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Project Site numbers will be proceeded by the following:

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Spills - sp
ERP - e
VCP - v
BCP - c

non-releasable - put .nf.pdf
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BOTH sites
905018
& 905022

New York State Department of Environmental Conservation
PLANT 1 / PLANT 2 DEMOLITION
CONTRACT NO. D003190

☑ Approved ☐ Approved As Noted ☐ Resubmit With Revisions ☐ Disapproved

COMMISSIONER OF ENVIRONMENTAL CONSERVATION
Designated Representative

Date 6/11/97

CONSTRUCTION CERTIFICATION REPORT

Building Demolition and Disposal
Van Der Horst Plant Nos. 1 and 2
Site Nos. 9-05-008 and 9-05-022
Olean, Cattaraugus County

Prepared for:

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, NY 12233

Prepared by:

ERM-NORTHEAST
175 Froehlich Farm Boulevard
Woodbury, NY 11797

ERM

ERM-Northeast's Commitment to Quality

Our Quality Policy

We will fully understand and document our clients' requirements for each assignment.

We will conform to those requirements at all times and satisfy the requirements in the most efficient and cost effective manner.

Our quality policy and procedures include an absolute commitment to provide superior service and responsiveness to our clients

Our Quality Goals

To serve you.

To serve you well.

To continually improve that service.

Our Quality Improvement Process

Train each employee.

Establish and implement requirements based on a preventative approach.

Maintain a standing Quality Improvement Team to ensure continuous improvement.

Empower Corrective Action Teams to analyze, correct and eliminate problems.

Continually strive to improve our client relationships.

John A. DeFilippi, P.E.
Chairman

Howard Wiseman, P.E.
President

CONSTRUCTION CERTIFICATION REPORT

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TABLE OF CONTENTS

LIST OF FIGURES — See End of Section

LIST OF TABLES — See End of Section

LIST OF APPENDICES

Section 1

1.0 INTRODUCTION

This Certification Report (Report) has been prepared by Environmental Resources Management Northeast Inc. (ERM) to document that the Building Demolition and Disposal Contract for the Van Der Horst Plant No. 1 and Plant No. 2 sites (NYSDEC Site Nos. 9-05-008 and 9-05-022) located in Olean, New York was implemented in accordance with the New York State Department of Environmental Conservation (NYSDEC) Contract Documents. These Contract Documents consist of the following:

- Original Contract Documents dated March 11, 1994;
- Addendum No. 1 to the Contract Documents, dated March 28, 1994;
- Addendum No. 2 to the Contract Documents, dated April 18, 1994;
- Addendum No. 3 to the Contract Documents, dated April 21, 1994;
- Addendum No. 4 to the Contract Documents, dated April 27, 1994;
- The Field Sampling and Analysis Plan, dated July 25, 1994, as prepared by the contractor, International Dismantling Machines Environmental, Inc. (IDM);
- IDM's Work Plan, dated July 26, 1994;
- IDM's Health and Safety Plan, dated July 27, 1994;
- IDM's Asbestos Abatement Plan, dated November, 1994;
- Change Order No. 1, dated December 22, 1994;
- Change Order No. 2 (rejected by State Comptroller); and
- Change Order No. 3, dated July 25, 1996.

This Report documents all work performed by IDM during the project, consisting of:

- Work performed during the period when full-time inspection services were provided by ERM (September 15, 1994 to April 3, 1995); and

- Residential soil removal and restoration activities which continued after April 3, 1995, and were inspected by NYSDEC personnel.

NYSDEC has provided additional information from their inspection activities necessary for this Report to comprehensively document all work that occurred during this project. However, since ERM did not provide inspection services after April 3, 1995, the ERM certifications contained in Section 5.0 of this Report apply only to the activities which were inspected by ERM personnel through April 3, 1995. ERM's inspection activities consisted of asbestos abatement monitoring, and the inspection and review of all of IDM's activities including 1) construction methods and materials, 2) sample collection and analysis, 3) waste manifesting procedures, and 4) implementation of the health and safety plan.

This Report is organized into five sections with appendices. Following this Section 1.0, Section 2.0 presents a general description of the project, and the personnel responsible for implementation of the project. Section 3.0 presents a detailed description of the activities that were performed at the sites, while Section 4.0 describes the analytical results of environmental samples collected at the sites. Finally, Section 5.0 presents a project summary and signed certifications by ERM personnel. The appendices contain extensive documentary material and information.

Section 2

Section 2

2.0 *PROJECT BACKGROUND*

The Van Der Horst Plant No. 1 and 2 sites are located in Olean, Cattaraugus County, New York, and are approximately 0.5 miles apart. Both facilities were utilized for electroplating operations, which ceased in the summer of 1987. A site location map showing both Plants is included as Figure 2-1 at the end of Section 2.0.

2.1 *DESCRIPTION OF THE VAN DER HORST PLANT NO. 1 SITE*

The Van Der Horst Plant No. 1 site is a two-acre industrial facility located within the northern section of the city of Olean, New York. The property is bounded by a developed residential neighborhood on its north and east, by Conrail railroad tracks on its west, and by an industrial area on its south. The industrial area is also present to the west of the Conrail tracks. The nearest surface water body is Olean Creek, approximately one quarter mile east of the site, which receives the site storm water runoff from the City of Olean storm sewer system.

The Van Der Horst Corporation began chromium electroplating operations at Plant No. 1 in the early 1940's. There were two reported instances of subsurface process wastewater disposal at the site. One account described a one-time dumping of iron-contaminated chromic acid into a shallow hole on-site sometime during the early 1940's. Also, reference is made in the files of the County Health Department to an on-site wastewater disposal well, which was in operation until approximately 1952.

Since 1952, the process wastewater from the plant was discharged to the sewer system without any pre-treatment. Until 1951, the plant used city water for its processes and other needs. In 1951, a 46-foot deep production well was installed on the site. The County Health Department reported that this process supply well was found to be heavily contaminated with

chromium by 1959. Use of this well was discontinued in 1960. In 1962 a new 91-foot deep process well was installed.

Manufacturing operations at Plant No. 1 were ceased in July, 1987. Figure 2-2 shows the conditions of the Plant No. 1 site prior to demolition activities, and is attached at the end of Section 2.0

2.2 *DESCRIPTION OF THE VAN DER HORST PLANT NO. 2 SITE*

The Van Der Horst Plant No. 2 site is located within the northern section of Olean, New York approximately 0.5 miles west of Plant No. 1. The property is bounded by an industrial area on its east, several residential properties on its west, a Conrail railroad track on its south and New York State Route 17 on its north. The nearest surface water body is Two Mile Creek, located between the northern boundary of the site and State Route 17.

The Van Der Horst Corporation began iron plating operations at Plant 2 beginning in 1951, to repair and restore the worn surfaces of machinery components, including cylinders and crankshafts.

The plant's plating process utilized many large open holding tanks containing a variety of hazardous substances. Several tanks were located below grade to an approximate depth of 12 feet. From the data obtained during the site investigation, it is believed that the below grade tanks located inside the building were a major contributor to the subsurface soil and groundwater contamination at the site.

The on-site disposal of wastes reportedly occurred throughout the Plant's active period. From the previous records of the plant's activities, documentation from the County Health Department, and interviews with former employees, it is believed that wastes from Plant No. 1 were dumped

at the Plant No. 2 site. An area west of the Plant No. 2 building was used as a fill area to dispose of wastes generated at the Plant.

Plant No. 2 ceased manufacturing operations in the summer of 1987. Figure 2-3 shows the conditions of the Plant No. 2 site prior to demolition activities, and is attached at the end of Section 2.0

2.3 *REGULATORY HISTORY AND ENVIRONMENTAL FINDINGS*

In 1984, Plant No. 1 was listed on the NYSDEC Registry of Suspected Hazardous Waste Sites. Plant No. 2 was listed in the "Registry of Inactive Hazardous Waste Sites" by NYSDEC in 1988.

In 1989, a summary abatement order was issued by NYSDEC to the Van Der Horst Corporation, stating that the conditions existing at both Plants constituted an imminent and substantial danger to public health and the environment. At the hearing, substantial evidence was presented by the Van Der Horst Corporation to prove that the company lacked financial resources to undertake remedial activities, thus making it necessary for New York State, through NYSDEC, to do so. Funds from the 1986 Environmental Quality Bond Act were used to investigate and remediate the sites.

In 1989, NYSDEC requested the United States Environmental Protection Agency (EPA) to take action immediately because of the imminent threat posed by improperly-stored chemicals inside the Plant No. 1 and Plant No. 2 buildings. EPA mobilized a field team in 1989 and erected a fence around the fill area at Plant No. 2. The chemicals inside the buildings were properly characterized, packaged, and removed, to eliminate the threat posed by these chemicals.

In 1989, NYSDEC contracted with ERM to conduct a Remedial Investigation/Feasibility Study (RI/FS) at both sites. The RI/FS was implemented in three phases. The results of the RI showed that site soils, creek sediments, and groundwater, including soil and groundwater beneath the Plant buildings, were contaminated with metals and a few volatile organic compounds. Contaminants detected in the RI samples were determined to be associated with the past Plant activities, and consisted primarily of:

- chromium, lead and arsenic in soil/sediment from both sites;
- chromium, lead, and tetrachloroethylene in groundwater at Plant No. 1; and
- chromium, lead, arsenic, beryllium, and benzene in groundwater at Plant No. 2.

Chromium, which is the primary contaminant at both sites, was identified at concentrations as high as 585,000 milligrams per kilogram (mg/kg, or parts per million by weight) in Plant No. 1 surface soil samples. Chromium was detected in Plant No. 2 surface soil samples at concentrations as high as 9,690 mg/kg. The RI also identified the presence of asbestos insulation on pipes and equipment in the Plant buildings at both sites, but did not attempt to delineate the extent of asbestos containing materials.

A Record of Decision (ROD) was executed by NYSDEC for Plant No. 1 in March, 1992, and in August, 1993 for Plant No. 2.

2.4 *PROJECT OBJECTIVE AND DESCRIPTION OF WORK*

Based on the results of the RI/FS performed by ERM, the following remedy was chosen by NYSDEC for the sites:

1. Plant building decontamination;

2. Removal and off-site disposal of asbestos in the Plant buildings;

3. Demolition and off-site disposal of the Plant buildings;

4. Removal of surface and subsurface soil at Plant No. 1, and on-site solidification, chemical stabilization, and placement on the Plant No. 1 site. This task includes removal of contaminated soil from residences adjacent to the Plant No. 1 site;

5. Removal of sediment from Olean Creek and from the Plant No. 1 storm sewer system, and solidification and placement of the sediment on the Plant No. 1 site;

6. Recovery of groundwater from the Plant No. 1 site, followed by treatment and discharge to the local POTW, as a 5 year pilot test;

7. Construction of an impermeable, multi-layer cap on the Plant No. 2 site;

8. Excavation and chemical stabilization if necessary, of contaminated Plant No. 2 soil located outside the cap, and consolidation of this soil beneath the Plant No. 2 cap;

9. Removal of sediment from Two Mile Creek, and solidification and placement of the sediment beneath the Plant No. 2 cap;

10. Restoration of the sites; and

11. Long-term groundwater monitoring at both sites.

The remedial tasks covered by the Demolition and Disposal Contract, and this Report, consisted of the first three tasks listed above, plus the removal and off-site disposal of contaminated soil from residences adjacent to Plant No. 1. The remaining remedial tasks are to be performed in subsequent phases of remediation, and are not discussed further in this Report.

The construction phase for the Van Der Horst Building Demolition and Disposal Contract began on September 19, 1994 and ended on July 11, 1995. After a brief shut down from April 3, 1995 to May 1, 1995, restoration activities were completed. ERM performed inspection services through

April 3, 1995, and NYSDEC then inspected all site activities from May 1, 1995 onward.

2.5 *PROJECT STAFF AND RESPONSIBILITIES*

2.5.1 *NYSDEC Staff*

All contracting was conducted directly by NYSDEC. Mr. George Harris, P.E. acted as the NYSDEC Authorized Representative for the execution of the Contract. Mr. Michael Cruden, P.E. was the Project Manager responsible for administration of the Contract. Mr. Gregory Sutton, P.E., Mr. Kevin Glaser, and Mr. William Roblee served as NYSDEC Site Representatives. Ms. Patricia Nelson served as the resident relocation coordinator.

2.5.2 *NYSDOH Staff*

Mr. Michael Rivara represented the NYSDOH, and assisted in coordinating the resident relocation activities.

2.5.3 *ERM Staff*

ERM provided remedial construction inspection services, to ensure that the project was performed in accordance with the Contract Documents. ERM personnel were present daily during all phases of construction, except as described in Section 1.0.

ERM's Project Director, Mr. Andris Ledins, P.E., was responsible for coordinating design efforts between the construction demolition project and the balance of the remedial design. ERM's Technical Project Manager, Mr. Robert Rivera, was responsible for maintaining the work schedule, ensuring that ERM's inspection services were provided within the project budget,

ensuring the technical adequacy of the work performed, reviewing and approving IDM applications for payment, preparing change orders to the construction contract, and coordinating preparation of this Report.

The responsibilities of ERM's Resident Engineer, Mr. Murthy Jogimahanti, included the following:

- Conducting bi-weekly meetings;
- Preparing and issuing field orders;
- Reviewing IDM submittals;
- Inspection of all project activities;
- Maintaining construction records and reports;
- Monitoring during asbestos abatement;
- Verifying compliance of all work with the Contract Documents;
- Identifying defective work and advising on corrective actions;
- Preparing photographic documentation of the project; and
- Maintaining a log of shipping documents for waste material transported to off-site disposal facilities.

ERM's Resident Engineer was assisted by one full-time inspector, Mr. Stephen O'Connor, when construction activities were being performed simultaneously at both the Plant No. 1 and Plant No. 2 sites. Mr. O'Connor's services were subcontracted from an M/WBE firm, Edward O. Watts, Inc.

2.5.4 *IDM Staff*

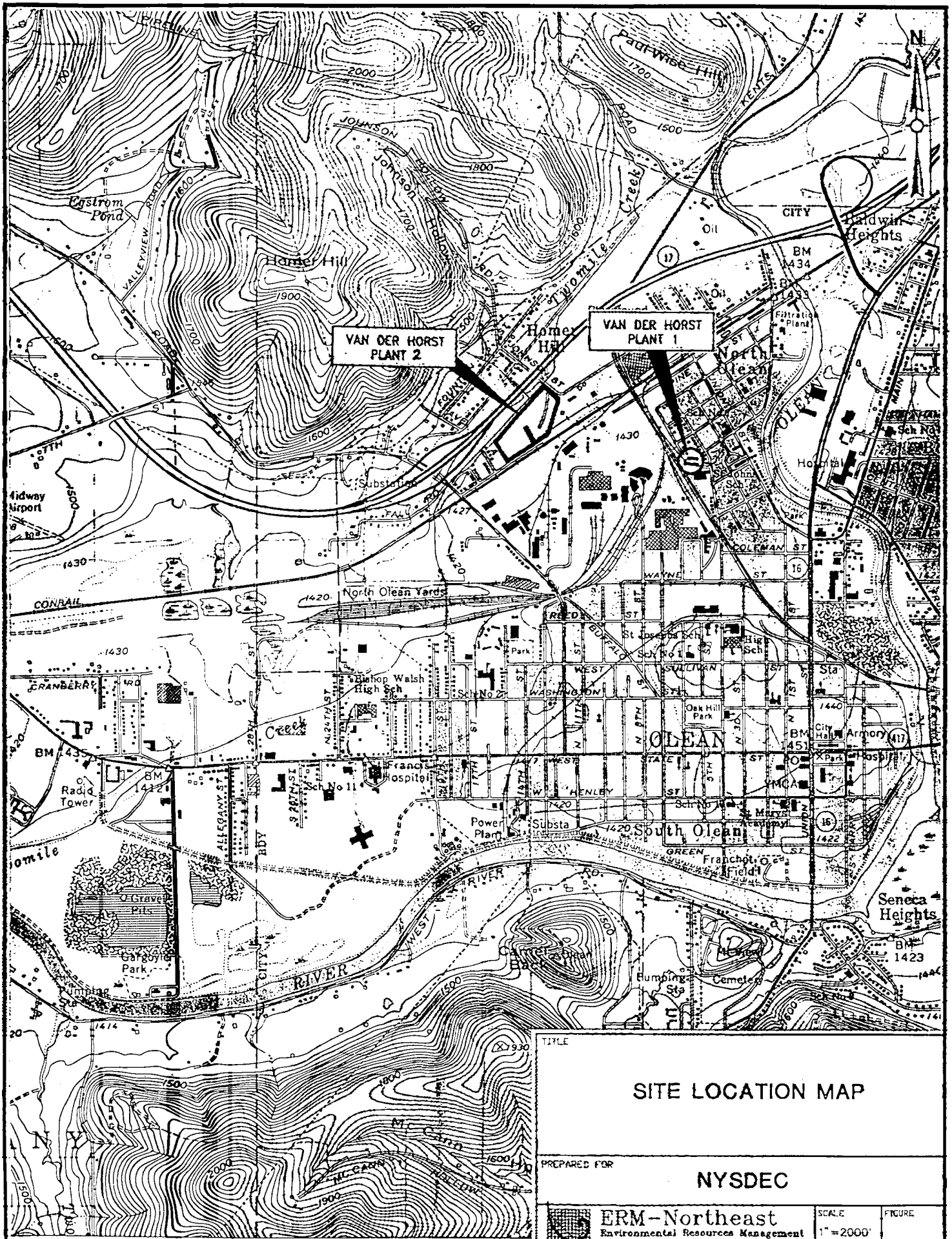
IDM had a full-time staff on-site during construction activities. IDM's Senior Vice President, Mr. James Harrigan, was responsible for the overall performance of IDM during remedial activities. Mr. Michael Baldwin, the

on-site project manager, was responsible for project coordination, including construction activities, arrangement of disposal facilities, transportation, ordering of supplies and equipment, hiring of subcontractors, and acted as a liaison between the Health and Safety personnel, field personnel, and the Engineer.

Mr. Jody Carez served as the site superintendent during September and October, 1994, and was responsible for daily work activities. He was replaced as site superintendent by Mr. Brian Lindsay during the months of November and December, 1994. Mr. Louis Paul then served as the site superintendent from January 1995 through to completion of the project. Mr. Joseph Biesiadecki, IDM's technical manager, was responsible for waste characterization and disposal requirements.

IDM utilized Safety and Ecology Consultants, Inc. (SEC) to provide Health and Safety services for the project. Mr. Christopher Leichtweis of SEC was responsible for the Health and Safety efforts for the project. Mr. Darell Harden of SEC served as the Site Health and Safety Officer at the Plant No. 1 site, and Mr. Craig Rieman of SEC served as the Site Health and Safety Officer at the Plant No. 2 site. Due to non-compliances with the health and safety plan described further in Section 4.3 of this Report, Mr. Craig Rieman was replaced, at NYSDEC's request, by Mr. Joseph DiNardo of IDM from February, 1995 through completion of the project. The Site Health and Safety Officer's were responsible for implementation, enforcement, and monitoring of the health and safety plan, including performing all required air monitoring during remedial activities.

IDM utilized the services of many subcontractors during the project. A list of these subcontractors and the services provided by the subcontractors are listed in Table 2-1 at the end of this Section.



