Removal Action Report

for the

Lackawanna Foundry Site

in

City of Lackawanna, Erie County, New York

Prepared by: Kevin Matheis, On Scene Coordinator
U.S. EPA Region 2

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Site Photographs

Section 1.0 Introduction

1.1 Site Background

The Lackawanna Foundry Site is located at 2 Elm Street, Lackawanna, New York. This site was the location of a foundry that produced speciality cast iron molds for more than 60 years. The foundry owner is deceased and operations since his death had been limited in scale. The Site is located in a mixed residential and heavily industrialized area of Lackawanna, New York, adjacent to Smokes Creek, a direct tributary to Lake Erie. Twelve residential properties are immediately adjacent to the site to the west, railroad tracks border the east, Smokes Creek to the north, and a multi-use city park to the South.

In 1999, the New York State Department of Environmental Conservation (NYSDEC) ordered the property owner to collect samples from transformers and soil on-site and to provide NYSDEC with an inventory of chemicals on-site. The owner complied with this request and analysis of transformers and soils indicated that two transformers contain 86% PCBs. Soil contamination in proximity of the transformers indicated the presence of PCB contaminated soils up to 210 ppm. The inventory also showed more than 100 drums located at the site, stored in various stages of deteriorated condition. NYSDEC requested that the owner undertake a cleanup at the site, but he did not have the financial ability to comply with this request.

As a result, the NYSDEC requested that EPA evaluate the site for a removal action. EPA performed a removal assessment which was completed on March 15, 1999. During this assessment, EPA became aware of several problem areas at the site. The site was completely unfenced and contained more than 100 unknown drums outside the foundry buildings, and another 200 drums, laboratory chemicals, compressed gas cylinders, and PCB transformers within the foundry buildings. In addition, the buildings that contain the drums and transformers were in extremely poor condition and several access points were identified. Evidence of trespassing existed throughout the property. In February 1999, the attorney for the owner wrote to the City of Lackawanna and told them to demolish the buildings on-site because the owner did not have the financial ability to undertake a removal action or comply with building code violations.

As a result of the assessment, EPA immediately began removal actions at the site. EPA secured the site and moved drums and other containers of chemicals inside the buildings. EPA's cleanup contractor, Earth Tech Remediation, was mobilized to the site on March 22, 1999. In addition to securing the site, EPA mobilized its Environmental Response Team (ERT) to the Site to perform an extent of contamination assessment. In April 1999, ERT collected soil samples from various locations at the site to better characterize the contamination.

EPA's removal action was completed in June 2000. This removal completion report

summarizes confirmation sample results, topsoil and backfill sampling results, and provides an overview of removal actions in designated areas. A June 2001 Brownfields Site Investigation Report was prepared for subsurface contamination and groundwater at the site and is not part of this Removal Action Report. This report was submitted to NYSDEC under separate cover.

2.0 EPA Removal Action

2.1 EPA Removal Action Objective

As a result of the assessments by EPA in March 1999 and the ERT assessment on April 1999, the following removal action objectives were authorized in the Action Memorandum dated August 13, 1999: the removal of all PCB transformers, capacitors and contaminated soil and debris; removal of drums, laboratory chemicals, and compressed gas cylinders; removal of arsenic contaminated soils from recreational area adjacent to site; demolition of on-site buildings; and restoration of the site upon completion of removal actions.

EPA began the removal action by removing all drums, laboratory chemicals, and other containers at the site that contained waste materials.

3.0 Removal Action at Specific Areas of Concern

Areas of concern addressed by EPA are included as Attachment 1. This attachment uses a transparency of the 1999 aerial photograph overlying the 2000 aerial photograph taken upon completion of the cleanup at the Site. Attachment 2 provides an unabridged copy of the 1999 aerial photograph.

Section 3.1 PCB Vault Area:

Attachment 1 of this report identifies the area EPA called the PCB vault area. In this area, large PCB transformers were staged by Lackawanna Foundry. During the removal action assessment, plates were removed from the flooring within this room and approximately 50 PCB capacitors were discovered, some of which had leaked their contents into the covered trench. This trench was used for utilities at some point during foundry operations. The capacitors were removed and PCB contamination was discovered in the subsurface of the flooring within the trench. The only effective way to remediate this trench was to demolish and excavate the PCB Vault Area. Due to the fact that the PCB vault area was attached to the main warehouse area of the foundry buildings, EPA decided that the entire complex of buildings at the site would need to be demolished.

Upon completion of the demolition of site buildings, EPA commenced a soil cleanup in the PCB vault area. Approximately 1,000 cubic yards of soil were removed from this PCB contaminated area until the PCB cleanup objectives of 10ppm were met. Attachment 3 shows the confirmation sampling results and the corresponding sampling locations.

PCB Confirmation Sample Results in PCB Vault Area

Sample Identification	PCB Results (mg/kg)
Foundry Conf 7 Sub-soil PCB	non-detect
Foundry Conf 8 Sub-soil PCB	1.4
Foundry Conf 9 Sub-soil PCB	non-detect
Foundry Conf 10 Sub-soil PCB	non-detect

Upon completion of the demolition, the soil was removed approximately 2 feet below grade to native clay. Samples were taken within the vault area excavation at the base of the clay.

Section 3.2 Production Area:

This area of the site is shown in Attachment 1. The production area was a large building adjacent to the PCB Vault Area. The Production Area was a large open warehouse situated on the eastern edge of the site. The production area floor was constructed of concrete, but had been covered by dirt and debris due to the overall condition of the building. At the time of EPA's removal, little equipment remained in the room except for an overhead crane and old foundry equipment. Most of the roofs were collapsed and one of the walls was missing. Sampling by EPA showed low-levels of PCB contamination on the production room floor, yet higher that the 10ppm PCB cleanup objective. Upon completion of the demolition of the site buildings, EPA tested the soil that was within the production area. Some of the soil exhibited low levels of PCBs and EPA removed all of the PCB soils above the concrete pad. Since all soils above the concrete pad were removed, EPA did not perform confirmation tests at this time. The Production Area was underlaid with a concrete floor approximately three to four feet below grade. EPA did not remove the concrete floor and placed backfill and topsoil over the concrete floor as part of the restoration at the site. Testing beneath the concrete floor was conducted as part of an EPA-funded Brownfields assessment and is not part of this removal report. This report has been distributed to NYSDEC under separate cover.

Section 3.3 Recreation Area:

EPA identified arsenic contamination in the area adjacent to the site buildings to the south. EPA delineated the contamination and the extent of contamination sampling is shown as Attachment 4. EPA removed soils from areas exceeding the removal action cleanup level of 20ppm for arsenic and began removal of the arsenic contaminated soil once all of the site buildings were demolished. Approximately 1,000 cubic yards of arsenic contaminated soil were removed from the recreational area. The area removed is shown in Attachment 1. EPA removed the arsenic contaminated soil down to native clays and typically the excavation was down approximately two feet. Confirmation samples were taken as part of the excavation and are included as Attachment 5. Upon completion of the excavation, EPA backfilled the areas with clean topsoil.

Arsenic Confirmation Sample Results in Recreational Area

Sample Identification	Arsenic Results (mg/kg)
N60E0	2.5
N20E0	14
ARCONF 3	.3
ARCONF 4	1.6
ARCONF 6	1.0

At the request of a residence adjacent to the Site, the New York State Health Department collected a sample in a residential property on Elm Street. Sample results are shown in Attachment 6. Results of the residential sampling indicated that no cleanup was necessary on the residential property.

Section 3.4 Main Buildings:

The main building in the center of the site was the location of the furnace, conveyer system, main offices and pattern storage areas. The main buildings are identified in Attachment 1. PCB or arsenic contamination was not found in this area. EPA demolished all of the site buildings and removed the concrete flooring in the upper areas of the buildings. Foundry sands from the furnace were grated over the lower pad area and covered with topsoil. During the removal of the upper concrete pad area, another vault of PCB capacitors was discovered. Most of the 20 capacitors in this area were intact. EPA removed the concrete vault and soil in proximity down three feet to native clay. Sample results from the removal of the PCB vaults in the production areas are listed in Attachment 7.

PCB Confirmation Sample Results in PCB Vault within Main Buildings

Sample Identification	PCB Results (mg/kg)
LW-SS-01	.134
LW-SS-02	5.8
LW-SS-03	13

One sample from the PCB confirmation samples exceeded the 10ppm cleanup objective. Samples were taken from native clay in the area and all three samples were taken from the four-foot by four-foot area. Averaging the three samples of .134 ppm, 5.8 ppm, and 13 ppm meets the EPA cleanup objective. Upon completion of the concrete pad removal and grading of the footprint of the site building, EPA graded the area with a minimum one-foot of topsoil.

Section 3.5 Wetlands area:

In the central portion of the site property, north of the main Site buildings, EPA discovered an overgrown wetland area that had drums of slag and foundry sands, and also bulk piles of foundry sand dumped therein. Attachment 1 shows the location of the overgrown wetland area. EPA removed the overgrown brush and removed all drums from the area. This area appeared to be a low area of the site where water would accumulate. EPA scraped the foundry sands and soil out of the wetland area and set this soil aside in a stockpile. This stockpile was known as the backfill pile. The backfill pile contained approximately 1,000 cubic yards. Analysis of the backfill pile can be found in Attachment 9. As a result of the analysis of the backfill sample, no further confirmation samples were taken in the wetlands area.

Upon completion of the excavation of the backfill pile, the wetland was now situated within native clay underlying the area. EPA obtained permission from NYSDEC to utilized Buckhorn Marsh sediment as cover in the area. Buckhorn Marsh is a wetland rehabilitation project in Grand Island, New York where dredgings from this marsh are available for reuse in projects that have beneficial use. This marsh soil has been used on other environmental restoration projects and New York State Parks made it available to EPA for use. EPA backfilled the wetlands with Buckhorn Marsh sediment and created a wetland in the central portion of the site. The analytical of the Buckhorn Marsh sediment can be found in Attachment 8.

Section 4.0 Restoration

Section 4.1 Backfill Pile:

EPA tested the backfill pile taken from the wetlands and found minimal contamination. The analysis of the backfill can be found in Attachment 9. The backfill was placed on the concrete pad of the Production Area. This backfill covered the two feet above the concrete pad. Up to two feet of topsoil was then placed on top of the backfill in the production area to bring this part of the site up to grade.

Section 4.2 Topsoil:

The entire site was covered by a minimum of one foot of topsoil throughout the property. Foundry sands adjacent to Smokes Creek were covered, in addition to bringing the entire site up to grade.

90% of the topsoil used at the site was from E. Brenon Topsoil Inc., 215 Brenon Road, Amherst, New York 14228. A sample was collected from the source pile and this topsoil was dedicated to the project. Analysis of E. Brenon Topsoil is found as Attachment 10. Due to production limitations at E. Brenon Topsoil, EPA utilized topsoil from another vendor, Carmen Pariso Trucking, located at 3649 River Road, Town of Tonawanda, NY. A sample was collected at the source and this material was dedicated for use at the site. Topsoil analysis from Carmen Pariso can be found in Attachment 11 of this report.

Section 4.3 Grading

Upon completion of topsoil placement at the site, the site was graded to ensure surface water flow did not impact the adjacent properties or the recreational area. The site was graded to ensure the water flowing from the site would accumulate in the center portion of the site and ultimately the lowest portion of the site, the central wetland. Attachment 12 contains a final grade map.

Section 4.4 Hydroseeding

Upon completion of the restoration of the site, the site was hydro seeded with a durable grass mixture and watered until the mixture successfully germinated. The wetlands in the center portion of the site germinated cattails and other native species of wetland plants. EPA fenced the perimeter of the site and final graded the roadway areas with clean stone from local quarries.

Attachment 1

Attachment 1

2000 Aerial Photograph with 1999 Overlay

Lackawanna Foundry
EPA Aerial Overflight
May 28, 1999
Approx. Scale 1"=140 feet

Attachment 2

Attachment 2

1999 Aerial Photograph

Lackawanna Foundry
EPA Aerial Overflight
May 28, 1999
Approx. Scale 1"=140 feet

Attachment 3

Attachment 3

PCB Vault Area Confirmation Samples

Upstate Laboratories Inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
Mailing: Box 289 • Syracuse, NY 13206
Albany (518) 459-3134
Binghamton (607) 724-0478
Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

February 9, 2000

Ms. Lane Aulick
Earth Tech, Inc.
7870 Villa Park Dr.
Suite 400
Richmond, VA 23228

Re: Analysis Report #35599012 - 38340 Lackawanna Foundry

Dear Ms. Aulick:

Please find enclosed the results for your samples which were picked up by ULI personnel on December 20, 1999.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

AJS/lw

Enclosures: report, spreadsheets, disk

cc/encs: N. Scala, ULI
file
M. Kromis, Earth Tech (category B deliverables to follow)

Note: Faxed results were given to your office on 12/20/99. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 02/09/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 35599012
Client I.D.: EARTH TECH

APPROVAL: QS
QC: SD QS
Lab I.D.: 10170
Sampled by: Client

ID:35599012 Mat:Soil 38340 LACKAWANNA FOUNDRY CONF 7 SUB-SOIL PCB/ 1000H 12/20/99 G TRANSFORMER AREA

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	59%	12/22/99		WC8615
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1221	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1232	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1242	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1248	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1254	<0.14ug/kg dw	01/06/00		PA5467
Aroclor 1260	<0.14ug/kg dw	01/06/00		PA5467
Total PCB	<0.14ug/kg dw	01/06/00		PA5467

ID:35599013 Mat:Soil 38340 LACKAWANNA FOUNDRY CONF 8 SUB-SOIL PCB/ 1000H 12/20/99 G TRANSFORMER AREA

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	70%	12/22/99		WC8615
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.11ug/kg dw	01/06/00		PA5467
Aroclor 1221	<0.11ug/kg dw	01/06/00		PA5467
Aroclor 1232	<0.11ug/kg dw	01/06/00		PA5467
Aroclor 1242	1400ug/kg dw	01/06/00		PA5467
Aroclor 1248	<0.11ug/kg dw	01/06/00		PA5467
Aroclor 1254	<0.11ug/kg dw	01/06/00		PA5467
Aroclor 1260	<0.11ug/kg dw	01/06/00		PA5467
Total PCB	1400ug/kg dw	01/06/00		PA5467

ID:35599014 Mat:Soil 38340 LACKAWANNA FOUNDRY CONF 9 SUB-SOIL PCB/ 1000H 12/20/99 G TRANSFORMER AREA

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	66%	12/22/99		WC8615
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1221	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1232	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1242	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1248	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1254	<0.12ug/kg dw	01/06/00		PA5467
Aroclor 1260	<0.12ug/kg dw	01/06/00		PA5467
Total PCB	<0.12ug/kg dw	01/06/00		PA5467

dw = Dry weight

DATE: 02/09/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 35599012
Client I.D.: EARTH TECH

APPROVAL: GJS
QC: JD
Lab I.D.: 10170
Sampled by: Client

ID:35599015 Mat:Soil 38340 LACKAWANNA FOUNDRY CONF 10 SUB-SOIL PCB/ 1000H 12/20/99 G TRANSFORMER AREA

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	74%	12/22/99		WC8615
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1221	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1232	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1242	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1248	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1254	<54ug/kg dw	01/06/00	05	PA5467
Aroclor 1260	<54ug/kg dw	01/06/00	05	PA5467
Total PCB	<54ug/kg dw	01/06/00	05	PA5467

dw = Dry weight

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 VOLATILE ASP CODES

(B)POSSIBLE/PROBABLE BLANK CONTAMINATION (D)ALL COMPOUNDS IDENTIFIED AT A SECONDARY DILUTION FACTOR (J)ESTIMATED VALUE

35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS) PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS) PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20, CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

PARAMETER	CONF-7	CONF-8	CONF-9	CONF-10
Percent Solids	59%	70%	66%	74%
Aroclor 1016	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1221	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1232	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1242	<0.14ug/kg dw	1400ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1248	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1254	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Aroclor 1260	<0.14ug/kg dw	<0.11ug/kg dw	<0.12ug/kg dw	<54ug/kg dw
Total PCB	<0.14ug/kg dw	1400ug/kg dw	<0.12ug/kg dw	<54ug/kg dw

~~#6~~ 4/7

35599012 - 015

№ 0083

1/6 Hand

Earth Tech
2229 Tomlynn Street
Richmond, Virginia 23230
(804) 358-5400

CHAIN OF CUSTODY RECORD

	PROJ. NO.	PROJECT NAME					NO. OF CONTAINERS	PCB (Volatiles)			REMARKS
	38340	Lackawanna Foundry									
	SAMPLERS: (Signature)										
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION						
012 Conf 7	12/20	1000		X	Sub-Soil PCB Trans		3 3262	X	(X)	(1)	
013 Conf 8	12/20	1000		X	Fence Area		3 3262	X	(X)	(1)	14 day TAT
014 Conf 9	12/20	1000		X	↓		3 3262	X	(X)	(1)	
015 Conf 10	12/20	1000		X			3 3262	X	(X)	(1)	Fax Results to Lance Bullock 804-515-8307
											Thank you

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	12/20/1100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			12/21 0800		

Attachment 4

Attachment 4

Recreational Area Extent of Contamination Survey

Roy F. Weston, Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-225-6116 • Fax 732-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019

December 17, 1999

Mr. Kevin Matheis
U.S. Environmental Protection Agency
Removal Action Branch
2890 Woodbridge Avenue
Edison, NJ 08837

EPA CONTRACT NO: 68-W5-0019
TDD NO: 02-99-09-0025 C
DOCUMENT CONTROL NO: START-02-F-03986
SUBJECT: ARSENIC SOIL CONTAMINATION MAPS- LACKAWANNA FOUNDRY SITE

Dear Mr. Matheis:

Enclosed please find the Arsenic Sampling Maps for the Lackawanna Foundry Site located at 2 Elm Street, Lackawanna, Erie County, New York. These maps pertain to the soil sampling event that occurred on October 18-20, 1999. The data presented on these maps is from the written data package received from Severn Trent Laboratories. I have included additional copies of the written laboratory data and the START Sampling Trip Report for your convenience.

