-Chloroaniline              |               | 330   | ט     |
| 59-50-7           | -4-Chloro-3-methylphenol     |               | 330   | U     |
| 91-58-7           | 2-Chloronaphthalene          |               | 330   | U     |
| 95-57-8           | 2-Chlorophenol               |               | 330   | ប     |
| 7005-72-3         | 4-Chlorophenyl phenyl ether  |               | 330   | ט ו   |
| 218-01-9          | Chrysene                     |               | 330   | ប     |
| 53-70-3           | Dibenzo (a, h) anthracene    |               | 330   | ט     |
| 132-64-9          | Dibenzofuran                 |               | 330   | U     |
| 84~74~2           | Di-n-butyl phthalate         |               | 330   | ט     |
|                   | 1,2-Dichlorobenzene          |               | 330   | U     |
|                   | -1,3-Dichlorobenzene         |               | 330   | U     |
| 106-46-7          | 1,4-Dichlorobenzene          |               | 330   | Ū     |
| 91-94-1           | -3,3'-Dichlorobenzidine      |               | 660   | U     |
| 120-83-2          | 2,4-Dichlorophenol           |               | 330   | ן ט   |
| 84-66-2           | Diethyl phthalate            |               | 330   | Ū     |
|                   | 2,4-Dimethylphenol           |               | 330   | Ū     |

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Client No.

| b Name: STL Buffalo Con                   | tract:   |                  | \$S-7                 |
|---|----------|------------------|-----------------------|
| b Code: RECNY Case No.:                   | SAS No.: | SDG No.:         |                       |
| trix: (soil/water) SOIL                   |          | Lab Sample ID:   | A1B63007              |
| mple wt/vol: <u>30.26</u> (g/mL) <u>G</u> |          | Lab File ID:     | Y49861.RR             |
| yel: (low/med) <u>row</u>                 |          | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 23.1 decanted: (Y/N)            | ŽĪ       | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      |          | Date Analyzed:   | 12/04/2001            |
| rjection Volume: 1.00 (uL)                |          | Dilution Factor: | 1.00                  |
| C Cleanup: (Y/N) N pH:                    |          |                  |                       |

|          |                            | CONCENIRATION UNITS: |              |    |
|----------|----------------------------|----------------------|--------------|----|
| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg)      | <u>UG/KG</u> | Q  |
| 131-11-3 | Dimethyl phthalate         |                      | 330          | U  |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |                      | 1600         | U  |
| 51-28-5  | 2,4-Dinitrophenol          |                      | 1600         | UJ |
| 121-14-2 | 2,4-Dinitrotoluene         |                      | 330          | υ  |
| 606-20-2 | 2,6-Dinitrotoluene         |                      | 330          | ט  |
| 117-84-0 | Di-n-octyl phthalate       |                      | 330          | ט  |
| 206-44-0 | Fluoranthene               |                      | 330          | טו |
| 86-73-7  |                            |                      | 330          | U  |
| 118-74-1 | Hexachlorobenzene          |                      | 330          | ט  |
|          | Hexachlorobutadiene        |                      | 330          | lσ |
| 77-47-4  | Hexachlorocyclopentadiene  |                      | 330          | ט  |
|          | Hexachloroethane           |                      | 330          | Įυ |
| 193-39-5 | Indeno (1,2,3-cd) pyrene   |                      | 330          | U  |
| 78-59-1  | Isophorone                 |                      | 330          | UJ |
| 91-57-6  | 2-Methylnaphthalene        |                      | 330          | U  |
| 95-48-7  | 2-Methylphenol             |                      | 330          | U  |
| 106-44-5 | 4-Methylphenol_            |                      | 330          | U  |
| 91-20-3  | Naphthalene                |                      | 330          | שו |
| 88-74-4  | 2-Nitroaniline             |                      | 1600         | ប  |
| 99-09-2  | 3-Nitroaniline             |                      | 1600         | U  |
|          | 4-Nitroaniline             |                      | 1600         | U  |
|          | Nitrobenzene               |                      | 330          | lυ |
| 88-75-5  | 2-Nitrophenol              |                      | 330          | lυ |
| 100-02-7 | 4-Nitrophenol              |                      | 1600         | שו |
| 86-30-6  | N-nitrosodiphenylamine     |                      | 330          | lυ |
| 621-64-7 | N-Nitroso-Di-n-propylamine |                      | 330          | υ  |
| 87-86-5  | Pentachlorophenol          |                      | 96           | J  |
| 85-01-8  | Phenanthrene               |                      | 330          | บ  |
| 108-95-2 |                            |                      | 330          | ט  |
| 129-00-0 |                            | <del></del>          | 330          | lΰ |
| 120-82-1 | 1,2,4-Trichlorobenzene     |                      | 330          | Ü  |
| 95-95-4  | 2,4,5-Trichlorophenol      |                      | 800          | Ū  |
|          |                            |                      |              |    |

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| b Name: STL Buffalo Contract:        | ·   | SS-7                  |
|--------------------------------------|---|-----------------------|
| Code: RECNY Case No.: SAS No.:       | SDG No.:                                    |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:                              | A1B63007              |
| nple wt/vol:30.26 (g/mL) <u>G</u>    | Lab File ID:                                | Y49861.RR             |
| rel: (low/med) <u>LOW</u>            | Date Samp/Recv:                             | 11/16/2001 11/21/2001 |
| Moisture: 23.1 decanted: (Y/N) N     | Date Extracted:                             | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:                              | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor:                            | 1.00                  |
| Cleanup: (Y/N) N pH:                 |   |                       |
|                                      | CENTRATION UNITS:<br>g/L or ug/Kg) <u>I</u> | <u>rg/kg</u> Ö        |
| 88-06-22,4,6-Trichlorophenol         |   | 330 U                 |

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

009077

Client No.

| ÷                                   |                    | SS-7                  |
|-------------------------------------|--------------------|-----------------------|
| Name: SIL Buffalo Contract:         | l                  |                       |
| Code: RECNY Case No.: SAS No.:      | SDG No.:           |                       |
| ;rix: (soil/water) <u>SOIL</u>      | Lab Sample ID:     | A1B63007              |
| ple wt/vol: 30.26 (g/mL) <u>G</u>   | Lab File ID:       | Y49861 .RR            |
| rel: (low/med) <u>LOW</u>           | Date Samp/Recv:    | 11/16/2001 11/21/2001 |
| poisture: 23.1 decanted: (Y/N) N    | Date Extracted:    | 11/28/2001            |
| centrated Extract Volume: 1000 (uL) | Date Analyzed:     | 12/04/2001            |
| jection Volume: 1.00 (uL)           | Dilution Factor:   | 1.00                  |
| Cleanup: (Y/N) <u>N</u> pH:         |                    |                       |
| ber TICs found: 6                   | CONCENTRATION UNIT |                       |

| CAS NO.   | Compound Name   | RT  | Est. Conc.                             | Q                                  |
|---|---|---|--|------------------------------------|
| 1. <del>79 34 5</del><br>2.<br>3.<br>4.<br>5.<br>6. | 1,1,2,2 TETRACTILOROFITIANE UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN ALKANE UNKNOWN ALKANE | 6.98<br>27.63<br>29.33<br>30.45<br>30.88<br>32.36 | 280<br>600<br>770<br>330<br>260<br>220 | JN K<br>J<br>J<br>J<br>J<br>J<br>J |

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000078

Client No.

| b Name: SIL Buffalo Contract:       | SS-8  |         |
|-------------------------------------|---|---------|
| Code: RECNY Case No.: SAS No.:      | SDG No.:                                      |         |
| trix: (soil/water) <u>SOIL</u>      | Lab Sample ID: A1B63008                       |         |
| ple wt/vol: 30.62 (g/mL) G          | Lab File ID: Y49862.RR                        |         |
| yel: (low/med) <u>LOW</u>           | Date Samp/Recv: <u>11/16/2001</u> <u>11/2</u> | 21/2001 |
| Moisture: 7.0 decanted: (Y/N) N     | Date Extracted: <u>11/28/2001</u>             |         |
| centrated Extract Volume: 1000 (uL) | Date Analyzed: <u>12/04/2001</u>              |         |
| jection Volume: 1.00 (uL)           | Dilution Factor:1.00                          |         |
| Cleanup: (Y/N) N pH:                |   |         |
| ,                                   | CONCENTRATION UNITS:                          |         |

(ug/L or ug/Kg)

UG/KG

Q

CAS NO.

٤. ٤

COMPOUND

| 83-32-9Acenaphthene                  | 330  | υ        |
|--------------------------------------|------|----------|
| 208-96-8Acenaphthylene               | 330  | U        |
| 120-12-7Anthracene                   | 330  | <b>U</b> |
| 56-55-3Benzo (a) anthracene          | 330  | U        |
| 205-99-2Benzo (b) fluoranthene       | 330  | U        |
| 207-08-9Benzo (k) fluoranthene       | 330  | UJ       |
| 191-24-2Benzo (ghi) perylene         | 330  | U        |
| 50-32-8Benzo (a) pyrene              | 330  | ט        |
| 65-85-0Benzoic acid                  | 1600 | ប        |
| 100-51-6Benzyl alcohol               | 330  | U        |
| 111-91-1Bis(2-chloroethoxy) methane  | 330  | U        |
| 111-44-4Bis(2-chloroethyl) ether     | 330  | Ū        |
| 108-60-12,2'-Oxybis(1-Chloropropane) | 330  | U        |
| 117-81-7Bis(2-ethylhexyl) phthalate  | 330  | Ü        |
| 101-55-34-Bromophenyl phenyl ether   | 330  | U        |
| 85-68-7Butyl benzyl phthalate        | 330  | U        |
| 106-47-84-Chloroaniline              | 330  | U        |
| 59-50-74-Chloro-3-methylphenol       | 330  | ַט       |
| 91-58-72-Chloronaphthalene           | 330  | U        |
| 95-57-82-Chlorophenol                | 330  | U        |
| 7005-72-34-Chlorophenyl phenyl ether | 330  | U        |
| 218-01-9Chrysene                     | 330  | U        |
| 53-70-3Dibenzo (a, h) anthracene     | 330  | U        |
| 132-64-9Dibenzofuran                 | 330  | U        |
| 84-74-2Di-n-butyl phthalate          | 44   | J        |
| 95-50-11,2-Dichlorobenzene           | 330  | U        |
| 541-73-11,3-Dichlorobenzene          | 330  | U        |
| 106-46-71,4-Dichlorobenzene          | 330  | U        |
| 91-94-13,3'-Dichlorobenzidine        | 660  | Ų        |
| 120-83-22,4-Dichlorophenol           | 330  | U        |
| 84-66-2Diethyl phthalate             | 330  | U        |
| 105-67-92,4-Dimethylphenol           | 330  | U        |
|                                      |      |          |

Client No.

| b Name: SIL Buffalo Contract:        |                  | SS-8                  |
|--------------------------------------|------------------|-----------------------|
|                                      | <del></del>      |                       |
| Code: RECNY Case No.: SAS No.:       | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:   | A1B63008              |
| mple wt/vol: 30.62 (g/mL) G          | Lab File ID:     | Y49862.RR             |
| vel: (low/med) <u>LOW</u>            | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 7.0 decanted: (Y/N) N      | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor: | 1.00                  |
| Cleanup: (Y/N) N pH:                 |                  |                       |

CAS NO.

COMPOLIND

621-64-7----N-Nitroso-Di-n-propylamine

87-86-5----Pentachlorophenol

120-82-1----1,2,4-Trichlorobenzene

95-95-4----2,4,5-Trichlorophenol\_

85-01-8-----Phenanthrene

108-95-2----Phenol

129-00-0----Pyrene

CONCENTRATION UNITS:

<u>UG/KG</u>

Q

U

J

U

U

U

U

U

330

330

330

330

330

800

1000

(ug/L or ug/Kg)

| 131-11-3Dimethyl phthalate         | 330           | ט          |
|------------------------------------|---------------|------------|
| 534-52-14,6-Dinitro-2-methylphenol | 1600          | U          |
| 51-28-52,4-Dinitrophenol           | 1600          | UJ         |
| 121-14-22,4-Dinitrotoluene         | 330           | U          |
| 606-20-22,6-Dinitrotoluene         | 330           | ប          |
| 117-84-0Di-n-octyl phthalate       | 330           | Ü          |
| 206-44-0Fluoranthene               | 330           | ប          |
| 86-73-7Fluorene                    | 330           | U          |
| 118-74-1Hexachlorobenzene          | 330           | U          |
| 87-68-3Hexachlorobutadiene         | 330           | ប          |
| 77-47-4Hexachlorocyclopentadiene   | 330           | ប          |
| 67-72-1Hexachloroethane            | 330           | U          |
| 193-39-5Indeno (1,2,3-cd) pyrene   | 330           | שו         |
| 78-59-1Isophorone                  | 330           | UJ         |
| 91-57-62-Methylnaphthalene         | 330           | υ          |
| 95-48-72-Methylphenol              | 330           | U          |
| 106-44-54-Methylphenol             | 330           | ប          |
| 91-20-3Naphthalene                 | 330           | <b> </b> υ |
| 88-74-42-Nitroaniline              | 1600          | ប្រ        |
| 99-09-23-Nitroaniline              | 1600          | ប          |
| 100-01-64-Nitroaniline             | 1600          | ប          |
| 98-95-3Nitrobenzene                | 330           | ប          |
| 88-75-52-Nitrophenol               | 330           | U          |
| 100-02-74-Nitrophenol              | 1600          | υ          |
| 86-30-6N-nitrosodiphenylamine      | 330           | Ų          |
|                                    | <del></del> - | 1          |

07/23/00

|  |   | SS-8             |               |
|--|---|------------------|---------------|
| Name: STL Buffalo Contract:              | ·                                       | L                |               |
| Code: RECNY Case No.: SAS No.:           | SDG No.:                                | -                |               |
| rix: (soil/water) <u>SOIL</u>            | Lab Sample ID:                          | A1B63008         | <del></del>   |
| ple wt/vol: <u>30.62</u> (g/mL) <u>G</u> | Lab File ID:                            | <u> Y49862.R</u> | <u>R</u>      |
| el: (low/med) <u>LOW</u>                 | Date Samp/Recv:                         | 11/16/20         | 01 11/21/2001 |
| oisture: <u>7.0</u> decanted: (Y/N) N    | Date Extracted:                         | 11/28/20         | <u>01</u>     |
| centrated Extract Volume: 1000 (uL)      | Date Analyzed:                          | 12/04/20         | <u>01</u> .   |
| ection Volume: 1.00 (uL)                 | Dilution Factor:                        | 1.00             |               |
| Clearup: (Y/N) N pH:                     |   |                  |               |
| CAS NO. COMPOUND                         | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) |                  | Q             |
| 88-06-22,4,6-Trichlorophenol             |   | 330              | U             |

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENIATIVELY IDENTIFIED COMPOUNDS

000081

Client No.

| b Name: SIL Buffalo Contract:             |                  | SS-8                  |
|---|------------------|-----------------------|
| Occide: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:   | A1B63008              |
| mple wt/vol: <u>30.62</u> (g/mL) <u>G</u> | Lab File ID:     | Y49862.RR             |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 7.0 decanted: (Y/N) N           | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| jection Volume:1.00 (uf.)                 | Dilution Factor: | 1,00                  |

CONCENTRATION UNITS:

(ug/Lorug/Kg) <u>UG/KG</u>

| CAS NO.    | Compound Name            | RT    | Est. Conc. | Q                |
|------------|--------------------------|-------|------------|------------------|
| 1. 79-34-5 | 1,1,2,2 THRACH ORDERIANS | 6.90  | - App      | <del>3N</del> (2 |
| 2.         | UNKNOWN ALKANE           | 18.18 | 390        | J                |
| 3.         | UNKNOWN ALKANE           | 18.80 | 370        | J                |
| 4.         | UNKNOWN ALKANE           | 19.43 | 480        | J                |
| 5.         | UNKNOWN ALKANE           | 19.51 | 690        | J                |
| 6.         | UNKNOWN ALKANE           | 19.96 | 150        | J                |
| 7.         | UNKNOWN ALKANE           | 20.63 | 520        | J                |
| 8.         | UNKNOWN ALKANE           | 21.70 | 160        | J                |
| 9.         | UNKNOWN ALKANE           | 21.76 | 460        | J                |
| 10.        | UNKNOWN ALKANE           | 22.85 | 360        | J                |
| 11.        | UNKNOWN ALKANE           | 23.90 | 210        | J                |
| 12.        | UNKNOWN ALKANE           | 24.31 | 240        | J                |
| 13.        | UNKNOWN ALKANE           | 24.88 |            | J                |

Clearup: (Y/N) N PH: \_\_\_\_

ober TICs found: 13

apson

Client No.

| o Name: <u>STL Buffalo</u> Contract: |                  | SS-9                  |
|--------------------------------------|------------------|-----------------------|
|                                      |                  |                       |
| Code: RECNY Case No.: SAS No.:       | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:   | A1B63009              |
| ple wt/vol: 30.46 (g/mL) <u>G</u>    | Lab File ID:     | Y49863.RR             |
| rel: (low/med) <u>LOW</u>            | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 12.0 decanted: (Y/N) N     | Date Extracted:  | 11/28/2001            |
| centrated Extract Volume: 1000 (uL)  | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)            | Dilution Factor: | 5.00                  |
| Cleanup: (Y/N) N pH:                 |                  |                       |

|           |                               | CONCENTRATION UNIT | rs:            |          |
|-----------|-------------------------------|--------------------|----------------|----------|
| CAS NO.   | COMPOUND                      | (ug/L or ug/Kg)    | <u>UG/KG</u>   | Q        |
| 83-32-9   | Acenaphthene                  |                    | 330 ]          | ប        |
|           | Acenaphthylene                |                    | 330            | U        |
|           | Anthracene                    |                    | 360 160        | U        |
|           | Benzo (a) anthracene          |                    | 330 7 01       | ប        |
|           | Benzo (b) fluoranthene        |                    | 620            | U        |
| 207-08-9  | Benzo(k) fluoranthene         |                    | <b>3</b> 30    | UJ       |
| 191-24-2  | Benzo (ghi) perylene          |                    | 320            | U        |
| 50-32-8   | Benzo (a) pyrene              |                    | £30-)          | ט        |
|           | Benzoic acid                  |                    | 1600 8000      | U        |
| 100-51-6  | Benzyl alcohol                |                    | 790 3750       | U        |
|           | Bis(2-chloroethoxy) methane   |                    | 3307           | ប        |
| 111-44-4  | Bis(2-chloroethyl) ether      |                    | 3/30           | U        |
| 108-60-1  | 2,2'-Oxybis (1-Chloropropane) |                    | 330            | U        |
| 117-81-7  | Bis(2-ethylhexyl) phthalate   | 144.1              | 3,20           | ט        |
| 101-55-3  | 4-Bromophenyl phenyl ether    |                    | 3307           | שו       |
| 85-68-7   | Butyl benzyl phthalate        |                    | 330 1650       | U        |
| 106-47-8  | 4-Chloroaniline               |                    | 360 U          | U        |
| 59-50-7   | 4-Chloro-3-methylphenol       |                    | 336            | ט        |
| 91-58-7   | 2-Chloronaphthalene           |                    | 3(30)          | ប        |
|           | 2-Chlorophenol                |                    | 350            | U        |
| 7005-72-3 | 4-Chlorophenyl phenyl ether   |                    | 930            | U        |
| 218-01-9  | Chrysene                      |                    | 380            | ប        |
|           | Dibenzo (a, h) anthracene     |                    | 330            | ט        |
| 132-64-9  | Dibenzofuran                  |                    | <b>2</b> 30    | U        |
| 84-74-2   | Di-n-butyl phthalate          |                    | 330            | ប        |
|           | 1,2-Dichlorobenzene           |                    | 330            | ט        |
|           | 1,3-Dichlorobenzene           |                    | 320            | ប        |
|           | 1,4-Dichlorobenzene           |                    | 330            | U        |
|           | 3,3'-Dichlorobenzidine        |                    | 568 3300       | U        |
|           | 2,4-Dichlorophenol            |                    | <b>ാർത്ത</b>   | Ū        |
|           | Diethyl phthalate             | ***                | 320 - 1650     | Ū        |
|           | 2,4-Dimethylphenol            |                    | 30 W           | Ū        |
|           | 7                             |                    | -4 <del></del> | <u> </u> |

