CONSTRUCTION CERTIFICATION REPORT

REMEDIATION OF THE
SWEDEN 3-CHAPMAN SITE
#8-28-040A

New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

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SECTION 1 - EXECUTIVE SUMMARY

The purpose of this construction certification report is to document the work activities pertaining to the remediation of the Sweden 3 Chapman site (Site No. 828040A) located in Sweden, Monroe County, New York. The New York State Department of Environmental Conservation (NYSDEC) contracted Site Remediation Services (SRS) under the State Superfund Standby Contract to provide general contracting services. Ecology & Environment (E&E) performed the remedial design and prepared the contract specifications. NYSDEC personnel provided construction inspection, project engineering, and project management services.

The Sweden 3 Chapman site was formerly used as a construction and demolition (C&D) debris landfill. The NYSDEC performed an interim remedial measure (IRM) in 1991 which involved the removal of 2,383 drums, 1,710 tons of contaminated soil and debris, and 486 bottles containing laboratory materials. A remedial investigation and feasibility study (RI/FS) was conducted in 1993 to define the nature and extent of contamination at the site and to select an appropriate remedial measure. The NYSDEC selected low-temperature thermal desorption (LTTD) for the final remedy.

NYSDEC publicly bid the contract and awarded the contract to the low bidder, SRS of East Windsor, Connecticut. The Notice to Proceed was issued by NYSDEC on August 24, 1998. SRS subcontracted Midwest Soil Remediation (MSR) to perform the LTTD operations. MSR did not complete mobilization of the LTTD unit to the site until November 22, 1998. The LTTD Demonstration Test was performed on November 23 and 24, 1998, and full-scale operation began on December 11, 1998. Due to schedule delays (as described in Section 3.1.3 of this report), Separable Part A of the contract was not completed until March 26, 1999 (compared to the contract schedule for Separable Part A being January 15, 1999). A total of 47 days of liquidated damages were assessed to SRS.

Work completed during this project included:

- Excavation, treatment, and backfill of 28,259 tons of contaminated soil;
- Treatment of 1,393,639 gallons of water generated during excavation dewatering operations;
- Sampling and analyses of post-excavation soil samples, treated soil piles, water treatment samples, and perimeter and personal air monitoring samples;
- Installation of 10 new monitoring wells and decommissioning of 4 existing wells;
- Construction of a landfill cap (with a geomembrane liner and geocomposite drainage layer); and
- Final site restoration activities including final grading and application of topsoil and seed, and installation of a gravel road leading to the landfill area.

In general, the work was performed in accordance with the contract documents. A description of the work performed is described in this report.

SECTION 2 - INTRODUCTION

2.1 Scope of Report

This construction remediation report consists of seven sections, along with supporting tables, figures, and appendices. Section 1 is an executive summary of key concepts and issues associated with the remediation of the Sweden 3 Chapman site. Section 2 presents the project background information and the team of project personnel and their responsibilities. Section 3 describes the sequence of construction activities associated with Separable Part A of the contract (which included LTTD treatment operations), and Section 4 describes the construction activities associated with the landfill cap and final site restoration activities. Section 5 includes a summary of the proposed change orders (PCOs) and Change Order No. 1. Section 6 describes conclusions and recommendations, and Section 7 provides the construction certificate for the project. The tables include summaries of important components of the remedial construction such as a list of subcontractors, the bid tabulation for the project, summaries of LTTD treatment operations, and a breakdown of final contract price for the project. The figures include the site location plan, construction site layout, water treatment system schematic, and LTTD system schematic. Appendices include project photographs, as-built drawings, summary of health and safety documentation air monitoring results, and sampling analytical results.

2.2 Site Background Information

2.2.1 Site Location and Description

The Sweden 3 Chapman site is approximately 2 acres in size located in the Town of Sweden about three miles south of the Village of Brockport in Monroe County, New York. The actual fenced construction area used during remedial activities encompassed approximately 8 acres. The site, which is currently owned by two adjacent property owners, was formerly used as a construction and demolition debris (C&D) landfill. The site is located in a sparsely populated residential/rural area. Approximately twenty residences are located within one-half mile of the site. The site borders a New York State regulated wetland to the north. Site drainage is to the north into the wetland and site groundwater flows to the northeast. A site location map is presented in Figure 1.

2.2.2 Site History

Based on aerial photographs, it appears that disposal activities started at the Sweden 3 site in the early 1960s . The dump was owned by Mr. Webster Chapman, Sr., who operated a construction business and used the landfill for C&D debris. Mr. Chapman gave the business to his son, Webster Chapman, Jr. in the early 1970s. The drums appear to have been disposed at the site between 1974 and 1976. Mr. Chapman, Jr. closed the landfill in 1979, sold the property, and left the Rochester area.

2.2.3 Remedial History

In 1982, the site was listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites. In 1983, a preliminary investigation Phase I Report was prepared for the NYSDEC which documented the presence of sixty-five 55-gallon drums on the surface of the site. The NYSDEC collected surface soil and drum samples at the site in October 1987 and March 1989 which indicated that hazardous waste at the site could potentially contaminate the adjacent wetland and underlying aquifer, and that drums on the surface (as well as partially buried) could present a direct exposure threat to people at the site. Therefore, the NYSDEC performed an interim remedial measure (IRM) in 1991. The IRM resulted in the removal of 2,383 drums, 1,710 tons of contaminated soil and debris, and 486 bottles containing laboratory materials. Approximately 2,400 tons of contaminated soil and debris from the IRM were stored at the site on a concrete pad until remedial construction activities began.

A Remedial Investigation and Feasibility Study (RI/FS) was conducted in the summer of 1993 to define the nature and extent of contamination remaining after the IRM and to select the appropriate remedial measure. The results of the RI/FS indicated that there were three source areas of heavily contaminated soil at the Sweden 3 site. These source areas were primarily located in areas where drums were removed during the IRM operations. The primary contaminants present were volatile organic compounds (VOCs) including trichloroethene (TCE) and associated compounds, acetone, and 2-butanone, which are commonly used industrial solvents. The RI/FS also indicated that the groundwater at the site was contaminated with VOCs.

Based on the results of the RI/FS, the NYSDEC selected on-site low temperature thermal desorption (LTTD) for the final remedy. The components of the remedy were identified as follows:

- Installation of a groundwater interceptor trench perpendicular to the VOC plume. The groundwater collected by the trench was to be treated by an air stripper and re-injected on site. However, this component of the remedy was not included in the final remedial design;
- Erect a temporary building on-site for soil/debris separation and size reduction;
- Separate debris from staged IRM-stockpiled soils using vibrating screens and grizzlies within the separation building. Larger debris not appropriate for the treatment system would be decontaminated and placed back on site;
- Excavated soils would require separation and reduction of particle size in the separation building prior to treatment;
- Treat soils by LTTD. Treat the off-gases from the process by thermal oxidation or carbon adsorption before discharge to the atmosphere;
- Once soils are treated to concentrations less than site cleanup objectives, backfill the soils in the excavation as per the RCRA Corrective Action Management Unit regulations, 40 CFR 264 Subpart S, as published in the Federal Register. The final cover system would consist

of a cap consistent with the requirements of 6 NYCRR Part 360-7.3(b)(9), construction requirements for Construction and Demolition Debris landfills three acres or less; and

- Long-term monitoring program and site restoration.

The Record of Decision (ROD) (which is a document that describes the selected remedial alternative for the site) was signed on March 21, 1994. In 1994, the site was also chosen for a multi-vendor demonstration of biological treatment to evaluate whether biological treatment was a possible remedial option. Field tests performed on site soils were completed in 1994 and 1995. The biological treatment study indicated that biological treatment was not appropriate for the site due to unfavorable field conditions (high water table). The Department's Division of Environmental Remediation retained Ecology and Environment (E&E) of Lancaster, New York to perform the remedial construction design, which was completed in 1998. The remedial design was finalized by the Department with a modification to the remedy, which involved the elimination of the groundwater pump-and-treat portion of the remedy. The basis for this modification was that a large volume of contaminated water would be removed from the source area during remedial construction (excavation dewatering) activities, and that the site groundwater would be monitored after construction. If necessary, based on the groundwater monitoring, active measures will be taken to alleviate the groundwater contamination problem.

Following public notice and a review of competitive bid packages, the remedial construction contract was awarded to Site Remediation Services (SRS) of East Windsor, Connecticut on August 24, 1998. Substantial completion of Separable Part A of the contract (LTTD treatment of contaminated soil and associated punchlist items) was achieved on March 26, 1999. Substantial completion of the contract (construction of the landfill cap) was achieved on June 15, 1999. Site restoration activities were completed on June 21, 1999. Final punchlist items were completed on July 2, 1999.

2.3 Project Staff and Responsibilities

The NYSDEC retained SRS as the prime construction contractor to perform and coordinate the work on-site. The staffing and responsibilities of both the NYSDEC and SRS are presented in the following paragraphs.

2.3.1 NYSDEC Staff

The construction project at the Sweden 3 Chapman site was performed on a contract under the New York State Standby Superfund Program, which is managed by the NYSDEC. Mr. George Harris, P.E. (Chief, Western Field Section, Bureau of Construction Services) was authorized by NYSDEC to execute the contract.

Mr. Mike Cruden, P.E. was the NYSDEC Project Manager. As the project manager, he made decisions on construction management issues and acceptability of the work based on information and recommendations from the construction inspector and project engineer. Specifically, his responsibilities were to assure the project proceeded satisfactorily according to the contract and NYSDEC interests; to provide final approval of proposed change orders (PCOs), change orders, and

payment requests; and to resolve disputes between the contractor and project engineer or construction inspector. He also inspected the project site on a bi-weekly basis and attended progress meetings.

Mr. Rob Ryan, P.E. was the NYSDEC Project Engineer, responsible for handling construction management duties. Specifically, Mr. Ryan kept the project manager informed of day-to-day issues during the remedial construction phase; provided direction to the contractor regarding contractual requirements; reviewed and approved contractor submittals; prepared PCOs and change orders; and ran project meetings and prepared meeting minutes. He also maintained close communication with the construction inspector regarding key construction issues and work progress.

Mr. Bob Long was responsible for providing construction inspection and management services for NYSDEC. Specifically, Mr. Long was responsible for providing full-time inspection of the construction activities at the project site and verifying that the work was performed in accordance with the contract documents. He also maintained written and photographic records of the work including notices of deficiencies as appropriate and maintained communication with the project engineer and project manager regarding key construction issues and work progress.

Meaghan Boice-Green provided public interaction and citizen participation services throughout the project. She ran public meetings and the project's open house, and provided the public with frequent project updates (fact sheets).

2.3.2 SRS Staff

SRS was the general contractor for the project. Mr. Bryan Pereyo was the original vice-president for SRS during the bidding and award process and during approximately the first two months of the project. Mr. Pereyo was then replaced by Mr. John Nelson. Mr. Nelson provided management oversight of the project for SRS and provided direction to SRS's project manager.

Mr. Sam Insallaco was the initial acting project manager for SRS. Mr. Insallaco was responsible for contractor schedule, submittal development, submittal of contractor payment applications, overall performance of the work in accordance with the contract documents, coordination with subcontractors, and coordination of SRS technical staff including a project superintendent and a Health and Safety Officer, tracking and reporting of M/WBE activity to the NYSDEC, and coordination with NYSDEC throughout the project. Mr. Insallaco also served as the Quality Assurance/Quality Control (QA/QC) Officer throughout the project. Mr. Ernest Duke replaced Mr. Insallaco as project manager approximately two months into the project. However, Mr. Insallaco remained on staff to provide technical support (including QA/AC Officer duties) throughout the remainder of the project, and actually served as acting project manager again during the final landfill cap phase of the project.

Mr. Tim Duclos was the initial project superintendent and was responsible for supervising and coordinating day-to-day construction activities, including coordination with subcontractors. Mr. Duclos was replaced by Mr. Mike Burns approximately two months into the project.

Mr. Kevin Connor and Ms. April Frankenburg provided technical support for SRS throughout the project including submittal preparation, transmittal of analytical results, coordination with subcontractors, and coordination with the NYSDEC.

Mr. Doug Weatherhog was the original Health and Safety Officer (HSO) and was replaced by Mr. Gary Finnigan approximately two months into the project. The HSO was responsible for implementing the Health and Safety Plan (HASP).

SRS subcontracted Midwest Soil Remediation (MSR) to perform the LTTD treatment operations. SRS utilized several other subcontractors throughout the project. Table 1 presents a list of subcontractors hired by SRS during construction, along with their major responsibilities.

SECTION 3 - SUMMARY OF SEPARABLE PART A CONSTRUCTION ACTIVITIES (August 1998 to March 1999)

3.1 Introduction

SRS was notified of its apparent low bidder status for the Sweden 3 Chapman remediation contract following Department review of competitive bid packages. SRS's bid tabulation for this project is included in Table 2. SRS was provided Notice of Intent to Award on July 9, 1998 followed by Notice to Proceed on August 24, 1998.

3.1.1 Project Meetings

A pre-construction meeting was held on August 18, 1998 in the NYSDEC project trailer at the Oswego Castings construction site located in Oswego, New York. People attending the meeting included SRS's vice president and project manager and NYSDEC personnel including the project manager, project engineer, construction inspector, technical specialist, and citizen participation specialist. The purpose of the meeting was to provide an opportunity for project personnel to meet, as well as discuss the project schedule and contractual requirements (such as change orders, payments, completion of work, etc.) for the project.

Bi-weekly progress meetings were held at the site in accordance with the contract. The progress meetings included a discussion of the following items: previous meeting minutes, work completed and work anticipated, health and safety issues, environmental issues, public interaction, schedule, change orders, payment requests, subcontractors, and submittals. The meetings also included a general discussion involving any other issues of concern. A summary of all the project meetings is presented in Table 3. A list of the contract-required submittals delivered by SRS during this project is presented in Table 4.

3.1.2 Project Schedule

Notice to Proceed was awarded on August 24, 1998. Substantial Completion of Separable Part A of the contract (excavation, LTTD treatment, and backfill) was scheduled for 144 days from the Notice to Proceed, which was to be January 15, 1999 (liquidated damages of $1530 per day would

be assessed for every day beyond 144 days). Separable Part A of the contract was established so that excavation, LTTD treatment, and backfilling activities would be completed in a timely manner by the contractor, as these activities would be affected by winter weather, and would put undue strain on nearby residents if they were allowed to occur over the entire length of the contract. Substantial Completion of the entire contract was scheduled for 290 days from Notice to Proceed, which was to be June 10, 1999 (liquidated damages of $1530 per day for every day beyond 290 days). Final completion was scheduled for 350 days from Notice to Proceed, which was August 9, 1999 (liquidated damages of $890 per day for every day beyond 350 days).

The Department granted SRS a time extension of 22 days for Part A Substantial Completion due to excavation layback work along the wetland associated with PCO1, certain periods of shutdown, and treatment of additional soils. The time extension was granted on the condition that SRS would not make any additional claims for additional costs for Part A work. Of the 22 additional days granted, 4 of the days were associated with the additional soil treatment. Therefore, 4 days were also added to the Substantial Completion and Final Completion Schedules.

SRS achieved actual Substantial Completion of Separable Part A of the contract on March 26, 1999, 47 days after the time extension allowed. SRS was therefore assessed 47 days of liquidated damages. The liquidated damages were withheld from progress payments and subsequently included in Change Order No. 1, which SRS executed and was eventually paid for after the State Comptroller approved it.

3.1.3 Project Schedule Delays

There were several factors that contributed to project delays in the project schedule. Although Notice to Proceed was provided on August 24, 1998, major work tasks such as construction of the Feed Preparation Building and Water Treatment System did not begin at the site until late October 1998. Additionally, MSR did not complete mobilization of the LTTD unit to the site until November 22, 1998. After the date of substantial completion of Part A (January 15, 1999) had expired, significant weather delays were also experienced at the site.

The Department made efforts to assist SRS in completing the project on time. Specifically, the Department provided approval to use slope-benching in the main source area excavation in lieu of sheet piling (see Sections 3.6.3 and 5.1 of this report). The Department also allowed SRS to excavate in the main source area (for the LTTD Demo Test) before the water treatment system was operational, and provided SRS full-scale approval for LTTD operations before receiving the final Demo Test Report (A draft copy had been reviewed and the necessary revisions were relatively minor).

Specific details regarding the project schedule are presented in the project meeting minutes.

3.1.4 Community Interaction

Throughout the course of the project, the Department kept the public informed using both an initial public meeting and open house as well as periodic fact sheets. The fact sheets were mailed or hand-

delivered to local residents throughout the project and after the final landfill cap was completed. The fact sheets provided an update on site activities and gave names of contact people that could be contacted with questions or complaints. Department staff also were equipped with pagers and were always available to the public. During the LTTD treatment operations, the neighbor located immediately east of the site complained about noise and vibration. To mitigate the problem, an effort was made to minimize night time and weekend operation of the system. Additionally, the back-up alarms on the loaders were de-activated and replaced with flashing light alarms.

3.2 Site Preparation

3.2.1 Clearing and Grubbing

Bedrock Inc. and B.C. Excavators were retained by SRS to perform clearing and grubbing services at the site in preparation for remedial construction activities. The clearing and grubbing work was completed on September 22 and 23, 1998, and consisted of the removal of trees and ground cover in the area designated for remedial construction activities. The work was performed using chain saws, a mechanical tree shearer, and a wood chipper. Wood chips were stockpiled along the southwest corner of the site and tree stumps were stockpiled separately in the same area. The wood chips were eventually used for mulch as part of the wetland restoration activities and the tree stumps were hauled off-site to the Town of Sweden Highway Department. It should be noted that the tree stumps which were hauled off-site did not come from contaminated areas at the site.

3.2.2 Set-Up / Removal of Temporary Access Roads

Gravel roads and a parking area which existed at the site as a result of the IRM activities were upgraded for use during the remedial construction work. The roads and parking area were upgraded by clearing vegetation and adding gravel as necessary. Existing roads located in the areas designated for the Feed Preparation Building (FPB) and the LTTD staging pad were removed prior to installation of those items.

At the end of the project, all temporary access roads and parking areas were removed, with the exception of a main entrance road which existed prior to IRM activities. The remaining entrance road was approximately 15 feet wide and ran approximately 100 feet into the site. Temporary access roads and parking areas were removed by excavating gravel to a depth of 6 inches and replacing it with topsoil (followed by hydro seeding). Excavated gravel and soil from these areas was sampled to evaluate for the presence of contamination prior to being placed underneath the landfill cap for final disposition. Section 4.4 of this report provides additional details regarding final site restoration activities.

3.2.3 Set-Up / Removal of Staging Areas

Construction of the staging pads for the LTTD unit and the water treatment system began on September 28, 1998 and was completed on October 26, 1998. The LTTD pad was constructed to be 200 feet by 150 feet in size and the water treatment pad was 75 feet by 100 feet. Both of the pads consisted of approximately 3 to 6 inches of sand overlain by a 40 mil high density polyethylene liner

and a layer of geotextile fabric, overlain by approximately 9 inches of gravel. Chenango Contracting installed the 40 mil liner for both of the pads. Both of the pads were constructed with a 2-foot earthen berm around the perimeter, with the 40 mil liner extending over the top of the berm. The LTTD pad was sloped to the northwest corner to a blind sump, which consisted of an area of lower elevation, approximately 6 feet in diameter and also lined with the 40 mil liner. Water that accumulated in the sump was periodically pumped out (as necessary) and treated in the Water Treatment System.

3.2.4 Feed Preparation Building

The asphalt pad for the FPB was installed on November 5 and 6, 1998 by Cardwell construction, after the FPB was constructed. The pad was 4 inches thick and 88 feet by 200 feet in size. Concrete jersey barriers (for secondary containment inside the FPB) were installed around the perimeter of the pad and were sealed with asphalt. A sump (4 feet by 4 feet by 3 feet deep) was installed at the northwest corner of the pad and lined with asphalt.

Construction of the FPB was performed by Universal Fabrics between October 27 and November 4, 1998. The building was also 88 feet by 200 feet in size and consisted of aluminum beams, PVC-coated polyester scrim fabric, two man doors (one at each end), and two sliding cargo doors at each end. The building was ventilated by utilizing a 36-inch duct connected to the LTTD combustion air fan.

3.2.5 Pre / Post-Treatment Sampling of Pad Areas

Prior to installation of the pads, sampling grids were surveyed in place by Modi Engineering on October 19, 1998. The grids were established to account for one sample per 1000 square feet of grid. Fifty five (55) pre-treatment samples were obtained and delivered to Columbia Analytical Services (CAS) on October 19, 1998. The samples were analyzed for VOCs using US EPA Method 8260B to evaluate whether the soil underneath the proposed pad locations was contaminated prior to construction of the pads. Analytical results for all of the samples indicated that VOCs were not detected. Portions of the LTTD and water treatment pads located within the footprint of the landfill were not sampled, as these areas would be contained underneath the landfill cap.

Following removal of these pads after remedial activities were completed, samples were obtained from the same surveyed locations to verify that the pad areas were not contaminated during the remedial activities. All of the samples were analyzed for the same parameters described above and analytical results indicated that VOCs were not detected. Table 5 presents a summary of the different sampling activities performed throughout the project.

3.2.6 Removal of LTTD and Water Treatment System Pads

Following remedial construction activities, the LTTD and water treatment system staging pads were removed. Removal of the pads consisted of excavating the pad materials (sand, gravel, and liner) and sampling the materials to confirm that they had not become contaminated during treatment operations. Analytical results indicated that the materials were not contaminated; therefore the

materials were temporarily staged and eventually placed underneath the landfill cap for final disposition. Section 4.4 of this report provides additional details regarding final site restoration activities.

3.2.7 Removal of Feed Preparation Building

Prior to removal of the FPB, the interior surfaces of the building, asphalt pad, and jersey barriers were decontaminated using a power-wash. The asphalt pad was removed by SRS and hauled off-site by MJ Dreher Trucking (on April 16, 1999) to Dolomite Products asphalt recycling plant. Jersey barriers were also removed and hauled off-site. On April 23, 1999, Universal Fabrics completed disassembly of the building and removed it from the site.

3.2.8 Set-Up / Removal of Utilities and Sanitary Facilities

D.V. Gonzalez was on-site for approximately two months after beginning installation of electrical utilities on August 25, 1998. They installed aboveground electrical services to the four trailers and installed underground services to the LTTD pad, water treatment pad, decontamination pad, and exterior light poles. The electrical services were provided by upgrading the existing service panel that was present at the site as a result of the IRM activities. Niagara Mohawk was the utility company responsible for providing electricity to the site.

Portable sanitary facilities were provided by EZ Does It. They were emptied and cleaned every 2 weeks. Potable bottled water was contracted through Keppler-Culligan. Frontier Telephone was the utility company responsible for providing telephone services to the site.

3.2.9 Health and Safety Equipment / Decontamination Trailer / Weather Station

Air monitoring equipment was needed at the site to ensure that air quality remained at safe levels during construction, both for the safety of the workers at the site, as well as neighboring residents. The weather station was needed to verify wind direction during construction activities, which was necessary information to adequately monitor the air quality at the site perimeter.

D.W. Environmental provided initial air monitoring equipment and a weather station at the site. The weather station measured wind velocity and temperature. Approximately two months into the project, D.W. Environmental left the project and SRS replaced D.W. Environmental's equipment with their own equipment. Air monitoring equipment was placed at six locations at the site. Each station consisted of a Bacharach Sentinel 44 Oxygen Deficiency/Explosivity Meter which measured carbon monoxide, oxygen, and the lower explosive limit (LEL); a Mini-Rae Plus Organic Vapor Meter; MIE-PDR-1000 Particulate Meter; and a Gillian Air Pump, which was used to obtain samples for dust/VOC documentation monitoring. The weather station consisted of a wind gauge and thermometer.

Throughout the project, construction work was stopped three times due to high dust content in the air. The high dust content was due to problems with the re-hydrating system associated with the LTTD unit.

The decontamination trailer was used daily by workers to decontaminate themselves prior to leaving the job site. The decontamination trailer was delivered to the site on August 27, 1998 and was in service by November 11, 1998. Decontamination/waste water was collected in a 200-gallon tank outside the trailer for temporary storage before being pumped to the water treatment plant for final treatment.

3.2.10 Field Offices / Project Sign

Field offices provided necessary office space for NYSDEC, SRS, and subcontractors. Two field trailers were delivered to the site on August 25, 1998. SRS provided a computer, printer, copier, fax machine, and phone in both their own trailer and the Department's trailer as required by the contract. The third trailer was delivered to the site on August 3, 1998 and was generally used by subcontractors.

The existing sign used during IRM activities was re-used during the remedial construction. The sign read "New York State Department of Environmental Conservation, 1986 NYS Environmental Bond Act Project, Remediation of the Sweden 3 Chapman Site, Site No. 828040A.

3.2.11 Site Survey

An initial site survey was performed by Modi Engineering, a subcontractor to SRS, between September 9 through September 14, 1998. The survey included existing topographic conditions, fence, monitoring wells, and roadways within the area that was fenced during IRM activities. A copy of the Existing Conditions Map is included in Appendix A.

3.2.12 Surface, Storm Water, Erosion, and Sedimentation Controls

Silt fencing was placed along the entire southern boundary of the wetland to prevent sediment from the excavation area from entering the wetland. The drainage swale at the site which flows north into the wetland was located in the same area where the FPB needed to be constructed. Therefore, a culvert was constructed underneath the FPB to enable the drainage swale to maintain normal flow into the wetland. Additionally, stone check dams were constructed at various locations along the drainage swale to control flow velocity during rain or snowmelt events and thereby minimize sediment releases into the swale.

3.2.13 Decontamination Station

The existing concrete decontamination pad which remained at the site after the IRM activities was used to provide an area where equipment could be decontaminated after certain work activities or before the equipment was to leave the site. The pad was 50 feet by 40 feet in size and was equipped with a trench drain which connected to a blind sump. The decontamination pad was also equipped with 6-inch concrete curbing around the perimeter. To put the pad in service for the LTTD remedial activities, sediment from the trench drain and sump was removed and the sump was equipped with a sump pump. Additionally, SRS placed polyethylene sheet curtains around the perimeter of the pad to prevent decontamination spray water from leaving the decontamination area.

3.2.14 Permits and Fees

SRS was responsible for obtaining all permits and paying fees to perform the work. Specifically, SRS obtained a building permit from the Town of Sweden for the FPB and an electrical underwriters certificate.

3.2.15 Traffic Controls

In accordance with the contract, two traffic control signs saying "Truck Entrance" were placed on Beadle Road, approximately one quarter of a mile from each side of the entrance. One of the signs was located west of the site and the other was located to the east. Additionally, subcontractors hauling materials and equipment to the site were directed to enter the site from the west end of Beadle Road, to minimize traffic on the more residential east end of the road.

3.2.16 Demolition and Removal of Existing Site Facilities

At the end of the project, two existing concrete pads and the decontamination pad (remaining from the IRM activities) were saw-cut and removed. All of these pads were used during the LTTD remedial activities and were removed at the end of the project. Refer to Section 4.4 of this report for a detailed description of site restoration activities.

3.2.17 Mobilization / Demobilization of LTTD Equipment

MSR began mobilizing LTTD equipment to the site on November 16, 1998 and completed delivery of all the components on November 22, 1998. The equipment delivered to the site consisted of: the feed hopper, thermal desorber, thermal dust collector, soil cooler, baghouse filter, after burner (thermal oxidizer), control room, and generator. Demobilization of the LTTD equipment after the remedial activities occurred from March 17, 1999 to April 6, 1999.

3.2.18 Public Information Meeting

A public information meeting (open house) was held on Saturday, November 21, 1998 to inform the local neighbors and public about the upcoming remedial activities planned at the site. The open house was performed inside the SRS field trailer and was followed by a brief walking tour of a small area of the site where the LTTD equipment could be viewed. Brief introductions and an overview of LTTD operations were provided. A large schematic showing the process of soil treatment from the excavation stage through the LTTD and backfilling activities was presented. Approximately 30 local residents, as well as representatives from the New York State and Monroe County Health Departments, attended the open house.

3.2.19 Demonstration Test

The Demonstration (Demo) Test for the LTTD Unit was performed on November 23 and 24, 1998 in accordance with the Site Preparation provisions in the contract. A detailed discussion of the Demo Test is provided in Section 3.9.4 of this report.

3.2.20 Stone Access Road

After completing the landfill cap construction, a stone access road leading to the landfill was constructed in accordance with the contract. Section 4.4 of this report provides details regarding the construction of this roadway.

3.2.21 Drum Disposal

Approximately 236 drums were left at the site after the IRM and the biological treatment study. As part of this contract, soil from these drums was removed and treated in the LTTD unit; water contained in the drums was sent through the water treatment system; and personal protective equipment (PPE) and polyethylene plastic wastes were placed under the landfill cap for final disposition. The drums were decontaminated and disposed off-site.

3.3 Site Services

3.3.1 Site Security

Site security was provided by SRS during working hours and included visual observation and the use of a sign-in sheet for visitors and subcontractors. A gate was installed at the entrance to the exclusion zone, which served to prevent uncontrolled access to the remedial construction area. SRS retained Adams Security, Inc. to provide security during non-working hours.

3.3.2 On-going Maintenance of Site

Throughout the project, SRS performed on-going maintenance of access roads, site fencing, traffic control signs, surface and storm water controls, field offices, temporary utilities, sanitary facilities, and staging/support areas on an as-needed basis or as directed by the NYSDEC construction inspector.

3.3.3 Handling and Disposal of Contractor Wastes

A large roll-off dumpster at the site for disposal of office-related wastes, garbage, silt fencing, waste polyethylene sheeting, wood debris, and miscellaneous other debris was used.

3.3.4 Maintenance of Survey Controls

Modi Engineering and Shultz Associates maintained survey controls throughout the project. Specifically, survey controls were utilized for sample point locations, excavation volumes and dimensions, differentiating between the source area north layback excavation areas. The survey controls were also used for preparation of as-built drawings (which are included in Appendix A) at the end of the project.

3.4 Health and Safety

As discussed in Section 2.3.2, SRS retained Doug Weatherhog of D.W. Environmental to be the Health and Safety Officer (HSO) and to provide equipment for air monitoring and implementation of the Health and Safety Plan. Mr. Weatherhog was responsible for conducting health and safety meetings, supervising health and safety activities, perimeter air monitoring, and the collection of soil samples from the existing soil stockpile that remained after IRM activities. Mr. Weatherhog resigned approximately two months into the project, and was replaced by Mr. Gary Finnigan of SRS.

SRS mobilized a decontamination trailer to the site, and staged it in the support zone located to the south of the LTTD treatment operations. The trailer was used by workers to clean hands and faces, take showers as necessary, and to store their street clothing in.

The level of protection for workers for the majority of the work performed on-site was Modified Level D, which required the wearing of safety glasses and gloves, in addition to the typical Level D protection (field clothes, hard hats, and steel toe boots).

As discussed in Section 3.2.13 of this report, SRS utilized the existing decontamination station left at the site from the IRM acitivites. The decontamination station consisted of a 50 feet by 40 feet concrete pad equipped with a trench drain connected to a sump (equipped with a sump pump). The decontamination station was also equipped with six inch curbing and polyethylene sheet curtains around the perimeter of the pad.

3.4.1 Air Monitoring

Contract specifications required SRS to provide both real time and documentation air monitoring throughout the project. Real time organic vapor monitoring was performed using a Mini-Rae Organic Vapor Meter, and real time particulate monitoring was performed using a MIE-PDR-1000 Particulate Meter. Real time monitoring was performed during intrusive excavation activities, and handling and/or treatment of contaminated materials. Prior to intrusive excavation activities, upwind background levels were established. If background levels were exceeded during intrusive excavation activities, the HSO was notified and work was suspended. If real time particulate monitoring indicated that the particulate level in the work zone exceeded 150 micrograms per cubic meter over background conditions at any time, the HSO was notified and the work was suspended, and corrective actions were implemented. Air monitoring results were reported to the NYSDEC on a daily basis.