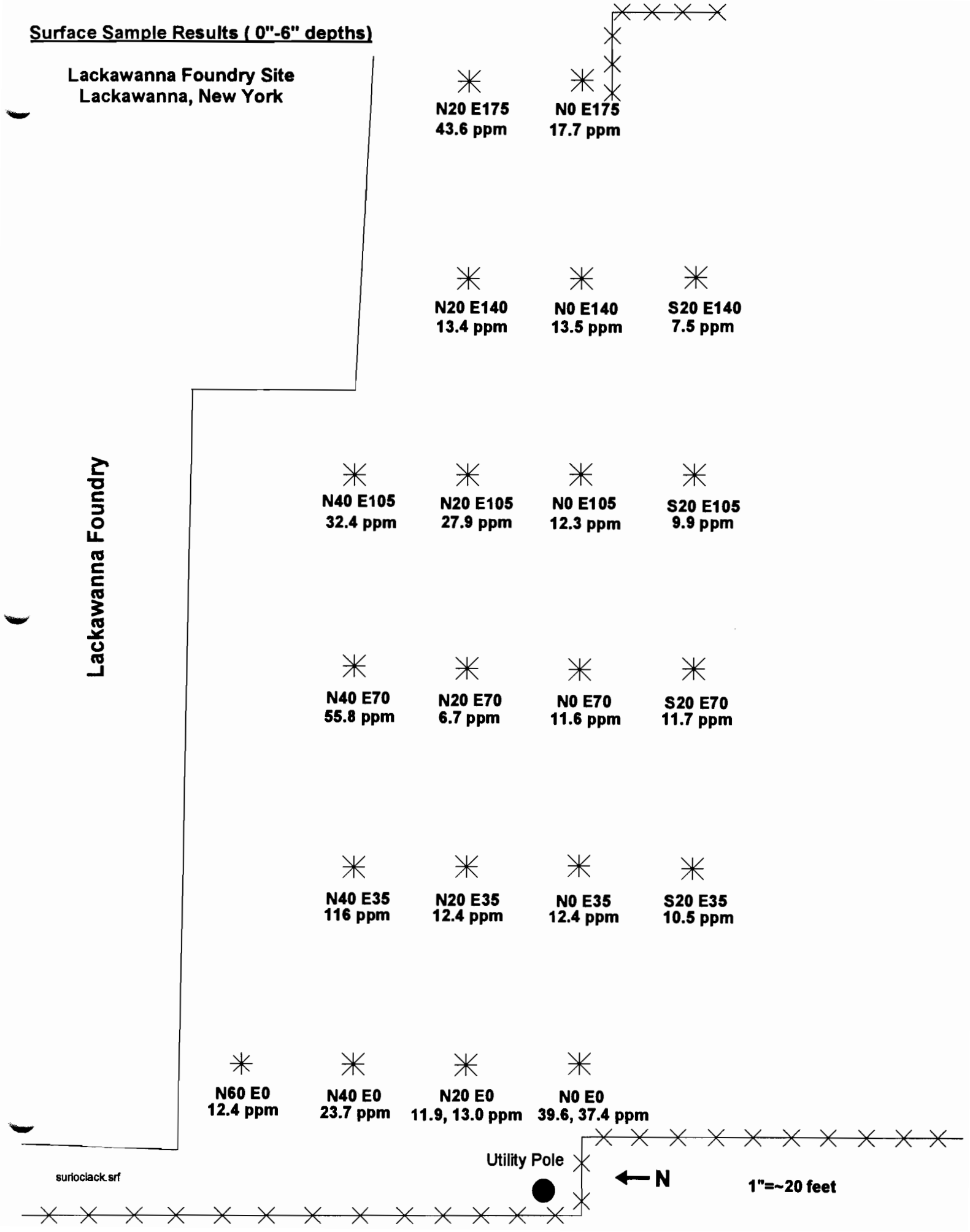
If you have any questions, please do not hesitate to call me at (732) 225-6116.

Very truly yours,

ROY F. WESTON, INC.

James Kearns
Project Manager

Enclosure
cc: TDD File


Surface Sample Results (0"-6" depths)
Lackawanna Foundry Site
Lackawanna, New York
N20 E175
43.6 ppm
N0 E175
17.7 ppm
N20 E140
13.4 ppm
N0 E140
13.5 ppm
S20 E140
7.5 ppm
Lackawanna Foundry
N40 E105
32.4 ppm
N20 E105
27.9 ppm
N0 E105
12.3 ppm
S20 E105
9.9 ppm
N40 E70
55.8 ppm
N20 E70
6.7 ppm
N0 E70
11.6 ppm
S20 E70
11.7 ppm
N40 E35
116 ppm
N20 E35
12.4 ppm
N0 E35
12.4 ppm
S20 E35
10.5 ppm
N60 E0
12.4 ppm
N40 E0
23.7 ppm
N20 E0
11.9, 13.0 ppm
N0 E0
39.6, 37.4 ppm
Utility Pole
N
1"=~20 feet
surlocklack.srf

Sample Map with Surface Sample Countour Map Overlay

Surface Sample Results (0"-6" depths)

Lackawanna Foundry Site

Lackawanna, New York

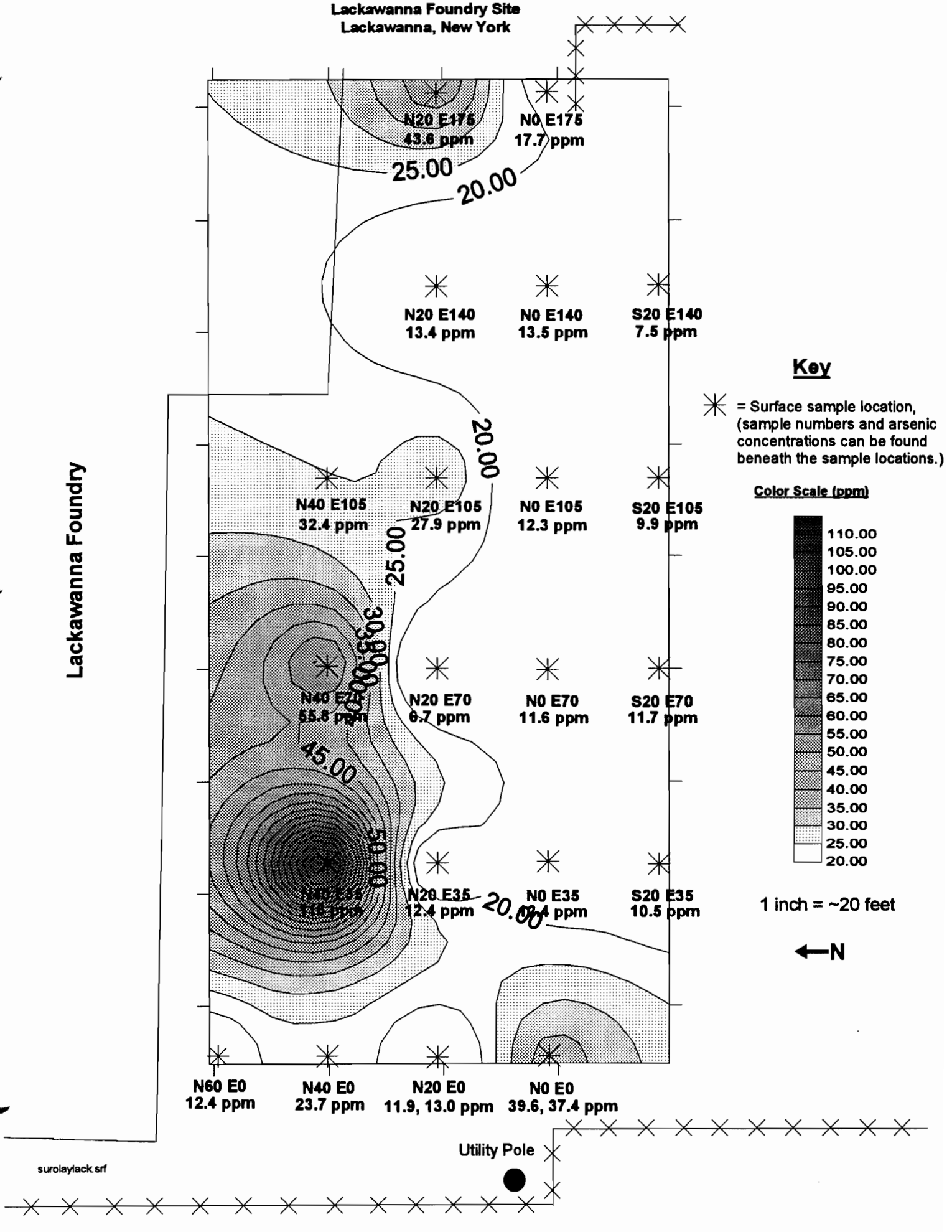
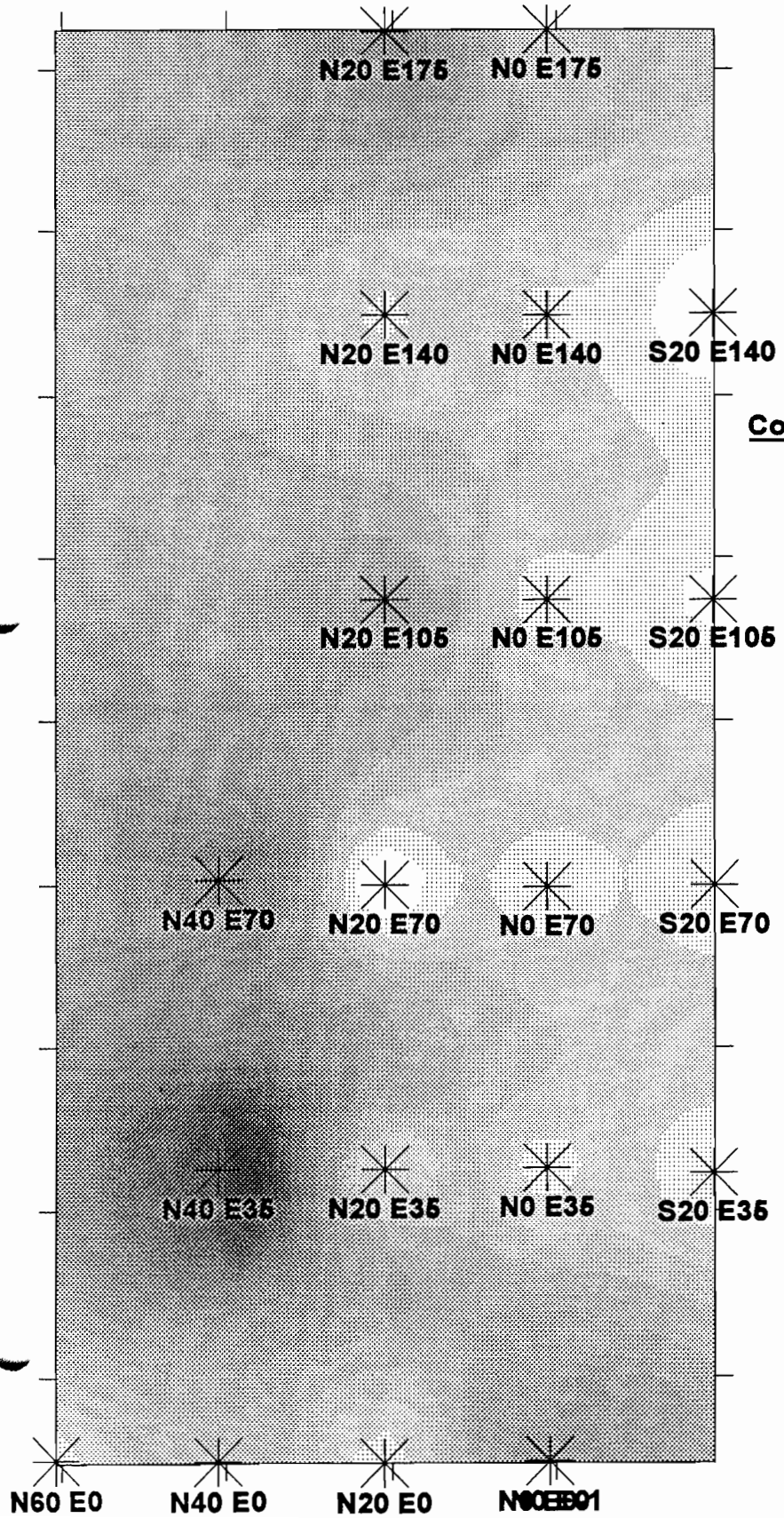


Image Map Using Interpolated Pixels With Sample Map Overlay

Surface Sample Results (0"-6" depths)

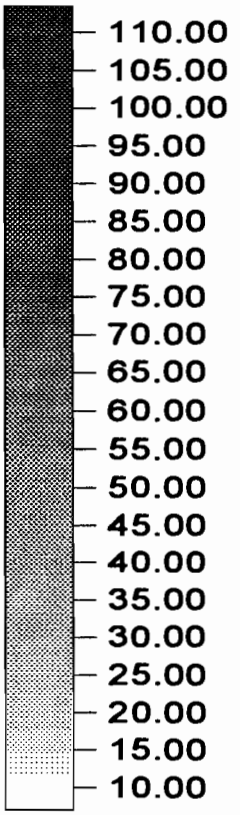
Lackawanna Foundry Site
Lackawanna, New York



Key

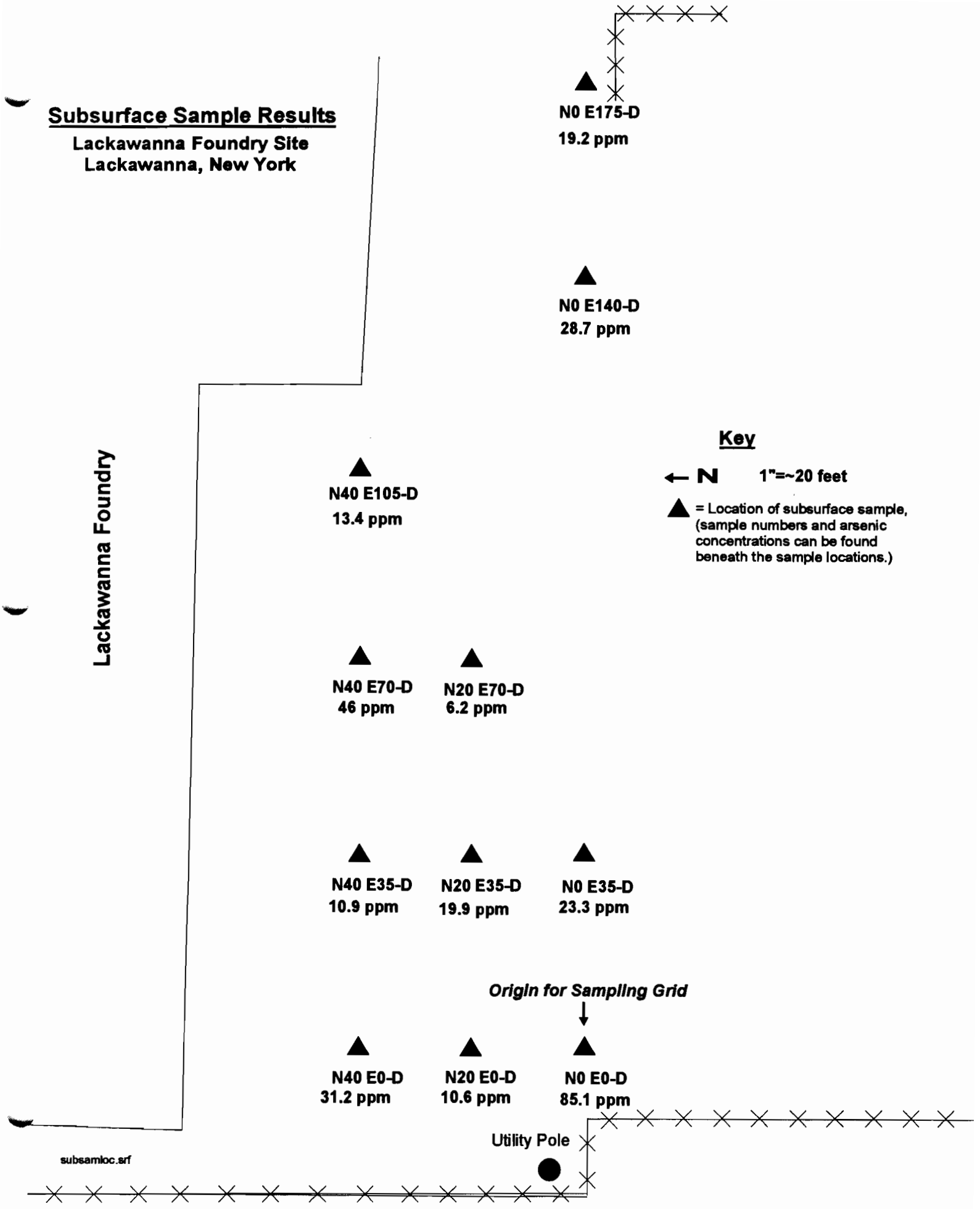
= Surface sample location, (sample numbers can be found beneath the sample locations.)