Craspa

| b Name: STL Buffalo Contract:             | Manager .        | SS-9                  |
|---|------------------|-----------------------|
| b Code: RECNY Case No.: SAS No.:          | SDG No.:         |                       |
| trix: (soil/water) SOIL                   | Lab Sample ID:   | A1B63009              |
| mple wt/vol: <u>30.46</u> (g/mL) <u>G</u> | Lab File ID:     | Y49863.RR             |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 12.0 decanted: (Y/N) N          | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1,00 (uL)                 | Dilution Factor: | 5.00                  |
| Clearup: (Y/N) N pH:                      |                  |                       |

|                 |                            | CONCENTRATION UNITS:                    |                 |     |
|-----------------|----------------------------|---|-----------------|-----|
| CAS NO.         | COMPOUND                   | (ug/L or ug/Kg)                         | UG/KG           | Q   |
| 131-11-3        | Dimethyl phthalate         |   | 330/1650        | U   |
| 534-52-1        | 4,6-Dinitro-2-methylphenol |   | 1600 2000       | Ū   |
| 51-28-5         | 2,4-Dinitrophenol          |   | 1600 1000       | UJ  |
|                 | 2,4-Dinitrotoluene         |   | 338             | ບື  |
| 606-20-2        | 2,6-Dinitrotoluene         |   | <b>330</b> ,    | U   |
| 117-84-0        | Di-n-octyl phthalate       |   | 330             | U   |
| 206-44-0        | Fluoranthene               |   | 330             | U   |
| 86-73-7         |                            |   | 320 1650        | υ   |
|                 | Hexachlorobenzene          |   | 330 T u         | U   |
|                 | Hexachlorobutadiene        |   | 3667            | U   |
| 77-47-4         | Hexachlorocyclopentadiene  |   | 380             | U   |
| 67-72-1         | Hexachloroethane           |   | 370             | ប   |
| 193-39-5        | Indeno (1,2,3-cd) pyrene   |   | 370             | ប   |
| 78-59 <b>-1</b> | Isophorone                 |   | 330             | UJ  |
| 91-57-6         | 2-Methylnaphthalene        |   | <b>52</b> 0     | บั  |
| 95-48-7         | 2-Methylphenol             | 100000000000000000000000000000000000000 | 370             | U   |
| 106-44-5        | 4-Methylphenol             |   | <b>620</b>      | ប   |
| 91-20-3         | Naphthalene                |   | <b>120</b>      | U   |
| 88-74-4         | 2-Nitroaniline             |   | 1600            | υ   |
|                 | 3-Nitroaniline             |   | 1600 18000      | ប   |
|                 | 4-Nitroaniline             |   | 14500) W        | U   |
| 98-95-3         | Nitrobenzene               | ·                                       | 3498 1650       | ט   |
| 88-75-5         | 2-Nitrophenol              |   | 3 <b>Z</b> Q 11 | Ţ   |
| 100-02-7        | 4-Nitrophenol              |   | 1600 8000       | U   |
| 86-30-6         | N-nitrosodiphenylamine     |   | 339 1650u       | ט ו |
|                 | N-Nitroso-Di-n-propylamine |   | 320 10-54       | บ   |
| 87-86-5         | Pentachlorophenol          |   | 7800            |     |
| 85-01-8         | Phenanthrene               |   | 3307            | υ   |
| 108-95-2        |                            |   | 370 / 1650      | Ų   |
| 129-00-0        | Pyrene                     |   | 310 10 U        | Ü   |
|                 | 1,2,4-Trichlorobenzene     |   | 360             | Ū   |
|                 | 2,4,5-Trichlorophenol      |   | 800 4000        | បី  |
|                 |                            |   | . 4000          |     |

Client No.

| ib Name: STL Buffalo Contract:       | SS-9  |  |  |  |
|--------------------------------------|---|--|--|--|
| b Code: RECNY Case No.: SAS No.:     | SDG No.:  |  |  |  |
| atrix: (soil/water) <u>SOIL</u>      | Lab Sample ID: AlB63009                             |  |  |  |
| mple wt/vol: 30.46 (g/mL) G          | Lab File ID: Y49863.RR                              |  |  |  |
| rvel: (low/med) <u>LOW</u>           | Date Samp/Recv: <u>11/16/2001</u> <u>11/21/2001</u> |  |  |  |
| Moisture: 12.0 decanted: (Y/N) N     | Date Extracted: <u>11/28/2001</u>                   |  |  |  |
| ncentrated Extract Volume: 1000 (uL) | Date Analyzed: <u>12/04/2001</u>                    |  |  |  |
| jection Volume: 1.00 (uL)            | Dilution Factor: 5.00                               |  |  |  |
| C Cleanup: (Y/N) N pH:               |   |  |  |  |
| CAS NO. COMPOUND                     | CONCENTRATION UNITS: (ug/L or ug/kg) <u>UG/kG</u> O |  |  |  |
| 88-06-22,4,6-Trichlorophenol         | 560 250 U   |  |  |  |

04/23/02

Client No.

## \* T ///W/E METHOD 8270 - TCL SEMI-VOLATTLE ORGANICS

TENTATIVELY IDENTIFIED COMPOUNDS

| b Name: STL Buffalo Contract:             |                  | 40-7                 |
|---|------------------|----------------------|
| o Code: RECNY Case No.: SAS No.:          | SDG No.:         |                      |
| trix: (soil/water) <u>SOIL</u>            | Lab Sample ID:   | A1B63009             |
| mple wt/vol: <u>30.46</u> (g/mL) <u>G</u> | Lab File ID:     | Y49863.RR            |
| vel: (low/med) <u>LOW</u>                 | Date Samp/Recv:  | 11/16/2001 11/21/200 |
| Moisture: 12.0 decanted: (Y/N) N          | Date Extracted:  | 11/28/2001           |
| ncentrated Extract Volume: 1000 (uL)      | Date Analyzed:   | 12/04/2001           |
| jection Volume: 1.00 (uL)                 | Dilution Factor: | 5.00                 |

Cleanup: (Y/N) N pH: \_\_\_\_

mber TICs found: <u>5</u>

CONCENTRATION UNITS:

(ug/Lorug/Kg) UG/KG

CAS NO. RTQ Compound Name Est. Conc. 1. UNKNOWN ALKANE 19.51 1200 2. UNKNOWN ALKANE 20.63 880 J 3. UNKNOWN ALKANE 21.76 1000 IJ 4. UNKNOWN ALKANE 22.85 1000 J 5. UNKNOWN ALKANE J 23.90 760

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

Client No.

| b Name: STL Buffalo Contract:       |                  | SS-700                |
|-------------------------------------|------------------|-----------------------|
| D Code: RECNY Case No.: SAS No.:    | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>      | Lab Sample ID:   | A1B63010              |
| ple wt/vol: 30.46 (g/mL) <u>G</u>   | Lab File ID:     | Y49864.RR             |
| .vel: (low/med) <u>Low</u>          | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 20.3 decanted: (Y/N) N    | Date Extracted:  | 11/28/2001            |
| centrated Extract Volume: 1000 (uL) | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)           | Dilution Factor: | 1.00                  |
| Cleanup: (Y/N) N pH:                |                  |                       |

|           |                               | CONCENTRATION U                       | NITS: |     |   |
|-----------|-------------------------------|---------------------------------------|-------|-----|---|
| CAS NO.   | COMPOUND                      | (ug/L or ug/Kg                        | UG/KG | Q   |   |
| 83-32-9   |                               |                                       | 330   | Ų   |   |
| 208-96-8  | -Acenaphthylene               |                                       | 330   | U   |   |
| 120-12-7  |                               |                                       | 330   | Ū   |   |
| 56-55-3   | -Benzo (a) anthracene         |                                       | 330   | U   | 1 |
| 205-99-2  | -Benzo (b) fluoranthene       |                                       | 330   | U   |   |
| 207-08-9  | -Benzo (k) fluoranthene       |                                       | 330   | UI  | 0 |
| 191-24-2  | -Benzo (ghi) perylene         |                                       | 330   | Įυ  | 0 |
| 50-32-8   | -Benzo (a) pyrene             |                                       | 330   | lυ  | 0 |
| 65-85-0   | -Benzoic acid                 |                                       | 1600  | ប   |   |
|           | -Benzyl alcohol               |                                       | 330   | שׁן |   |
|           | -Bis(2-chloroethoxy) methane  |                                       | 330   | ប   |   |
| 111-44-4  | -Bis(2-chloroethyl) ether     |                                       | 330   | U   | 1 |
| 108-60-1  | -2,2'-Oxybis(1-Chloropropane) |                                       | 330   | Ţ   | 1 |
| 117-81-7  | -Bis(2-ethylhexyl) phthalate  |                                       | 330   | U   |   |
| 101-55-3  | -4-Bromophenyl phenyl ether   |                                       | 330   | U   |   |
| 85-68-7   | -Butyl benzyl phthalate       |                                       | 330   | ប   |   |
|           | -4-Chloroaniline              |                                       | 330   | U   | 1 |
| 59-50-7   | -4-Chloro-3-methylphenol      |                                       | 330   | U   |   |
| 91-58-7   | -2-Chloronaphthalene          |                                       | 330   | ប   | l |
| 95-57-8   | -2-Chlorophenol               |                                       | 330   | U   |   |
| 7005-72-3 | -4-Chlorophenyl phenyl ether  |                                       | 330   | U   |   |
| 218-01-9  | -Chrysene                     |                                       | 330   | U   |   |
| 53-70-3   | -Dibenzo (a, h) anthracene    |                                       | 330   | υ   | 1 |
| 132-64-9  | -Dibenzofuran                 | · · · · · · · · · · · · · · · · · · · | 330   | ט   |   |
| 84-74-2   | -Di-n-butyl phthalate         |                                       | 330   | ប្រ |   |
| 95-50-1   | -1,2-Dichlorobenzene          |                                       | 330   | lΰ  | ł |
| 541-73-1  | -1,3-Dichlorobenzene          |                                       | 330   | ט   | 1 |
| 106-46-7  | -1,4-Dichlorobenzene          |                                       | 330   | Ų   |   |
|           | -3,3'-Dichlorobenzidine       |                                       | 660   | Ū   | 1 |
| 120-83-2  | -2,4-Dichlorophenol           |                                       | 330   | Ū   |   |
|           | -Diethyl phthalate            | •                                     | 330   | Ū   |   |
|           | -2,4-Dimethylphenol           |                                       | 330   | Ū   |   |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

## 009087

Client No.

|                                      |                  | S\$-700               |
|--------------------------------------|------------------|-----------------------|
| b Name: STL Buffalo Contract:        | *****            |                       |
| b Code: RECNY Case No.: SAS No.:     | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>       | Lab Sample ID:   | A1B63010              |
| mple wt/vol: 30.46 (g/mL) G          | Lab File ID:     | Y49864.RR             |
| wel: (low/med) <u>LOW</u>            | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: 20.3 decanted: (Y/N) N     | Date Extracted:  | 11/28/2001            |
| ocentrated Extract Volume: 1000 (uL) | Date Analyzed:   | 12/04/2001            |
| rjection Volume: 1.00 (uL)           | Dilution Factor: | 1.00                  |
| Cleanup: (Y/N) N pH:                 |                  |                       |

|          |                            | CONCENERATION UNITS:                    |              |     |
|----------|----------------------------|---|--------------|-----|
| CAS NO.  | COMPOUND                   | (ug/L or ug/Kg)                         | <u>UG/KG</u> | Q   |
|          | Dimethyl phthalate         |   | 330          | υ   |
| 534-52-1 | 4,6-Dinitro-2-methylphenol |   | 1600         | ប   |
| 51-28-5  | 2,4-Dinitrophenol          |   | 1600         | UJ  |
|          | 2,4-Dinitrotoluene         |   | 330          | U   |
|          | 2,6-Dinitrotoluene         |   | 330          | บ   |
| 117-84-0 | Di-n-octyl phthalate       |   | 330          | U   |
| 206-44-0 | Fluoranthene               |   | 330          | ט   |
| 86-73-7  |                            |   | 330          | ט   |
|          | Hexachlorobenzene          |   | 330          | ប   |
|          | Hexachlorobutadiene        |   | 330          | U   |
| 77-47-4  | Hexachlorocyclopentadiene  |   | 330          | ט   |
|          | Hexachloroethane           |   | 330          | שׁ  |
|          | Indeno (1,2,3-cd) pyrene   |   | 330          | ַ ע |
|          | Isophorone                 |   | 330          | ひょう |
|          | 2-Methylnaphthalene        |   | 330          | ט   |
| 95-48-7  | 2-Methylphenol             |   | 330          | ប   |
|          | 4-Methylphenol             |   | 330          | U   |
|          | Naphthalene                |   | 330          | שׁן |
|          | 2-Nitroaniline             |   | 1600         | ט   |
|          | 3-Nitroaniline             |   | 1600         | ט   |
|          | 4-Nitroaniline             |   | 1600         | U   |
| 98-95-3  | Nitrobenzene               | , | 330          | U   |
| 88-75-5  | 2-Nitrophenol              |   | 330          | ט   |
| 100-02-7 | 4-Nitrophenol              |   | 1600         | ט   |
| 86-30-6  | N-nitrosodiphenylamine     |   | 330          | Ų   |
| 621-64-7 | N-Nitroso-Di-n-propylamine |   | 330          | ט   |
| 87-86-5  | Pentachlorophenol          |   | 350          | J   |
|          | Phenanthrene               | <del>, </del>                           | 330          | Ū   |
| 108-95-2 | Phenol                     |   | 330          | Ū   |
| 129-00-0 | Pyrene                     |   | 330          | บ   |
|          | 1,2,4-Trichlorobenzene     |   | 330          | U   |
|          | 2,4,5-Trichlorophenol      |   | 800          | U   |

Colles for

# METHOD 8270 - TCL SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET

## 000088

Client No.

| b Name: SIL Buffalo Contract:           |  | SS-700     |            |
|---|--|------------|------------|
| Code: RECNY Case No.: SAS No.:          | SDG No.:   |            |            |
| trix: (soil/water) <u>SOIL</u>          | Lab Sample ID:                                   | A1B63010   |            |
| mple wt/vol: 30.46 (g/mL) G             | Lab File ID:                                     | Y49864 .RR | -          |
| rel: (low/med) <u>LOW</u>               | Date Samp/Recv:                                  | 11/16/2001 | 11/21/2001 |
| Moisture: <u>20.3</u> decanted: (Y/N) N | Date Extracted:                                  | 11/28/2001 |            |
| centrated Extract Volume: 1000 (uL)     | Date Analyzed:                                   | 12/04/2001 |            |
| jection Volume: 1.00 (uL)               | Dilution Factor:                                 | 1.00       |            |
| Cleanup: (Y/N) N pH:                    |  |            |            |
| CAS NO. COMPOUND                        | CONCENTRATION UNITS:<br>(ug/L or ug/Kg) <u>U</u> | IG/KG      | Q          |
| 88-06-22,4,6-Trichlorophenol            | 3  | 330 U      |            |

## METHOD 8270 - TCL SEMI-VOLATILE ORGANICS TENTATIVELY IDENTIFIED COMPOUNDS

Client No.

| b Name: STL Buffalo Contract:           |                  | SS-700                |
|---|------------------|-----------------------|
| Code: RECNY Case No.:SAS No.:           | SDG No.:         |                       |
| trix: (soil/water) <u>SOIL</u>          | Lab Sample ID:   | A1B63010              |
| ple wt/vol: 30.46 (g/mL) G              | Lab File ID:     | Y49864.RR             |
| yel: (low/med) <u>LOW</u>               | Date Samp/Recv:  | 11/16/2001 11/21/2001 |
| Moisture: <u>20.3</u> decanted: (Y/N) N | Date Extracted:  | 11/28/2001            |
| ncentrated Extract Volume: 1000 (uL)    | Date Analyzed:   | 12/04/2001            |
| jection Volume: 1.00 (uL)               | Dilution Factor: | 1.00                  |
| : Cleanup: (Y/N) N pH:                  |                  |                       |

| , |            |                           |       |            |              |
|---|------------|---------------------------|-------|------------|--------------|
|   | CAS NO.    | Compound Name             | RT    | Est. Conc. | Ω            |
| I | 1. 79.34.5 | 1,1,2,2 TETRACHICROEHIANE | 6.98  | 250        | DE 0         |
| 1 | 2.         | UNKNOWN HYDROCARBON       | 27.63 | 620        | J            |
| ł | 2          | TRIVATURE EUROCCATRODOCAT | 20.22 | 020        | <del>-</del> |

iber TICs found: \_\_9

CONCENTRATION UNITS:

UG/KG

(ug/L or ug/Kg)

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#### -1-

## INORGANIC ANALYSIS DATA SHEET

| SAMPLE | NO. |
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|     | 99.1          |      |
|     | 22-T          |      |
|     |               |      |

tract: NY01-181

b Code: STL BFLO

Case No.:

SAS No.:

SDG NO.: A01-B630

trix (soil/water):

SOIL

LOW

Lab Sample ID: AD123831

Date Received: 11/21/01

olids: 84

ive1 (low/med):

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

| CAS No.   | Analyte   | Concentration | C        | Q    | М   |
|-----------|-----------|---------------|----------|------|-----|
| 7429-90-5 | Aluminum  | 11800         |          | EJ   | P   |
| 7440-36-0 | Antimony  | 1.8           | B        |      | P   |
| 7440-38-2 | Arsenic   | 8.5           | 1        | }    | P   |
| 7440-39-3 | Barium    | 67.9          | 1        | P J  | P   |
| 7440-41-7 | Beryllium | 0.52          | В        | 1    | P   |
| 7440-43-9 | Cadmium   | 0.18          | В        |      | P   |
| 7440-70-2 | Calcium   | 1570          |          | k J  | P   |
| 7440-47-3 | Chromium  | 15.1          | 1        | P J  | p   |
| 7440-48-4 | Cobalt    | 10.9          |          | P J  | P   |
| 7440-50-8 | Copper    | 23.1          | <u> </u> | FJ   | P   |
| 7439-89-6 | Iron      | 25300         | 1        | J J  | P   |
| 7439-92-1 | Lead      | 20.8          |          | E'   | P   |
| 7439-95-4 | Magnesium | 3510          |          | JE J | P   |
| 7439-96-5 | Manganese | 805           |          | PJ^  | ₽   |
| 7440-02-0 | Nickel    | 22.8          |          | E J  | P   |
| 7440-09-7 | Potassium | 860           |          | # J  | P   |
| 7782-49-2 | Selenium  | 1.6           |          | 1    | P   |
| 7439-97-6 | Mercury   | 0.064         |          | 1    | CV  |
| 7440-22-4 | Silver    | 0.41          | В        | )    | P   |
| 7440-23-5 | Sodium    | 50.4          | B        |      | P   |
| 7440-28-0 | Thallium  | 0.61          | Ū        | N    | P   |
| 7440-62-2 | Vanadium  | 15.0          |          | E T  | ₽   |
| 7440-66-6 | Zinc      | 57.1          |          | IF J | ] P |