Documentation monitoring was performed at the site perimeter at both upwind and downwind locations for organic vapors, dust, and mercury. The documentation samples were collected using the Gillian Pump and were analyzed using NIOSH Method 0500. Documentation samples were collected twice per week during normal working hours. At the end of each week, the HSO selected three perimeter samples to be analyzed. The documentation samples were obtained to verify that airborne contaminants were not leaving the site at unsafe levels. Additionally, air monitoring equipment was placed on individual workers in the exclusion zone once per week and samples were

collected and analyzed. These samples were obtained to confirm that workers in the exclusion zone were not being exposed to unsafe levels of airborne contaminants. Copies of the weekly documentation monitoring results are included in Appendix B.

Throughout the project, work was stopped three times due to high dust content in the air. The high dust content was due to problems with the LTTD re-hydrating system, which was designed to add water to treated soil as it exits the LTTD unit, preventing dust emissions.

SRS also maintained a meteorological station inside the LTTD control room, which measured wind velocity and direction, temperature, humidity, and precipitation.

Continuous air emission monitoring was also performed at the stack of the LTTD unit on an hourly basis. After the normal work hours, the LTTD operator would write down the readings on a log sheet and reported it to the HSO and NYSDEC in the daily report.

3.4.2 Dust Control

Dust control was provided using a water truck and spraying equipment over various areas of the construction site or as directed by the NYSDEC construction inspector. Back-up dust control was also provided at the LTTD soil discharge area for occasions when primary soil re-hydrating operations failed due to pump failure or hose problems (freezing, folding, etc.). The back-up system consisted of a water spray system that could be immediately activated by the LTTD operator in the event that primary soil re-hydrating operations failed. Additionally, polyethylene sheeting was placed over treated soil piles as necessary.

3.4.3 Odor Control

Odor control was achieved by placing polyethylene sheeting over contaminated soil piles throughout the project. The feed preparation building also served to prevent excess odors from entering the atmosphere around the job site.

3.3.4 Noise Control

To maintain appropriate noise control at the site, the contract required that sound impacts be maintained below 35 decibels above background at the site perimeter. Noise was monitored continuously during the first week of construction, during the LTTD Demo Test, and during the first two weeks of LTTD treatment operations. Reports were provided to the NYSDEC on a daily basis.

During construction activities, backup alarms on dump trucks and loaders were adjusted or reduced to minimize noise associated with their operation. The power screen used for LTTD screening operations was also modified to minimize noise. LTTD treatment operating hours were limited on weekends. Additionally, nuisance noise complaints from local residents were promptly addressed.

3.4.5 Operation and Maintenance of Health and Safety Equipment

The HSO was responsible for the operation and maintenance of all health and safety equipment throughout the project. Specifically, the HSO calibrated air monitoring equipment on a daily basis, inspected and maintained the decontamination trailer and remote decontamination stations (2 portable eye wash stations, fire extinguishers, the boot wash area in the support zone, etc.). Used personal protective equipment (PPE) was placed in plastic bags and staged on the decontamination pad prior to final disposal off-site.

3.5 Monitoring Well Decommissioning

Prior to excavation and backfill activities, two existing wells in the source area (monitoring wells 6S and 6I) and two existing wells outside the source area (monitoring wells 15S and 15I) were decommissioned. Applied Earth Technologies performed the decommissioning activities on November 9 and 10, 1998. The decommissioning was performed by first breaking up and removing the concrete seal and protective casing at the top of the well. The materials were pulled out of the ground by boring around the outside of the 2-inch PVC riser and screen, and then pulling the materials out of the ground with the boring equipment. Grout was then placed into the open hole up to the surface elevation. The decommissioning work was performed in accordance with the NYSDEC guidance entitled "Groundwater Monitoring Well Decommissioning Procedures", dated October 1996.

3.6 Excavation and Backfill of Soils

The following equipment was used during the excavation and backfill activities:

- (1) Samsung 350 SE Tracked Excavators
- (2) Volvo 35D Articulating Off-Road End Dump Trucks
- (1) John Deere 270 Excavator
- (1) Caterpillar T15 Articulating Off-Road End Dump Trucks

3.6.1 Topsoil Stripping and Staging

On November 2 through November 16, 1998, approximately 6 inches of topsoil was stripped from the surface of the source area and water treatment pad area. The topsoil was stockpiled at the southwest corner of the site, to be reused for site restoration purposes at the end of the project. A survey of the stockpile indicated that approximately 609 cubic yards of topsoil were stripped from the site. Topsoil samples were obtained on October 30, 1998 at a frequency of one per 10,000 square feet prior to topsoil stripping activities. The samples were analyzed by Columbia Analytical Services (CAS) for VOCs using US EPA Method 8260B. Analytical results indicated that VOCs were not detected in the topsoil samples. Table 5 includes a summary of topsoil samples obtained during the project. Table 6 presents a summary of the topsoil materials handled during the project.

3.6.2 Excavation of Clean Soils

During the previous IRM activities, drums and associated contaminated soil were removed from the northern portion of the landfill to a depth representative of the wetland elevation. Polyethylene sheeting was placed over the exposed excavated portion of the landfill and the adjacent area. Clean soils were then backfilled onto the polyethylene sheeting to provide cover over the remaining contaminated soil and to provide a base for the temporary clay cap that was installed as part of the IRM activities.

These clean soils were removed by SRS on November 18 and 19, 1998 to expose the source area for the purpose of performing the excavation of source area soils for treatment in the LTTD unit. A total of 3,525 cubic yards of soil were excavated and stockpiled at the southwest corner of the site, to be reused during final landfill cap construction. The soil was sampled on November 3 ,1998 (prior to excavation) at intervals of one sample per 500 cubic yards and was analyzed for VOCs using US EPA Method 8260B. Sample results indicated that VOCs were not detected in the soils. Table 5 includes a summary of fill samples obtained during the project. Table 6 includes a summary of fill materials handled during the project.

3.6.3 Excavation of Contaminated Source-Area Soils

Excavation in the source area began on November 20 and 21, 1998 to obtain soil for the LTTD Demo Test as described in Section 3.9.4 of this report. Approximately 4,500 cubic yards of soil were removed from the source area as part of Demo Test excavation activities. The soil removed for the Demo Test was stockpiled on the staging pad located outside the FPB, prior to screening and processing through the LTTD system.

Remaining source area excavation activities began on December 4, 1998, following receipt of successful Demo Test results. Prior to excavation activities, diversion berms were placed around the excavation areas to divert stormwater run-off into the drainage swales at the site, instead of flowing into the excavation to minimize the volume of water that would need to be removed (dewatered) from the excavation. A berm was also constructed north of the excavation area adjacent to the wetland, to minimize impact to the wetland. Silt fencing was also maintained between the wetland and the berm to minimize erosion in the wetland.

The contract specified that sheeting/shoring be utilized along the northern extent of the excavation to prevent impact to the wetland. However, SRS requested that the Department allow them to use slope benching in lieu of sheet piling to provide sidewall protection adjacent to the wetland during excavation activities. To expedite the project, the Department approved of the slope-benching request in proposed change order PCO1, as described in Section 5 of this report. Additional details regarding PCO1 are also included in the project meeting minutes.

Initial excavation activities involved excavation of the upper 10 feet of the surveyed source area and layback areas. This was done for the purpose of obtaining dry soils which would enable the LTTD unit to operate at a higher treatment rate than if the soils were wet (wet soils would result in the LTTD unit operating at a slower rate). Soils from the north layback area were staged in 200 cubic

yard piles and each pile was sampled to evaluate the need for treatment. If sample results indicated that a soil pile had VOC concentrations exceeding the cleanup levels, then the soil was transported to the staging pad outside the FPB in preparation for treatment. If sample results indicated that concentrations in the soil pile were below the cleanup levels, then the soil pile was transported to a stockpile located west of the source area for temporary storage prior to being backfilled. Of the 5,295 cubic yards of soil excavated from the north layback area, only 800 cubic yards required treatment in the LTTD unit.

The contract required layback of soils along the southern extent of the excavation to maintain sidewall protection. South layback soils (containing C&D material) were excavated and staged in 500 cubic yard piles per the contract and each pile was sampled to evaluate for the presence of contamination above the cleanup levels. Sample results from 3,887 cubic yards of soil excavated from the south layback area indicated that only 500 cubic yards of these soils required LTTD treatment (After treatment, these soils were used for backfilling the excavation as described in Section 3.6.4 of this report).

Source area soils from the main source area were excavated down to bedrock throughout the entire surveyed main source area excavation and were stockpiled on the staging pad outside the FPB prior to treatment in the LTTD. 13,389 cubic yards of source area soils were removed for LTTD treatment. Approximately 3,520 cubic yards of the 13,389 cubic yards were tailings (stones/cobbles) that were screened in the FPB and could not be treated in the LTTD.

The limits of the main source area excavation including the south layback area (the area requiring slope-benching along the southern perimeter of the main source area in accordance with the contract) were pre-determined based on the results of the Remedial Investigation/Feasibility Study (RI/FS) and were surveyed prior to excavation activities. These limits were also surveyed regularly during excavation activities to maintain survey control between the source area, south layback area and north layback area (the area of slope-benching along the northern perimeter of the main source area in accordance with PCO1). This was done to prevent cross-contamination between these areas and subsequent unnecessary treatment of cross-contaminated soil from the north layback area. The limits of the north layback area were based on a 1:1 slope back from the source area. Separate excavators were also used for source area soils and north layback soils to prevent cross-contamination between source area soils and the north layback soils, thereby minimizing unnecessary treatment of cross-contaminated soil from the north layback area. Final excavation volumes were determined by surveying the excavation after the excavation was completed. The source area excavation was completed on February 17, 1999. A survey drawing of the main source area excavation is included in Appendix A.

Excavation of the two spot excavations (located east of the main source area) included in the contract was performed on February 22, 1999. Soils from these excavations were also transported to the staging pad outside the FPB prior to being treated in the LTTD. Table 5 includes a summary of soil samples obtained during excavation activities. Table 6 includes a summary of the soil materials excavated during the project. Figure 2 shows the location of the excavation areas at the site.

3.6.4 Backfilling

Prior to backfilling, the bedrock elevation in the bottom of the excavation was surveyed for the purpose of providing accurate as-built drawings. Additionally, berms were maintained north of the layback area in the wetland to minimize impact from the adjacent backfilling activities. Backfilling in the source area began on February 4, 1999 with the placement of tailings (stones/cobbles removed from the excavation) into the northeast portion of the excavation, after approximately half of the main source area excavation was complete. The tailings were placed into the bottom of the excavation in a layer that was approximately 2 to 4 feet thick. Geotextile fabric was placed over the top and sides of the tailings during backfill operations. Backfill of the tailings proceeded southwest towards the recovery sump location, which was in the approximate middle of the source area excavation. As the sump was being installed, backfilling of the tailings continued southwest throughout the remainder of the excavation. Dewatering operations continued during backfilling and sump installation activities.

The recovery sump was installed on February 18, 1999 during backfill operations. It should be noted that the contract specified that the sump would be installed in the low spot of the excavation, which was thought to be the northeast corner of the excavation. The contract also specified that 6-inch flexible corrugated pipe laterals were to be placed in the base of the excavation and sloped back to the sump at a 1 percent grade. However, as excavation activities progressed, it became evident that the low spot of the excavation was actually more towards the middle of the excavation instead of at the northeast end. Therefore, a field decision was made to install the sump in the actual low spot of the excavation, without installing the piping laterals. The sump construction consisted of a 36-inch high density polyethylene (HDPE) pipe keyed into the low spot in the bedrock. The sump pipe was slotted from the bedrock surface up through the approximate 2 to 4-foot layer of tailings that was placed in the bottom of the excavation. Approximately one-foot of crushed stone was placed between the outside of the sump and the layer of tailings. Geotextile fabric was placed around the sides and top of the crushed stone layer. These changes were summarized in PCO2, which is also discussed in Section 5 of this report. The NYSDEC, as well as the design engineer (E&E), approved of placing the tailings in the base of the excavation, as well as the revised recovery sump construction/installation. A schematic of the revised recovery sump installation is presented in Figure 3.

During backfill operations, a CAT D6H dozer and CAT T15 articulated dump truck were used to transport the backfill materials into the excavation. The dozer and dump truck had been decontaminated for the purpose of backfilling soil into the excavation, and were not being used to transport contaminated soils during this time.

Treated soil was backfilled in the excavation at up to 24-inch lifts. The contract specified that the backfilling would be performed in 8-inch lifts at 90 percent compaction. However, E&E approved of using 24-inch lifts (due to the relatively homogeneous consistency of the treated soils), as long as the 24-inch lifts would meet the 90 percent compaction requirement outlined in the contract. SRS therefore performed a 24-inch compaction demonstration test to verify that the 90 percent compaction requirement was attainable. A separate demonstration compaction test was performed on the soils from the north layback soils due the differences in soils from these two areas. The

demonstration compaction tests were successful for both the source-area and north layback area soils. An Ingersoll-Rand D100D vibratory roller was used to compact the backfilled soils. Treated soils were sampled and compaction-tested for particle size, maximum density, and moisture content every 500 cubic yards in accordance with the contract. VanderHorst Inc. performed the compaction testing.

Treated soils were backfilled to the approximate elevation of the wetland. Concrete from the two existing staging pads, gravel from the roadways/staging pads, and C&D fill were backfilled on top of the treated soils to obtain the required subgrade elevation of the landfill cap, which is described in Section 4 of this report.

3.7 Excavation Dewatering

3.7.1 Test Pits

Prior to excavation operations, there was concern about the potential quantity of water that would be encountered in the excavation throughout the treatment operations. There was concern about water quantity for the purpose of estimating the necessary storage volume required for the water treatment plant, as well as for the purpose of estimating the volume of water that would be available for possible use as LTTD quench (re-hydrating) water. As described below, adequately treated water from the excavation was used for LTTD quench water. Therefore, two test pits were excavated (down to bedrock) near the source area to observe the influx of water as a basis for estimating the volume of water expected during excavation activities. One of the test pits was located adjacent and south of the source area within the C&D debris area of the landfill, and the other test pit was excavated to the north of the source area near the wetland. The test pits were excavated on October 27 and 29, 1998. Based on test pit observations, it did not appear that there would be an excess or shortage of water from the excavation.

3.7.2 Excavation Dewatering Operations

To effectively dewater the excavation, a 12-inch temporary sump was installed in the main source area within the area where excavation had initially been performed to obtain soil for the Demo Test. The temporary sump was located in an area of the excavation where bedrock was at nearly the lowest elevation within the entire main source area. Therefore, the sump served as a gravity-flow collection basin for groundwater during the excavation activities. Excavation water was removed intermittently throughout the excavation activities using a 4-inch gas powered pump. Continuous dewatering of the excavation was not possible due to problems such as insufficient storage volume, pump failures, and some of the additional problems described in Section 3.8.4. The water was delivered to either the holding tanks or the retention basin prior to treatment in the water treatment plant as described below.

At the time of the LTTD Demo Test, when excavation was performed in the main source area to obtain soil for the Demo Test, the dewatering and water treatment systems were not yet operational. Therefore, water accumulated in the initial Demo Test excavation, creating saturated soils that would be difficult to treat in the LTTD unit. From this time on, it should be noted that problems with

dewatering continued throughout the entire excavation/treatment process. Some of the common problems were: inadequate storage capacity, pump and hose failures, and treatment system down time. Additionally, there were times when treated water did not meet the water treatment requirements and thus could not be used for LTTD quench purposes. This resulted in a back-up of water that either had to be re-treated or disposed off-site, creating a need for additional storage capacity and causing a delay in LTTD treatment operations.

3.8 Water Treatment System

3.8.1 Treatment System Components

The water treatment system was delivered to the site on October 19, 1998 by Mid-Atlantic Environmental Equipment. The system was used to treat groundwater encountered in the excavation, as well as rainwater that drained into the excavation. The system consisted of two influent holding tanks (each with capacities of up to 20,000 gallons) leading to a high-flow, horizontal-tray air stripper with a 120 gallon per minute (gpm) working capacity. Water then flowed through a bag filter assembly utilizing two 100-micron bag filters, and then through a 600-gallon multi-media filter designed to remove oxidized metals, specifically iron. The water continued to flow through two additional 600-gallon filters containing granular activated carbon for VOC removal. The effluent from the treatment system flowed into a series of up to 10 holding tanks where the water was sampled prior to being used for LTTD quench purposes or being disposed off-site. Off-gases were treated by passing the vapors through a filter containing vapor-phase granular activated carbon. The water treatment system was equipped with an in-line flow meter to measure treated water volumes. Mid-Atlantic Environmental Equipment assisted in the set-up of the system, which became operational on December 7, 1998. A schematic of the water treatment system is presented in Figure 4.

3.8.2 Water Treatment System Demonstration Test

Prior to performing the Water Treatment Demo Test, the system was filled with potable water and tested hydrostatically for two hours to evaluate the presence of leaks in the system. On December 8, 1998, an 8-hour Demo Test was performed in accordance with the contract. The Demo Test consisted of running contaminated water continuously through the system for 8 hours. The contaminated water was obtained from the LTTD Demo Test excavation area (groundwater and possibly some rainwater had accumulated in the source area excavation during the approximate two week period between the LTTD Demo Test and the water treatment system Demo Test). Influent and effluent water samples were obtained at the start, after 4 hours, and after 8 hours. The samples were analyzed for the parameters outlined in the SPDES permit (included in the contract) using CLP 95-1 (VOCs) and CLP inorganics (magnesium, iron and antimony). The contract included provisions for discharging the treated water to the wetland located north of the site, as long as parameters were below the SPDES permit discharge limits. Influent samples were obtained from the influent holding tank using a bailer and effluent samples were obtained from the effluent sample valve located on the discharge line of the treatment system.

The Water Treatment Demo Test results indicated that the treatment system failed to adequately treat trichloroethene (TCE) and two inorganics, magnesium and antimony. TCE was detected at a concentration of 18.4 parts per billion (ppb); this exceeded the SPDES permit limit of 10 ppb. Magnesium was detected at 83,000 ppb (SPDES limit 35,000ppb) and antimony was detected at 8 ppb (SPDES limit 3ppb). Iron was detected at a concentration below the SPDES limit. Therefore, the Demo Test was repeated on December 19,1998. Analytical results from the second test indicated that TCE was below the SPDES limit; however, all three of the inorganics were above the SPDES limits. Full-scale operation of the water treatment system began with the understanding that treated water that did not meet the SPDES - VOCs and inorganics requirements could not be discharged to the wetland. Treated water could be used as LTTD quench water with the condition that VOCs meet the SPDES requirements as long as the three inorganics remaining in the treated water (at levels above SPDES limits) were at concentrations significantly lower than local background levels for these compounds. Quench water was to be used at such a rate that no free water would remain to runoff from re-hydrated soils. If the treated water could not meet the SPDES-VOCs criteria, then it was delivered to Monroe County Pure Waters - Van Lare Treatment Plant located in Irondequoit, New York.

3.8.3 Treatment System Operations

In January 1999, a 400,000-gallon retention pond was constructed to provide additional storage for water treatment operations. Treated water also had to be frequently transported to maintain adequate storage capacity at the site. SRS retained A.D. Call and ARG Trucking to haul the water off-site to the Monroe County Pure Waters Van Lare Treatment Plant, prior to hauling water off-site, it was characterized (or existing analytical results were evaluated) to verify it was suitable for disposal at the plant.

Prior to using the treated water as LTTD quench water, batch sampling was performed to confirm that the water was suitable for re-hydrating in the LTTD system. After the water was treated and hydrogen peroxide treatment was completed (see Section 3.8.4 below), a water sample was obtained from the effluent batch tank using a disposable bailer. Throughout most of the project, the samples were only analyzed for VOCs, with the understanding that the treated water would not be discharged to the wetland due to metals exceeding the SPDES limits. During the time period a water softening system was being used (see Section 3.8.4 below), the batch samples were also analyzed for the three inorganics included on the SPDES permit. A summary of water treatment analytical data is included in Appendix C.

A total of 1,393,639 gallons of water were treated during the project, compared to the contract estimate of 2,500,000 gallons. 640,479 gallons of water were hauled off-site. 373,810 gallons of potable water were also hauled to the site for LTTD quench purposes, at the times when the water from the excavation was deemed unsuitable for quench purposes. A summary of daily water treatment volumes is presented in Table 7.

3.8.4 Water Treatment Problems and Enhancements

The treatment system had frequent problems meeting the 50 ppb SPDES limit for acetone.

Therefore, the usage of hydrogen peroxide in the treatment process to reduce acetone levels below the 50 ppb limit, was considered. The Department approved the usage of a 35 percent solution of hydrogen peroxide as a strong oxidizing agent and it served to be successful in reducing acetone concentrations. MSR also approved of the usage of hydrogen peroxide after evaluating whether the treated water (being used as LTTD quench water) would have any ill effects on the LTTD components. It should be noted that the approved submission for the water treatment system included a water filtration media specifically for the removal of acetone which SRS, at its own option, chose not to provide.

In the last month of the project, there was an excess volume of water that was not needed for LTTD quench purposes. Instead of disposing of the water off-site and incurring the associated expenses, SRS proposed to treat the magnesium, iron, and antimony using a water softener system to reduce the metals concentrations below the SPDES limits. This would allow the discharge of excess water to the wetland in accordance with the contract and avoid unnecessary off-site water disposal. The Department approved of the water softener system; however, the system was unsuccessful in treating the inorganics and the excess water was disposed off-site at the Van Lare Treatment Plant..

Additional water treatment problems included occasional freezing of the lines leading from the excavation to the holding tanks (or retention basin), freezing of the water in the batch tanks resulting in additional time and labor removing the ice, and accumulation of sediment in the influent holding tanks requiring additional maintenance.

3.8.5 Dismantling of the Water Treatment System

Upon completion of water treatment operations, the treatment system was dismantled on April 4, 1999 and the components were shipped off-site on April 12, 1999. Spent carbon (approximately 2 tons) from the treatment system was treated in the LTTD system. Sediment from the holding tanks and retention basin were dewatered, and after analytical results confirmed that contamination was not present, the sediment was placed in the landfill. Final volumes of excess water were disposed off-site.

3.9 LTTD Treatment Operations

3.9.1 LTTD Pad Construction

As stated in Section 3.2.3of this report, construction of the LTTD staging pad began on September 28, 1998. Refer to Section 3.2.3 for details regarding the construction of the LTTD staging pad.

3.9.2 LTTD Mobilization and Shakedown Testing

Prior to mobilization of the LTTD unit, SRS filed an application for a Permit to Operate (Process, Exhaust, or Ventilation System) for the LTTD unit on September 30, 1998. Approval for full-scale operation was provided by the Department on December 11, 1998 and was amended on December 14, 1998.

MSR began delivery of the LTTD unit on November 16, 1998. As the components continued to arrive at the site, MSR began to set up the LTTD unit on the staging pad constructed by SRS. Set-up of the LTTD unit was completed on November 22, 1998. MSR began shakedown testing of the LTTD unit on November 23, 1998.

Shakedown testing consisted of calibrating the feed belt scale; bringing each of the components up to the appropriate temperature; testing electrical circuits, fuel supply lines, compressor lines, and electronic control devices. The subcontractor selected to perform the LTTD Demo Test, ARI Environmental, Inc. (ARI) performed shakedown testing and calibration of their equipment at the same time as MSR. Once MSR was comfortable with the equipment set-up, approximately 100 tons of clean soil were run through the unit to monitor the equipment under stress. The shakedown testing indicated that the LTTD unit was operating efficiently and ready for full-scale operations.

3.9.3 LTTD System Components

Prior to being fed into the LTTD system, soil was screened and stockpiled in the FPB as described in Section 3.9.5 below. The FPB was located immediately west of the LTTD unit components. A negative air pressure draw was created on the building by venting the air from the FPB into the LTTD unit using the combustion air fan of the LTTD. This was accomplished by connecting the LTTD combustion air fan and the FPB using a 36-inch steel duct. The emissions drawn from the FPB were directed to the LTTD and were destroyed during the treatment process.

The primary feed hopper was the first processing device in the system. The soil was fed through a 8-inch heavy-duty grisly bar screen which screens the debris and large stones. The soil then passed through a 4-inch oscillating screen to further reduce the size of the soil particles to be fed into the LTTD unit. The contract specifications specified an additional 2-inch final screen, but MSR and SRS agreed that a final 4-inch screen was appropriate for this particular LTTD unit. After passing through the screen, the soil proceeded to the transfer conveyor which carried the soil to the thermal desorber.

The rotary thermal desorber operated at temperatures of approximately 400 to 900 degrees fahrenheit and served to heat the contaminated soils to temperatures that caused contaminants to volatilize from the soil. Volatilization of soil contaminants was enhanced by the rotary movement of the desorber.

The thermal dust collector received the heated soil exiting the desorber and mixed with injected soil from the filter baghouse (see below). The residual dust from the baghouse was thermally treated by maintaining contact with the high temperature soil from the desorber.

The rotary soil cooler received the heated soil and treated dust from the thermal dust collector. The soil cooler utilized four stages of water injection to cool and re-hydrate the soil so that it could exit the soil cooler on the load-out conveyor and be placed in manageable soil piles.

The heated gas stream from the desorber and thermal dust collector was drawn into the filter baghouse by a main exhaust fan. The gas stream passed through the filter cloth in the baghouse and the dust was collected on the filters, while the filtered gas stream was directed to the thermal

oxidizer. The collected dust was eventually directed to the thermal dust collector as described previously.

The thermal oxidizer received the filtered gas stream from the baghouse and the gasses entered the combustion zone of the thermal oxidizer. The combustion zone elevated the gas temperature to approximately 1600 degrees fahrenheit for up to two seconds, which was sufficient time to destroy all the organic vapors contained in the gas stream. The hot gas stream then exited the oxidizer via the stack at the end of the unit.

The control center of the system provided complete operational control from a central operating console and utilized computerized start-up, operation, and shut-down of all components. Safety interlocks were in place to monitor all phases of system operation.

A schematic of the LTTD system components is presented in Figure 5. The LTTD work plan provides additional schematics and details regarding all system components.

3.9.4 LTTD Demonstration Testing

The Demo Test was performed on November 23 and 24, 1998. A detailed description of the Demo Test and data collection requirements is presented in the final LTTD work plan and the Air Emissions Demo Test Report provided by ARI. In summary, inlet and outlet soil concentrations and air emissions were collected and analyzed for target parameters to determine the destruction removal efficiency (DRE) of trichloroethene (TCE) as the primary organic hazardous compound (POHC). Soil sampling was performed for VOCs. Air sampling consisted of the collection of samples to be analyzed for total particulate matter, carbon monoxide, hydrogen chloride (HCl), mercury, total hydrocarbons, seven specific VOCs, five semi- VOCs, and five products of incomplete combustion (PICs). Three valid test repetitions were performed for each emissions parameter. The test repetitions were 60 minutes in duration to determine particulate matter, carbon monoxide, hydrogen chloride, mercury, and VOCs. The test repetitions for SVOCs and the PICs were 120 minutes.

To obtain soil samples for the Demo Test, soil was excavated from the source area at locations where data (from the RI/FS) indicated the highest concentrations of TCE would likely be located. The soil was removed from the excavation, staged on the concrete pad outside the FPB, fed through the 4-inch screen inside the FPB, temporarily staged inside the FPB, and eventually placed through the feed hopper, where pre-treatment samples were obtained. Pre-treatment soil samples were obtained at 20 minute intervals from the feed hopper and analyzed for VOCs using CLP 95-1.

Due to the relatively low TCE concentrations in the pre-treatment soil, a 99.99 percent DRE was not demonstrable. However, all of the TCE analytical results were below the practical quantitative limit (PQL) of the method. A calculated DRE based on the lower detectable limits was 99.95 percent. Approval was based on the alternative method; non-detect (ND) in the stack. The average HCl emission rate was 1.7 pounds per hour, which was under the permit limit of 4 pounds per hour. Upon receipt of the results of the Demo Test, full scale operation of the LTTD unit began on December 11, 1998. Based on the Demo Test results, the LTTD unit operating parameters for full scale operation were set as follows:

Soil feed rate:	60 tons per hour
PTU temperature:	400 - 900 degrees fahrenheit
STU temperature:	1600 degrees fahrenheit
Maximum material size:	4-inch diameter

Continuous emissions monitoring (one hour rolling average):

Oxygen:	3 - 10 percent
Carbon Monoxide:	0 - 50 parts per million (ppm)
Carbon Dioxide:	7 -12 percent
Total Hydrocarbons:	0 -100 ppm

3.9.5 Pre-LTTD Treatment Soil Handling

Soil from the source area excavations were transported to the large staging pad located outside (to the west) of the FPB. Lime was added to wet soils on the staging pad to make the soil more suitable for LTTD treatment. A total of 6,677 tons of lime were used during the project. Larger debris were hand-sorted before the soil was directed through the 4-inch power screen located immediately inside of the FPB. Debris and rocks (tailings) that did not pass through the power screen were stockpiled on a smaller concrete staging pad located outside (to the west) of the FPB. Untreatable debris such as wood, metal debris, and tires were also screened from the excavated soil. Wood was temporarily stockpiled to be eventually placed under the landfill cap prior to final landfill cap construction. Metal debris were decontaminated and salvaged when possible, and tires were disposed off-site. Soil that passed through the power screen was stockpiled inside of the FPB before being fed into the feed hopper of the LTTD system.

3.9.6 Sampling and Post-Treatment Procedures

Post-treatment verification sampling was performed in accordance with the ROD. After exiting the LTTD system, treated soil was segregated and stockpiled into 160-ton piles. The soil piles were then labeled and sampled and analyzed (for VOCs using US EPA Method 8260B) at either Columbia Analytical Services or Lozier Laboratory. Following receipt of analytical results after a 24 to 48-hour turn-around time, soil piles were re-staged east of the LTTD system. Any soil piles that did not meet the cleanup standards were re-treated in the LTTD system. A total of 1,500 tons of soil was re-treated. It should be noted that a portion of the 1500 tons of re-treated soil was being used to stabilize wet soils, and did not actually require re-treatment due to failure of meeting the cleanup standards. A total of 266 soil samples were obtained from the treated soil piles. A total of ten soil piles failed to meet the cleanup standards. Table 5 includes a summary of all LTTD sampling activities. LTTD sampling analytical results are included in Appendix D.

All of the soil piles that failed to meet the cleanup standards (as specified in the ROD) failed due to acetone concentrations being greater than the site-specific acetone cleanup criteria of 198 ppb.

The Department, therefore, reviewed the acetone cleanup criteria of 198 ppb specified in the ROD. It was noted that the NYSDEC's Technology Section initially developed the cleanup goals for the

Sweden 3 site based on a soil carbon content of 3 percent and a conversion factor of 60. This yielded a correction factor of 1.8 times the soil cleanup objective to protect groundwater quality. In the case of acetone, this resulted in a cleanup number of 198 ppb. The recommended cleanup goals are subject to further evaluation and possible adjustments during the Feasibility Study (FS) phase based on technology, cost, and other pertinent considerations. Many of the contaminants of concern at the Sweden 3 site were adjusted by factors ranging from 1.3 to 3 during the FS phase, while acetone was left unchanged. Based on this, the Department's Division of Environmental Remediation-Technology Section increased the acetone cleanup number from 198 ppb to 257 ppb (using the adjustment factor of 1.3). Factors involved in this decision included the issue that groundwater will remain at the site in the range of a part per million for total VOCs, long-term groundwater monitoring will confirm that this decision has not adversely impacted the groundwater, and the treated soil will be placed under a cap. Additionally, the difference between the Department's TAGM 4046 cleanup objective for acetone (200 ppb) and 257 ppb is minimal. After the new acetone cleanup number was implemented, any future failures for acetone would have to be re-treated without the option of re-sampling. Only two soil piles failed to meet the cleanup standards after the acetone cleanup number was adjusted. These two piles we re-treated through the LTTD system accordingly.

The final volumes of soil treated through the LTTD system are outlined below:

source-area soil:	28,259 tons
lime addition:	6,677 tons
re-treated soil:	1,500 tons
soil contaminated by contractor operations:	26 tons
spent carbon (treated through LTTD):	2 tons
total volume treated	36,463 tons

Table 6 includes a summary of the different materials handled at the site. A summary of daily LTTD-treated soil volumes is presented in Table 8.