SOURCE: U.S.G.S. Quadrangle Map, Olean, NY

TITLE

SITE LOCATION MAP

PREPARED FOR

NYSDEC

ERM-Northeast
Environmental Resources Management

SCALE	FIGURE
1" = 2000'	2-1

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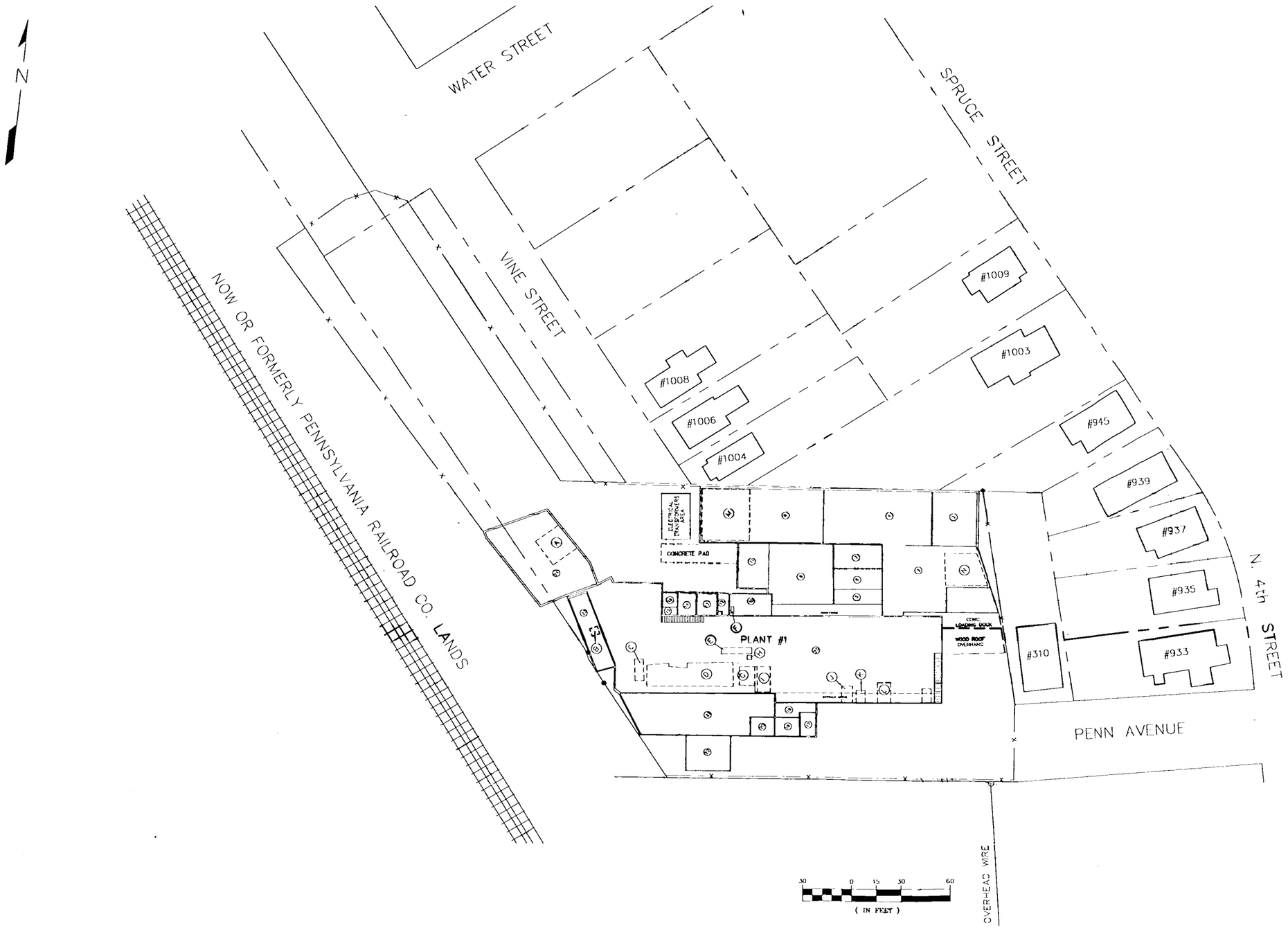
Y.Z.	164.013.26	CCR2-1	3/31/97



NO.	DATE	APPR.	REVISION

NO.	DATE	APPR.	REVISION

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION

VAN DER HORST BUILDING DEMOLITION AND DISPOSAL

ERM-Northeast
Environmental Resources Management

ERM

CHECKED		DATE
DESIGN ENGINEER		
PROJECT ENGINEER		
PROJECT MANAGER		
APPROVED		
APPROVED		

PLANT 1 SITE MAP

DRAWN: M.T.M./S.P.	DATE: MAR. 31, 1997	REVISION DATE:	DRAWING NO: 2-2
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			SHEET OF

SOUTHERN TIER EXPRESSWAY

N

AVENUE "A"

JOHNSON STREET

METAL BUILDING "A"

PLANT No. 2

ELECTRIC TRANSFORMER AREA

METAL SHED

CONC. LOADING DOCK

CONC. PAD

OVERHEAD WIRES

HYD

SAN. MH

CONRAIL

METAL SHED

NIAGARA MOHAWK SUBSTATION

LOCATION OF GAS REGULATOR

FEUMONT PIPELINE MARKER

COLUMBIA GAS LINE MARKER

OVERHEAD WIRES

COLUMBIA GAS LINE MARKER

COLUMBIA GAS LINE MARKER

COLUMBIA GAS LINE MARKER

50 0 25 50 100

(IN FEET)

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

VAN DER HORST BUILDING DEMOLITION AND DISPOSAL

ERM-Northeast
Environmental Resources Management

ERM

CHECKED	
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DATE

PLANT 2 SITE MAP

DRAWING NO. 2-3

REV. NO.

DRAWN: M.T.M./S.P.	DATE: MAR. 31, 1997	REVISION DATE:
SCALE: GRAPHIC	JOB NO.: 164.013.26	FILE NAME: CCR2-3

SHEET OF

Table 2-1

List of IDM Subcontractors
Van Der Horst Building Demolition and Disposal

Robert C. Ackerman, Olean, NY - surveying

ACM, Inc., Olean, NY - asbestos removal

Anderson-Shortell, Olean, NY - plumbing

Big K. Trucking, Waterford, PA - transportation

CECOS International, Niagara Falls, NY - RCRA hazardous water disposal

Chemical Waste Management, Model City, NY - hazardous waste T & D

CID Landfill, Chaffee, NY - non-hazardous disposal

Fairbanks Scale, Upper Saddle River, NJ - weigh station

C.B. Giardini, Allegany, NY - steel salvage yard

Green Tree Landfill, Kersey, PA - asbestos disposal

HazMat Environmental, Buffalo, NY - transformer and oil transport

Keystone Septic Service, Portville, NY - septic tank/Porta-johns

Lakeview Landfill, Erie, PA - non-hazardous debris and soil disposal

L and L Construction, Olean, NY - pool installation

Ed Muniga Fencing, Olean, NY - fencing

On-site, Buffalo, NY - Contractor labor personnel

Pinkerton Security Services, Buffalo, NY - site security

Rohrer Trucking, Waterford, PA - transportation

Larry Russell, Franklinville, NY - plumbing and electrical

Scicchitanno Construction, Olean, NY - clearing and grubbing, copper recycling

TMA/Skinner & Sherman, Waltham, MA - analytical laboratory

John T. Williams, Allegany, NY - transportation

Zoldaz Construction, Alden, NY - transportation

* * *

Section 3

Section 3

3.0 *DESCRIPTION OF CONSTRUCTION ACTIVITIES*

The purpose of this Section is to describe the methods and sequence of activities performed during the remedial action phase, including site preparation and services, health and safety, asbestos abatement, building decontamination, building demolition, residential soil excavation, transportation and disposal of material, and restoration activities.

The narrative provides references to significant dates during the remedial action process. Tables 3-1 and 3-2 present a summary of the important project dates for the Plant No. 1 and Plant No. 2 sites, respectively, and are attached at the end of Section 3.0. Table 3-3 is also attached at the end of this Section, and summarizes the project construction costs. Change Orders issued during the Project are described in Section 3.12.

3.1 *SITE PREPARATION AND SECURITY*

Mobilization and site preparation at both sites began on September 19, 1994. The existing fence was repaired to secure the sites. Clearing and grubbing was performed at all areas for placing of access roads, decontamination pads, trailers, rolloffs, and other construction facilities. Field offices and decontamination trailers were set up, temporary utilities connected and project signs erected, in accordance with the Specifications in the Contract Documents.

Security services were provided throughout the project. A trailer was provided for security personnel at the entrance gate of each site. A security guard was present during work hours. During non-working hours, three security checks were performed at five hour intervals, and at eight hour intervals on weekends and holidays. IDM maintained a list of authorized persons and the security personnel limited site access to authorized personnel only. The security personnel maintained a log of all

people entering and leaving the site. All punch cards generated during patrols of the site using a watchman's clock were delivered to the Engineer on a weekly basis. All security documentation is located in the project file.

The staging areas described in the Specifications were not constructed, since IDM utilized roll-off containers for the storage of debris and soil.

One decontamination pad was constructed at each site at the locations indicated on the Record Drawings. The Record Drawings are included in Appendix E of this Report. The decontamination pads were constructed in accordance with the Contract Documents and Engineer-approved IDM submittals, and were used to decontaminate all equipment and vehicles prior to the equipment and vehicles leaving the site. As indicated in Tables 3-1 and 3-2, site preparation activities were not completed at either site for approximately two months, due to IDM delays in completing the decontamination pads.

A meteorological station was furnished at each site to observe and record wind speed and direction, relative humidity, and atmospheric precipitation. Each station was installed on top of the security trailer at each site.

A weigh station was installed at Plant 2, which included a Fairbanks Rodan Model 12-8727-S weigh scale, Model 50-3925 ticket printer, Model 90-9201 data indicator, and Model 90-9201 data terminal. The scale was calibrated at the beginning of the project and monthly by a representative of the New York State Department of Agriculture and Markets, Bureau of Weights and Measures. All payments to IDM for weight-based unit price items were based on measurements made at the on-site truck scale. Shop Drawing and calibration documentation are located in the project file.

3.2 *HEALTH AND SAFETY*

All work was performed in accordance with the health and safety plan requirements specified in the Contract Specifications, and in accordance with IDM's Health and Safety Plan (HASP), with the exception of non-compliant activities described in Sections 3.2.2 and 4.3 of this Report. The HASP described, among other things, safety responsibilities, safety equipment and procedures, equipment decontamination, medical surveillance, training, levels of personal and respiratory protection, personal decontamination, site perimeter air monitoring, and emergency response procedures. All health and safety records are located in the project file.

3.2.1 *Health And Safety Meetings*

Daily "tailgate" safety meetings were attended by all personnel on-site, prior to the start of work each day. Comprehensive safety meetings were held weekly, and when warranted. The weekly meetings were attended by IDM's superintendent, Site Health and Safety Officers, personnel, SEC personnel, on-site subcontractor personnel, and ERM personnel. Health and safety issues were also discussed during the bi-weekly progress meetings.

3.2.2 *Health And Safety Compliance*

From mobilization through January 31, 1995, SEC was subcontracted by IDM for the implementation of health and safety measures, and SEC implemented the required measures in a satisfactory manner. A few discrete incidents occurred on site where IDM employees were not in compliance with the HASP. Specific incidents consisted primarily of workers not secured to the Plant 2 roof during roof removal, and non-reporting of injuries. These issues were quickly resolved by all parties.

From February 1, 1995 to the completion of the project, IDM implemented health and safety measures directly. This change was warranted due to non-compliance of required air monitoring and reporting procedures by SEC's site Health and Safety Officer, and is discussed further in Section 4.3.

3.2.3 *Air Monitoring*

An air monitoring program was implemented by IDM in accordance with the Specifications, except for non-compliant monitoring activities described in Section 4.3 of this Report. The air monitoring program was implemented in order to:

- Determine the proper level of personal protective equipment, and document that the level of worker protection was adequate;
- Assess the potential migration of contaminants off of the site during the work; and
- Determine whether dust suppression techniques were adequate to protect public and worker safety.

Wind direction readings obtained from the meteorological stations were used to determine appropriate air monitoring locations upwind and downwind of the work zones. All meteorological data for the duration of the project was submitted to the Engineer, and is located in the project file.

Real-time air monitoring was conducted downwind of the work zone, and documentation samples collected from workers, to determine whether the workers' level of protection was adequate. In addition, real-time air monitoring for particulates downwind of the work zone perimeter, and documentation monitoring for particulates and metals at the site perimeter, were conducted to evaluate the potential migration of dust and other contaminants off of the site.

During asbestos abatement activities described in Section 3.4, IDM performed air monitoring as required by New York State Industrial Code Rule 56, and as further required in the Specifications. Air monitoring consisted of personal and area monitoring during the abatement work, and clearance air sampling following the work to document that any residual concentrations of asbestos fibers in ambient air were within acceptable levels. Results of asbestos air monitoring are located in the project file.

3.2.3.1 *Documentation Monitoring of Site Workers*

Documentation monitoring of site workers was conducted by collecting air samples from select personnel in the work zone, using personal sampling pumps fitted with PVC filter media cartridges. Samples were analyzed for respirable particulates according to NIOSH Method 0500. Personal documentation sample results are located in the project file.

3.2.3.2 *Real-Time Work Zone Monitoring*

Real-Time monitoring for respirable particulates was performed in the work zone every day, in order to protect workers from unacceptable exposures. One MIE DataRAM was used to continuously monitor particulates in the work area.

The background respirable particulate concentration was established prior to the start of work every day. During work activities, any monitoring results above IDM-established action levels would trigger engineering controls to reduce particulate concentrations in the work zone. Results of all real-time work zone monitoring are located in the project file.

3.2.3.3 *Real-Time Perimeter Monitoring*

Real-time monitoring for respirable particulates was performed at the site perimeter during all demolition, excavation, and debris handling activities, as required in the Specifications. Monitoring was continuously performed both upwind and downwind of the work zone, using MIE MiniRAMs.

Prior to the start of work each day, the meteorological station was used to determine the actual upwind and downwind directions from the work zone. The background (upwind) particulate concentration was also established.

During work activities, real-time particulate concentrations were monitored on an hourly basis, both upwind and downwind of the work zone. This monitoring was conducted to determine whether construction activities were causing an unacceptable release of particulates at concentrations greater than the action levels identified in the Specifications. The meteorological station readings (i.e., wind direction) were also used to determine whether the upwind and downwind monitoring locations had to be moved

Results of the real-time perimeter monitoring program are described in further detail in Section 4.3 of this Report. Results of all perimeter real-time monitoring are located in the project file.

3.2.3.4 *Documentation Monitoring At The Site Perimeter*

Documentation monitoring was conducted at the perimeter of each site, at four locations (one upwind location and three downwind locations). The four locations were chosen according to the location of the work zone, and the wind direction indicated by the meteorological station. Documentation

monitoring was conducted during demolition, soil excavation, and material handling activities, to document that unacceptable concentrations of contaminants were not migrating beyond the site boundaries.

Documentation monitoring consisted of the collection of air samples using air sample pumps and appropriate sample media cartridges. At the end of each sampling period of four hours, meteorological data was reviewed by the Site Safety Officer and Engineer, who then selected one upwind and two downwind documentation samples for laboratory analysis.

Documentation samples were collected by using approved NIOSH sample collection filter media. Documentation samples were then analyzed for total particulates, arsenic, chromium and lead, in accordance with the following NIOSH methods:

- total particulates: NIOSH 0500
- arsenic: NIOSH 7300 or 7900
- chromium: NIOSH 7024
- lead: NIOSH 7300 or 7082

All analyses were conducted using the lowest achievable detection limit for that NIOSH Method.

Results of the perimeter documentation monitoring program are described in further detail in Section 4.3 of this Report. Analytical results of perimeter documentation samples are located in the project file.

3.3 *RESIDENT RELOCATION PROGRAM*

A resident relocation program was established by ERM, NYSDEC, and NYSDOH as a precautionary measure to ensure the protection of residents adjacent to the Plant No. 1 site, from the potential hazards of demolition and soil excavation activities. Residents were offered to be voluntarily relocated during soil excavation activities on their properties or on

adjacent properties, and during any demolition activities that occurred within 50 feet of the residents' property line.

Based on these criteria, relocation services were offered to residents at the following addresses:

- 310 Penn Avenue
- 933 N. Fourth Street
- 935 N. Fourth Street
- 937 N. Fourth Street
- 939 N. Fourth Street
- 945 N. Fourth Street
- 1003 Spruce Street
- 1009 Spruce Street
- 1004 Vine Street
- 1006 Vine Street
- 1008 Vine Street

The relocation program consisted of relocating residents to a nearby hotel during working hours. Arrangements were also made for meal expenses, transportation requirements, and to coordinate with residents' requirements regarding children departing for or arriving from school.

The relocation program was implemented on 26 work days, from November 13, 1994 through December 16, 1994. The 310 Penn Avenue residence was vacant during that time.

Residents from 935 N. Fourth Street, 945 N. Fourth Street, 1003 Spruce Street, 1006 Vine Street, and 1008 Vine Street participated in the relocation program.

3.4 *ASBESTOS ABATEMENT*

During the months of October and November 1994, a comprehensive asbestos survey of the Plant No. 1 and Plant No. 2 buildings was conducted as required in the Specifications. The Asbestos Building Inspection Report

prepared by IDM's subcontractor documented significant quantities of asbestos-containing material (ACM) in the Plant buildings at both sites.

Asbestos abatement activities consisted of removing pipe insulation, floor tiles and mastic, transite, counter tops, vat and boiler insulation, roofing material, and sealants/flashing that were identified as ACM. A summary of ACM quantities removed from the buildings is included as Table 3-4 at the end of Section 3.0.

Asbestos abatement activities began at Plant No. 2 on October 17, 1994 and were completed on December 29, 1994. Asbestos abatement activities at Plant No. 1 began on November 3, 1994 and were completed on January 27, 1995. All abatement activities were conducted in accordance with New York State Industrial Code Rule 56 and the variances which NYSDEC obtained from the New York State Department of Labor for the work (as described in Addendum 4 to the Contract Documents).

IDM performed all asbestos abatement activities at Plant No. 2. IDM subcontracted Asbestos Control Management, Inc. to perform abatement activities at Plant 1.

3.4.1 *Pre-Abatement Activities*

All required pre-abatement submissions, notifications, postings, and permits were provided by IDM, and were reviewed and approved by ERM. A Pre-abatement safety meeting was conducted and worker training records were reviewed by ERM.

All contaminated architectural, mechanical, and electrical appurtenances such as full-height partitions, duct work, light fixtures, conduit, panels, and other contaminated items designated for removal were wet wiped completely, and then HEPA vacuumed. All dusty and/or asbestos-

contaminated surfaces, and all ACM, were wetted with amended water using mechanical sprays to reduce airborne fiber concentrations before the material was disturbed.

3.4.2 *Abatement and Post-Abatement Activities*

ACM was removed in accordance with ICR 56 and the specified variances. Glovebagging procedures were used to remove pipe insulation. Floor tiles, mastic, linoleum, counter tops, paper sheeting, and vat and boiler insulation was removed after constructing enclosures (isolation barriers). Transite and roofing material was removed without constructing enclosures. All persons performing abatement activities possessed a valid New York State license to handle asbestos.

All removed material was kept wet enough to prevent fiber release. High humidity was maintained in the work area by misting or spraying to facilitate fiber settling and reduce airborne concentrations. All debris was cleaned up promptly to maintain minimal fiber counts. On a daily basis, containerized waste was transferred from the work area to a lined roll-off.

All visible accumulations of ACM and asbestos-contaminated debris were removed and containerized. Containers (6-mil polyethylene double bags) were sealed when full. The containers were securely sealed to prevent accidental opening and leakage by tying the tops of the containers in an overhand knot or by taping in gooseneck fashion. The containers were then cleaned, removed through the equipment decontamination enclosure system, and placed in a lined roll-off on a daily basis.

After completion of removal work, surfaces from which ACM had been removed were wet-brushed to remove all visible residue. All tools and equipment were decontaminated by wet-wiping and/or HEPA vacuuming

prior to removal from the work area, at the appropriate time in the cleaning sequence.

After an acceptable inspection by ERM, the abated surfaces were sealed with a spray-on latex encapsulant by IDM. Final cleanup activities included the use of HEPA vacuums and wet-cleaning of all areas where residual dust or debris was evident on the inner surface of the outer enclosure layer.

All negative-air filtration unit pre-filters and secondary or HEPA filters were changed and disposed at that time. Negative pressure was maintained within the enclosure during those activities and until final clearance was attained. All HEPA vacuum contents were likewise emptied, bagged for disposal within the enclosure, and disposed prior to requesting final visual inspection and clearance air monitoring.

Following final cleanup activities, ERM inspected the restricted work area for visible residue. Following an acceptable visual inspection by the Engineer, clearance air monitoring was conducted within the work area. A final visual inspection was conducted by ERM following the removal of the work area isolation barriers.