Color Scale for Arsenic Concentrations (ppm)

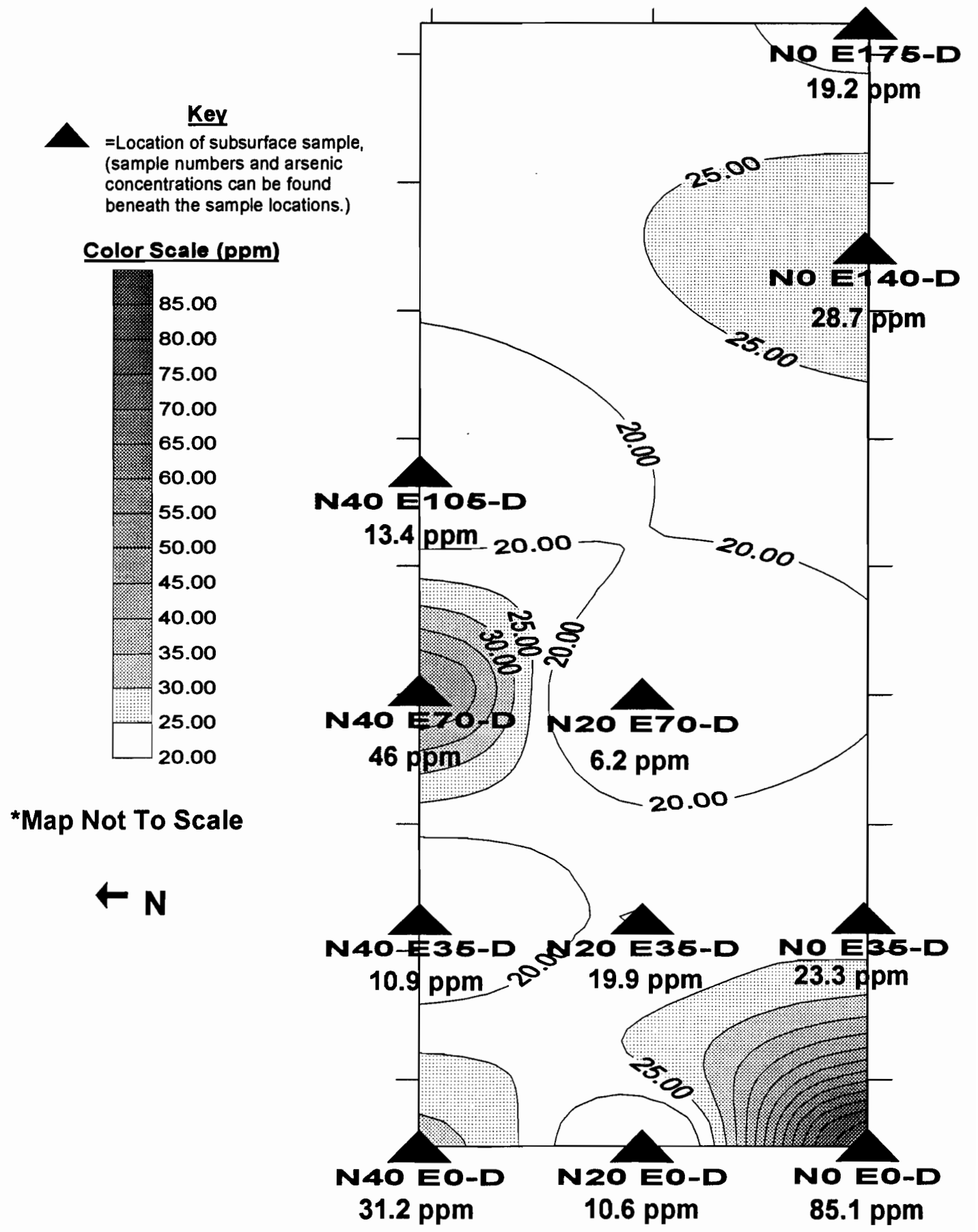


***Map Not To Scale**

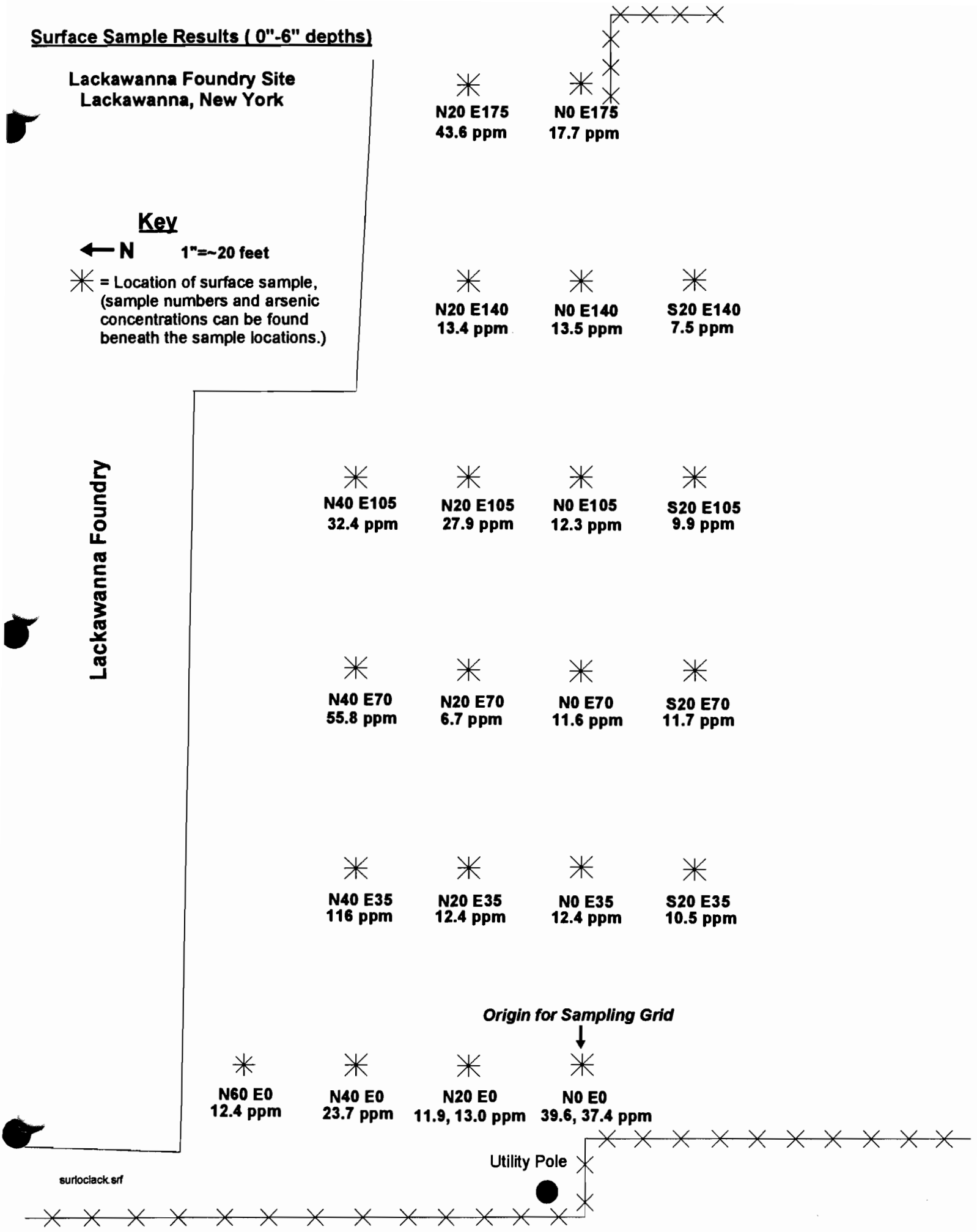
← N


Subsurface Sample Results
Lackawanna Foundry Site
Lackawanna, New York
N0 E175-D
19.2 ppm
N0 E140-D
28.7 ppm
Key
N
1"=~20 feet
= Location of subsurface sample, (sample numbers and arsenic concentrations can be found beneath the sample locations.)
Lackawanna Foundry
N40 E105-D
13.4 ppm
N40 E70-D
46 ppm
N20 E70-D
6.2 ppm
N40 E35-D
10.9 ppm
N20 E35-D
19.9 ppm
N0 E35-D
23.3 ppm
Origin for Sampling Grid
N40 E0-D
31.2 ppm
N20 E0-D
10.6 ppm
N0 E0-D
85.1 ppm
Utility Pole
subsamloc.srf

Contour Map for Subsurface Samples (>12" in depth) Using Inverse Distance to a Power Extrapolation Formula



subconlack.srf


Surface Sample Results (0"-6" depths)
Lackawanna Foundry Site
Lackawanna, New York
Key
N
1"=~20 feet
= Location of surface sample, (sample numbers and arsenic concentrations can be found beneath the sample locations.)
Lackawanna Foundry
N20 E175
43.6 ppm
N0 E175
17.7 ppm
N20 E140
13.4 ppm
N0 E140
13.5 ppm
S20 E140
7.5 ppm
N40 E105
32.4 ppm
N20 E105
27.9 ppm
N0 E105
12.3 ppm
S20 E105
9.9 ppm
N40 E70
55.8 ppm
N20 E70
6.7 ppm
N0 E70
11.6 ppm
S20 E70
11.7 ppm
N40 E35
116 ppm
N20 E35
12.4 ppm
N0 E35
12.4 ppm
S20 E35
10.5 ppm
Origin for Sampling Grid
N60 E0
12.4 ppm
N40 E0
23.7 ppm
N20 E0
11.9, 13.0 ppm
N0 E0
39.6, 37.4 ppm
Utility Pole
surlocjack.srf

Sample Map with Surface Sample Countour Map Overlay

Surface Sample Results (0"-6" depths)
Lackawanna Foundry Site
Lackawanna, New York

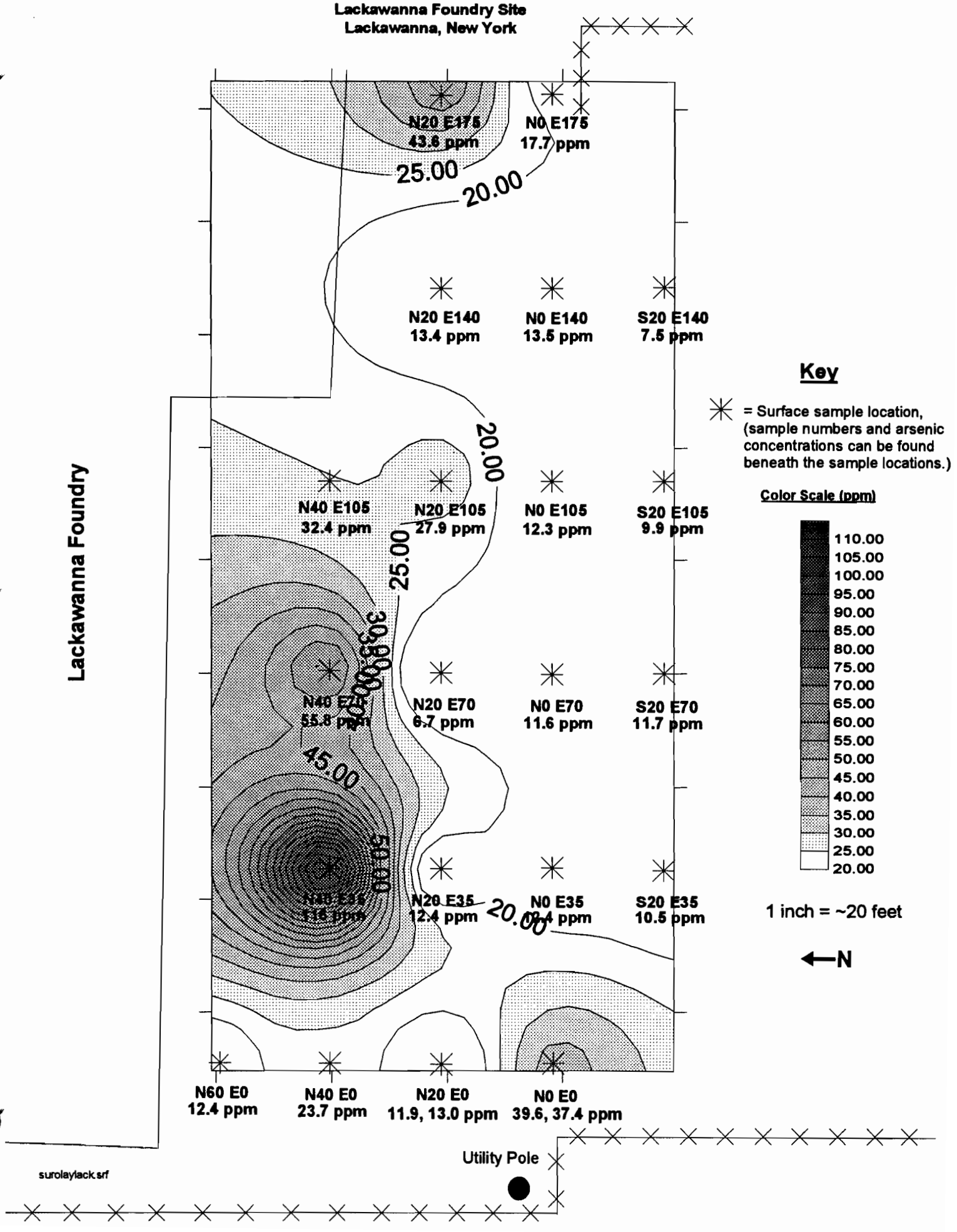
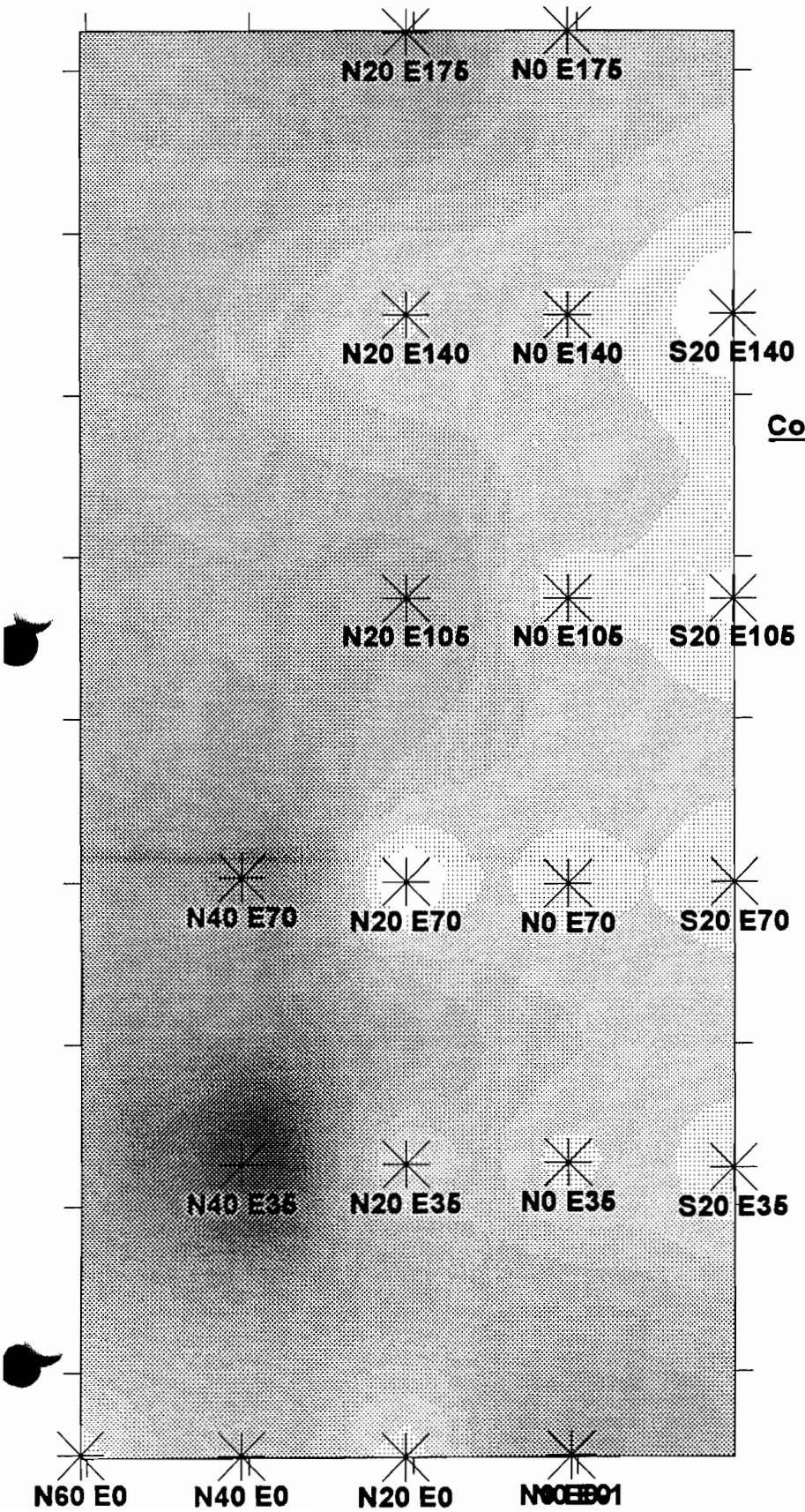


Image Map Using Interpolated Pixels With Sample Map Overlay

Surface Sample Results (0"-6" depths)

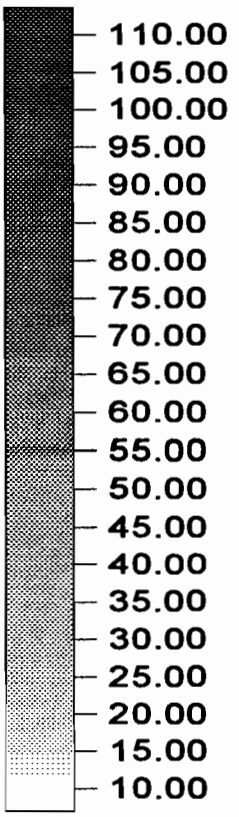
Lackawanna Foundry Site
Lackawanna, New York



Key

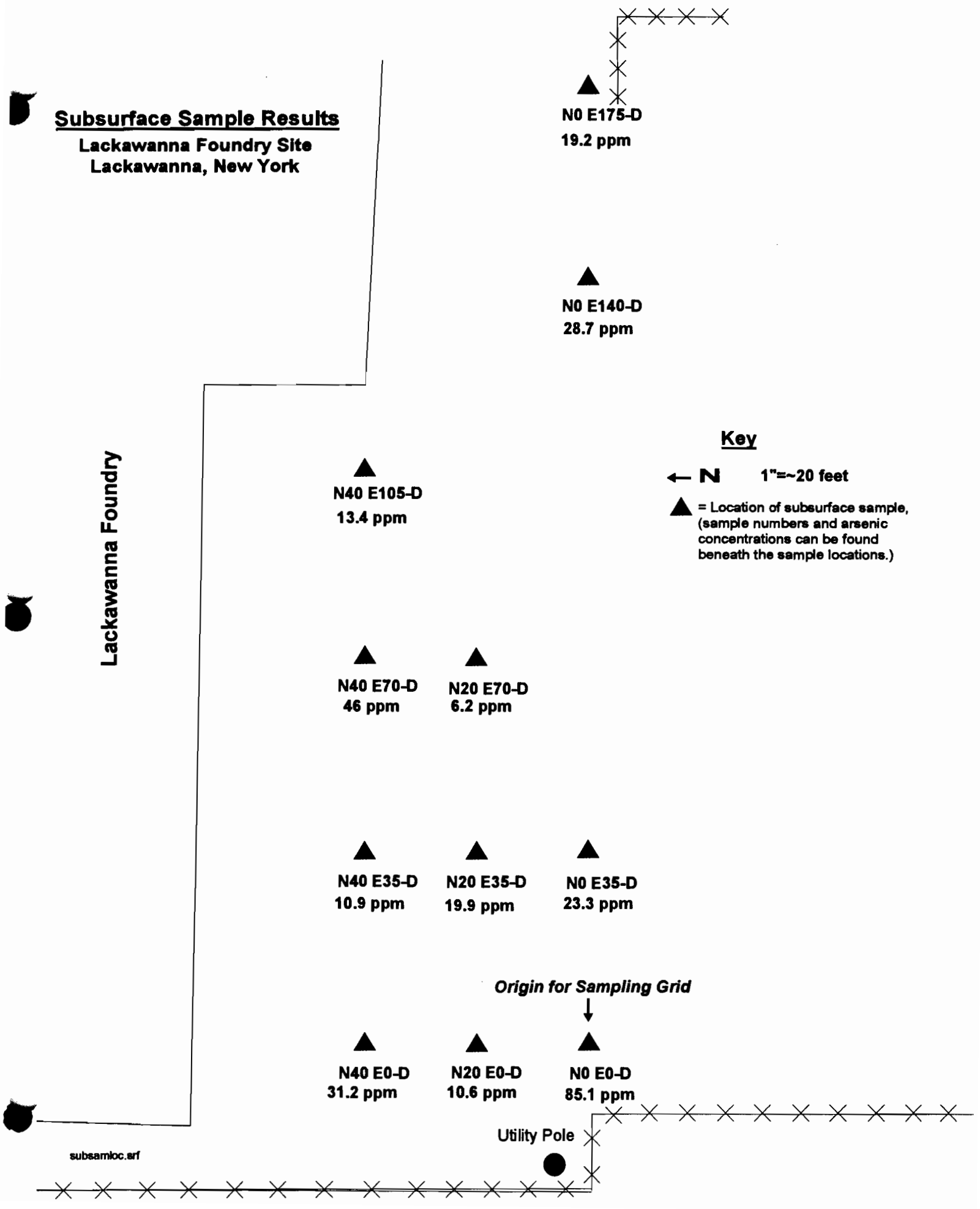
= Surface sample location, (sample numbers can be found beneath the sample locations.)