3.9.7 Dismantling of the LTTD System

Prior to dismantling of the LTTD system on March 15, 1999, seven soil samples were obtained from the immediate vicinity of the LTTD equipment to determine whether the LTTD operations caused soil contamination in the area of the site where the equipment operated. None of the samples contained contaminants above laboratory detection limits. Dismantling of the LTTD system components occurred between March 17 and March 31, 1999. LTTD system components were decontaminated prior to being temporarily staged in the parking area near Beadle Road. The system components were transported back to MSR's base location in Chicago, Illinois by March 31, 1999.

A photographic log, including photos of the LTTD treatment operations, excavation areas, staging areas, water treatment system, landfill construction, and site restoration, is included in Appendix E.

SECTION 4 - LANDFILL CAP CONSTRUCTION AND SITE RESTORATION ACTIVITIES
(April 1999 to June 1999)

4.1 Landfill Cap Construction

SRS subcontracted Chenango Contracting Company to install the geomembrane and geocomposite materials in the landfill cap. Landfill cap construction occurred between April 13, 1999 and May 19, 1999. As discussed in Section 3.6.4, the subgrade elevation of landfill cap was established by backfilling the excavation with treated soil, clean fill, gravel from the roadways/staging pads, and concrete from the two staging pads that existed from the IRM. A six-inch final cover layer, consisting of treated soil compacted to 80 percent maximum density, was placed over the subgrade elevation of the landfill.

Prior to placing the geomembrane liner, Chenango carefully examined the surface of the final cover layer and removed any rock or stones protruding from the surface. Then the 40 mil very flexible polyethylene (VFPE) geomembrane liner was then placed over the final cover layer. The liner was installed in 22.5-foot by 780-foot sections, which enabled Chenango personnel to manually remove wrinkles. A double-track, hot wedge fusion welder was used to seal the sections together. An extrusion welder was used to repair any tears in the liner that occurred during installation activities. Seams in the liner were pneumatically air-pressure tested at 25 to 30 pounds per square inch (psi) for 5 minutes. Vacuum testing was performed on any areas of the liner that had been repaired during construction activities.
Solomax International provided the geomembrane liner material.

The geocomposite drainage layer was then installed over the geomembrane liner. The geocomposite was installed in 14-foot by 250-foot sections, which were butt-joined using nylon cable ties at 5-foot intervals. SKAPS Inc. provided the geocomposite layer material.

In accordance with the contract specifications, a 1.5-foot barrier protection layer was then placed over the geomembrane and geocomposite layers. The first 6 inches of the barrier protection layer consisted of treated soil, while the top 1 foot consisted of soil fill obtained from off-site. Following the barrier protection layer, a 6-inch layer of topsoil was placed over the entire landfill cap.

In accordance with the contract specifications, a 3-foot deep by 2-foot wide anchor trench was excavated around the entire perimeter of the landfill. The geomembrane liner was anchored into the bottom of the trench and secured by backfilling with treated soil. The treated soil was compacted to 90 percent maximum density. The geocomposite drainage layer was placed over the top of the backfilled anchor trench and was extended to the designed drainage ditch located 12 feet beyond the anchor trench. This would enable surface drainage to flow to the ditch and not into the anchor trench. Six inches of topsoil was placed over the geocomposite drainage layer and the associated drainage ditch. Final elevations of the landfill were based on the actual volumes of materials placed in the landfill. The landfill was hydro seeded between June 15 and June 21, 1999 to provide final vegetative cover.

4.2 Monitoring Well Installation

In accordance with the contract, 10 new monitoring wells were installed by Buffalo Drilling between May 14 and June 10, 1999. SRS subcontracted with Buffalo Drilling for monitoring well installation. Five of the wells were shallow overburden wells, four were overburden/bedrock interface wells, and one was a deep bedrock well. The wells were installed primarily downgradient of the source area to monitor groundwater quality following the remedial construction activities. Additionally, one existing well (MW-4I) that had been damaged during the remedial activities was repaired.

Shallow wells were installed by augering into the overburden using a 4-inch hollow stem auger. The wells consisted of 2-inch, schedule 40 PVC risers with a sand pack (extended a minimum 2 feet above the top of screen), with a 0.010-inch slotted screen. The top of the screen was placed 2 feet above the top of the water table. A 1-foot thick bentonite seal was place over the top of the sand pack, with a 12-inch diameter portland/bentonite grout cover (sloped for drainage) placed over the seal. A 4-inch steel protective outer casing was used around the outside of the well heads, and the wells were equipped with sealed, locking caps.

The overburden/bedrock interface wells were constructed the same as the shallow wells, except that they were augered approximately 5 feet into bedrock and utilized a rock socket. A 3-7/8-inch roller bit was used to auger into the bedrock.

The deep bedrock well was constructed using an 8-inch diameter borehole down through the weathered bedrock and setting a rock socket at 5 feet below the top of rock with 4-inch steel protective outer casing. The casing was grouted into the rock using a portland/bentonite grout. After the rock socket was set, open-hole coring was performed to a total depth of approximately 48 feet.

The wells were developed approximately 48 hours after construction by purging a minimum of 5 well volumes from the wells. The purge water was disposed of by pouring it on the ground within the fingerprint of the landfill. Drill cuttings from the wells were placed into 55-gallon drums pending final displacement under the landfill cap after receipt of analytical results. The analytical results indicated that contaminants were not detected or were below the cleanup goals, so it was acceptable to place them under the landfill cap.

Long-term monitoring of the wells will be performed in accordance with the Operation and Maintenance (O&M) Manual dated August 1999, which calls for quarterly sampling for 20 years.

4.3 Post-Remedial Sampling of Private Wells

On January1, 1999, NYSDEC sampled the Polle's (located adjacent to the east of the site) and Luce's (located to the west of the site) private wells. The samples were analyzed for VOCs by Columbia Analytical Services using USEPA method 8260. VOCs were not detected in any of the samples.

4.4 Final Site Restoration Activities

Most of the site restoration activities were performed concurrent with or after the landfill cap construction activities. Site restoration activities were initiated by saw-cutting the three concrete staging pads (the decontamination pad, the 200-foot by 50-foot pad used for staging soils outside the FPB, and the smaller 60-foot by 60-foot pad used for staging tailings from the screening operations) that were left from the IRM activities. The concrete from these pads was placed under the landfill cap as discussed previously. Soil samples were obtained from underneath these pads and tested for VOCs. No VOCs were not detected in the samples.

All the roadways (the roadways that existed from the IRM as well as the roadways constructed for the LTTD phase) at the site were removed by taking a minimum of 6 inches of gravel from the surface of the roadways and then performing confirmatory sampling for VOCs. No VOCs were detected. A minimum of six inches of gravel was also removed from the top of the parking areas, but confirmatory sampling was not required in these areas. The gravel removed from the roadways and parking lots was also placed under the landfill cap as discussed previously. Six inches of topsoil were then placed over the top of the roadways and parking areas.

As part of the site restoration activities, the existing site fencing (approximately 2,900 feet) that was present from the IRM activities needed to be relocated to the smaller area that surrounded the landfill instead of the entire site. This required removing 1,650 feet of the existing fence and then relocating approximately 625 feet of fence to the area immediately surrounding the landfill. A 24-foot gate was installed at the entrance to the landfill. The removal and relocation of the fence was not included in the contract and therefore the changes were summarized in PCO3, which is discussed in further detail in Section 5 of this report. The final fencing location is shown in the as-built drawings included in Appendix A.

The existing driveway into the site was re-graded and restored to a distance of approximately 100 feet back into the site, at the request of one of the property owners. The two original steel posts were placed at the entrance to the driveway with a steel cable securing the entrance.

The contract called for construction of a new driveway leading to the landfill entrance. One of the property owners requested that the driveway be relocated from the design location to the eastern edge of the property, to minimize the footprint of the closed landfill. The Department approved of the landowner's request, and the new driveway was located approximately 5 feet from the eastern property boundary. The new driveway had a post and cable entrance with a turn-around parking area (approximately 60 feet by 70 feet in size) near the landfill cap. In accordance with the contract drawings, the driveway was constructed of stone gravel and fabric. Due to the relocation, two 24-inch diameter culverts needed to be installed along the driveway. One of the culverts was installed at the newly constructed drainage ditch near the landfill, and the other was installed at a naturally-existing swale. Rip-rap was placed at the openings of each of the culverts, to provide erosion control. Blue spruce trees were planted along each side of the driveway to provide a site barrier for the property owner to the east of the site. The relocation of the driveway was also included in PCO3.

Areas where staging pads and the FPB asphalt pad had been removed were backfilled with clean fill

to bring these areas up to grade. The entire site was re-graded, followed by the placement of topsoil over the entire site. Most of the topsoil (approximately 3200 cubic yards) was from the site and had been temporarily staged during the construction activities. However, approximately 864 cubic yards of topsoil had to be brought in from off-site to complete the re-grading activities. The entire construction area was hydro seeded between June 16 and June 21, 1999. Table 6 includes a summary of topsoil that was handled as part of the site restoration activities.

Additional site restoration activities included re-grading, topsoil placement, and seeding of the natural drainage swale that had been diverted with a culvert underneath the FPB. Staked straw bales were temporarily placed along the swale after seeding, to control water flow and associated erosion during seed growth. All silt fencing that was present from the IRM as well as the current contract was removed from the site. All electrical services, poles, and wiring were removed on May 14, 1999 except the main service pole and meter near Beadle Road due to the request of the landowner.

Wetland restoration included the planting of 5 species of wetland plants along the entire length of the wetland buffer adjacent to the toe of the landfill. Wood chips that were generated on-site during clearing and grubbing were used as a mulch base for the wetland plants.

SRS's field trailer, the decontamination trailer, and the break trailer were removed between May 10 and 12, 1999. The NYSDEC trailer was left on-site until July 2, 1999 and was shared with SRS for the purpose of completing the landfill construction activities. The last frac tank from SRS's water treatment operations was removed from the site on June 2, 1999.

A photographic log, including photos of the LTTD treatment operations, excavation areas, staging areas, water treatment system, landfill construction, and site restoration, is included in Appendix E.

SECTION 5 - PROPOSED CHANGE ORDERS AND CHANGE ORDER NO.1

5.1 PCO1, PCO2, PCO3, and PCO4

PCO1 was issued on November 6, 1998 and is summarized as follows: SRS, at its own option and cost, proposed to use slope benching (layback) in lieu of sheet piling to provide sidewall protection adjacent to the wetland.

PCO2 was issued on February 3, 1999 and involved proposed changes regarding construction of the groundwater collection sump. The Department proposed to relocate the groundwater collection sump from the northeast end of the excavation (contract design location) to the actual low point of the excavation (estimated to be approximately 150 feet southwest of the design location). The piping laterals specified in the contract would not be installed.

PCO3 was issued on March 15, 1999 to inform SRS of proposed changes associated with final site restoration. The Department proposed to relocate the existing site fencing to an area immediately surrounding the landfill cap, and to relocate the design location of the driveway to the landfill to the eastern property boundary of the site.

PCO4 was issued on April 6, 1999 and proposed that SRS retain an independent laboratory to perform the testing associated with the landfill cap materials, as required in Section 02276 of the contract. There was no cost associated with this PCO.

5.2 Change Order No. 1

Change Order No. 1 was issued on April 16, 1999 and included 16 items (including PCOs 1, 2, and 3) that resulted in an additional contract cost of $56,487.13, for a total contract cost of $2,973,062.13.

SECTION 6 - CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

- In consideration of the original scope of work and the relatively minor adjustments associated with Change Order No. 1, it can be concluded that the overall quality of the design was excellent. However, the extent and methodology of the demonstration test specifications regarding pre-treatment and post-treatment soil sampling and air discharge analyses needs to be revisited if these specifications are to be reused. Additionally, the design specifications regarding sheeting/shoring could have been improved if additional subsurface data would have been provided to the contractor.

- The landfill liner warranty limited the supplier's liability to the cost of any defective materials and required the Department to endorse its conditions. After discussions with counsel and research into standard warranties provided in this industry, the Department concluded that the warranty was typical, but the Department did not have any obligation to endorse the warranty. QA/QC and field inspection of the installation is probably more critical than warranty of the supplied materials. The contract required a 20-year warranty on the liner and also required the prime contractor to pass this requirement onto its subcontractors and suppliers. If any problems with the liner arise on the next twenty years, the Department will have to evaluate them from a technical and contractual standpoint and determine SRS's and the supplier's obligations at that point. On future contracts, the Department recommends strengthening this portion of the specification during the design process, and the warranty itself should be approved as a submittal prior to placement of the liner.

- The remedial work performed at this site, both presently and in the past, has reduced significant physical hazards posed by the former landfill, and addressed the significant threat of future contamination to the groundwater by the removal of the source. However, quarterly groundwater monitoring has indicated that VOC contamination remains in monitoring wells MW2D (vinyl chloride up to 460 ppb), MW 2I (vinyl chloride up to 840, 1,2 dichloroethane up to 1600 ppb) and MW 16I (tetrachloroethane up to 3500 ppb, trichloroethene up to 760 ppb).

6.2 Recommendations

- Long-term groundwater monitoring specifically in wells 2I, 2D and 16I should be evaluated in accordance with the O&M Plan prepared for the site. The need for additional wells and remediation in the vicinity of 2I, 2D, and16I needs to be evaluated.

- The O&M Plan needs to be modified to include provisions for groundwater pump-and-treat if this becomes necessary.

- Certain wells (6S, 6I, 15S, and 15 I) were decommissioned, but due to ambiguous specifications were not re-installed as originally planned. The Department should evaluate the initial post-remedial monitoring results and determine the necessity of replacing these former wells. Provisions for replacing these wells should be included in the O&M plan as necessary.

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SECTION 7 - CONSTRUCTION CERTIFICATION

Low Temperature Thermal Desorption of Contaminated Soil
Sweden 3 Chapman Site, Sweden, Monroe County, New York
NYSDEC Site Number 8-28-040A

Remedial construction at the Sweden 3 Chapman site was completed in substantial accordance with the contract documents, prepared by Ecology and Environment, dated May 1998, entitled "Remediation of the Sweden 3 Chapman Site, Sweden, Monroe County, New York," and as outlined in this construction certification report.

P.E. Stamp:

Signature: _____

Michael J. Cruden, P.E., NYSDEC Project Manager

Date: September 28, 2000

TABLES

Table 1 - List of Subcontractors

Subcontractor	Service Performed
B.C. EXCAVATING	CLEAR & GRUB
BEDROCK CONSTRUCTION	CLEAR & GRUB
GOTTRY CORP.	CRANE SUPPLIER
D.V. GONZALEZ ELEC.	ELECTRICAL SERVICE
CAMP DRESSER & McKEE	ENGINEERING
L.B.SMITH, INC.	EQUIPMENT RENTAL
MONROE TRACTOR	EQUIPMENT RENTAL
SPENCERPORT RENTAL, INC.	EQUIPMENT RENTAL
SWEDE	EQUIPMENT RENTAL
SAMSON FUEL AND TRUCKING	FUEL OIL
BRIGHTON LANDSCAPING	HYDROSEEDING
LOZIER LAB. INC.	LAB - SAMPLE ANALYSIS
COLUMBIA ANALYTICAL	LAB - SAMPLE ANALYSIS
PARADIGM ENV. SERVICES	LAB - SAMPLE ANALYSIS
VANDERHORST INC.	LAB - GEOTECHNICAL
M..J. DREHER TRUCKING INC.	MATERIAL - STONE, TOPSOIL, LIME
ARG TRUCKING INC.	MATERIAL - WATER
A.D.CALL	MATERIAL - WATER
ROSS SCEUSA	MATERIAL - WATER
OFFICE EQUIPMENT CO.	OFFICE EQUIPMENT
GE CAPITAL	OFFICE TRAILERS
CARDWELL CONSTRUCTION CO.	PAVING
EZ JOHN PORTABLE TOILETS	SANITARY FACILITIES
ADAMS SECURITY	SECURITY
MODI ENGINEERING	SURVEY

SCHULTZ ASSOC.	SURVEY
BAKER TANKS	TANK SUPPLIER
RAYFORD ENTERPRISES	TANK SUPPLIER
PIEDMONT ENTERPRISES	TANK SUPPLIER
DAN FISHBURN	TANK SUPPLIER
UNIVERSAL FABRIC STUCTURES	TEMPORARY BUILDING
TERRY TREE SERVICE	TREE REMOVAL
BUTTONWOOD FARM	TREE SUPPLY
MIDWEST SOIL REMEDIATION	TREATMENT - LTTD
MID ATLANTIC ENV.EQUIPT.	WATER TREATMENT SYSTEM
CULLIGAN WATER	WATER TREATMENT SYSTEM
CHEMICAL DISTRIBUTORS INC.	WATER TREATMENT - CHEMICALS
CHENANGO CONTRACTING CO.	WATER TREATMENT - POND LINER
MAS - ANN PLUMBING / HEATING	WATER TREATMENT - PLUMBING
CULLIGAN WATER	WATER - POTABLE
WASTE MANAGEMENT	WASTE REMOVAL - DEBRIS
SAFETY - KLEEN	WASTE REMOVAL - CYLINDERS
TIRE SOLUTIONS INTERNATIONAL	WASTE REMOVAL - TIRES
ENV.PRODUCTS & SERVICES	WASTE REMOVAL - HAZ. WASTE
KAPLAN CONTAINERS	WASTE REMOVAL - DRUMS
APPLIED EARTH TECH.	WELL DRILLING
BUFFALO DRILLING	WELL DRILLING
NYS FENCE	FENCING
CHENANGO CONTRACTING CO.	LANDFILL LINER MATERIAL

Table 2 - Final Pay Item Quantities

#	ITEM DESCRIPTION	ESTIMATED QUANTITY	ORIGINAL COST	ACTUAL QUANTITY	ACTUAL COST
1	MOBILIZATION / DEMOBILIZATION	1 LS	377,550.00	1 LS	377,550.00
2	SITE SERVICES	180 DAYS	283,860.00	180 DAYS	283,860.00
3	HEALTH / SAFETY	120 DAYS	139,200.00	101 DAYS	117,160.00
4	EXCAVATION / BACKFILL OF CONTAMINATED SOILS	12,361 CU.YDS.	210,137.00	13,389 CU.YDS.	227,613.00
5	EXCAVATION / BACKFILL OF CLEAN SOILS	5,265 CU.YDS.	26,325.00	3,165 CU.YDS.	15,825.00
6	TOPSOIL STRIPPING	1,843 CU.YDS.	5,529.00	608.8 CU.YDS.	1,826.40
7	SOIL TREATMENT - LTTD	24,722 TONS	1,384,432.00	28,258 TONS	1,582,448.00
8	LANDFILL COVER SYSTEM	12,495 SQ.FT.	349,860.00	12,495 SQ.FT.	349,860.00
9	DEWATERING	2,500,000 GALS.	50,000.00	1,393,639 GALS.	27,872.78
10	DEWATERING TREATMENT SYSTEM	1	41,462.00	1	41,462.00
11	SAMPLES - CONFIRMATORY	25	3,450.00	25	0
12	MONITORING WELLS - DECOMMISSINED	90 FT.	900.00	40.5 FT.	505.00
13	MONITORING WELLS - INSTALLED	300 FT.	15,000.00	207.3 FT.	10,365.00
14	POLLUTION LIABILITY INSURANCE	1 LS	28,870.00	1 LS	28,870.00
	CHANGE ORDER # 1		-		56,487.13
	TOTALS		**2,916,575.00**		**2,973,062.13**

Table 3 - Meetings

MEETING	DATE	LOCATION	ATTENDEES
PREBID CONFERENCE	6 / 9 / 98	ON-SITE	DEC, CONTRACTORS
PRECONSTRUCTION MEETING	8 / 18 / 98	OSWEGO	DEC, SRS
PROGRESS MEETING # 1	9 / 2 / 98	ON-SITE	DEC, SRS
PUBLIC INFO. MEETING	9 / 9 / 98	TOWN HALL	DEC, SRS, DOH
PROGRESS MEETING # 2	9 / 16 / 98	ON-SITE	DEC, SRS
PROGRESS MEETING # 3	9 / 30 / 98	ON-SITE	DEC, SRS
PROGRESS MEETING # 4	10 / 14 / 98	ON-SITE	DEC, SRS
PROGRESS MEETING # 5	10 / 28 / 98	ON-SITE	DEC,SRS
PROGRESS MEETING # 6	11 / 12 / 98	ON-SITE	DEC, SRS
PUBLIC OPEN HOUSE	11 / 21 / 98	ON-SITE	DEC, SRS, DOH, MIDWEST
PROGRESS MEETING # 7	11 / 23 / 98	ON-SITE	DEC, SRS, MIDWEST
PROGRESS MEETING # 8	12 / 9 / 98	ON-SITE	DEC, SRS, MIDWEST
PROGRESS MEETING # 9	12 / 22 / 98	ON-SITE	DEC, SRS, MIDWEST
PROGRESS MEETING # 10	1 / 5 / 99	ON-SITE	DEC, SRS, MIDWEST
PROGRESS MEETING # 11	1 / 20 / 99	ON-SITE	DEC, SRS, MIDWEST, DOH
PROGRESS MEETING # 12	2 / 3 / 99	ON-SITE	DEC, SRS
PROGRESS MEETING # 13	2 / 18 / 99	ON-SITE	DEC, SRS, MIDWEST, DOH
PROGRESS MEETING # 14	3 / 11 / 99	ON-SITE	DEC, SRS, DOH, MIDWEST
PROGRESS MEETING # 15	3 / 25 / 99	ON-SITE	DEC, SRS
SUBSTANTIAL COMPLETION - PART A	3 / 26 / 99	ON-SITE	DEC, SRS
PROGRESS MEETING # 16	4 / 8 / 99	ON-SITE	DEC, SRS

MEETING	DATE	LOCATION	ATTENDEES
PROGRESS MEETING # 17	4 / 21 / 99	ON-SITE	DEC, SRS
PROGRESS MEETING # 18	5 / 6 / 99	ON-SITE	DEC, SRS
PROGRESS MEETING # 19 SUBSTANTIAL COMPLETION	5 / 20 / 99	ON-SITE	DEC, SRS
FINAL INSPECTION	6 / 29 / 99	ON-SITE	DEC, SRS

Table 4 - Submittals

SUBMITTAL #	DESCRIPTION
1	GENERAL WORKPLAN
2	HEALTH AND SAFETY PLAN
3	QA / QC PLAN
4	LTTD WORKPLAN
5	PROJECT SCHEDULE
6	SUBCONTRACTOR LIST
7	SHOP DRAWING / SUBMITTAL SCHEDULE
8	SITE TRAILER LAYOUT
9	SHEETING / SHORING PLAN
10	LTTD, WATER TREATMENT, AND STAGING PAD DESIGN
11	SUBMITTAL LOG
12	TOPOGRAPHY MAP - INITIAL
13	WATER TREATMENT PLAN
14	COMPLIANCE TEST PLAN
15	CONTRACTORS PHONE NUMBERS - EMERGENCY
16	SITE LAYOUT
17	CONTRACTORS ORGANIZATIONAL CHART
18	SITE SECURITY PLAN
19	FEED PREPARATION BUILDING - LAYOUT
20	LTTD - PROPANE GAS PRECAUTIONS
21	FEED PREPARATION BUILDING - STRUCTURAL
22	SUBCONTRACTOR -UNIFORM CONTRACTING QUESTIONNAIRES
23	MINING PERMIT

SUBMITTAL #	DESCRIPTION
24	TEST PIT #1 - DETAILS
25	MINING PERMIT
26	EXISTING STOCKPILE - SAMPLES
27	CONTRACTORS DAILY REPORTS
28	STEP DRAWDOWN AQUIFER TEST
29	TEST PIT #2 - DETAILS
30	ELAP CLP CERTIFICATION - LABORATORIES
31	STORMWATER MANAGEMENT / EROSION CONTROL PLAN
32	SITE VISITOR LOGS
33	PRECONSTRUCTION SAMPLES
34	TOPSOIL (SOURCE AREA) SAMPLES
35	CLEAN FILL (SOURCE AREA) SAMPLES
36	NOISE LEVEL DOCUMENTATION
37	EXCAVATION DEWATERING PLAN
38	WATER TREATMENT PLAN WATER HANDLING PLAN
39	DUST AND VAPOR CONTROL PLAN
40	SITE SECURITY PLAN AND DOCUMENTATION
41	TOPOGRAPHY MAP
42	EXCAVATION AND BACKFILL PLAN GROUNDWATER COLLECTION
43	TSDF FACILITIES LIST
44	CERTIFIED PAYROLLS
45	CONTRACTOR PERSONNEL - RESUMES
46	CONTRACTORS PERSONNEL - OSHA CERTIFICATIONS
47	EMERGENCY RESPONSE MEETING - MINUTES
48	DAILY SAFETY FORMS AND AIR MONITORING DATA
49	LTTD - DEMONSTRATION TEST RESULTS

SUBMITTAL #	DESCRIPTION
50	PROPOSED CHANGE ORDERS
51	AIR MONITORING - DOCUMENTATION
52	DAILY SAFETY MEETINGS - DOCUMENTATION
53	LTTD - DAILY OPERATING LOGS
54	EXCAVATED LAYBACK SOIL - SAMPLES
55	WATER TREATMENT - SAMPLES
56	LTTD - TREATED SOIL - SAMPLES
57	LTTD - RETREATED SOIL - SAMPLES
58	WATER TREATMENT - DEMONSTRATION - SAMPLES
59	MONTHLY SAMPLE SUMMARY
60	WATER TREATMENT - BLENDING
61	SOIL STABILIZATION PLAN - LIME
62	QA / QC REPORTS
63	WATER TREATMENT - TANK USAGE PLAN
64	WATER TREATMENT - HOLDING POND PLAN
65	BACKFILL AND COMPACTION PLAN
66	LTTD - OFF-SITE SCALE CERTIFICATION
67	COMPACTION DOCUMENTATION
68	POST CONSTRUCTION SAMPLES - HAUL ROADS
69	GAS CYLINDER DISPOSAL
70	C & D DEBRIS SAMPLES
71	POST CONSTRUCTION SAMPLES - SMALL CONCRETE PAD
72	CONTRACTORS PERSONNEL - EXIT MEDICAL MONITORING
73	POST CONSTRUCTION SAMPLES - LARGE CONCRETE PAD
74	TOPOGRAPHY MAP - INTERIM
75	LANDFILL CAP - DETAILS AND MATERIAL CERTIFICATION
76	WETLAND PLANTS

SUBMITTAL #	DESCRIPTION
77	LANDFILL CAP - SEAM TESTS
78	MONITORING WELLS - BORING / CONSTRUCTION LOGS
79	LANDFILL CAP - SEED AND MULCH CERTIFICATIONS

Table 5 - Sampling

SAMPLE ID #	DESCRIPTION	NO. OF SAMPLES	DATE SAMPLE TAKEN	DATE RESULTS REC'D.
SS1 - SS5	EXISTING SOIL STOCKPILE	5	10 / 6 / 98	10 / 16 / 98
DP1 - DP2	DEBRIS FROM STOCKPILE	2	1 / 21 / 99	1 / 26 / 99
S1 - S54	PRECONSTRUCTION SOIL SAMPLES - LTTD / FPB	54	10 / 19 / 98	11 / 6 / 98
PAD517 - PAD565	POST CONSTRUCTION SOIL SAMPLES - LTTD / FPB	48	4 / 6 / 99	4 / 8 / 99
TS1 - TS4	TOPSOIL - SOURCE AREA	4	10 / 30 / 98	11 / 10 / 98
CF1 - CF15	CLEAN FILL - SOURCE AREA	15	11 / 3 / 98	11 / 10 / 98
STA1 - STA4	DOCUMENTATION - AIR MONITORING (DUST, Hg, VOC)	72	11 / 20 / 98 - 2 / 17 / 99	12 / 8 / 98 - 3 / 11 / 99
PT1 - PT21 R1 - R4	PRETREATMENT SOILS FOR LTTD DEMO TESTS	21 21	11 / 20 / 98 - 11 / 24 / 98	12 / 7 / 98
TR1 - TR7 TR1A	POST TREATMENT SOILS FOR LTTD DEMO TESTS ONE RESAMPLE	7	11 / 24 / 98 - 11 / 25 / 98 12 / 9 / 98	12 / 7 / 98 12 / 11 / 98
WT1 - WT4	WATER TREATMENT - DEMO TEST # 1	4	12 / 8 / 98	12 / 9 / 98
WT5 - WT8	WATER TREATMENT - DEMO TEST # 2	4	12 / 10 / 98	12 / 14 / 98
WT4A - WT107	WATER TREATMENT - BATCH TANK SAMPLES	99	12 / 10 / 98 - 4 / 8 / 99	12 / 14 / 98 - 4 / 9 / 99

SAMPLE ID #	DESCRIPTION	NO. OF SAMPLES	DATE SAMPLE TAKEN	DATE RESULTS REC'D.
APC1 VPC1	WATER TREATMENT - CARBON SAMPLES	1 1	3 / 16 / 99	3 / 17 / 99
T3S	HOLDING POND - SEDIMENT SAMPLE	1	3 / 17 / 99	3 / 18 / 99
LB1 - LB43	LAYBACK SOIL SAMPLES - NORTH SIDE	35	12 / 12 / 98 - 2 / 17 / 99	12 / 14 / 98 - 2 / 19 / 99
SLB1 - SLB44	LAYBACK SOIL SAMPLES - SOUTH SIDE	13	12 / 14 / 98 - 2 / 19 / 99	12 / 16 / 98 - 2 / 23 / 99
TR8 - TR266	TREATED SOIL SAMPLES - LTTD	258	12 / 12 / 98 - 3 / 17 / 99	12 / 15 / 98 - 3 / 18 / 99
SP1 - SP7	LTTD PAD - SOIL UNDER THE PROCESS EQUIPMENT	7	3 / 15 / 99	3 / 16 / 99
SDP1 - SDP2 SPA1	POST CONSTRUCTION - UNDER THE SMALL PAD	2 1	2 / 25 / 99 3 / 17 / 99	3 / 2 / 99 3 / 19 / 99
LPN1 - LPN2	POST CONSTRUCTION - UNDER THE LARGE PAD	2	3 / 30 / 99	3 / 31 / 99
HR1 - HR21	POST CONSTRUCTION - HAUL ROADS / FPB	21	2 / 12 / 99 - 3 / 9 / 99	2 / 15 / 99 - 3 / 11 / 99
BKPT1	TOPSOIL SAMPLE FROM OFF-SITE	1	4 / 13 / 99	4 / 15 / 99
TS1	TOPSOIL SAMPLE FROM OFF-SITE	1	5 / 12 / 99	5 / 13 / 99
FILL1	CLEAN FILL SAMPLE FROM OFF-SITE	1	5 / 12 / 99	5 / 13 / 99

SAMPLE ID #	DESCRIPTION	NO. OF SAMPLES	DATE SAMPLE TAKEN	DATE RESULTS REC'D.
MW12S - MW18D	SAMPLE OF DRILL CUTTINGS FROM WELLS	10	5 / 13 / 99 - 6 / 9 / 99	5 / 18 / 99 - 6 / 14 / 99
1MW - 2MW	SAMPLE OF WATER - WELL DEVELOPMENT	2	5 / 19 / 99	5 / 21 / 99
1829 (1) - 1829 (2)	SAMPLE OF WATER - NEIGHBOR WATER WELLS BY NYSDEC	2	1 / 6 / 99	2 / 16 / 99
182901 - 182914	SAMPLE OF WATER - ON-SITE MONITOR WELLS BY NYSDEC	14	9 / 28 / 99	11 / 22 / 99

Table 6 - Material Handling

MATERIALS HANDLED	VOLUME
TOPSOIL (SOURCE AREA) - STRIPPED / STAGED	608.80 cu.yds.
TOPSOIL (PADS / LF) - STRIPPED / STAGED	2655.70 cu.yds.
TOPSOIL - FROM OFF-SITE	864.00 cu.yds.
CLEAN FILL (SOURCE AREA)	3524.94 cu.yds.
CLEAN FILL - FROM OFF-SITE	3039.00 cu.yds.
SOILS EXCAVATED - TOTAL	22,348.18 cu.yds.
SOILS EXCAVATED (SOURCE)	13,166.14 cu.yds.
SOILS EXCAVATED (NORTH LAYBACK)	5,295.52 cu.yds.
SOILS EXCAVATED (SOUTH LAYBACK)	3,886.52 cu.yds.
SOILS TREATED - TOTAL	36,463.38 tons
SOILS TREATED (LIME)	6,677.46 tons
SOILS TREATED (RETREATED)	1,500.00 tons
SOILS TREATED (CARBON)	2.00 tons
SOILS TREATED (OTHER)	26.28 tons
SOILS TREATED (SOURCE / LAYBACK)	28,257.64 tons
TAILINGS BACKFILLED IN SOURCE AREA	3,520.27 cu.yds.
WATER - TREATED ON-SITE	1,393,639.00 gals.
WATER - HAULED ON-SITE	373,810.00 gals.
WATER - HAULED OFF-SITE	640,479.00 gals.