West for

| Color  | Before: | BROWN  | Clarity Before: |   | Texture:   | SILT |
|--------|---------|--------|-----------------|---|------------|------|
| Color  | After:  | AETTOM | Clarity After:  | CLOUDY                                  | Artifacts: |      |
| Commer | nts:    |        |                 |   | ·          |      |
| -      |         |        |                 | 10.001.0.000000000000000000000000000000 |            |      |

## INORGANIC ANALYSIS DATA SHEET

|   | SUMPTR |  |
|---|--------|--|
| _ |        |  |
|   | SS-2   |  |

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to Code: STL BFLO

Case No.:

SAS No.:

SDG NO.: A01-B630

'trix (soil/water):

SQIL

LOW

Lab Sample ID: AD123932

Solids: 86

'≤ve1 (low/med):

Date Received: 11/21/01

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

| CAS No.   | Analyte   | Concentration | C        | Ď   | М  |
|-----------|-----------|---------------|----------|-----|----|
| 7429-90-5 | Aluminum  | 12300         |          | 压丁  | P  |
| 7440-36-0 | Antimony  | 1.1           | В        |     | Ţ  |
| 7440-38-2 | Arsenic   | 7.5           |          |     | ₽  |
| 7440-39-3 | Barium    | 62.2          |          | 上丁  | P  |
| 7440-41-7 | Beryllium | 0.41          | B        |     | P  |
| 7440-43-9 | Cadmium   | 0.03          | ט        | 1   | P  |
| 7440-70-2 | Calcium   | 636           | <u> </u> | e J | P  |
| 7440-47-3 | Chromium  | 14.6          | <u> </u> | FJ  | P  |
| 7440-48-4 | Cobalt    | 11.2          | 1        | F J | ₽  |
| 7440-50-8 | Copper    | 18.4          | <u> </u> | FJ  | P  |
| 7439-89-6 | Iron      | 25800         | <u> </u> |     | P  |
| 7439-92-1 | Lead      | 17.7          |          | E   | P  |
| 7439-95-4 | Magnesium | 3240          |          | KJ  | P  |
| 7439-96-5 | Manganese | 947           | <u> </u> | BJ  | P  |
| 7440-02-0 | Nickel    | 22.2          |          | FJ  | P  |
| 7440-09-7 | Potassium | 718           | Ι.,      | 上丁  | P  |
| 7782-49-2 | Selenium  | 1.0           | <u>T</u> | 1   | P  |
| 7439-97-6 | Mercury   | 0.028         | В        | 1   | cv |
| 7440-22-4 | Silver    | 0.17          | В        | 1   | P  |
| 7440-23-5 | Sodium    | 40.0          | В        |     | P  |
| 7440-28-0 | Thallium  | 0.59          | Ū        | ナ   | F  |
| 7440-62-2 | Vanadium  | 15.9          |          | FJ  | P  |
| 7440-66-6 | Zinc      | 53.8          |          | K J | P  |

| Color Before | : BROWN | Clarity Before: |        | Texture:   | SILT |
|--------------|---------|-----------------|--------|------------|------|
| Color After: | YELLOW  | Clarity After:  | CTOUDY | Artifacts: |      |
| Comments:    |         |                 |        |            |      |
| -            |         |                 |        |            |      |

## INORGANIC ANALYSIS DATA SHEET

| SS-3 |
|------|

bntract: NY01-181

ab Code: STL BFLO

Case No.:

SAS No.:

SDG NO.: A01-B630

" htrix (soil/water):

SOIL

Lab Sample ID: AD123833

evel (low/med):

LOW

Date Received: 11/21/01

Solids: 84

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

| CAS No.   | Analyte   | Concentration | С       | ٥        |          | М  |
|-----------|-----------|---------------|---------|----------|----------|----|
| 7429-90-5 | Aluminum  | 11000         | 1       | 27       | <u> </u> | P  |
| 7440-36-0 | Antimony  | 1.4           | B       |          |          | P  |
| 7440-38-2 | Arsenic   | 9.0           |         | 1        |          | P  |
| 7440-39-3 | Barium    | 58.0          |         | P        | 5        | ₽  |
| 7440-41-7 | Beryllium | 0.41          | B       |          |          | ₽  |
| 7440-43-9 | Cadmium   | 0.04          | Ų       | Ţ        |          | P  |
| 7440-70-2 | Calcium   | 2680          |         | <b>B</b> | 7        | P  |
| 7440-47-3 | Chromium  | 14.2          | 1       | E        | 7        | P  |
| 7440-48-4 | Cobalt    | 10.6          |         | Æ,       | 1        | ₽  |
| 7440-50-8 | Copper    | 36.7          |         | P .      | 1        | P  |
| 7439-89-6 | Iron      | 24100         | 1       | /E .     | 7        | P  |
| 7439-92-1 | Lead      | 20.6          | 1       | E        |          | P  |
| 7439-95-4 | Magnesium | 3620          | Ī       |          | 1        | ₽  |
| 7439-96-5 | Manganese | 558           | Π       | _        | 1        | P  |
| 7440-02-0 | Nickel    | 23.9          | 1       |          | T        | P  |
| 7440-09-7 | Potassium | 820           | 1       | •        | J        | P  |
| 7782-49-2 | Selenium  | 1.1           | $\prod$ |          |          | P  |
| 7439-97-6 | Mercury   | 0.021         | В       | 1        |          | CV |
| 7440-22-4 | Silver    | 0.11          | U       |          |          | P  |
| 7440-23-5 | Sodium    | 73.3          | В       |          |          | P  |
| 7440-28-0 | Thallium  | 0.63          | ĮΨ      | 4        | .,,      | P  |
| 7440-62-2 | Vanadium  | 15.3          |         | E C      | 1        | P  |
| 7440-66-6 | Zinc      | 56.6          | T       | 12/      | 1        | P  |

| Color Befo | re: BROWN | Clarity Before: |        | Texture:       | SILT     |
|------------|-----------|-----------------|--------|----------------|----------|
| Color Afte | t: AEITOM | Clarity After:  | CLOUDY | Artifacts:     |          |
| Comments:  |           |                 |        | ************** | <u> </u> |
|            |           |                 |        |                |          |

## INORGANIC ANALYSIS DATA SHEET

| SAMP | LE | NO. |  |
|------|----|-----|--|
|      |    |     |  |

| ·<br>1   |             |               | •           |                     | SAMP.    | DE NO.   |
|----------|-------------|---------------|-------------|---------------------|----------|----------|
| ntract:  | NY01-181    |               |             |                     | SS-4     |          |
| b Code:  | STL BFLO    | Case No.:     | SI          | AS No.:             | SDG NO.: | A01-B630 |
| trix (so | oil/water): | SOIL          |             | Lab Sample ID:      | AD123934 | ·        |
| vel (low | /med): LOW  | ·             |             | Date Received:      | 11/21/01 |          |
| Solids:  | 93          |               | 41.         |                     |          |          |
|          | Con         | centration Un | its (ug/L o | r mg/kg dry weight) | : MG/KG  | _        |
|          |             | CAS No.       | Analyte     | Concentration C     | Ŏ W      |          |
| 2        |             | 7429-90-5     | Aluminum    | 12400               | B T P    |          |

| CAS No.   | Analyte   | Concentration | C    | Õ     | М  |
|-----------|-----------|---------------|------|-------|----|
| 7429-90-5 | Aluminum  | 12400         |      | W T   | ₽  |
| 7440-36-0 | Antimony  | 0.94          | В    |       | P  |
| 7440-38-2 | Arsenic   | 7.5           |      |       | P  |
| 7440-39-3 | Barium    | 67.6          | 1    | 7     | P  |
| 7440-41-7 | Beryllium | 0.47          | В    |       | P  |
| 7440-43-9 | Cadmium   | 0.10          | В    |       | ₽  |
| 7440-70-2 | Calcium   | 1070          | Ι,   | J     | P  |
| 7440-47-3 | Chromium  | 15.9          |      | アコ    | P  |
| 7440-48-4 | Cobalt    | 12.6          | Ι    | P J   | P  |
| 7440-50-8 | Copper    | 119           | Ī    | F J   | P  |
| 7439-89-6 | Iron      | 28800         | Ι.   | T J   | P  |
| 7439-92-1 | Lead      | 22.2          |      |       | P  |
| 7439-95-4 | Magnesium | 4230          |      | 17    | P  |
| 7439-96-5 | Manganese | 807           |      | T H   | ₽  |
| 7440-02-0 | Nickel    | 29.0          |      | JE 51 | P  |
| 7440-09-7 | Potassium | 670           | T    | F J   | P  |
| 7782-49-2 | Selenium  | 1.1           | Ï    |       | P  |
| 7439-97-6 | Mercury   | 0.008         | В    |       | CΛ |
| 7440-22-4 | Silver    | 0.10          | ט    |       | Þ  |
| 7440-23-5 | Sodium    | 44.9          | В    |       | P  |
| 7440-28-0 | Thallium  | 0.55          | ָט ; | 1     | P  |
| 7440-62-2 | Vanadium  | 14.0          |      | W J   | Þ  |
| 7440-66-6 | Zinc      | 61.9          |      | 方丁    | P  |

| Color Before:<br>Color After: | BROWN<br>YELLOW | Clarity Before:<br>Clarity After: | CLOUDY | Texture: Artifacts: | SILT |
|-------------------------------|-----------------|-----------------------------------|--------|---------------------|------|
| Comments:                     |                 | 30.545                            |        |                     |      |

## INORGANIC ANALYSIS DATA SHEET

|   | PAMETO | NU. |       |
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| on | tract | E: | NY01-181       |  |
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|    |       | -, | 11 T A T T O T |  |

ab Code: STL BFLO

Case No.:

SAS No.:

SDG No.:

A01-B630

'atrix (soil/water):

JIOE

Lab Sample ID: AD123835

LOW

Date Received: 11/21/01

' | Solids: 94

evel (low/med):

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

| CAS No.   | Analyte   | Concentration | C  | Ď    | М  |
|-----------|-----------|---------------|----|------|----|
| 7429-90-5 | Aluminum  | 9960          |    | F 5  | P  |
| 7440-36-0 | Antimony  | 1.0           | В  | 1    | P  |
| 7440-38-2 | Arsenic   | 5.0           |    | 1    | ₽  |
| 7440-39-3 | Barium    | 52.8          | Τ  | 1 丁  | P  |
| 7440-41-7 | Beryllium | 0.36          | В  |      | P  |
| 7440-43-9 | Cadmium   | 0.03          | U  | 1_   | P  |
| 7440-70-2 | Calcium   | 755           | 1  | 本人   | P  |
| 7440-47-3 | Chromium  | 13.7          |    | 一丁   | ₽  |
| 7440-48-4 | Cobalt    | 8.2           | 1  | FJ   | P  |
| 7440-50-B | Copper    | 80.4          | 1  | Je J | P  |
| 7439-89-6 | Iron      | 23400         |    | 国了   | P  |
| 7439-92-1 | Lead      | 41.9          |    | FJ   | P  |
| 7439-95-4 | Magnesium | 3440          | T  | Je J | P  |
| 7439-96-5 | Manganese | 253           | Ī  | D J  | P  |
| 7440-02-0 | Nickel    | 21.3          | ١. | 1P J | P  |
| 7440-09-7 | Potassium | 775           | T  | 上丁   | P  |
| 7782-49-2 | Selenium  | 1.1           |    | 1    | P  |
| 7439-97-6 | Mercury   | 0.016         | В  |      | ÇV |
| 7440-22-4 | Silver    | 0.10          | ט  | 1    | ₽  |
| 7440-23-5 | Sodium    | 29.6          | U  | 1    | P  |
| 7440-28-0 | Thallium  | 0.57          | U  | T    | P  |
| 7440-62-2 | Vanadium  | 11.9          | 1  | 南ム   | P  |
| 7440-66-6 | Zinc      | 49.4          | 1  | EJ   | Þ  |

| Color     | Before: | BROWN  | Clarity Before: |        | Texture:   | SILT |  |  |
|-----------|---------|--------|-----------------|--------|------------|------|--|--|
| Color     | After:  | AETTOM | Clarity After:  | CLOUDY | Artifacts: |      |  |  |
| Comments: |         |        |                 |        |            |      |  |  |
|           |         |        |                 |        |            |      |  |  |

## INORGANIC ANALYSIS DATA SHEET

|   | SAMPLE | NO. |      |
|---|--------|-----|------|
| 1 | \$S-6  |     | <br> |
|   | 72 0   |     |      |

ntract: NY01-181

ib Code: STL BFLO

Case No.:

SAS No.:

SDG NO.:

A01-B630

trix (soil/water):

SOIL

Lab Sample ID: AD123836

LOW

Date Received: 11/21/01

Solids: 89

svel (low/med):

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

| CAS No.   | Analyte   | Concentration | C            | Q        | м  |
|-----------|-----------|---------------|--------------|----------|--|
| <u> </u>  |           |               | <del> </del> | <u> </u> | <u>                                     </u> |
| 7429-90-5 | Aluminum  | 13700         | <u> </u>     |          | P  |
| 7440-36-0 | Antimony  | 1.3           | В            | 1        | ₽  |
| 7440-38-2 | Arsenic   | 10.3          |              |          | P  |
| 7440-39-3 | Barium    | 85.0          |              | B J      | P  |
| 7440-41-7 | Beryllium | 0.54          | B            | <u> </u> | P  |
| 7440-43-9 | Cadmium   | 0.04          | U            | l        | P  |
| 7440-70-2 | Calcium   | 1190          |              | I VEL    | P  |
| 7440-47-3 | Chromium  | 18.4          | Ī            | F J      | P  |
| 7440-48-4 | Cobalt    | 13.7          |              | 压工       | ₽  |
| 7440-50-8 | Copper    | 79.2          |              | F 4      | P  |
| 7439-89-6 | Iron      | 31800         | Ţ            | EJ       | T P  |
| 7439-92-1 | Lead      | 77.2          | 1            | H J      | P  |
| 7439-95-4 | Magnesium | 4660          |              | <u>1</u> | <b>1</b> P                                   |
| 7439-96-5 | Manganese | 960           | 1            | 12/5     | P  |
| 7440-02-0 | Nickel    | 30.2          | ]            | P J      | ₽  |
| 7440-09-7 | Potassium | 1060          | 1            | JBY 3    | 4  |
| 7782-49-2 | Selenium  | 1.4           | П            |          | P  |
| 7439-97-6 | Mercury   | 0.011         | В            |          | cv   |
| 7440-22-4 | Silver    | 0.11          | טן           |          | P  |
| 7440-23-5 | Sodium    | 45.4          | В            |          | P  |
| 7440-28-0 | Thallium  | 0.61          | ប្រ          | 17       | P  |
| 7440-62-2 | Vanadium  | 16.7          | T            | Je J     | P  |
| 7440-66-6 | Zinc      | 69.5          | 1_           | K 1      | ₽  |

| Color : | Before: | BROWN  | Clarity Before: |          | Texture:   | SILT |
|---------|---------|--------|-----------------|----------|------------|------|
| Color   | After:  | YELLOW | Clarity After:  | CTONDA   | Artifacts: |      |
| Commen  | ts:     |        |                 |          |            |      |
|         |         |        |                 | <u> </u> |            |      |

## INORGANIC ANALYSIS DATA SHEET

| State to    | DIC. |      |
|-------------|------|------|
| <del></del> |      | <br> |
|             |      |      |
| ss-7        |      |      |

f bntract: NY01-181

· ab Code: STL BFLO

Case No.:

SAS No.:

SDG NO.:

A01-B630

htrix (soil/water):

SOIL

LOW

Lab Sample ID: AD123837

Date Received: 11/21/01

Solids: 77

//vel (low/med):

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

| CAS No.   | Analyte   | Concentration | c  | Q    | М  |
|-----------|-----------|---------------|----|------|----|
| 7429-90-5 | Aluminum  | 14100         | +  | 15   | P  |
| 7440-36-0 | Antimony  | 0.97          | В  |      | P  |
| 7440-38-2 | Arsenic   | 7.7           | 1  |      | P  |
| 7440-39-3 | Barium    | 67.2          | 1  | JE J | P  |
| 7440-41-7 | Beryllium | 0.49          | В  |      | ₽  |
| 7440-43-9 | Cadmium   | 0.26          | B  |      | P  |
| 7440-70-2 | Calcium   | 544           | B  | W J  | P  |
| 7440-47-3 | Chromium  | 16.4          |    | P J  | P  |
| 7440-48-4 | Cobalt    | 13.1          | T  | p J  | P  |
| 7440-50-8 | Copper    | 57.7          |    | T J  | ₽  |
| 7439-89-6 | Iron      | 26500         |    | F J  | ₽  |
| 7439-92-1 | Lead      | 50.8          |    | D A  | P  |
| 7439-95-4 | Magnesium | 3150          | Π  | J J  | ₽  |
| 7439-96-5 | Manganese | 740           | Ι. | Je J | P  |
| 7440-02-0 | Nickel    | 21.5          | T  | Je J | P  |
| 7440-09-7 | Potassium | 718           | T  | 12 J | P  |
| 7782-49-2 | Selenium  | 1.6           |    | 1    | P  |
| 7439-97-6 | Mercury   | 0.037         | В  |      | cv |
| 7440-22-4 | Silver    | 0.12          | ט  |      | Р  |
| 7440-23-5 | Sodium    | 37.0          | U  |      | P  |
| 7440-28-0 | Thallium  | 0.70          | U  | 17   | P  |
| 7440-62-2 | Vanadium  | 18.4          | 1  | #J   | P  |
| 7440-66-6 | Zinc      | 64.0          | Τ  | £ 5  | P  |

| Color  | Before: | BROWN  | Clarity Before: |        | Texture:   | SILT |
|--------|---------|--------|-----------------|--------|------------|------|
| Color  | After:  | AETFOM | Clarity After:  | CLOUDY | Artifacts: |      |
| Commer | nts:    |        |                 |        |            |      |
|        |         |        |                 |        |            |      |

## INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

ontract: NY01-181

ab Code: STL BFLO

Case No.:

SAS No.:

SDG NO.: A01-B630

htrix (soil/water);

SOIL

Lab Sample ID: AD123840

evel (low/med):

LOW

Date Received: 11/21/01

Solids: 80

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

MG/KG

| CAS No.   | Analyte   | Concentration | c        | Q          | М  |
|-----------|-----------|---------------|----------|------------|----|
| 7429-90-5 | Aluminum  | 14300         |          | 15         | P  |
| 7440-36-0 | Antimony  | 0.95          | B        | <b>l</b> . | P  |
| 7440-38-2 | Arsenic   | 6.0           | 1        | <u> </u>   | P  |
| 7440-39-3 | Barium    | 57.9          |          | IF J       | P  |
| 7440-41-7 | Beryllium | 0.49          | В        |            | P  |
| 7440-43-9 | Cadmium   | 0.10          | B        |            | P  |
| 7440-70-2 | Calcium   | 733           |          | 12 J       | P  |
| 7440-47-3 | Chromium  | 17.6          |          | FJ         | ₽  |
| 7440-48-4 | Cobalt    | 11.9          | 1        | E J        | P  |
| 7440-50-8 | Copper    | 38.1          |          | P J        | P  |
| 7439-89-6 | Iron      | 28600         |          | K J        | P  |
| 7439-92-1 | Lead      | 31.6          | 1        |            | P  |
| 7439-95-4 | Magnesium | 4030          |          |            | P  |
| 7439-96-5 | Manganese | 610           |          | JE J       | P  |
| 7440-02-0 | Nickel    | 25.8          |          | FJ         | P  |
| 7440-09-7 | Potassium | 736           |          | 7          | P  |
| 7782-49-2 | Selenium  | 1.2           |          | 1          | P  |
| 7439-97-6 | Mercury   | 0.047         | В        |            | CV |
| 7440-22-4 | Silver    | 0.11          | <b>ט</b> |            | P  |
| 7440-23-5 | Sodium    | 40.2          | В        |            | P  |
| 7440-2B-0 | Thallium  | 0.65          | ס        | 15         | P  |
| 7440-62-2 | Vanadium  | 16.7          |          | FJ         | P  |
| 7440-66-6 | Zinc      | 75.9          |          | 18 J       | P  |