Refer to Appendices C and D for disposal logs which identify the quantity of ACM that was removed from the site and disposed at an off-site disposal facility. Refer also to Section 3.10.5.

3.5 *BUILDING DECONTAMINATION*

A "Guzzler" was used to vacuum all surfaces inside the buildings, including walls and floors of the buildings, to remove soil particles and other small debris. Additionally, after completion of demolition activities, the remaining concrete slabs of each Plant building were pressure washed to remove all residual particulate contamination. All solids and

wastewater generated by building decontamination activities were collected separately, and disposed off-site. Refer to Section 3.10.6.

Approximately 36 tons of salvageable steel were not properly decontaminated prior to off-site removal. As a result, rainwater leached contamination from the steel onto the surrounding soil at the C.B. Giardini salvage yard, where the steel had been transported for recycling. IDM was directed to transport the steel back onto the site for proper decontamination. Following proper decontamination, the steel was transported back to the Giardini salvage yard. In addition, IDM was directed to remediate all affected soil at Giardini's salvage yard. A log of the steel that was returned for proper decontamination is included in Disposal Log No. 5 in Appendix D of this Report.

3.6 *BUILDING DEMOLITION*

Building demolition work consisted of demolition and removal of a three-story building (first floor, second floor and attic) at Plant No. 1 and two one-story buildings at Plant No. 2. Demolition activities were performed after the completion of asbestos removal work and building decontamination work.

Room 24 at Plant No. 1 was not demolished. This room had block wall construction, and was a recent addition to the Van Der Horst Plant. Because the room was very clean, new and had its own exterior door, the room was preserved for storage purposes at the site.

Demolition extended to the concrete floor slabs, however, the concrete floor slabs and any basements were left intact, for removal as part of the final remedy. The Plant No. 1 building, and the large Plant No. 2 building, each contained several sub-slab electroplating vats, as shown on the Contract Drawings. The vats consisted of structural vaults, lined with rectangular

steel tanks. The vaults were constructed of either cast-in-place reinforced concrete or bricks. A sub-slab hone was also present at Plant No. 2.

All steel and other debris was removed from the vats until only the vaults remained. However, a portion of one steel tank at Plant No. 1 was left in its vault because it could not be removed.

The vaults were then filled with backfill material, and capped with a six inch thick layer of concrete to match the surrounding floor elevation. The vaults were capped in this manner to prevent potential exposures to the highly contaminated vault surfaces, during the period between this Project and the removal of the vaults as part of the final remedy.

Demolition of the Plant No. 2 buildings commenced on January 3, 1995 and were completed on January 23, 1995. Demolition of the Plant No. 1 building commenced on January 30, 1995 and were completed on February 20, 1995.

Mechanical grapplers and shears attached to trackhoes (Komatsu PC 300) were used to demolish the buildings. Blow torches were used to cut some steel. Water was used to suppress dust, to minimize the airborne particulates that were generated during demolition activities.

All demolition activities were conducted in accordance with the requirements of the Contract Documents and IDM's Work Plan, and in accordance with the sequence identified in IDM's Work Plan. Demolished material was segregated, decontaminated as necessary, loaded into transport vehicles, and disposed of off-site. Refer to Appendices C and D for disposal logs which identify the quantities of various debris that were removed from the site and disposed at off-site disposal facilities. Refer also to Sections 3.10.1, 3.10.2, and 3.10.3.

3.7 *RESIDENTIAL SOIL EXCAVATION AND PROPERTY RESTORATION*

3.7.1 *Residential Soil Excavation*

During previous site investigations, residential soil was found to be contaminated, to the initial limits identified on Figure 3-1 at the end of Section 3.0, and comprised approximately one half acre. Excavation was to extend initially to a depth of six inches, for an initial estimated quantity of 400 cubic yards of soil.

The Specifications, however, directed the Contractor to collect confirmatory samples, and completely delineate the limits of excavation based on satisfactory sample results, prior to commencing actual excavation activities. The results of this sampling program are discussed in detail in Section 4.2. Based on the results of the confirmatory sampling program, approximately 835 cubic yards of soil required excavation, as shown on the Record Drawings in Appendix E of this Report.

Immediately after completion of the confirmatory sampling program, IDM began tree, fence, and pool removal activities, in order to access the contaminated soil which had to be excavated. In addition, a garage at 310 Penn Avenue was removed so that IDM could access the properties. A temporary decontamination pad was constructed on the 310 Penn Avenue property for decontamination of equipment used in the residential properties.

Soil excavation activities began on November 15, 1994 and continued until December 19,1994. Excavation began in the residential properties on Vine Street, continued in a clockwise direction onto the Spruce Street and North Fourth Street properties, and ended on the 310 Penn Avenue property.

Soil was initially stockpiled on the Plant No. 1 site, and on the 310 Penn Avenue property. Soil stockpiles on the 310 Penn Avenue property were not removed in a timely fashion, and on November 23, 1994 IDM was directed to transport all excavated soil to the Plant No. 2 site for stockpiling. Off-site transport and disposal of excavated soil began on December 12, 1994, and continued through December 21, 1994.

During excavation activities, houses were protected by closing all openings (windows, doors, etc.) and by covering the exterior surfaces with 10 mil polyethylene plastic sheeting. Excavated and stockpiled material was also covered with polyethylene sheeting.

Soil remediation activities occurred at Plant No. 1 during 19 days. The required real-time perimeter dust monitoring was conducted during 18 of those days. However, the following required monitoring was not conducted by IDM:

- Real-time perimeter dust monitoring was not conducted during one of the days;
- Real-time dust monitoring in the work zone was not conducted during any of the 19 required days; and
- Documentation sampling at the perimeter was not conducted during any of the 19 required days.

These non-compliances with the Health and Safety Plan and Specifications are discussed in detail in Section 4.3 of this Report.

As described in more detail in Section 4.1.1, five of the exit samples collected from surface soil in the vicinity of the Plant No. 1 site exceeded the site cleanup goal for chromium, of 50 mg/kg. Three of these samples were located in areas where soil was scheduled to be remediated as part of the final remedy, and were not addressed as part of this Project. IDM was directed to remediate the areas around the other two samples in May,

1995. Remediation of these areas generated an additional 8.47 tons of soil for off-site disposal. NYSDEC personnel performed inspection of this additional work, and a Record Drawing of the additional soil removal limits is provided as an 8½" X 11" Figure in Appendix E of this Report.

Refer to Appendices C and D for disposal logs which identify the quantity of soil removed from the site and disposed at an off-site disposal facility. Refer also to Section 3.10.4. At the conclusion of the Project, all remedial goals had been achieved for residential soil.

3.7.2 *Residential Property Restoration*

Following completion of soil excavation activities, excavation areas were backfilled with common fill, followed by a six inch layer of topsoil to bring final grade back to original grade, and to match surrounding grades. Although fill materials usually are not placed during the winter season, IDM was allowed to place fill materials during December 1994 in order to eliminate physical hazards on the residential properties. Placement of fill materials was allowed on the condition that any low areas be brought up to required grade the following spring, once the soil had settled. At the request of residents, additional topsoil was placed in some areas to correct pre-existing low areas that were subject to ponding water during storm events. The garage at 310 Penn Avenue was not replaced, and NYSDEC arrived at a satisfactory cash settlement with the property owner for the value of the garage. All of this work was inspected by ERM.

The remaining restoration work described in this Section 3.7.2 was performed by IDM, after April 3, 1995, and was inspected by NYSDEC. The discussion which follows is based on ERM's understanding of the work performed, and is not covered by ERM's certification.

All residential properties impacted by the work were restored to pre-existing condition, unless specifically requested otherwise by the residents (for example, some residents did not want trees replaced). This restoration work included seeding, and the replacement of flower beds, fences, pools, and sidewalks.

A subgrade drain pipe was installed around a pool located on the 945 N. Fourth Street property, and extended onto the Plant No. 1 site, to drain a wet area. The pool was originally removed by IDM in the Fall of 1994, and replaced in the Spring of 1995.

Prior to seeding operations, NYSDEC identified objectionable debris and glass in some of the topsoil, and directed IDM to screen the topsoil, or remove and replace the topsoil. All topsoiled areas were restored in a satisfactory manner and then seeded.

In May, 1995, NYSDEC identified a concern with the topsoil quality. It was believed that some topsoil used on residential properties at 933 and 935 N. Fourth Street may have been supplied from an off-site source where previous pesticide storage or spillage had occurred. Therefore, NYSDEC collected two composite samples and one grab sample of the topsoil from these properties, and analyzed the samples for pesticides. The analytical results indicated that several pesticides were identified in the samples at concentrations greater than the laboratory detection levels, with the highest concentration attributable to the pesticide Dieldrin. However, all detected pesticides were within acceptable concentrations for residential soil. This matter was also referred to NYSDOH for their concurrence that the detected concentrations of pesticides did not pose an unacceptable risk.

3.8 *DRUM REMOVAL*

All contents of drums (at both sites) were emptied into lined rolloffs, using fork lifts, and disposed off-site in bulk shipments. The fiber drums were crushed and disposed of in bulk with the drum contents. Steel drums were crushed and handled as salvageable steel.

Drum removal activities occurred at Plant No. 1 on an intermittent basis, over a period of 28 work days (refer to Table 3-1). During that time, IDM conducted required real-time perimeter dust monitoring on only 19 of the 28 days. Real time dust monitoring in the work zone, and documentation sampling at the perimeter, were required but were not conducted on any of the 28 days.

Drum removal activities occurred at Plant No. 2 on an intermittent basis, over a period of 20 work days (refer to Table 3-1). During that time, IDM conducted required real-time perimeter dust monitoring on only 9 of the 20 days. Real time dust monitoring in the work zone, and documentation sampling at the perimeter, were required but were not conducted on any of the 20 days. These non-compliances with the Health and Safety Plan and Specifications at Plant Nos. 1 and 2 are discussed in detail in Section 4.3 of this Report.

Refer to Appendices C and D for disposal logs which identify the quantity of drums and drum materials removed from the site and disposed at an off-site disposal facility. Refer also to Section 3.10.3 and 3.10.4.

3.9 *TRANSFORMER REMOVAL*

Regulated transformers (i.e., transformers containing oil with PCB concentrations greater than 50 mg/kg) were removed from the site and disposed intact, with the transformer oil still present in the transformer

carcass. Non-regulated transformers were drained of oil, which was disposed of separately. The non-regulated transformer carcasses were then crushed and handled as salvageable steel. All required monitoring was conducted during the removal of transformers and ballasts at each Plant.

Refer to Appendices C and D for disposal logs which identify the quantity of transformers and transformer oil removed from the site and disposed at off-site disposal facilities. Refer also to Section 3.10.7.

3.10 *TRANSPORTATION AND DISPOSAL OF SITE WASTE MATERIALS*

This Section 3.10 describes the transport and off-site disposal of all waste materials generated by the work. All waste materials were sampled for the parameters and at the minimum frequencies identified in the Specifications, or in accordance with the requirements of the disposal facilities if the facilities requirements were more stringent than the Specifications. Based on the characterization sampling, all waste materials were classified for disposal at appropriately-permitted disposal facilities.

Appendices C and D to this Report contain disposal logs for all off-site disposal shipments. All waste profile forms and characterization sampling results are located in the project file.

A hazardous or non-hazardous waste manifest was prepared by IDM for each transported load of material, as appropriate. Manifest forms were reviewed and signed by ERM as a representative of NYSDEC.

All loads were weighed using the weigh station at Plant 2 prior to being transported. Each truck driver was required to show licenses, permits, and insurance for all states that the driver would be driving in, before the truck driver was allowed to leave the site.

3.10.1 *Non-Hazardous Building Debris*

A total of 1,535.32 tons of non-hazardous building demolition debris was disposed of at Lakeview Landfill in Erie, Pennsylvania. Several transporters were used, including Big K Trucking, Rohrer Trucking, and Zoldaz Construction.

An additional 85.92 tons of non-hazardous building demolition debris was disposed of at CID Landfill in Chaffee, New York. Wayne Paving and Trucking was the transporter of this debris.

3.10.2 *Hazardous Building Debris*

A total of 527.04 tons of material was disposed of as RCRA TCLP chromium (D007) hazardous waste, at the Chemical Waste Management (CWM) facility located in Model City, New York. This total consisted of 515.59 tons of building debris, and 11.45 tons of RCRA hazardous asbestos containing material. Transportation of all hazardous material was provided by CWM.

3.10.3 *Salvageable Building Debris*

After decontamination at the site, 780.21 tons of salvageable debris was disposed of at Charles B. Giardini's salvage yard, located in Allegheny, New York. This total quantity consisted of 772 tons of building debris, and 8.21 tons of crushed steel drums and non-regulated transformer carcasses. Transportation was provided by John T. Williams and C.B. Giardini. The weight of steel that was brought back to the site following original disposal, for proper decontamination as described in Section 3.5, was only counted once in the total of 780.21 tons, although it was transported twice from the site.

3.10.4 *Drum Contents And Residential Soil*

A total of 1,676.35 tons of drum contents (drill cuttings) and excavated soil from the residential backyards was disposed of at Lakeview Landfill in Erie, Pennsylvania. This total quantity consisted of 21.06 tons of drum contents and crushed fiber drums, 1,646.82 tons of residential soil removed in the Fall of 1994, and 8.47 tons of residential soil removed in June, 1995 (as a result of unsatisfactory exit samples discussed in Sections 3.7.1 and 4.1.1 of this Report). The materials were transported by several transporters including Big K Trucking, Rohrer Trucking, and Zoldaz Construction.

3.10.5 *Asbestos-Containing Material*

In addition to the few tons of RCRA hazardous asbestos containing debris identified in Section 3.10.2, 106.27 tons of non-RCRA asbestos-containing debris was disposed of at Green Tree Landfill located in Kersey, Pennsylvania.

3.10.6 *Wastewater*

Three types of wastewater were collected for disposal during the project. These wastewater streams were generated from:

- Decontamination of equipment, debris and personnel;
- Pressure washing the concrete floor slabs;
- Wastewater existing in pits and containers;

All wastewater collected from decontamination activities was collected in a 6,500 gallon holding tank. Prior to disposal, sampling and analysis of the water for TCLP metals parameters was performed in accordance with the requirements of the Olean Sewer Authority (OSA). Results of these

analyses indicated that no detectable concentrations of TCLP metals parameters were present in the wastewater. Permission was granted by OSA to discharge this wastewater into the OSA sanitary sewer system. Sanitary sewer manholes on Vine Street (for Plant No. 1) and on Johnson Street (for Plant No. 2) were used for this purpose.

A total of 3,547 gallons of wastewater were collected in holding tanks, and disposed of as a RCRA TCLP chromium (D007) hazardous waste at the CECOS International facility in Niagara Falls, New York. A small volume of this wastewater was located in a container at Plant No. 2, while the majority of the water was generated due to pressure washing of the concrete floor slabs. Bison Oil, Inc. transported the wastewater.

A total of 7,150 gallons of wastewater existing in the Plant vats contained a sheen of oil, and were disposed of at the Bison Oil facility, located in Buffalo, New York. Bison Oil also transported this wastewater.

3.10.7 *Electrical Transformers And Ballasts*

Two regulated (i.e., PCB concentrations greater than 50 mg/kg) electrical transformers were disposed of at the TSCA-permitted S.D. Myers facility in Tallmadge, Ohio, with the PCB oil intact in the transformers. Transformer oil was transported by HazMat Environmental Group of Buffalo, New York.

A total of 26 steel drums of non-regulated transformer oil were disposed of at the S.D. Myers facility in Tallmadge, Ohio, and were transported by HazMat Environmental Group.

A total of 4 steel drums of fluorescent lighting ballasts were disposed of at the FulCircle Recyclers facility in Bronx, New York. Transportation was provided by HazMat Environmental.

3.11 *CLEANUP AND DEMOBILIZATION OF THE SITES*

As described in further detail earlier in this report, additional phases of work were required at each site following this project. Therefore, each site was restored only as necessary for safety purposes, until the following phases of work could be performed.

Room 24 at Plant No. 1 was secured, to close up entryways into the room that resulted from demolition of the attached Plant building.

All general debris and rubbish was removed from the site. At the Plant No. 1 site, a new chain link fence was installed along the eastern and northern site boundaries, to prevent access by the public onto the site. Prior to demolition activities (as shown on Figure 2-2) the Plant building was located on the property line, and served as an access barrier. In addition, the discolored (i.e., chromium) portions of the remaining concrete slab were topsoiled and temporarily seeded to further minimize access to potentially-hazardous site conditions.

The project signs were dismantled and stored at the Plant No. 1 site for use during future phases of work. Restoration of the residential properties is discussed in Section 3.7.2.

3.12 *CONTRACT CHANGE ORDERS*

This Section describes the Proposed Change Orders (PCOs) and Change Orders (COs) which were issued to IDM during the project. The original contract value was $967,236.50, as indicated on Table 3-3 of this Report. A total of three COs were issued during the project, resulting in a net increase of $862,772.02 in the contract value, for a final contract value of $1,830,008.52.

3.12.1 *Change Order No. 1*

Change Order No. 1 was issued on December 22, 1994, and increased the contract value by $810,007.81. CO No. 1 primarily addressed the increased scope of residential soil excavation and property restoration adjacent to Plant No. 1, and the removal of additional quantities of asbestos at both Plant Nos. 1 and 2. CO No. 1 also extended the times for Substantial Completion at both Plants.

Proposed Change Order (PCO) Nos. 1 and 2 were included in CO No. 1 to address the residential soil excavation scope, as described below. The out-of-scope asbestos removal requirements at both Plants are also described below.

PCO No. 1 was issued on October 19, 1994, and addressed the anticipated additional requirements for excavation and restoration of residential properties adjacent to Plant No. 1, based on the unsatisfactory results of confirmatory soil samples. However, as indicated on Table 3-1 of this Report, the confirmatory soil sampling program for these residential properties was not completed until November 10, 1994. Therefore, the scope of soil excavation and restoration was finalized after PCO No. 1 was issued, requiring that PCO No. 2 be issued to finalize the scope of soil excavation and property restoration. These were the only two PCOs issued during the project.

For cost minimization reasons during the design, ERM and NYSDEC agreed that ERM would not conduct a detailed asbestos survey in the Plant buildings. Easily classified asbestos materials were identified by ERM, to identify an approximate scope of asbestos removal work in the Bidding Documents. In accordance with NYS Department of Labor regulations, however, a detailed asbestos survey must be performed prior

to building demolition projects of this type. IDM identified significant quantities of additional asbestos as a result of conducting the asbestos surveys required by the State regulations. The cost of the asbestos surveys, as well as the cost to remove and dispose of the additional quantities of asbestos, were included in CO No. 1.

Finally, the remainder of the CO No. 1 costs resulted from additional quantities of items associated with the additional volume of excavation (e.g., additional backfill, topsoil, and restoration), and additional quantities of site services that resulted from the Contract Time extensions.

3.12.2 *Change Order No. 2*

Change Order No. 2 addressed the difference in Contract value for an under-run in the final quantity of salvageable building debris (Contract Line Item 00509.C - refer to Table 3-3), based on a claim submitted by IDM. The original estimated quantity of salvageable debris (primarily structural steel) was 2,325 tons, and the final quantity was 772 tons. CO No. 2 was eventually rejected by the Office of the New York State Comptroller, and therefore had a net Contract value of $0. A discussion of this claim, and the background for the claim, is presented below.

For cost minimization purposes during the design phase, NYSDEC directed ERM to not conduct a building inspection to determine the quantity of structural steel, provided that other methods could be used to reasonably estimate this quantity. Therefore, an ERM structural engineer never saw the buildings during the design phase. A licensed structural Professional Engineer who has been retained on several ERM projects was contacted, and indicated that the quantity could be reasonably estimated.

For typical industrial buildings with steel superstructures, the weight of steel is approximately 3.5 pounds per cubic foot of building space. This

figure was used by ERM to determine the estimated quantity of 2,325 tons. However, once demolition activities were underway, it was apparent that Plant No. 1 did not contain a steel superstructure, but rather was constructed primarily of cinder block exterior walls, and a built-up wood/asphalt roof, with some interior steel sections. The interior of the Plant No. 1 building contained visible steel columns and beams in the main manufacturing area, which resulted in the design assumption that the building contained a steel superstructure. This assumption contributed significantly to the over-estimate in the quantity of salvageable debris.