Table 7 - Daily Volume of Treated Water

DATE	WATER TREATED (GALLONS)
12 / 8 / 98	19,580 (DEMONSTRATION TEST # 1)
12 / 10 / 98	19,301 (DEMONSTRATION TEST # 2)
12 / 16 / 98	44,650 STARTUP - FOUR (4) FRAC TANKS ON-SITE
12 / 17 / 98	33,544
12 / 18 / 98	17,780
12 / 19 / 98	19,716
12 / 20 / 98	8,147
12 / 21 / 98	17,480
12 / 22 / 98	20,114 HOLIDAY SHUTDOWN
1 / 7 / 99	8,712 WINTERIZE UNITS
1 / 8 / 99	13,948
1 / 9 / 99	4,530
1 / 12 / 99	151
1 / 13 / 99	9,180
1 / 14 / 99	3,323
1 / 15 / 99	17,769
1 / 16 / 99	11,878
1 / 18 / 99	22,696 TWELVE (12) FRAC TANKS ON-SITE
1 / 19 / 99	15,667
1 / 20 / 99	31,775
1 / 21 / 99	30,857
1 / 22 / 99	14,653
1 / 25 / 99	21,555 HOLDING POND ONLINE

DATE	WATER TREATED (GALLONS)
1 / 26 / 99	33,816
1 / 27 / 99	50,213
1 / 28 / 99	32,384
1 / 31 / 99	13,630
2 / 1 / 99	33,379
2 / 2 / 99	67,606
2 / 3 / 99	19,146
2 / 4 / 99	48,809
2 / 5 / 99	32,025
2 / 6 / 99	31,704
2 / 7 / 99	22,754
2 / 8 / 99	30,635
2 / 11 / 99	82,204
2 / 13 / 99	53,873
2 / 14 / 99	32,705
2 / 15 / 99	50, 854
2 / 16 / 99	17,000
2 / 17 / 99	24,367
2 / 18 / 99	10,408
2 / 19 / 99	19,005
2 / 21 / 99	8,022
2 / 22 / 99	19,210
2 / 23 / 99	13,576
2 / 24 / 99	25,444
2 / 25 / 99	27,009
2 / 26 / 99	24,421

DATE	WATER TREATED (GALLONS)
3 / 1 / 99	34,615
3 / 2 / 99	25,788
3 / 23 / 99	20,000
3 / 24 / 99	20,000
3 / 25 / 99	20,000
3 / 26 / 99	20,025
3 / 29 / 99	22,006 HOLDING POND REMOVED
TOTAL	**1,393,639 GALS.**

Table 8- Daily Volume of Treated Soil

DATE	SOIL TREATED (TONS)
11 / 23 / 98	310.44 (TEST BURN)
11 / 24 / 98	554.59 (TEST BURN) - SHUTDOWN
12 / 12 / 98	433.85
12 / 13 / 98	416.82
12 / 14 / 98	637.96
12 / 15 / 98	677.28
12 / 16 / 98	825.85
12 / 17 / 98	626.03
12 / 18 / 98	315.64
12 / 19 / 98	573.32
12 / 20 / 98	378.80
12 / 21 / 98	705.50
12 / 22 / 98	360.75 HOLIDAY SHUTDOWN
12 / 29 / 98	508.84
12 / 30 / 98	380.93
12 / 31 / 98	448.67
1 / 2 / 99	246.33
1 / 4 / 99	118.01
1 / 5 / 99	329.41
1 / 6 / 99	483.18
1 / 7 / 99	245.24
1 / 8 / 99	366.00 BAGHOUSE SHUTDOWN
1 / 15 / 99	714.62
1 / 16 / 99	372.62

DATE	SOIL TREATED (TONS)
1 / 17 / 99	700.04
1 / 18 / 99	556.52 WEATHER SHUTDOWN
1 / 28 / 99	367.97
1 / 29 / 99	245.22
1 / 30 / 99	764.14
1 / 31 / 99	492.34
2 / 1 / 99	1323.00
2 / 2 / 99	1263.05
2 / 3 / 99	1342.42
2 / 4 / 99	1590.84
2 / 5 / 99	889.00
2 / 6 / 99	833.08
2 / 7 / 99	974.48
2 / 8 / 99	1528.06
2 / 9 / 99	1281.37
2 / 10 / 99	1476.04
2 / 11 / 99	1578.53
2 / 12 / 99	1292.65
2 / 13 / 99	858.11
2 / 14 / 99	1070.94
2 / 15 / 99	1536.12 PAYMENT SHUTDOWN
3 / 10 / 99	524.25
3 / 11 / 99	317.29
3 / 12 / 99	817.52
3 / 13 / 99	678.98
3 / 15 / 99	724.46
3 / 16 / 99	405.36

FIGURES

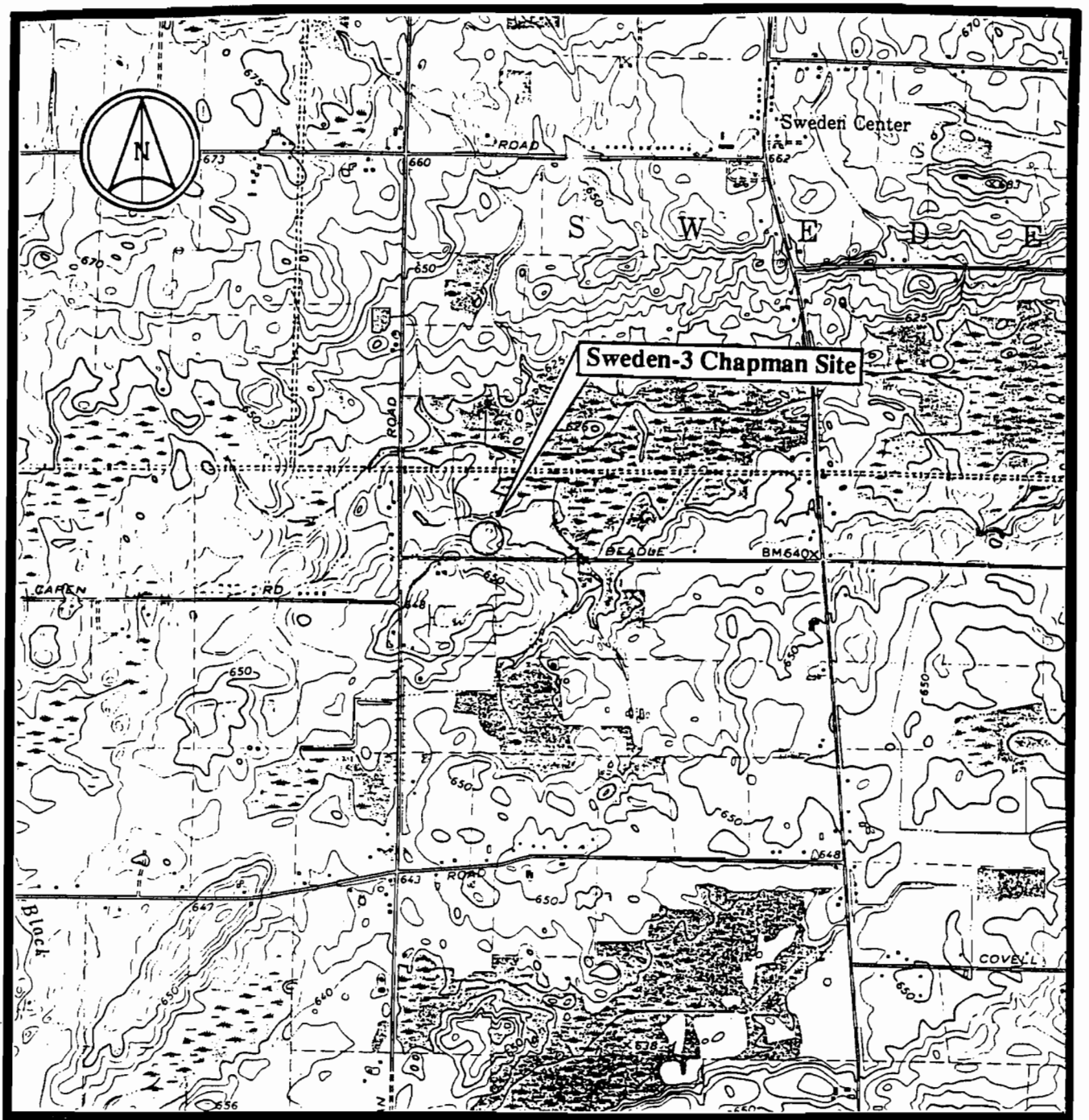


FIGURE 1

SITE LOCATION MAP

BROCKPORT QUADRANGLE
NEW YORK
7.5 MINUTE SERIES (TOPOGRAPHIC)

SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

FIGURE 2

Project Site Layout

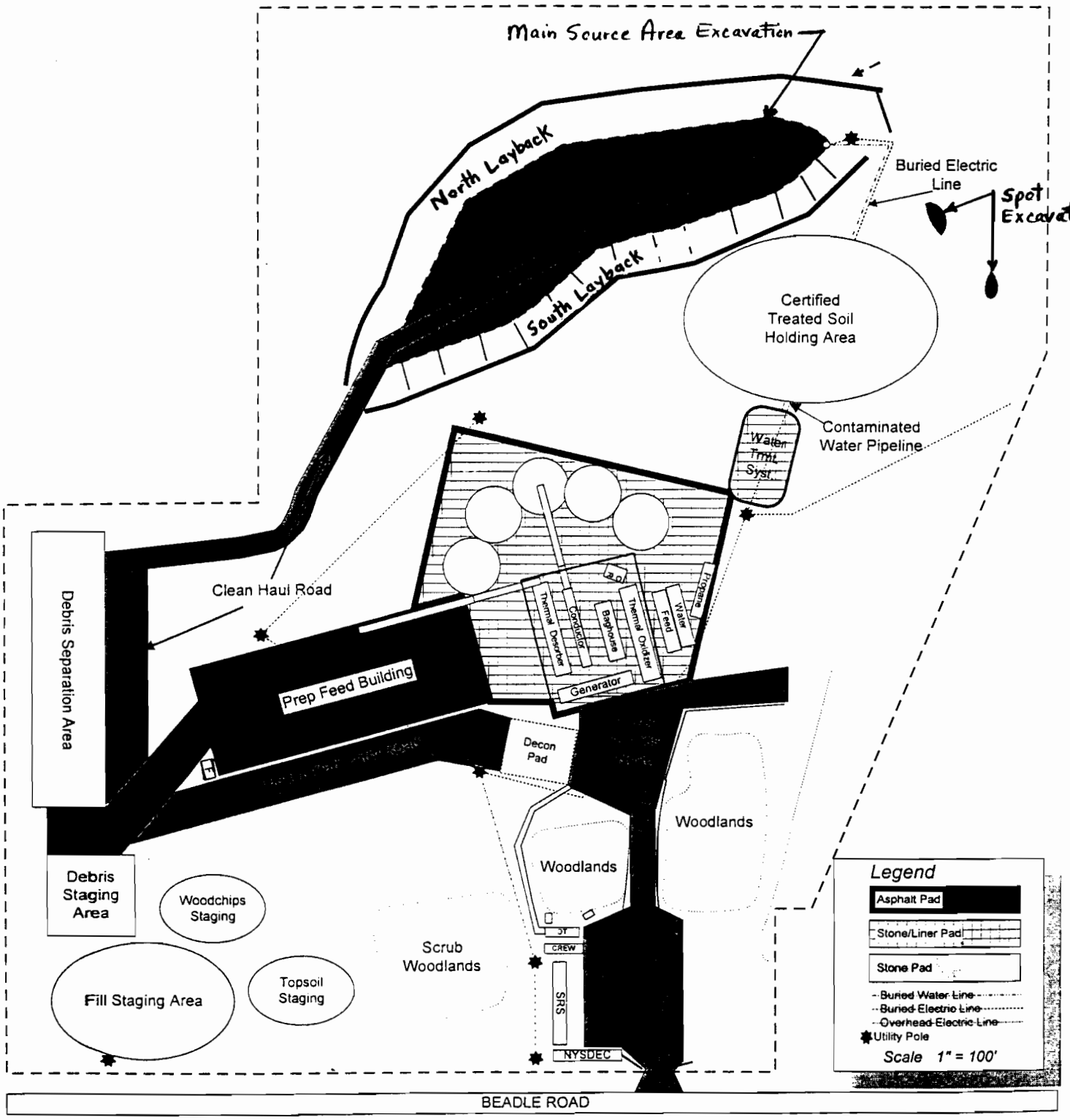
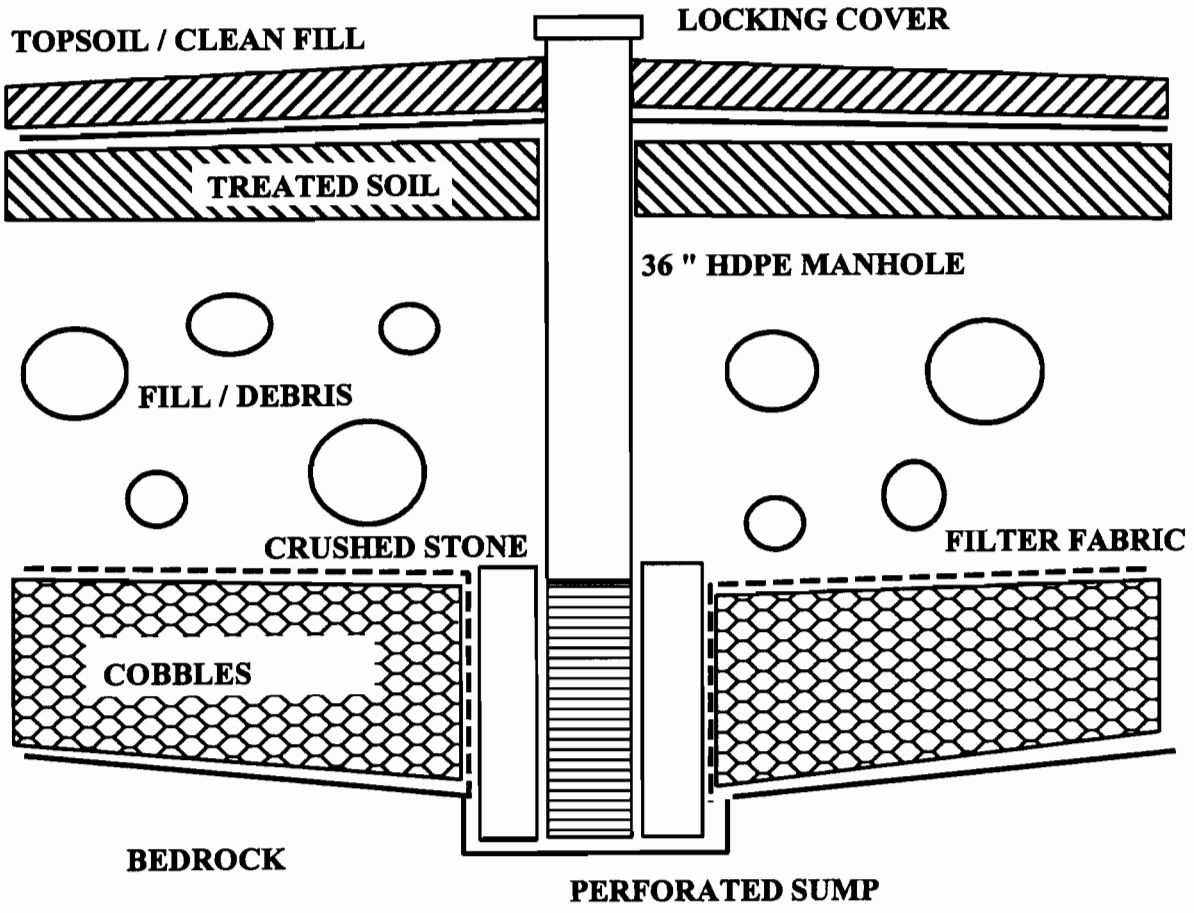
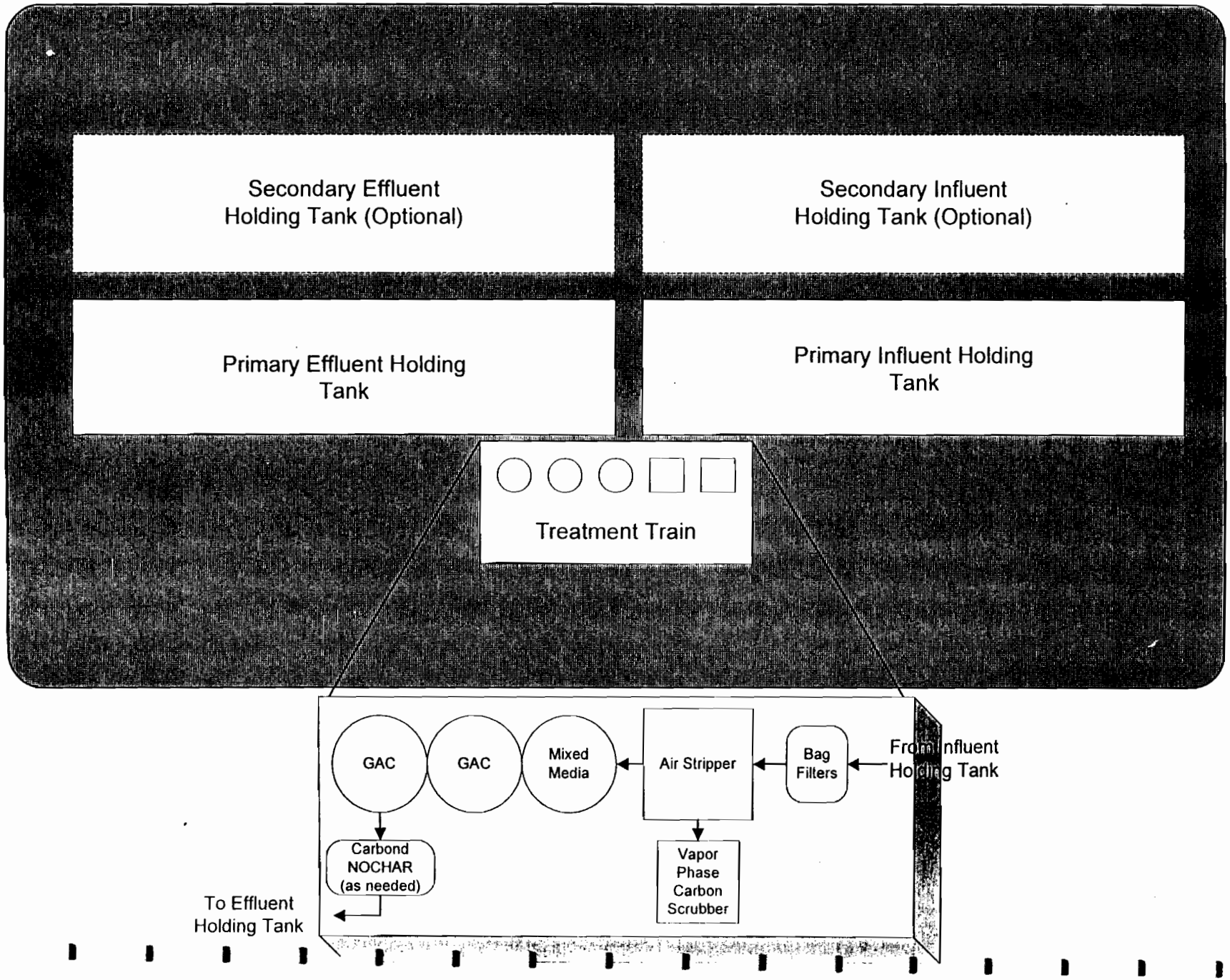


FIGURE 3 - RECOVERY SUMP SCHEMATIC



Water Treatment Plant



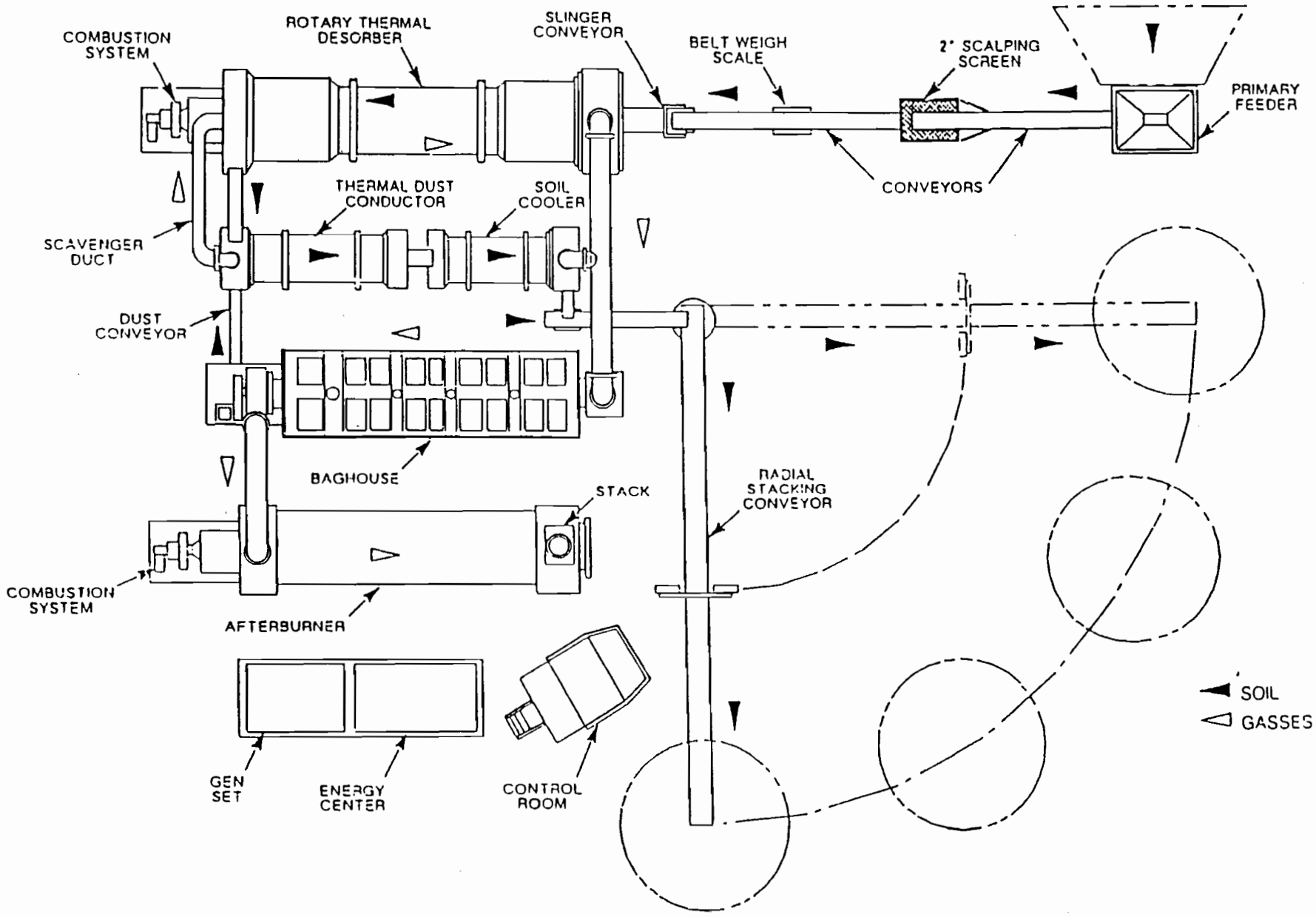


FIGURE 5 - LTTD SYSTEM SCHEMATIC

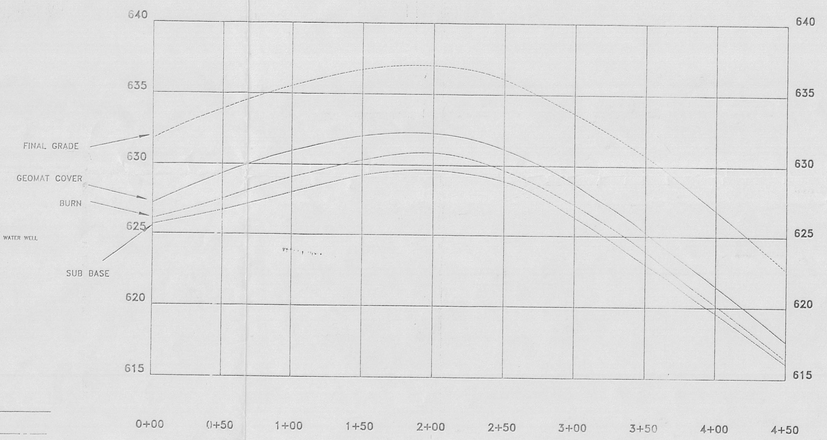
APPENDICES

APPENDIX A

Project Drawings

Existing Conditions Map
Excavation of Main Source Area
Final As-Builts

CROSS SECTION OF CAP
WEST TO EAST



MONITORING WELLS SCHEDULE

WELL No:	GROUND ELEVATION (FEET)	TOP OF COVER ELEVATION (FEET)	HORIZONTAL LOCATION NORTHING: (Y)	EASTING: (X)
MW 1 I	624.92	626.46	1153357.92	666581.11
MW 1 D	624.61	627.15	1153360.16	666569.244
* MW 2 I	621.75	623.48	1153476.47	666928.91
MW 2 D	622.30	624.40	1153469.10	666942.33
MW 3 I	619.19	622.00	1153324.60	667070.09
MW 3 D	620.56	622.75	1153307.93	667069.34
MW 4 I	636.36	638.00	1152955.44	666915.84
MW 5 I	651.38	654.88	1152748.35	666414.79
MW 5 D	651.84	653.99	1152755.08	666415.61
MW 7 S	622.19	624.55	1153404.50	667009.41
MW 8 I	623.76	625.33	1153119.37	667008.73
MW 8 D	623.82	625.22	1153109.96	667005.40
MW 9 I	620.64	623.11	1153578.90	666746.41
MW 9 D	621.57	624.13	1153581.06	666766.74
MW 10 I	619.16	621.44	1153666.51	667006.80
MW 10 D	619.08	620.96	1153665.50	667028.53
MW 10 S	619.31	622.15	1153660.97	667012.85
MW 11 I	619.44	621.85	1153418.51	667270.48
MW 11 D	619.40	621.70	1153414.66	667254.67
MW 12 S	619.39	621.86	1153802.57	667414.00
MW 12 D	618.92	622.01	1153803.47	667470.88
MW 12 I	618.71	621.56	1153797.56	667472.97
MW 13 S	619.08	621.22	1153767.24	667116.36
* MW 13 I	618.74	620.59	1153762.12	667119.64
MW 14 I	619.30	621.36	1153476.96	667079.13
MW 16 I	620.54	623.34	1153288.85	667149.69
MW 16 S	620.43	623.39	1153305.29	667148.98
MW 17 I	619.81	622.66	1153546.62	667465.31
MW 17 S	620.31	622.95	1153555.89	667470.04
MW 18 I	619.41	621.92	1153943.17	667120.09
MW 18 S	619.50	622.12	1153938.57	667113.87
MW 19 S	623.34	625.88	1153785.37	666590.81
MW 19 I	623.56	626.07	1153776.97	666596.41
MW 19 D	623.28	625.82	1153765.91	666596.14

* ASTERIK DENOTES REVISION

SURVEY NOTES

SITE BENCHMARK P.K. NAIL IN CENTER LINE OF BEADLE ROAD REFERENCED TO ECOLOGY AND ENVIRONMENTAL ENGINEERING P.C. SITE PLAN DATED 5/98 DRAWING No: 0F9330 SHEET 1

REVISIONS

NO.	DATE	DESCRIPTION	BY
1.	2/10/00	REVISED ELEVATIONS AS NOTED	R.J.B.

CERTIFICATION

WE, SCHULTZ ASSOCIATES, ENGINEERS AND LAND SURVEYORS P.C. HEREBY CERTIFY THIS MAP WAS COMPLETED ON JANUARY 19, 2000 FROM NOTES OF AN INSTRUMENT SURVEY COMPLETED DECEMBER 27, 1999 IN ACCORDANCE WITH ARTICLE 7209 OF THE NEW YORK STATE EDUCATION LAW. ANY ALTERATIONS ARE A VIOLATION OF ARTICLE 145 SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.

KRIS J. SCHULTZ, L.S. NO. 49982
JOHN H. SCIARABBA, L.S. NO. 50348

SWEDEN-3 CHAPMAN SITE
SWEDEN, NEW YORK

AS-BUILT MAP

SCALE: 1" = 80' | CHECKED BY: J.H.S.
DATE: JANUARY 19, 2000 | SHEET NO.: 1 OF 1
DRAWN BY: R.J.B. | DRAWING NO.:

SCHULTZ ASSOCIATES
ENGINEERS & LAND SURVEYORS, P.C.
4 WEST AVENUE, BOX 89
SPENCERPORT, NEW YORK 14559
716-349-3750

LEGEND

- 5 FOOT INDEX CONTOUR
- 1 FOOT INTERMEDIATE CONTOUR
- MONITORING WELL
- AIR MONITORING POINT
- UTILITY POLE
- DECIDUOUS TREE
- MARSH BRUSH

NOTES

1. BOTH HORIZONTAL AND VERTICAL DATUMS ARE BASED ON AUTOCAD FILE AND CONTRACT DRAWINGS DATED 5/98 BY ECOLOGY AND ENVIRONMENT ENGINEERING PC PROVIDED TO MODI ENGINEERING PC.
2. FIELD SURVEY WAS COMPLETED ON 9/9/98-9/14/98.
3. FIELD SURVEY WAS COMPLETED USING A PENTAX PTS-V3 (SER#519976) INSTRUMENT WITH A HEWLETT PACKARD HP48GX DATA COLLECTOR.

50 0 50 100 150

Scale 1" = 50'

REVISIONS

The undersigned hereby certifies that this is a correct map made from an actual survey.