CUN 123/02

| Colox  | Before: | BROWN  | Clarity Before: |        | Texture:   | silī |
|--------|---------|--------|-----------------|--------|------------|------|
| Color  | After:  | AETTOM | Clarity After:  | CLOUDY | Artifacts: |      |
| Commer | ıts:    |        |                 |        |            |      |
|        |         |        |                 |        |            |      |

-1-

## INORGANIC ANALYSIS DATA SHEET

| SAMPLE | NO. |
|--------|-----|
|--------|-----|

|          |             |           |            | SS-8         |          | _ |
|----------|-------------|-----------|------------|--------------|----------|---|
| ntract:  | NY01-181    |           |            | <u> </u>     |          | - |
| b Code:  | STL BFLO    | Case No.: | SAS No.:   | SDG NO.:     | A01-B630 |   |
| trix (sc | oil/water): | SOIL      | Lab Sample | ID: AD123838 |          |   |

Solids: 93

kvel (low/med):

LOW

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

MG/KG

Date Received: 11/21/01

| CAS No.   | Analyte   | Concentration | c      | Q    | М  |
|-----------|-----------|---------------|--------|------|----|
| 7429-90-5 | Aluminum  | 14400         | $\top$ | F 7  | P  |
| 7440-36-0 | Antimony  | 1.1           | B      |      | P  |
| 7440-38-2 | Arsenic   | 7.4           | Ī      |      | P  |
| 7440-39-3 | Barium    | 79.5          | 1      | F 7  | P  |
| 7440-41-7 | Beryllium | 0.53          | B      |      | p  |
| 7440-43-9 | Cadmium   | 0.03          | ט      |      | P  |
| 7440-70-2 | Calcium   | 916           |        | J 1  | P  |
| 7440-47-3 | Chromium  | 19.4          |        | F J  | P  |
| 7440-48-4 | Cobalt    | 12.9          | 1      | 年 丁  | P  |
| 7440-50-8 | Copper    | 50.4          |        | 1    | P  |
| 7439-89-6 | Iron      | 33600         |        | F 7  | P  |
| 7439-92-1 | Lead      | 38.2          |        | K J  | F  |
| 7439~95~4 | Magnesium | 4980          | Ι,     | 12 7 | P  |
| 7439-96-5 | Manganese | 692           | 1.     | 拉丁   | ₽  |
| 7440-02-0 | Nickel    | 32.2          | 1      | # J  | P  |
| 7440-09-7 | Potassium | 906           |        |      | P  |
| 7782-49-2 | Selenium  | 1.6           |        | 1    | P  |
| 7439-97-6 | Mercury   | 0.012         | B      |      | CV |
| 7440-22-4 | Silver    | 0.10          | ט      |      | P  |
| 7440-23-5 | Sodium    | 61.9          | B      | 1    | P  |
| 7440-28-0 | Thallium  | 0.58          | טן     | 4    | P  |
| 7440-62-2 | Vanadium  | 17.2          |        | K 5  | P  |
| 7440-66-6 | Zinc      | 72.3          |        | 15 1 | P  |

Cut 123/02

| Color Before:<br>Color After: | BROWN | Clarity Before:<br>Clarity After: | CLOUDY | Texture: Artifacts: | SILT |
|-------------------------------|-------|-----------------------------------|--------|---------------------|------|
| Comments:                     |       |                                   |        |                     |      |

## INORGANIC ANALYSIS DATA SHEET

| SAMPLE | NO. |  |
|--------|-----|--|
| SS-9   |     |  |

| <pre>pntract:</pre> | NY01-181 |
|---------------------|----------|
| MULLAC:             | MIGITARY |

b Code: STL BFLO

Case No.:

SAS No.:

SDG NO.: A01-B630

. %trix (soil/water):

SOIL

Lab Sample ID: AD123839

vel (low/med):

LOW

Date Received: 11/21/01

.,Solids: 88

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

MG/KG

| CAS No.   | Analyte   | Concentration | C        | Q        | M  |
|-----------|-----------|---------------|----------|----------|----|
| 7429-90-5 | Aluminum  | 12500         |          | 医丁       | P  |
| 7440-36-0 | Antimony  | 1.5           | B        |          | P  |
| 7440-38-2 | Arsenic   | 3.8           |          |          | P  |
| 7440-39-3 | Barium    | 74.6          |          | K J      | ₽  |
| 7440-41-7 | Beryllium | 0.49          | В        |          | P  |
| 7440-43-9 | Cadmium   | 0.03          | ט        |          | P  |
| 7440-70-2 | Calcium   | 967           | Ι,       | 上丁       | P  |
| 7440-47-3 | Chromium  | 16.8          |          | FJ       | P  |
| 7440-48-4 | Cobalt    | 11.6          |          | E J      | P  |
| 7440-50-8 | Copper    | 139           |          | F J      | P  |
| 7439-89-6 | Iron      | 29900         |          | P J      | P  |
| 7439-92-1 | Lead      | 145           | ١.       | # J      | P  |
| 7439-95-4 | Magnesium | 4310          |          | F J      | P  |
| 7439-96-5 | Manganese | 698           |          | B J      | P  |
| 7440-02-0 | Nickel    | 28.0          | '        | 南ノ       | P  |
| 7440-09-7 | Potassium | 760           | <u> </u> | F 5      | P  |
| 7782-49-2 | Selenium  | 1,3           |          | <u> </u> | P  |
| 7439-97-6 | Mercury   | 0.011         | В        | 1        | CV |
| 7440-22-4 | Silver    | 0.10          | ש        | 1        | P  |
| 7440-23-5 | Sodium    | 43.5          | В        | 1        | P  |
| 7440-28-0 | Thallium  | 0.60          | שן       | 14       | P  |
| 7440-62-2 | Vanadium  | 16.1          |          | 1        | ₽  |
| 7440-66-6 | Zinc      | 59.9          |          | E J      | P  |

CA 102 102

| 'Color Before: | BROWN  | Clarity Before: |        | Texture:   | SILT |
|----------------|--------|-----------------|--------|------------|------|
| Color After:   | YELLOW | Clarity After:  | GLOUDY | Artifacts: |      |
| Comments:      |        |                 |        | ····       |      |
| · .            |        |                 |        |            |      |

# ORGANIC QC SUMMARY FORMS

Camp Pharsalia Site

SDG No. A01-B630

## SEMI-VOLATILE ORGANICS QC PARAMETER / QUALIFIER SUMMARY

**SW846 METHOD 8270 C** 

CLIENT: SHAW E&I - LATHAM, NY

PROJECT: NYSDEC - CAMP PHARSALIA

SDG No.: A01-B630

HOLDING TIMES (NYSDEC-ASP)

NON-AQUEOUS MATRIX: AQUEOUS MATRIX:

10 DAYS MAXIMUM FROM VTSR TO EXTRACTION **5 DAYS MAXIMUM FROM VTSR TO EXTRACTION** 

ALL MATRICES:

40 DAYS MAXIMUM FROM EXTRACTION TO ANALYSIS

B. METHOD BLANKS Blank ID SBLK65

File ID Y49852 Matrix soil

Analytes Present none

Conc., ug/Kg n/a

ACTION: If sample concentration >CRQL, but <10x Blank value, flag result with "U"

If sample concentration <CRQL, and <10x Blank value, report CRQL and flag with 'U' If sample concentration >CRQL, and >10x Blank value, no qualification necessary

C. SURROGATE RECOVERY Sample ID

Surrogate

Bias Surrogate <u>Bias</u>

**ACTION** 

All surrogate recoveries were within acceptable limits.

MS or MSD

ACTION

none necessary

D. MATRIX SPIKE / DUPLICATE

Sample ID

Spike Compound

Bias

SS-1

All MS/MSD recoveries and %RPD values were within acceptable limits.

Note: only CLP spike compounds were added.

E. **BLANK SPIKE**  Sample ID MSB65

Spike Compound

<u>Bias</u> All MSB recoveries were within acceptable limits.

**ACTION** 

Note: only CLP spike compounds were added.

F. **INTERNAL STANDARDS** 

Sample ID Internal Standard All IS recoveries & RTs were within acceptable limits

<u>Bias</u>

**ACTION** 

**ACTION** 

G. **INSTRUMENT TUNES** 

<u>Date</u> 09/26/01 m/z abundance < 12-hrs. OK ves 12/03/01 OK yes 12/03/01 OK yes 12/05/01 QΚ yes 12/05/01 OK yes

OK

40.0

RRF

0.158

H. SAMPLE RESULT **VERIFICATION** 

Conc., ug/Kg =

Sample ID SS-6 DL

12/06/01

Ax

716035

1874509

Compound pentachlorophenol Reported Conc., ug/Kg 70000

۷t

1000

Vi

1.0

yes

Calculated

Conc., ug/Kg

70227

Df 20.0

Ws

30.91

**GPC** 

1.0

D

0.89

#### SEMI-VOLATILE ORGANICS CALIBRATION SUMMARY SW846 METHOD 8270C

CLIENT: SHAW E&I - LATHAM, NY PROJECT: NYSDEC - CAMP PHARSALIA SDG No.: A01-B630

#### A. INITIAL CALIBRATION

| CALIBRATION DATE :<br>FILE IDs : | arrange A                 | <u>12/05/01</u><br>Y49869 - 873 |
|----------------------------------|---------------------------|---------------------------------|
| ALL RRFs > 0.05 ?                | Yes                       | Yes                             |
| SPCC RRFs >0.05 ?                | Yes                       | Yes                             |
| CCC %RSDs < 30% ?                | Yes                       | Yes                             |
| All Targets < 15% RSD?           | NO                        | NO                              |
| (If No, list compounds)          | hexachlorocyclopentadiene | hexachlorocyclopentadiene       |
| SPCC Compounds                   | 2-nitroantline            | 2-nitroaniline                  |
| N-Nitroso-di-n-propytamine       | 2,6-dinitrotoluene        | 2,6-dinitrotoluene              |
| Hexachlorocyclopentaciene        | 3-nitroaniline            | 3-nitroanifine                  |
| 2,4-Dinitrophenol                | 2,4-dintrophenol          | 2.4-dinitrophenol               |
| 4-Nitrophenol                    | 4-nitroaniline            | 4-nitroaniline                  |
| MINIMUM RRF = 0.050              | 3,3'-dichlorobenzidine    | 4,6-dinitro-2-methylphenol      |

GCC Compounds
Base/Neutrals
Acenaphthene
1,4-Dichlorobenzene
Hexachtorobutadiene
Diphenylamine
Di-n-octylphthalate
Fluoranthene
Benzo(a)pyrene
Acids
4-Chloro-3-methylphenol
2,4-Dichlorophenol
Phenol
Phenol
Pentachlorophenol
2,4-G-Trichlorophenol
3,4-G-Trichlorophenol
MAXIMUM %RSD = 30,0%

ACTION: Qualify 'J' all positive compounds which exceed 15% RSD in associated samples.

B.

#### **CONTINUING CALIBRATIONS**

| SPCC Compounds   | CALIBRATION DATE :      | <u>12/03/01</u>                  | 12/05/01                 | 12/06/01          |
|--|-------------------------|----------------------------------|--------------------------|-------------------|
| N-Nitroso-di-n-propylamine   | FILE IDs ;              | Y49851                           | Y49881                   | Y49899            |
| Hexachlorocyclopentadiene  | ALL RRFs > 0.05 ?       | Yes                              | Yes                      | Yes               |
| 2,4-Dinitrophenol  | SPCC RRFs >0.05 ?       | Yes                              | Yes                      | Yes               |
| 4-Nitrophenol  | CCC %Ds < 20% ?         | Yes                              | Yes                      | Yes               |
| MINIMUM RRF = 0.050  | Alt Targets < 20%D?     | NO                               | Yes                      | NO                |
|  | (If No, list compounds) | isophorone                       |                          | 2,4-dinitrophenol |
| CCC Compounds  |                         | 2,4-dinitrophenol                | 1                        |                   |
| Base/Neutrals  | 1 .                     | benzo(k)fluoranthene             | i                        |                   |
| Acenaphthene   |                         |                                  |                          |                   |
| 1,4-Dichlorobenzene  | ACTION:                 | Qualify 'J' or 'UJ' all reported | results for compounds wh | nich exceed 20%D  |
|  |                         |                                  |                          |                   |
| Hexachlorobutadiene  | 7.5.1.5.1.              |                                  | •                        |                   |
|  | 7.0                     | in associated samples.           | •                        |                   |
| Hexachlorobutadiene<br>Diphenylamine   |                         |                                  |                          |                   |
| Hexachlorobutadiene  |                         |                                  | •                        |                   |
| Hexachkorobutadiene<br>Diphenylamine<br>Di-n-octylphthalate  |                         |                                  |                          |                   |
| Hexachlorobutadiene<br>Diphenylamine<br>Di-n-octylphthalete<br>Fluoranthene<br>Benzo(a)pyrene  |                         |                                  |                          |                   |
| Hexachlorobutadiene<br>Diphenylamine<br>Di-n-octylphthalate<br>Fluoranthene<br>Benzo(a)pyrene<br><u>Acids</u>  |                         |                                  | ,                        |                   |
| Hexachlorobutadiene Diphenylamine DI-n-octylphthalate Fluoranthene Benzo(a)pyrene <u>Ackts</u> 4-Chloro-3-methylphenol                                   |                         |                                  |                          |                   |
| Hexachlorobutadiene<br>Diphenylamine<br>Di-n-octylphthalate<br>Fluoranthene<br>Benzo(a)pyrene<br><u>Acids</u>  |                         |                                  |                          |                   |
| Hexachlorobutadiene Diphenylamine Di-n-octylphthalate Fluoranthene Benzo(a)pyrene <u>Ackls</u> 4-Chloro-3-methylphenol 2,4-Dichlorophenol                |                         |                                  |                          |                   |
| Hexachlorobutadiene Diphenylamine Diphenylamine Pluoranthene Benzo(a)pyrene <u>Acktis</u> 4-Chloro-3-methylphenol 2,4-Dichlorophenol 2-Nitrophenol       |                         |                                  |                          |                   |
| Hexachlorobutadiene Diphenylamine Di-n-octylphthalate Filuoranthene Benzo(a)pyrene <u>Acids</u> 4-Chloro-3-methylphenol 2,4-Dichlorophenol 2-Nitrophenol |                         |                                  | •                        |                   |

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## ENVIRONMENTAL QUALITY ASSOCIATES, INC. SPECIALISTS IN DATA VALIDATION SINCE 1994

August 5, 2002

Shaw Group E & I Att: Tanjia Maynard, Project Manager 13 British - American Boulevard Latham, New York 12110

NYSDEC / Camp Pharsalia Laboratory Analytical Data Re:

Dear Ms. Maynard,

This cover letter and attachments are a Data Usability Summary Report (DUSR) for the following analytical results contained in the above-referenced deliverables set. The attached documents include the laboratory data reports with data qualifications resulting from the DUSR effort per the NYSDEC ASP and Region II SOP indicated in red ink.

Camp Pharsalia Site Name:

**Fractions** 

PCDD/PCDF, 8290, 8280\*

Laboratory:

STL, West Sacramento, CA.

SDG No.: A01-B634

Matrix:

Non-Aqueous

Reviewer:

Bruce Wallin

Prepared by: Environmental Quality Associates, Inc.

## **SECTION A** Sample Information

The above-noted project samples were analyzed for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/PCDF) by USEPA SW-846 Method 8290. A summary table of samples analyzed is presented below.

Field or rinse blank results were not reported with the data deliverables package. Therefore, these parameters indicated in the SOP, could not be evaluated.

|              |              |        | Date      |
|--------------|--------------|--------|-----------|
| Sample ID    | Lab ID       | Matrix | Collected |
| SS-1         | G1K240118-1  | S      | 11/16/01  |
| SS-2         | G1K240118-2  | s      | 11/16/01  |
| SS-3         | G1K240118-3  | S      | 11/16/01  |
| SS-4         | G1K240118-4  | S      | 11/16/01  |
| SS-5*        | G1K240118-5  | S      | 11/16/01  |
| SS-6*        | G1K240118-5  | S      | 11/16/01  |
| SS-7         | G1K240118-7  | S.     | 11/16/01  |
| SS-8*        | G1K240118-8  | S      | 11/16/01  |
| SS-9*        | G1K240118-9  | S      | 11/16/01  |
| SB-1 (10-12) | G1K240118-10 | S      | 11/15/01  |
| SB-2 (10-12) | G1K240118-11 | S      | 11/15/01  |
| SB-3 (10-12) | G1K240118-12 | S      | 11/15/01  |
| SB-4 (6-8)   | G1K240118-13 | S      | 11/16/01  |
| SB-5 (8-10)  | G1K240118-14 | S      | 11/16/01  |
| SB-6 (4-6)   | G1K240118-15 | S      | 11/16/01  |
| SB-7 (2-4)   | G1K240118-16 | S      | 11/16/01  |
| SB-700 (2-4) | G1K240118-17 | S      | 11/16/01  |
| SS-700       | G1K240118-18 | S      | 11/16/01  |

<sup>\* =</sup> Sample analyzed by Method 8280.

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# SECTION B Data Completeness

The data package was reviewed and considered equivalent to an ASP Category B deliverable, per DUSR requirement.

## SECTION C Holding Times

All samples were extracted within a maximum of 18 days from collection and 12 days from verified time of receipt at the laboratory (VTSR) which is within the 30 days from VTSR indicated in the ASP. All extracts were analyzed within a maximum of 24 days from extraction, which is within the 40 days indicated in the ASP. The COC information was provided in an illegible form (unreadable copy), therefore, the VTSR was based on the received date indicated on the laboratory Sample Summary. According to the Buffalo facility SDG narrative, "the cooler was received at a temperature of 2°C." According to the W. Sacramento SDG narrative, "the samples were five degrees Celsius at the time of receipt."

S = Non-Aqueous Matrix Total Samples =

The latter temperature exceeds the 4° C specified in the Method, ASP, and SOP. No action was taken on the basis of professional judgment since the parameters of interest are resistant to chemical and biological degradation, however, the data user is cautioned that the exceedence may impact data defensibility.

## SECTION D OC INFORMATION

With the following exceptions, all performance criteria evaluated within the DUSR requirements were within specification.

#### 1. Calibrations.

For 1,2,3,4,7,8-HxCDD, and 1,2,3,7,8,9-HxCDD the continuing calibration ST1213B provided RRF %Ds of 25.2 and 25.1, respectively, which exceed the control limit of ± 20%. The results for these parameters reported for associated samples SS-1, SS-2, SS-3, SS-4, and SS-7 were flagged as estimated 'J' to signify the potential for high bias of the indicated amount.

#### 2. Internal Standards.

For sample SS-1, the recoveries of all internal standards were below the 40% lower limit but above the 25% minimum indicated in the SOP. On the basis of professional judgment, the results for all parameters were flagged as estimated 'J' to signify the potential for low bias.