Color Scale for Arsenic Concentrations (ppm)

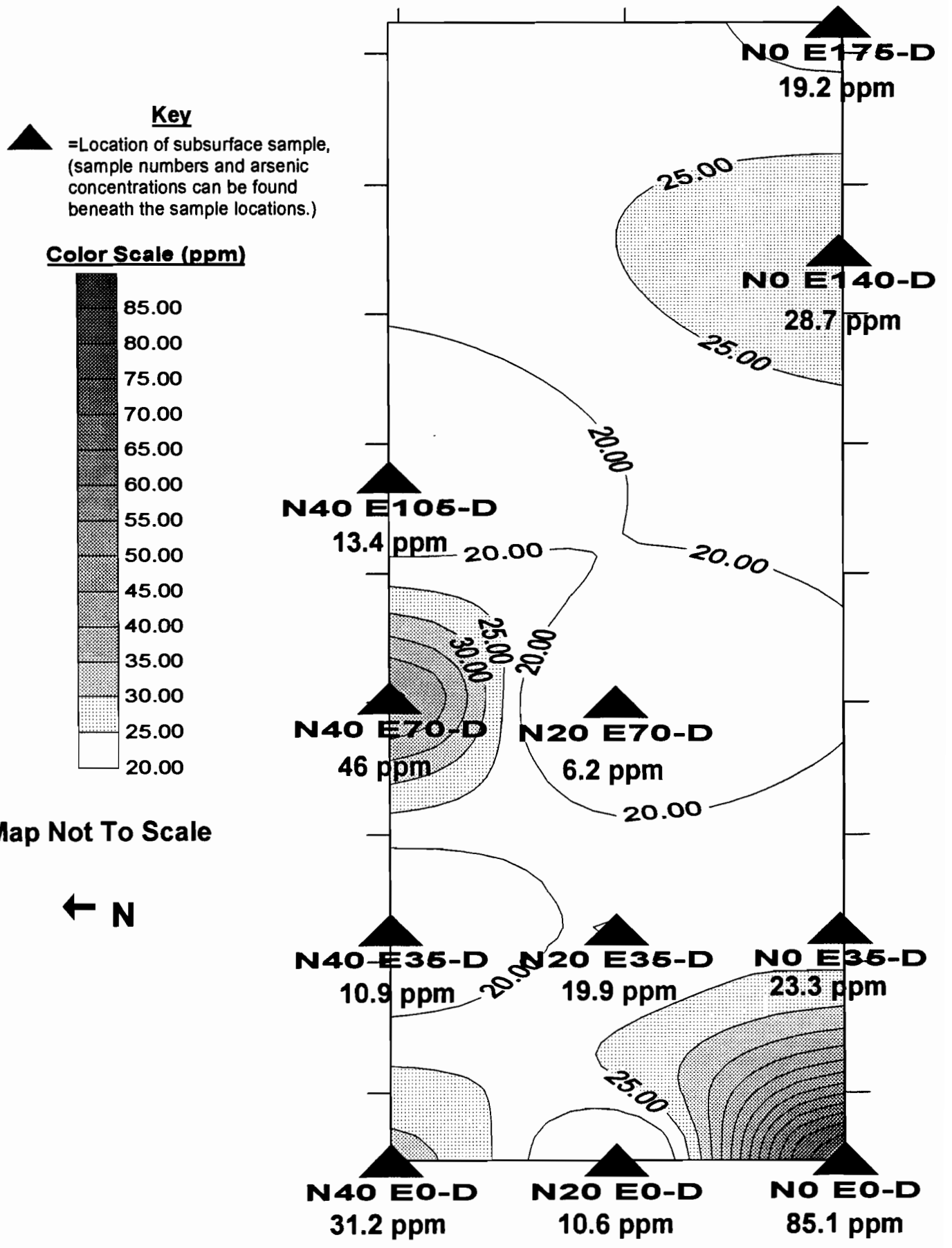


***Map Not To Scale**

← N


Subsurface Sample Results
Lackawanna Foundry Site
Lackawanna, New York
N0 E175-D
19.2 ppm
N0 E140-D
28.7 ppm
Key
N
1"=~20 feet
= Location of subsurface sample, (sample numbers and arsenic concentrations can be found beneath the sample locations.)
Lackawanna Foundry
N40 E105-D
13.4 ppm
N40 E70-D
46 ppm
N20 E70-D
6.2 ppm
N40 E35-D
10.9 ppm
N20 E35-D
19.9 ppm
N0 E35-D
23.3 ppm
Origin for Sampling Grid
N40 E0-D
31.2 ppm
N20 E0-D
10.6 ppm
N0 E0-D
85.1 ppm
Utility Pole
subsamloc.srf

Contour Map for Subsurface Samples (>12" in depth) Using Inverse Distance to a Power Extrapolation Formula



subconlack.srf

Roy F. Weston, Inc.
Federal Programs Division
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-225-6116 • Fax 732-225-7037

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019

START-02-F-04000

TRANSMITTAL MEMO

To:	Kevin Matheis, OSC Removal Action Branch, U.S. EPA Region II
From:	Smita Sumbaly, Inorganic Data Reviewer START Region II
Subject:	Lackawanna Foundry Site Data Validation Assessment
Date:	December 29, 1999

The purpose of this memo is to transmit the following information:

☐ Data validation results for the following parameters:

Total Arsenic	35 samples

☐ Matrices and Number of Samples

Soil	34 samples
Water	01 sample

☐ Sampling dates: October 18 - 20, 1999

The final data assessment narrative and original analytical data package are attached.

cc:	START PM:	James Kearns
	START SITE FILE TDD #:	02-99-09-0025
	ANALYTICAL TDD #:	02-99-10-0015
	PCS#	6274

U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: December 29, 1999

TO: Kevin Matheis, OSC
USEPA Region II

FROM: Smita Sumbaly
START Data Review Team

SUBJECT: QA/QC Compliance Review Summary

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness	Blanks
Spectra Matching Quality	DFTPP and BFB Tuning
Surrogate Spikes	Chromatography
Matrix Spikes/Duplicates	Holding Times
Calibration	Compound ID (HSL, TIC)

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

	I Arsenic	II	III	IV
Acceptable as Submitted				
Acceptable with Comments	X			
Unacceptable, Action Pending				
Unacceptable				

Data Reviewed by: Smita Sumbaly Date: 12/29/99

Approved By: Jim Sova Date: 12/29/99

Area Code/Phone No.: (732) 225-6116

NARRATIVE

CASE No. 6274

SITE NAME: **Lackawanna Foundry Site**

2 Elm Street, Lackawanna, Erie County, New York.

Laboratory Name: Severn Trent Laboratories, Inc, 10 Hazelwood Drive, Amherst, NY.

INTRODUCTION:

The laboratory's portion of this Case consisted of 34 - soil and 1 - water samples collected on October 8 - 20, 1999.

The laboratory reported No problem(s) with the receipt of these samples.

The laboratory reported No problems with the analyses of Total Arsenic - Inorganic parameters.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the following forms.

IV. Inorganic:-

Y Data Summary/Tabulated Results
Y Initial and Continuing Calibration
Y Blanks
Y ICP Interference Check
Y Spike Sample Recovery
Y Duplicates
Y Detection Limits
NA Standard Addition Results
Y ICP Serial Dilutions
Y Holding Times
Y ICP Interelement Correction Factors
Y ICP Linear Ranges
Y Chain of Custody
Y Raw Data
Y Quantitation, Conversions, Dilutions, etc.

Comments:

1. Refer to Data Assessment Narrative.

Title: Evaluation of Inorganic Data for the Contract laboratory Program Appendix A.2: Data Assessment Narrative

Date: Jan. 1992
Number: HW-2
Revision: 11

Case #:RFP # 6274 **Site: Lackawanna Foundry Site**

SDG#: 6932 **Lab: Severn Trent Laboratories, Inc.** **Matrix: Soil: 34**

Contractor: WESTON-START **Reviewer: Smita Sumbaly** **Water: 01**

A.2.1 Validation Flags- The following flags have been applied in red by the data validator and must be considered by the data user.

J- This flag indicates the result qualified as estimated.

Red- Line- A red-line drawn through a sample result indicates an unusable value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user.

Fully Usable Data- The results that do not carry "J" or "red-line" are fully usable.

Contractual Qualifiers- The legend of contractual qualifiers applied by the laboratory on Form I's is found on page B-20 of SOW ILM01.0.

A.2.2 The data assessment is given below and on the attached sheets.

On October 18 - 20, 1999, USEPA Region II sampling personnel collected thirty four (34) soil samples from a grid and equipment blank sample from the Lackawanna Foundry Site, 2 Elm Street, Lackawanna, Erie County, New York. Samples for Total Arsenic were hand delivered to Severn Trent Laboratories, Inc., 10 Hazelwood Drive, Amherst, New York. The laboratory verified that samples were received intact, properly preserved and in sealed shipping containers.

The soil samples were analyzed for Total Arsenic following the Contract Laboratory Program (CLP) Statement of Work (SOW) number ILM04.0.

A.2.2 (continuation)

Client identification (ID) and laboratory ID numbers are as follows:

Client ID No.	Laboratory ID No.	Matrix
N0E140D	AD917489	Soil
N0E175D	AD917491	Soil
N0E0	AD917453	Soil
N0E0-D	AD917472	Soil
N0E0-1[1]	AD917456	Soil
N0E105	AD917467	Soil
N0E140	AD917468	Soil
N0E175	AD917470	Soil
N0E35	AD917459	Soil
N0E35-D	AD917485	Soil
N0E70	AD917465	Soil
N20E0	AD917477	Soil
N20E0-D	AD917473	Soil
N20E0-1[2]	AD917457	Soil
N20E105	AD917463	Soil
N20E140	AD917466	Soil
N20E175	AD917471	Soil
N20E35	AD917458	Soil
N20E35D	AD917492	Soil
N20E70	AD917462	Soil
N20E70D	AD917487	Soil
N40E105-D	AD917488	Soil
N40E0	AD917460	Soil
N40E0-D	AD917474	Soil
N40E105	AD917461	Soil
N40E35	AD917464	Soil
N40E35D	AD917480	Soil
N40E70	AD917469	Soil
N40E70D	AD917486	Soil
N60E0	AD917490	Soil
S20E35	AD917482	Soil
S20E70	AD917481	Soil
S20E105	AD917484	Soil
S20E140	AD917483	Soil
EQPMT	AD917510	Water

[1] Soil sample N0E0-1 is a field duplicate sample of N0E0.
[2] Soil sample N20E0-1 is a field duplicate sample of N20E0.

A.2.2 (continuation)

The results presented in the data package are acceptable with the exception noted in the following data assessment narrative.

CASE DESCRIPTION: RFP # 6274 consists of thirty four(34) soil samples and one equipment blank sample from the Lackawanna Foundry Site.

Holding times: All samples were analyzed within six months; holding times were not exceeded.

CALIBRATION: The correlation coefficient (r^2) of standard concentration versus absorbance readings is greater than (>) 0.995 for linear calibration curves generated in the data package.

RAW DATA: The laboratory provided the supporting raw data for this package. This data package contains summary of analytical results, blank results, initial & continuing calibration recovery, spike sample recovery, lab duplicate results, laboratory control sample results, serial dilution summary and analysis run log.

INITIAL CALIBRATION VERIFICATION/CONTINUING CALIBRATION VERIFICATION: ICV/CCV were run at appropriate intervals as noted on the Calibration Summary form. All ICV/CCV recoveries are within the acceptable range of 90 to 110%.

DUPLICATE ANALYSIS: Data met laboratory duplicate analysis QC criteria (≤ 20% RPD)

LABORATORY CONTROL SAMPLES: LCS recoveries are within the acceptable range of 80-120%.

MATRIX SPIKE RECOVERY:- Matrix Spike recoveries are within the acceptable range of 75-125%.

CRDL STANDARD RECOVERY: CRDL Standard recoveries are within the acceptable range of 80-120%.

FIELD DUPLICATE ANALYSIS:- Data met field duplicate analysis QC criteria (≤ 20% RPD)

pH: pH for aqueous samples reported < 2.

ICP SERIAL DILUTION:

The following positive TAL inorganic data > 10 X IDL (or > MDL when the MDL is > 10 X IDL) were either qualified as estimated "J" or rejected "red-line" because the percent difference (% D) between the Initial Sample result (I) and the Serial Dilution Sample result (S) is either between 10-100% or > 100% when the concentration of I is > 10 X IDL:

ANALYTE	CONTROL LIMIT	PERCENT DIFFERENCE	QUALIFIER	ASSOCIATED SAMPLES
Arsenic	>100 ug/l	34.7%	"J"	N0E0, N0E0-1, N40E105, N20E105, N40E35, N40E70, N20E175, N40E0-D & N0E0-D

A.2.2 (continuation)

A.2.3 Contract Problem/Non-Compliance:

None

MMB/ESAT Reviewer: _____ Signature _____ Date:

Contractor Reviewer: Anita Dunbar Signature 12/29/99 Date:

Verified by: _____ Signature _____ Date:

U.S.EPA - CLP
FORM - VI

EPA SAMPLE NO.
N20E0 & N20E0-1

FIELD DUPLICATE

LAB NAME: Severn Trent Laboratories, Inc. CONTRACT: Weston-START

LAB CODE: STL ~~CASE~~ RFP NO.: 6274 SAS NO.: — SDG.: 6932

MATRIX(SOIL/WATER): Soil LEVEL(LOW/MED): Low

% SOLIDS FOR SAMPLE: 75.0 % SOLIDS FOR DUPLICATE: 71.0

CONCENTRATION UNITS (UG/L OR MG/KG DRY WEIGHT): ug/L.

ANALYTE	CONTROL LIMIT	SAMPLES(S) N20E0	C	DUPLICATE(S) N20E0-1	C	RPD	Q	M
Arsenic	±20	43.64		47.23		<2xCRDL		

EPA SAMPLE NO.
N0E0 and N0E0-1

% SOLIDS FOR SAMPLE: 74.0 % SOLIDS FOR DUPLICATE: 66.0

ANALYTE	CONTROL LIMIT	SAMPLES(S) N0E0	C	DUPLICATE(S) N0E0-1	C	RPD	Q	M
Arsenic	100%	137.78		124.56		10.1%		

OTHER ANALYTES WORK TABLE

Project: Lackawanna Foundry Site

Sampling Date: October 18 - 20, 1999

SAMPLE #/CONCENTRATION (MG/KG)

Total Metals	Instrument Detection Limit (IDL)	Soil N0E140D AD917489	Soil N0E175D AD917491	Soil N0E0 AD917453	Soil N0E0-D AD917472	Soil N0E0-1 AD917456	Soil N0E105 AD917467
Percent Solids		85.0	81.0	74.0	85.0	66.0	73.0
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Arsenic	2.0	28.7	19.2	36.9 J	85.1 J	37.4 J	12.3

Total Metals	Instrument Detection Limit (IDL)	Soil N0E140 AD917468	Soil N0E175 AD917470	Soil N0E35 AD917459	Soil N0E35-D AD917485	Soil N0E70 AD917465	Soil N20E0 AD917477
Percent Solids		73.0	74.0	83.0	71.0	74.0	75.0
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Arsenic	2.0	13.5	17.7	12.4	23.3	11.6	11.9

Total Metals	Instrument Detection Limit (IDL)	Soil N20E0-D AD917473	Soil N20E0-1 AD917457	Soil N20E105 AD917463	Soil N20E140 AD917466	Soil N20E175 AD917471	Soil N20E35 AD917458
Percent Solids		82.0	71.0	85.0	81.0	77.0	74.0
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Arsenic	2.0	10.6	13.0	27.9 J	13.4	43.6 J	12.4

Inorganic Qualifiers

U - non-detected compound
J - estimated value
B - between the instrument detection limit (IDL) and the contract required detection limit (CRDL)
R - rejected compound

OTHER ANALYTES WORK TABLE

Project: Lackawanna Foundry Site

Sampling Date: October 18 - 20, 1999

SAMPLE #/CONCENTRATION (MG/KG)

Total Metals	Instrument Detection Limit (IDL)	Soil N20E35D AD917492	Soil N20E70 AD917462	Soil N20E70D AD917487	Soil N40E105-D AD917488	Soil N40E0 AD917460	Soil N40E0-D AD917474
Percent Solids		84.0	82.0	79.0	75.0	72.0	81.0
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Arsenic	2.0	19.9	6.7	6.2	13.4	23.7	31.2 J

Total Metals	Instrument Detection Limit (IDL)	Soil N40E105 AD917461	Soil N40E35 AD917464	Soil N40E35D AD917480	Soil N40E70 AD917469	Soil N40E70D AD917486	Soil N60E0 AD917490
Percent Solids		76.0	75.0	70.0	74.0	85.0	86.0
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0
Arsenic	2.0	32.4 J	116 J	10.9	55.8 J	46.0	12.4

Total Metals	Instrument Detection Limit (IDL)	Soil S20E35 AD917482	Soil S20E70 AD917481	Soil S20E105 AD917484	Soil S20E140 AD917483		
Percent Solids		75.0	80.0	80.0	79.0		
Dilution Factor		1.0	1.0	1.0	1.0		
Arsenic	2.0	10.5	11.4	9.9	7.5		

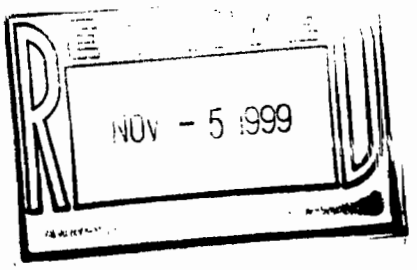
SAMPLE #/CONCENTRATION (UG/L)

Total Metals	Instrument Detection Limit (IDL)	Water EQPMT AD917510					
Percent Solids		0.0					
Dilution Factor		1.0					
Arsenic	10.0	10.0 U					

Inorganic Qualifiers

U - non-detected compound
J - estimated value
B - between the instrument detection limit (IDL) and the contract required detection limit (CRDL)
R - rejected compound

STL
Committed To *Your* Success



SDG NARRATIVE

Laboratory Name: Severn Trent Laboratories, Inc.

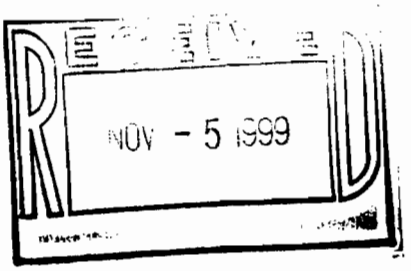
Laboratory Code: STL-Buffalo

Contract Number: NY99-220

Sample Identifications:

N0E0
N0E0-1
N0E0-D
N0E105
N0E140
N0E140-D
N0E175
N0E35
N0E35-D
N0E70
N20E0
N20E0-1
N20E0-D
N20E105
N20E140
N20E175
N20E35
N20E35-D
N20E70
N20E70-D
N40E0
N40E0-D
N40E105
N40E105-D
N40E35
N40E35-D
N40E70
N40E70-D
N60E0
NOE175-D
S20135
S20140
S20E35
S20E70

STL
Committed To *Your* Success



METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results is indicated on the specific data tables. The method number presented refers to the following U.S. Environmental Protection Agency reference:

- U.S. Environmental Protection Agency Contract Laboratory Program (CLP); ILM04.0.