The reduction in quantity of 1,553 tons resulted in a decrease of $86,502.10 in the Contract value, which was claimed by IDM. IDM also claimed approximately $85,000 in additional lost revenue, based on the fact that IDM received $55 per ton from the salvage yard for each ton of steel transported from the site.

IDM's claim was initially dismissed by ERM and by the NYSDEC Bureau of Construction Services, based on the language in Section VIII, Article 11 of the NYSDEC Contract. This Article states, among other things, that estimated quantities of unit price work are not guaranteed, and also that the contractor must demonstrate that additional costs were incurred, on a unit basis, as a result of the change in quantity (the reduction in quantity caused a decrease in cost and a decrease in revenue, resulting in no net cost differential on a unit basis). IDM could not demonstrate that additional costs were incurred on a unit basis, and their claim essentially stated only that revenues were decreased.

This issue was appealed through the procedures outlined in the Contract for dispute resolution. After IDM's claim had been rejected by several NYSDEC appeals procedures, a further appeal by IDM was heard by the NYSDEC Contract Review Committee (CRC). The CRC found in favor of

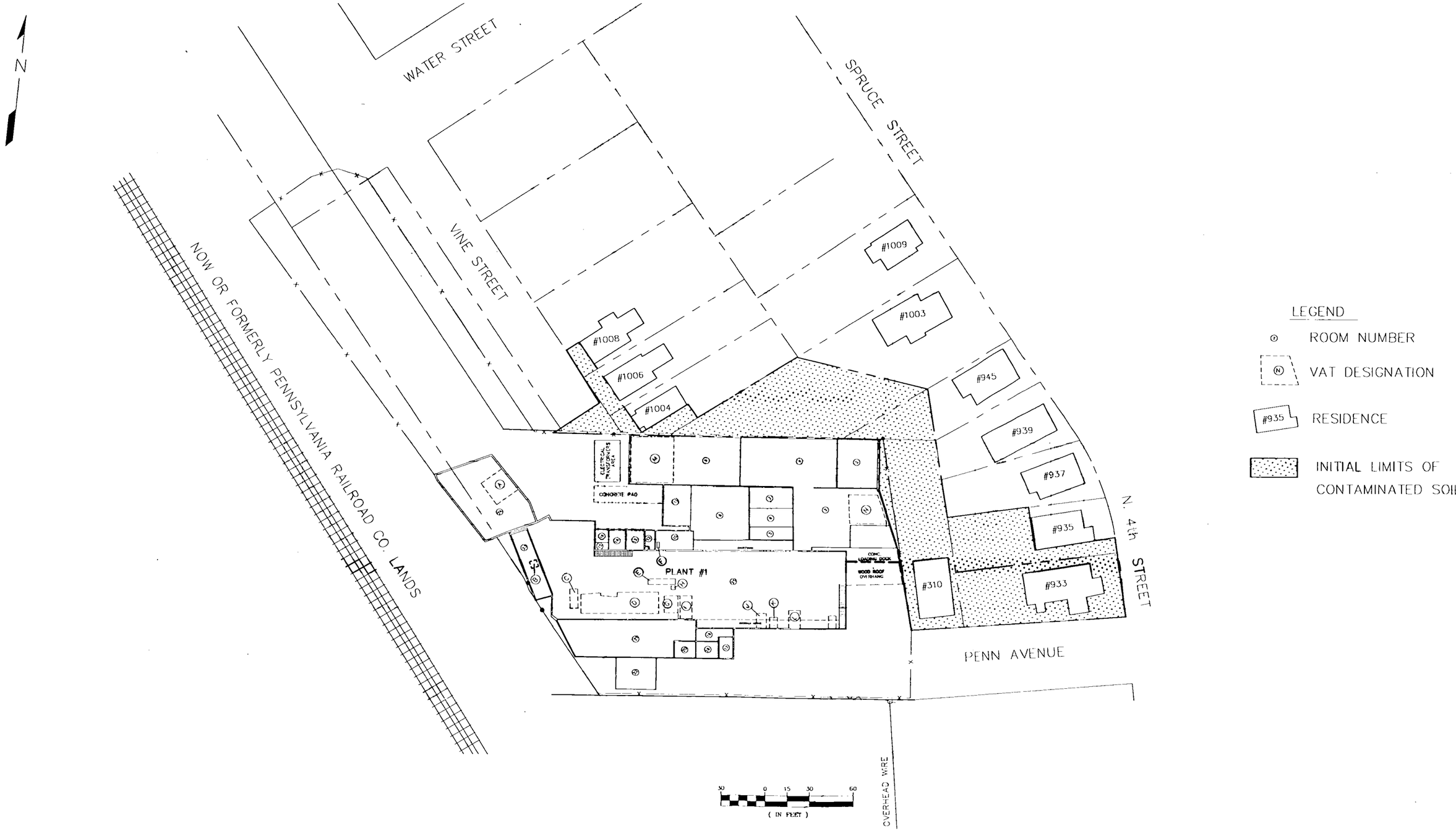
IDM, on the grounds of the significant discrepancy between the estimated and final quantities, and directed the NYSDEC Bureau of Construction Services to issue a Change Order (CO No. 2) to IDM to cover IDM's claim amount.

CO No. 2 was prepared and reviewed through normal State of New York procedures (NYSDEC, Department of Law, State Comptroller). However, the State Comptroller rejected CO No. 2 as not being justified based on the terms of the Contract. IDM sued the State under Article 78 of the Civil Practice Law and Rules, and the courts found in favor of the State's Office of the State Comptroller.

3.12.3 *Change Order No. 3*

Change Order No. 3 was issued on July 25, 1996, and was the final change order on the Project. CO No. 3 increased the Contract value by $52,764.21, and addressed the following:

- Adjustments between the estimated quantities of all unit price work items, and the final quantities of these items;
- Additional costs to sample and dispose of transformer oil and transformer carcasses that were regulated under the Toxic Substances Control Act (TSCA), since the oil contained PCB concentrations greater than 50 mg/kg. The original scope of work anticipated that the transformers would not be regulated under TSCA;
- Assessment of liquidated damages to IDM for exceeding the Plant No. 2 Substantial Completion date; and
- Miscellaneous credits to the Contract value for work not performed, or performed incorrectly. These items consisted of the air monitoring non-compliances discussed in Section 4.3 of this Report, water supply costs paid to the City of Olean by NYSDEC, and costs for ERM to provide weekend inspection services.



NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

VAN DER HORST BUILDING DEMOLITION AND DISPOSAL

ERM–Northeast
Environmental Resources Management

ERM

		DATE
CHECKED		
DESIGN ENGINEER		
PROJECT ENGINEER		
PROJECT MANAGER		
APPROVED		
APPROVED		

ORIGINAL LIMITS OF CONTAMINATED RESIDENTIAL SOIL

DRAWING NO. 3-1

REV. NO.

DRAWN	DATE	REVISION DATE
M.L.M.\S.P.	MAR. 31, 1997	
SCALE	JOB NO.	FILE NAME
GRAPHIC	164.013.26	COR3-1

SHEET OF

Table 3-1

Plant 1 Contract Schedule Summary
Van Der Horst Building Demolition and Disposal

TASK	START DATE	FINISH DATE
Contract Commencement Date	9/12/94	----
Site Preparation	9/19/94	11/16/94
Site Services	10/10/94	3/27/95
Asbestos Material Removal and Disposal	11/03/94	1/27/95
Residential Soil Confirmatory Sampling	9/29/94	11/10/94
Residential Soil Excavation and Backfill	11/15/94	12/23/94
Residential Property Restoration	11/16/94	7/11/95
Health and Safety Provisions	10/28/94	7/11/95
Building Decontamination	12/05/94	3/24/95
Non-hazardous Debris Removal and Disposal	11/21/94	3/27/95
Hazardous Debris Removal and Disposal	11/21/94	3/13/95
Salvageable Debris Removal and Disposal	11/21/94	3/15/95
Drum Removal and Disposal	11/14/94	12/30/94
Transformer and Ballasts Removal and Disposal	12/01/94	3/28/95
Substantial Completion	----	7/11/95

Table 3-2

Plant 2 Contract Schedule Summary
Van Der Horst Building Demolition and Disposal

TASK	START DATE	FINISH DATE
Contract Commencement Date	9/26/94	- - - -
Site Preparation	9/19/94	12/05/94
Site Services	10/10/94	3/24/95
Asbestos Material Removal and Disposal	10/17/94	12/29/94
Health and Safety Provisions	10/10/94	1/23/95
Building Decontamination	10/31/94	1/22/95
Non-hazardous Debris Removal and Disposal	10/31/94	1/23/95
Hazardous Debris Removal and Disposal	10/31/94	1/23/95
Salvageable Debris Removal and Disposal	10/31/94	1/23/95
Drum Removal and Disposal	11/01/94	12/30/94
Transformer and Ballasts Removal and Disposal	11/07/94	3/28/95
Substantial Completion	- - - -	1/23/95

Table 3-3

Summary of Project Contract Costs
Van Der Horst Building Demolition and Disposal

PAYMENT ITEM NO.	DESCRIPTION	UNIT	ORIGINAL QUANTITY	UNIT/LS PRICE	TOTAL AMOUNT	FINAL QUANTITY	FINAL CONTRACT VALUE
00502.A	Site Services (Plant 1)	Month	4.5	$14,678.00	$66,051.00	5.383	$77,644.54
00502.B	Site Services (Plant 2)	Month	1.5	$18,713.00	$28,069.50	3.330	$48,086.83
00504.A	Asbestos Pipe Insulation	Linear Foot	3,760	$22.75	$85,540.00	4,830	$109,882.50
00504.B	Miscellaneous Asbestos Materials	Square Foot	2,000	$3.00	$6,000.00	6,899	$20,697.00
00505.A	Verification Sampling	Sample	25	$150.00	$3,750.00	66	$9,900.00
00505.B	Soil Excavation and Disposal	Ton	500	$220.00	$110,000.00	1,647	$343,044.00
00505.C	Backfill Material	Cubic Yard	190	$24.50	$4,655.00	1,516	$37,142.00
00505.D	Topsoil, Seeding, and Mulch	Cubic Yard	380	$27.50	$10,450.00	873	$24,007.50
00508.A	Health and Safety (Plant 1)	Month	4.5	$24,403.00	$109,813.50	4.5	$109,813.50
00508.B	Health and Safety (Plant 2)	Month	1.5	$19,958.00	$29,937.00	1.5	$29,937.00
00509.A	Non-Hazardous Debris	Ton	1,533	$66.00	$101,178.00	1,621	$106,986.00
00509.B	Hazardous Debris	Ton	254	$220.00	$55,880.00	516	$150,358.27
00509.C	Salvageable Building Debris	Ton	2,325	$55.70	$129,502.50	772	$43,000.40
00509.F	Existing Water	Gallon	1,000	$0.75	$750.00	7,375	$5,531.25
00501	Site Preparation (+ Pollution Liability)	Lump Sum	1	$172,500.00	$172,500.00	Lump Sum	$188,597.52
00505.E	Restoration	Lump Sum	1	$5,500.00	$5,500.00	Lump Sum	$31,820.61
00509.D	Drum Removal	Lump Sum	1	$38,760.00	$38,760.00	Lump Sum	$38,760.00
00509.E	Transformers and Lighting Ballasts	Lump Sum	1	$8,900.00	$8,900.00	Lump Sum	$20,503.84
---	Additional Asbestos Removal at Plant 1	---	---	---	---	Lump Sum	$267,288.00
---	Additional Asbestos Removal at Plant 2	---	---	---	---	Lump Sum	$183,383.00
---	Liquidated Damages	---	---	---	---	(7)	($2,794.72)
---	Weekend Inspection Services	---	---	---	---	(6)	($3,284.00)
---	Documentation Sampling Non-Complianc	---	---	---	---	Lump Sum	($9,935.00)
---	Mulching and Seeding at Plant 1	---	---	---	---	1,350	$202.50
---	Steel Quantity Dispute Resolution	---	---	---	---	Lump Sum	$0.00
---	City Of Olean Fees	---	---	---	---	Lump Sum	($564.01)
			TOTALS:		$967,236.50		$1,830,008.52

ORIGINAL CONTRACT VALUE	$967,236.50	
CHANGE ORDER NO. 1 VALUE	$810,007.81	
CHANGE ORDER NO. 2 VALUE	$0.00	(REJECTED BY OSC)
CHANGE ORDER NO. 3 VALUE	$52,764.21	
FINAL CONTRACT VALUE	$1,830,008.52	

Table 3-4

Asbestos Removal Quantities
Van Der Horst Building Demolition and Disposal

DESCRIPTION	PLANT 1	PLANT 2
Pipe Insulation	1,740 S.F.	3,090 S.F.
Floor Tile	5,364 S.F.	1,535 S.F.
Transite	6,719 S.F.	62 S.F.
Built-up Roofing Material	25,226 S.F.	20,753 S.F.
Vat and Boiler Insulation	738 S.F.	- - - -
Asbestos Shorts	4 Bags	- - - -
Gasket Rope	40 L.F.	15 L.F.
Paper Sheets	72 S.F.	- - - -
Counter top	13 S.F.	- - - -
Seal Patch	- - - -	94 S.F.

S.F. = Square Feet, L.F. = Linear Feet

Section 4

Section 4

4.0 *LABORATORY ANALYTICAL RESULTS*

This Section describes in detail the following types of sampling and laboratory analyses that were conducted during the project:

- Entrance/Exit Soil Sampling - to ensure that implementation of the remedy did not impact (i.e., contaminate) soil surrounding the areas of remedial activity;
- Confirmatory Soil Sampling - to ensure that the remedial goals for residential soil removal were achieved; and
- Perimeter Air Monitoring - to ensure that implementation of the remedy did not cause potential contaminants in air to migrate beyond the site boundaries.

All sampling and analysis was conducted in accordance with the Specifications, and IDM's Sampling and Analysis Plan. The Sampling and Analysis Plan described procedures and standards for the types and frequencies of samples to be collected, chain of custody and record keeping requirements, analytical compounds and laboratory methods, and laboratory QA/QC procedures.

All other sampling and analysis conducted during the project related to the health and safety of workers, or to proper disposal methods for waste materials. These other types of sampling and analysis are described in sufficient detail elsewhere in this Report, were conducted in accordance with the Specifications and IDM's Sampling and Analysis Plan, and are located in the project file.

4.1 *ENTRANCE/EXIT SOIL SAMPLING PROGRAM*

An entrance and exit soil sampling program was implemented at both sites, to document that the remedial activities did not spread contamination. Entrance and exit samples were collected as described

below, and analyzed at a New York State Department of Health (NYSDOH) ELAP CLP-certified laboratory, in accordance with NYSDOH ASP 1991 protocols. One matrix spike/matrix spike duplicate/ matrix spike blank analysis was conducted for every 20 field samples. In addition, one field duplicate and one field rinsate blank were collected and analyzed for every 10 field samples. Results of all QA/QC sample analyses are located in the project file.

During mobilization, entrance surface soil samples were collected at locations that were in proximity to the remedial activities, but that were not expected to be impacted by the remedial activities. Samples were collected from six locations at each site, and analyzed for arsenic, chromium, and lead, to establish the concentrations of these site contaminants of concern in the surrounding surface soils prior to the work.

When all work involving handling of contaminated materials had been completed, exit samples were collected at the same locations from which the entrance samples had been collected. Exit samples were analyzed for arsenic, chromium, and lead, and compared to both the site cleanup levels, and the entrance samples, to determine whether contamination had been spread by the remedial activities.

Table 4-1 presents a summary of the analytical results of all entrance and exit soil samples at both Plants. Laboratory data sheets (Form 1s) of entrance and exit samples are included in Appendix A to this Report.

4.1.1 *Plant No. 1 Entrance and Exit Sampling Results*

Figure 4-1 identifies the locations of all entrance and exit samples collected at the Plant No. 1 site. The entrance soil samples collected around the Plant No. 1 site are also shown on the Record Drawings in Appendix E.

As identified in Table 4-1, four entrance samples exceeded site remedial goals. However, three of these samples were located in areas where soil was scheduled to be remediated as part of the final remedy. Therefore, no action was taken under this Contract to address these areas. Entrance sample location VS1-002 was incorporated into the soil remediation scope of this Project described in Section 3.7.1.

IDM failed to implement the perimeter air monitoring program correctly, as described in more detail in Section 4.3, resulting in a time period of several weeks where there is no documentation regarding potential migration of airborne contaminants from the site. For this reason NYSDEC required that in addition to the six exit samples specified to be collected from around the Plant No. 1 site, additional exit samples were to be collected, so that one exit sample would be collected from each of the residential properties adjacent to the site. All exit samples were analyzed for arsenic, chromium , and lead. A total of fourteen (14) exit samples were collected from the Plant No. 1 site.

As identified in Table 4-1, exit samples from five locations exceeded site remedial goals. Exit samples from three of these five locations (VS1-044, 045, and 049) were to be addressed as part of the final remedy. The analytical results of these three samples were determined to be beyond what fugitive dust emissions from the Contractor's activities would have caused. Exit samples from the other two of these five locations (VS1-046 and VS1-047) exceeded the site remedial goals, and IDM was directed to remediate the surface soil in these two areas as described in Section 3.7.1.

4.1.2 *Plant No. 2 Entrance and Exit Sampling Results*

Figure 4-2 identifies the locations of all entrance and exit samples collected at the Plant No. 2 site. As identified in Table 4-1, two entrance samples (VS2-002 and VS2-005) exceeded site remedial goals. However, site-wide

soil remediation was scheduled to be addressed as part of the final remedy. Therefore, no action was taken under this Contract to address these contaminated soil areas.

Because IDM failed to implement the perimeter air monitoring program correctly, as described in more detail in Section 4.3, NYSDEC required that additional exit samples were to be collected. In addition to the six exit samples specified to be collected from around the Plant No. 2 site, two additional exit samples were required to be collected on the site near the western site boundary, which adjoins several residences. All exit samples were analyzed for arsenic, chromium , and lead. A total of eight (8) exit samples were collected from the Plant No. 2 site.

As identified in Table 4-1, exit samples from five of these eight locations (VS1-051, VS1-052, VS1-053, VS1-055, and VS2-065) exceeded site remedial goals, but were not addressed since soil remediation was scheduled to occur as part of the final remedy.

4.2 *CONFIRMATORY SOIL SAMPLING PROGRAM*

Confirmatory soil sampling was performed to ensure that all residential soil with chromium concentrations greater than the site remedial goal of 50 mg/kg were properly removed. Based on prior investigations, chromium was identified to be the primary indicator of contamination in surface soils at the site. Further, chromium contaminated soil encompassed all areas that were also contaminated with arsenic or lead. Therefore, the analysis of confirmatory samples for chromium only was determined by NYSDEC to also be protective for soils potentially contaminated with arsenic or lead.

All sampling was performed prior to the commencement of excavation activities, to minimize the time of disturbance on each residential

property. Soil samples were collected as described below, and analyzed at a New York State Department of Health (NYSDOH) ELAP CLP-certified laboratory, in accordance with NYSDOH ASP 1991 protocols. One matrix spike/matrix spike duplicate/ matrix spike blank analysis was conducted for every 20 field samples. In addition, one field duplicate and one field rinsate blank were collected and analyzed for every 10 field samples.

The results of selected laboratory analytical data were validated by ERM. Results of all QA/QC sample analyses, and ERM's data validation reports, are located in the project file.

The Record Drawings in Appendix E identify the location of all confirmatory samples. Table 4-2 presents a summary of the analytical results of all confirmatory soil samples collected prior to the exit sampling program. Laboratory data sheets (Form 1s) of confirmatory soil samples are included in Appendix B to this Report.

The results of the sample analyses required that the limits of excavation be extended three times, until all soil analytical results indicated that samples collected at the boundary of the excavation limits contained less than 50 mg/kg of chromium. The excavation limits were extended horizontally and/or vertically as dictated by the analytical results. In general, excavation was not performed beneath concrete sidewalks, concrete driveways, or paved roads, except for the concrete sidewalk in front of the 310 Penn Avenue residence.