For sample SB-7 (2-4), the recovery of the internal standard <sup>13</sup>C-1,2,3,4,7,8-HxCDF was below the 50% limit but above the 25% minimum indicated in the SOP. On the basis of professional judgment, the results reported for all HxCDF parameters were flagged as estimated 'J' to signify the potential for low bias.

Samples SS-6, SS-8, and SS-9 provided elevated recoveries of the internal standard <sup>13</sup>C-OCDD. The results reported for OCDD that were positive in all of these samples were flagged as estimated 'J' to signify the potential for high bias.

### 3. Quantitation models.

Section 7.9.1 of Method 8290 indicates that, for the quantitation of target analytes, the laboratory is to use the average relative response factor from the associated initial calibration. Section 7.2.11 of the SOP indicates that the relative response factor obtained from the associated continuing calibration is to be used for the quantitation of target analytes. The laboratory used the model specified in the Method and this model was verified by the reviewer. The data user is notified that utilization of the quantitation model specified in the SOP will result in values that may differ as much as  $\pm$  20% from those provided in the laboratory reports.

See the attached Calibration Summary and QC Parameter/Qualifier Summary.

Additional QC items:

- Reporting limits: Several parameters were reported below the laboratory reporting limit. These were flagged as estimated 'J' by the laboratory and should be considered as estimates due to the statistical uncertainty at the low levels.
- Ion ratios. For sample SS-1 the analysis on the DB-5 column provided an ion ratio for the internal standard <sup>13</sup>C-2,3,7,8-TCDF that was not within specification. No action was taken, since the value reported is from the confirmation column that provided acceptable ion ratios. Sample SS-4 provided non-compliant ion ratio for the internal standard <sup>13</sup>C-1,2,3,4,6,7,8-HpCDF. The results for parameters quantified from this internal standard in the sample were flagged as estimated 'J' to signify the potential for high bias.
- Diluted samples: Samples SS-4, SS-7 and SS-700 were originally analyzed undiluted and the signals for some parameters exceeded that of the highest initial calibration standard signal. These samples were diluted and reanalyzed since the narrative indicated that some of the signals were considered detector saturation. For all diluted values the laboratory flagged the associated values with the 'D' qualifier. For some samples the signals for some analytes exceeded the calibration range. These were flagged with the 'E' qualifier by the laboratory when a dilution was or was not performed. The narrative indicated that, for these situations, historical information suggests that dilution would not significantly change the result. The Method requires dilutions for the fifteen 2,3,7,8-substituted parameters providing signals in excess of the calibration range (section 7.9.3). On the basis of professional judgment the values for ALL analytes that were from extracts that were not diluted, or diluted and still exceeded the calibration range (flagged 'D, E' by the laboratory) have been flagged as estimated 'J' to signify the potential for biases.
- Samples SS-5, SS-6, SS-8, and SS-9 were analyzed by Method 8280 due to the levels of several parameters in the ng/g range. This is an allowed option in Method 8290. On the basis of professional judgment, the positive results were flagged as estimated 'J' to signify the potential for high bias due to the less specific methodology used.
- A matrix spike/ matrix spike duplicate was not reported, therefore, this item indicated in the SOP could not be evaluated.
- On the basis of previous knowledge regarding sample identification conventions it is assumed that sample SS-700 is a duplicate of sample SS-7 and sample SB-700 is a duplicate of sample SB-7. For sample SS-7 considerable difference was reported for several parameters. For sample SB-7 values in excess of the limits were reported for total TCDD and total PeCDD. No action was taken, however, if the assumption of sample identification is correct, considerable heterogeneity is indicated, with the potential for impact on representativeness.
- For Method 8290, Section 5.0 of the SOP indicates that initial calibrations do not have to be performed daily but "should be analyzed at least once every week and/or whenever the continuing calibration standard does not meet criteria." For the samples associated with this SDG the initial calibration was performed up to approximately two months prior to the analytical event. No action was taken, based on professional judgment, since the Method only specifies the requirement for initial calibration when cal solutions are replaced or the continuing calibration does not meet specification.

# SECTION E SAMPLE RESULT VERIFICATION

For sample SS-1, the result reported for 2,3,7,8-TCDD was verified from the raw data. See the QC Parameter/Qualifier Summary for details.

## SECTION F Overall Recommendations

The results of the review and validation process for the above analytical fraction and associated samples are summarized on the attached notated Analytical Reports, Calibration and QC parameter summaries. From this information it does not appear reasonable or judicious utilization of funds to re-generate any data to resolve any technical discrepancies identified in the DUSR efforts associated with the SDG.

Very truly yours,

Environmental Quality Associates, Inc.

**Ch**ris W. Taylor Vice President

**Attachments** 

#### Client Sample ID: SH-1(10-12)

#### Trace Level Organic Compounds

Analysis Date..: 12/27/01

Lot-Sample #...: G1K240118-010 Work Order #...: EPF261AC Matrix.....: SOLID Date Sampled...: 11/15/01 Date Received..: 11/23/01

Date Sampled...: 11/15/01 Prep Date..... 12/03/01

Prep Batch #...: 1337482

Dilution Factor: 1

|          | DETECTIO   | 727  |   |
|----------|--|--|---|
| RESULT   | LIMIT  | UNITS  | METHOD  |
| ND       | 0.30   | pg/g   | SW846 8290  |
| ND       | 0.30   | pg/g   | SW846 8290  |
| ND       | 0.96   | pg/g   | SW846 8290  |
| 5.2      |  | pg/g   | SW846 8290  |
| ND       | 0.26   | pg/g   | SW846 B290  |
| ND       | 1.5  | pg/g   | SW846 8290  |
| ND       | 0.57   | pg/g   | 6W846 8290  |
| 15       |  | <b>pg/g</b>  | SW846 8290  |
| ND       | 0.26   | pg/g   | SW846 8290  |
| ХD       | 1.5  | pg/g   | SW846 8290  |
| ND       | 0.29   | pg/g   | SW846 8290  |
| ND       | 0.37   | pg/g   | SW846 8290  |
| ND       | 0.27   | pg/g   | SW846 8290  |
| 9.8      |  | pg/g   | SW846 8290  |
| 63       |  | pg/g   | SW845 8290  |
| ND       | 0.30   | pg/g   | SW846 8290  |
| NID .    | 0.24   | pg/g   | SW845 8290  |
| ND       |  | •  | SW846 8290  |
| ND       |  |  | SW846 8290  |
| ND       |  |  | SW\$46 8290   |
| ND       | 0.17   |  | SW846 8290  |
| מוע      | 0.18   |  | 8W846 B290  |
| NU       | 1.6  |  | SW846 8290  |
|          | 0.93   |  | SW846 B290  |
| 7.7(J)   |  | pg/g   | SW846 8290  |
| PERCENT  |  | •  |   |
| RECOVERY | Limits   |  |   |
| 76       | (40 - 13   | <b>(5)</b>   |   |
| 73       | (40 - 13   | 15)  |   |
| 68       | (40 - 135)                                       |  |   |
| 82       | (40 - 13   | 35)  |   |
| 78       | (40 - 13)  | 15)  |   |
| 75       | (40 - 13   | 15)  |   |
| 70       | (40 - 13   | 15)  |   |
| 59       | (40 - 13   | 55)  |   |
| 73       | (40 - 13   | 15)  |   |
|          | ND ND 5.2 ND ND ND ND ND ND ND ND ND ND ND ND ND | ND 0.30 ND 0.96 5.2 ND 0.26 ND 1.5 ND 0.57 15 ND 0.26 ND 0.57 15 ND 0.27 ND 0.27 9.8 63 ND 0.37 ND 0.27 9.8 63 ND 0.16 ND 0.24 ND 0.16 ND 0.16 ND 0.16 ND 0.17 ND 0.18 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.17 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 ND 0.18 | NID 0.30 pg/g NID 0.96 pg/s 5.2 pg/g NID 0.26 pg/g NID 0.57 pg/g NID 0.57 pg/g NID 0.57 pg/g NID 0.26 pg/g NID 0.57 pg/g NID 0.26 pg/g NID 0.26 pg/g NID 0.29 pg/g NID 0.37 pg/g NID 0.37 pg/g NID 0.37 pg/g NID 0.27 pg/g 9.8 pg/g NID 0.30 pg/g NID 0.24 pg/g NID 0.24 pg/g NID 0.24 pg/g NID 0.24 pg/g NID 0.16 pg/g NID 0.16 pg/g NID 0.16 pg/g NID 0.16 pg/g NID 0.17 pg/g NID 0.18 pg/g NID 0.18 pg/g NID 0.19 pg/g NID 0.19 pg/g NID 0.19 pg/g NID 0.10 pg/g NID 0.11 pg/g NID 0.12 pg/g NID 0.13 pg/g |

#### Moir(s) :

Results and reporting limits have been adjusted for dry weight.

J. Baimaged result. Result is less than the reporting limit.

Client Sample ID: SB-2(10-12)

#### Trace Level Organic Compounds

Lot-Sample #...: G1K240118-011 Work Order #...: EPF271AC Matrix..... SOLID

Date Sampled...: 11/15/01 Date Received..: 11/23/01 Analysis Date..: 12/15/01

Prep Date....: 12/03/01 Prep Batch #...: 1337482

Dilution Factor: 1

|                           |          | DETECTIO   | NI .        | •           |
|---------------------------|----------|------------|-------------|-------------|
| PARAMETER                 | Result   | LIMIT      | UNITS       | METHOD      |
| Total TCDF                | ND       | 0.36       | <b>pg/g</b> | SW846 8290  |
| Total PeCDF               | ND       | 0.58       | pg/g        | SW846 8290  |
| Total ExCDF               | 22       |            | pg/g        | SW846 8290  |
| Total HpCDF               | 150      |            | pg/g        | \$W846 8290 |
| Total TCDD                | ND       | 0.58       | pg/g        | SW846 8290  |
| Total PeCDD               | ND       | 0.79       | pg/g        | SW846 8290  |
| Total ExCDD               | 1.2      |            | pg/g        | SW846 8290  |
| Total HpCDD               | 180      |            | pg/g        | SW846 8290  |
| 2,3,7,8-TCDD              | ND       | 0.58       | pg/g        | SN846 8290  |
| 1,2,3,7,8-PeCDD           | ND       | 0.79       | pg/g        | SW846 8290  |
| 1,2,3,4,7,8-HxCDD         | MD       | 0.67       | P9/9        | SW846 8290  |
| L,2,3,6,7,8~HxCDD         | 6.1      |            | <b>P8/3</b> | SW846 8290  |
| 1,2,3,7,8,9-HxCDD         | ND       | 2.7        | pg/g        | SW846 8290  |
| L,2,3,4,6,7,8-RpCDD       | 120      |            | pg/g        | 5W846 8290  |
| COD                       | 550      |            | pg/g        | SW846 8290  |
| 2,3,7,6-TCDF              | ND       | 0.36       | pg/g        | SW846 8290  |
| 1,2,3,7,8-PeCDF           | ND       | 0.58       | pg/g        | SW846 8290  |
| 1,3,4,7,8-PeCDF           | ND       | 0.56       | pg/g        | SW846 B290  |
| L,2,3,4,7,8-HxCDF         | ND       | 1.1        | pg/g        | SW846 8290  |
| 1,2,3,6,7,8-HxCDF         | ND       | 0.92       | pg/g        | SW846 8290  |
| 1,3,4,6,7,8-HxCDF         | ND       | 1.1        | pg/g        | SW846 8290  |
| 1,2,3,7,8,9-HXCDF         | ND       | 1.2        | pg/g        | SW846 8290  |
| L, 2, 3, 4, 6, 7, 8-HpCDF | 30       |            | pg/g        | SW846 8290  |
| 1,2,3,4,7,8,9-HpCDF       | ND       | 2.0        | pg/g        | SW845 8290  |
| CDF                       | 180      |            | pg/g        | SW846 B290  |
| •                         | PERCENT  | RECOVERY   |             |             |
| INTERNAL STANDARDS        | RECOVERY | LIMITS     |             |             |
| 3C-2,3,7,8-TCDD           | 71       | (40 - 13   | 5)          |             |
| 3C-1,2,3,7,8-PeCDD        | 82       | (40 - 13   | •           |             |
| I3C-1,2,3,6,7,8-HxCDD     | 73       | (40 - 13   |             |             |
| 3C-1,2,3,4.6,7,8-HpCDD    | 87       | (40 - 13   | *           |             |
| 3C-OCDD                   | 89       | (40 - 135) |             |             |
| 3C-2,3,7,8-TCDF           | 79       | (40 - 13   | -           |             |
| 13C-1, 2, 3, 7, 8-PeCDF   | 88       | {40 - 13   |             |             |
| 13G-1,2,3,4,7,8-HXCDF     | 68       | (40 - 13.  | - •         |             |
| L3C-1,2,3,4,6,7,8-HpCDF   | 84       | (40 - 13   | -           |             |
| symple).                  |          |            |             |             |

Note (S) :

Results and reporting Benits have been adjusted for dry weight.

### Client Sample ID: SB-3(10-12)

### Trace Level Organic Compounds

Analysis Date..: 12/15/01

| Lot-Sample #: G1K240118-012 | Work Order #: EPF281AC | Matrix SOLID |
|-----------------------------|------------------------|--------------|
| Date Sampled: 11/15/01      | Date Received 11/23/01 |              |

Date Sampled...: 11/15/01 Prep Date....: 12/03/01

Prep Batch #...: 1337482

Dilution Factor: 1

| <b>-</b>               |             | DETECTIO | <del></del>  |            |
|------------------------|-------------|----------|--------------|------------|
| PARAMETER              | result      | LIMIT    | UNITS        | METHOD     |
| Total TCDF             | ND          | 0.29     | ba\a         | SWB46 8290 |
| Total PeCDF            | ND          | 0.56     | <b>p</b> g/g | SW845 8290 |
| otal ExCDF             | 14          |          | <b>pg/g</b>  | SW846 8290 |
| otal HpCDF             | 120         |          | pg/g         | SW846 8290 |
| otal TCDD              | ND          | 0.40     | pg/g         | SW046 8290 |
| Otal PeCDD             | ND          | 2.0      | pg/g         | SW846 8290 |
| Total ExCDD            | 8.3         |          | pg/g         | SW846 8290 |
| Notal HpCDD            | 150         |          | .pg/g        | SW846 8290 |
| 1,3,7,8-TCDD           | NĎ          | 0.40     | pg/g         | 8W846 B290 |
| ,2,3,7,8-PeCDD         | ND          | 2.0      | pg/g         | SW846 8290 |
| ,2,3,4,7,8-HxCDD       | ND V        | 0.66     | pg/g         | SW846 8290 |
| ,2,3,6,7,8-ExCDD       | 4.3(J)      |          | pg/g         | SW846 8290 |
| ,2,3,7,8,9-HxCDD       | ND          | 1.3      | pg/g         | SW845 8290 |
| ,2,3,4,6,7,8-HpCDD     | 99          |          | pg/g         | SW846 8290 |
| CDD                    | 500         |          | pg/g         | SW846 8290 |
| ,3,7,8-TCDF            | ND          | 0.29     | pg/g         | SW846 8290 |
| ,2,3,7,8-PeCDF         | ND          | 0.56     | pg/g         | SW846 8290 |
| ,3,4,7,8-PeCDF         | <b>3/</b> D | 0.56     | pg/g         | SW846 8290 |
| ,2,3,4,7,8-HxCDF       | <b>MD</b>   | 1.2      | pg/g         | SW846 8290 |
| ,2,3,6,7,8-HxCDF       | RD          | 0.46     | pg/g         | SW846 8290 |
| ,3,4,6,7,8-HxCDF       | ND          | 0.70     | pg/g         | SW846 8290 |
| ,2,3,7,8,9-HXCDF       | ND          | 3.3      | pg/g         | SW846 8290 |
| .,2,3,4,6,7,8-EpCDF    | 24          |          | 129/g        | SW846 8290 |
| ,2,3,4,7,8,9-HpCDF     | ND          | 3.8      | pg/g         | SW846 8290 |
| COF                    | 160         |          | pg/g         | SW846 8290 |
|                        | PERCENT     | RECOVERY | •            | ÷          |
| nternal Standards      | RECOVERY    | LIMITS   |              |            |
| 3C-2,3,7,8-TCDD        | 60          | (40 - 13 | 5)           |            |
| 3C-1,2,3,7,8-FeCDD     | 68          | (40 - 13 | 5)           |            |
| 3C-1,2,3,6,7,8-HxCDD   | 56          | (40 - 13 | 5)           |            |
| 3C-1,2,3,4,6,7,8-HpCDD | 70          | (40 - 13 | 5)           |            |
| 3C-OCDD                | 70          | (40 - 13 | 5)           |            |
| 3C-2,3,7,8-TCDF        | 67          | (40 - 13 | 5)           |            |
| 3C-1,2,3,7,8-PeCDF     | 78          | (40 - 13 | · ·          |            |
| 3C-1,2,3,4,7,8-HxCDF   | 54          | (40 - 13 | -            |            |
| 3C-1,2,3,4,6,7,8-HpCDF | 64          | (40 - 13 |              | •          |

Results and reporting limits have been adjusted for dry weight.

I Estimated result. Result is less than the reporting limit.

#### Client Sample ID: SB-4 (6-8)

#### Trace Level Organic Compounds

Analysis Date..: 12/27/01

| Lot-Sample #: G1K240118-013 | Work Order #: BPF291AC  | Matrix SOLID |
|-----------------------------|-------------------------|--------------|
| Date Sampled: 11/16/01      | Date Received: 11/23/01 |              |

Prep Batch #...: 12/03/01 Prep Batch #...: 1337482

Dilution Factor: 1

|                         |          | DETECTIO  | an a         |             |
|-------------------------|----------|-----------|--------------|-------------|
| Parameter               | RESULT   | LIMIT     | UNITS        | METHOD      |
| Total TCDF              | ND       | 0.27      | pg/g         | SW846 8290  |
| Total PeCDF             | ND       | 0.22      | pg/g         | SW846 8290  |
| Total HxCDF             | ND       | 0.76      | pg/g         | SW846 8290  |
| Total HpCOF             | 3.9      |           | pg/g         | SW846 8290  |
| Total TCDD              | MD       | 0.16      | pg/g         | SWB46 8290  |
| Total PeCDD             | ND       | 0.68      | pg/g         | SW846 8290  |
| Total HxCDD             | ND       | 0.68      | pg/g         | SW846 8290  |
| Total HpCDD             | 13       |           | P3/9         | SW846 8290  |
| 2,3,7,8-TCDD            | ND       | 0.16      | pg/g         | \$WB46 8290 |
| 1,2,3,7,8-PeCDD         | MD       | 0.68      | pg/g         | 8W846 8290  |
| 1,2,3,4,7,8-HxCDD       | ND       | 0.16      | pg/g         | SW846 8290  |
| 1,2,3,6,7,8-HxCDD       | ND       | 0.47      | pg/g         | SW846 8290  |
| 1,2,3,7,8,9-HxCDD       | ND       | 0.26      | pg/g         | SW846 8290  |
| 1,2,3,4,6,7,8-HpCDD     | 8.0      |           | pg/g         | SW846 8290  |
| OCDID :                 | 50       |           | pg/g         | SW846 8290  |
| 2,3,7,8-TCDF            | MD CIN   | 0.27      | pg/g         | SW846 8290  |
| 1,2,3,7,8-PeCDF         | ND       | 0.15      | pg/g         | SW846 8290  |
| 2,3,4,7,8-PeCDF         | ND       | 0.15      | pg/g         | SW846 8290  |
| 1,2,3,4,7,8-HxCDF       | ND       | 0.17      | pg/g         | SW846 8290  |
| 1,2,3,6,7,8-HxCDF       | ND       | 0.17      | <b>₽</b> g/g | SW846 8290  |
| 2,3,4,6,7,8-HxCDF       | ND       | 0,18      | pg/g         | SW846 B290  |
| 1,2,3,7,8,9-HxCDF       | ND       | 0.20      | pg/g         | 6W846 8290  |
| 1,2,3,4,6,7,8-HpCDF     | ND       | 2.0       | pg/g         | SN846 8290  |
| 1,2,3,4,7,8,9-HpCDF     | ND _     | 0.46      | pg/g         | 5W846 8290  |
| OCOF                    | 5.6(3)   |           | pg/g         | 8W846 8290  |
|                         | PERCENT  | RECOVERY  | r            |             |
| Internal Standards      | RECOVERY | LIMITS    |              |             |
| 13C-2,3,7,8-TCDD        | 77       | (40 - 13  | ···•         |             |
| 13C-1,2,3,7,8-PeCDD     | 74       | (40 - 13) | 15)          |             |
| 13C-1,2,3,6,7,8-HxCDD   | 78       | (40 - 13  | 15)          |             |
| 13C-1,2,3,4,6,7,8-HpCDD | 86       | (40 - 13  | 15)          |             |
| 13C-OCDD                | 83       | (40 - 13  | 15)          |             |
| 13C-2,3,7,8-TCDF        | 76       | (40 - 13  | 15)          |             |
| 13C-1,2,3,7,8-PeCDF     | 72       | (40 - 13) | 15)          |             |
| 13C-1,2,3,4,7,8-HxCDF   | 72       | (40 - 13  | 15)          |             |
| 13C-1,2,3,4,6,7,8-HpCDF | 88       | (40 - 13  | 15)          |             |
| WWW (Q).                |          |           |              |             |

#### NOTE (S) 1

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than the reporting limit.