COMMENTS

Comments pertain to data on one or all pages of this report.

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

The sample cooler was received at ambient temperature.

METALS DATA

Sample identifications were abbreviated due to software limitations.

The IDL was elevated to the Client Requested Detection Limit (CDL).

"I certify that this data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Susan L. Tinsmith
Laboratory Director

11/3/99
Date

ROY F WESTON

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.:6932__

Protocol Version: CLP-M

WESTON Sample No.	Lab Sample ID.
_N20E140_____	__AD917466____
_N20E175_____	__AD917471____
_N20E35_____	__AD917458____
_N20E35D_____	__AD917492____
_N20E70_____	__AD917462____
_N20E70D_____	__AD917487____
_N40E-D_____	__AD917488____
_N40E0_____	__AD917460____
_N40E0-D_____	__AD917474____
_N40E105_____	__AD917461____
_N40E35_____	__AD917464____
_N40E35D_____	__AD917480____
_N40E70_____	__AD917469____
_N40E70D_____	__AD917486____
_N60E0_____	__AD917490____
_S20E35_____	__AD917482____
_S20E70_____	__AD917481____
_S20135_____	__AD917484____
_S20140_____	__AD917483____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the Protocol, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Susan L Tinsmith Name: Susan L. Tinsmith_____

Date: 11/3/99 Title: Laboratory_Manager_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

EQPMT

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): WATER Lab Sample ID: AD917510

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: __0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_		_		NR
7440-36-0	Antimony_		_		NR
7440-38-2	Arsenic__	10.0_	U		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: COLORLESS Clarity Before: CLEAR_ Texture: _____

Color After: COLORLESS Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693211-STA00055_____

CLIENT_SAMPLE_ID:_EQPMT-BLK_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

NOE140D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917489

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _85.0

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	28.7			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693232-STA00079

CLIENT_SAMPLE_ID:_N0E140-D

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

NOE175D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917491

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _81.0

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__	19.2_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693234-STA00079

CLIENT_SAMPLE_ID:_N0E175-D

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E0

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917453

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _74.0

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__	36.9_	_	J	P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693201-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E0-D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917472

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _85.0

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__	85.1_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693220-STA00079_____

ROY F WESTON

000010

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E0-1

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917456

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _66.0

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__	37.4_	_	J	P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693202-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E105

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917467

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _73.0

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	12.3			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693215-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E140

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917468

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _73.0

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__	13.5_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693216-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E175

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917470

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _74.0

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	17.7			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693218-STA00079

ROY F WESTON

000014

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E35

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917459

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _83.0

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__	12.4_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693206-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E35-D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917485

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _71.0

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	23.3			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693228-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N0E70

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917465

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _74.0

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__	11.6_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693213-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E0

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 5932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917477

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _75.0

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	11.9			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ____

Comments:

LAB_SAMPLE_ID:_A9693203-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E0-D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917473

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _82.0

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__	10.6_			P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ____

Comments:

LAB_SAMPLE_ID:_A9693221-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E0-1

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932_

Matrix (soil/water): SOIL_ Lab Sample ID: AD91757

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _71.0

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__	13.0_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693204-STA00079_____

ROY F WESTON

000020

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E105

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917463

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _85.0

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	27.9		J	P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693210-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E140

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917466

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _81.0

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__	13.4			P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693214-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E175

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917471

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _77.0

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__	43.6_		J	P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693219-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E35

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917458

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _74.0

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__	12.4_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693205-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E35D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917492

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _84.0

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__	19.9_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693235-STA00079_____

CLIENT_SAMPLE_ID:_N20E35-D_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E70

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917462

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _82.0

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__	6.7_			P_
7440-39-3	Barium___				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium__				NR
7440-70-2	Calcium__				NR
7440-47-3	Chromium_				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693209-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N20E70D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917487

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _79.0

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__	6.2_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693230-STA00079

CLIENT_SAMPLE_ID:_N20E70-D

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E-D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932_

Matrix (soil/water): SOIL_ Lab Sample ID: AD917488

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _75.0

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__	13.4_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693231-STA00079_____

CLIENT_SAMPLE_ID:_N40E105-D_____

ROY F WESTON

000028

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E0

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917460

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _72.0

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__	23.7_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693207-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E0-D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917474

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _81.0

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__	31.2_	_	J	P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693222-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E105

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917461

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _76.0

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__	32.4_	_	J	P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693208-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E35

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932_

Matrix (soil/water): SOIL_ Lab Sample ID: AD917464

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _75.0

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	116		J	P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW Clarity After: CLEAR Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693212-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E35D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917480

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _70.0

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	10.9			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693223-STA00079

CLIENT_SAMPLE_ID:_N40E35-D

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E70

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917469

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _74.0

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__	55.8_	_	J	P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693217-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N40E70D

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917486

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _85.0

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__	46.0_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693229-STA00079_____

CLIENT_SAMPLE_ID:_N40E70-D_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

N60E0

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917490

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _86.0

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__	12.4_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693233-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

S20E35

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917482

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _75.0

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	10.5			P
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693225-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

S20E70

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932

Matrix (soil/water): SOIL_ Lab Sample ID: AD917481

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _80.0

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__	11.4_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693224-STA00079_____

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

S20135

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917484

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _80.0

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__	9.9_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693227-STA00079

ROY F WESTON

1

INORGANIC ANALYSES DATA SHEET

WESTON SAMPLE NO.

S20140

Lab Name: SEVERN_TRENT_LABORATORIES Contract: NY99-220__

Lab Code: STLBUF Case No.: 8461_ SAS No.: _____ SDG No.: 6932__

Matrix (soil/water): SOIL_ Lab Sample ID: AD917483

Level (low/med): LOW__ Date Received: 10/20/99

% Solids: _79.0

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__	7.5_	_		P_
7440-39-3	Barium___		_		NR
7440-41-7	Beryllium		_		NR
7440-43-9	Cadmium__		_		NR
7440-70-2	Calcium__		_		NR
7440-47-3	Chromium_		_		NR
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: OPAQUE Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: ___

Comments:

LAB_SAMPLE_ID:_A9693226-STA00079

CHAIN OF CUSTODY RECORD

RFP No.:	PO No.:
6274	7034

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 732-225-6116 Fax: 732-225-7037

Matrix Box No.:	Preservative Box No.:
1. Surface Water	1. HCl
2. Ground Water	2. HNO3
3. Leachate	3. NaOH
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. *Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Air	
9. *Other (Specify)	* See Comments

Send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #s)	RAS ANALYSIS VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSIS IGN	COR	REAC	OTHER
N0E0 *	10/19/99/900	5	L/M	G	6										ARSENIC
N0E0-1	10/19/99/905	5	L/M	G	6										ARSENIC
N20E0 *	10/19/99/907	5	L/M	G	6										ARSENIC
N20E0-1	10/19/99/908	5	L/M	G	6										ARSENIC
N20E35	10/19/99/910	5	L/M	G	6										ARSENIC
N0E35	10/19/99/915	5	L/M	G	6										ARSENIC
N40E0	10/19/99/915	5	L/M	G	6										ARSENIC
N40E105	10/19/99/925	5	L/M	G	6										ARSENIC
N20E70	10/19/99/922	5	L/M	G	6										ARSENIC
N20E105	10/19/99/930	5	L/M	G	6										ARSENIC
EQPMT-BLK	10/19/99/845	4	L	G	2										ARSENIC

Comments:
* - additional volume submitted for MS/MSD analysis. (PA)

COOLER # 1 of 3

Person Assuming Responsibility for Sample: P. Austin/S.T.A.R.T. — Time/ Date (MM/DD/YY): 1615 10/19/99

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
ALL	P. Austin	08:30	10/21/99		Delivery to Lab
All		07:10	10/21/99	STL	Analysis
		0910	10/22/99		

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

coolers 4/4/3 °C

1 of 3

RFP No.:	PO No.:
6274	7034

CHAIN OF CUSTODY RECORD

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 732-225-6116 Fax: 732-225-7037

Matrix Box No.:	Preservative Box No.:
1. Surface Water	1. HCl
2. Ground Water	2. HN03
3. Leachate	3. NaOH
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. *Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Air	
9. *Other (Specify)	* See Comments

Send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #s)	RAS ANALYSIS VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSIS IGN	COR	REAC	OTHER
N40E35	10/19/99/930	5	L/M	G	6										ARSENIC
N0E70	10/19/99/930	5	L/M	G	6										ARSENIC
N20E140	10/19/99/938	5	L/M	G	6										ARSENIC
N0E105	10/19/99/940	5	L/M	G	6										ARSENIC
N0E140	10/19/99/945	5	L/M	G	6										ARSENIC
N40E70	10/19/99/950	5	L/M	G	6										ARSENIC
N0E175	10/19/99/955	5	L/M	G	6										ARSENIC
N20E175	10/19/99/935	5	L/M	G	6										ARSENIC
N0E0-D	10/19/99/1140	5	L/M	G	6										ARSENIC
N20E0-D	10/19/99/1145	5	L/M	G	6										ARSENIC
N40E0-D	10/19/99/1150	5	L/M	G	6										ARSENIC
N40E35-D	10/19/99/1155	5	L/M	G	6										ARSENIC

Comments:

2nd COOLER of 3

Person Assuming Responsibility for Sample:	Time/ Date (MM/DD/YY)
P. AUSTIN/START	1618 10/19/99

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
All	P. Austin	08:30	10/20/99		Delivery to Lab
All		09:10	10/20/99	STL	Analysis
		0910	10/20/99	P Cupe	

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

cools 4/18

RFP No.:	CHAIN OF CUSTODY RECORD	Matrix Box No.:	Preservative Box No.
6274		1. Surface Water	1. HCl
PO No.:	SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM	2. Ground Water	2. HNO3
7034	EPA CONTRACT 68-W5-0019	3. Leachate	3. NaOH
	Phone: 732-225-6116 Fax: 732-225-7037	4. Rinsate	4. H2SO4
		5. Soil/Sediment	5. *Other (Specify)
		6. Oil	6. Ice Only
		7. Waste	N. Not Preserved
		8. Air	
		9. *Other (Specify)	* See Comments

6732

Send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #s)	RAS ANALYSIS VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSIS IGN	COR	REAC	OTHER
S20 E70	10/19/99/1200	5	L/M	G	6										ARSENIC
S20 E35	10/19/99/1205	5	L/M	G	6										ARSENIC
S20 140	10/19/99/1210	5	L/M	G	6										ARSENIC
S20 135	10/19/99/1215	5	L/M	G	6										ARSENIC
N0 E35D	10/19/99/1250	5	L/M	G	6										ARSENIC
N40 E70-D	10/19/99/1300	5	L/M	G	6										ARSENIC
N20 E70-D	10/19/99/1350	5	L/M	G	6										ARSENIC
N40 E105-D	10/19/99/1515	5	L/M	G	6										ARSENIC
N0 E140-D	10/19/99/1515	5	L/M	G	6										ARSENIC
N60 E0	10/19/99/1555	5	L/M	G	6										ARSENIC
N0 E175-D	10/19/99/1540	5	L/M	G	6										ARSENIC
N20 E35-D	10/19/99/1500	5	L/M	G	6										ARSENIC

Comments:

3RD COOLER OF 3

Person Assuming Responsibility for Sample: P. AUSTIN/START Time/ Date (MM/DD/YY) 1615 10/19/99

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
All	P. Austin	0830	10/20/99		Delivery to Lab
All		0910	10/21/99	STL,	Analysis
		0910	10/21/99		

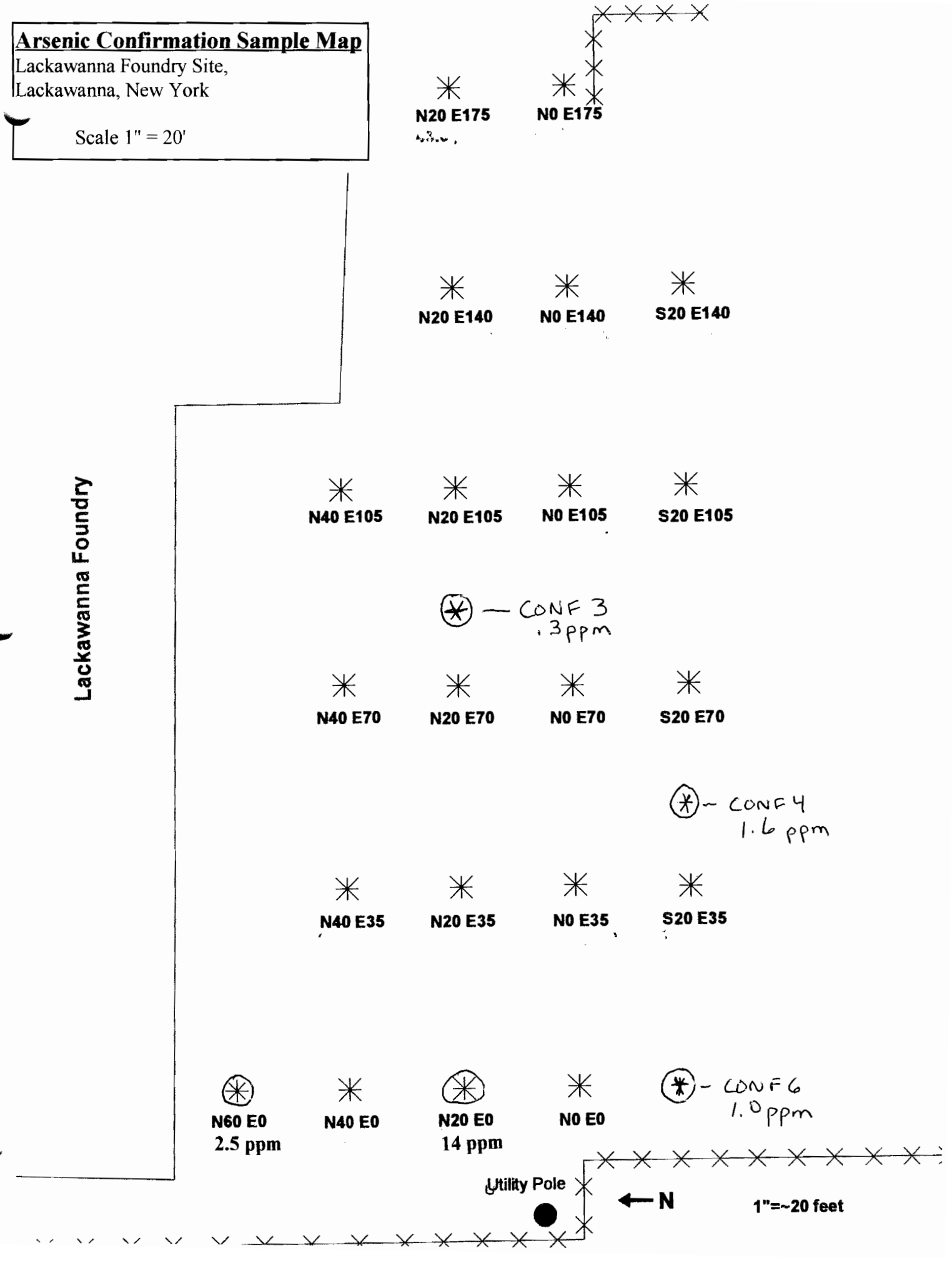
coolers 4/4 @ °C

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, C.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

Attachment 5

Attachment 5

Recreational Area Confirmation Sample Results


Arsenic Confirmation Sample Map
Lackawanna Foundry Site,
Lackawanna, New York
Scale 1" = 20'
N20 E175
N0 E175
N20 E140
N0 E140
S20 E140
Lackawanna Foundry
N40 E105
N20 E105
N0 E105
S20 E105
CONF 3
.3ppm
N40 E70
N20 E70
N0 E70
S20 E70
CONF 4
1.6 ppm
N40 E35
N20 E35
N0 E35
S20 E35
N60 E0
2.5 ppm
N40 E0
N20 E0
14 ppm
N0 E0
CONF 6
1.0 ppm
Utility Pole
N
1"=~20 feet

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10800063
Client I.D.: EARTH TECH

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _ _
Lab I.D.: 10170
Sampled by: Client

ID:10800063 Mat:Soil N20EO 0955H 04/12/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	71%	04/18/00		WC9891
Total Arsenic by furnace method	14mg/kg dw	04/21/00		ME2754

ID:10800064 Mat:Soil N60EO 0959H 04/12/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	76%	04/18/00		WC9891
Total Arsenic by furnace method	2.5mg/kg dw	04/21/00		ME2754

ID:10800065 Mat:Soil ARCONF(3) 1000H 04/12/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	73%	04/18/00		WC9891
Total Arsenic by furnace method	0.30mg/kg dw	04/21/00		ME2754

ID:10800066 Mat:Soil ARCONF(4) 1005H 04/12/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	89%	04/18/00		WC98S
Total Arsenic by furnace method	1.6mg/kg dw	04/21/00		ME2754

ID:10800067 Mat:Soil ARCOF(6) 1010H 04/12/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	84%	04/18/00		WC9891
Total Arsenic by furnace method	1.0mg/kg dw	04/21/00		ME2754

dw = Dry weight

DATE: 05/01/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10800055
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _ _
Lab I.D.: 10170

N20EO 0955H 04/12/00 G

ULI I.D.: 10800063 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	14mg/kg dw J	04/21/00		ME2754

dw = Dry weight

DATE: 05/01/00

Upstate Laboratories, Inc.
alysis Results
port Number: 10800055
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _
Lab I.D.: 10170

N60EO 0959H 04/12/00 G

ULI I.D.: 10800064 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	2.5mg/kg dw	04/21/00		ME2754

dw = Dry weight

DATE: 05/01/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10800055
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _
Lab I.D.: 10170

ARCONF(3) 1000H 04/12/00 G

ULI I.D.: 10800065 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	0.30mg/kg dw J	04/21/00		ME2754

dw = Dry weight

000045

DATE: 05/01/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10800055
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _
Lab I.D.: 10170

ARCONF(4) 1005H 04/12/00 G

ULI I.D.: 10800066 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	1.6mg/kg dw J	04/21/00		ME2754

dw = Dry weight

DATE: 05/01/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 10800055
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL:_ _ _ _
QC:_ _ _ _ _ _ _
Lab I.D.: 10170

ARCOF(6) 1010H 04/12/00 G

ULI I.D.: 10800067 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Total Arsenic by furnace method	1.0mg/kg dw J	04/21/00		ME2754

dw = Dry weight

PO No.:

WESTON. MANAGERS DESIGNERS/CONSULTANTS

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 908-225-6116 Fax: 908-225-7037

MATRIX BOX NO.	Preservative BOX No.
1. Surface Water	1. HCl
2. Ground Water	2. HNO3
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	

Send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #)	RAS ANALYSES VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSES ION	COR	REAC	Full TCLP (% solids)	OTHER
03 N20E0	4/12/00 0955	5	L	G											(x)	Arsenic (1)
04 N60E0	4/12/00 0959	5	L	G											(x)	Arsenic (1)
05 AR conf (3)	4/12/00 1000	5	L	G											(x)	Arsenic (1)
06 AR conf (4)	4/12/00 1005	5	L	G											(x)	Arsenic (1)
★ AR conf (6)	4/12/00 1010	5	L	G											(x)	★ MS/~~MSD~~ Arsenic (3) dupe

Person Assuming Responsibility for Sample: David L Adams — Time: 0955 — Date (MM/DD/YY): 4/12/00

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
All	David L Adams	1600	4/12/00		
Sample Number:	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
					4-14-00 4:05pm
Sample Number:	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
		1200	4/14/00	4-14-00 4:20pm	K. Crump

Roy F. Weston, Inc.
FEDERAL PROGRAMS DIVISION
In Association with Resource Applications, Inc., R.E. Sarriera Associates, PRC Environmental Management, J.C. Johnson & Malhotra, P.C., and GRB Environmental Services, Inc.