In locations along Penn Avenue and along Vine Street where soil samples exceeded remedial goals, the limits of excavation were extended to the road curb (i.e., the paved road was not excavated), as shown on the Record Drawings in Appendix E. At two locations on residential property (samples VS1-SS-RES-42 and VS1-SS-RES-043), samples exceeded remedial goals, and the soil excavation limits were extended to North Fourth Street.

Following the complete delineation of the required excavation limits, IDM was allowed to commence with the soil removal activities as described in Section 3.7.1.

As described in Sections 3.7.1 and 4.1.1, additional soil was required to be excavated from residential property adjacent to Plant 1, based on unsatisfactory exit sample analytical results. Confirmatory sample analytical results for this additional soil remediation are presented on an 8-1/2" X 11" Figure in Appendix E. At the completion of the project, remedial goals were met for all residential soil.

4.3 *PERIMETER AIR MONITORING*

This Section describes the results of the Perimeter Air Monitoring Program, which was conducted to ensure that implementation of the remedy did not cause potential contaminants in air to migrate beyond the site boundaries. The air monitoring program is described in more detail in Section 3.2.3, and consisted of real-time monitoring for respirable particulates, and documentation sampling. The documentation samples were collected at the site, and then sent to an analytical laboratory for arsenic, chromium, lead, and respirable particulate analyses.

Generally, all perimeter air monitoring results were satisfactory. The action level for real-time particulate monitoring was never exceeded. Documentation sample analytical results were within acceptable concentrations. The results of all perimeter documentation samples are summarized on Table 4-3, attached at the end of this Section.

All required air monitoring was implemented from Monday, January 30, 1995 until completion of the project. However, the remainder of this Section describes significant air monitoring non-compliances by IDM,

which occurred during the project from mobilization through Friday, January 27, 1995.

4.3.1 *Air Monitoring Non-Compliances*

Through January 27, 1995, 101 total days of work occurred at the Plant No. 1 site. During that period of times, various types of air monitoring were required during 50 days. The required air monitoring, and the actual program implemented by IDM, consisted of the following:

- Asbestos air monitoring in the work zone was required during 50 days. IDM conducted the required air monitoring during all 50 days;
- Real-time dust monitoring in the work zone was required during 47 days. IDM did not conduct any real-time dust monitoring in the work zone, therefore, 47 days of required data was not collected;
- Real-time dust monitoring at the site perimeter was required during 47 days. IDM conducted the required monitoring during 25 days, therefore, 22 days of required data was not collected; and
- Documentation sampling at the site perimeter was required during all 50 days. IDM did not conduct any documentation sampling, therefore, 50 days of required data was not collected.

Similarly, through January 23, 1995 (work was substantially complete at Plant 2 on January 23, 1995), 77 total days of work had been performed at the Plant No. 2 site. During that period of time, various types of air monitoring were required during 41 days. The required air monitoring, and the actual program implemented by IDM, consisted of the following:

- Asbestos air monitoring in the work zone was required during 13 days. IDM conducted the required air monitoring during all 13 days;
- Real-time dust monitoring in the work zone was required during 41 days. IDM did not conduct any real-time dust monitoring in the work zone, therefore, 41 days of required data was not collected;

- Real-time dust monitoring at the site perimeter was required during 41 days. IDM conducted the required monitoring during 30 days, therefore, 11 days of required data was not collected; and

- Documentation sampling at the site perimeter was required during 41 days. IDM did not conduct any documentation sampling, therefore, 41 days of required data was not collected.

Detailed discussions of these air monitoring non-compliances are presented in the following project correspondence, copies of which are located in the project file:

- February 2, 1995 letter from George Harris, P.E. (NYSDEC) to Andris Ledins, P.E., (ERM);

- February 7, 1995 letter from Andris Ledins, P.E. (ERM) to George Harris, P.E. (NYSDEC);

- February 10, 1995 letter from George Harris, P.E. (NYSDEC) to Andris Ledins, P.E., (ERM);

- February 22, 1995 letter from Andris Ledins, P.E. (ERM) to George Harris, P.E. (NYSDEC); and

- February 28, 1995 letter from Michael Cruden, P.E. (NYSDEC) to Michael Rivara (NYSDOH).

Based on discussions with IDM subsequent to the discovery of these non-compliances, IDM believed that the Health and Safety Plan was being properly implemented for the following reasons:

- The Specifications required real-time perimeter dust monitoring to be conducted during all excavation activities. IDM did not conduct this monitoring during loading of soil stockpiles into trucks, since IDM did not believe that excavation was occurring. However, this interpretation by IDM was incorrect, since the intent of the Specifications was that this monitoring was required during any earth disturbance activities.

- The Specifications required real-time perimeter dust monitoring to be conducted during all demolition activities. IDM did not conduct this monitoring during removal of the roofs at both Plants, since the roofs contained asbestos and IDM was monitoring for asbestos. However,

this interpretation by IDM was incorrect, since the roof removal work involved both asbestos removal and demolition. The nature of the roof removal work created the opportunity for dust emissions to occur, and therefore, monitoring for dust should have been conducted.

- IDM did not conduct any real-time dust monitoring in the work zone, since they believed that the perimeter monitoring program provided acceptable coverage. This interpretation by IDM conflicts with the Specifications, which require real-time monitoring in the work zone during all demolition and excavation activities. The real-time dust monitoring in the work zone is used to determine proper levels of worker respiratory protection, and to determine whether engineering controls in the work zone are required.

- IDM did not conduct any documentation sampling. A partial reason offered by IDM was that they interpreted the Specifications differently than did NYSDEC, ERM, and NYSDOH. The Specifications state that "*Documentation samples shall be collected twice a day at regularly scheduled intervals or at the initiation of a new phase of on-site Work.*" The intent of this clause is that 1) documentation samples shall be collected twice a day, and 2) during each day, the samples shall be collected either at regularly-scheduled intervals (e.g., 12 noon and 4 p.m.) or when new activities are occurring, such as the start of drum removal activities. IDM incorrectly interpreted the clause to mean that samples had to be collected twice each day, but only on those days when new activities occurred.

Following discovery of the described non-compliances, the following measures were required of IDM, over and above the requirements of the Specifications, for the remainder of the project:

- IDM's Health and Safety Officer was required to walk the site with ERM's Resident Engineer prior to the start of work each day. IDM was required to identify all monitoring equipment, monitoring locations, current meteorological data (to justify monitoring locations), and proof of any required calibration for all monitoring instruments.

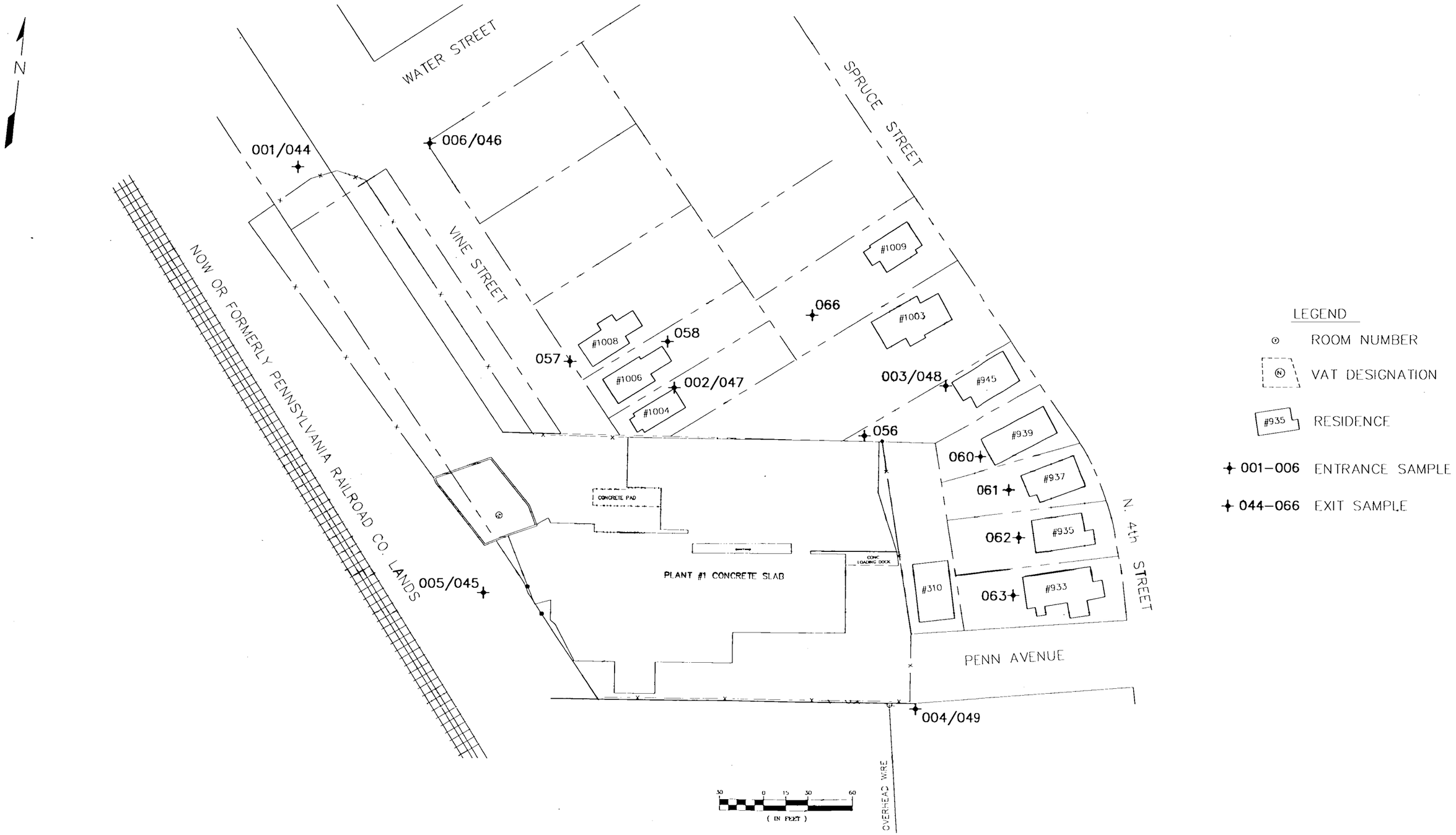
- Prior to the start of work each day, IDM was required to submit real-time dust monitoring results from the previous day. The results also had to be reviewed and approved by ERM's Resident Engineer, and all discrepancies or exceedances resolved, prior to start of work.

- At the scheduled time for the second round of documentation samples each day, IDM's Health and Safety Officer and ERM's Resident

Engineer again walked the site perimeter and agreed on the monitoring locations and equipment.

- At the end of each phase of work, the Resident Engineer was required to be present to select the documentation samples that would be sent off-site for laboratory analysis. In addition, at the end of each work day, IDM was required to demonstrate that all selected documentation samples were properly prepared and enclosed in a shipping package.

In the absence of usable data to document that surrounding properties were not impacted by the work activities, NYSDEC required that IDM collect additional exit samples for this purpose, as described in Sections 3.2.3 and 4.1. In addition, NYSDEC required that IDM replace the Site Safety Officer, Mr. Craig Rieman.



NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

VAN DER HORST BUILDING DEMOLITION AND DISPOSAL

ERM–Northeast
Environmental Resources Management

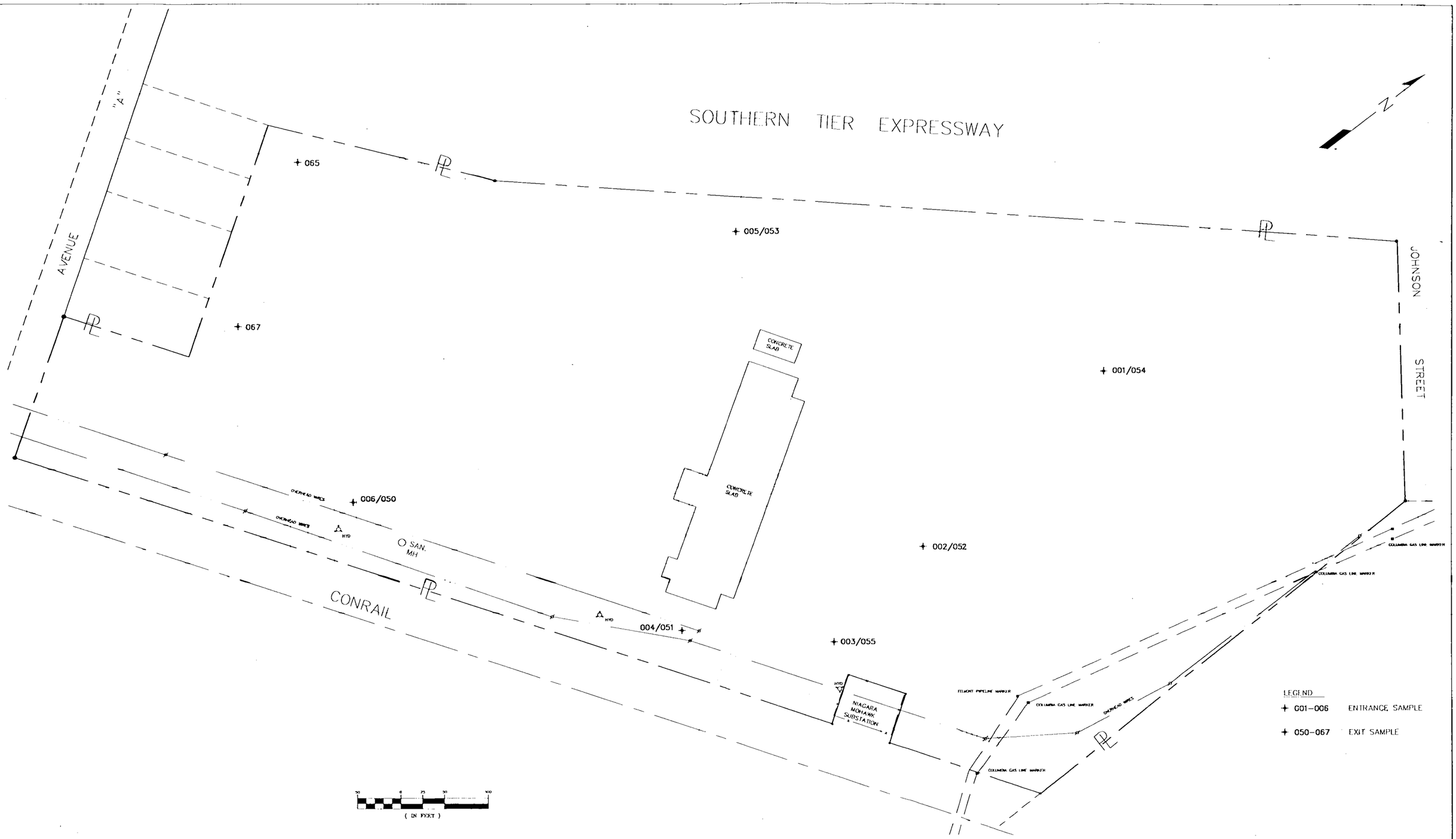
ERM

CHECKED | DATE
DESIGN ENGINEER
PROJECT ENGINEER
PROJECT MANAGER
APPROVED
APPROVED

ENTRANCE/EXIT SAMPLE LOCATIONS PLANT 1

DRAWING NO. 4–1

DRAWN	DATE	REVISION DATE	REV. NO.
M.L.M.\S.P.	MAR. 31, 1997		
SCALE	JOB NO.	FILE NAME	SHEET OF
GRAPHIC	164.013.26	CGR4–1	



NO	DATE	APPR	REVISION	NO	DATE	APPR	REVISION

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

VAN DER HORST BUILDING DEMOLITION AND DISPOSAL

ERM–Northeast
Environmental Resources Management

ERM

CHECKED	
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DATE

ENTRANCE/EXIT SAMPLE LOCATIONS PLANT 2

DRAWN: M.L.M./S.P.	DATE: MAR. 31, 1997	REVISION DATE:	DRAWING NO: 4-2
SCALE: GRAPHIC	JOB NO: 164.013.26	FILE NAME: CCR4-2	REV. NO: SHEET OF

Table 4-1

Analytical Results of Entrance/Exit Samples
Van Der Horst Building Demolition and Disposal

PLANT 1							
Sample Description		**Total Chromium**		**Total Lead**		**Total Arsenic**	
Entrance	Exit	Entrance	Exit	Entrance	Exit	Entrance	Exit
VS1-001	VS1-044	**125.0**	**269.0**	142.0	213.0	16.8	16.3
VS1-002	VS1-047	**89.5**	**106.0**	496.0	**624.0**	24.7	22.7
VS1-003	VS1-048	43.8	22.3	296.0	102.0	29.6	11.7
VS1-004	VS1-049	**86.7**	**89.2**	67.4	89.7	13.0	12.7
VS1-005	VS1-045	**655.0**	**5,110.0**	**3,930.0**	**7,190.0**	**52.7**	30.6
VS1-006	VS1-046	16.9	**62.1**	64.0	228.0	11.7	25.0
---	VS1-056	---	15.8	---	78.8	---	10.1
---	VS1-057	---	14.2	---	79.4	---	10.2
---	VS1-058	---	44.7	---	413.0	---	20.3
---	VS1-060	---	15.6	---	82.2	---	10.5
---	VS1-061	---	16.2	---	98.8	---	10.8
---	VS1-062	---	15.9	---	75.6	---	10.8
---	VS2-063	---	12.9	---	83.0	---	10.4
---	VS1-066	---	12.1	---	67.7	---	8.6

PLANT 2							
Sample Description		**Total Chromium**		**Total Lead**		**Total Arsenic**	
Entrance	Exit	Entrance	Exit	Entrance	Exit	Entrance	Exit
VS2-001	VS1-054	16.3	17.4	37.9	161.0	15.3	22.2
VS2-002	VS1-052	**124.0**	**113.0**	104.0	108.0	**36.9**	29.5
VS2-003	VS1-055	40.1	**63.5**	39.6	59.9	29.5	22.5
VS2-004	VS1-051	37.8	44.1	45.3	61.0	31.7	**54.2**
VS2-005	VS1-053	**608.0**	**363.0**	**4,090.0**	147.0	23.8	12.4
VS2-006	VS1-050	14.8	18.1	68.1	30.3	7.9	8.7
---	VS2-065	---	31.0	---	**557.0**	---	17.0
---	VS2-067	---	20.7	---	72.8	---	14.8

NOTES:
1. All results are reported in mg/kg (ppm).
2. All results in bold exceed site remedial goals.
3. Site remedial goals are: chromium< 50 mg/kg, lead<500 mg/kg, arsenic<35 mg/kg.