Matrix..... SOLID

#### STL BUFFALO

### Client Sample ID: SB-5 (8-10)

### Trace Level Organic Compounds

Date Received..: 11/23/01

Lot-Sample #...: G1K240118-014 Work Order #...: EPF3A1AC

Date Sampled...: 11/16/01

| Parameter           | 55000 H      | DETECTION     |               |            |
|---------------------|--------------|---------------|---------------|------------|
| Total TCDF          | RESULT<br>ND | LIMIT<br>0.19 | UNITS         | METHOD     |
| Total PecDF         | ND           |               | ba\a          | 9W846 8290 |
| Total HxCDF         | ND           | 0.20          | <b>pg/g</b>   | SW846 8290 |
| Total HpCDF         |              | 2.3           | pg/g          | SW846 8290 |
| Total TCDD          | 1.9<br>ND    | 0.13          | pg/g          | SW846 8290 |
| Total Pecep         | ND           | 0.13          | pg/g          | SW846 8290 |
| Total HxCDD         |              | 0.36          | <b>P</b> 8/8  | SW846 8290 |
| Total Rocco         | ND           | 0.85          | <b>P</b> 9/8  | 8W846 8290 |
| 2,3,7.9-TCDD        | 31           |               | <b>P8/</b> 8  | SW846 8290 |
| 1,2,3,7,8-PeCDD     | MD           | 0.13          | Pg/g          | SW846 B290 |
| 1,2,3,4,7,8-HxCDD   | MD<br>ND     | 0.36          | ba\a          | SW846 8290 |
| 1,2,3,6,7,8-HxCDD   | ND           | 0.14          | ba\a          | SW846 8290 |
| 1,2,3,7,8,9-HxCDD   | ND           | 0.85          | P9/9          | SW846 8290 |
| 1,2,3,4,6,7,8-HoCDD | ND           | 0.24          | <b>pg/g</b>   | 5W846 8290 |
| OCDD                | 19           |               | <b>23/8</b>   | SW846 8290 |
|                     | 160          |               | ba\a          | SW846 8290 |
| 2,3,7,8-TCDF        | ND .         | 0.19          | ₽ <b>9</b> /9 | SW846 8290 |
| 1,2,3,7,8-PeCDF     | ND           | 0.14          | pg/g          | SW846 8290 |
| 1,3,4,7,8-PeCDF     | MD           | 0.14          | ba\a          | SW846 8290 |
| 1,2,3,4,7,8-ExCDF   | ND           | 0.20          | pg/g          | SW846 8290 |
| .,2,3,6,7,8-HxCDF   | ND           | 0.075         | P9/9          | 5W846 8290 |
| 2,3,4,6,7,8-HxCDF   | ND           | 0.084         | pg/g          | SW846 8290 |
| 1,2,3,7,8,9-HxCDF   | ND 🔿         | 0.090         | pg/g          | SW846 8290 |
| 1,2,3,4,6,7.8-HpCDF | 3.7(J)       |               | pg/g          | SW846 8290 |
| 1,2,3,4,7,8,9-HpCDF | ND           | 0.46          | pg/g          | SW846 8290 |
| COF                 | 21           |               | pg/g          | SW846 B290 |

| Internal Standards      | PERCENT<br>RECOVERY | recovery<br>Limits |
|-------------------------|---------------------|--------------------|
| 13C-2,3,7,8-TCDD        | 76                  | (40 - 135)         |
| 13C-1,2,3,7,8-PeCDD     | 71                  | (40 - 135)         |
| 13C-1,2,3,6,7,8-HxCDD   | 78                  | (40 - 135)         |
| 13C-1,2,3,4,6,7,8-HpCDD | 85                  | (40 - 135)         |
| 13C-OCDD                | <b>Bl</b>           | (40 - 135)         |
| 13C-2,3,7,8-TCDF        | 76                  | (40 - 135)         |
| 13C-1,2,3,7,8-PeCDF     | 69                  | (40 - 135)         |
| 13C-1,2,3,4,7,8-HxCDF   | 68                  | (40 + 135)         |
| 13C-1,2,3,4,6,7,8-HpCDF | 81                  | (40 - 135)         |

#### MOTE (S):

Results and reporting Rmits have been adjusted for dry weight.

I Estimated semit. Result is less than the reporting limit.

## Client Sample ID: SB-6 (4-6)

## Trace Level Organic Compounds

| Lot-Sample #: G1K240118-015 Date Sampled: 11/16/01 Prep Date: 12/03/01 | Work Order #: EPF3C1AC<br>Date Received: 11/23/01<br>Analysis Date: 12/15/01 | Matrix SOLID |
|--|--|--------------|
| Prep Batch #: 1337482  | Amarysis Date: 12/15/01  |              |

Dilution Factor: 1

|                         |          | DETECTIO  | . и   |            |
|-------------------------|----------|-----------|-------|------------|
| PARAMETER               | RESULT   | LIMIT     | UNITS | METHOD     |
| Total TCDF              | NO       | 0.25      | pg/g  | SW846 8290 |
| Total PeCDF             | ND OW    | 0.40      | pg/g  | SW846 8290 |
| Total HxCDF             | ND       | 1.7       | pg/g  | SW846 8290 |
| Total HpCDF             | 6.6      |           | pg/g  | SWB46 8290 |
| Total TCDD              | ND       | 0.36      | pg/g  | SW846 8290 |
| Total Pecip             | <b>D</b> | 0.81      | pg/g  | SW846 8290 |
| Total HxCDD             | ND       | 0.69      | pg/g  | SW846 8290 |
| Total Hocho             | 17       |           | pg/g  | SW846 8290 |
| 2,3,7,8-TCDD            | ND       | 0.36      | pg/g  | SW846 8290 |
| 1,2,3,7,8-PeCDD         | ND       | 0.81      | P9/9  | SW846 8290 |
| 1,2,3,4,7,8-HxCDD       | ND       | 0.65      | pg/g  | SW846 8290 |
| 1,2,3,6,7,8-HxCDD       | ND       | 0.69      | pg/g  | SW846 8290 |
| 1,2,3,7,8,9-HxCDD       | ND       | 0.64      | pg/g  | SW846 8290 |
| 1,2,3,4,6,7,8-HpCDD     | 12       |           | pg/g  | SW846 8290 |
| OCTO                    | 45       |           | pg/g  | SW846 8290 |
| 2,3,7,6-TCDF            | MD       | 0.25      | pg/g  | SW846 8290 |
| 1,2,3,7,8~PeCDF         | ND       | 0.40      | pg/g  | SW846 8290 |
| 2,3,4,7,8-PeCDF         | ND       | 0.40      | pg/g  | SW846 8290 |
| 1,2,3,4,7,8-HxCDF       | ND       | 0.49      | pg/g  | SW846 8290 |
| 1,2,3,6,7,8-HxCDF       | ND       | 0.43      | pg/g  | SW846 8290 |
| 2,3,4,6,7,8-HXCDF       | MD       | 0.54      | pg/g  | SW846 8290 |
| 1,2,3,7,8,9-HxCDF       | ND       | 0.57      | pg/g  | SW846 8290 |
| 1,2,3,4,6,7,8-Hpcor     | ND       | 2.2       | P9/8  | SW846 8290 |
| 1,2,3,4,7,8,9-HpCDF     | NID 🔷    | 0.60      | pg/g  | SW846 8290 |
| OCDF                    | 7.3(J)   |           | pg/g  | SW846 8290 |
|                         | PERCENT  | RECOVERY  |       |            |
| Internal Standards      | RECOVERY | LIMITS    |       |            |
| 13C-2,3,7,8-TCDD        | 79       | (40 - 235 | 3)    |            |
| 13C-1,2,3,7,8-PeCDD     | 86       | (40 - 135 | -     |            |
| 13C-1,2,3,6,7,8-HxCDD   | 76       | (40 - 135 |       |            |
| 13C-1,2,3,4,6,7,8-HpCDD | 84       | (40 - 135 | -     |            |
| 13C-0CDD                | 78       | (40 - 135 |       |            |
| 13C-2,3,7,8-TCDF        | 88       | (40 - 135 | -     |            |
| 13C-1,2,3,7,8-PeCDF     | 69       | (40 - 135 | •     |            |
| 13C-1,2,3,4,7,8-HxCDF   | 64       | (40 - 135 |       |            |
| 13C-1,2,3,4,6,7,8-HpCDF | 73       | (40 - 135 | •     |            |
| Molary (c.)             |          |           |       |            |

## Note(s):

Results and reporting limits have been adjusted for dry weight.

J Eistimuted result. Result is less than the reporting limit.

#### STL BUPPALO

## Client Sample ID: SB-7 (2-4)

## Trace Level Organic Compounds

Prep Date....: 12/03/01 Prep Batch #...: 1337482

Dilution Factor: 1

| Parameter               |             | DETECTIO      | <del></del>    |            |  |
|-------------------------|-------------|---------------|----------------|------------|--|
| Total TCDF              | RESULT      | <u> Limit</u> | UNITS          | METHOD     |  |
| •                       | ND          | 0.52          | pg/g           | SW846 8290 |  |
| Total PecDP             | MD _        | 0.84          | pg/g           | 5W846 8290 |  |
| Total HxCDF             | ND J        | 1.6           | pg/ş           | SW846 8290 |  |
| Total Epcoy             | 13          |               | P9/9           | SW846 8290 |  |
| Total TCDD              | 18          |               | pg/g           | SW846 8290 |  |
| Total Pecop             | 14          |               | <b>pg/g</b>    | SW846 8290 |  |
| Total ExCOD             | 3.5         |               | pg/g           | EW846 8290 |  |
| Total HpCnp             | 23          |               | Pg/g           | SW846 8290 |  |
| 2,3,7,8-TCDD            | ND          | 0.64          | pg/g           | SW846 8290 |  |
| 1,2,3,7,8-PeCDD         | ND          | 1.6           | pg/g           | SW846 8290 |  |
| 1,2,3,4,7,8-HxCDD       | ND          | 0.94          | pg/g           | SW846 8290 |  |
| 1,2,3,6,7,8-HxCDD       | MD          | 1.2           | pg/g           | SW846 8290 |  |
| 1,2,3,7,8,9-HxCDD       | <b>TMID</b> | 0.92          | P9/9           | SW846 8290 |  |
| 1,2,3,4,6,7,8-HpCDD     | 17          |               | P9/9           | SW846 8290 |  |
| OCDD                    | 42          |               | pg/g           | SW846 8290 |  |
| 2,3,7,8-TCDF            | MD          | 0.52          | pg/g           | SW846 8290 |  |
| 1,2,3,7,8-PeCDF         | ND          | 0.79          | pg/g           | SW846 8290 |  |
| 2,3,4,7,8-PeCDF         | MD          | 0.79          | pg/g           | 8W846 8290 |  |
| 1,2,3,4,7,8-HxCDF       | nd I        | 1.0           | pg/g           | SW846 8290 |  |
| 1,2,3,6,7,8-HxCDP       | ND (        | 0.87          | pg/g           | SW846 8290 |  |
| 2,3,4,6,7,8-HxCDF       | ир Ј        | 1.1           | pg/g           | SW846 8290 |  |
| 1,2,3,7,8,9-HxCDF       | ND J        | 1.2           | pg/g           | SW846 8290 |  |
| 1,2,3,4,5,7,8-HpcnF     | 3.4 (7)     | _             | pa/a           | SW846 8290 |  |
| 1,2,3,4,7,8,9-HpCDF     | ND 🚞        | 0.83          | pg/g           | 5W846 8290 |  |
| OCDF                    | 11(Q)       |               | pg/g           | SWB46 8290 |  |
|                         | PERCENT     | RECOVERY      |                |            |  |
| INTERNAL STANDARDS      | RECOVERY    | LIMITS        |                |            |  |
| 13C-2,3,7,8-TCDD        | 40          | (40 - 135     | <del>.</del> 7 |            |  |
| 13C-1,2,3,7,8-PeCDD     | 43          | (40 - 135     | ;)             |            |  |
| 13C-1,2,3,6,7,8-HxCDD   | 41          | (40 - 135     |                |            |  |
| 13C-1,2,3,4,6,7,8-HpCDD | 46          | (40 - 139     | •              |            |  |
| 13C-OCDD                | 43          | (40 - 135     | •              |            |  |
| 145 5 5 5 5 5 5 5 5 5 5 | =           | , mba         | •              |            |  |

| RECOVERY   | LIMITS                                 |
|------------|--|
| 40         | (40 - 135)                             |
| 43         | (40 - 135)                             |
| 41         | (40 - 135)                             |
| 46         | (40 - 135)                             |
| 43         | (40 - 135)                             |
| <b>4</b> 5 | (40 - 135)                             |
| 46         | (40 - 135)                             |
| 37 *       | (40 - 135)                             |
| 42         | (40 - 135)                             |
|            | 40<br>43<br>41<br>46<br>43<br>45<br>46 |

#### Note (S):

Results and reporting limits have been adjusted for day weight.

J Essimated result. Result is less than the seporting limit.

Surrogate resovery is outside stated control limits.

### Client Sample ID: SB-700 (2-4)

### Trace Level Organic Compounds

Analysis Date..: 12/15/01

| Lot-Sample #: G1K240118-017 | Work Order #: EPF3E1AC  | Matrix SOLID |
|-----------------------------|-------------------------|--------------|
| Date Sampled: 11/16/01      | Date Received: 11/23/01 |              |

Prep Date.... 12/03/01

Prep Batch #...: 1337482

Dilution Factor: 1

|                        |                 | DETECTIO  | 74           |            |
|------------------------|-----------------|-----------|--------------|------------|
| PARAMETER              | RESULT          | LIMIT     | UNITS        | METHOD     |
| Total TCDF             | ND              | 0.27      | pg/g         | SW846 8290 |
| Total PeCDF            | ND              | 0.43      | pg/g         | 8W846 8290 |
| Total HxCDF            | סא              | 1.8       | pg/g         | SW846 8290 |
| Total HpcDF            | 11              |           | pg/g         | SW846 8290 |
| Total TCDD             | 4.9             |           | pg/g         | EW846 8290 |
| Total PeCUD            | 4.5             |           | pg/g         | SW846 8290 |
| Total HxCDD            | ND              | 1.0       | pg/g         | SW846 8290 |
| Total HpCDD            | 22              |           | pq/g         | SW846 B290 |
| 2,3,7,8-TCDD           | ND              | 0.49      | pg/g         | SW846 B290 |
| 1,2,3,7,8-PeCDD        | MD              | 0.85      | pg/g         | SW846 8290 |
| 1,2,3,4,7,8-HxCDD      | ND              | 0.46      | pg/g         | SW846 8290 |
| 1,2,3,6,7,8-EXCDD      | ND              | 0.70      | pg/g         | SW846 9290 |
| 1,2,3,7,8,9-HxCDD      | ND              | 0.45      | pg/g         | SW846 8290 |
| 1,2,3,4,6,7,8-HpCDD    | 15              |           | pg/g         | SW846 8290 |
| OCDD                   | 85              |           | pg/g         | SW846 8290 |
| 2,3,7,8-TCDF           | ND              | 0.27      | pg/g         | SW846 8290 |
| 1,2,3,7,8-PeCDF        | ND              | 0.36      | pg/g         | SW846 8290 |
| 1.3.4,7,8-PeCDF        | ND              | 0.36      | pg/g         | SN846 8290 |
| l,2,3,4,7,8-HxCDF      | MD              | 0.50      | pg/g         | SW846 8290 |
| 1,2,3,6,7,8-HxCDF      | ND              | 0.43      | pg/g         | SW846 8290 |
| 2,3,4,6,7,8-HxCDF      | ND              | 0.53      | pg/g         | SW845 8290 |
| L,2,3,7,8,9-HxCDF      | ND              | 0.57      | pg/g         | SW846 8290 |
| 1,2,3,4,6,7,8-HpCDF    | 2.9 <i>(</i> J) |           | P9/9         | 5W846 8290 |
| L,2,3,4,7,8,9-HpCDF    | MD ~            | 0.39      | pg/g         | SW846 8290 |
| )CDF                   | 11(J)           |           | <b>199/9</b> | SN846 8290 |
|                        | PERCENT         | RECOVERY  |              |            |
| INTERNAL STANDARDS     | RECOVERY        | LIMITS    |              |            |
| 13C-2,3,7,8-TCDD       | 76              | (40 - 13  | 5)           |            |
| 13C-1,2,3,7,8-PeCDD    | 82              | (40 - 13  | 5)           |            |
| 13C-1,2,3,6,7,8-HxCDD  | 76              | (40 - 13  | 5)           |            |
| 3C-1,2,3,4,6,7,8-HpCDD | 84              | (40 - 13! | 5)           |            |
| .3C-OCDB               | 78              | (40 - 139 | 5)           |            |
| 3C-2,3,7,8-TCDF        | 91              | (40 - 13  | -            |            |
| 3C-1,2,3,7,8-PeCDF     | 88              | (40 - 13  | -            |            |
| 3C-1,2,3,4,7,8-HxCDF   | 66              | (40 - 135 |              |            |
| 3C-1,2,3,4,6,7,8-HpCDF | 78              | (40 - 135 | -            |            |

Results and reporting limits have been adjusted for dry weight.

I Estimated result. Result is less than the reporting limit.