DONALD W. FRY LS # 43743
LICENSED LAND SURVEYOR

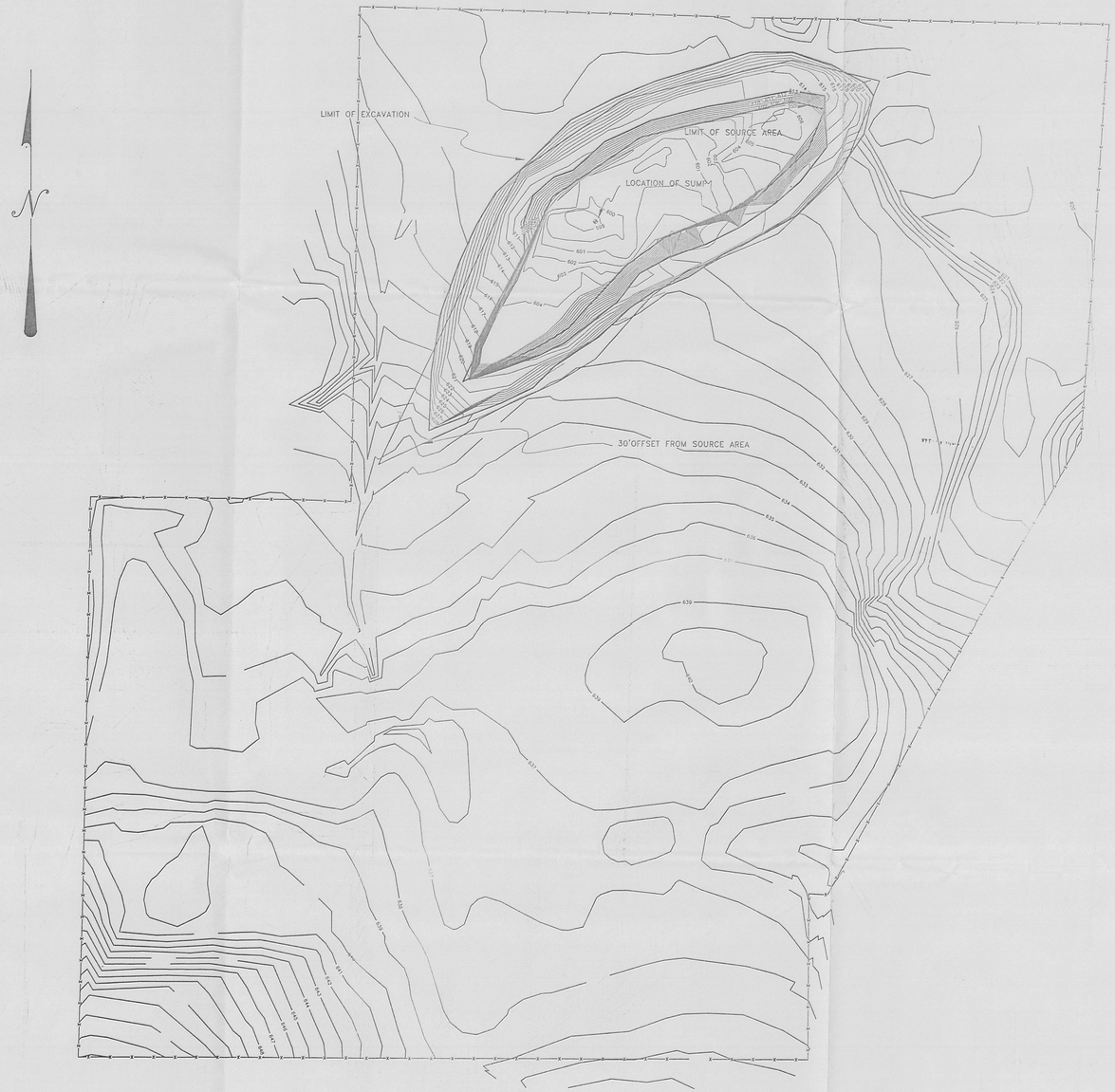
STATE OF NEW YORK DONALD W. FRY 043743 LICENSED LAND SURVEYOR

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

SITE REMEDIATION EXISTING CONDITIONS MAP SWEDEN 3 CHAPMAN SITE SWEDEN, NEW YORK MONROE COUNTY

modi engineering & land surveying, p.c.
CONSULTING ENGINEERS & LAND SURVEYORS
7730 FRONTAGE ROAD
OGDEN, N.Y. 13039 (315)458-8980
FAX (315)458-8978

DATE	SCALE	PROJECT NO.	DWG. NO.
12/9/98	1"=50'	9835	98035-1.DWG



02-18-1999 Volume Report: Total fill removed around source area
Lower left grid corner : 666571.59,1153191.94
Upper right grid corner: 666981.59,1153511.54
X grid resolution: 41, Y grid resolution: 32
X grid cell size : 10.00, Y grid cell size: 10.00
Cut volume : 247927 cubic ft, 9182 cubic yards

02-18-1999 Volume Report : Total fill removed from source area
Lower left grid corner : 666572.47,1153197.23
Upper right grid corner: 666972.47,1153517.23
X grid resolution: 40, Y grid resolution: 32
X grid cell size : 10.00, Y grid cell size: 10.00
Cut volume : 355485.88 cubic ft, 13166.144 cubic yards

NOTES:
HORIZONTAL & VERTICAL DATUM ARE BASED ON AUTOCAD FILE AND DRAWING (# 98035PL1.DWG) SUPPLIED BY MODI ENGINEERING AND LAND SURVEYING, P.C. DATED OCTOBER 22, 1998

SWEDEN-3 CHAPMAN SITE
SWEDEN, NEW YORK

ASBUILT MAP SHOWING TOTAL EXCAVATING OF SOURCE AREA 1

SCALE:	1" = 50'	CHECKED BY:	
DATE:	MARCH 28, 1999	SHEET NO.:	1 OF 1
DRAWN BY:	P.L.	DRAWING NO.:	

SCHULTZ ASSOCIATES
ENGINEERS & LAND SURVEYORS, P.C.
4 WEST AVENUE, BOX 89
SPENCERPORT NEW YORK 14559
716-349-3750

APPENDIX B

Health & Safety Documentation Air Monitoring Results

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Sita Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 23-NOV-98 - 24-NOV-98
Date Received : 01-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47406

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STR-3 29	L47406-6	129	<0.04	<0.06	<0.06	<0.0005
STR-2 33	L47406-7	168	<0.04	<0.06	<0.06	<0.0004
STR-4 30	L47406-8	168	<0.04	<0.06	<0.06	<0.0004
LAB BLANK	L47406-9	NA	<0.04	<0.06	<0.06	NA

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 03-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 23-NOV-98 - 24-NOV-98
Date Received : 01-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47406

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-3	L47406-10	129	<10	<10	<10	<0.08	<0.02
STA-2	L47406-11	168	<10	<10	<10	<0.06	<0.02
STA-4	L47406-12	168	<10	<10	<10	<0.06	<0.02
LAB BLANK	L47406-13	NA	<10	<10	<10	NA	NA

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : ggs
Date : 08-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 23-NOV-98 - 24-NOV-98
Date Received : 01-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47406

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-3 31659	L47406-1	1.716	0.498	0.29
STA-2 31653	L47406-3	1.680	0.141	0.084
STA-4 31647	L47406-4	1.680	<0.05	<0.03
LAB BLANK	L47406-5	NA	<0.05	NA

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : FVC PW

Submitted by: tk
Approved by : KSB
Date : 02-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable

mg -Milligrams
ug -Micrograms
ND -Not Detected

m3 -Cubic Meters
l -Liters
ppm -Parts per Million

kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Sita Remediation Services, Inc.
Site : SWEDEN, NY — Project No.: 260
Date Sampled : 23-NOV-98 - 24-NOV-98 — Account No.: 13310
Date Received : 01-DEC-98 — Login No. : L47406

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-3 29	L47406-6	129	<0.04	<0.06	<0.06	<0.0005
STA-2 33	L47406-7	168	<0.04	<0.06	<0.06	<0.0004
STA-4 30	L47406-8	168	<0.04	<0.06	<0.06	<0.0004
LAB BLANK	L47406-9	NA	<0.04	<0.06	<0.06	NA

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 03-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 23-NOV-98 - 24-NOV-98
Date Received : 01-DEC-98

Project No.: 260
Account No.: 13310
Login No. : L47406

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-3	L47406-10	129	<10	<10	<10	<0.08	<0.02
STA-2	L47406-11	168	<10	<10	<10	<0.06	<0.02
STA-4	L47406-12	168	<10	<10	<10	<0.06	<0.02
LAB BLANK	L47406-13	NA	<10	<10	<10	NA	NA

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : ggs
Date : 08-DEC-98
QC by:
NYS DOH # : 11626

<	-Less Than	mg	-Milligrams	m3	-Cubic Meters	kg	-Kilograms
>	-Greater Than	ug	-Micrograms	l	-Liters	NS	-Not Specified
NA	-Not Applicable	ND	-Not Detected	ppm	-Parts per Million		

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Sita Remediation Services, Inc.
Site : SWEDEN, NY Project No.: 260
Date Sampled : 18-NOV-98 - 20-NOV-98 Account No.: 13310
Date Received : 24-NOV-98 Login No. : L47301

Mercury

Sample ID	Lab ID	Air Vol Liters	Filter ug	Tube ug	Total ug	Conc ug/m3
3 ST-3	L47301-1	99	<0.04	<0.06	<0.06	<0.0006
9 ST-2	L47301-2	118.6	<0.04	<0.06	<0.06	<0.0005
10 ST-1	L47301-3	140	<0.04	<0.06	<0.06	<0.0004
11 PERSONNEL-1	L47301-4	43	<0.04	<0.06	<0.06	<0.001
LAB BLANK	L47301-5	NA	<0.04	<0.06	<0.06	NA

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 30-NOV-98
QC by:
MIS DOM # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Galson Laboratories

LABORATORY ANALYSIS REPORT

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 18-NOV-98 - 20-NOV-98
Date Received : 24-NOV-98
Project No.: 260
Account No.: 13310
Login No. : L47301

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
SIT-3	L47301-11	99	<10	<10	<10	<0.1	<0.03
SIT-2	L47301-12	118.6	<10	<10	<10	<0.08	<0.02
SIT-1	L47301-13	140	<10	<10	<10	<0.07	<0.02
PERSONNEL-1	L47301-14	43	14	<10	14	0.3	0.09
LAB BLANK	L47301-15	NA	<10	<10	<10	NA	NA

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include n-hexane and methyl chloroform.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: CSG
Approved by : JMT
Date : 03-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY — Project No. : 260
Date Sampled : 18-NOV-98 - 20-NOV-98 — Account No. : 10310
Date Received : 24-NOV-98 — Login No. : L47303

Total Dust

Sample ID	Lab ID	Air Vol m3	Total MG	Conc mg/m3
31635 ST-3	L47301-6	0.990	<0.05	<0.05
31639 ST-2	L47301-7	1.186	<0.05	<0.04
31636 ST-1	L47301-8	1.400	<0.05	<0.04
31641 PERSONNEL-1	L47301-9	0.480	<0.05	<0.1
LAB BLANK	L47301-10	NA	<0.05	NA

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg — Submitted by: MS
Analytical Method : NIOSH 0500; GRAV — Approved by : KCS
OSHA PEL (TWA) : PNOR 15 mg/m3 — Date : 25-NOV-98
Collection Media : PVC PW — QC by:
NYS DOH # : 11626

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 01-DEC-98
Date Received : 11-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47696

Total Dust

	Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
	STA-1 31640	L47696-1	1.200	<0.05	<0.04
	STA-2 31949	L47696-2	1.090	0.061	0.056
	STA-3 31947	L47696-3	0.890	0.058	0.065
*	PER 31669	L47696-4	1.080	3.32	3.1
	LAB BLANK	L47696-5	NA	<0.05	NA

COMMENTS: PNOR = Particulates Not Otherwise Regulated.
* This sample exceeded the NIOSH recommended loading of 2 mg for total dust. Reported results may underestimate actual concentrations.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: TK
Approved by : KSB
Date : 16-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 01-DEC-98
Date Received : 11-DEC-98

Project No.: 260
Account No.: 13310
Login No. : L47696

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 41	L47696-6	120	<0.04	<0.06	<0.06	<0.0005
STA-2 49	L47696-7	98	<0.04	<0.06	<0.06	<0.0006
STA-3 61	L47696-8	89	<0.04	<0.06	<0.06	<0.0007
FER 42	L47696-9	81	<0.04	<0.06	<0.06	<0.0007
LAB BLANK	L47696-10	NA	<0.04	<0.06	<0.06	NA

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 14-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 01-DEC-98
Date Received : 11-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47696

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L47696-11	120	<10	<10	<10	<0.08	<0.02
STA-2	L47696-12	109	<10	<10	<10	<0.09	<0.03
STA-3	L47696-13	89	<10	<10	<10	<0.1	<0.03
PER	L47696-14	81	335	<10	335	4.1	1.2
LAB BLANK	L47696-15	NA	<10	<10	<10	NA	NA

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include: Methyl ethyl ketone, n-hexane, methyl isobuty ketone, toluene, ethyl benzene, xylene, and stoddard solvent.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: LEO LUCISANO
Approved by : JMT
Date : 18-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWANDA, NY
Date Sampled : 12-DEC-98
Date Received : 17-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47812

Coded Data

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 31937	L47812-1	1.560	<0.05	<0.03
STA-2 31939	L47812-2	1.550	<0.05	<0.03
STA-3 31935	L47812-3	1.540	0.169	0.11
[illegible] 31928	L47812-4	0.720	0.709	0.91

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC FW

Submitted by: tk
Approved by : KSB
Date : 21-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 12-DEC-98
Date Received : 17-DEC-98

Project No.: 260
Account No.: 13310
Login No. : L47812

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 69	L47812-5	156	<0.04	<0.06	<0.06	<0.0004
STA-2 72	L47812-6	155	<0.04	<0.06	<0.06	<0.0004
STA-3 78	L47812-7	116	<0.04	<0.06	<0.06	<0.0005
PRES-PB 82	L47812-8	78	<0.04	<0.06	<0.06	<0.0008

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 23-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Galson Laboratories

LABORATORY ANALYSIS REPORT

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 12-DEC-98
Date Received : 17-DEC-98

Project No.: 260
Account No.: 13310
Login No. : L47812

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L47812-9	156	<10	<10	<10	<0.06	<0.02
STA-2	L47812-10	155	<10	<10	<10	<0.06	<0.02
STA-3	L47812-11	116	<10	<10	<10	<0.09	<0.02
PERS-PB	L47812-12	78	<10	<10	<10	<0.1	<0.04

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 23-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : NS
Date Sampled : 19-DEC-98
Date Received : 22-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47916

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 134	L47916-6	136	<0.04	<0.06	<0.06	<0.0004
STA-2 108	L47916-7	132	<0.04	<0.06	<0.06	<0.0004
STA-3 101	L47916-8	132	<0.04	<0.06	<0.06	<0.0004
STA-4 135	L47916-9	132.0	<0.04	<0.06	<0.06	<0.0004
PER 129	L47916-10	114	<0.04	<0.06	<0.06	<0.0005

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table 2-?
Collection Media : Filter & Tube

Submitted by: AP
Approved by : [illegible]
Date : 30-DEC-98
QC by: [illegible]
NJ DOH # 11545

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : NS
Date Sampled : 19-DEC-98
Date Received : 22-DEC-98
Project No.: 260
Account No.: 13310
Login No. : L47916

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L47916-11	136	<10	<10	<10	<0.07	<0.02
STA-2	L47916-12	132	<10	<10	<10	<0.08	<0.02
STA-3	L47916-13	132	<10	<10	<10	<0.08	<0.02
STA-4	L47916-14	132.0	<10	<10	<10	<0.08	<0.02
PER	L47916-15	114	41	<10	41	0.4	0.1

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include: Acetone, trichloroethylene, toluene, ethyl benzene, xylene, stoddard solvent, and low molecular weight hydrocarbons.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: LEO LUCISANO
Approved by : JMT
Date : 30-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms		
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified		
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million			

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : NS
Date Sampled : 19-DEC-98
Date Received : 22-DEC-98
Project No.: 300
Account No.: 13310
Login No. : L47916

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32099	L47916-1	1.360	<0.05	<0.04
STA-2 32103	L47916-2	1.320	0.314	0.24
STA-3 32099	L47916-3	1.320	0.239	0.18
STA-4 32101	L47916-4	1.320	0.073	0.055
* PER 32107	L47916-5	1.140	2.22	1.9

COMMENTS: PNOR = Particulates Not Otherwise Regulated.
* This sample exceeded the NIOSH recommended loading of 2 mg for total dust. Reported results may underestimate actual concentrations.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: MK
Approved by : ves
Date : 24-DEC-98
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY — Project No.: 260
Date Sampled : 21-DEC-98 - 29-DEC-98 — Account No.: 13310
Date Received : 05-JAN-99 — Login No. : L48065

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32502	L48065-1	1.680	<0.05	<0.03
STA-2 32503	L48065-2	1.670	<0.05	<0.03
STA-3 32496	L48065-3	1.660	<0.05	<0.03
STA-4 32501	L48065-4	1.650	0.136	0.082
PERSONNEL 32494	L48065-5	0.720	0.375	0.52
STA-1 32488	L48065-6	1.490	<0.05	<0.03
STA-2 32481	L48065-7	1.480	<0.05	<0.03
STA-3 32486	L48065-8	1.470	<0.05	<0.03
STA-4 32487	L48065-9	1.440	<0.05	<0.03

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: NS
Approved by : KSB
Date : 06-JAN-99
QC by:
NYS DOH # : 11626

< -Less Than — mg -Milligrams — m3 -Cubic Meters — kg -Kilograms
> -Greater Than — ug -Micrograms — l -Liters — NS -Not Specified
NA -Not Applicable — ND -Not Detected — ppm -Parts per Million

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 21-DEC-98 - 29-DEC-98
Date Received : 05-JAN-99

Project No.: 260
Account No.: 13310
Login No. : L48065

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L48065-20	168	<10	<10	<10	<0.06	<0.02
STA-2	L48065-21	167	<10	<10	<10	<0.06	<0.02
STA-3	L48065-22	166	<10	<10	<10	<0.06	<0.02
STA-4	L48065-23	165	<10	<10	<10	<0.06	<0.02
PERSONNEL	L48065-24	72	40	<10	40	0.6	0.2
STA-1	L48065-25	149	<10	<10	<10	<0.07	<0.02
STA-2	L48065-26	111	<10	<10	<10	<0.09	<0.02
STA-3	L48065-27	110	<10	<10	<10	<0.09	<0.02
STA-4	L48065-28	108	<10	<10	<10	<0.09	<0.03

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include: Acetone, methyl ethyl ketone, ethyl benzene, trichloroethylene, methyl isobutyl ketone, toluene, xylene, stoddard solvent, and low molecular weight hydrocarbons.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: LEO LUCISANO
Approved by : JMT
Date : 12-JAN-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 21-DEC-98 - 29-DEC-98
Date Received : 05-JAN-99

Project No.: 260
Account No.: 13310
Login No. : L48065

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 288	L48065-10	168	<0.04	<0.06	<0.06	<0.0004
STA-2 289	L48065-11	167	<0.04	<0.06	<0.06	<0.0004
STA-3 124	L48065-12	166	<0.04	<0.06	<0.06	<0.0004
STA-4 122	L48065-14	165	<0.04	<0.06	<0.06	<0.0004
PERSONNEL 284	L48065-15	72	<0.04	<0.06	<0.06	<0.0008
STA-1 111	L48065-16	149	<0.04	<0.06	<0.06	<0.0004
STA-2 120	L48065-17	111	<0.04	<0.06	<0.06	<0.0005
STA-3 116	L48065-18	110	<0.04	<0.06	<0.06	<0.0005
STA-4 114	L48065-19	108	<0.04	<0.06	<0.06	<0.0006

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table 2-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 06-JAN-99
QC by: EM
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 15-JAN-99 - 17-JAN-99
Date Received : 28-JAN-99
Project No.: 260
Account No.: 13310
Login No. : L48543

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32685	L48543-1	0.900	<0.05	<0.06
STA-2 32646	L48543-2	0.870	<0.05	<0.06
STA-3 33275	L48543-3	0.850	0.097	0.11
STA-4 32657	L48543-4	0.850	<0.05	<0.06
STA-1 32649	L48543-5	1.080	<0.05	<0.05
STA-2 32648	L48543-6	1.080	0.145	0.13
STA-3 32660	L48543-7	1.080	0.112	0.10
STA-4 32654	L48543-8	1.080	<0.05	<0.05
STA-1 32655	L48543-9	1.620	<0.05	<0.03
STA-2 32651	L48543-10	1.620	<0.05	<0.03
STA-3 33264	L48543-11	1.620	0.111	0.068
STA-4 32659	L48543-12	1.620	0.274	0.17

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: MS
Approved by : KSB
Date : 01-FEB-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 15-JAN-99 - 17-JAN-99
Date Received : 28-JAN-99
Project No.: 260
Account No.: 13310
Login No. : L48543

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 160	L48543-13	90	<0.04	<0.06	<0.06	<0.0007
STA-2 162	L48543-14	87	<0.04	<0.06	<0.06	<0.0007
STA-3 176	L48543-15	85	<0.04	<0.06	<0.06	<0.0007
STA-4 157	L48543-16	85	<0.04	<0.06	<0.06	<0.0007
STA-1 163	L48543-17	108	<0.04	<0.06	<0.06	<0.0006
STA-2 167	L48543-18	108	<0.04	<0.06	<0.06	<0.0006
STA-3 152	L48543-19	108	<0.04	<0.06	<0.06	<0.0006
STA-4 137	L48543-20	108	<0.04	<0.06	<0.06	<0.0006
STA-1 161	L48543-21	162	<0.04	<0.06	<0.06	<0.0004
STA-2 159	L48543-22	162	<0.04	<0.06	<0.06	<0.0004
STA-3 179	L48543-23	162	<0.04	<0.06	<0.06	<0.0004
STA-4 164	L48543-24	162	<0.04	<0.06	<0.06	<0.0004

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 03-FEB-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 15-JAN-99 - 17-JAN-99
Date Received : 28-JAN-99
Project No.: 260
Account No.: 13310
Login No. : L48543

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1 1/15	L48543-25	90	<10	<10	<10	<0.1	<0.03
STA-2 1/15	L48543-26	87	<10	<10	<10	<0.1	<0.03
STA-3 1/15	L48543-27	85	10	<10	10	0.1	0.03
STA-4 1/15	L48543-28	85	<10	<10	<10	<0.1	<0.03
STA-1 1/16	L48543-29	108	<10	<10	<10	<0.09	<0.03
STA-2 1/16	L48543-30	108	<10	<10	<10	<0.09	<0.03
STA-3 1/16	L48543-31	108	<10	<10	<10	<0.09	<0.03
STA-4 1/16	L48543-32	108	<10	<10	<10	<0.09	<0.03
STA-1 1/17	L48543-33	162	<10	<10	<10	<0.06	<0.02
STA-2 1/17	L48543-34	162	<10	<10	<10	<0.06	<0.02
STA-3 1/17	L48543-35	162	<10	<10	<10	<0.06	<0.02
STA-4 1/17	L48543-36	162	<10	<10	<10	<0.06	<0.02

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identification includes stoddard solvent.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 04-FEB-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 28-JAN-99
Date Received : 11-FEB-99
Project No.: 260
Account No.: 13310
Login No. : L48871

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 177	L48871-5	168	<0.04	<0.06	<0.06	<0.0004
STA-2 148	L48871-6	168	<0.04	<0.06	<0.06	<0.0004
STA-3 149	L48871-7	168	<0.04	<0.06	<0.06	<0.0004
STA-4 180	L48871-8	168	<0.04	<0.06	<0.06	<0.0004

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 15-FEB-99
QC by:
NYS DOH # 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 28-JAN-99
Date Received : 11-FEB-99
Project No.: 260
Account No.: 13310
Login No. : L48871

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L48871-9	168	<10	<10	<10	<0.06	<0.02
STA-2	L48871-11	168	<10	<10	<10	<0.06	<0.02
STA-3	L48871-12	168	<10	<10	<10	<0.06	<0.02
STA-4	L48871-13	168	<10	<10	<10	<0.06	<0.02

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 18-FEB-99
QC by:
NYS DOH #: 11625

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 28-JAN-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48871

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 33526	L48871-1	1.680	<0.05	<0.03
STA-2 33525	L48871-2	1.680	<0.05	<0.03
STA-3 33522	L48871-3	1.680	<0.05	<0.03
STA-4 33527	L48871-4	1.680	<0.05	<0.03

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: tk
Approved by : KSB
Date : 17-FEB-99
QC by:
NYS DOH #: 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 30-JAN-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48872

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
PERS-1	L48872-3	102	45	<10	45	0.4	0.1

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Tentative identifications include: [illegible] and other low molecular weight hydrocarbons.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 18-FEB-99
QC by:
NYS DOH #: 11626

< -Less Than
> -Greater Than
NA -Not Applicable

mg -Milligrams
ug -Micrograms
ND -Not Detected

m3 -Cubic Meters
l -Liters
ppm -Parts per Million

kg -Kilograms
ul -Microliters

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 30-JAN-99
Date Received : 11-FEB-99

Project No.: 760
Account No.: 13310
Login No. : L48872

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
PENS-1 33530	L48872-1	1.020	0.512	0.60

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: tk
Approved by : KSB
Date : 16-FEB-99
QC by:
NYS DOH #: 11626

< -Less Than
> -Greater Than
NA -Not Applicable

mg -Milligrams
ug -Micrograms
ND -Not Detected

m3 -Cubic Meters
l -Liters
ppm -Parts per Million

kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 30-JAN-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48872

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
PERS-1 450	L48872-2	102	<0.04	<0.06	<0.06	<0.0006

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 15-FEB-99
QC by:
NYS DOH # 11626

< -Less Than
> -Greater Than
NA -Not Applicable

mg -Milligrams
ug -Micrograms
ND -Not Detected

m3 -Cubic Meters
l -Liters
ppm -Parts per Million

kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 02-FEB-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48873

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 D426	L48873-9	138	<0.04	<0.06	<0.06	<0.0004
STA-2 D432	L48873-10	138	<0.04	<0.06	<0.06	<0.0004
STA-3 D427	L48873-11	138	<0.04	<0.06	<0.06	<0.0004
STA-4 D448	L48873-12	138	<0.04	<0.06	<0.06	<0.0004
STA-1 N421	L48873-13	156	<0.04	<0.06	<0.06	<0.0004
STA-2 N411	L48873-14	156	<0.04	<0.06	<0.06	<0.0004
STA-3 N422	L48873-15	117	<0.04	<0.06	<0.06	<0.0005
STA-4 N433	L48873-16	117	<0.04	<0.06	<0.06	<0.0005

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 15-FEB-99
QC by:
NYS DOH : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 02-FEB-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48873

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1 D	L48873-17	138	<10	<10	<10	<0.07	<0.02
STA-2 D	L48873-18	138	17	<10	17	0.1	0.04
STA-3 D	L48873-19	138	<10	<10	<10	<0.07	<0.02
STA-4 D	L48873-20	138	<10	<10	<10	<0.07	<0.02
STA-1 N	L48873-21	156	<10	<10	<10	<0.06	<0.02
STA-2 N	L48873-22	156	<10	<10	<10	<0.06	<0.02
STA-3 N	L48873-23	117	<10	<10	<10	<0.08	<0.02
STA-4 N	L48873-24	117	<10	<10	<10	<0.08	<0.02

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identification includes a petroleum distillate pattern.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 18-FEB-99
QC by:
NY# [illegible] 11676

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 02-FEB-99
Date Received : 11-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L48873

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 D33516	L48873-1	1.380	<0.05	<0.04
STA-2 D33532	L48873-2	1.380	0.050	0.036
STA-3 D33542	L48873-3	1.380	<0.05	<0.04
STA-4 D33533	L48873-4	1.380	0.050	0.036
STA-1 M33539	L48873-5	1.560	0.057	0.036
STA-2 M33546	L48873-6	1.170	0.068	0.058
STA-3 M33514	L48873-7	1.560	<0.05	<0.03
STA-4 M33510	L48873-8	1.560	0.088	0.056

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: tk
Approved by : KSB
Date : 17-FEB-99
QC by:
NYS DOH # 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 10-FEB-99
Date Received : 19-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L49058

Mercury

Sample ID	Lab ID	Air Vol liter...	Filter ...ug...	Tube ug	Total ug	Conc mg/m3
STA-1 S-372	L49058-10	132	<0.04	<0.06	<0.06	<0.0004
STA-2 D-365	L49058-11	132	<0.04	<0.06	<0.06	<0.0004
STA-3 D-380	L49058-12	132	<0.04	<0.06	<0.06	<0.0004
STA-4 D-369	L49058-13	132	<0.04	<0.06	<0.06	<0.0004
PERSONNEL D-368	L49058-14	90	<0.04	<0.06	<0.06	<0.0007
STA-1 N-376	L49058-15	109	<0.04	<0.06	<0.06	<0.0006
STA-2 N-362	L49058-16	109	<0.04	<0.06	<0.06	<0.0006
STA-3 N-373	L49058-17	145	<0.04	<0.06	<0.06	<0.0004
STA-4 N-361	L49058-18	109	<0.04	<0.06	<0.06	<0.0006

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSO
Date : 2/23/99
QC by:
NYS DOH # : 11625

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Allied Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 10-FEB-99
Date Received : 19-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L49058

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1 D	L49058-19	132	<10	<10	<10	<0.08	<0.02
STA-2 D	L49058-20	132	<10	<10	<10	<0.08	<0.02
STA-3 D	L49058-21	132	<10	<10	<10	<0.08	<0.02
STA-4 D	L49058-22	132	<10	<10	<10	<0.08	<0.02
* PERSONNEL	L49058-23	90	65	<10	65	0.7	0.2
STA-1 N	L49058-24	109	<10	<10	<10	<0.09	<0.03
STA-2 N	L49058-25	109	<10	<10	<10	<0.09	<0.03
STA-3 N	L49058-26	145	<10	<10	<10	<0.07	<0.02
STA-4 N	L49058-27	109	<10	<10	<10	<0.09	<0.03

COMMENTS: Metal ug corrected for a desorption efficiency of 100%
Quantified as n-hexane.
* Tentative identifications include: MEK, n-hexane, methyl chloroform, trichloroethylene, methyl isobutyl ketone, toluene, ethyl benzene, xylenes, a type of naphtha, and unidentfied light hydrocarbons with molecular weights <200.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: Heather Eckerlin
Approved by : JMT
Date : 26-FEB-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : SWEDEN, NY
Date Sampled : 10-FEB-99
Date Received : 19-FEB-99

Project No.: 260
Account No.: 13310
Login No. : L49058

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 D-33055	L49058-1	1.320	0.071	0.054
STA-2 D-33079	L49058-2	1.320	<0.05	<0.04
STA-3 D-33071	L49058-3	1.320	0.055	0.042
STA-4 D-33087	L49058-4	1.320	0.270	0.20
[illegible]	[illegible]	0.099	0.919	1.9
STA-1 N-33090	L49058-6	1.093	<0.05	<0.04
STA-2 N-33077	L49058-7	1.093	<0.05	<0.04
STA-3 N-33088	L49058-8	1.458	0.168	0.12
STA-4 N-33078	L49058-9	1.093	<0.05	<0.04

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: tk
Approved by : RSD
Date : 24-FEB-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 01-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49692

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32824	L49692-1	0.960	<0.05	<0.05
STA-2 32835	L49692-2	0.960	<0.05	<0.05
STA-3 32830	L49692-3	0.960	<0.05	<0.05
STA-4 32840	L49692-4	0.960	<0.05	<0.05

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500, GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: MS
Approved by : KSB
Date : 23-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 01-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49692

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L49692-9	96	<10	<10	<10	<0.1	<0.03
STA-2	L49692-10	96	<10	<10	<10	<0.1	<0.03
STA-3	L49692-11	96	<10	<10	<10	<0.1	<0.03
STA-4	L49692-12	96	<10	<10	<10	<0.1	<0.03

COMMENTS: Total ug corrected for a desorption efficiency of 100%. Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 24-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 01-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49692

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 227	L49692-5	96	<0.04	<0.06	<0.06	<0.0006
STA-2 238	L49692-6	96	<0.04	<0.06	<0.06	<0.0006
STA-3 231	L49692-7	96	<0.04	<0.06	<0.06	<0.0006
STA-4 237	L49692-8	96	<0.04	<0.06	<0.06	<0.0006

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 22-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 13-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49693

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32855	L49693-1	1.440	0.076	0.053
STA-2 32863	L49693-2	1.440	<0.05	<0.03
STA-3 32853	L49693-3	1.440	<0.05	<0.03
STA-4 32858	L49693-4	1.440	<0.05	<0.03

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: MS
Approved by : KSB
Date : 23-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 13-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49693

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L49693-9	144	<10	<10	<10	<0.07	<0.02
STA-2	L49693-10	144	<10	<10	<10	<0.07	<0.02
STA-3	L49693-11	144	<10	<10	<10	<0.07	<0.02
STA-4	L49693-12	144	<10	<10	<10	<0.07	<0.02

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/PID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: JSG
Approved by : JMT
Date : 24-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 13-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49693

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 262	L49693-5	144	<0.04	<0.06	<0.06	<0.0004
STA-2 256	L49693-6	144	<0.04	<0.06	<0.06	<0.0004
STA-3 251	L49693-7	144	<0.04	<0.06	<0.06	<0.0004
STA-4 257	L49693-8	144	<0.04	<0.06	<0.06	<0.0004

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 22-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 15-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49694

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
STA-1 32844	L49694-1	1.680	0.053	0.032
STA-2 32850	L49694-2	1.670	<0.05	<0.03
STA-3 32848	L49694-3	1.660	<0.05	<0.03
STA-4 32849	L49694-4	1.650	<0.05	<0.03

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC FW

Submitted by: MS
Approved by : KSB
Date : 23-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Galson Laboratories

LABORATORY ANALYSIS REPORT

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 15-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49694

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
STA-1	L49694-9	168	82	<10	82	0.5	0.1
STA-2	L49694-10	167	<10	<10	<10	<0.06	<0.02
STA-3	L49694-11	166	<10	<10	<10	<0.06	<0.02
STA-4	L49694-12	165	<10	<10	<10	<0.06	<0.02

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include: Limonene.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: LEO LUCISANO
Approved by : JMT
Date : 25-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Galson Laboratories

LABORATORY ANALYSIS REPORT

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 15-MAR-99
Date Received : 18-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49694

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
STA-1 258	L49694-5	168	<0.04	<0.06	<0.06	<0.0004
STA-2 252	L49694-6	167	<0.04	<0.06	<0.06	<0.0004
STA-3 263	L49694-7	166	<0.04	<0.06	<0.06	<0.0004
STA-4 264	L49694-8	165	<0.04	<0.06	<0.06	<0.0004

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 22-MAR-99
QC by:
NYS DOH # : 11629

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 17-FEB-99 - 26-FEB-99
Date Received : 11-MAR-99

Project No.: 260
Account No.: 13310
Login No. : L49509

Total Volatile Organics

Sample ID	Lab ID	Air Vol liter	Front ug	Back ug	Total ug	Conc mg/m3	ppm
PERSONAL 2/17	L49509-27	90	14	<10	14	0.2	0.04
STA-1 2/17	L49509-28	140	<10	<10	<10	<0.07	<0.02
STA-2 2/17	L49509-29	140	<10	<10	<10	<0.07	<0.02
STA-3 2/17	L49509-30	140	<10	<10	<10	<0.07	<0.02
STA-4 2/17	L49509-31	140	<10	<10	<10	<0.07	<0.02
STA-1N 2/17	L49509-32	132	<10	<10	<10	<0.08	<0.02
STA-2N 2/17	L49509-33	132	<10	<10	<10	<0.08	<0.02
STA-3N 2/17	L49509-34	132	<10	<10	<10	<0.08	<0.02
STA-4N 2/17	L49509-35	132	<10	<10	<10	<0.08	<0.02
STA-1 2/26	L49509-36	108	<10	<10	<10	<0.09	<0.03
STA-2 2/26	L49509-37	108	<10	<10	<10	<0.09	<0.03
STA-3 2/26	L49509-38	108	<10	<10	<10	<0.09	<0.03
STA-4 2/26	L49509-39	108	<10	<10	<10	<0.09	<0.03

COMMENTS: Total ug corrected for a desorption efficiency of 100%.
Quantified as n-hexane.
Tentative identifications include: Toluene, xylene, and unidentified light hydrocarbons.