0000446

Attachment 6

Attachment 6

Elm Street Residence Sample Results

Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
Mailing: Box 289 • Syracuse, NY 13206
Albany (518) 459-3134
Binghamton (607) 724-0478
Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

November 4, 1999

Ms. Lane Aulick
Earth Tech
7870 Villa Park Dr.
Suite 400
Richmond, VA 23228

Re: Analysis Report #28899177 - 34674 Lackawanna

Dear Ms. Aulick:

Please find enclosed the results for your sample which was picked up by ULI personnel on October 15, 1999.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala

Anthony J. Scala
Director

AJS/jd

Enclosures: report, spreadsheets, disk

cc/encs: N. Scala, ULI
file

Note: Faxed results were given to your office on 10/29/99. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 11/04/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 28899177
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: QC: Lab I.D.: 10170

34674 LACKAWANNA
[redacted]ELM[redacted] ELM-HACKYARA AM 10/12/99 C

ULI I.D.: 28899177 Matrix: Solid

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	Percent Solids	79%	10/18/99		WC7798
Total	Aluminum	11,000mg/kg dw	10/20/99		ME2381
Total	Antimony	<38mg/kg dw	10/20/99		ME2381
Total	Arsenic by furnace method	18mg/kg dw	10/20/99		ME2381
Total	Barium	180mg/kg dw	10/20/99		ME2381
Total	Beryllium	1.4mg/kg dw	10/20/99		ME2381
Total	Cadmium	3.0mg/kg dw	10/20/99		ME2381
Total	Calcium	18,000mg/kg dw	10/20/99		ME2384
Total	Chromium	29mg/kg dw	10/20/99		ME2381
Total	Cobalt	9.7mg/kg dw	10/20/99		ME2381
Total	Copper	55mg/kg dw	10/20/99		ME2381
Total	Iron	22,000mg/kg dw	10/20/99		ME2381
Total	Lead	250mg/kg dw	10/20/99		ME2381
Total	Magnesium	4700mg/kg dw	10/20/99		ME2384
Total	Manganese	800mg/kg dw	10/20/99		ME2381
Total	Mercury	0.35mg/kg dw	10/26/99		MB1611
Total	Nickel	25mg/kg dw	10/20/99		ME2381
Total	Potassium	1300mg/kg dw	10/20/99		ME2384
Total	Selenium by furnace method	<0.6mg/kg dw	10/20/99		ME2381
Total	Silver	<6.3mg/kg dw	10/20/99		ME2381
Total	Sodium	380mg/kg dw	10/20/99		ME2384
Total	Thallium by furnace method	<0.4mg/kg dw	10/20/99		ME2381
Total	Vanadium	<38mg/kg dw	10/20/99		ME2381
Total	Zinc	580mg/kg dw	10/20/99		ME2381
	TCL Volatiles by EPA Method 8260				
	Chloromethane	<3ug/kg	10/25/99		VM2631
	Bromomethane	<3ug/kg	10/25/99		VM2631
	Vinyl Chloride	<2ug/kg	10/25/99		VM2631
	Chloroethane	<3ug/kg	10/25/99		VM2631
	Methylene Chloride	14ug/kg	10/25/99	44	VM2631
	Acetone	<10ug/kg	10/25/99		VM2631
	Carbon Disulfide	<3ug/kg	10/25/99		VM2631
	1,1-Dichloroethene	<3ug/kg	10/25/99		VM2631
	1,1-Dichloroethane	<3ug/kg	10/25/99		VM2631
	trans-1,2-Dichloroethene	<3ug/kg	10/25/99		VM2631
	cis-1,2-Dichloroethene	<3ug/kg	10/25/99		VM2631
	Chloroform	<3ug/kg	10/25/99		VM2631
	1,2-Dichloroethane	<3ug/kg	10/25/99		VM2631
	2-Butanone	<10ug/kg	10/25/99		VM2631

dw = Dry weight

DATE: 11/04/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 28899177
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: GJS
QC: JD IJ
Lab I.D.: 10170
34674 LACKAWANNA
ELM ELM-HACKYARA AM 10/12/99 C

ULI I.D.: 28899177 Matrix: Solid

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
1,1,1-Trichloroethane	<3ug/kg	10/25/99		VM2631
Carbon Tetrachloride	<3ug/kg	10/25/99		VM2631
Bromodichloromethane	<3ug/kg	10/25/99		VM2631
1,2-Dichloropropane	<3ug/kg	10/25/99		VM2631
cis-1,3-Dichloropropene	<3ug/kg	10/25/99		VM2631
Trichloroethene	<3ug/kg	10/25/99		VM2631
Dibromochloromethane	<3ug/kg	10/25/99		VM2631
1,1,2-Trichloroethane	<3ug/kg	10/25/99		VM2631
Benzene	<3ug/kg	10/25/99		VM2631
trans-1,3-Dichloropropene	<3ug/kg	10/25/99		VM2631
Bromoform	<3ug/kg	10/25/99		VM2631
4-Methyl-2-pentanone	<10ug/kg	10/25/99		VM2631
2-Hexanone	<3ug/kg	10/25/99		VM2631
Tetrachloroethene	<3ug/kg	10/25/99		VM2631
1,1,2,2-Tetrachloroethane	<3ug/kg	10/25/99		VM2631
Toluene	<3ug/kg	10/25/99		VM2631
Chlorobenzene	<3ug/kg	10/25/99		VM2631
Ethylbenzene	<3ug/kg	10/25/99		VM2631
Styrene	<3ug/kg	10/25/99		VM2631
m-Xylene and p-Xylene	<3ug/kg	10/25/99		VM2631
o-Xylene	<3ug/kg	10/25/99		VM2631
TCL Semivolatiles by EPA Method 8270				
Phenol	<420ug/kg dw	10/27/99		SA2188
bis(2-Chloroethyl)ether	<420ug/kg dw	10/27/99		SA2188
2-Chlorophenol	<420ug/kg dw	10/27/99		SA2188
1,3-Dichlorobenzene	<420ug/kg dw	10/27/99		SA2188
1,4-Dichlorobenzene	<420ug/kg dw	10/27/99		SA2188
1,2-Dichlorobenzene	<420ug/kg dw	10/27/99		SA2188
2-Methylphenol	<420ug/kg dw	10/27/99		SA2188
2,2'-Oxybis(1-Chloropropane)	<420ug/kg dw	10/27/99		SA2188
4-Methylphenol	<420ug/kg dw	10/27/99		SA2188
n-Nitrosodi-n-propylamine	<420ug/kg dw	10/27/99		SA2188
Hexachloroethane	<420ug/kg dw	10/27/99		SA2188
Nitrobenzene	<420ug/kg dw	10/27/99		SA2188
Isophorone	<420ug/kg dw	10/27/99		SA2188
2-Nitrophenol	<420ug/kg dw	10/27/99		SA2188
2,4-Dimethylphenol	<420ug/kg dw	10/27/99		SA2188
bis(2-Chloroethoxy)methane	<420ug/kg dw	10/27/99		SA2188
2,4-Dichlorophenol	<420ug/kg dw	10/27/99		SA2188

dw = Dry weight

DATE: 11/04/99

pstate Laboratories, Inc.
Analysis Results
Report Number: 28899177
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: CJS
QC: JD
Lab I.D.: 10170

34674 LACKAWANNA
ELM ELM-HACKYARA AM 10/12/99 C

ULI I.D.: 28899177 Matrix: Solid

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
1,2,4-Trichlorobenzene	<420ug/kg dw	10/27/99		SA2188
Naphthalene	<420ug/kg dw	10/27/99		SA2188
4-Chloroaniline	<420ug/kg dw	10/27/99		SA2188
Hexachlorobutadiene	<420ug/kg dw	10/27/99		SA2188
4-Chloro-3-methylphenol	<420ug/kg dw	10/27/99		SA2188
2-Methylnaphthalene	<420ug/kg dw	10/27/99		SA2188
Hexachlorocyclopentadiene	<420ug/kg dw	10/27/99		SA2188
2,4,6-Trichlorophenol	<420ug/kg dw	10/27/99		SA2188
2,4,5-Trichlorophenol	<420ug/kg dw	10/27/99		SA2188
2-Chloronaphthalene	<420ug/kg dw	10/27/99		SA2188
2-Nitroaniline	<4200ug/kg dw	10/27/99		SA2188
Dimethylphthalate	<420ug/kg dw	10/27/99		SA2188
Acenaphthylene	<420ug/kg dw	10/27/99		SA2188
2,6-Dinitrotoluene	<420ug/kg dw	10/27/99		SA2188
3-Nitroaniline	<4200ug/kg dw	10/27/99		SA2188
Acenaphthene	<420ug/kg dw	10/27/99		SA2188
2,4-Dinitrophenol	<4200ug/kg dw	10/27/99		SA2188
4-Nitrophenol	<4200ug/kg dw	10/27/99		SA2188
Dibenzofuran	<420ug/kg dw	10/27/99		SA2188
2,4-Dinitrotoluene	<420ug/kg dw	10/27/99		SA2188
Diethylphthalate	<420ug/kg dw	10/27/99		SA2188
4-Chlorophenylphenylether	<420ug/kg dw	10/27/99		SA2188
Fluorene	<420ug/kg dw	10/27/99		SA2188
4-Nitroaniline	<4200ug/kg dw	10/27/99		SA2188
2-Methyl-4,6-dinitrophenol	<4200ug/kg dw	10/27/99		SA2188
n-Nitrosodiphenylamine	<420ug/kg dw	10/27/99		SA2188
4-Bromophenylphenylether	<420ug/kg dw	10/27/99		SA2188
Hexachlorobenzene	<420ug/kg dw	10/27/99		SA2188
Pentachlorophenol	<840ug/kg dw	10/27/99		SA2188
Phenanthrene	790ug/kg dw	10/27/99		SA2188
Anthracene	<420ug/kg dw	10/27/99		SA2188
Carbazole	<420ug/kg dw	10/27/99		SA2188
di-n-butylphthalate	<420ug/kg dw	10/27/99		SA2188
Fluoranthene	1300ug/kg dw	10/27/99		SA2188
Pyrene	1300ug/kg dw	10/27/99		SA2188
Butylbenzylphthalate	<420ug/kg dw	10/27/99		SA2188
3,3'-Dichlorobenzidine	<420ug/kg dw	10/27/99		SA2188
Benzo(a)anthracene	550ug/kg dw	10/27/99		SA2188
Chrysene	670ug/kg dw	10/27/99		SA2188
bis(2-Ethylhexyl)phthalate	<420ug/kg dw	10/27/99		SA2188

dw = Dry weight

DATE: 11/04/99

pstate Laboratories, Inc.
Analysis Results
Report Number: 28899177
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: GS
QC: JD
Lab I.D.: 10170
34674 LACKAWANNA
[redacted]ELM [redacted] ELM-HACKYARA AM 10/12/99 C

ULI I.D.: 28899177 Matrix: Solid

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
di-n-octylphthalate	<420ug/kg dw	10/27/99		SA2188
Benzo(b)fluoranthene	<420ug/kg dw	10/27/99		SA2188
Benzo(k)fluoranthene	<420ug/kg dw	10/27/99		SA2188
Benzo(a)pyrene	600ug/kg dw	10/27/99		SA2188
Indeno(1,2,3-cd)pyrene	<840ug/kg dw	10/27/99		SA2188
Dibenzo(a,h)anthracene	<840ug/kg dw	10/27/99		SA2188
Benzo(ghi)perylene	<840ug/kg dw	10/27/99		SA2188

dw = Dry weight

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 VOLATILE ASP CODES

(B)POSSIBLE/PROBABLE BLANK CONTAMINATION (D)ALL COMPOUNDS IDENTIFIED AT A SECONDARY DILUTION FACTOR (J)ESTIMATED VALUE
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS) PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS) PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20, CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

PARAMETER	[redacted] ELM
Percent Solids	79%
Total Aluminum	11,000mg/kg dw
Total Antimony	<38mg/kg dw
Total Arsenic by furnace method	18mg/kg dw
Total Barium	180mg/kg dw
Total Beryllium	1.4mg/kg dw
Total Cadmium	3.0mg/kg dw
Total Calcium	18,000mg/kg dw
Total Chromium	29mg/kg dw
Total Cobalt	9.7mg/kg dw
Total Copper	55mg/kg dw
Total Iron	22,000mg/kg dw
Total Lead	250mg/kg dw
Total Magnesium	4700mg/kg dw
Total Manganese	800mg/kg dw
Total Mercury	0.35mg/kg dw
Total Nickel	25mg/kg dw
Total Potassium	1300mg/kg dw
Total Selenium by furnace method	<0.6mg/kg dw
Total Silver	<6.3mg/kg dw
Total Sodium	380mg/kg dw
Total Thallium by furnace method	<0.4mg/kg dw
Total Vanadium	<38mg/kg dw
Total Zinc	580mg/kg dw
Chloromethane	<3ug/kg
Bromomethane	<3ug/kg
Vinyl Chloride	<2ug/kg
Chloroethane	<3ug/kg
Methylene Chloride	14ug/kg
Acetone	<10ug/kg
Carbon Disulfide	<3ug/kg
1,1–Dichloroethene	<3ug/kg
1,1–Dichloroethane	<3ug/kg
trans–1,2–Dichloroethene	<3ug/kg
cis–1,2–Dichloroethene	<3ug/kg
Chloroform	<3ug/kg
1,2–Dichloroethane	<3ug/kg

PARAMETER	[redacted] ELM
2–Butanone	<10ug/kg
1,1,1–Trichloroethane	<3ug/kg
Carbon Tetrachloride	<3ug/kg
Bromodichloromethane	<3ug/kg
1,2–Dichloropropane	<3ug/kg
cis–1,3–Dichloropropene	<3ug/kg
Trichloroethene	<3ug/kg
Dibromochloromethane	<3ug/kg
1,1,2–Trichloroethane	<3ug/kg
Benzene	<3ug/kg
trans–1,3–Dichloropropene	<3ug/kg
Bromoform	<3ug/kg
4–Methyl–2–pentanone	<10ug/kg
2–Hexanone	<3ug/kg
Tetrachloroethene	<3ug/kg
1,1,2,2–Tetrachloroethane	<3ug/kg
Toluene	<3ug/kg
Chlorobenzene	<3ug/kg
Ethylbenzene	<3ug/kg
Styrene	<3ug/kg
m–Xylene and p–Xylene	<3ug/kg
o–Xylene	<3ug/kg
Phenol	<420ug/kg dw
bis(2–Chloroethyl)ether	<420ug/kg dw
2–Chlorophenol	<420ug/kg dw
1,3–Dichlorobenzene	<420ug/kg dw
1,4–Dichlorobenzene	<420ug/kg dw
1,2–Dichlorobenzene	<420ug/kg dw
2–Methylphenol	<420ug/kg dw
2,2'–Oxybis(1–Chloropropane)	<420ug/kg dw
4–Methylphenol	<420ug/kg dw
n–Nitrosodi–n–propylamine	<420ug/kg dw
Hexachloroethane	<420ug/kg dw
Nitrobenzene	<420ug/kg dw
Isophorone	<420ug/kg dw
2–Nitrophenol	<420ug/kg dw
2,4–Dimethylphenol	<420ug/kg dw

PARAMETER	[redacted] ELM
bis(2-Chloroethoxy)methane	<420ug/kg dw
2,4-Dichlorophenol	<420ug/kg dw
1,2,4-Trichlorobenzene	<420ug/kg dw
Naphthalene	<420ug/kg dw
4-Chloroaniline	<420ug/kg dw
Hexachlorobutadiene	<420ug/kg dw
4-Chloro-3-methylphenol	<420ug/kg dw
2-Methylnaphthalene	<420ug/kg dw
Hexachlorocyclopentadiene	<420ug/kg dw
2,4,6-Trichlorophenol	<420ug/kg dw
2,4,5-Trichlorophenol	<420ug/kg dw
2-Chloronaphthalene	<420ug/kg dw
2-Nitroaniline	<4200ug/kg dw
Dimethylphthalate	<420ug/kg dw
Acenaphthylene	<420ug/kg dw
2,6-Dinitrotoluene	<420ug/kg dw
3-Nitroaniline	<4200ug/kg dw
Acenaphthene	<420ug/kg dw
2,4-Dinitrophenol	<4200ug/kg dw
4-Nitrophenol	<4200ug/kg dw
Dibenzofuran	<420ug/kg dw
2,4-Dinitrotoluene	<420ug/kg dw
Diethylphthalate	<420ug/kg dw
4-Chlorophenylphenylether	<420ug/kg dw
Fluorene	<420ug/kg dw
4-Nitroaniline	<4200ug/kg dw
2-Methyl-4,6-dinitrophenol	<4200ug/kg dw
n-Nitrosodiphenylamine	<420ug/kg dw
4-Bromophenylphenylether	<420ug/kg dw
Hexachlorobenzene	<420ug/kg dw
Pentachlorophenol	<840ug/kg dw
Phenanthrene	790ug/kg dw
Anthracene	<420ug/kg dw
Carbazole	<420ug/kg dw
di-n-butylphthalate	<420ug/kg dw
Fluoranthene	1300ug/kg dw
Pyrene	1300ug/kg dw

PARAMETER	[redacted]ELM
Butylbenzylphthalate	<420ug/kg dw
3,3'–Dichlorobenzidine	<420ug/kg dw
Benzo(a)anthracene	550ug/kg dw
Chrysene	670ug/kg dw
bis(2–Ethylhexyl)phthalate	<420ug/kg dw
di–n–octylphthalate	<420ug/kg dw
Benzo(b)fluoranthene	<420ug/kg dw
Benzo(k)fluoranthene	<420ug/kg dw
Benzo(a)pyrene	600ug/kg dw
Indeno(1,2,3–cd)pyrene	<840ug/kg dw
Dibenzo(a,h)anthracene	<840ug/kg dw
Benzo(ghi)perylene	<840ug/kg dw