## Client Sample ID: 88-700 SS-700 CQ

## Trace Level Organic Compounds

| Lot-Sample #: G1K240118-018 Date Sampled: 11/16/01 Prep Date: 12/03/01 Prep Batch #: 1337482 Dilution Factor: 1 | Work Order #: EPF3F1AC<br>Date Received: 11/23/01<br>Analysis Date: 12/15/01 | Matrix SOLID |
|---|--|--------------|
|---|--|--------------|

| Nan Elemen          |              | Detection | •              |                          |
|---------------------|--------------|-----------|----------------|--------------------------|
| PARAMETER           | RESULT       | LIMIT     | <u>units</u>   | METHOD                   |
| Total TCDF          | 82           |           | pg/g           | SW846 8290               |
| Total PeCDF         | 1200         |           | pg/g           | SW846 8290               |
| Total HxCOF         | 16000        |           | pg/9           | SW846 8290               |
| Total HpCDF         | 81000        |           | pg/g           | SW846 8290               |
| Total TCDD          | 48           |           | pg/g           | SW846 8290               |
| Total Pecop         | 730          |           | pg/g           | SW846 8290               |
| Total HxCDD         | 11000        |           | pg/g           | SW846 8290               |
| Total HpCDD         | 110000       |           | pg/g           | SW846 8290               |
| 2,3,7,8-TCDD        | 17           |           | pg/g           | EW846 8290               |
| 1,2,3,7,8-PeCDD     | 270          |           | pg/g           | SW846 8290               |
| 1,2,3,4,7,8-班(120)  | 610 D        |           | 29, \$<br>29/g | SW846 8290               |
| 1,2,3,6,7,8-HxCDD   | 2900 D       |           | pg/g           | SW846 8290               |
| 1,2,3,7,8,9-HxCDD   | 1500 D       |           | 28/8<br>52/3   | SW846 8290               |
| 1,2,3,4,6,7,8-HpCDD | 67000 D      |           | Pg/g           | SW846 8290               |
| OCDD                | 380000 B,D 3 |           | pg/g           | SW846 8290               |
| 2,3,7,8-TCDF        | 14 CON       |           | 19/g           | SW846 8290               |
| 1,2,3,7,8-PeCDF     | 90           |           | pg/g           | SW846 8290               |
| 2,3.4,7,8-PeCDP     | 72           |           | pg/g           | SW846 8290               |
| 1,2,3,4,7,6-HXCOP   | 610          |           | pg/g           | 5W846 8290               |
| 1,2,3,6,7,8-HXCDF   | 350          |           | pg/g           | SW846 8290               |
| 2,3,4,6,7,8-HaCDF   | 270          |           | pg/g           | SWB46 8290               |
| 1,2,3,7,8,9-EXCDF   | 23           |           | pg/g           | SW846 8290               |
| 1,2,3,4,6,7,8-HpCOF | 23000 D      |           | P9/9<br>P9/9   |                          |
| 1,2,3,4,7,8,9-HpCDF | 1300 D       | •         | pg/g<br>pg/g   | EW846 8290<br>SW846 8290 |
| OCDF                | 55000 D      |           |                | ·                        |
|                     |              |           | pg/g           | 5W846 8290               |
|                     | PERCENT      | RECOVERY  |                |                          |

| INTERNAL STANDARDS      | Percent<br>Recovery | recovery<br>Limits |
|-------------------------|---------------------|--------------------|
| 13C-2,3,7,8-TCDD        | 58                  | (40 - 135)         |
| 13C-1,2,3,7,8-PeCDD     | 76                  | (40 - 135)         |
| 13C-1,2,3,6,7,8-HxCDD   | 60                  | (40 - 135)         |
| 13C-1,2,3,4,6,7,8-HpCDD | 80                  | (40 - 135)         |
| 13C-0CDD                | 106                 | (40 - 135)         |
| 13C-2,3,7,8-TCDF        | 66                  | (40 - 135)         |
| 13C-1,2,3,7,8-PeCDF     | 82                  | (40 - 135)         |
| 13C-1,2,3,4,7,8-HxCDF   | 68                  | (40 - 135)         |
| 13C-1,2,3,4,6,7,8-HpCDF | 60                  | (40 - 135)         |

#### NOTE(S) 2

Ranchs and reporting limits have been adjusted for dry weight.

CON Confirmation unalysis.

D Result was obtained from the analysis of a dilution.

E Estimated result. Result concentration exceeds the calibration range.

#### Client Sample TO: SS-1

## Trace Level Organic Compounds

Analysis Date..: 12/14/01

Lot-Sample #...: G1K240118-001 Work Order #...: EPF2V1AC Matrix....: SOLID Date Sampled...: 11/16/01 Date Received..: 11/23/01

Prep Date....: 12/03/01 Prep Batch #...: 1337482

Dilution Pactor: 1

|                     |         | DETECTION |       |            |
|---------------------|---------|-----------|-------|------------|
| Parameter           | RESULT  | LIMIT     | UNITS | METHOD     |
| Total TCDF          | 1.0     |           | pg/g  | SW846 8290 |
| Total PecDF         | 31 J    |           | pg/g  | 8W846 8290 |
| Total HxCDF         | 490     |           | pg/g  | SW846 8290 |
| Total HpCDF         | 1900    |           | pg/g  | SW846 8290 |
| Total TCDD          | 1.1     |           | pg/g  | 5W846 8290 |
| Total PecDD         | 19      |           | pg/g  | SW846 8290 |
| Total HaCDD         | 490     |           | pg/g  | SW846 8290 |
| Total HpCDD         | 5000_   |           | pg/g  | SW846 8290 |
| 2,3,7,8-TCDD        | 1.1(3)  |           | P9/9  | SW846 B290 |
| 1,2,3,7,8-PeCDD     | 10      |           | 29/g  | SW846 8290 |
| 1,2,3,4,7,8-HaCDD   | 29      |           | pg/g  | SW846 8290 |
| 1,2,3,6,7,8-HxCDD   | 120     |           | pg/g  | SWB46 8290 |
| 1,2,3,7,8,9-HxCDD   | 74      |           | pg/g  | SWB46 8290 |
| 1,2,3,4,6,7,8-HpCDD | 3200 B  |           | pg/g  | SW846 8290 |
| OCDD                | 23000 B |           | pg/g  | SW846 8290 |
| 2,3,7,8-TCDF        | ND CON  | 0.50      | ba\a  | SW846 8290 |
| 1,2,3,7,8-PaCDF     | 3.9 (7) |           | pg/g  | SW846 8290 |
| 2,3,4,7,8-PeCDF     | 3.1①    | •         | pg/g  | SW846 8290 |
| 1,2,3,4,7,8-ExCDF   | 18      |           | pg/g  | SW846 8290 |
| 1,2,3,6,7,8-HxCDF   | 12      |           | pg/g  | SW846 8290 |
| 2,3,4,6,7,8-HxCOF   | 7.1     |           | pg/g  | SW846 8290 |
| 1,2,3,7,8,9-HxCDF   | NID     | 1.3       | pg/g  | SW846 8290 |
| 1,2,3,4,6,7,8-Apcor | 510     |           | pg/g  | SW846 8290 |
| 1,2,3,4,7,8,9-HpCDF | 37      |           | pg/g  | 5W846 8290 |
| OCDF                | 1900    |           | pg/g  | SW846 8290 |

|                         | Percent  | RECOVERY   |
|-------------------------|----------|------------|
| INTERNAL STANDARDS      | RECOVERY | LIMITS     |
| 13C-2,3,7,8-TCDD        | 39 *     | (40 - 135) |
| 13C-1,2,3,7,8-PeCDD     | 31 *     | (40 - 135) |
| 13C-1,2,3,6,7,8-HxCDD   | 25 *     | (40 - 135) |
| 13C-1,2,3,4,6,7,8-HpCDD | 30 +     | (40 - 135) |
| 13C-0CDD                | 35 *     | (40 - 135) |
| 13C-2,3,7,6-TCDF        | 34 *     | (40 - 135) |
| 13C-1,2,3,7,8-PeCDF     | 36 ★     | (40 - 135) |
| 13C-1,2,3,4,7,8-HxCDF   | 26 *     | (40 - 135) |
| 13C-1,2,3,4,6,7,8-HpCDF | 31 *     | (40 - 135) |

(Continued on next page)

Client Sample ID: SS-1

## Trace Level Organic Compounds

Lot-Sample #...: G1K240118-001 Work Order #...: EPF2V1AC

Matrix..... SOLID

NOTE (S):

Results and reporting limits have been adjusted for dry weight.

- J. Estimated result. Result is less than the reporting limit.
- E Estimated result. Result concentration exceeds the calibration range, CON Confirmation analysis.
- \* Surrogate recovery it outside mated control limits.

#### Client Sample ID: SS-2

## Trace Level Organic Compounds

Analysis Date..: 12/14/01

Lot-Sample #...: G1K240118-002 Work Order #...: EPF2W1AC Matrix..... SOLID Date Received..: 11/23/01

Date Sampled...: 11/16/01 Prep Date....: 12/03/01

Prep Batch #...: 1337482

Dilution Factor: 1

|                        |               | DETECTION | 7             |            |
|------------------------|---------------|-----------|---------------|------------|
| PARAMETER              | RESULT        | LIMIT     | UNITS         | METHOD     |
| Total TCDF             | 0.92          |           | pg/g          | SW846 8290 |
| Total PeCDF            | 31            |           | pg/g          | SW846 8290 |
| Total ExCDF            | 430           |           | pg/g          | SW846 8290 |
| Total HpCDF            | 1500          |           | pg/g          | SW846 8290 |
| Total TCDD             | 1.6           |           | pg/g          | SW846 8290 |
| Total PeCDD            | 8.3           |           | pg/g          | SW846 8290 |
| Total HxCDD            | 360           |           | pg/g          | SW846 8290 |
| Total RpCDD            | 3300          |           | pg/g          | SW846 8290 |
| 2,3,7,8-TCDD           | 0.83 (J)      |           | pg/g          | 5W846 8290 |
| 1,2,3,7,8-PeCDD        | 8.3           |           | ba\a<br>524.2 | SW846 8290 |
| 1,2,3,4,7,8-ExCDD      | 21 J          |           | pg/g          | SW846 8290 |
| L,2,3,6,7,8-HxCDD      | 99            |           | pg/9          | SW846 8290 |
| L, 2, 3, 7, 8, 9-HKCDD | <b>5</b> 6 () |           | pg/g          | SW846 8290 |
| L,2,3,4,6,7,8-HpCDD    | 2100          |           | pg/g          | SW846 8290 |
| COD                    | 13000 E J     |           | pg/g          | BW846 8290 |
| 1,3,7,8-TCDF           | 0.92 (T) CON  |           | pg/g          | SW846 8290 |
| 1,2,3,7,8-PeCDF        | 5.23          | ٠.        | pg/g          | SW846 8290 |
| 2,3,4,7,8-PeCDF        | ND            | 2.9       | pg/g          | SW846 8290 |
| .,2,3,4,7,8-HxCDF      | 21            |           | pg/g          | SW846 8290 |
| L,2,3,6,7,8-ExCDF      | 12            |           | pg/g          | SW846 8290 |
| 2,3,4,6,7,8-ExCDF      | 8.3           |           | 29/9          | SW846 8290 |
| .,2,3,7,8,9-HxCDF      | ND            | 2.0       | pg/g          | SW846 8290 |
| .3,3,4,6,7,8-HpCDF     | 370           |           | pg/g          | SW846 8290 |
| 1,2,3,4,7,8,9-HpcDF    | 29            |           | 19/9<br>19:5  | SW846 8290 |
| XCDF                   | 1300          |           | <b>p</b> 9/9  | SW846 8290 |
|                        | Percent       | RECOVERY  |               |            |
| INTERNAL STANDARDS     | RECOVERY      | LIMITS    | _             |            |
| 3C-2,3,7,8-TCDD        | 73            | (40 - 135 | <u> </u>      |            |
|                        |               |           |               |            |

|                         | Percent   | RECOVERY      |
|-------------------------|-----------|---------------|
| INTERNAL STANDARDS      | RECOVERY  | <u>LIMITS</u> |
| 13C-2,3,7,8-TCDD        | 73        | (40 - 135)    |
| 13C-1,2,3,7,8-PeCDD     | 82        | (40 - 135)    |
| 13C-1,2,3,6,7,8-HxCDD   | 61        | (40 - 135)    |
| 13C-1,2,3,4,6,7,8-HpCDD | 92        | (40 - 135)    |
| 13C-OCDD                | 110       | (40 - 135)    |
| 13C-2,3,7,8-TCDF        | 76        | (40 ~ 135)    |
| 13C-1,2,3,7,8-PeCDF     | 86        | (40 - 135)    |
| 13C-1,2,3,4,7,8-HxCDF   | <b>54</b> | (40 - 135)    |
| 13C-1,2,3,4,6,7,8-HpCDF | 92        | (40 - 135)    |

#### NOTE (S) :

Results and reporting limits have been adjusted for dry weight.

f Estimated result. Result is less than the reporting black.

E. Emimated result. Result concentration exceeds the calibration range. CON Confirmation analysis.

## Client Sample ID: SS-3

## Trace Level Organic Compounds

| Lot-Sample #: G1K240118-003 Date Sampled: 11/16/01 Prep Date: 12/03/01 Prep Batch #: 1337482 Dilution Factor: 1 | Work Order #: EPF2X1AC<br>Date Received: 11/23/01<br>Analysis Date: 12/14/01 | Matrix SOLID |
|---|--|--------------|
|---|--|--------------|

|                     |           | DETECTION    |              |                   |
|---------------------|-----------|--------------|--------------|-------------------|
| PARAMETER           | RESULT    | <u>LIMIT</u> | UNITS        | METHOD            |
| Total TCDF          | 14        |              | P9/9         | SH846 8290        |
| Total PeCDF         | 200       |              | pg/g         | EW846 8290        |
| Total HxCDF         | 2200      |              | pg/g         | <b>SW846 8290</b> |
| Total HpcDF         | 7000      |              | <b>pg/</b> g | SW846 8290        |
| Total TCDD          | 8.6       |              | P9/9         | SW846 8290        |
| Total PeCDD         | 83        |              | pg/g         | SW846 8290        |
| Total Encor         | 1400      |              | pg/g         | SW846 8290        |
| Total HpCDD         | 15000     |              | pg/g         | SW846 8290        |
| 2,3,7,9-TCDD        | 2.8       |              | pg/g         | SW846 8290        |
| 1,2,3,7,8-PeCDD     | 32        |              | pg/g         | SW846 8290        |
| 1,2,3,4,7,8-ExCDD   | 68 J      |              | pg/g         | SW846 8290        |
| 1,2,3,6,7,9-HxCDD   | 390 /     |              | pg/g         | SW846 8290        |
| 1,2,3,7,8,9-HxCDD   | 200 7     |              | pg/g         | SW846 8290        |
| 1,2,3,4,6,7,8-HpCDD | 9300 R J  |              | pg/g         | SW846 8290        |
| OCDD:               | 58000 R J |              | pg/g         | SW846 8290        |
| 2,3,7,8-TCDF        | 3.7 CON   |              | pg/g         | SW846 8290        |
| 1,2,3,7,8-PeCDF     | 25        |              | pg/g         | SW846 8290        |
| 2,3,4,7,8-PeCDF     | 15        |              | pg/g         | SW846 8290        |
| 1,2,3,4,7,8-ExCDF   | 100       |              | pg/g         | SWB46 8290        |
| 1,2,3,6,7,8-HacdF   | 57        |              | pg/g         | SW846 8290        |
| 2,3,4,6,7,8-HxCDF   | 45        |              | pg/g         | SW846 8290        |
| 1,2,3,7,8,9-HxCDF   | 7,9       |              | pg/g         | SW846 8290        |
| 1,2,3,4,6,7,8-HpCOP | 1700      |              | pg/g         | SW846 8290        |
| 1,2,3,4,7,8,9-HpCOF | 130       |              | pg/g         | SW846 8290        |
| OCDF                | 6500 E J  |              | pg/g         | SW846 8290        |
|                     |           |              |              |                   |

| RECOVERY  |   |
|-----------|---|
| WOLLA RKI | <u>Limits</u>                           |
| 73        | (40 - 135)                              |
| 82        | (40 - 135)                              |
| 69        | (40 - 135)                              |
| 93        | (40 - 135)                              |
| 110       | (40 - 135)                              |
| 74        | (40 - 135)                              |
| 84        | (40 - 135)                              |
| 64        | (40 - 135)                              |
| 97        | (40 - 135)                              |
|           | 73<br>82<br>69<br>93<br>110<br>74<br>84 |

#### MOTE (B) :

Results and reporting limits have been adjusted for dry weight.

E Estimated sensit. Result concentration exceeds the calibration range,

CON Confirmation analysis.

#### Client Sample ID: 85-4

### Trace Level Organic Compounds

Lot-Sample # ...: G1K240118-004 Work Order # ...: EPF201AC Matrix ....: SOLID
Date Sampled ...: 11/16/01 Date Received ...: 11/23/01
Prop Date ....: 12/03/01 Analysis Date ...: 12/14/01

Prep Batch #...: 1337482

Dilution Pactor: 1

| PARAMETER               | RESULT       | DETECTION<br>LIMIT | UNITS        | METHOD     |
|-------------------------|--------------|--------------------|--------------|------------|
| Total TYDF              | 37           |                    | pg/g         | SW846 8290 |
| Total PeCDF             | 590          |                    | P9/9         | SWB46 8290 |
| Total HxCDF             | 6300 _       |                    | pg/g         | SW846 8290 |
| Total HpCDF             | 24000 J      |                    | pg/g         | SW846 8290 |
| Potal TCDD              | 8.8          |                    | pg/g         | SW846 8290 |
| Total PeCDD             | 150          |                    | pg/g         | SW846 8290 |
| Total HaCDD             | 3700         | •                  | pg/g         | SW846 8290 |
| Fotal RpCDD             | 47000        |                    | <b>29/9</b>  | SW846 8290 |
| 2,3,7,8-TCDD            | 3.5          |                    | pg/g         | SW846 8290 |
| 1,2,3,7,8-PaCDD         | 56           |                    | pg/g         | SW846 8290 |
| 1,2,3,4,7,8-ExCDD       | 180 T        |                    | pg/g         | SW846 8290 |
| 1,2,3,6,7,8-HxCOD       | 1200_        |                    | pg/g         | SW846 8290 |
| L, 2, 3, 7, 8, 9-HxCTD  | 440 J        |                    | pg/g         | SW846 8290 |
| 1,2,3,4,6,7,8-NDCOD     | 30000 D      |                    | pg/g         | SW846 8290 |
|                         | 210000 D,R J |                    | pg/g         | SW846 8290 |
| 1,3,7,8-TCDF            | 11 COM       |                    | pg/g         | SW846 8290 |
| L,2,3,7,8-PeCDP         | 66           | ,                  | P3/3         | SW846 8290 |
| 1,3,4,7,8-PacDF         | 47           |                    | pa/a         | SW846 8290 |
| L,2,3,4,7,8~HxCDF       | 240          |                    | pg/g         | SW846 8290 |
| ,2,3,6,7,8-HxCDF        | 110          |                    | <b>P</b> 9/9 | SW846 8290 |
| ,3,4,6,7,8-HXCDF        | 86           |                    | pg/g         | SW846 8290 |
| 1,2,3,7,8,9-EXCOF       | 20           |                    | <b>p</b> g/g | SW846 8290 |
| .2,3,4,6,7,8-EpCDF      | 5300 D J     |                    | pg/g         | SW846 8290 |
| 1,2,3,4,7,8,9-RpCDF     | 360 D J      |                    | <b>199/9</b> | SW846 8290 |
| XDF                     | 20000 D      |                    | ba\a         | SW846 8290 |
|                         | PERCENT      | RECOVERY           | -            |            |
| NTERNAL STANDARDS       | RECOVERY     | <u> Limit</u> e    |              |            |
| 3C-2,3,7,8-TCDD         | 69           | (40 - 135)         | •            |            |
| 3C-1,2,3,7,8-PeCDD      | 80           | (40 - 135)         |              |            |
| 3C-1,2,3,6,7,8-HxCDD    | 66           | (40 - 135)         |              |            |
| .3C-1,2,3,4,6,7,8-HpCDD | 78           | (40 - 135)         |              |            |
| .3C-0C0D                | 89           | (40 - 135)         |              |            |
| 3C-2,3,7,8-TCDF         | 72           | (40 - 135)         |              |            |
| 3C-1,2,3,7,8-PeCDF      | 64           | (40 - 135)         |              |            |
| 3C-1,2,3,4,7,8-HxCDF    | 68           | (40 - 135)         |              |            |
| 3C-1,2,3,4,6,7,8-HpCDF  | 67           | (40 - 135)         |              |            |

#### NOTE(S):

Results and reporting familes have been adjusted for dry weight.