Table 4-2

Analytical Results of Confirmatory Samples
Van Der Horst Building Demolition and Disposal

VS1-SS-RES SAMPLES				
Sample Designation	Chromium Conc. (mg/kg)	Collection Depth (inches)	Analytical Round	Comments
RES-001	16.4	0-2	1	
RES-002	120.0	0-2	1	
RES-003	47.2	0-2	1	
RES-004	246.0	0-2	1	
RES-005	185.0	0-2	1	
RES-006	115.0	0-2	1	
RES-007	68.7	0-2	1	
RES-008	73.4	0-2	1	Duplicate of RES-007
RES-009	415.0	0-2	1	
RES-010	150.0	0-2	1	
RES-011	285.0	0-2	1	
RES-012	6.7	- - -	1	Field Blank
RES-013	81.8	0-2	1	
RES-014	91.3	0-2	1	
RES-015	63.3	0-2	1	
RES-016	39.3	0-2	1	
RES-017	47.2	0-2	1	
RES-018	36.1	6-7	1	
RES-019	66.4	6-7	1	
RES-020	46.2	6-7	1	
RES-021	127.0	6-7	1	
RES-022	98.1	6-7	1	
RES-023	117.0	6-7	1	Duplicate of RES-022
RES-031	67.5	0-2	2	
RES-032	95.9	0-2	2	
RES-033	182.0	0-2	2	
RES-034	51.0	0-2	2	
RES-035	120.0	0-2	2	
RES-036	48.8	0-2	3	
RES-037	6.8	- - -	3	Field Blank
RES-038	45.1	0-2	3	
RES-039	46.3	0-2	3	
RES-040	40.0	0-2	3	
RES-041	46.8	0-2	3	
RES-042	89.5	6-7	3	
RES-043	61.7	0-2	3	
RES-044	46.1	0-2	3	
RES-045	37.9	0-2	3	
RES-046	46.7	6-7	3	Duplicate of RES-041
RES-047	6.7	- - -	3	Field Blank

Table 4-2 (Continued)

Analytical Results of Confirmatory Samples
Van Der Horst Building Demolition and Disposal

VS1-SS-SSU SAMPLES				
Sample Designation	Chromium Conc. (mg/kg)	Collection **Depth** (inches)	**Analytical Round**	**Comments**
SSU-002	31.5	12-13	3	
SSU-004	44.8	12-13	3	
SSU-005	**51.3**	12-13	2	
SSU-006	42.5	12-13	2	Duplicate of SSU-005
SSU-011	22.9	18-19	3	
SSU-014	9.8	- - -	2	Field Blank
SSU-015	29.7	6-7	3	
SSU-016	**55.2**	6-7	2	
SSU-017	**65.1**	6-7	2	Duplicate of SSU-016
SSU-018	**118.0**	6-7	2	
SSU-019	49.9	6-7	3	
SSU-024	**52.6**	6-7	3	
SSU-025	40.6	6-7	3	
SSU-026	34.4	12-13	3	
SSU-028	**148.0**	12-13	3	
SSU-029	31.4	6-7	3	
SSU-030	33.0	18-19	3	

NOTES:
1. All results in **bold** exceed the site chromium remedial goal of 50 mg/kg.
2. The prefix "VS1-SS-" was used in the field for all samples, but is not identified above for clarity.

Table 4-3

Results of Site Perimeter Documentation Samples
Van Der Horst Building Demolition and Disposal

Date	Sample Designation	Total Particulates (mg/m^3)	Arsenic (ug/m^3)	Chromium (ug/m^3)	Lead (ug/m^3)
1/30/95	2	- - -	BDL	BDL	BDL
	3	- - -	BDL	BDL	BDL
	4	- - -	BDL	BDL	BDL
1/31/95	5	- - -	BDL	BDL	BDL
	6	- - -	BDL	BDL	BDL
	8	- - -	BDL	BDL	BDL
	9	- - -	BDL	BDL	BDL
	11	- - -	BDL	BDL	BDL
	12	- - -	BDL	BDL	BDL
2/1/95	13	- - -	BDL	BDL	BDL
	14	- - -	BDL	BDL	BDL
	16	- - -	BDL	BDL	BDL
	17	- - -	BDL	BDL	BDL
	19	- - -	BDL	BDL	BDL
	20	- - -	BDL	BDL	BDL
2/2/95	21	0.02	BDL	BDL	BDL
	23	0.04	BDL	BDL	BDL
	24	0.05	BDL	BDL	BDL
	25	0.02	BDL	BDL	BDL
	26	0.04	BDL	BDL	BDL
	27	0.02	BDL	BDL	BDL
2/3/95	29	0.04	BDL	BDL	BDL
	30	0.08	BDL	BDL	BDL
	31	0.03	BDL	BDL	BDL
2/6/95	33	0.02	BDL	BDL	BDL
	35	0.01	BDL	BDL	BDL
	36	0.04	BDL	BDL	BDL
	37	0.02	BDL	BDL	BDL
	39	0.02	BDL	BDL	BDL
	40	0.02	BDL	BDL	BDL
2/7/95	41	0.01	BDL	BDL	BDL
	43	0.03	BDL	BDL	BDL
	44	0.03	BDL	BDL	BDL
	45	0.02	BDL	BDL	BDL
	46	0.01	BDL	BDL	BDL
	48	0.03	BDL	BDL	BDL
2/8/95	49	0.02	BDL	BDL	BDL
	50	0.06	BDL	BDL	BDL
	52	0.02	BDL	BDL	BDL

Table 4-3

Results of Site Perimeter Documentation Samples
Van Der Horst Building Demolition and Disposal

Date	Sample Designation	Total Particulates (mg/m^3)	Arsenic (ug/m^3)	Chromium (ug/m^3)	Lead (ug/m^3)
2/8/95	53	0.02	BDL	BDL	BDL
	55	0.01	BDL	BDL	BDL
	56	0.04	BDL	BDL	BDL
2/9/95	57	0.02	BDL	BDL	BDL
	58	0.02	BDL	BDL	BDL
	59	0.02	BDL	BDL	BDL
	61	0.02	BDL	BDL	BDL
	63	0.10	BDL	BDL	BDL
	64	0.02	BDL	BDL	BDL
2/10/95	65	1.02	BDL	BDL	BDL
	66	0.04	BDL	BDL	BDL
	67	0.05	BDL	BDL	BDL
2/13/95	69	---	BDL	BDL	BDL
	71	---	BDL	BDL	BDL
	72	---	BDL	BDL	BDL
	73	---	BDL	BDL	BDL
	75	---	BDL	BDL	BDL
	76	---	BDL	BDL	BDL
2/14/95	77	0.13	---	---	---
	79	0.15	---	---	---
	80	0.09	---	---	---
	81	---	BDL	BDL	BDL
	83	---	BDL	BDL	BDL
	84	---	BDL	BDL	BDL
	85	---	BDL	BDL	BDL
	87	---	BDL	3.18	BDL
	88	---	BDL	1.45	BDL
	89	0.07	---	---	---
	91	0.12	---	---	---
	92	0.11	---	---	---
2/15/95	94	0.09	---	---	---
	95	0.14	---	---	---
	96	0.08	---	---	---
	98	---	BDL	3.50	BDL
	99	---	BDL	1.73	BDL
	100	---	BDL	1.59	BDL
	101	0.09	---	---	---
	103	0.08	---	---	---
	104	0.17	---	---	---

Table 4-3

Results of Site Perimeter Documentation Samples
Van Der Horst Building Demolition and Disposal

Date	Sample Designation	Total Particulates (mg/m^3)	Arsenic (ug/m^3)	Chromium (ug/m^3)	Lead (ug/m^3)
2/15/95	105	---	BDL	3.68	BDL
	107	---	BDL	4.44	BDL
	108	---	BDL	6.02	BDL
2/16/95	109	0.15	---	---	---
	111	0.07	---	---	---
	112	0.08	---	---	---
	113	---	BDL	2.46	BDL
	115	---	BDL	1.64	BDL
	116	---	BDL	2.81	BDL
	117	0.02	---	---	---
	118	0.02	---	---	---
	120	0.03	---	---	---
	121	---	BDL	2.81	BDL
	122	---	BDL	2.60	BDL
	124	---	BDL	2.90	BDL
2/17/95	125	0.02	---	---	---
	126	0.02	---	---	---
	127	0.10	---	---	---
	129	---	BDL	BDL	BDL
	130	---	BDL	BDL	BDL
	131	---	BDL	BDL	BDL
2/20/95	133	0.09	BDL	BDL	BDL
	134	0.05	BDL	BDL	BDL
	135	0.05	0.51	BDL	BDL
	141	0.02	BDL	BDL	BDL
	143	0.02	BDL	BDL	BDL
	144	0.02	BDL	BDL	BDL
2/21/95	149	BDL	BDL	BDL	BDL
	151	0.01	BDL	BDL	BDL
	152	0.02	BDL	BDL	BDL
	157	0.02	BDL	BDL	BDL
	159	0.01	BDL	BDL	BDL
	160	0.02	BDL	BDL	BDL
2/22/95	161	BDL	BDL	BDL	BDL
	162	0.02	BDL	BDL	BDL
	163	0.02	BDL	BDL	BDL
	165	BDL	BDL	BDL	BDL
	167	0.03	BDL	BDL	BDL
	168	0.01	BDL	BDL	BDL

Table 4-3

Results of Site Perimeter Documentation Samples
Van Der Horst Building Demolition and Disposal

Date	Sample Designation	Total Particulates (mg/m^3)	Arsenic (ug/m^3)	Chromium (ug/m^3)	Lead (ug/m^3)
2/23/95	169	0.07	BDL	BDL	BDL
	171	0.07	BDL	BDL	BDL
	172	0.12	BDL	BDL	BDL
	174	0.14	BDL	BDL	BDL
	175	0.02	BDL	BDL	BDL
	176	0.08	BDL	BDL	BDL
2/27/95	177	0.01	BDL	BDL	BDL
	179	0.05	BDL	BDL	BDL
	180	0.04	BDL	BDL	BDL
2/28/95	181	BDL	BDL	BDL	BDL
	183	BDL	BDL	BDL	BDL
	184	BDL	BDL	BDL	BDL
	185	BDL	BDL	BDL	BDL
	186	BDL	BDL	BDL	BDL
	188	BDL	BDL	BDL	BDL
	189	BDL	BDL	BDL	BDL
2/28/95	191	BDL	BDL	BDL	BDL
	192	BDL	BDL	BDL	BDL
	193	0.01	BDL	BDL	BDL
	195	BDL	BDL	BDL	BDL
	196	BDL	BDL	BDL	BDL
3/1/95	197	BDL	BDL	BDL	BDL
	199	0.03	BDL	BDL	BDL
	200	BDL	BDL	BDL	BDL
	201	0.01	BDL	BDL	BDL
	202	BDL	BDL	BDL	BDL
	203	BDL	BDL	BDL	BDL
3/2/95	205	0.05	BDL	BDL	BDL
	207	BDL	BDL	BDL	BDL
	208	BDL	BDL	BDL	BDL
	209	0.01	BDL	BDL	BDL
	210	BDL	BDL	BDL	BDL
	211	BDL	BDL	BDL	BDL
3/3/95	213	0.04	BDL	BDL	BDL
	215	0.05	BDL	BDL	BDL
	216	BDL	BDL	BDL	BDL
3/7/95	218	2.14	BDL	BDL	BDL
	219	0.08	BDL	1.55	BDL
	221	0.11	BDL	BDL	BDL

Table 4-3

Results of Site Perimeter Documentation Samples
Van Der Horst Building Demolition and Disposal

Date	Sample Designation	Total Particulates (mg/m^3)	Arsenic (ug/m^3)	Chromium (ug/m^3)	Lead (ug/m^3)
3/8/95	222	0.05	BDL	BDL	BDL
	224	0.13	BDL	BDL	BDL
	225	BDL	BDL	1.20	BDL
	226	BDL	BDL	BDL	BDL
	228	0.02	BDL	BDL	BDL
	229	0.05	BDL	2.40	13.20
3/9/95	230	0.03	BDL	0.80	4.73
	232	0.02	BDL	1.64	9.67
	233	0.01	BDL	1.01	BDL
3/10/95	234	0.02	BDL	BDL	BDL
	235	0.05	BDL	1.44	BDL
	236	0.11	BDL	BDL	BDL
3/13/95	238	0.05	BDL	1.10	BDL
	240	0.11	BDL	BDL	BDL
	241	0.03	BDL	BDL	BDL
3/14/95	242	0.05	BDL	BDL	BDL
	243	0.04	BDL	BDL	BDL
	244	0.07	BDL	BDL	BDL
3/21/95	246	0.02	BDL	BDL	5.40
	248	0.03	BDL	BDL	6.10
	249	BDL	BDL	BDL	7.20

Notes: 1. BDL = Below Detection Limit
2. The Prefix "1-CA-" was omitted from each sample designation on this table.

Section 5

5.0 SUMMARY

The purpose of this Report was to document that the Building Demolition and Disposal Contract for the Van Der Horst Plant No. 1 and Plant No. 2 sites (NYSDEC Site Nos. 9-05-008 and 9-05-022) located in Olean, New York was implemented in accordance with the New York State Department of Environmental Conservation (NYSDEC) Contract Documents, as enumerated in Section 1.0 of this Report. This Report has been prepared by a Professional Engineer licensed to practice in the state of New York. A certification statement signed by the ERM Project Manager and the ERM Project Director is included as part of this Section.

5.1 SUMMARY OF WORK PERFORMED

During the demolition and disposal project, approximately 2,917 tons of debris, 118 tons of asbestos-containing debris, 1,676 tons of soil and drill cuttings, and 10,700 gallons of wastewater were removed from the site and disposed of at off-site permitted disposal facilities. Both sites were restored to safe conditions until subsequent phases of work could be implemented. The residential properties adjacent to the Plant No. 1 site were restored to original condition, or conditions satisfactory to the property owners.

5.2 STATUS OF SITES AT CONTRACT CLOSURE

At the time of Substantial Completion on July 11, 1995, both sites were cleared of the buildings and debris, and left in a condition that would enable efficient implementation of the final remedy described in Section 2.3 of this Report.

VAN DER HORST PLANT NO. 1 AND PLANT NO. 2 SITES
OLEAN, CATTARAUGUS COUNTY, NEW YORK
CONSTRUCTION CERTIFICATION

ERM provided construction inspection services for this project through April 3, 1995. ERM certifies that construction through April 3, 1995 was completed in accordance with the Contract Documents entitled "Building Demolition and Disposal, Van Der Horst Plant Nos. 1 and 2" and as described in this Certification Report, with the exception of any variations or non-compliances with the Contract Documents that are also described in this Certification Report.

Signature: _____

Robert J. Rivera, P.E.
Project Manager

Date: 6/5/97

Signature: _____

Andris H. Ledins, P.E.
Project Director

Date: 6.5.97

STATE OF NEW YORK · ANDRIS H. LEDINS · NO. 61747 · LICENSED PROFESSIONAL ENGINEER

A

APPENDIX A

Analytical Data Sheets for ***Entrance/Exit Samples***

APPENDIX A1

Plant 1 Entrance Sample ***Results***

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1001

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: [illegible] Case No.: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009101

Level (low/med): LOW Date Received: 10/13/94

% Solids 73.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.80			P
7440-47-3	Chromium	125.00		N	P
7439-92-1	Lead	142.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1002

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009102

Level (low/med): LOW Date Received: 10/13/94

% Solids 74.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	24.70			P
7440-47-3	Chromium	89.50		N	P
7439-92-1	Lead	496.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1003

Lab Name: Energy & Environ. Engr. Contract:
Lab Code: E3I Case No: SAS No.: SDG No.: VS1001
Matrix (soil/water): SOIL Lab Sample ID: 95009103
Level (low/med): LOW Date Received: 10/13/94
% Solids 78.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	29.60			F
7440-47-3	Chromium	43.80		N	P
7439-92-1	Lead	296.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:
Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1004

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009104

Level (low/med): LOW Date Received: 10/13/94

% Solids 81.3

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

CAS No.	Analyte	Concentration	C	Q	M
7439-92-1	Lead	67.40		N	F

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1005

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009105

Level (low/med): LOW Date Received: 10/13/94

% Solids 69.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	52.70			F
7440-47-3	Chromium	655.00		N	P
7439-92-1	Lead	3930.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1006

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009106

Level (low/med): LOW Date Received: 10/13/94

% Solids 80.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.70			F
7440-47-3	Chromium	16.90		N	P
7439-92-1	Lead	64.00		N	F

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

APPENDIX A2

Plant 1 Exit Sample Results

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC044

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-01 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 68.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.3			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	269		*	P
7439-92-1	Lead	213			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, WOOD

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC045

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-02-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-02 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 76.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	30.6			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	5110		*	P
7439-92-1	Lead	7190			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC046

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-03 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 71.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	25.0			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	62.1		*	P
7439-92-1	Lead	228			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, GRASS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC047

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-04 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 72.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.7			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	106		*	P
7439-92-1	Lead	624			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC048

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-05 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 80.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.7			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	22.3		*	P
7439-92-1	Lead	102			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:
ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC049

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-06 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 87.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.7			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	89.2		*	P
7439-92-1	Lead	89.7			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, WOOD

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC056

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-02-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-13 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 82.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.1			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	15.8		*	P
7439-92-1	Lead	78.8			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, PINE NEEDLES

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC57

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-01 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 87.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.2			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	14.2			P
7439-92-1	Lead	79.4		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC58

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-02 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 74.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	20.3			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	44.7			P
7439-92-1	Lead	413		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BLACK Clarity Before: Texture: FINE

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC60

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-02-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-04 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 86.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	15.6			P
7439-92-1	Lead	82.2		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC61

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-05 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 86.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.8			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	16.2			P
7439-92-1	Lead	98.8		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS

1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC62

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-06 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 80.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.8			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	15.9			P
7439-92-1	Lead	75.6		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS2SSWC63

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-07 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 83.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.4			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	12.9			P
7439-92-1	Lead	83.0		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts:

Comments:

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC066

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC066

Matrix (soil/water): SOIL Lab Sample ID: S504007-01 S

Level (low/med): LOW Date Received: 04/04/95

% Solids: 95.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.6			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	12.1			P
7439-92-1	Lead	67.7			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

APPENDIX A3

Plant 2 Entrance Sample ***Results***

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE No.

VS2001

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009107

Level (low/med): LOW Date Received: 10/13/94

% Solids 79.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.30			F
7440-47-3	Chromium	16.30		N	P
7439-92-1	Lead	37.90		N	F

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS2002

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009108

Level (low/med): LOW Date Received: 10/13/94

% Solids 68.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	36.90			F
7440-47-3	Chromium	124.00		N	P
7439-92-1	Lead	104.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS2003

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009109

Level (low/med): LOW Date Received: 10/13/94

% Solids 76.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	29.50			F
7440-47-3	Chromium	40.10		N	P
7439-92-1	Lead	39.60		N	F

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS2004

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009110

Level (low/med): LOW Date Received: 10/13/94

% Solids 84.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	31.70			F
7440-47-3	Chromium	37.80		N	P
7439-92-1	Lead	45.30		N	F

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS2005

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009111

Level (low/med): LOW Date Received: 10/13/94

% Solids 84.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	23.80			F
7440-47-3	Chromium	608.00		N	P
7439-92-1	Lead	4090.00		N	P

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS2006

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1001

Matrix (soil/water): SOIL Lab Sample ID: 95009112

Level (low/med): LOW Date Received: 10/13/94

% Solids 89.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.90			F
7440-47-3	Chromium	14.80		N	P
7439-92-1	Lead	68.10		N	F

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

APPENDIX A4

Plant 2 Exit Sample Results

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC050

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-07 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 87.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.7			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	18.1		*	P
7439-92-1	Lead	30.3			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, GRASS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC051

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-08 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 76.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	54.2			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	44.1		*	P
7439-92-1	Lead	61.0			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
I

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC052

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-09 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 67.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	29.5			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	113		*	P
7439-92-1	Lead	108			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES, ROOTS, GRASS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC053

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-10 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 77.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.4			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	363		*	P
7439-92-1	Lead	147			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC054

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-11 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 59.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.2			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	17.4		*	P
7439-92-1	Lead	161			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSWC055

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VDerH SAS No.: SDG No.: WC044

Matrix (soil/water): SOIL Lab Sample ID: S503149-12 S

Level (low/med): LOW Date Received: 03/28/95

% Solids: 77.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.5			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	63.5		*	P
7439-92-1	Lead	59.9			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS2SSWC65

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-02-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC57

Matrix (soil/water): SOIL Lab Sample ID: S503177-09 S

Level (low/med): LOW Date Received: 03/31/95

% Solids: 61.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	17.0			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	31.0			P
7439-92-1	Lead	557		N	P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS2SSWC067

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: VanDer SAS No.: SDG No.: WC066

Matrix (soil/water): SOIL Lab Sample ID: S504007-02 S

Level (low/med): LOW Date Received: 04/04/95

% Solids: 70.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.8			P
7440-39-3	Barium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium	20.7			P
7439-92-1	Lead	72.8			P
7439-97-6	Mercury				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

B

APPENDIX B

Analytical Data Sheets for Confirmatory Samples

APPENDIX B1

VS1-SS-RES Series Confirmatory Sample Results

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0001

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001201

Level (low/med): LOW Date Received: 10/04/94

% Solids 90.3

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	16.40		E	P

Color Before: GREY Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0002

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001202

Level (low/med): LOW Date Received: 10/04/94

% Solids 87.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	120.00		E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0003