Earth Tech
2229 Tomlynn Street
Richmond, Virginia 23230
(804) 358-5400

28899177

№ 0083

10/29 1400

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
34674	Lackawanna

SAMPLERS: (Signature) Lane Aulick

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TAL Metals	TCL VOAs	TCL SemiVs	(10 soil days)			REMARKS
[redacted] Elm	10/12	AM	X		[redacted] Elm-backyard	2	X	X	X	(X)			
													IFB # 34674-03
													10dy TAT
													Contact: Lane Aulick
													(716) 827-3037 (p)
													(716) 827-3036 (f)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cameron Hoover	10/14 10:47	Lane Aulick			
Lane Aulick	10/15/99 1200			10/15/99 1200	10-15-99 7:55
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
Audrey Arnold	10-15-99 4:05		10/15/99 1600		

Attachment 7

Attachment 7

Main Building Area, PCB Vault Confirmation Samples

Table 1: Lackawanna Foundry Soil Sampling for PCB

Sample#	Sample Date	Sample Time	Analytical Results	Additional Information
LW-SS-01	5/3/00	0940	.134 ppm	Brown sand/soil
LW-SS-02	5/3/00	1000	5.8 ppm	Tan clay
LW-SS-03	5/3/00	1000	13 ppm	Tan clay

Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
Mailing: Box 289 • Syracuse, NY 13206
Albany (518) 459-3134
Binghamton (607) 724-0478
Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 18, 2000

Ms. Lane Aulick
Earth Tech
7870 Villa Park Dr.
Suite 400
Richmond, VA 23228

Re: Analysis Report #12500017 - Lackawanna Foundry

Dear Ms. Aulick:

Please find enclosed the results for your samples which were picked up by ULI personnel on May 3, 2000.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

AJS/lw

Enclosures: report, spreadsheets, disk

cc/encs: N. Scala, ULI
file
M. Kromis, Earth Tech (category B deliverables sent on 5/10/00)

Note: Faxed results were given to your office and K. Matheis on 5/5/00. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 05/18/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 12500017
Client I.D.: EARTH TECH

APPROVAL: QSD
QC: JD
Lab I.D.: 10170
Sampled by: Client

ID:12500017 Mat:Soil LACKAWANNA FOUNDRY LW-SS-01 0940H 05/03/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	95%	05/04/00		WD0102
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<1.7ug/kg dw	05/04/00		GA0057
Aroclor 1221	<1.7ug/kg dw	05/04/00		GA0057
Aroclor 1232	<1.7ug/kg dw	05/04/00		GA0057
Aroclor 1242	134ug/kg dw	05/04/00		GA0057
Aroclor 1248	<1.7ug/kg dw	05/04/00		GA0057
Aroclor 1254	<1.7ug/kg dw	05/04/00		GA0057
Aroclor 1260	<1.7ug/kg dw	05/04/00		GA0057
Total PCB	134ug/kg dw	05/04/00		GA0057

ID:12500018 Mat:Soil LACKAWANNA FOUNDRY LW-SS-02 1000H 05/03/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	69%	05/04/00		WD0102
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<170ug/kg dw	05/05/00	05	GA00_
Aroclor 1221	<170ug/kg dw	05/05/00	05	GA0057
Aroclor 1232	<170ug/kg dw	05/05/00	05	GA0057
Aroclor 1242	5800ug/kg dw	05/05/00		GA0057
Aroclor 1248	<170ug/kg dw	05/05/00	05	GA0057
Aroclor 1254	<170ug/kg dw	05/05/00	05	GA0057
Aroclor 1260	<170ug/kg dw	05/05/00	05	GA0057
Total PCB	5800ug/kg dw	05/05/00		GA0057

ID:12500019 Mat:Soil LACKAWANNA FOUNDRY LW-SS-03 1005H 05/03/00 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	68%	05/04/00		WD0102
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<170ug/kg dw	05/04/00	05	GA0057
Aroclor 1221	<170ug/kg dw	05/04/00	05	GA0057
Aroclor 1232	<170ug/kg dw	05/04/00	05	GA0057
Aroclor 1242	13,000ug/kg dw	05/04/00		GA0057
Aroclor 1248	<170ug/kg dw	05/04/00	05	GA0057
Aroclor 1254	<170ug/kg dw	05/04/00	05	GA0057
Aroclor 1260	<170ug/kg dw	05/04/00	05	GA0057
Total PCB	13,000ug/kg dw	05/04/00		GA0057

dw = Dry weight

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
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21 UG/KG AS REC.D / UG/KG DRY WT
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25 ND(NON-DETECTED)
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28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 VOLATILE ASP CODES

(B)POSSIBLE/PROBABLE BLANK CONTAMINATION (D)ALL COMPOUNDS IDENTIFIED AT A SECONDARY DILUTION FACTOR (J)DETECTED BELOW THE CRQL
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS) PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS) PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20, CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

PARAMETER	LW-SS-01	LW-SS-02	LW-SS-03
Percent Solids	95%	69%	68%
Aroclor 1016	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Aroclor 1221	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Aroclor 1232	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Aroclor 1242	134ug/kg dw	5800ug/kg dw	13,000ug/kg dw
Aroclor 1248	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Aroclor 1254	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Aroclor 1260	<1.7ug/kg dw	<170ug/kg dw	<170ug/kg dw
Total PCB	134ug/kg dw	5800ug/kg dw	13,000ug/kg dw

PO No.:

125CC017-19

WESTON
MANAGERS ENGINEERS/CONSULTANTS

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT 68-W5-0019
Phone: 908-225-6116 Fax: 908-225-7037

Matrix Box No.:	Preservative Box No.:
1. Surface Water	1. HCl
2. Ground Water	2. HNO3
3. Leachate	3. Na2SO4
4. Rinsate	4. H2SO4
5. Soil/Sediment	5. Other (Specify)
6. Oil	6. Ice Only
7. Waste	N. Not Preserved
8. Other (Specify)	

5/5 HDP

Send verbal and written results to: Roy F. Weston, Inc., USEPA Region II START
Suite 201, 1090 King Georges Post Road, Edison, New Jersey 08837-3703
Attention: Smita Sumbaly, START Analytical Coordinator

	Sample Number	Sample Collection MM/DD/YY/Time	Sample Matrix (Enter box #)	Conc. Low-L Med-M High-H	Sample Type Comp-C Grab-G	Sample Preserv. (Enter box #)	RAS ANALYSIS VOA	BNA	PEST	PCBs	TAL	CN	RCRA ANALYSIS HAN	CDR	REAC	Full TCLP % Solid	OTHER
1	LW-SS-01	4/03/00 0940	5	L	G				(1)	X						(x)	24 hr TAT
2	LW-SS-02	4/03/00 1000	5	L	G				(1)	X						(x)	
3	LW-SS-03	4/03/00 1005	5	L	G				(1)	X						(x)	Fax Results To Kevin Matheis @ 716-827-3036 Mail Hard copy To USEPA Kevin Matheis 3 Elm ST LACKAWANNA, NY 14218

Person Assuming Responsibility for Sample: DAVID L ADAMS — Time: 0940 — Date (MM/DD/YY): 4/3/00

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
All	David L Adams	1030	4/3/00		Shipment To Lab.

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody

Sample Number	Relinquished By:	Time	Date	Received By:	Reason for Change of Custody
		1730	5/3/00		

CDL 5/4/00 0750

Attachment 8

Attachment 8

Buckhorn Marsh Backfill Sample

The Haseley Companies
10315 LOCKPORT ROAD
P.O. BOX 212 L.P.O.
NIAGARA FALLS N.Y. 14304
[redacted]

LETTER OF TRANSMITTAL

DATE: 13-May-00 JOB NO.: 9901
ATTENTION: Mr. Vernon Wilson
RE: Gratwick - Riverside Park
Hydric Soil

TO Earth Tech, Inc.
3 Elm Street
Lackawana, N.Y. 14218

☐ HASELEY TRUCKING CO.
■ HASELEY CONSTRUCTION CO.
☐ HASELEY CONSULTANTS/CONSTRUCTORS

GENTLEMEN:

WE ARE SENDING YOU ■ Attached ☐ Under separate cover via _____ the following items

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ Reports ☐ Permits ■ Test Results

COPIES	DATE	NO.	DESCRIPTION
1			ANALYTICAL TEST DATA (BUCKHORN HYDRIC SOIL)

THESE ARE TRANSMITTED as checked below

☐ For Approval ☐ Approved as submitted ☐ Resubmit_____copies for approval
■ For your use ☐ Approved as noted ☐ Submit_____copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints
☐ For review ☐ _____

☐ FOR BIDS DUE_____19____

REMARKS:

PLEASE CONTACT ME @ 694-4755 IF YOU HAVE ANY QUESTIONS

COPY TO: JOB BOOK / TRANSLTR.

SIGNED:

WILLIAM L. BEY
PROJECT ENGINEER

Chemical Analysis
Hydric Soil
(EPA Test)

Committed To *Your* Success

Severn Trent Laboratories
10 Hazelwood Drive
Suite 106
Amherst, New York 14228-2298

Tel: (716) 691-2600
Fax: (716) 691-7991

July 31, 1999

Mr. David Birch
GZA GeoEnvironmental
364 Nagel Drive
Buffalo, New York 14225

RE: Analytical Results

Dear Mr. Birch:

Enclosed are analytical results concerning the samples recently submitted. The pertinent information regarding these analyses is listed below:

Quote #:	NY99-237
Project:	HYDRIX SOIL Samples
Matrix:	Soil, Water
Samples Received:	07/02/99
Sample Date:	06/02/99

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

Sincerely,

Severn Trent Laboratories, Inc

Kenneth P. Kinecki
Program Manager

DOCUMENT APPROVAL REVIEW
☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED
☐ REVISE AND RESUBMIT
☐ REVIEWED FOR CONFORMANCE
BY
DATE 10/22/99

KPK/rtv
Enclosure

I.D. #A99-4287
#NY9A8465

This report contains 14 pages which are individually numbered

STL
Committed To *Your* Success

ANALYTICAL RESULTS

Prepared For:

GZA GeoEnvironmental
364 Nagel Drive
Buffalo, New York 14225

Prepared By:

Severn Trent Laboratories, Inc.
10 Hazelwood Drive, Suite 106
Amherst, New York 14228-2298

METHODOLOGY

The specific methodology employed in obtaining the enclosed analytical results is indicated on the specific data table. The method number presented refers to the following U.S. Environmental Protection Agency reference:

- "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, September 1994, U.S. Environmental Protection Agency Office of Solid Waste.

COMMENTS

Comments pertain to data on one or all pages of this report.

The enclosed data has been reported utilizing data qualifiers (Q) as defined on the Organic and Inorganic Data Comment Pages

METHOD 8260 DATA

The VBLK19 exhibited positive results for Methylene chloride. Affected samples are flagged with "B" qualifiers

No other deviations from protocol were encountered during the analytical procedures.

METHOD 8270 DATA

The Method Blank exhibited positive results for Bis(2-ethylhexyl) phthalate. Affected samples are flagged with "B" qualifiers

Sample 07029-1A was analyzed at a dilution factor of 5 due to matrix interference.

No other deviations from protocol were encountered during the analytical procedures.

Committed To *Your* Success

METHOD 8081 DATA

Sample 07029-1A was analyzed at a dilution factor of 4 due to high levels of target compounds.

No other deviations from protocol were encountered during the analytical procedures.

METHOD 8082 DATA

No deviations from protocol were encountered during the analytical procedures.

METALS DATA

The Method Blank (A9B0622401) exhibited results for Mercury. However, all sample results were greater than ten (10) times that of the Method Blank.

The Method Blank (A9B0631702) exhibited results for Lead, Calcium, Manganese, and Zinc. However, all sample results were greater than ten (10) times that of the Method Blank.

Sample 07029-1A exhibited spike recovery results outside quality control limits for Aluminum, Antimony, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc. The samples were redigested and reanlayzed, and exhibited similar spike recoveries. This suggests matrix interference.

No other deviations from protocol were encountered during the analytical procedures.

WET CHEMISTRY DATA

No deviations from protocol were encountered during the analytical procedures.

ORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES INC.

USEPA Defined Organic Data Qualifiers:

U - Indicates compound was analyzed for but not detected.

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

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

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

E - This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

T - This flag is used when the analyte is found in the associated TCLP extraction blank as well as in the sample.

N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

P - This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".

A - This flag indicates that a TIC is a suspected aldol-condensation product.

INORGANIC DATA COMMENT PAGE

Laboratory Name: SEVERN TRENT LABORATORIES, INC.

USEPA Defined Inorganic Data Qualifiers:

B	-	Indicates a value greater than or equal to the instrument detection limit, but less than the contract required detection limit.
U	-	Indicates compound was analyzed for but not detected. Report with the detection limit value (e.g., 100).
N	-	Indicates spike sample recovery is not within the control limits.
K	-	Indicates the post digestion spike recovery is not within the control limits.
*	-	Indicates duplicate analysis is not within the control limits.
S	-	Indicates value determined by the Method of Standard Addition.
+	-	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.
M	-	Indicates duplicate injection results exceeded control limits.
W	-	Post digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance
E	-	Indicates a value estimated or not reported due to the presence of interference.

Sample Data Package

Sample ID: 07029-1A
Lab ID: A9428701
Date Collected: 07/02/1999
Time Collected: 16:00

Date Received: 07/02/1999
Project No: NY9A8465
Client No: L11085
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analy
Naphthalene	ND		390	UG/KG	8270	07/21/99 13:49	RCS
2-Nitroaniline	ND		1600	UG/KG	8270	07/21/99 13:49	RCS
3-Nitroaniline	ND		1600	UG/KG	8270	07/21/99 13:49	RCS
4-Nitroaniline	ND		1600	UG/KG	8270	07/21/99 13:49	RCS
Nitrobenzene	ND		390	UG/KG	8270	07/21/99 13:49	RCS
2-Nitrophenol	ND		780	UG/KG	8270	07/21/99 13:49	RCS
4-Nitrophenol	ND		1600	UG/KG	8270	07/21/99 13:49	RCS
N-nitrosodiphenylamine	ND		390	UG/KG	8270	07/21/99 13:49	RCS
N-Nitroso-Di-n-propylamine	ND		390	UG/KG	8270	07/21/99 13:49	RCS
Pentachlorophenol	ND		1600	UG/KG	8270	07/21/99 13:49	RCS
Phenanthrene	ND		390	UG/KG	8270	07/21/99 13:49	RCS
Phenol	ND		390	UG/KG	8270	07/21/99 13:49	RCS
Pyrene	ND		390	UG/KG	8270	07/21/99 13:49	RCS
1,2,4-Trichlorobenzene	ND		390	UG/KG	8270	07/21/99 13:49	RCS
2,4,5-Trichlorophenol	ND		800	UG/KG	8270	07/21/99 13:49	RCS
2,4,6-Trichlorophenol	ND		780	UG/KG	8270	07/21/99 13:49	RCS
SOIL-SW8463 8260 - TCL VOLATILES							
Acetone	ND		10	UG/KG	8260	07/08/99 17:24	
Benzene	ND		5	UG/KG	8260	07/08/99 17:24	
Bromodichloromethane	ND		5	UG/KG	8260	07/08/99 17:24	
Bromoform	ND		5	UG/KG	8260	07/08/99 17:24	
Bromomethane	ND		10	UG/KG	8260	07/08/99 17:24	
2-Butanone	ND		10	UG/KG	8260	07/08/99 17:24	
Carbon Disulfide	ND		5	UG/KG	8260	07/08/99 17:24	
Carbon Tetrachloride	ND		5	UG/KG	8260	07/08/99 17:24	
Chlorobenzene	ND		5	UG/KG	8260	07/08/99 17:24	
Chloroethane	ND		10	UG/KG	8260	07/08/99 17:24	
Chloroform	ND		5	UG/KG	8260	07/08/99 17:24	
Chloromethane	ND		10	UG/KG	8260	07/08/99 17:24	
Dibromochloromethane	ND		5	UG/KG	8260	07/08/99 17:24	
1,1-Dichloroethane	ND		5	UG/KG	8260	07/08/99 17:24	
1,2-Dichloroethane	ND		5	UG/KG	8260	07/08/99 17:24	
1,1-Dichloroethene	ND		5	UG/KG	8260	07/08/99 17:24	
1,2-Dichloroethene (Total)	ND		10	UG/KG	8260	07/08/99 17:24	
1,2-Dichloropropane	ND		5	UG/KG	8260	07/08/99 17:24	
cis-1,3-Dichloropropene	ND		5	UG/KG	8260	07/08/99 17:24	
trans-1,3-Dichloropropene	ND		5	UG/KG	8260	07/08/99 17:24	
Ethylbenzene	ND		5	UG/KG	8260	07/08/99 17:24	
2-Hexanone	ND		10	UG/KG	8260	07/08/99 17:24	
Methylene chloride	17	B	5	UG/KG	8260	07/08/99 17:24	
4-Methyl-2-pentanone	ND		10	UG/KG	8260	07/08/99 17:24	
Styrene	ND		5	UG/KG	8260	07/08/99 17:24	
1,1,2,2-Tetrachloroethane	ND		5	UG/KG	8260	07/08/99 17:24	
Tetrachloroethene	ND		5	UG/KG	8260	07/08/99 17:24	
Toluene	ND		5	UG/KG	8260	07/08/99 17:24	
1,1,1-Trichloroethane	ND		5	UG/KG	8260	07/08/99 17:24	
1,1,2-Trichloroethane	ND		5	UG/KG	8260	07/08/99 17:24	
Trichloroethene	ND		5	UG/KG	8260	07/08/99 17:24	
Vinyl acetate	ND		10	UG/KG	8260	07/08/99 17:24	

Sample ID: 07029-1A
Lab ID: A9428701
Date Collected: 07/02/1999
Time Collected: 16:00