CON Confirmation analysis.

D Result was obtained from the analysis of a dilution.

E Estimated result. Result concentration exceeds the calibration range.

## Client Sample ID: SS-5

## Trace Level Organic Compounds

| Lot-Sample #: G1K240118-005 Date Sampled: 11/16/01 Prep Date: 12/31/01 Prep Batch #: 2002332 | Work Order #: BPF211AD Date Received: 11/23/01 Analysis Date: 01/03/02 | Matrix: SOLID |
|--|--|---------------|
|--|--|---------------|

Dilution Factor: 1

| PARAMETER                        | M-1                                | DETECTION |              |             |
|----------------------------------|------------------------------------|-----------|--------------|-------------|
| 2,3,7,8-TCDD                     | RESULT                             | LIMIT     | <u>Units</u> | METHOD      |
| Total TCDD                       | ND                                 | 0.027     | ng/g         | SW846 8280  |
| 1,2,3,7,8-PeCDD                  | ND                                 | 0.027     | ng/g         | SW846 8280  |
| Total PaCDD                      | NTD                                | 0.48      | ng/g         | SW846 8280  |
|                                  | NTD COM                            | 0.48      | ng/g         | SW846 8280  |
| 1,2,3,4,7,8-ExCDD                | 0.72 <b>(j</b> )<br>13 <b>(</b> 5) |           | ng/g         | SW046 8280  |
| 1,2,3,6,7,8-HxCDD                | 13 5                               |           | ng/g         | SW846 8280  |
| 1,2,3,7,8,9-HXCDD<br>Total HxCDD | 2.1 5                              |           | ng/g         | SW846 8280  |
| <del></del>                      | 30 5                               |           | ¤g/g         | SW846 \$280 |
| 1,2,3,4,6,7,8-HpCDD              | 520 B                              |           | ng/g         | SW846 8280  |
| Total HpCDD                      | 730 J                              |           | <b>¤g/g</b>  | 6W846 8280  |
| OCDO                             | 2500 K J                           |           | ng/g         | SW846 8280  |
| 2,3,7,8-TCDF                     | <b>MD</b>                          | 0.15      | ng/g         | SW846 8280  |
| Total TCDF                       | MD                                 | 0.15      | ng/g         | 6W946 8280  |
| 1,2,3,7,8-PeCDF                  | ND                                 | 0.34      | ng/g         | SW846 8280  |
| 2,3,4,7,8-PeCDF                  | ND                                 | 0.33      | ng/g         | SW846 8280  |
| Total PeCDF                      | <b>7</b> 00                        | 0.59      | ng/g         | SW846 8280  |
| 1,2,3,4,7,8-HxCDF                | 1.2 (J)                            |           | ng/g         | SW846 B280  |
| 1,2,3,6,7,0-HoCDP                | ND ~                               | 0.42      | ng/g         | EW846 8280  |
| 2,3,4,6,7,8-Hacdf                | <b>1.1 (f)</b>                     |           | ng/g         | SW846 8280  |
| 1,2,3,7,8,9-HxCDF                | MD                                 | 0.14      | ng/g         | SW846 8280  |
| Total RxCDF                      | 47 5                               |           | ng/g         | SW846 8280  |
| 1,2,3,4,6,7,8-HpCDF              | لر £ 50                            |           | ⊅g/g         | SW846 8280  |
| 1,2,3,4,7,8,9-Epcof              | 3.4 )                              |           | ng/g         | SW846 8280  |
| Total HoCDF                      | 270 5                              |           | ng/g         | SW846 8280  |
| OCDP                             | 450 H J                            |           | ng/g         | SW846 8280  |
| _                                | PERCENT                            | RECOVERY  |              |             |
| INTERNAL STANDARDS               | RECOVERY                           | LIMITS    |              |             |
| 13C-2,3,7,8-TCDD                 | 92                                 | (40 - 120 | <del>)</del> |             |
| 13C-2,3,7,8-TCDF                 | 94                                 | (40 - 120 | )            |             |
| 13C-1,2,3,6,7,8-HxCDD            | 106                                | {40 - 120 |              |             |
| 13C-1,2,3,4,6,7,8-HpCDF          | 102                                | (40 - 120 |              |             |
| 13C-0CDD                         | 72                                 | (40 - 120 | -            |             |

| INTERNAL STANDARDS      | RECOVERY | LIMITS     |
|-------------------------|----------|------------|
| 13C-2,3,7,8-TCDD        | 92       | (40 - 120) |
| 13C-2,3,7,8-TCDF        | 94       | (40 - 120) |
| 13C-1,2,3,6,7,8-HxCDD   | 106      | (40 - 120) |
| 13C-1,2,3,4,6,7,8-HpcDF | 102      | (40 - 120) |
| 13C-0CDD                | 72       | (40 - 120) |

### Note (8):

Rapides and reporting fimits have been adjusted for dry weight.

J Enimated result. Result is less than the suporting limit.

E Eximated result. Result concentration exceeds the calibration range.

#### Client Sample ID: 95-6

### Trace Level Organic Compounds

Prep Date....: 12/31/01 Prep Batch #...: 2002332

Dilution Factor: 1

| •                       |          | DETECTION | I     |             |
|-------------------------|----------|-----------|-------|-------------|
| PARAMETER               | RESULT   | LIMIT     | UNITS | METHOD      |
| 2,3,7,8-TCDD            | ND       | 0.053     | ng/g  | 5N846 B280  |
| Total TCDD              | ND       | 0.053     | ng/g  | SW946 8280  |
| 1,2,3,7,8-PeCDD         | ND       | 0.51      | ng/g  | SW846 8280  |
| Total PeCDD             | ND _     | 0.51      | ng/g  | SW846 8280  |
| 1,2,3,4,7,8-HxCDD       | 0.70 (J) |           | ng/g  | SW846 8280  |
| 1,2,3,6,7,8-ExCDD       | 7.2      |           | ng/g  | SW846 8280  |
| 1,2,3,7,8,9-HxCDD       | 1.8 🗸    | ,         | ng/g  | SW846 8280  |
| Total Except            | سر س 19  |           | ng/g  | SW846 \$280 |
| 1,2,3,4,6,7,8-HpCDD     | 370 B J  |           | ng/g  | SW846 8280  |
| Total PpCDD             | 560 J _  |           | ng/g  | SW846 8280  |
| OCDD                    | 1700 B J |           | ng/g  | 6W846 8280  |
| 2,3,7,8-TCDF            | NID      | 0.29      | ng/g  | SW846 8280  |
| Total TCDF              | ND       | 0.29      | ng/g  | 8W846 B280  |
| 1,2,3,7,8-PeCDF         | ND       | 0.18      | ng/g  | SW846 8280  |
| 2,3,4,7,8-PeCDF         | NTD /    | 0.17      | ng/g  | SW846 8280  |
| Total PeCDF             | 2.1 1    |           | ng/g  | SW846 8280  |
| 1,2,3,4,7,8-ExCOF       | 0.78(J)  |           | ₽g/g  | SW846 8280  |
| 1,2,3,6,7,8-HxCDF       | ND O     | 0.29      | ng/g  | SW846 8280  |
| 2,3,4,6,7,8-Hocor       | o.78 🛈   |           | ng/g  | SW846 8280  |
| 1,2,3,7,8,9-HxCDF       | ענא _    | 0.067     | ng/g  | SW846 8280  |
| Total Excur             | 25 🕤     |           | ng/g  | SW846 8280  |
| 1,2,3,4,6,7,8-HpCOF     | 27       |           | ng/g  | SW846 8280  |
| 1,2,3,4,7,8,9-HpCDF     | 2.0      |           | ng/g  | SW846 8280  |
| Total HpCDF             | 130 🗸    |           | ng/g  | SW846 8280  |
| OCDF                    | 100 в Ј  |           | ng/g  | SW846 8280  |
|                         | PERCENT  | RECOVERY  |       |             |
| INTERNAL STANDARDS      | RECOVERY | LIMITS    | _     |             |
| 13C-2,3,7,8-TCDD        | 89       | (40 - 120 | )     |             |
| 13C-2,3,7,8-TCDF        | 89       | (40 - 120 | )     |             |
| 13C-1,2,3,6,7,8-HxCDD   | 94       | (40 - 120 | )     |             |
| 13C-1,2,3,4,6,7,8-HpCDF | 100      | (40 - 120 | )     |             |
| 13C-GCDD                | 190 *    | (40 - 120 | )     |             |

Results and reporting limits have been adjusted for dry weight.

- I Entrusted result. Result is less than the reporting limit.
- E Estimated result. Result concentration exceeds the calibration range.
- Surrogate recovery is outside stated control limits.

### Client Sample ID: 88-7

## Trace Level Organic Compounds

Lot-Sample #...: G1K240118-007 Work Order #...: EPF231AC Date Sampled...: 11/16/01 Prep Date....: 12/03/01

Date Received..: 11/23/01 Analysis Date..: 12/14/01 Matrix..... SOLID

Prep Batch #...: 1337482 Dilution Factor: 1

| PARAMETER Total TCDF Total PCDF Total HxCDP Total HxCDP Total HxCDD Total TCDD Total HxCDD Total HxCDD Total HxCDD 1,2,3,7,8-TCDD 1,2,3,7,8-TCDD 1,2,3,4,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 1,2,3,4,6,7,8-HxCDD 2,3,7,8-TCDF 1,2,3,7,8-PCDF 1,2,3,4,7,8-PCDF | RESULT  21  340  7900  53000  15  200  4100  44000  6.5  100  250 J  2300  590 J  28000 D  170000 D  4.3 CON  31 | DETECTION | 53/3<br>53/3<br>53/3<br>53/3<br>53/3<br>53/3<br>53/3<br>53/3 | METHOD SW846 8290 |
|---|--|-----------|--|---|
| ~ . ~ . ~   |  |           |  | •   |

|                         | PERCENT          | RECOVERY   |
|-------------------------|------------------|------------|
| INTERNAL STANDARDS      | <u>re</u> covery | LIMITS     |
| 13C-2,3,7,8-TCDD        | 73               | (40 - 135) |
| 13C-1,2,3,7,8-PeCDD     | 90               | (40 - 135) |
| 13C-1,2,3,6,7,8-HxCDD   | 62               | (40 - 135) |
| 13C-1,2,3,4,6,7,8-HpCDD | 99               | (40 - 135) |
| 13C-OCDD                | 124              | (40 - 135) |
| 13C-2,3,7,8-TCDF        | 77               | (40 - 135) |
| 13C-1,2,3,7,8-PeCDF     | 88               | (40 - 135) |
| 13C-1,2,3,4,7,8-HxCDF   | 64               | (40 - 135) |
| 13C-1,2,3,4,6,7,8-HpCDF | 87               | (40 - 135) |

Remills and reporting timits have been adjusted for dry weight.

CON Confirmation analysis.

D Result was obtained from the analysis of a dilution.

## Client Sample ID: 85-8

## Trace Level Organic Compounds

| Lot-Sample #: G1K240118-008 Date Sampled: 11/16/01 Prep Date: 12/31/01 Prep Batch #: 2002332 Dilution Factor: 1 | Work Order #: EPF241AD<br>Date Received: 11/23/01<br>Analysis Date: 01/03/02 | Matrix soLID |
|---|--|--------------|
|---|--|--------------|

|                           |           | Detectio) | ง              |                                  |
|---------------------------|-----------|-----------|----------------|----------------------------------|
| PARAMETER                 | RESULT    | LIMIT     | UNITS          | METHOD                           |
| 2,3,7,8-TCDD              | ND        | 0.037     | ng/g           | SW846 8280                       |
| Total TCDD                | ND        | 0.037     | ng/g           | SW846 8260                       |
| 1,2,3,7,8-PeCDD           | MD        | 0.49      | ng/g           | SW846 8280                       |
| Total PeCDD               | ND        | 0.49      | ng/g           | SW846 8280                       |
| 1,2,3,4.7,8-HxCDD         | ND /      | 0.62      | ng/g           | SW846 8280                       |
| 1,2,3,6,7,8-HXCDD         | 3.7 J     |           | ng/g           | SW846 8280                       |
| 1,2,3,7,8,9-ExCOD         | 1.4 3     |           | 19/g           | SW846 B280                       |
| Total Excus               | 10 🗸 🧹    |           | ng/g           | SN846 8280                       |
| 1,2,3,4,6,7,B-HpCDD       | 150 B J   |           | ng/g           | SW846 8280                       |
| Total HpCID               | 220 J _   |           | ng/g           | 5W846 9280                       |
| OCDID                     | 600 B ()  |           | ng/g           | SW846 8280                       |
| 2,3,7,8-TCDF              | ND        | 0.087     | ng/g           | SW846 8280                       |
| Notal TCDF                | ND        | 0.087     | ng/g           | SW846 8280                       |
| L, 2, 3, 7, 8 - PeCDF     | ND        | 0.35      | ng/g           | SW846 8280                       |
| 2,3,4,7,8-PGCDF           | ND        | 0.35      | ng/g           | SW846 8280                       |
| Total PeCDF               | ND        | 0.75      | ng/g           | SW846 8280                       |
| L,2,3,4,7,8~HxCDF         | ND        | 0.55      | ng/g           | SN846 8280                       |
| l,2,3,6,7,8-HxCDF         | MD        | 0.29      | ng/g           | 9W846 B280                       |
| 2,3,4,6,7,8-HxCDF         | ND        | 0.46      | ng/g           | SW846 8280                       |
| L, 2, 3, 7, 8, 9-HxCDF    | ND /      | 0.12      | ng/g           | SW846 8280                       |
| total Excor               | 14 J      |           | ng/g           | SW846 8280                       |
| L, 2, 3, 4, 6, 7, 8-HpCDF | 16 3      |           | 19/9<br>19/9   | 54846 8280<br>54846 8280         |
| 1,2,3,4,7,8.9-Epcor       | (E) ee. o |           | 113/3<br>113/3 | 50046 6280<br>50846 <b>8</b> 280 |
| otal Hpcor                | 66 1      |           | ng/g           | SW846 8280                       |
| COF                       | 56 B 3    |           | ng/g           | SW846 B280                       |
|                           | PERCENT   | RECOVERY  |                |                                  |
| Internal Etandards        | マをこびいます   | T.TWTTC   |                |                                  |

| INTERNAL STANDARDS      | Percent<br>Recovery | recovery<br>Limits |
|-------------------------|---------------------|--------------------|
| 13C-2,3,7,8-TCDD        | 96                  | (40 - 120)         |
| 13C-2,3,7,8-TCDF        | 96                  | (40 - 120)         |
| 13C-1,2,3,6,7,8-HxCDD   | 104                 | (40 - 120)         |
| 13C-1,2,3,4,6,7,8-HpCDF | 113                 | (40 - 120)         |
| 13C-OCDD                | 183 *               | (40 - 120)         |

#### NOTE (S)

Results and reparting limits have been adjusted for dry weight.

- E Enlanced result. Result concentration accords the calibration range.
- J Estimated result. Result is less than the reporting liquit.
- Surrogue recevery is onuide stated control limits.

Client Sample TD: SS-9

### Trace Level Organic Compounds

| Lot-Sample #: G1K240118-009 Date Sampled: 11/16/01 Prep Date: 12/31/01 Prep Batch #: 2002332 Dilution Factor: 1 | Work Order #: EPF251AD<br>Date Received: 11/23/01<br>Analysis Date: 01/03/02 | Matrix SOLID |
|---|--|--------------|
|---|--|--------------|

| <b></b>                |                 | DETECTIO  | N .            |            |
|------------------------|-----------------|-----------|----------------|------------|
| PARAMETER              | RESULT          | LIMIT     | units          | METHOD     |
| 2,3,7,8-TCDD           | ND              | 0.050     | ng/g           | SW846 8280 |
| Total TCDD             | NED             | 0.050     | ng/g           | SW846 8280 |
| 1,2,3,7,8-PeCDD        | ND              | 0.76      | ng/g           | SW846 8280 |
| Total PeCDD            | ND _            | 0.76      | ng/g           | SW846 8280 |
| 1,2,3,4,7,8-HxCDD      | 1.1 (1)         |           | ng/g           | SW845 8280 |
| 1,2,3,6,7,8-ExCDD      | 5.8 J           |           | ng/g           | SW846 8280 |
| 1,2,3,7,8,9-HxCDD      | 2.5 🕤           | •         | ng/g           | SW846 8280 |
| Total ExCDD            | 18 5            |           | ng/g           | SW846 8280 |
| 1,2,3,4,6,7,8-HpCDD    | 230 E J         |           | ng/g           | SN846 8280 |
| Total HpCDD            | 350 ∫ 🦯         |           | ng/g           | SW646 8280 |
| OCDD                   | 870 E J         |           | ⊅g/g           | 5W846 8280 |
| 2,3,7,8-TCDF           | ND              | 0.13      | ng/g           | SW846 8280 |
| Total TCDF             | ND              | 0.13      | ng/g           | SW846 8280 |
| 1,2,3,7,9-PeCDF        | ND              | 0.40      | ng/g           | SW846 8280 |
| 2,3,4,7,8-Pecop        | ND /            | 0.39      | ng/g           | SW846 8280 |
| Total PeCOF            | 1.3 1           |           | ng/g           | SW846 8280 |
| 1,2,3,4,7,8-RXCDF      | 0.87(J)         | •         | ng/g           | SW846 8280 |
| 1,2,3,6,7,8-HxCDF      | NTO -           | 0.49      | ng/g           | 8W846 8280 |
| 2,3,4,6,7,8-HxCDF      | 1.0 <i>(</i> 3) |           | ng/g           | SW846 8280 |
| 1,2,3,7,8,9-HxCDF      | ND ·            | 0.17      | ng/g           | SW846 8280 |
| Total Excor            | 24 5            |           | ng/g           | SN846 8280 |
| 1,2,3,4,6,7,8-HpCDF    | 25 5            |           | ng/g           | 5W846 8280 |
| 1,2,3,4,7,8,9-HpCDF    | 1.65            |           | ng/g           | SW846 8280 |
| Total HpCDF            | 1005/           |           | -3/ 5<br>===/g | SW846 8280 |
| OCDF                   | 81 E J          |           | ng/g           | SW846 8280 |
|                        | PERCENT         | RECOVERY  |                |            |
| internal Standards     | RECOVERY        | LIMITS    |                |            |
| 3C-2,3,7,8-TCDD        | 84              | (40 - 12  | 0)             |            |
| 13C-2,3,7,8-TCDF       | 79              | (40 - 12  | -              |            |
| 13C-1,2,3,6,7,8-HxCDD  | 88              | (40 - 12  | •              |            |
| 3C-1,2,3,4,6,7,8-HpCDF | 100             | (40 - 12) |                |            |
| L3C-OCDD               | 171 *           | (40 - 12  | =              |            |
| TORUM LOS              |                 |           |                |            |

#### MOTE (S):

Results and reporting thatis have been adjusted for dry weight.

- J Estimated result. Result is less than the reporting limit.
- E Estimated serah. Rapide concentration exceeds the calibration range.
- Surrogate recovery is quiside stated control limits.