Level of quantitation: 10 ug
Analytical Method : NIOSH 1500/1501; GC/FID
OSHA PEL (TWA) : NA
Collection Media : Charcoal

Submitted by: Heather Eckerlin
Approved by : JMT
Date : 17-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 17-FEB-99 - 26-FEB-99
Date Received : 11-MAR-99
Project No.: 260
Account No.: 13310
Login No. : L49509

Mercury

Sample ID	Lab ID	Air Vol liter	Filter ug	Tube ug	Total ug	Conc mg/m3
PERSONAL 329	L49509-14	90	<0.04	<0.06	<0.06	<0.0007
STA-1 333	L49509-15	140	<0.04	<0.06	<0.06	<0.0004
STA-2 347	L49509-16	140	<0.04	<0.06	<0.06	<0.0004
STA-3 335	L49509-17	140	<0.04	<0.06	<0.06	<0.0004
STA-4 332	L49509-18	140	<0.04	<0.06	<0.06	<0.0004
STA-1N 328	L49509-19	132	<0.04	<0.06	<0.06	<0.0004
STA-2N 325	L49509-20	132	<0.04	<0.06	<0.06	<0.0004
STA-3N 321	L49509-21	132	<0.04	<0.06	<0.06	<0.0004
STA-4N 326	L49509-22	132	<0.04	<0.06	<0.06	<0.0004
STA-1 228	L49509-23	108	<0.04	<0.06	<0.06	<0.0006
STA-2 240	L49509-24	108	<0.04	<0.06	<0.06	<0.0006
STA-3 232	L49509-25	108	<0.04	<0.06	<0.06	<0.0006
STA-4 233	L49509-26	108	<0.04	<0.06	<0.06	<0.0006

Level of quantitation: 0.06 ug
Analytical Method : NIOSH 6009
OSHA PEL (TWA) : See Table Z-2
Collection Media : Filter & Tube

Submitted by: AP
Approved by : KSB
Date : 15-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

LABORATORY ANALYSIS REPORT

Galson Laboratories

Client : Site Remediation Services, Inc.
Site : Sweden, NY
Date Sampled : 17-FEB-99 - 26-FEB-99
Date Received : 11-MAR-99
Project No.: 260
Account No.: 13310
Login No. : L49509

Total Dust

Sample ID	Lab ID	Air Vol m3	Total mg	Conc mg/m3
PERSONAL 32686	L49509-1	0.900	0.472	0.52
STA-1 32678	L49509-2	1.440	<0.05	<0.03
STA-2 33286	L49509-3	1.440	0.174	0.12
STA-3 33297	L49509-4	1.440	0.050	0.035
STA-4 32683	L49509-5	1.440	0.175	0.12
STA-1N 32857	L49509-6	1.320	<0.05	<0.04
STA-2N 32667	L49509-7	1.320	0.096	0.073
STA-3N 32675	L49509-8	1.320	0.219	0.16
STA-4N 32666	L49509-9	1.320	<0.05	<0.04
STA-1 32828	L49509-10	1.080	<0.05	<0.05
STA-2 32834	L49509-11	1.080	0.065	0.060
STA-3 32823	L49509-12	1.080	<0.05	<0.05
STA-4 32829	L49509-13	1.080	<0.05	<0.05

COMMENTS: PNOR = Particulates Not Otherwise Regulated.

Level of quantitation: 0.05 mg
Analytical Method : NIOSH 0500; GRAV
OSHA PEL (TWA) : PNOR 15 mg/m3
Collection Media : PVC PW

Submitted by: tk
Approved by : KSB
Date : 12-MAR-99
QC by:
NYS DOH # : 11626

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

APPENDIX C

Water Analytical Results

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Water

Sample ID	Date	Time	Matrix	Location	Comments
WT-1	12/8/98	1800	Water	Water Treatment Influent	
WT-2	12/8/98	1815	Water	Water Treatment Effluent	
WT-3	12/8/98	2200	Water	Water Treatment Influent	
WT-4	12/8/98	2200	Water	Water Treatment Effluent	
WT-4A	12/10/98	715	Water	Water Treat. Effluent (Resample)	
WT-5	12/10/98	1410	Water	Water Treatment Influent	
WT-6	12/10/98	1420	Water	Water Treatment Effluent	
WT-7	12/10/98	1830	Water	Water Treatment Influent	
WT-8	12/10/98	1840	Water	Water Treatment Effluent	
WT-9	12/21/98	1649	Water	Treated water	
WT-10	12/28/98	1325	Water	Southwest Tank	
WT-11	12/28/98	1330	Water	Southeast Tank	
WT-12	12/28/98	1438	Water	North Tank center	
WT-13	12/28/98	1738	Water	East tank soil pad	
WT-14	12/28/98	1742	Water	west tank pad	

Site Remediation Servies, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Water

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-1		XXX	319E	2477E	1176E	175.8	12.4	1754
WT-2	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-3		XXX	497E	3014E	1795E	270E	15.5	2110.5
WT-4	XXX		bdl	18.4	bdl	bdl	bdl	bdl
WT-4A	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-5		XXX	1112E	5882E	3603E	621E	31.4	4235.4
WT-6	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-7		XXX	1063E	5875E	3669E	616E	33.1	4247.9
WT-8	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-9		XXX	65.1	bdl	bdl	bdl	bdl	bdl
WT-10	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-11		XXX	369.1	25.3	bdl	7.6	bdl	bdl
WT-12		XXX	465	1566	959.7	366	5.4	846.7
WT-13		XXX	123.8	bdl	bdl	bdl	bdl	bdl
WT-14		XXX	71.1	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Sweden-3 Chapman Site

Sample Results Summary Table

January Water 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-15	1/4/99	1948	Water	Tank 5	Hold till further use
WT-16	1/4/99	1953	Water	Tank 7 3hrs. After H2O2	
WT-17	1/6/99	1819	Water	Tank 5 4.5 hrs. after H202	
WT-18	1/7/99	2034	Water	After final carbon filter	*Broke during Shipment*
WT-19	1/7/99	2036	Water	post-2nd carbon filter	*Broke during Shipment*
WT-20	1/7/99	2038	Water	sock filter	*Broke during Shipment*
WT-21	1/9/99	1140	Water	tank 4 after treatment	
WT-22	1/9/99	1150	Water	post 1st charcoal filter	
WT-23	1/9/99	1130	Water	post 2nd charcoal filter	
WT-24	1/9/99	1155	Water	tank 3	
WT-25	1/9/99	1145	Water	resin soc experiment	
WT-26	1/9/99	1140	Water	2nd soc filter	
WT-27	1/12/99	645	Water	post H202 treat Tank 5	
WT-28	1/16/99	910	Water	tank 4 after h202	
WT-29	1/16/99	915	Water	Tank 2	
WT-30	1/16/99	925	Water	excavation pond	
WT-31	1/16/99	1315	Water	tank 5 4hrs. After h202	
WT-32	1/16/99	1720	Water	tank 8 post dilution	
WT-33	1/18/99	915	Water	tank 6 with H202	
WT-34	1/19/99	1350	Water	Tank 11 after H202	
WT-35	1/19/99	1400	Water	Upper Exc. Pit	
WT-36	1/20/99	1100	Water	Tank 4	
WT-37	1/20/99	1230	Water	Tank 5	
WT-38	1/21/99	1130	Water	Tank 6 (Pretreat)	
WT-39	1/21/99	1240	Water	Tank 4 Post H202	
WT-40	1/21/99	1345	Water	Tank 6 Post H202	
WT-41	1/22/99	1230	Water	Tank 4	
WT-42	1/22/99	1245	Water	Tank 6	
WT-43	1/22/99	1255	Water	Tank 11	
WT-44	1/25/99	1350	Water	Tank 5	

Sweden-3 Chapman Site

Sample Results Summary Table

January Water 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-45	1/25/99	1405	Water	Pretreat exc. Pit	
WT-46	1/26/99	1330	Water	Tank 11	
WT-47	1/26/99	1345	Water	Tank 4	
WT-48	1/27/99	1215	Water	Tank 5	
WT-49	1/27/99	1230	Water	Tank 6	
WT-50	1/28/99	1315	Water	Tank 6	
WT-51	1/28/99	1319	Water	Tank 4	
WT-52	1/29/99	1322	Water	Tank 4 (pretreat)	
WT-53	1/29/99	1324	Water	Tank 5 (pretreat)	
WT-54	1/29/99	1326	Water	Tank 6 (Pretreat)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Water 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-15				Not Ran for Duplicate Purpose				
WT-16			62.8	bdl	bdl	bdl	bdl	bdl
WT-17		XXX	265.4	bdl	bdl	bdl	bdl	bdl
WT-18				*Broke during Shipment*				
WT-19				*Broke during Shipment*				
WT-20				*Broke during Shipment*				
WT-21			94.9	bdl	bdl	bdl	bdl	bdl
WT-22		XXX	467.1	bdl	bdl	89.1	bdl	bdl
WT-23			171.4	8.7	bdl	bdl	bdl	bdl
WT-24		XXX	342.7	970E	737E	239.2	bdl	534E
WT-25								
WT-26								
WT-27			97.4	bdl	bdl	bdl	bdl	bdl
WT-28			132.8	bdl	bdl	bdl	bdl	bdl
WT-29		XXX	224.8	1925E	1120.8E	135.2	7	598.7
WT-30		XXX	155.4	3902.7E	488.4E	93.1	7.3	2371.8
WT-31			90.3	bdl	bdl	bdl	bdl	bdl
WT-32			bdl	7	bdl	2.1	bdl	bdl
WT-33			108.5	bdl	bdl	bdl	bdl	bdl
WT-34			103.9	104.5	bdl	3.1	bdl	57.6
WT-35		XXX	413.9	1184E	1059E	704E	7.7	1475.5
WT-36			140.5	bdl	bdl	bdl	bdl	bdl
WT-37			145.7	bdl	bdl	bdl	bdl	bdl
WT-38			164.9	bdl	bdl	bdl	bdl	bdl
WT-39			145.8	bdl	bdl	bdl	bdl	bdl
WT-40			253.6	bdl	bdl	bdl	bdl	bdl
*BDL = Below Detection Limit								

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Water 1999

Sample ID	Clean	Contaminated	Constituents	Results = µg/kg				
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-41			191.5	bdl	bdl	bdl	bdl	bdl
WT-42			184.4	bdl	bdl	bdl	bdl	bdl
WT-43			97.1	11.2	bdl	bdl	bdl	bdl
WT-44			169.1	bdl	bdl	bdl	bdl	bdl
WT-45		XXX	137.2	472.8	189.4	263.4	1.6	9.5
WT-46			88.8	bdl	bdl	9.5	bdl	bdl
WT-47			207.3	bdl	bdl	2.4	bdl	bdl
WT-48			149.1	bdl	bdl	bdl	bdl	bdl
WT-49			153.2	bdl	bdl	bdl	bdl	bdl
WT-50			181.1	bdl	bdl	bdl	bdl	bdl
WT-51			137.2	bdl	bdl	bdl	bdl	bdl
WT-52			187.9	bdl	24.2	bdl	bdl	bdl
WT-53			168.9	bdl	bdl	bdl	bdl	bdl
WT-54			55	bdl	bdl	bdl	bdl	bdl

*BDL = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Water 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-55	2/1/99	1150	Water	Tank 4	
WT-56	2/2/99	801	Water	Tank 5	
WT-57	2/2/99	803	Water	Tank 6	
WT-58	2/2/99	1340	Water	Tank 5	
WT-59	2/2/99	1342	Water	Tank 6	
WT-60	2/3/99	830	Water	creekwater	
WT-61	2/3/99	930	Water	Tank 4	
WT-62	2/3/99	932	Water	Tank 5	
WT-63	2/3/99	1400	Water	Tank 6	
WT-64	2/4/99	1310	Water	Tank 4	
WT-65	2/4/99	1315	Water	Tank 5	
WT-66	2/5/99	1025	Water	Tank 5	
WT-67	2/5/99	1028	Water	Tank 6	
WT-68	2/6/99	1115	Water	Tank 4	
WT-69	2/7/99	1250	Water	Tank 5	
WT-70	2/7/99	1251	Water	Tank 6	
WT-71	2/8/99	1345	Water	Tank 5	
WT-72	2/9/99	904	Water	Tank 6	
WT-73	2/11/99	1332	Water	Tank 6	
WT-74	2/12/99	1335	Water	Tank 5	
WT-75	2/12/99	1116	Water	Tank 4	
WT-76	2/12/99	1118	Water	Tank 5	
WT-77	2/12/99	1120	Water	Tank 6	
WT-78	2/13/99	1345	Water	Tank 5	
WT-79	2/13/99	1345	Water	Tank 6	
WT-80	2/14/99	1310	Water	Tank 4	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Water 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-81	2/14/99	1312	Water	Tank 5	
WT-82	2/15/99	1330	Water	Tank 6	
WT-83	2/16/99	1330	Water	Tank 5	
WT-84	2/16/99	1345	Water	Tank 6	
WT-85	2/17/99	1030	Water	Tank 4	
WT-86	2/17/99	1330	Water	Tank 6	
WT-87	2/18/99	1345	Water	Tank 5	
WT-88	2/19/99	1010	Water	Tank 4	
WT-89	2/19/99	1353	Water	Tank 6	
WT-90	2/22/99	1015	Water	Tank 5	
WT-91	2/22/99	1400	Water	Tank 4	
WT-92	2/24/99	1130	Water	Tank 6	
WT-93	2/25/99	1340	Water	Tank 6	
WT-94	2/25/99	1400	Water	Tank 4	
WT-95	2/26/99	1030	Water	Tank 6	
WT-96	2/26/99	1500	Water	Tank 5	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Water 1999

Sample ID	Clean	Contaminated	Constituents	Results = µg/kg				
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-55	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-56	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-57	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-58	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-59	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-60	XXX		46.8	bdl	bdl	bdl	bdl	bdl
WT-61		XXX	58.4	bdl	bdl	bdl	bdl	bdl
WT-62	XXX		29.3	bdl	bdl	bdl	bdl	bdl
WT-63	XXX		31.1	bdl	bdl	bdl	bdl	bdl
WT-64	XXX		46.3	bdl	bdl	bdl	bdl	bdl
WT-65	XXX		34.8	bdl	bdl	bdl	bdl	bdl
WT-66		XXX	67.7	bdl	bdl	bdl	bdl	bdl
WT-67		XXX	77.7	bdl	bdl	bdl	bdl	bdl
WT-68		XXX	92.6	bdl	bdl	bdl	bdl	bdl
WT-69		XXX	118.4	bdl	bdl	bdl	bdl	bdl
WT-70		XXX	69.9	bdl	bdl	bdl	bdl	bdl
WT-71		XXX	86.9	bdl	bdl	bdl	bdl	bdl
WT-72		XXX	107.8	bdl	bdl	bdl	bdl	bdl
WT-73		XXX	52	bdl	bdl	bdl	bdl	bdl
WT-74		XXX	89.2	bdl	bdl	bdl	bdl	bdl
WT-75		XXX	84.3	bdl	bdl	bdl	bdl	bdl
WT-76		XXX	79.9	bdl	bdl	bdl	bdl	bdl
WT-77		XXX	86.9	bdl	bdl	bdl	bdl	bdl
WT-78		XXX	89.2	bdl	bdl	bdl	bdl	bdl
WT-79		XXX	73.3	bdl	bdl	bdl	bdl	bdl

* bdl = Below Detection Limit

* Contaminated = Did not meet SPEDS

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Water 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-80	XXX		28.8	bdl	bdl	bdl	bdl	bdl
WT-81		XXX	87.5	bdl	bdl	bdl	bdl	bdl
WT-82	XXX		46	bdl	bdl	bdl	bdl	bdl
WT-83		XXX	61.4	bdl	bdl	bdl	bdl	bdl
WT-84		XXX	53	bdl	bdl	bdl	bdl	bdl
WT-85		XXX	54	bdl	bdl	bdl	bdl	bdl
WT-86	XXX		49.1	bdl	bdl	bdl	bdl	bdl
WT-87	XXX		36.6	bdl	bdl	bdl	bdl	bdl
WT-88	XXX		36.7	bdl	bdl	bdl	bdl	bdl
WT-89	XXX		31.1	bdl	bdl	bdl	bdl	bdl
WT-90	XXX		31.6	bdl	bdl	bdl	bdl	bdl
WT-91	XXX		36.1	bdl	bdl	bdl	bdl	bdl
WT-92	XXX		19.1	bdl	bdl	bdl	bdl	bdl
WT-93	XXX		27.2	bdl	bdl	bdl	bdl	bdl
WT-94	XXX		29.8	bdl	bdl	bdl	bdl	bdl
WT-95	XXX		15	bdl	bdl	bdl	bdl	bdl
WT-96	XXX		14.8	bdl	bdl	bdl	bdl	bdl

* bdl = Below Detection Limit

*Contaminated = Did not meet SPEDS

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Water 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-97	3/1/99	1340	Water	Tank 4	
WT-98	3/1/99	1345	Water	Tank 5	
WT-99	3/2/99	1130	Water	Tank 5	
WT-100	3/2/99	1132	Water	Tank 6	
WT-101	3/22/99	1500	Water	Tank 5	
WT-102	3/24/99	1420	Water	Tank 4	
WT-103	3/24/99	1425	Water	Tank 6	
WT-104	3/24/99	1435	Water	Exc. Hole/pond taken while pumping	
WT-105	3/26/99	1330	Water	Tank 4	
WT-106	3/26/99	1340	Water	Tank 5	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Water 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-97	XXX		18.1	bdl	bdl	bdl	bdl	bdl
WT-98	XXX		13.7	bdl	bdl	bdl	bdl	bdl
WT-99		XXX	23	bdl	bdl	bdl	bdl	12.3
WT-100		XXX	21	bdl	bdl	bdl	bdl	11.1
WT-101	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-102	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-103	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-104	XXX		bdl	6.8	21.1	bdl	bdl	bdl
WT-105	XXX		bdl	bdl	bdl	bdl	bdl	bdl
WT-106	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limits

* Contaminated = Did not meet SPEDS

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Water April 1999

Sample ID	Date	Time	Matrix	Location	Comments
WT-107	4/8/99	1320	Water	Decon Pad Sump	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Water April 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
WT-107	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* Bdl = Below Detection Limit

APPENDIX D

Soil Analytical Results

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

November Pre-Treated **1998**

Sample ID	Date	Time	Matrix	Location	Comments
1	11/20/98	1710	Soil	Exc. bucket 1ft below surface South side	
2	11/20/98	1710	Soil	Exc. Bucket 2ft. Below surface North side	
3	11/20/98	1723	Soil	Exc. Bucket 5ft. Below surface South side	
4	11/20/98	1730	Soil	Exc. Bucket 7ft. Below surface NW corner	
5	11/20/98	1738	Soil	9ft. Below surface mid. S side Hnu=25ppm	
6	11/20/98	1738	Soil	duplicate of 5	
7	11/20/98	1745	Soil	12ft. Below surface mid. N side	
8	11/20/98	1800	Soil	6ft. Below surface mid. S side Hnu= 60 ppm	
9	11/20/98	1811	Soil	18ft. Below surface NE corner	
10	11/20/98	1820	Soil	21ft. Below surface N. side Hnu=40 ppm	
11	11/20/98	1840	Soil	22ft.at rock S. side	
12	11/20/98	1840	Soil	duplicate of 11	
PT-13	11/22/98	1300	Soil	stockpile 11/21 S. side	
PT-14	11/22/98	1310	Soil	stockpile 11/21 E. side	
PT-15	11/22/98	1325	Soil	stockpile 11/22 N. side (wet)	
PT-16	11/22/98	1330	Soil	staging pad (wet)	
PT-17	11/22/98	1330	Soil	dupilicate of PT-16	
PT-18	11/22/98	1610	Soil	staging pad (wet and dry)	
PT-19	11/22/98	1615	Soil	staging pad (E. side)	
PT-20	11/22/98	1620	Soil	staging pad (S. side)	
PT-21	11/22/98	1630	Soil	screened pile S. side	

Site Remediation Services, Inc

Sweden-3 Chapman Site

Sample Results Summary Table

November **Pre-Treated 1998**

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
1	XXX		20	57	19	12	12	85
2	XXX		12	13	12	12	12	67
3	XXX		12	17	11	11	11	52
4	XXX		12	44	12	12	12	194
5	XXX		11	840	16	11	13	182
6		XXX	5600	17000	2800	2800	1400	4200
7		XXX	5600	1400	4700	2800	1400	4200
8	XXX		11	190	11	11	11	71
9		XXX	5600	1400	13000	2800	1400	4200
10		XXX	5600	21000	20000	2800	1400	9600
11		XXX	5600	7000	18000	2800	1400	4500
12		XXX	860	250	5700	69	57	171
PT-13		XXX	5500	3300	2800	2800	1400	4200
PT-14		XXX	5600	1400	2800	2800	1400	4200
PT-15		XXX	5800	1500	3300	2900	1500	12100
PT-16		XXX	6400	4900	5200	12000	1600	31200
PT-17		XXX	6300	7700	5000	3100	1600	4800
PT-18		XXX	6100	1500	4800	3100	1500	4500
PT-19		XXX	5900	1500	8800	2900	1500	4500
PT-20		XXX	540	1400	950	1400	1400	4200
PT-21		XXX	1100	170	2600	1600	1600	4800

Site Remediation Servies, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

November Treated 1998

Sample ID	Date	Time	Matrix	Location	Comments
TR-1	11/23/98	1630	Soil	160 tons	
TR-2	11/23/98	2005	Soil	320 tons	
TR-3	11/24/98	1400	Soil	160 tons	
TR-4	11/24/98	1810	Soil	320 tons	
TR-5	11/24/98	2031	Soil	480 tons	
TR-6	11/25/98	1210	Soil	554 tons	
TR-7	11/25/98	1210	Soil	Duplicate of TR-6 554 ton	

Site Remediation Services, Inc

Sweden-3 Chapman Site

Sample Results Summary Table

November Treated 1998

Sample ID	Clean	Contaminated	Constituents					
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-1		XXX	310	22	56	22	2.6	66
TR-2	XXX		180	11	49	11	2.6	33
TR-3	XXX		190	11	26	11	2.6	33
TR-4	XXX		35	43	20	10	10	55
TR-5	XXX		43	40	23	11	2.6	33
TR-6	XXX		30	1.4	22	11	2	33
TR-7	XXX		34	11	28	21	1.9	33

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

November Pre-Treated 1998

Sample ID	Date	Time	Matrix	Location	Comments
R1-400	11/24/98	1600	Soil	feed conyeyor	
R1-415	11/24/98	1615	Soil	feed conyeyor	
R2-430	11/24/98	1630	Soil	feed conyeyor	
R2-445	11/24/98	1645	Soil	feed conyeyor	
R2-500	11/24/98	1700	Soil	feed conyeyor	
R2-515	11/24/98	1715	Soil	feed conyeyor	
R2-530	11/24/98	1730	Soil	feed conyeyor	
R2-545	11/24/98	1745	Soil	feed conyeyor	
R2-600	11/24/98	1800	Soil	feed conyeyor	
R2-615	11/24/98	1815	Soil	feed conyeyor	
R3-630	11/24/98	1830	Soil	feed conyeyor	
R3-645	11/24/98	1845	Soil	feed conyeyor	
R3-700	11/24/98	1900	Soil	feed conyeyor	
R3-715	11/24/98	1915	Soil	feed conyeyor	
R3-730	11/24/98	1930	Soil	feed conyeyor	
R3-745	11/24/98	1945	Soil	feed conyeyor	
R3-800	11/24/98	2000	Soil	feed conyeyor	
R3-815	11/24/98	2015	Soil	feed conyeyor	
R4-830	11/24/98	2030	Soil	feed conyeyor	
R4-845	11/24/98	2045	Soil	feed conyeyor	
R4-900	11/24/98	2100	Soil	feed conyeyor	

Site Remediation Services, Inc

Sweden-3 Chapman Site

Sample Results Summary Table

November Pre-Treated 1998

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
R1-400		XXX	760	2300	830	1600	1600	4800
R1-415		XXX	1500	200	1500	1500	5300	4500
R2-430		XXX	1500	1500	1500	1500	11000	4500
R2-445		XXX	580	430	1400	1400	7000	3100
R2-500		XXX	1500	1500	1500	1500	8000	3530
R2-515		XXX	580	740	1500	1500	11000	3210
R2-530		XXX	770	1600	1500	610	3800	3420
R2-545		XXX	1600	370	2900	1600	1600	4800
R2-600		XXX	1500	43000	840	1500	310	5600
R2-615		XXX	1500	11000	1500	1500	180	3950
R3-630		XXX	1500	670	1500	1500	1500	4500
R3-645		XXX	570	840	640	1400	1400	3030
R3-700		XXX	310	760	1500	1500	1500	3610
R3-715		XXX	350	1800	1400	1400	1400	3100
R3-730		XXX	210	1200	1500	1500	1500	3210
R3-745		XXX	450	1200	500	1500	1500	3770
R3-800		XXX	440	430	1500	1500	1500	4100
R3-815		XXX	610	1500	700	1500	1500	3170
R4-830		XXX	1200	1200	3100	510	1600	4800
R4-845		XXX	630	1100	1500	1500	1500	3700
R4-900		XXX	2000	1500	8100	810	380	3180

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December Pre-Treated 1998

Sample ID	Date	Time	Matrix	Location	Comments
PTS-1	12/17/98	1000	Soil	40 tons	
PTS-2	12/17/98	1445	Soil	260 tons	
PTS-3	12/17/98	1800	Soil	420 tons	
PTS-4	12/17/98	2045	Soil	580 tons	
PTS-5	12/30/98	1930	Soil	305 tons	
PTS-6	12/31/98	1222	Soil	145 tons	
PTS-7	12/31/98	1630	Soil	305 tons	

Site Remediation Services, Inc.