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001203

Level (low/med): LOW Date Received: 10/04/94

% Solids 86.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	47.20		E	P

Color Before: YELLOW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0004

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001204

Level (low/med): LOW Date Received: 10/04/94

% Solids 73.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	246.00		E	P

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0005

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001205

Level (low/med): LOW Date Received: 10/04/94

% Solids 79.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	185.00		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0006

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001206

Level (low/med): LOW Date Received: 10/04/94

% Solids 68.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	115.00		E	P

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0007

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001207

Level (low/med): LOW Date Received: 10/04/94

% Solids 71.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	68.70		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0008

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001208

Level (low/med): LOW Date Received: 10/04/94

% Solids 71.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	73.40		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

DUPLICATE OF 0007

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0009

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001209

Level (low/med): LOW Date Received: 10/04/94

% Solids 67.3

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	415.00		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0010

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001210

Level (low/med): LOW Date Received: 10/04/94

% Solids 70.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	150.00		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0011

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001211

Level (low/med): LOW Date Received: 10/04/94

% Solids 70.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	285.00		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0012

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): WATER Lab Sample ID: 95001212

Level (low/med): LOW Date Received: 10/04/94

% Solids 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.70	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

FIELD BLANK

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
0013

Lab Name: Energy & Environ. Engr. Contract:
Lab Code: E3I Case No: SAS No.: SDG No.: 0001
Matrix (soil/water): SOIL Lab Sample ID: 95001213
Level (low/med): LOW Date Received: 10/04/94
% Solids 70.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	81.80		E	P

Color Before: GREY Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:
Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0014

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001214

Level (low/med): LOW Date Received: 10/04/94

% Solids 78.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	91.30		E	P

Color Before: BLACK Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0015

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001215

Level (low/med): LOW Date Received: 10/04/94

% Solids 73.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	63.30		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
0016

Lab Name: Energy & Environ. Engr. Contract:
Lab Code: E3I Case No: SAS No.: SDG No.: 0001
Matrix (soil/water): SOIL Lab Sample ID: 95001216
Level (low/med): LOW Date Received: 10/04/94
% Solids 74.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	39.30		E	P

Color Before: YELLOW Clarity Before: Texture: MEDIUM
Color After: YELLOW Clarity After: Artifacts:
Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0017

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001217

Level (low/med): LOW Date Received: 10/04/94

% Solids 79.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	47.20		E	P

Color Before: YELLOW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
0018

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001218

Level (low/med): LOW Date Received: 10/04/94

% Solids 80.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	36.10		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0019

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001219

Level (low/med): LOW Date Received: 10/04/94

% Solids 77.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	66.40		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0020

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001220

Level (low/med): LOW Date Received: 10/04/94

% Solids 84.5

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	46.20		E	P

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0021

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001221

Level (low/med): LOW Date Received: 10/04/94

% Solids 80.7

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	127.00		E	P

Color Before: YELLOW Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0022

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001222

Level (low/med): LOW Date Received: 10/04/94

% Solids 77.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	98.10		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

0023

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: 0001

Matrix (soil/water): SOIL Lab Sample ID: 95001223

Level (low/med): LOW Date Received: 10/04/94

% Solids 77.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	117.00		E	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

DUPLICATE OF 0022

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1031

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011311

% Solids 82.6 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	67.50		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1032

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011312

% Solids 82.4 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	95.90		N	P

Color Before: YELLOW Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1033

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011313

% Solids 67.0 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	182.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1034

Lab Name: Energy & Environ. Engr. Contract:
Lab Code: E3I Case No: SAS No.: SDG No.: VS1002
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids 76.3
Lab Sample ID: 95011314
Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	51.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE
Color After: YELLOW Clarity After: Artifacts:
Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1035

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL Lab Sample ID: 95011315

Level (low/med): LOW Date Received: 10/14/94

% Solids 77.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	120.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1036

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011316

% Solids 87.4 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	48.80		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1037

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): WATER Lab Sample ID: 95011317

Level (low/med): LOW Date Received: 10/14/94

% Solids 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.80	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1038

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017501

Level (low/med): LOW Date Received: 10/21/94

% Solids 77.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	45.10			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1039

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017502

Level (low/med): LOW Date Received: 10/21/94

% Solids 75.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	46.30			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1040

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017503

Level (low/med): LOW Date Received: 10/21/94

% Solids 74.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	40.00			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1041

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017504

Level (low/med): LOW Date Received: 10/21/94

% Solids 75.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	46.80			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1042

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017505

Level (low/med): LOW Date Received: 10/21/94

% Solids 69.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	89.50			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1043

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017506

Level (low/med): LOW Date Received: 10/21/94

% Solids 78.8

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	61.70			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1044

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017507

Level (low/med): LOW Date Received: 10/21/94

% Solids 68.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	46.10			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1045

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017508

Level (low/med): LOW Date Received: 10/21/94

% Solids 76.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	37.90			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1046

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017509

Level (low/med): LOW Date Received: 10/21/94

% Solids 76.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	46.70			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

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INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1047

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): WATER Lab Sample ID: 95017510

Level (low/med): LOW Date Received: 10/21/94

% Solids 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	6.70	U		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

FORM I - IN

APPENDIX B2

VS1-SS-SSU Series Confirmatory Sample Results

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1002

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL Lab Sample ID: 95011301

Level (low/med): LOW Date Received: 10/14/94

% Solids 78.9

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	31.50		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

Post-it™ Fax Note 7671 | Date 10 | 19 | # of pages ▶ 1

To MATT CLARK	From Antonia
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1004

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL Lab Sample ID: 95011302

Level (low/med): LOW Date Received: 10/14/94

% Solids 80.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	44.80		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1005

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL Lab Sample ID: 95011303

Level (low/med): LOW Date Received: 10/14/94

% Solids 76.1

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	51.30		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1006

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011304

% Solids 77.7 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	42.50		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSSSU011

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: 72 Hr Cr SAS No.: SDG No.: VS1

Matrix (soil/water): SOIL Lab Sample ID: S410163-01 S

Level (low/med): LOW Date Received: 10/25/94

% Solids: 81.6

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	22.9			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.
VS1014

Lab Name: Energy & Environ. Engr. Contract:
Lab Code: E3I Case No: SAS No.: SDG No.: VS1002
Matrix (soil/water): WATER Lab Sample ID: 95011305
Level (low/med): LOW Date Received: 10/14/94
% Solids 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	9.80	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

FORM I - IN

NYSDEC-ASP

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.: VS1015

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011306

% Solids 81.9 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	29.70		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1016

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011307

% Solids 84.6 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	55.20		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1017

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011308

% Solids 85.2 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	65.10		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1018

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL

Level (low/med): LOW Lab Sample ID: 95011309

% Solids 77.7 Date Received: 10/14/94

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	118.00		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

VS1019

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: VS1002

Matrix (soil/water): SOIL Lab Sample ID: 95011310

Level (low/med): LOW Date Received: 10/14/94

% Solids 78.2

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	49.90		N	P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1
INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SSU024

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017511

Level (low/med): LOW Date Received: 10/21/94

% Solids 78.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	52.60			P

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM I - IN

NYSDEC-ASP

1

INORGANIC ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SSU025

Lab Name: Energy & Environ. Engr. Contract:

Lab Code: E3I Case No: SAS No.: SDG No.: SSU024

Matrix (soil/water): SOIL Lab Sample ID: 95017512

Level (low/med): LOW Date Received: 10/21/94

% Solids 84.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-47-3	Chromium	40.60			P

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: YELLOW Clarity After: Artifacts:

Comments:

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS2SSSSU026

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: 72 Hr Cr SAS No.: SDG No.: VS1

Matrix (soil/water): SOIL Lab Sample ID: S410163-02 S

Level (low/med): LOW Date Received: 10/26/94

% Solids: 82.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	34.4			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
ROOTS, STONES

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSSSU028

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: 72 CR SAS No.: SDG No.: VS1U028

Matrix (soil/water): SOIL Lab Sample ID: S410194-01 S

Level (low/med): LOW Date Received: 10/28/94

% Solids: 71.7

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	148			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
_____	Cyanide				NR
_____	_____	_____	_	_____	__

Color Before: BLACK Clarity Before: Texture: FINE

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSSSU029

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: 72 CR SAS No.: SDG No.: VS1U028

Matrix (soil/water): SOIL Lab Sample ID: S410194-02 S

Level (low/med): LOW Date Received: 10/28/94

% Solids: 82.3

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	31.4			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
STONES, ROOTS

3

SAFETY AND ECOLOGY CONSULTANTS
1

INORGANIC ANALYSIS DATA SHEET

SAMPLE NUMBER: VS1SSSSU030

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D2-0039

Lab Code: SKINER Case No.: Chromium SAS No.: SDG No.: U030

Matrix (soil/water): SOIL Lab Sample ID: 11001-01S

Level (low/med): LOW Date Received: 11/01/94

% Solids: 74.8

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium	33.0			P
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: BLACK Clarity Before: Texture: FINE

Color After: BLACK Clarity After: Artifacts: YES

Comments:
STONES

APPENDIX C

Summary of Waste Material Disposal

List of Disposal Facilities and Disposal Information
Van Der Horst Building Demolition and Disposal

Van Der Horst Plant 1 USEPA ID No.: NYD980780928
Van Der Horst Plant 2 USEPA ID No.: NYD986878775

Disposal Facilities

CWM Chemical Services, Inc.
1550 Balmer Road
Model City, NY 14107
USEPA ID No. NYD049836679
Waste Streams: Hazardous Debris

S.D. Myers, Inc.
180 South Avenue
Tallmadge, OH 44276
USEPA ID No. OHD053576294
Waste Streams: Transformers,
Transformer Oil

Ful Circle Ballast Recyclers
509 Manida Street
Bronx, NY 10474
USEPA ID No. NYD986980233
Waste Streams: Fluorescent Lighting
Ballasts

CECOS International, Inc.
5600 Niagara Falls Blvd.
Niagara Falls, NY 14304
USEPA ID No. NYD080336241
Waste Streams: Hazardous Water

Bison Waste Oil Co.
240 Main Street
Cowlesville, NY 14037
NYSDEC No. 9A050
Waste Streams: Non Hazardous Water

Lake View Landfill
851 Robison Road East
Erie, PA 16509
PADEP No. 100329
Waste Streams: Drum Contents,
Empty Fiber Drums, Residential Soil,
Non-Hazardous Debris

C.I.D. Landfill
10860 Olean Road
Chaffee, NY 14030
Waste Streams: Non-Hazardous Debris

BFI - Green Tree Landfill
635 Toby Road
Kersey, PA 15846
Waste Streams: Asbestos Materials

C.B. Giardini
5228 South Vandalia Road
Allegany, NY 14706
Waste Streams: Salvageable Metal,
Empty Metal Drums,
Transformer Carcasses

Scicchitanno Construction
Box 285
Olean, NY 14760
Waste Streams: Salvageable Copper

Van Der Horst Building Demolition and Disposal
Summary Disposal Log - Plants 1 and 2

Waste Stream Description	Disposal Facility	Units	Actual Disposal Quantity	Contract Adjustment	Final Contract Quantity	Comments
Non-Hazardous Debris	Lake View Landfill	Ton	1,145.13	-13.35	1,131.78	
Non-Hazardous Debris	Lake View Landfill	Ton	411.25	-7.71	403.54	
Non-Hazardous Debris	C.I.D. Landfill	Ton	85.92	0.00	85.92	
				Total:	**1,621.24**	
Hazardous Debris	CWM	Ton	527.04	-11.45	**515.59**	
Salvageable Steel	C.B. Giardini	Ton	381.70	-43.93	337.77	
Salvageable Steel	C.B. Giardini	Ton	434.23	0.00	434.23	
				Total:	**772.00**	
Residential Soil	Lake View Landfill	Ton	1,655.29	-8.47	**1,646.82**	
Asbestos	BFI Green Tree Landfill	Ton	106.27	0.00	**106.27**	Not paid by tonnage
Hazardous Water	CECOS International	Gallon	3,547.00	-3,322.00	225.00	
Non-Hazardous Water	Bison Oil	Gallon	7,150.00	0	7,150.00	
				Total:	**7,375.00**	
TSCA-Regulated Transformers	S.D. Myers, Inc.	Transformer	2	0	2	Paid on T&M basis
Transformer Carcasses (<50 ppm oil	C.B. Giardini	Transformer	17	0	17	Paid on lump sum basis
Transformer Oil < 50 ppm PCBs	S.D. Myers, Inc.	55-gallon drum	26	0	26	Paid on lump sum basis
Lighting Ballasts	Ful Circle Recyclers	55-gallon drum	4	0	4	Paid on lump sum basis
Drum Contents (Drilling Muds)	Lake View Landfill	Ton	21.06	0	21.06	Paid on lump sum basis
Emptied Metal Drums - Plant 1	C.B. Giardini	Drum	92	0	92	Paid on lump sum basis
Emptied Metal Drums - Plant 2	C.B. Giardini	Drum	176	0	176	Paid on lump sum basis
Emptied Fiber Drums	Lake View Landfill	Drum	12	0	12	Paid on lump sum basis
Non-Hazardous Debris	Scicchitanno Construction	Drum	10	-10	0	Not documented by Contractor

APPENDIX D

Individual Waste Stream ***Disposal*** *Logs*

Disposal Log No. 1

Non-Hazardous Debris Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: Lake View Landfill
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/30/95	1531	34,180	17.09	17.09	
2/1/95	1941	53,100	26.55	43.64	
	1532	39,740	19.87	63.51	
2/2/95	1944	38,240	19.12	82.63	
	1943	42,940	21.47	104.10	
	1939	39,520	19.76	123.86	
	1946	34,320	17.16	141.02	
2/3/95	1951	54,240	27.12	168.14	
	1948	55,760	27.88	196.02	
	1947	34,160	17.08	213.10	
	1950	43,060	21.53	234.63	
2/9/95	1952	44,320	22.16	256.79	
	1954	50,960	25.48	282.27	
2/10/95	1956	35,300	17.65	299.92	
	1955	40,020	20.01	319.93	
	1953	44,520	22.26	342.19	
2/13/95	1957	49,800	24.90	367.09	
	1961	61,020	30.51	397.60	
	1958	55,260	27.63	425.23	
	1960	51,560	25.78	451.01	
	1959	54,440	27.22	478.23	
	1962	41,560	20.78	499.01	
	1963	52,580	26.29	525.30	
2/15/95	1965	46,340	23.17	548.47	
	1966	36,620	18.31	566.78	
	1967	40,460	20.23	587.01	
	1968	50,160	25.08	612.09	
2/16/95	1973	30,600	15.30	627.39	
	1972	45,540	22.77	650.16	
	1970	47,800	23.90	674.06	
	1971	58,980	29.49	703.55	
	1969	41,040	20.52	724.07	
2/17/95	1974	54,440	27.22	751.29	
2/20/95	1980	28,180	14.09	765.38	
	1979	23,220	11.61	776.99	
	1978	18,260	9.13	786.12	
	1975	50,680	25.34	811.46	
	1981	53,060	26.53	837.99	
2/21/95	1984	25,920	12.96	850.95	
	1983	23,020	11.51	862.46	
	1982	45,840	22.92	885.38	
2/22/95	1985	54,340	27.17	912.55	
	1986	51,400	25.70	938.25	
	1987	26,700	13.35	951.60	(1)

Disposal Log No. 1

Non-Hazardous Debris Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: Lake View Landfill
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
2/27/95	1988	44,460	22.23	973.83	
	1776	48,000	24.00	997.83	
2/28/95	1990	63,260	31.63	1029.46	
	1989	52,280	26.14	1055.60	
3/1/95	1991	55,620	27.81	1083.41	
3/8/95	1937	36,860	18.43	1101.84	
	1938	38,680	19.34	1121.18	
3/9/95	1936	47,900	23.95	1145.13	
	TOTALS	2,290,260	1145.13		

(1) Weight was for drum contents, and was subtracted from contract quantity.

Disposal Log No. 2

Non-Hazardous Debris Disposal Log - Plant 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **Lake View Landfill**
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/5/95	52744	7,440	3.72	3.72	(1)
	52743	7,980	3.99	7.71	(1)
1/10/95	52742	27,500	13.75	21.46	
	52747	23,800	11.90	33.36	
	52746	29,840	14.92	48.28	
1/12/95	52687	32,700	16.35	64.63	
	50514	29,800	14.90	79.53	
	50513	18,540	9.27	88.80	
	50510	28,720	14.36	103.16	
	50512	36,500	18.25	121.41	
	52752	30,840	15.42	136.83	
	50511	33,000	16.50	153.33	
1/13/95	50526	21,660	10.83	164.16	
	50521	24,820	12.41	176.57	
	50527	26,300	13.15	189.72	
	50520	21,860	10.93	200.65	
	50516	19,260	9.63	210.28	
	50517	24,280	12.14	222.42	
	50518	23,720	11.86	234.28	
	50519	23,220	11.61	245.89	
1/14/95	50529	29,300	14.65	260.54	
	50528	27,020	13.51	274.05	
	50530	25,160	12.58	286.63	
	50522	20,380	10.19	296.82	
1/18/95	50525	22,880	11.44	308.26	
	50523	21,120	10.56	318.82	
	50524	23,580	11.79	330.61	
1/19/95	50535	11,220	5.61	336.22	
	50534	13,260	6.63	342.85	
	50531	18,020	9.01	351.86	
	50532	16,500	8.25	360.11	
	50533	14,340	7.17	367.28	
1/20/95	50540	26,400	13.20	380.48	
	50539	26,460	13.23	393.71	
	50538	12,940	6.47	400.18	
	50537	12,720	6.36	406.54	
	50536	9,420	4.71	411.25	
	TOTALS	822,500	411.25		

(1) Weight was for drum contents, and was subtracted from contract quantity.

Disposal Log No. 3

Non-Hazardous Debris Disposal Log - Plants 1 and 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.I.D. Landfill**
Chaffee,NY 14030

Date	Plant No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
11/9/94	2	4,640	2.32	2.32	
11/21/94	2	7,160	3.58	5.90	
1/5/95	1	18,180	9.09	14.99	
1/6/95	1	22,820	11.41	26.40	
1/9/95	1	8,020	4.01	30.41	
1/11/95	1	17,740	8.87	39.28	
1/12/95	1	9,740	4.87	44.15	
	1	4,800	2.40	46.55	
1/20/95	1	3,240	1.62	48.17	
1/24/95	2	13,180	6.59	54.76	
1/26/95	1	11,460	5.73	60.49	
	2	4,800	2.40	62.89	
1/31/95	2	5,620	2.81	65.70	
3/13/95	1 & 2	21,660	10.83	76.53	
3/31/95	1 & 2	18,780	9.39	85.92	
	TOTALS	171,840	85.92		

Disposal Log No. 4

Hazardous Debris Disposal Log - Plants 1 and 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **CWM Chemical Services**
Model City, NY 14107

Date	Plant No.	Haz Waste Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
2/14/95	2	NYB7009137	23,860	11.93	11.93	
	2	NYB7009119	18,520	9.26	21.19	
	2	NYB7009092	12,500	6.25	27.44	
2/20/95	1	NYB7009506	23,000	11.50	38.94	
	1	NYB7009497	17,660	8.83	47.77	
	1	NYB7009479	18,000	9.00	56.77	
	1	NYB7009461	21,800	10.90	67.67	
	1	NYB7009515	21,020	10.51	78.18	
	1	NYB7009488	24,000	12.00	90.18	
2/21/95	1	NYB7009551	22,080	11.04	101.22	
	1	NYB7009128	21,580	10.79	112.01	
	1	NYB7009524	23,340	11.67	123.68	
	1	NYB7009533	23,040	11.52	135.20	
	1	NYB7103367	26,880	13.44	148.64	
	1	NYB7009542	25,800	12.90	161.54	
2/22/95	1	NYB7009659	28,280	14.14	175.68	
2/23/95	1	NYB7010307	22,520	11.26	186.94	
	1	NYB7010316	27,560	13.78	200.72	
	1	NYB7010298	22,000	11.00	211.72	
2/24/95	1	NYB7010271	28,200	14.10	225.82	
	1	NYB7010289	28,120	14.06	239.88	
2/27/95	1	NYB7010208	27,800	13.90	253.78	
	1	NYB7010217	23,560	11.78	265.56	
	1	NYB7010235	28,280	14.14	279.70	
	1	NYB7010244	25,920	12.96	292.66	
	1	NYB7010253	21,240	10.62	303.28	
	1	NYB7010262	26,160	13.08	316.36	
2/28/95	1	NYB7010199	23,960	11.98	328.34	
	1	NYB7010154	25,480	12.74	341.08	
	1	NYB7010181	29,340	14.67	355.75	
	1	NYB7010163	24,760	12.38	368.13	
	1	NYB7010172	32,780	16.39	384.52	
	1	NYB7010145	19,400	9.70	394.22	
3/1/95	1	NYB7009623	28,800	14.40	408.62	
	1	NYB7009587	18,520	9.26	417.88	
	1	NYB7009641	24,240	12.12	430.00	
	1	NYB7009632	26,700	13.35	443.35	

Disposal Log No. 4

Hazardous Debris Disposal Log - Plants 1 and 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **CWM Chemical Services**
Model City, NY 14107

Date	Plant No.	Haz Waste Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
3/2/95	1	NYB7009605	21,560	10.78	454.13	
	1	NYB7009596	18,980	9.49	463.62	
	1	NYB7009569	17,380	8.69	472.31	
	1	NYB7009578	21,280	10.64	482.95	
3/8/95	1	NYB7011801	6,480	3.24	486.19	(1)
	1	NYB7011819	16,420	8.21	494.40	(1)
3/9/95	1	NYB7009614	28,140	14.07	508.47	
3/13/95	1	NYB7010127	16,980	8.49	516.96	
	1	NYB7108596	20,160	10.08	527.04	
		TOTALS	1,054,080	527.04		

(1) Weight was for asbestos disposal, paid for as a lump sum, not as a unit quantity.
(2) All Shipments classified as TCLP chromium waste (D007).