Sample Results Summary Table

December 1998 Pre-Treated

Sample ID	Clean	Contaminated	Constituents				Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
PTS-1		XXX	590.7	4383E	1420E	876E	26.9	697E
PTS-2	XXX		bdl	248	bdl	84.6	4.8	bdl
PTS-3	XXX		152.2	111	110.7	40.4	bdl	bdl
PTS-4	XXX		bdl	286.7	136.3	100.9	23.7	bdl
PTS-5		XXX	546.8	1021E	587.3	342.2	9.1	422.5
PTS-6	XXX		127.8	1073E	240.1	50	11.7	300.8
PTS-7		XXX	203.2	2075E	351.3	309.1	14.7	323.4

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Date	Time	Matrix	Location	Comments
TR-1A	12/9/98	1600	Soil	Resample of TR-1	
TR-8	12/12/98	1512	Soil	160 tons	
TR-9	12/12/98	1607	Soil	320 tons	
TR-10	12/12/98	1729	Soil	480 tons	
TR-11	12/13/98	830	Soil	160 tons	
TR-12	12/13/98	1723	Soil	160 tons	
TR-13	12/13/98	2030	Soil	320 tons	
TR-14	12/14/98	1430	Soil	160 tons	
TR-15	12/14/98	1621	Soil	320 tons	
TR-16	12/14/98	1930	Soil	480 tons	
TR-17	12/14/98	2115	Soil	640 tons	
TR-11A	12/15/98	235	Soil	Northen Surface (TR-11)	
TR-11B	12/15/98	236	Soil	Southern Surface (TR-11)	
TR-11C	12/15/98	237	Soil	W 1ft below surface (TR-11)	
TR-11D	12/15/98	238	Soil	E 1ft below surface (TR-11)	
TR-18	12/15/98	1220	Soil	160 tons	
TR-19	12/15/98	1220	Soil	duplicate of TR-18	
TR-20	12/15/98	347	Soil	320 tons	
TR-21	12/15/98	619	Soil	480 tons	
TR-22	12/15/98	909	Soil	640 tons	
TR-23	12/16/98	1018	Soil	160 tons	
TR-24	12/16/98	110	Soil	320 tons	
TR-25	12/16/98	347	Soil	480 tons	
TR-26	12/16/98	630	Soil	640 tons	
TR-27	12/16/98	2100	Soil	800 tons	
TR-28	12/17/98	1315	Soil	160 tons	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-1A	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-8	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-9	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-10	XXX		150.4	bdl	bdl	bdl	bdl	bdl
TR-11		XXX	219.6	bdl	bdl	bdl	bdl	bdl
TR-12	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-13	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-14	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-15	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-16	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-17	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-11A		XXX	265.9	bdl	bdl	bdl	bdl	bdl
TR-11B	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-11C		XXX	234.8	bdl	bdl	bdl	bdl	bdl
TR-11D		XXX	260.7	bdl	bdl	bdl	bdl	bdl
TR-18	XXX		115.3	bdl	bdl	bdl	bdl	bdl
TR-19	XXX		145.5	bdl	bdl	bdl	bdl	bdl
TR-20	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-21	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-22	XXX		166.7	bdl	bdl	bdl	bdl	bdl
TR-23	XXX		104.7	bdl	bdl	bdl	bdl	bdl
TR-24	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-25	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-26	XXX		118.3	bdl	bdl	bdl	bdl	bdl
TR-27	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-28		XXX	206.8	26.5	bdl	32.1	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Date	Time	Matrix	Location	Comments
TR-29	12/17/98	1652	Soil	320 tons	
TR-30	12/17/98	1900	Soil	480 tons	
TR-31	12/17/98	2130	Soil	640 tons	
TR-32	12/18/98	1342	Soil	160 tons	
TR-33	12/19/98	915	Soil	160 tons	
TR-34	12/19/98	1255	Soil	320 tons	
TR-35	12/19/98	1515	Soil	480 tons	
TR-36	12/20/98	1700	Soil	160 tons	
TR-37	12/20/98	2036	Soil	320 tons	
TR-38	12/20/98	2036	Soil	duplicate of TR-38	
TR-39	12/21/98	830	Soil	378 tons	
TR-40	12/21/98	1110	Soil	160 tons	
TR-41	12/21/98	1309	Soil	320 tons	
TR-42	12/21/98	1658	Soil	480 tons	
TR-43	12/21/98	1850	Soil	315 ton from TR-32(12/18/98)	
TR-44	12/22/98	840	Soil	705 tons	
TR-45	12/22/98	1752	Soil	160 tons	
TR-46	12/22/98	2025	Soil	320 tons	
TR-47	12/28/98	1530	Soil	573 tons (TR-35)	
TR-48	12/28/98	1530	Soil	380 tons (TR-46)	
TR-49	12/29/98	1125	Soil	160 tons	
TR-50	12/29/98	1820	Soil	320 tons	
TR-51	12/29/98	2051	Soil	480 tons	
TR-52	12/30/98	1138	Soil	160 tons	
TR-53	12/30/98	1949	Soil	320 tons	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-29	XXX		162	bdl	bdl	11.3	bdl	bdl
TR-30	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-31	XXX		155.9	34	bdl	bdl	bdl	bdl
TR-32	XXX		127.8	bdl	bdl	bdl	bdl	bdl
TR-33	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-34	XXX		114.7	bdl	bdl	bdl	bdl	bdl
TR-35	XXX		127.4	bdl	bdl	bdl	bdl	bdl
TR-36		XXX	416.7	bdl	bdl	bdl	bdl	bdl
TR-37		XXX	278.7	bdl	bdl	bdl	bdl	bdl
TR-38		XXX	363.1	bdl	bdl	bdl	bdl	bdl
TR-39	XXX		178.6	bdl	bdl	bdl	bdl	bdl
TR-40	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-41		XXX	324.4	bdl	bdl	bdl	bdl	bdl
TR-42	XXX		195.7	bdl	bdl	bdl	bdl	bdl
TR-43	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-44	XXX		174.5	bdl	bdl	bdl	bdl	bdl
TR-45	XXX		127.7	bdl	bdl	bdl	bdl	bdl
TR-46	XXX		169.4	bdl	bdl	bdl	bdl	bdl
TR-47	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-48	XXX		128.1	bdl	bdl	bdl	bdl	bdl
TR-49	XXX		129.2	bdl	bdl	bdl	bdl	bdl
TR-50	XXX		103.5	bdl	bdl	bdl	bdl	bdl
TR-51	XXX		190	bdl	bdl	bdl	bdl	bdl
TR-52	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-53	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Date	Time	Matrix	Location	Comments
TR-54	12/30/98	2120	Soil	380 tons	
TR-55	12/31/98	1247	Soil	160 tons	
TR-56	12/31/98	1339	Soil	clean pile #1 South	
TR-57	12/31/98	1342	Soil	Clean pile #1 East	
TR-58	12/31/98	1351	Soil	Clean pile #1 East	
TR-59	12/31/98	1712	Soil	320 tons	
TR-60	12/31/98	2020	Soil	448 tons	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Treated

Sample ID	Clean	Contaminated	Constituents				Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-54		XXX	297.8	bdl	bdl	50.3	bdl	bdl
TR-55	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-56	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-57	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-58	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-59	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-60	XXX		bdl	bdl	bdl	bdl	bdl	bdl
* bdl = Below Detection Limit								

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Layback

Sample ID	Date	Time	Matrix	Location	Comments
LB-1	12/12/98	855	Soil	200 yds.	
LB-2	12/12/98	1053	Soil	400 yds	
LB-3	12/12/98	1100	Soil	600 yds	
LB-4	12/12/98	1145	Soil	800 yds	
LB-5	12/12/98	215	Soil	1000 yds	
LB-6	12/12/98	245	Soil	1200 yds	
SLB-1	12/14/98	1537	Soil	Southern 500 yds	
SLB-2	12/16/98	217	Soil	Southern 500 yds	
LB-7	12/16/98	420	Soil	200 yds.	
LB-8	12/16/98	422	Soil	200 yds.	
LB-9	12/16/98	425	Soil	200 yds.	
LB-10	12/16/98	431	Soil	200 yds.	
SLB-3	12/17/98	1745	Soil	200 yds.	
SLB-4	12/18/98	1510	Soil	500 yds	
LB-11	12/23/98	1406	Soil	200 yds.	
LB-12	12/23/98	1407	Soil	200 yds.	
LB-13	12/23/98	1408	Soil	200 yds.	
LB-14	12/23/98	1409	Soil	200 yds.	
LB-15	12/23/98	1410	Soil	200 yds.	
LB-16	12/23/98	1411	Soil	200 yds.	
SLB-5	12/30/98	1630	Soil	500 yds	
SLB-6	12/30/98	1633	Soil	500 yds	

LB = Northern Layback

SLB = Southern Layback

Site Remediation Servies, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

December 1998 Layback

Sample ID	Clean	Contaminated	Constituents				Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
LB-1		XXX	1044.9	151.3	3403.3	167.5	bdl	689.9
LB-2	XXX		bdl	39	bdl	bdl	bdl	118
LB-3	XXX		bdl	61.6		bdl	bdl	121.1
LB-4	XXX		bdl	1001.9	320	34.8	bdl	687.5
LB-5	XXX		bdl	23.8	bdl	bdl	bdl	bdl
LB-6	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SLB-1	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SLB-2		XXX	bdl	3689E	bdl	bdl	bdl	358.7
LB-7	XXX		171.4	336.9	355.8	80.3	bdl	363.1
LB-8	XXX		102.2	bdl	191.5	107.3	bdl	154.9
LB-9	XXX		bdl	378.8	bdl	85.7	5.3	381.1
LB-10	XXX		115.6	bdl	229.2	587.4	bdl	328.1
SLB-3	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SLB-4	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-11	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-12	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-13	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-14	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-15	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-16	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SLB-5	XXX		bdl	31.3	bdl	17.5	bdl	bdl
SLB-6	XXX		bdl	32.1	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Debris Pile 1999

Sample ID	Date	Time	Matrix	Location	Comments
DP-1	1/21/99	1345	Soil	S side	
DP-2	1/21/99	1350	Soil	N side	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Debris Pile 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
DP-1	XXX		bdl	bdl	bdl	bdl	bdl	bdl
DP-2	XXX		bdl	bdl	bdl	17.3	31.1	bdl

*BDL = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Pre-Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
PTS-8	1/2/99	1820	Soil	145 tons	
PTS-9	1/4/99	2012	Soil	110 tons	
PTS-10	1/5/99	1240	Soil	145 tons	
PTS-11	1/5/99	1921	Soil	305 tons	
PTS-12	1/6/99	1314	Soil	145 tons	
PTS-13	1/6/99	1727	Soil	305 tons	
PTS-14	1/6/99	2040	Soil	465 tons	
PTS-15	1/7/99	1825	Soil	145 tons	
PTS-16	1/8/99	1242	Soil	145 tons	
PTS-17	1/29/99	1830	Soil	Feed Material	
PTS-18	1/30/99	1700	Soil	395 tons	

Site Remediation Services, Inc.

Sample Results Summary Table

January Pre-Treated 1999

Sample ID	Clean	Contaminated	Constituents				Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
PTS-8		XXX	272.2	1900E	792.5	69	33.5	205.1
PTS-9	XXX		bdl	220.8	152.6	21.3	5.3	bdl
PTS-10	XXX		126.5	1072E	329.1	28.6	21.1	146.3
PTS-11		XXX	bdl	1889E	231.1	14.6	6.3	85.2
PTS-12		XXX	53.6	1657E	bdl	bdl	5.5	bdl
PTS-13	XXX		bdl	25.8	bdl	bdl	4.1	bdl
PTS-14	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PTS-15	XXX		bdl	82.9	bdl	bdl	10.7	342.5
PTS-16	XXX		188.7	67.2	bdl	32.4	19.5	216.7
PTS-17		Moisture ONLY = 15%						
PTS-18		Moisture ONLY = 10.96%						

*BDL = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-61	1/2/99	1835	Soil	160	
TR-62	1/2/99	2015	Soil	246	
TR-63	1/4/99	2030	Soil	118	
TR-64	1/5/99	1309	Soil	160	
TR-65	1/5/99	2024	Soil	320	
TR-66	1/6/99	1502	Soil	pile 1	
TR-67	1/6/99	1509	Soil	pile 2	
TR-68	1/6/99	1532	Soil	pile 3	
TR-69	1/6/99	1538	Soil	pile 4	
TR-70	1/6/99	1544	Soil	pile 5	
TR-71	1/6/99	1552	Soil	pile 6	
TR-72	1/6/99	1554	Soil	pile 7	
TR-73	1/6/99	1604	Soil	pile 8	
TR-74	1/6/99	1608	Soil	pile 9	
TR-75	1/6/99	1339	Soil	160	
TR-76	1/6/99	1612	Soil	pile 10	
TR-77	1/6/99	1747	Soil	320	
TR-78	1/6/99	2052	Soil	480	
TR-79	1/7/99	1910	Soil	160	
TR-80	1/7/99	2130	Soil	245	
TR-81	1/8/99	1339	Soil	160	
TR-82	1/9/99	1300	Soil	320	
TR-83	1/15/99	1138	Soil	160	
TR-84	1/15/99	1138	Soil	Dup. Of TR-83	
TR-85	1/15/99	1540	Soil	320	
TR-86	1/15/99	1820	Soil	480	
TR-87	1/15/99	2205	Soil	640	

Sweden-3 Chapman Site

Sample Results Summary Table

January Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-88	1/16/99	1520	Soil	160	
TR-89	1/16/99	2130	Soil	320	
TR-90	1/17/99	1020	Soil	160	
TR-91	1/17/99	1450	Soil	320	
TR-92	1/17/99	1725	Soil	480	
TR-93	1/17/99	2015	Soil	640	
TR-94	1/18/99	1004	Soil	160	
TR-93A	1/17/99	2015	Soil	640 Dup.	
TR-95	1/18/99	1249	Soil	320	
TR-96	1/18/99	1520	Soil	480	
TR-97	1/28/99	1755	Soil	160	
TR-98	1/28/99	2105	Soil	320	
TR-99	1/29/99	2030	Soil	160	
TR-100	1/30/99	838	Soil	245	
TR-101	1/30/99	1005	Soil	160	
TR-102	1/30/99	1400	Soil	320	
TR-103	1/30/99	1704	Soil	480	
TR-104	1/30/99	1704	Soil	480 Dup.	
TR-105	1/30/99	1915	Soil	680	
TR-106	1/31/99	1130	Soil	160	
TR-107	1/31/99	2145	Soil	764	
TR-108	1/31/99	1415	Soil	320	
TR-109	1/31/99	1615	Soil	480	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-61	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-62	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-63	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-64	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-65	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-66	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-67	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-68	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-69	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-70	XXX		bdl	bdl	bdl	bdl	11.2	bdl
TR-71	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-72	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-73	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-74	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-75	XXX		138.1	bdl	bdl	bdl	bdl	bdl
TR-76	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-77	XXX		172.5	bdl	bdl	12.4	bdl	bdl
TR-78	XXX		167.5	bdl	bdl	bdl	bdl	bdl
TR-79	XXX		254.3	bdl	bdl	17	bdl	bdl
TR-80	XXX		145.9	bdl	bdl	bdl	bdl	bdl
TR-81	XXX		178.2	bdl	bdl	bdl	bdl	bdl
TR-82	XXX		119.6	bdl	bdl	14.7	bdl	bdl
TR-83	XXX		139.3	bdl	bdl	13.3	bdl	bdl
TR-84	XXX		144.1	bdl	bdl	15.5	bdl	bdl
TR-85	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-86	XXX		108.9	bdl	bdl	bdl	bdl	bdl
*BDL = Below Detection Limit								

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-87	XXX		116	bdl	bdl	bdl	bdl	bdl
TR-88	XXX		206.9	bdl	bdl	19.5	bdl	bdl
TR-89	XXX		175.9	bdl	bdl	bdl	bdl	bdl
TR-90	XXX		182.2	bdl	bdl	bdl	bdl	bdl
TR-91	XXX		114.7	bdl	bdl	bdl	bdl	bdl
TR-92	XXX		161.8	bdl	bdl	bdl	bdl	bdl
TR-93	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-94	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-93A	XXX		123.1	bdl	bdl	bdl	bdl	bdl
TR-95	XXX		203.6	bdl	bdl	bdl	bdl	bdl
TR-96	XXX		bdl	bdl	bdl	22.9	bdl	bdl
TR-97	XXX		221.9	bdl	bdl	bdl	bdl	bdl
TR-98	XXX		264.8	bdl	bdl	bdl	bdl	bdl
TR-99	XXX		161.2	bdl	bdl	bdl	bdl	bdl
TR-100	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-101	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-102	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-103	XXX		104.9	bdl	bdl	bdl	bdl	bdl
TR-104	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-105	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-106	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-107	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-108	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-109	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*BDL = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

January Layback 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
LB-17	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-18	XXX		108.7	bdl	bdl	bdl	bdl	bdl
LB-19	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-20	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-21	XXX		bdl	27.4	bdl	bdl	bdl	bdl
LB-22	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-23		XXX	bdl	3079E	bdl	bdl	bdl	637
LB-24		XXX	bdl	4359E	bdl	bdl	bdl	746.1
SLB-25	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SLB-26	XXX		bdl	220.2	bdl	12.6	12.6	bdl
SLB-27		XXX	614.5	21.2	bdl	21.9	bdl	bdl
SLB-28		XXX	386.8	bdl	bdl	bdl	bdl	bdl

*BDL = Below Detection Limit

Sweden-3 Chapman Site

Sample Results Summary Table

January Layback 1999

Sample ID	Date	Time	Matrix	Location	Comments
LB-17	1/8/99	1640	Soil	200 yds.	
LB-18	1/8/99	1030	Soil	200 yds.	
LB-19	1/8/99	1100	Soil	200 yds.	
LB-20	1/8/99	1055	Soil	200 yds.	
LB-21	1/8/99	1115	Soil	200 yds.	
LB-22	1/11/99	1045	Soil	200 yds.	
LB-23	1/30/99	855	Soil	200 yds.	
LB-24	1/30/99	1408	Soil	200 yds.	
SLB-25	1/31/99	1430	Soil	500 yds.	
SLB-26	1/31/99	1415	Soil	500 yds.	
SLB-27	1/31/99	1518	Soil	500 yds.	
SLB-28	1/31/99	1416	Soil	500 yds.	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-110	2/1/99	1320	Soil	160	
TR-111	2/1/99	1420	Soil	320	
TR-112	2/1/99	1715	Soil	480	
TR-113	2/1/99	1915	Soil	640	
TR-114	2/1/99	2115	Soil	800	
TR-115	2/2/99	200	Soil	960	
TR-116	2/2/99	300	Soil	1120	
TR-117	2/2/99	515	Soil	1280	
TR-118	2/2/99	901	Soil	160	
TR-119	2/2/99	1258	Soil	dup of 113	
TR-120	2/2/99	1400	Soil	320	
TR-121	2/2/99	1400	Soil	dup of 120	
TR-122	2/2/99	1610	Soil	480	
TR-123	2/2/99	2000	Soil	640	
TR-124	2/2/99	2000	Soil	dup of 123	
TR-125	2/2/99	2245	Soil	800	
TR-126	2/3/99	100	Soil	960	
TR-127	2/3/99	335	Soil	1120	
TR-128	2/3/99	615	Soil	1264	
TR-129	2/3/99	940	Soil	160	
TR-130	2/3/99	1310	Soil	320	
TR-131	2/3/99	1340	Soil	480	
TR-132	2/3/99	1645	Soil	640	
TR-133	2/3/99	1830	Soil	800	
TR-134	2/3/99	1830	Soil	dup of 133	
TR-135	2/4/99	15	Soil	960	
TR-136	2/4/99	210	Soil	1120	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-137	2/4/99	434	Soil	1280	
TR-138	2/4/99	845	Soil	160	
TR-139	2/4/99	1130	Soil	320	
TR-140	2/4/99	1330	Soil	480	
TR-141	2/4/99	1600	Soil	640	
TR-142	2/4/99	1830	Soil	800	
TR-143	2/4/99		Soil	960	
TR-144	2/4/99		Soil	dup of 143	
TR-145	2/4/99	2300	Soil	1120	
TR-146	2/5/99	110	Soil	1280	
TR-147	2/5/99	359	Soil	1440	
TR-148	2/5/99	815	Soil	1600	
TR-149	2/5/99	1240	Soil	160	
TR-150	2/5/99	1550	Soil	320	
TR-151	2/5/99	1750	Soil	480	
TR-152	2/5/99	1950	Soil	640	
TR-153	2/5/99	2200	Soil	800	
TR-154	2/6/99	2235	Soil	883	
TR-155	2/6/99	900	Soil	160	
TR-156	2/6/99	900	Soil	dup of 155	
TR-157	2/6/99	1344	Soil	320	
TR-158	2/6/99	1350	Soil	480	
TR-159	2/6/99	1640	Soil	640	
TR-160	2/6/99	1845	Soil	800	
TR-161	2/7/99	940	Soil	160	
TR-162	2/7/99	1120	Soil	320	
TR-163	2/7/99	1330	Soil	480	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-164	2/7/99	1330	Soil	dup of 163	
TR-165	2/7/99	1600	Soil	640	
TR-166	2/7/99	1700	Soil	800	
TR-167	2/7/99	2030	Soil	960	
TR-168	2/8/99	1125	Soil	160	
TR-169	2/8/99	1320	Soil	320	
TR-170	2/8/99	1545	Soil	480	
TR-171	2/8/99	1740	Soil	640	
TR-172	2/8/99	2030	Soil	800	
TR-173	2/8/99	2130	Soil	960	
TR-174	2/8/99	2130	Soil	dup of 174	
TR-175	2/8/99	2350	Soil	1120	
TR-176	2/9/99	220	Soil	1280	
TR-177	2/9/99	510	Soil	1440	
TR-178	2/9/99	700	Soil	1528	
TR-179	2/9/99	1445	Soil	160	
TR-180	2/9/99	1645	Soil	320	
TR-181	2/9/99	1900	Soil	440	
TR-182	2/9/99	2100	Soil	640	
TR-183	2/9/99	2315	Soil	800	
TR-184	2/9/99	2315	Soil	dup of 183	
TR-185	2/10/99	110	Soil	960	
TR-186	2/10/99	325	Soil	1120	
TR-187	2/10/99		Soil	1281	
TR-188	2/10/99		Soil	160	
TR-189	2/10/99		Soil	320	
TR-190	2/10/99		Soil	480	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-191	2/10/99	1515	Soil	640	
TR-192	2/10/99	1730	Soil	800	
TR-193	2/10/99	2300	Soil	960	
TR-194	2/10/99	2300	Soil	dup of 193	
TR-195	2/11/99	45	Soil	1120	
TR-196	2/11/99	345	Soil	1280	
TR-197	2/11/99	545	Soil	144	
TR-198	2/11/99	930	Soil	160	
TR-199	2/11/99	1240	Soil	320	
TR-200	2/11/99	1315	Soil	480	
TR-201	2/11/99	1520	Soil	640	
TR-202	2/11/99	1600	Soil	800	
TR-203	2/11/99	1845	Soil	960	
TR-204	2/11/99	1845	Soil	dup of 203	
TR-205	2/11/99	2300	Soil	1120	
TR-206	2/12/99	115	Soil	1280	
TR-207	2/12/99	300	Soil	1440	
TR-208	2/12/99	630	Soil	1578	
TR-209	2/12/99	940	Soil	160	
TR-210	2/12/99	1130	Soil	320	
TR-211	2/12/99	1400	Soil	480	
TR-212	2/12/99	1400	Soil	640	
TR-213	2/12/99	1620	Soil	800	
TR-214	2/12/99	1620	Soil	dup of 213	
TR-215	2/12/99	1930	Soil	960	
TR-216	2/12/99	2115	Soil	1120	
TR-217	2/12/99	2310	Soil	1280	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-218	2/13/99	1115	Soil	160	
TR-219	2/13/99	1300	Soil	320	
TR-220	2/13/99	1500	Soil	480	
TR-221	2/13/99	1715	Soil	640	
TR-222	2/13/99	1920	Soil	800	
TR-223	2/14/99	920	Soil	160	
TR-224	2/14/99	920	Soil	dup of 223	
TR-225	2/14/99	1045	Soil	320	
TR-226	2/14/99	1340	Soil	480	
TR-227	2/14/99	1430	Soil	640	
TR-228	2/14/99	1800	Soil	800	
TR-229	2/14/99	1900	Soil	960	
TR-230	2/14/99	2100	Soil	1071	
TR-231	2/15/99	1025	Soil	160	
TR-232	2/15/99	1230	Soil	320	
TR-233	2/15/99	1400	Soil	480	
TR-234	2/15/99	1400	Soil	dup of 233	
TR-235	2/15/99	1635	Soil	640	
TR-236	2/15/99	1840	Soil	800	
TR-237	2/15/99	2030	Soil	960	
TR-238	2/15/99	2245	Soil	1120	
TR-239	2/16/99	115	Soil	1280	
TR-240	2/16/99	400	Soil	1440	
TR-241	2/17/99	1100	Soil	1536	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-110	XXX		bdl	34.8	bdl	bdl	bdl	bdl
TR-111	XXX		bdl	61.7	bdl	bdl	bdl	bdl
TR-112	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-113	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-114	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-115	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-116	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-117	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-118	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-119	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-120	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-121	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-122	XXX		50	5.5	11	11	5.5	5.5
TR-123	XXX		110	5.7	21	11	5.7	5.7
TR-124	XXX		150	5.7	31	11	5.7	5.1
TR-125	XXX		69	5.5	13	11	5.5	5.5
TR-126	XXX		88	5.5	21	11	5.5	5.5
TR-127	XXX		41	5.3	11	11	5.3	5.3
TR-128	XXX		41	5.6	11	11	5.6	5.6
TR-129	XXX		72	5.3	13	11	5.3	5.3
TR-130	XXX		58	5.6	11	11	5.6	5.6
TR-131	XXX		46	5.5	11	11	5.5	5.5
TR-132	XXX		37	5.3	4.3	11	5.3	5.3
TR-133	XXX		73	5.6	14	11	5.6	5.6
TR-134	XXX		80	5.6	12	11	5.6	5.6
TR-135	XXX		65	5.4	11	11	5.4	5.4

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-136	XXX		69	5.5	8.1	11	5.5	5.5
TR-137	XXX		47	5.5	7.7	11	5.5	5.5
TR-138	XXX		64	5.3	8	11	5.3	5.3
TR-139	XXX		190	12	24	11	5.5	2.7
TR-140	XXX		220	5.5	30	1.3	5.5	5.5
TR-141	XXX		68	bdl	bdl	bdl	bdl	bdl
TR-142	XXX		112	bdl	bdl	bdl	bdl	bdl
TR-143	XXX		111	bdl	bdl	bdl	bdl	bdl
TR-144	XXX		75	bdl	bdl	bdl	bdl	bdl
TR-145	XXX		81	bdl	bdl	bdl	bdl	bdl
TR-146	XXX		60	bdl	bdl	bdl	bdl	bdl
TR-147	XXX		93	bdl	bdl	bdl	bdl	bdl
TR-148	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-149	XXX		125	bdl	bdl	bdl	bdl	bdl
TR-150	XXX		65	bdl	bdl	bdl	bdl	bdl
TR-151	XXX		74.5	bdl	bdl	bdl	bdl	bdl
TR-152	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-153	XXX		55.9	bdl	bdl	bdl	bdl	bdl
TR-154	XXX		55.5	bdl	bdl	bdl	bdl	bdl
TR-155	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-156	XXX		52.9	bdl	bdl	bdl	bdl	bdl
TR-157	XXX		64.2	bdl	bdl	bdl	bdl	bdl
TR-158	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-159	XXX		94.5	bdl	bdl	bdl	bdl	bdl
TR-160	XXX		91.9	bdl	bdl	bdl	bdl	bdl
TR-161	XXX		72.1	bdl	bdl	bdl	bdl	bdl
TR-162	XXX		112.8	bdl	bdl	bdl	bdl	bdl

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-163		XXX	297.6	bdl	bdl	bdl	bdl	bdl
TR-164	XXX		131.6	bdl	bdl	bdl	bdl	bdl
TR-165	XXX		199.8	bdl	bdl	bdl	bdl	bdl
TR-166	XXX		180.3	bdl	bdl	bdl	bdl	bdl
TR-167	XXX		160.6	bdl	bdl	bdl	bdl	bdl
TR-168	XXX		140.5	bdl	bdl	bdl	bdl	bdl
TR-169	XXX		62.3	bdl	bdl	bdl	bdl	bdl
TR-170	XXX		122	bdl	bdl	bdl	bdl	bdl
TR-171	XXX		144	bdl	bdl	bdl	bdl	bdl
TR-172	XXX		147	bdl	bdl	bdl	bdl	bdl
TR-173	XXX		135	bdl	bdl	bdl	bdl	bdl
TR-174	XXX		155	bdl	bdl	bdl	bdl	bdl
TR-175	XXX		129	bdl	bdl	bdl	bdl	bdl
TR-176	XXX		101	bdl	bdl	bdl	bdl	bdl
TR-177	XXX		112	bdl	bdl	bdl	bdl	bdl
TR-178	XXX		99	bdl	bdl	bdl	bdl	bdl
TR-179	XXX		77.6	bdl	bdl	bdl	bdl	bdl
TR-180	XXX		82.6	bdl	bdl	bdl	bdl	bdl
TR-181	XXX		83.3	bdl	bdl	bdl	bdl	bdl
TR-182	XXX		69.8	bdl	bdl	bdl	bdl	bdl
TR-183	XXX		76.2	bdl	bdl	bdl	bdl	bdl
TR-184	XXX		91	bdl	bdl	bdl	bdl	bdl
TR-185	XXX		79.8	bdl	bdl	bdl	bdl	bdl
TR-186	XXX		65.8	bdl	bdl	bdl	bdl	bdl
TR-187	XXX		80.7	bdl	bdl	bdl	bdl	bdl
TR-188	XXX		53.3	bdl	bdl	bdl	bdl	bdl
TR-189	XXX		141.4	bdl	bdl	bdl	bdl	bdl

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-190	XXX		120.2	bdl	bdl	bdl	bdl	bdl
TR-191	XXX		164.1	bdl	bdl	bdl	bdl	bdl
TR-192	XXX		148.5	bdl	bdl	bdl	bdl	bdl
TR-193	XXX		119.7	bdl	bdl	bdl	bdl	bdl
TR-194	XXX		140.4	bdl	bdl	bdl	bdl	bdl
TR-195	XXX		92.9	bdl	bdl	bdl	bdl	bdl
TR-196	XXX		110.7	bdl	bdl	bdl	bdl	bdl
TR-197	XXX		75	bdl	bdl	bdl	bdl	bdl
TR-198	XXX		210.4	bdl	bdl	bdl	bdl	bdl
TR-199	XXX		60.8	bdl	bdl	bdl	bdl	bdl
TR-200	XXX		74.2	bdl	bdl	bdl	bdl	bdl
TR-201	XXX		261	bdl	bdl	bdl	bdl	bdl
TR-202		XXX	339.1	bdl	bdl	bdl	bdl	bdl
TR-203	XXX		106	bdl	bdl	bdl	bdl	bdl
TR-204	XXX		225.6	bdl	bdl	bdl	bdl	bdl
TR-205	XXX		160.6	bdl	bdl	bdl	bdl	bdl
TR-206	XXX		218.6	bdl	bdl	bdl	bdl	bdl
TR-207	XXX		128.4	bdl	bdl	bdl	bdl	bdl
TR-208	XXX		98	bdl	bdl	bdl	bdl	bdl
TR-209	XXX		53	bdl	bdl	bdl	bdl	bdl
TR-210	XXX		73	bdl	bdl	bdl	bdl	bdl
TR-211	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-212	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-213	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-214	XXX		58	bdl	bdl	bdl	bdl	bdl
TR-215	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-216	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-217	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-218	XXX		53	bdl	bdl	bdl	bdl	bdl
TR-219	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-220	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-221	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-222	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-223	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-224	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-225	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-226	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-227	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-228	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-229	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-230	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-231	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-232	XXX		62.7	bdl	bdl	bdl	bdl	bdl
TR-233	XXX		69.2	bdl	bdl	bdl	bdl	bdl
TR-234	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-235	XXX		70	bdl	bdl	bdl	bdl	bdl
TR-236	XXX		60	bdl	bdl	bdl	bdl	bdl
TR-237	XXX		65	bdl	bdl	bdl	bdl	bdl
TR-238	XXX		91	bdl	bdl	bdl	bdl	bdl
TR-239	XXX		81	bdl	bdl	bdl	bdl	bdl
TR-240	XXX		51	bdl	bdl	bdl	bdl	bdl
TR-241	XXX		52	bdl	bdl	bdl	bdl	bdl

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Layback 1999

Sample ID	Date	Time	Matrix	Location	Comments
LB-29	2/1/99	1550	Soil	* Map	
LB-30	2/1/99	1551	Soil	* Map	
LB-31	2/1/99	1552	Soil	* Map	
LB-32	2/3/99	1340	Soil	* Map	
LB-33	2/4/99	1324	Soil	resample of CD LB-28	
LB-34	2/9/99	1505	Soil	N. Layback road	
LB-35	2/12/99	1340	Soil	Left Pile	
LB-36	2/12/99	1342	Soil	Right Pile	
SLB-37	2/17/99	1500	Soil	Stake # 1 on map	
SLB-38	2/17/99	1505	Soil	Stake # 2 on map	
LB-39	2/17/99	1510	Soil	Stake # 3 on map	
LB-40	2/17/99	1515	Soil	Stake # 4 on map	
LB-41	2/17/99	1520	Soil	Stake # 5 on map	
LB-42	2/17/99	1525	Soil	Stake # 6 on map	
SLB-43	2/17/99	1540	Soil	Stake # 7 on map	
SLB-44	2/19/99	1520	Soil	S. Layback stake # 1	

* Shown on Map

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Layback 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
LB-29	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-30	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-31	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-32	XXX		186.7	bdl	bdl	bdl	bdl	bdl
LB-33	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-34	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-35	XXX		bdl	80.4	bdl	bdl	bdl	95
LB-36	XXX		bdl	383.7	bdl	11.8	bdl	173.4
SLB-37		XXX	409.1	1355	855.4	32.3	bdl	505.9
SLB-38	XXX		53.9	bdl	bdl	bdl	bdl	bdl
LB-39	XXX		bdl	65.2	bdl	bdl	bdl	30.4
LB-40	XXX		bdl	bdl	bdl	bdl	bdl	bdl
LB-41	XXX		72.9	bdl	bdl	bdl	bdl	bdl
LB-42	XXX		37	24.7	bdl	16.3	bdl	37.3
SLB-43	XXX		74	bdl	bdl	bdl	bdl	bdl
SLB-44	XXX		bdl	55.4	bdl	19.4	10.1	29.8

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Haul Road 1999

Sample ID	Date	Time	Matrix	Location	Comments
HR-1	2/12/99	1410	Soil	Road Slop	
HR-2	2/15/99	1345	Soil	E of pad	
HR-3	2/26/99	1310	Soil	See Map	
HR-4	2/26/99	1312	Soil	See Map	
HR-5	2/26/99	1314	Soil	See Map	
HR-6	2/26/99	1316	Soil	See Map	
HR-7	2/26/99	1318	Soil	See Map	
HR-8	2/26/99	1320	Soil	See Map	
HR-9	2/26/99	1322	Soil	See Map	
HR-10	2/26/99	1324	Soil	See Map	
HR-11	2/26/99	1410	Soil	See Map	
HR-12	2/26/99	1412	Soil	See Map	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