Disposal Log No. 5

Salvagable Steel Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.B. Giardini**
Allegany, NY 14706

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/26/95	11,900	5.95	5.95	
	5,020	2.51	8.46	(1)
2/1/95	23,460	11.73	20.19	
2/2/95	14,080	7.04	27.23	
	16,980	8.49	35.72	
2/6/95	14,980	7.49	43.21	
	16,500	8.25	51.46	
	22,580	11.29	62.75	
	16,300	8.15	70.90	
2/7/95	15,800	7.90	78.80	
	20,300	10.15	88.95	
	8,360	4.18	93.13	
2/8/95	18,500	9.25	102.38	
	17,400	8.70	111.08	
	14,520	7.26	118.34	
	19,920	9.96	128.30	
2/9/95	18,700	9.35	137.65	
	13,260	6.63	144.28	
	13,080	6.54	150.82	
	16,820	8.41	159.23	
	15,880	7.94	167.17	
2/10/95	20,820	10.41	177.58	
2/15/95	15,340	7.67	185.25	
	10,200	5.10	190.35	
	12,320	6.16	196.51	
2/16/95	15,420	7.71	204.22	
	18,240	9.12	213.34	
2/17/95	14,100	7.05	220.39	
2/20/95	14,580	7.29	227.68	
	11,020	5.51	233.19	
2/21/95	11,500	5.75	238.94	
2/22/95	10,900	5.45	244.39	
	12,380	6.19	250.58	
	11,380	5.69	256.27	
2/23/95	23,060	11.53	267.80	
	15,360	7.68	275.48	
2/24/95	18,980	9.49	284.97	
	16,840	8.42	293.39	
	16,600	8.30	301.69	
3/1/95	13,680	6.84	308.53	

Disposal Log No. 5

Salvagable Steel Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.B. Giardini**
Allegany, NY 14706

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
3/2/95	13,960	6.98	315.51	(2)
	11,680	5.84	321.35	(2)
	9,660	4.83	326.18	(2)
	20,480	10.24	336.42	(2)
	14,400	7.20	343.62	(2)
3/7/95	9,800	4.90	348.52	(2)
	11,960	5.98	354.50	(2)
3/8/95	18,840	9.42	363.92	(2)
3/13/95	15,060	7.53	371.45	(2)
3/15/95	20,500	10.25	381.70	(2)
TOTALS	763,400	381.70		

(1) 8.21 Tons of empty drums and transformer shells were subtracted from contract quantity.

(2) See below, quantities returned to site were measured twice.

LOG OF INCOMING STEEL FROM GIARDINI REQUIRING DECON (SUBTRACT THESE QUANTITIES FROM ABOVE TOTAL)

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
3/2/95	13,320	6.66	6.66	
	13,820	6.91	13.57	
	10,600	5.30	18.87	
3/3/95	8,300	4.15	23.02	
	6,280	3.14	26.16	
	10,780	5.39		
	8,340	4.17	30.33	
TOTALS	71,440	35.72		

Disposal Log No. 6

Salvagable Steel Disposal Log - Plant 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.B. Giardini**
Allegany, NY 14706

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/7/95	6,120	3.06	3.06	
	16,840	8.42	11.48	
	6,040	3.02	14.50	
	15,400	7.70	22.20	
	11,460	5.73	27.93	
	11,860	5.93	33.86	
	11,260	5.63	39.49	
	13,580	6.79	46.28	
	9,960	4.98	51.26	
	13,020	6.51	57.77	
	13,080	6.54	64.31	
1/8/95	12,940	6.47	70.78	
	7,040	3.52	74.30	
	10,860	5.43	79.73	
	13,100	6.55	86.28	
	7,320	3.66	89.94	
	12,500	6.25	96.19	
	10,080	5.04	101.23	
	10,000	5.00	106.23	
	11,240	5.62	111.85	
1/9/95	6,120	3.06	114.91	
	12,500	6.25	121.16	
	5,260	2.63	123.79	
	9,440	4.72	128.51	
	4,420	2.21	130.72	
	8,820	4.41	135.13	
	6,340	3.17	138.30	
	6,600	3.30	141.60	
	6,520	3.26	144.86	
	8,980	4.49	149.35	
1/10/95	10,260	5.13	154.48	
	13,580	6.79	161.27	
	12,340	6.17	167.44	
	13,740	6.87	174.31	
	6,380	3.19	177.50	
	14,180	7.09	184.59	
	10,780	5.39	189.98	

Disposal Log No. 6

Salvagable Steel Disposal Log - Plant 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.B. Giardini**
Allegany, NY 14706

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/10/95	10,500	5.25	195.23	
	7,420	3.71	198.94	
	10,640	5.32	204.26	
1/11/95	13,900	6.95	211.21	
	9,800	4.90	216.11	
	10,700	5.35	221.46	
	15,440	7.72	229.18	
	12,480	6.24	235.42	
	9,700	4.85	240.27	
	15,640	7.82	248.09	
	9,880	4.94	253.03	
	13,780	6.89	259.92	
	8,160	4.08	264.00	
1/12/95	6,700	3.35	267.35	
	8,340	4.17	271.52	
	7,240	3.62	275.14	
	9,340	4.67	279.81	
	10,660	5.33	285.14	
	5,200	2.60	287.74	
	12,060	6.03	293.77	
	7,640	3.82	297.59	
	10,040	5.02	302.61	
1/13/95	5,860	2.93	305.54	
	14,240	7.12	312.66	
	5,580	2.79	315.45	
	7,860	3.93	319.38	
	9,140	4.57	323.95	
	9,240	4.62	328.57	
	9,340	4.67	333.24	
	8,120	4.06	337.30	
1/14/95	9,920	4.96	342.26	
	7,080	3.54	345.80	
	9,300	4.65	350.45	
	8,300	4.15	354.60	
	8,900	4.45	359.05	
	11,240	5.62	364.67	
1/16/95	25,720	12.86	377.53	

Disposal Log No. 6

Salvagable Steel Disposal Log - Plant 2

Van Der Horst Building Demolition and Disposal

Disposal Facility: **C.B. Giardini**
Allegany, NY 14706

Date	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
1/16/95	19,760	9.88	387.41	
	15,080	7.54	394.95	
1/17/95	6,200	3.10	398.05	
1/19/95	22,060	11.03	409.08	
1/20/95	28,280	14.14	423.22	
1/24/95	22,020	11.01	434.23	
TOTALS	868,460	434.23		

Disposal Log No. 7
Residential Soil Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: **Lake View Landfill**
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
12/12/94	50704	41,180	20.59	20.59	
	50702	44,480	22.24	42.83	
	50703	48,680	24.34	67.17	
	50705	40,000	20.00	87.17	
	50746	46,600	23.30	110.47	
	50749	47,800	23.90	134.37	
	50747	41,640	20.82	155.19	
	50750	47,420	23.71	178.90	
12/13/94	50745	46,600	23.30	202.20	
	50744	42,560	21.28	223.48	
12/14/94	50734	32,900	16.45	239.93	
	50731	29,140	14.57	254.50	
	50730	42,080	21.04	275.54	
	50728	31,560	15.78	291.32	
	50726	45,520	22.76	314.08	
	50729	42,240	21.12	335.20	
	50727	48,060	24.03	359.23	
	50733	31,640	15.82	375.05	
	50732	43,500	21.75	396.80	
12/15/94	50709	33,720	16.86	413.66	
	50724	29,880	14.94	428.60	
	50723	41,780	20.89	449.49	
	50722	46,500	23.25	472.74	
	50719	41,980	20.99	493.73	
	50737	35,340	17.67	511.40	
	50736	38,700	19.35	530.75	
	50718	30,280	15.14	545.89	
	50738	46,380	23.19	569.08	
	50739	44,860	22.43	591.51	
	50717	45,220	22.61	614.12	
	50713	28,780	14.39	628.51	
	50707	31,500	15.75	644.26	
	50708	30,120	15.06	659.32	
	50742	40,860	20.43	679.75	
	50743	36,280	18.14	697.89	
	50725	44,560	22.28	720.17	
	50714	39,160	19.58	739.75	

Disposal Log No. 7
Residential Soil Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: **Lake View Landfill**
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
12/15/94	50710	44,960	22.48	762.23	
	50712	42,060	21.03	783.26	
	50715	37,440	18.72	801.98	
	50721	42,960	21.48	823.46	
	50716	42,020	21.01	844.47	
	50701	44,940	22.47	866.94	
	50706	44,880	22.44	889.38	
	50735	46,060	23.03	912.41	
	50740	31,100	15.55	927.96	
	50741	32,640	16.32	944.28	
	50720	42,980	21.49	965.77	
12/16/94	52720	44,860	22.43	988.20	
	52719	34,480	17.24	1005.44	
	52722	28,660	14.33	1019.77	
	52725	41,180	20.59	1040.36	
	52727	35,900	17.95	1058.31	
	52724	40,860	20.43	1078.74	
	52718	47,760	23.88	1102.62	
	52717	45,820	22.91	1125.53	
	52721	48,020	24.01	1149.54	
	52723	40,340	20.17	1169.71	
	52731	42,560	21.28	1190.99	
	52732	43,100	21.55	1212.54	
	52730	40,700	20.35	1232.89	
	52738	50,540	25.27	1258.16	
	52737	33,180	16.59	1274.75	
	52736	34,360	17.18	1291.93	
	52735	44,160	22.08	1314.01	
	52734	36,340	18.17	1332.18	
12/19/94	52739	17,980	8.99	1341.17	
	52729	40,800	20.40	1361.57	
	52716	32,100	16.05	1377.62	
	52733	28,480	14.24	1391.86	
	50502	31,740	15.87	1407.73	
	50504	40,080	20.04	1427.77	
	50507	51,820	25.91	1453.68	
	50506	50,480	25.24	1478.92	

Disposal Log No. 7
Residential Soil Disposal Log - Plant 1

Van Der Horst Building Demolition and Disposal

Disposal Facility: **Lake View Landfill**
Erie, PA 16509

Date	Non-Haz Manifest No.	Net Weight (Pounds)	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
12/19/94	50505	45,740	22.87	1501.79	
	50503	49,360	24.68	1526.47	
	50501	41,960	20.98	1547.45	
	52715	30,560	15.28	1562.73	
	52728	45,200	22.60	1585.33	
12/20/94	52741	25,680	12.84	1598.17	
	52751	32,620	16.31	1614.48	
12/21/94	52750	33,480	16.74	1631.22	
	52749	31,200	15.60	1646.82	
6/26/95	61287	16,940	8.47	1655.29	(1)
	TOTALS	3,310,580	1655.29		

(1) Payment on T & M basis, subtracted from unit price contract quantity.

Disposal Log No. 8

Asbestos Disposal Log - Plants 1 and 2
Van Der Horst Building Demolition and Disposal

Disposal Facility: **BFI - Green Tree Landfill**
Kersey, PA 15846

Date	Plant No.	Asbestos Manifest No.	Net Weight (Tons)	Cumulative Weight (Tons)	Comments
11/10/94	2	31772	2.81	2.81	
12/7/94	1	31773	3.23	6.04	
12/28/94	2	31774	9.92	15.96	
	2	31775	8.31	24.27	
1/3/95	2	31777	11.46	35.73	
	2	31778	6.67	42.40	
1/16/95	1	31779	8.92	51.32	
	1	31780	12.73	64.05	
1/17/95	1	31781	3.89	67.94	
	1	31782	12.48	80.42	
1/31/95	1	31783	9.09	89.51	
	1	31784	16.40	105.91	
2/1/95	1	31785	0.36	106.27	
		TOTALS	106.27		

Disposal Log No. 9

Hazardous and Non-Hazardous Water Disposal Log - Plants 1 and 2

Van Der Horst Building Demolition and Disposal

Hazardous Water Log

Disposal Facility: **CECOS International**
Niagara Falls, NY 14304

Date	Plant No.	Haz Waste Manifest No.	Gallons	Cumulative Gallons	Comments
1/21/95	2	NYB4513572	1,909	1909.00	(1)
3/20/95	2	NYB4513581	748	2657.00	(1)
3/24/95	1	NYB4513725	890	3547.00	(1)
		TOTALS	3,547		

(1) Only 225 gallons was existing water. Remainder was not paid on a unit basis.
(2) All Shipments classified as TCLP chromium waste (D007).

Non-Hazardous Water Log

Disposal Facility: **Bison Oil**
Cowlesville, NY 14037

Date	Plant No.	Manifest No.	Gallons	Cumulative Gallons	Comments
3/6/95	2	Not Used	5,300	5300.00	
3/16/95	2	Not Used	1,850	7150.00	
		TOTALS	7,150		

Disposal Log No. 10

Transformers, Transformer Oil, and Ballasts Disposal Log - Plants 1 and 2

Van Der Horst Building Demolition and Disposal

TSCA-Regulated PCB Transformers

Disposal Facility: **S.D. Myers, Inc.**
Tallmadge, OH 44276

Date	Plant No.	Haz Waste Manifest No.	Transformers		Comments
3/28/95	1	NYB4981932	2		(1), (2), (3)
		TOTALS	2		

(1) Transformer disposal paid on T&M basis in Change Order No. 3
(2) Transformers shipped with PCB oil intact.
(3) One B002 transformer, and one B006 transformer.

Non-TSCA Transformer Oil

Disposal Facility: **S.D. Myers, Inc.**
Tallmadge, OH 44276

Date	Plant No.	Manifest No.	No. of 55-Gallon Drums	Cumulative Drums	Comments
3/13/95	1	01890	9	9	
	2	01890	12	21	
3/28/95	1	01978	5	26	
		TOTALS	26		

(1) Transformer Oil <50 ppm, paid for on a lump sum basis.

Fluorescent Lighting Ballasts

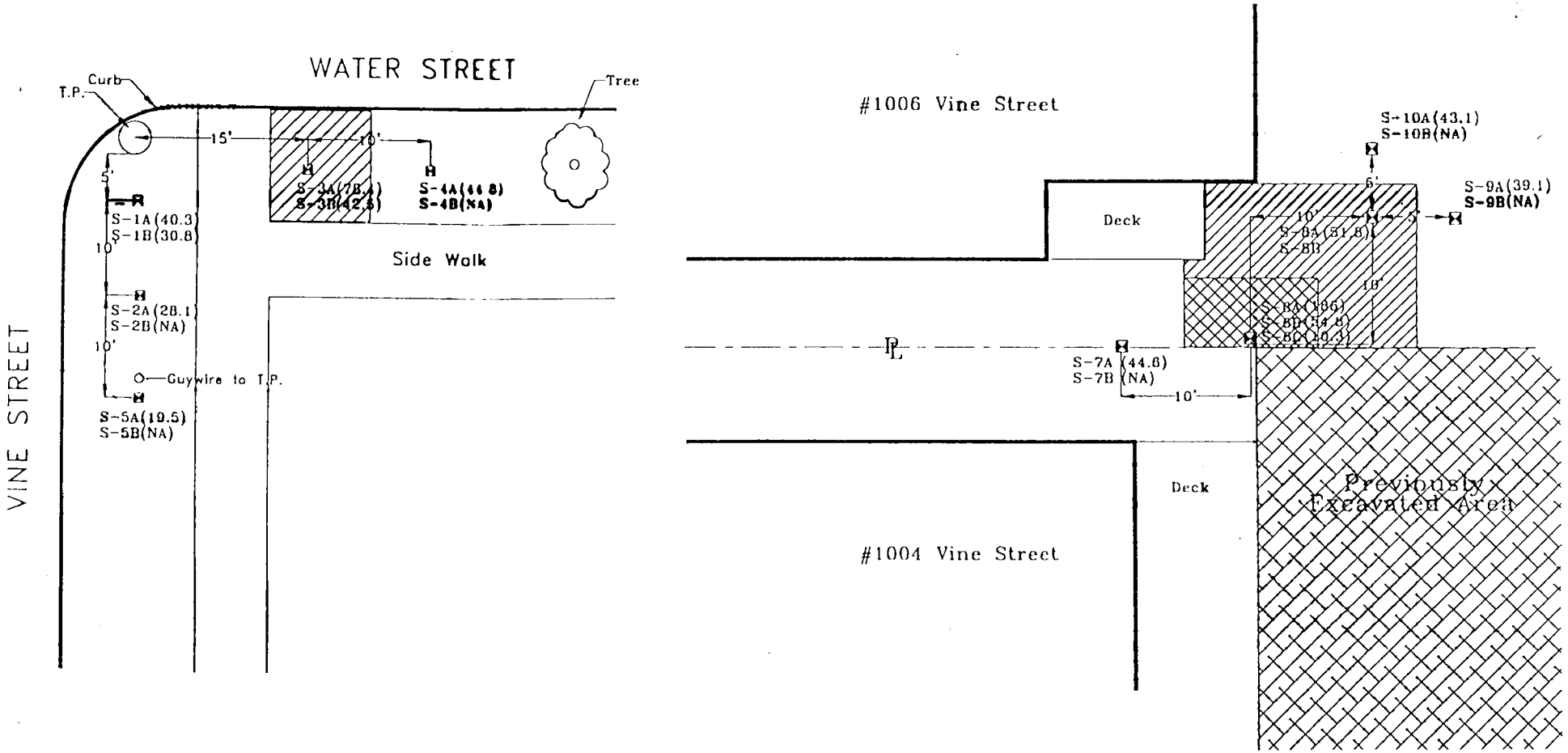
Disposal Facility: **Ful Circle Ballast Recyclers**
Bronx, NY 10474

Date	Plant No.	Manifest No.	No. of 55-Gallon Drums	Cumulative Drums	Comments
3/17/95	1	10001	4	4	
		TOTALS	4		

(1) Ballasts paid for on a lump sum basis.

APPENDIX E

Record Drawings



- Soil to be removed to a depth of 6 inches.

- Soil to be removed to a depth of 12 inches

Total soil to be removed approximately 6.1 cubic yards.

⊠ - S-1A(40.3) Soil Sample Location & Chromium Conc. in mg/kg (ppm)
All "A" samples collected at 0"to 2" depth.
All "B" samples collected at 6"to 8" depth
All "C" samples collected at 12" depth

Note: All Analyses for chromium(T) only.

Clean-up Goal for Chromium - 50 mg/kg (ppm)

NYSDEC-REGION 9

Van der Horst Plant #1
Post Demolition Soil Sampling

DATE:	REVISION:	SCALE:	DRAWN BY:
4/18/95	4/25/95	NOT TO SCALE	GPS