February Haul Road 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
HR-1	XXX		bdl	bdl	bdl	bdl	bdl	bdl
HR-2	XXX		bdl	75.8	bdl	13.4	bdl	bdl
HR-3	XXX		132	28	bdl	bdl	bdl	bdl
HR-4	XXX		153	46.2	bdl	bdl	bdl	bdl
HR-5	XXX		135	48.3	bdl	bdl	bdl	bdl
HR-6	XXX		154	bdl	bdl	bdl	bdl	bdl
HR-7	XXX		180	34.5	bdl	bdl	bdl	bdl
HR-8	XXX		172	92.7	bdl	13.7	bdl	35.7
HR-9	XXX		160	bdl	bdl	bdl	bdl	bdl
HR-10	XXX		170	bdl	bdl	bdl	bdl	bdl
HR-11		XXX	161	11080	bdl	32.2	26.8	206.9
HR-12	XXX		160	535.1	bdl	bdl	bdl	55.2

* bdl = Below Detection Limits

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Treated 1999

Sample ID	Date	Time	Matrix	Location	Comments
TR-242	3/10/99	1230	Soil	160	
TR-243	3/10/99	1345	Soil	320	
TR-244	3/10/99	1350	Soil	dup of 243	
TR-245	3/10/99	1830	Soil	480	
TR-246	3/11/99	1600	Soil	160	
TR-247	3/11/99	1855	Soil	317	
TR-248	3/12/99	1150	Soil	160	
TR-249	3/12/99	1210	Soil	320	
TR-250	3/12/99	1800	Soil	480	
TR-251	3/12/99	1805	Soil	640	
TR-252	3/12/99	1810	Soil	800	
TR-253	3/13/99	1320	Soil	160	
TR-254	3/13/99	1330	Soil	320	
TR-255	3/13/99	1830	Soil	480	
TR-256	3/13/99	1840	Soil	dup of 255	
TR-257	3/13/99	1855	Soil	640	
TR-258	3/15/99	1400	Soil	160	
TR-259	3/15/99	1405	Soil	320	
TR-260	3/16/99	1810	Soil	480	
TR-261	3/16/99	1815	Soil	640	
TR-262	3/16/99	1036	Soil	724	
TR-263	3/16/99	1350	Soil	160	
TR-264	3/16/99	1650	Soil	320	
TR-265	3/17/99	1045	Soil	Re-Sample of 262	
TR-266	3/17/99	1050	Soil	405	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Treated 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
TR-242	XXX		191	bdl	bdl	bdl	bdl	bdl
TR-243	XXX		240	bdl	bdl	bdl	bdl	bdl
TR-244	XXX		196	bdl	bdl	bdl	bdl	bdl
TR-245	XXX		123	bdl	bdl	bdl	bdl	bdl
TR-246	XXX		52.8	bdl	bdl	bdl	bdl	bdl
TR-247	XXX		60.2	bdl	bdl	bdl	bdl	bdl
TR-248	XXX		132.2	bdl	bdl	bdl	bdl	bdl
TR-249	XXX		150.4	bdl	bdl	bdl	bdl	bdl
TR-250	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-251	XXX		110.7	bdl	bdl	bdl	bdl	bdl
TR-252	XXX		87.2	bdl	bdl	bdl	bdl	bdl
TR-253	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-254	XXX		55.5	bdl	bdl	bdl	bdl	bdl
TR-255	XXX		58.5	bdl	bdl	bdl	bdl	bdl
TR-256	XXX		66.9	bdl	bdl	bdl	bdl	bdl
TR-257	XXX		151.9	bdl	bdl	bdl	bdl	bdl
TR-258	XXX		148	bdl	bdl	bdl	bdl	bdl
TR-259	XXX		223.3	bdl	bdl	bdl	bdl	bdl
TR-260	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-261	XXX		83.3	bdl	bdl	bdl	bdl	bdl
TR-262		XXX	58.6	bdl	bdl	bdl	bdl	509.4
TR-263	XXX		bdl	bdl	bdl	bdl	bdl	bdl
TR-264	XXX		67.3	bdl	bdl	bdl	bdl	bdl
TR-265	XXX		101.9	bdl	bdl	bdl	bdl	bdl
TR-266	XXX		140.3	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Haul Road 1999

Sample ID	Date	Time	Matrix	Location	Comments
HR-13	3/1/99	1100	Soil	See Map	
HR-14	3/1/99	1105	Soil	See Map	
HR-15	3/1/99	1140	Soil	See Map	
HR-16	3/1/99	1145	Soil	See Map	
HR-17	3/1/99	1150	Soil	See Map	
HR-18	3/2/99	1211	Soil	See Map	
HR-19	3/2/99	1215	Soil	See Map	
HR-20	3/9/99	1100	Soil	See Map	
HR-21	3/9/99	1103	Soil	See Map	
HR-22	3/14/99	1625	Soil	under blacktop	
HR-23	3/14/99	1630	Soil	Feed hopper ramp	
HR-24	3/15/99	1400	Soil	Sediment from water treatment	
HR-25	3/30/99	1330	Soil	Culvert after soil removal	
HR-26	3/30/99	1340	Soil	50' W of 25	
HR-27	3/30/99	1340	Soil	dup of 26	
HR-28	3/31/99	1330	Soil	30' W of light pole	
HR-29	3/31/99	1330	Soil	30' W of Feed prep. Bld. Door	
HR-30	3/31/99	1331	Soil	90' W of sw bld. Corner	
HR-31	3/31/99	1333	Soil	50' W of feed prep. Bld. Corner (sw)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Haul Road 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
HR-13	XXX		104.8	290.3	bdl	bdl	bdl	bdl
HR-14		XXX	90	1215	bdl	bdl	bdl	38.3
HR-15	XXX		109	bdl	bdl	bdl	bdl	bdl
HR-16	XXX		120	bdl	bdl	bdl	bdl	bdl
HR-17	XXX		104	225.9	bdl	bdl	bdl	72.4
HR-18	XXX		53	bdl	bdl	bdl	bdl	bdl
HR-19	XXX		bdl	bdl	bdl	bdl	bdl	bdl
HR-20	XXX		86	bdl	bdl	bdl	bdl	bdl
HR-21	XXX		163	bdl	bdl	bdl	bdl	bdl
HR-22	XXX		79.6	32.4	bdl	bdl	13.8	bdl
HR-23	XXX		79	37.7	bdl	bdl	9.2	bdl
HR-24	XXX		83.3	167.9	bdl	bdl	bdl	62.5
HR-25	XXX		102	bdl	bdl	bdl	bdl	bdl
HR-26	XXX		115	bdl	bdl	bdl	bdl	bdl
HR-27	XXX		99	bdl	bdl	bdl	bdl	bdl
HR-28	XXX		100	bdl	bdl	bdl	bdl	bdl
HR-29	XXX		100	bdl	bdl	bdl	bdl	bdl
HR-30	XXX		100	bdl	bdl	bdl	bdl	bdl
HR-31	XXX		100	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Staging Pad 1999

Sample ID	Date	Time	Matrix	Location	Comments
SP-1	3/15/99	900	Soil	Under Baghouse (W side)	
SP-2	3/15/99	905	Soil	Under Soil Cooler (E side)	
SP-3	3/15/99	910	Soil	E of Desorber	
SP-4	3/15/99	915	Soil	Under Desorber	
SP-5	3/15/99	920	Soil	W of Desorber	
SP-6	3/15/99	925	Soil	Between Afterburner and BagHouse	
SP-7	3/15/99	930	Soil	Under Control Building (NE corner)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Staging Pad 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
SP-1	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SP-2	XXX		bdl	bdl	bdl	bdl	bdl	bdl
SP-3	XXX		bdl	bdl	bdl	26.5	bdl	bdl
SP-4	XXX		56.8	bdl	bdl	22.2	bdl	bdl
SP-5	XXX		40	bdl	bdl	bdl	bdl	bdl
SP-6	XXX		63.2	bdl	bdl	bdl	bdl	bdl
SP-7	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Carbon 1999

Sample ID	Date	Time	Matrix	Location	Comments
APC-1	3/16/99	1410	Carbon	Aqueous Phase Carbon	
VPC-1	3/16/99	1410	Carbon	Vapor Phase Carbon	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Carbon 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
APC-1		XXX	209.7	1542	1312.3	1223	6.8	5977.9
VPC-1		XXX	86.2	174.1	132.6	bdl	bdl	107644

* bdl = Below Detection Limits

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Confirmatory 1999

Sample ID	Date	Time	Matrix	Location	Comments
Small Pad	3/17/99	1100	Soil	Small Pad Post Removal	
T-3-S	3/17/99	1330	Soil	Sediment from Tank 3	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Confirmatory 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
Small Pad	XXX		bdl	bdl	bdl	bdl	bdl	bdl
T-3-S	XXX		bdl	404.8	bdl	bdl	6.5	53.4

* bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Unknown Cylinders 1999

Sample ID	Date	Time	Matrix	Location	Comments
BOT-1	3/26/99	1330	Gas	C&D material	
BOT-2	3/26/99	1330	Gas	C&D material	
BOT-3	3/26/99	1330	Gas	C&D material	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

March Unknown Cylinders 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
BOT-1		XXX			Hydrogen Chloride			
BOT-2	XXX				Empty			
BOT-3	XXX				Empty			

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Topsoil Sample April 1999

Sample ID	Date	Time	Matrix	Location	Comments
BKPT-1	4/13/99	1400	Soil	Brockport Topsoil	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Topsoil Sample April 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
BKPT-1	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* Bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Haul Road April 1999

Sample ID	Date	Time	Matrix	Location	Comments
HR-32	4/8/99	1330	Soil	S of Building W of Culvert	
HR-33	4/8/99	1335	Soil	S of Building E of Culvert	
HR-34	4/8/99	1340	Soil	Between Decon pad & entrance Rd.	
HR-35	4/8/99	1345	Soil	N of Building E of Culvert	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Haul Road April 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
HR-32	XXX		bdl	bdl	bdl	bdl	bdl	bdl
HR-33	XXX		bdl	bdl	bdl	bdl	bdl	bdl
HR-34	XXX		bdl	bdl	bdl	bdl	bdl	bdl
HR-35	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* Bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Pad Samples April 1999

Sample ID	Date	Time	Matrix	Location	Comments
PAD 517	4/6/99	1300	Soil	See Attached Maps	
PAD 518	4/6/99	1305	Soil	See Attached Maps	
PAD 519	4/6/99	1310	Soil	See Attached Maps	
PAD 520	4/6/99	1315	Soil	See Attached Maps	
PAD 521	4/6/99	1320	Soil	See Attached Maps	
PAD 522	4/6/99	1325	Soil	See Attached Maps	
PAD 523	4/6/99	1330	Soil	See Attached Maps	
PAD 524	4/6/99	1335	Soil	See Attached Maps	
PAD 525	4/6/99	1340	Soil	See Attached Maps	
PAD 526	4/6/99	1345	Soil	See Attached Maps	
PAD 526A	4/6/99	1345	Soil	See Attached Maps	
PAD 527	4/6/99	1350	Soil	See Attached Maps	
PAD 528	4/6/99	1350	Soil	See Attached Maps	
PAD 529	4/6/99	1355	Soil	See Attached Maps	
PAD 530	4/6/99	1356	Soil	See Attached Maps	
PAD 531	4/6/99	1357	Soil	See Attached Maps	
PAD 532	4/6/99	1358	Soil	See Attached Maps	
PAD 533	4/6/99	1359	Soil	See Attached Maps	
PAD 563	4/6/99	1400	Soil	See Attached Maps	
PAD 564	4/6/99	1405	Soil	See Attached Maps	
PAD 564A	4/6/99	1405	Soil	See Attached Maps	
PAD 565	4/6/99	1410	Soil	See Attached Maps	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Pad Samples April 1999

Sample ID	Date	Time	Matrix	Location	Comments
PAD 534	4/7/99	1230	Soil	See Attached Maps	
PAD 535	4/7/99	1235	Soil	See Attached Maps	
PAD 536	4/7/99	1240	Soil	See Attached Maps	
PAD 537	4/7/99	1245	Soil	See Attached Maps	
PAD 538	4/7/99	1250	Soil	See Attached Maps	
PAD 539	4/7/99	1255	Soil	See Attached Maps	
PAD 540	4/7/99	1300	Soil	See Attached Maps	
PAD 540A	4/7/99	1305	Soil	See Attached Maps	
PAD 541	4/7/99	1310	Soil	See Attached Maps	
PAD 542	4/7/99	1315	Soil	See Attached Maps	
PAD 543	4/7/99	1320	Soil	See Attached Maps	
PAD 544	4/7/99	1325	Soil	See Attached Maps	
PAD 545	4/7/99	1330	Soil	See Attached Maps	
PAD 546	4/7/99	1335	Soil	See Attached Maps	
PAD 547	4/7/99	1340	Soil	See Attached Maps	
PAD 548	4/7/99	1345	Soil	See Attached Maps	
PAD 549	4/7/99	1350	Soil	See Attached Maps	
PAD 550	4/7/99	1351	Soil	See Attached Maps	
PAD 550A	4/7/99	1352	Soil	See Attached Maps	
PAD 551	4/7/99	1353	Soil	See Attached Maps	
PAD 552	4/7/99	1354	Soil	See Attached Maps	
PAD 559	4/6/99	1400	Soil	See Attached Maps	
PAD 560	4/6/99	1400	Soil	See Attached Maps	
PAD 561	4/7/99	1355	Soil	See Attached Maps	
PAD 562	4/7/99	1400	Soil	See Attached Maps	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Pad Samples April 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
PAD 517	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 518	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 519	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 520	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 521	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 522	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 523	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 524	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 525	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 526	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 526A	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 527	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 528	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 529	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 530	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 531	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 532	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 533	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 563	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 564	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 564A	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 565	XXX		bdl	bdl	bdl	bdl	bdl	bdl

* Bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Pad Samples April 1999

Sample ID	Clean	Contaminated	Constituents				Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
PAD 534	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 535	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 536	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 537	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 538	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 539	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 540	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 540A	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 541	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 542	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 543	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 544	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 545	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 546	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 547	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 548	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 549	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 550	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 550A	XXX		bdl	bdl	bdl	17.5	bdl	bdl
PAD 551	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 552	XXX		bdl	bdl	bdl	bdl	bdl	bdl
PAD 559	XXX		bdl	21.3	bdl	79.8	bdl	bdl
PAD 560	XXX		221.2	bdl	bdl	bdl	bdl	bdl
PAD 561	XXX		187.5	bdl	bdl	bdl	bdl	bdl
PAD 562	XXX		233.5	bdl	bdl	bdl	bdl	bdl

* Bdl = Below Detection Level

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Topsoil May 1999

Sample ID	Date	Time	Matrix	Location	Comments
Topsoil 1	5/12/99	1430	Soil	Topsoil (off-site)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Topsoil May 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
Topsoil 1	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Level

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Topsoil May 1999

Sample ID	Pesticides	Results = µg/kg
Topsoil 1	BHC(a-isomer)	< 1.9
	BHC(b-isomer)	< 1.9
	BHC(d-isomer)	< 1.9
	BHC(g-isomer)	< 1.9
	Heptachlor	< 1.9
	Aldrin	< 1.9
	Heptachlor Epoxide	< 1.9
	Endosulfan I	< 1.9
	Dieldrin	< 3.7
	4,4'-DDE	10.7
	Endrin	< 3.7
	Endrosulfan II	< 3.7
	4,4'-DDD	0.4
	Endrosulfan Sulfate	< 3.7
	4,4'-DDT	2.5
	Methoxychlor	< 19
	Endrin Ketone	< 3.7
	Endrin Aldehyde	< 3.7
	alpha-Chlordane	< 1.9
	gamma-Chlordane	< 1.9
	Toxaphene	< 190
	Aroclor 1016	< 37
	Aroclor 1221	< 37
	Aroclor 1232	< 37
	Aroclor 1242	< 37
	Aroclor 1248	< 37
	Aroclor 1254	< 37
	Aroclor 1260	< 37

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Fill May 1999

Sample ID	Date	Time	Matrix	Location	Comments
Fill 1	5/12/99	1430	Soil	Fill (off-site)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Fill May 1999

Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
Fill 1	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Monitoring Well (Soils) May 1999

Sample ID	Date	Time	Matrix	Location	Comments
MW-16I	5/13/99	1330	Soil	back of polle's yard (intermediate)	
MW-16S	5/14/99	1152	Soil	back of polle's yard (shallow)	
MW-17I	5/18/99	1100	Soil	soil spoils (ne of 16)(intermediate)	
MW-17S	5/18/99	1115	Soil	soil spoils (ne of 16)(shallow)	

Site Remediation Services, Inc.

Sweden-3 Chapman Site

Sample Results Summary Table

Monitoring Well (Soils) May 1999

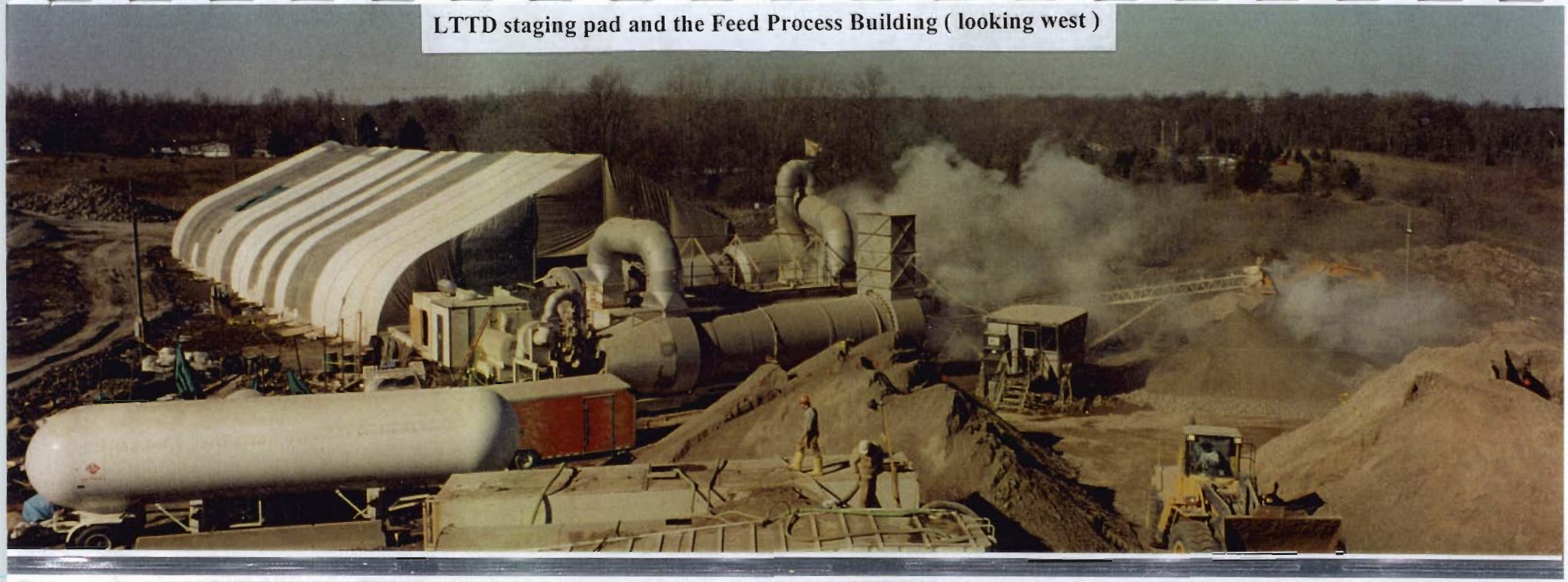
Sample ID	Clean	Contaminated				Constituents	Results = µg/kg	
			Acetone	Trichloroethene	2- Butanone (MEK)	4- Methyl-2-Pentanone	Tetrachloroethene	1,2 DCE (Total)
MW-16I	XXX		bdl	bdl	bdl	bdl	13.7	bdl
MW-16S	XXX		bdl	bdl	bdl	bdl	bdl	bdl
MW-17I	XXX		bdl	bdl	bdl	bdl	bdl	bdl
MW-17S	XXX		bdl	bdl	bdl	bdl	bdl	bdl

*bdl = Below Detection Limit

APPENDIX E

Photographic Log

LTTD staging pad and the Feed Process Building (looking west)



Low Temperature Thermal Desorption (LTTD) unit (looking southeast)

Original staging pads containing IRM soils (looking north)

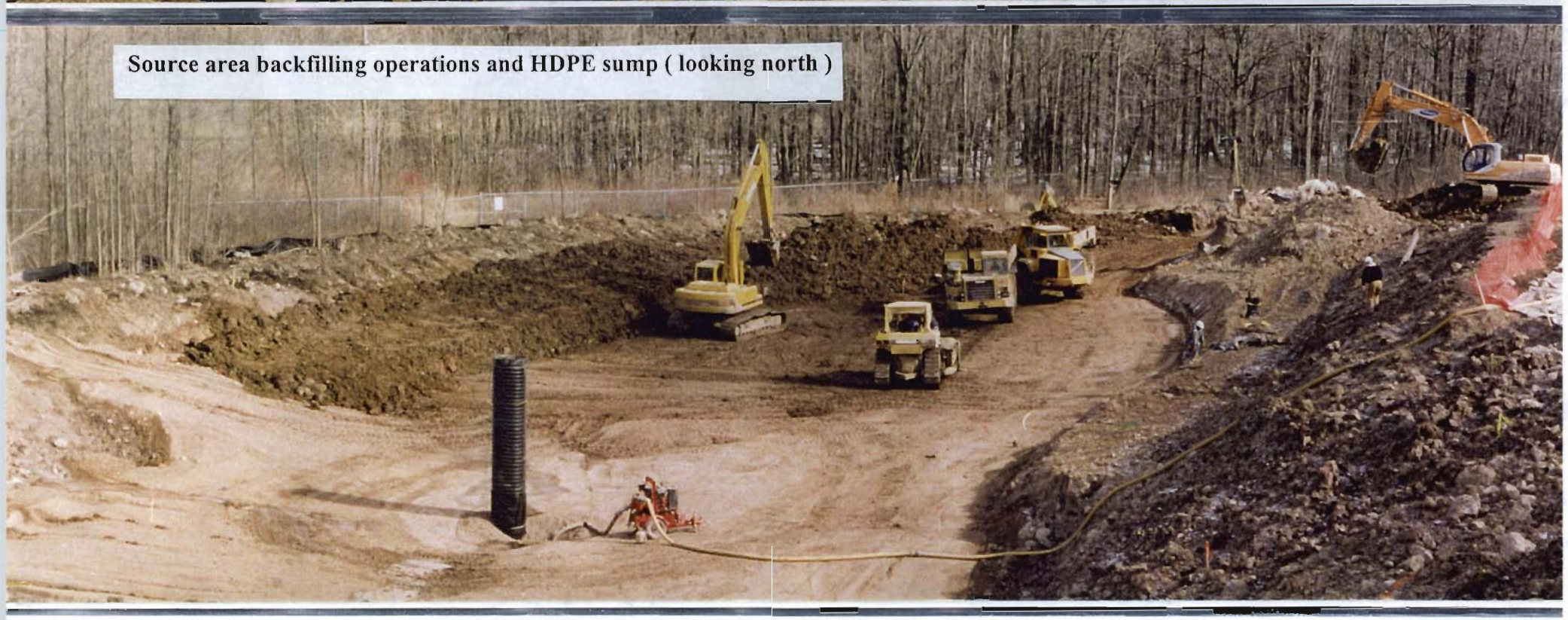
Original decontamination pad with staged drums from previous investigations

Soil staging area and Feed Process Building (looking west)

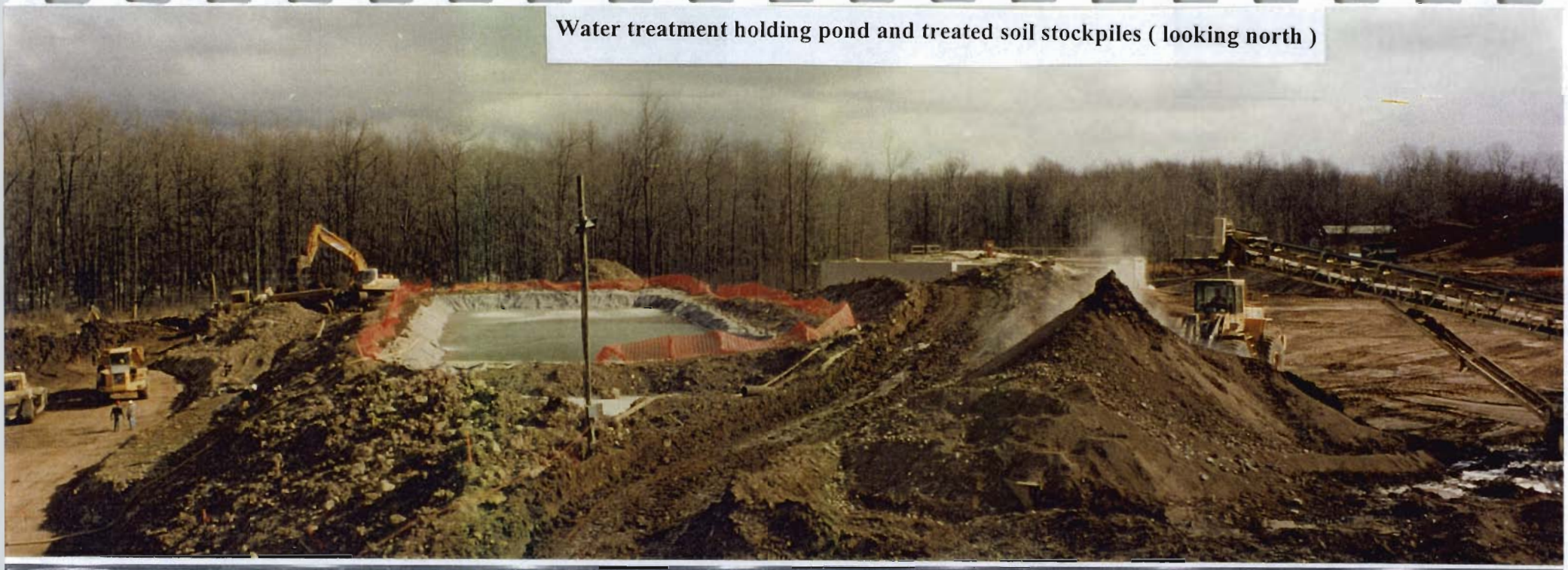
Soil staging pads and Feed Process Building (looking north)

Source area excavation with dewatering and backfilling operations (looking north)

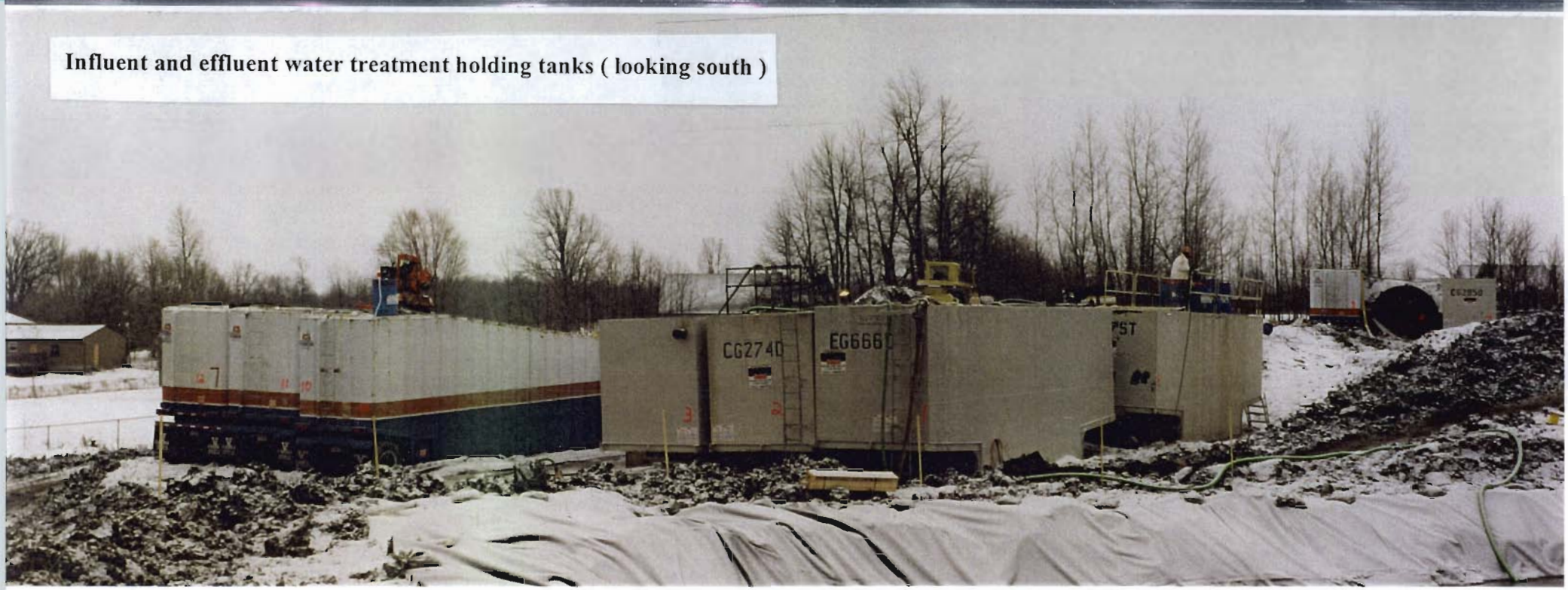
Source area backfilling operations and HDPE sump (looking north)



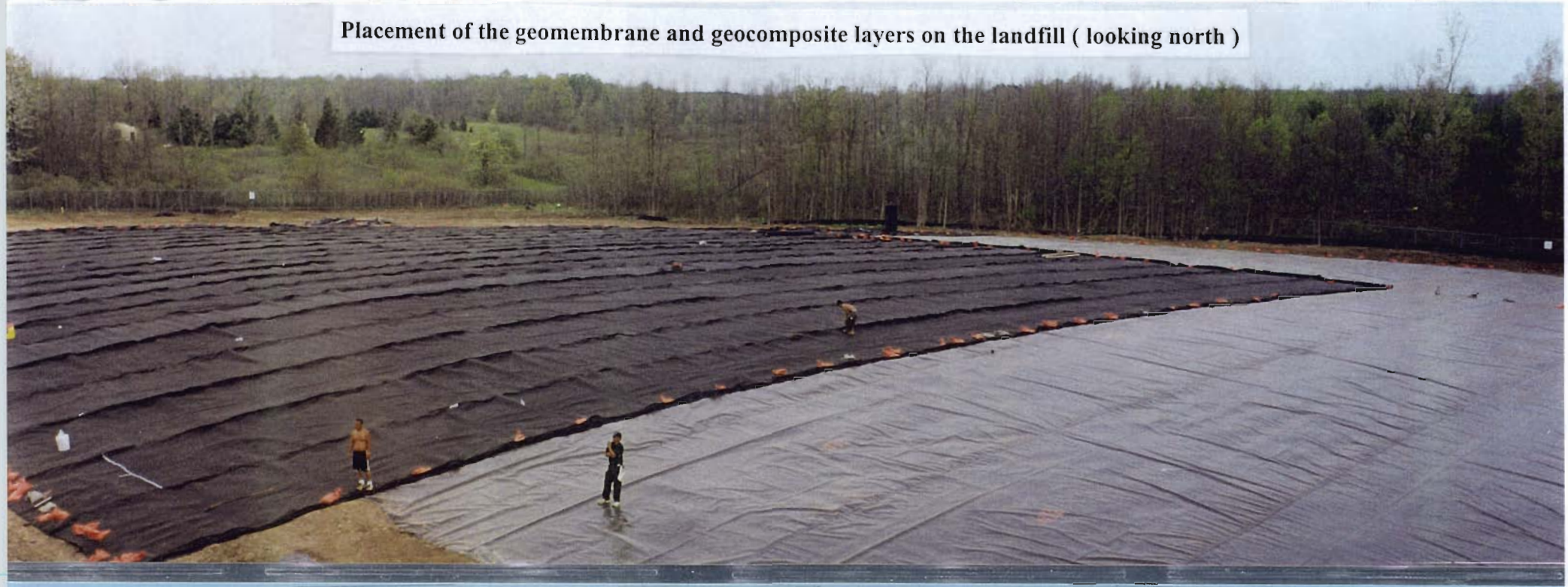
Water treatment holding pond and treated soil stockpiles (looking north)



Influent and effluent water treatment holding tanks (looking south)



Placement of the geomembrane and geocomposite layers on the landfill (looking north)



Placement of barrier protection soil layers over the geomembrane layer (looking north)