Date Received: 07/02/1999
Project No: NY9A8465
Client No: L11085
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Anal
Vinyl chloride	ND		10	UG/KG	8260	07/08/99 17:24	
Total Xylenes	ND		15	UG/KG	8260	07/08/99 17:24	
SOIL-SW8463 8082 - PCBS							
Aroclor 1016	ND		40	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1221	ND		80	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1232	ND		40	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1242	ND		40	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1248	ND		40	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1254	4.0	J	40	UG/KG	8082	07/10/99 12:01	BJ
Aroclor 1260	ND		40	UG/KG	8082	07/10/99 12:01	BJ
SOIL-SW8463 8081 - TCL PESTICIDES							
Aldrin	ND		8.0	UG/KG	8081	07/23/99 06:43	KE
alpha-BHC	ND		8.0	UG/KG	8081	07/23/99 06:43	KE
beta-BHC	ND		8.0	UG/KG	8081	07/23/99 06:43	KE
gamma-BHC (Lindane)	ND		8.0	UG/KG	8081	07/23/99 06:43	KE
delta-BHC	ND		8.0	UG/KG	8081	07/23/99 06:43	KE
Chlordane	ND		80	UG/KG	8081	07/23/99 06:43	KE
4,4'-DDD	ND		16	UG/KG	8081	07/23/99 06:43	KE
4,4'-DDE	ND		16	UG/KG	8081	07/23/99 06:43	K
4,4'-DDT	ND		16	UG/KG	8081	07/23/99 06:43	K
Dieldrin	ND		16	UG/KG	8081	07/23/99 06:43	K
Endosulfan I	ND		16	UG/KG	8081	07/23/99 06:43	K
Endosulfan II	ND		16	UG/KG	8081	07/23/99 06:43	K
Endosulfan Sulfate	ND		16	UG/KG	8081	07/23/99 06:43	K
Endrin	ND		16	UG/KG	8081	07/23/99 06:43	K
Endrin aldehyde	ND		32	UG/KG	8081	07/23/99 06:43	K
Heptachlor	ND		8.0	UG/KG	8081	07/23/99 06:43	K
Heptachlor epoxide	ND		8.0	UG/KG	8081	07/23/99 06:43	K
Methoxychlor	ND		80	UG/KG	8081	07/23/99 06:43	K
Toxaphene	ND		160	UG/KG	8081	07/23/99 06:43	K
Metals Analysis							
Aluminum - Total	4620		2.3	MG/KG	6010	07/16/99 18:53	
Antimony - Total	ND		0.47	MG/KG	6010	07/16/99 18:53	
Arsenic - Total	3.1		0.29	MG/KG	6010	07/16/99 18:53	
Barium - Total	23.0		0.12	MG/KG	6010	07/16/99 18:53	
Beryllium - Total	0.42		0.12	MG/KG	6010	07/16/99 18:53	
Cadmium - Total	0.093		0.058	MG/KG	6010	07/16/99 18:53	
Calcium - Total	10400		2.3	MG/KG	6010	07/16/99 18:53	
Chromium - Total	6.6		0.14	MG/KG	6010	07/16/99 18:53	
Cobalt - Total	4.9		0.12	MG/KG	6010	07/16/99 18:53	
Copper - Total	11.8		0.17	MG/KG	6010	07/16/99 18:53	
Iron - Total	9880		2.3	MG/KG	6010	07/16/99 18:53	
Lead - Total	7.4		0.19	MG/KG	6010	07/16/99 18:53	
Magnesium - Total	3470		2.3	MG/KG	6010	07/16/99 18:53	
Manganese - Total	129		0.12	MG/KG	6010	07/16/99 18:53	
Mercury - Total	ND		0.040	MG/KG	7471	07/13/99 13:00	
Nickel - Total	12.3		0.15	MG/KG	6010	07/16/99 18:53	

Sample ID: 07029-1A
Lab ID: A9428701
Date Collected: 07/02/1999
Time Collected: 16:00

Date Received: 07/02/1999
Project No: NY9A8465
Client No: L11085
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
Potassium - Total	691		17.5	MG/KG	6010	07/16/99 18:53	JWT
Selenium - Total	ND		0.47	MG/KG	6010	07/16/99 18:53	JWT
Silver - Total	ND		0.17	MG/KG	6010	07/16/99 18:53	JWT
Sodium - Total	82.8		29.1	MG/KG	6010	07/16/99 18:53	JWT
Thallium - Total	1.4		0.62	MG/KG	6010	07/16/99 18:53	JWT
Vanadium - Total	9.0		0.14	MG/KG	6010	07/16/99 18:53	JWT
Zinc - Total	41.6		0.12	MG/KG	6010	07/16/99 18:53	JWT
Wet Chemistry Analysis							
Leachable Phosphorous	ND		0.20	UG/G	365.2	07/13/99	MA
Leachable pH	7.66		0.00000	S.U.	9045	07/09/99	TB
Leachable Total Organic Carbon	718		200	UG/G	9060	07/20/99	PGE
SHAKE EXTRACTION OF SOLID WASTE WITH WATER	ND		0	INVALID	D 3987-85	07/13/99	KMS

Sample ID: 07029-1A (L)
Lab ID: A9428702
Date Collected: 07/02/1999
Time Collected: 16:00

Date Received: 07/02/1999
Project No: NY9A8465
Client No: L11085
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Anal
Wet Chemistry Analysis							
Nitrate	2.6		0.050	MG N/L	9200	07/14/99	DP
Redox Potential	205		0	M.VOLTS	D-1498-76	07/16/99	PG

Chronology and QC Summary Package

Date: 07/31/1999
Time: 10:40:50

Rept: AN0326

HYDRIX SOIL Samples
METHOD 8260 - TCL VOLATILE ORGANICS

Client ID		VBLK19							
Job No	Lab ID	A99-4287	A9428703						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/KG	ND	10	NA		NA		NA	
Benzene	UG/KG	ND	5	NA		NA		NA	
Bromodichloromethane	UG/KG	ND	5	NA		NA		NA	
Bromoform	UG/KG	ND	5	NA		NA		NA	
Bromomethane	UG/KG	ND	10	NA		NA		NA	
2-Butanone	UG/KG	ND	10	NA		NA		NA	
Carbon Disulfide	UG/KG	ND	5	NA		NA		NA	
Carbon Tetrachloride	UG/KG	ND	5	NA		NA		NA	
Chlorobenzene	UG/KG	ND	5	NA		NA		NA	
Chloroethane	UG/KG	ND	10	NA		NA		NA	
Chloroform	UG/KG	ND	5	NA		NA		NA	
Chloromethane	UG/KG	ND	10	NA		NA		NA	
Dibromochloromethane	UG/KG	ND	5	NA		NA		NA	
1,1-Dichloroethane	UG/KG	ND	5	NA		NA		NA	
1,2-Dichloroethane	UG/KG	ND	5	NA		NA		NA	
1,1-Dichloroethene	UG/KG	ND	5	NA		NA		NA	
1,2-Dichloroethene (Total)	UG/KG	ND	10	NA		NA		NA	
1,2-Dichloropropane	UG/KG	ND	5	NA		NA		NA	
cis-1,3-Dichloropropene	UG/KG	ND	5	NA		NA		NA	
trans-1,3-Dichloropropene	UG/KG	ND	5	NA		NA		NA	
Ethylbenzene	UG/KG	ND	5	NA		NA		NA	
2-Hexanone	UG/KG	ND	10	NA		NA		NA	
Methylene chloride	UG/KG	4	5	NA		NA		NA	
4-Methyl-2-pentanone	UG/KG	ND	10	NA		NA		NA	
Styrene	UG/KG	ND	5	NA		NA		NA	
1,1,2,2-Tetrachloroethane	UG/KG	ND	5	NA		NA		NA	
Tetrachloroethene	UG/KG	ND	5	NA		NA		NA	
Toluene	UG/KG	ND	5	NA		NA		NA	
1,1,1-Trichloroethane	UG/KG	ND	5	NA		NA		NA	
1,1,2-Trichloroethane	UG/KG	ND	5	NA		NA		NA	
Trichloroethene	UG/KG	ND	5	NA		NA		NA	
Vinyl acetate	UG/KG	ND	10	NA		NA		NA	
Vinyl chloride	UG/KG	ND	10	NA		NA		NA	
Total Xylenes	UG/KG	ND	15	NA		NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	94	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	91	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	75	50-200	NA		NA		NA	
Toluene-D8	%	98	72-116	NA		NA		NA	
p-Bromofluorobenzene	%	89	72-121	NA		NA		NA	
1,2-Dichloroethane-D4	%	113	52-157	NA		NA		NA	

Date: 07/31/1999
Time: 10:41:25

Rept: AN0326

HYDRIX SOIL Samples
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client ID		Method Blank							
Job No	Lab ID	A99-4287	A9B0610902						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/KG	ND	330	NA		NA		NA	
Acenaphthylene	UG/KG	ND	330	NA		NA		NA	
Anthracene	UG/KG	ND	330	NA		NA		NA	
Benzo(a)anthracene	UG/KG	ND	330	NA		NA		NA	
Benzo(b)fluoranthene	UG/KG	ND	330	NA		NA		NA	
Benzo(k)fluoranthene	UG/KG	ND	330	NA		NA		NA	
Benzo(ghi)perylene	UG/KG	ND	330	NA		NA		NA	
Benzo(a)pyrene	UG/KG	ND	330	NA		NA		NA	
Benzoic acid	UG/KG	ND	1600	NA		NA		NA	
[illegible]	UG/KG	ND	330	NA		NA		NA	
Bis(2-chloroethoxy) methane	UG/KG	ND	330	NA		NA		NA	
Bis(2-chloroethyl) ether	UG/KG	ND	330	NA		NA		NA	
2,2'-Oxybis(1-chloropropane)	UG/KG	ND	330	NA		NA		NA	
Bis(2-ethylhexyl) phthalate	UG/KG	22 J	330	NA		NA		NA	
4-Bromophenyl phenyl ether	UG/KG	ND	330	NA		NA		NA	
Butyl benzyl phthalate	UG/KG	ND	330	NA		NA		NA	
4-Chloroaniline	UG/KG	ND	330	NA		NA		NA	
4-Chloro-3-methylphenol	UG/KG	ND	330	NA		NA		NA	
2-Chloronaphthalene	UG/KG	ND	330	NA		NA		NA	
2-Chlorophenol	UG/KG	ND	330	NA		NA		NA	
4-Chlorophenyl phenyl ether	UG/KG	ND	330	NA		NA		NA	
Chrysene	UG/KG	ND	330	NA		NA		NA	
Dibenzo(a,h)anthracene	UG/KG	ND	330	NA		NA		NA	
Dibenzofuran	UG/KG	ND	330	NA		NA		NA	
Di-n-butyl phthalate	UG/KG	ND	330	NA		NA		NA	
1,2-Dichlorobenzene	UG/KG	ND	330	NA		NA		NA	
1,3-Dichlorobenzene	UG/KG	ND	330	NA		NA		NA	
1,4-Dichlorobenzene	UG/KG	ND	330	NA		NA		NA	
3,3'-Dichlorobenzidine	UG/KG	ND	660	NA		NA		NA	
2,4-Dichlorophenol	UG/KG	ND	330	NA		NA		NA	
Diethyl phthalate	UG/KG	ND	330	NA		NA		NA	
2,4-Dimethylphenol	UG/KG	ND	330	NA		NA		NA	
Dimethyl phthalate	UG/KG	ND	330	NA		NA		NA	
4,6-Dinitro-2-methylphenol	UG/KG	ND	1600	NA		NA		NA	
2,4-Dinitrophenol	UG/KG	ND	1600	NA		NA		NA	
2,4-Dinitrotoluene	UG/KG	ND	330	NA		NA		NA	
2,6-Dinitrotoluene	UG/KG	ND	330	NA		NA		NA	
Di-n-octyl phthalate	UG/KG	ND	330	NA		NA		NA	
Fluoranthene	UG/KG	ND	330	NA		NA		NA	
Fluorene	UG/KG	ND	330	NA		NA		NA	
Hexachlorobenzene	UG/KG	ND	330	NA		NA		NA	
Hexachlorobutadiene	UG/KG	ND	330	NA		NA		NA	
Hexachlorocyclopentadiene	UG/KG	ND	330	NA		NA		NA	

Date: 07/31/1999
Time: 10:41:25

Rept: AN0326

HYDRIX SOIL Samples
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client ID		Method Blank							
Job No	Lab ID	A99-4287	A9B0610902						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexachloroethane	UG/KG	ND	330	NA		NA		NA	
Indeno(1,2,3-cd)pyrene	UG/KG	ND	330	NA		NA		NA	
Isophorone	UG/KG	ND	330	NA		NA		NA	
2-Methylnaphthalene	UG/KG	ND	330	NA		NA		NA	
2-Methylphenol	UG/KG	ND	330	NA		NA		NA	
4-Methylphenol	UG/KG	ND	330	NA		NA		NA	
Naphthalene	UG/KG	ND	330	NA		NA		NA	
2-Nitroaniline	UG/KG	ND	1600	NA		NA		NA	
3-Nitroaniline	UG/KG	ND	1600	NA		NA		NA	
4-Nitroaniline	UG/KG	ND	1600	NA		NA		NA	
Nitrobenzene	UG/KG	ND	330	NA		NA		NA	
2-Nitrophenol	UG/KG	ND	330	NA		NA		NA	
4-Nitrophenol	UG/KG	ND	1600	NA		NA		NA	
N-Nitrosodiphenylamine	UG/KG	ND	330	NA		NA		NA	
N-Nitroso-Di-n-propylamine	UG/KG	ND	330	NA		NA		NA	
Pentachlorophenol	UG/KG	ND	1600	NA		NA		NA	
Phenanthrene	UG/KG	ND	330	NA		NA		NA	
Phenol	UG/KG	ND	330	NA		NA		NA	
Pyrene	UG/KG	ND	330	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/KG	ND	330	NA		NA		NA	
2,4,5-Trichlorophenol	UG/KG	ND	800	NA		NA		NA	
2,4,6-Trichlorophenol	UG/KG	ND	330	NA		NA		NA	
CAS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	115	50-200	NA		NA		NA	
Naphthalene-D8	%	122	50-200	NA		NA		NA	
Acenaphthene-D10	%	112	50-200	NA		NA		NA	
Phenanthrene-D10	%	107	50-200	NA		NA		NA	
Chrysene-D12	%	114	50-200	NA		NA		NA	
Perylene D12	%	92	50-200	NA		NA		NA	
Nitrobenzene-D5	%	69	20-114	NA		NA		NA	
Terphenyl-D14	%	78	31-125	NA		NA		NA	
2-Fluorobiphenyl	%	70	38-116	NA		NA		NA	
2-Fluorophenol	%	34	23-105	NA		NA		NA	
Phenol-D5	%	26	18-105	NA		NA		NA	
2,4,6-Tribromophenol	%	98	25-122	NA		NA		NA	

Date: 07/31/1998
Time: 10:41:46

Rept: AN0326

HYDRIX SOIL Samples
METHOD 8082 - POLYCHLORINATED BIPHENYLS

Client ID Job No Sample Date	Lab ID	Method Blank A99-4287	A9B0610302						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	UG/KG	ND	40	NA		NA		NA	
Aroclor 1221	UG/KG	ND	80	NA		NA		NA	
Aroclor 1232	UG/KG	ND	40	NA		NA		NA	
Aroclor 1242	UG/KG	ND	40	NA		NA		NA	
Aroclor 1248	UG/KG	ND	40	NA		NA		NA	
Aroclor 1254	UG/KG	ND	40	NA		NA		NA	
Aroclor 1260	UG/KG	ND	40	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	80	56-137	NA		NA		NA	
Decachlorobiphenyl	%	96	50-150	NA		NA		NA	

SIL Buff

Date: 07/31/1999
Time: 10:41:46

Rept: AN0326

HYDRIX SOIL Samples
METHOD 8081 - TCL PESTICIDES

Client ID		Method Blank							
Job No	Lab ID	A99-4287	A980626603						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aldrin	UG/KG	ND	8.0	NA		NA		NA	
alpha-BHC	UG/KG	ND	8.0	NA		NA		NA	
beta-BHC	UG/KG	ND	8.0	NA		NA		NA	
gamma-BHC (Lindane)	UG/KG	ND	8.0	NA		NA		NA	
delta-BHC	UG/KG	ND	8.0	NA		NA		NA	
Chlordane	UG/KG	ND	80	NA		NA		NA	
4,4'-DDD	UG/KG	ND	16	NA		NA		NA	
4,4'-DDE	UG/KG	ND	16	NA		NA		NA	
4,4'-DDT	UG/KG	ND	16	NA		NA		NA	
Dieldrin	UG/KG	ND	16	NA		NA		NA	
Endosulfan I	UG/KG	ND	16	NA		NA		NA	
Endosulfan II	UG/KG	ND	16	NA		NA		NA	
Endosulfan Sulfate	UG/KG	ND	16	NA		NA		NA	
Endrin	UG/KG	ND	16	NA		NA		NA	
Endrin aldehyde	UG/KG	ND	32	NA		NA		NA	
Heptachlor	UG/KG	ND	8.0	NA		NA		NA	
Heptachlor epoxide	UG/KG	ND	8.0	NA		NA		NA	
Methoxychlor	UG/KG	ND	80	NA		NA		NA	
Toxaphene	UG/KG	ND	160	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	78	30-130	NA		NA		NA	
Decachlorobiphenyl	%	91	21-169	NA		NA		NA	

Date: 07/31/1999
Time: 10:43:27

Rept: AN0326

HYDRIX SOIL Samples
GZA-SW8463 - TAL METALS

Client ID Job No Sample Date	Lab ID	Method Blank A99-4287	A980622401	Method Blank A99-4287 07/15/1999	A980631702				
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aluminum - Total	MG/KG	NA		ND	2.0	NA		NA	
Antimony - Total	MG/KG	NA		ND	0.40	NA		NA	
Iron - Total	MG/KG	NA		ND	2.0	NA		NA	
Magnesium - Total	MG/KG	NA		ND	2.0	NA		NA	
Potassium - Total	MG/KG	NA		ND	15.0	NA		NA	
Sodium - Total	MG/KG	NA		ND	25.0	NA		NA	
Vanadium - Total	MG/KG	NA		ND	0.12	NA		NA	
Thallium - Total	MG/KG	NA		ND	0.53	NA		NA	
Lead - Total	MG/KG	NA		0.24	0.16	NA		NA	
[illegible] - Total	MG/KG	NA		6.3	2.0	NA		NA	
Barium - Total	MG/KG	NA		ND	0.10	NA		NA	
Arsenic - Total	MG/KG	NA		ND	0.25	NA		NA	
Beryllium - Total	MG/KG	NA		ND	0.10	NA		NA	
Cobalt - Total	MG/KG	NA		ND	0.10	NA		NA	
Manganese - Total	MG/KG	NA		5.4	0.10	NA		NA	
Mercury - Total	MG/KG	ND	0.033	NA		NA		NA	
Nickel - Total	MG/KG	NA		ND	0.13	NA		NA	
Selenium - Total	MG/KG	NA		ND	0.40	NA		NA	
Silver - Total	MG/KG	NA		ND	0.15	NA		NA	
Zinc - Total	MG/KG	NA		1.6	0.10	NA		NA	

SIL Buff.

000017

Date: 07/31/1999
Time: 10:43:27

Rept: AN0326

HYDRIX SOIL Samples
GZA-SW8463 - TAL METALS

Client ID		07029-1A		07029-1A		LCS		LCS CLP Soils	
Job No	Lab ID	A99-4287	A9428701MD	A99-4287	A9428701MS	A99-4287	A980622402	A99-4287	A980631701
Sample Date		07/02/1999		07/02/1999				07/15/1999	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aluminum - Total	MG/KG	4970	2.4	5200	2.3	NA		3000	2.0
Antimony - Total	MG/KG	ND	0.49	21.5	0.46	NA		21.4	0.40
Arsenic - Total	MG/KG	3.3	0.30	42.6	0.29	NA		110	0.25
Barium - Total	MG/KG	23.9	0.12	69.1	0.11	NA		136	0.099
Beryllium - Total	MG/KG	0.44	0.12	39.8	0.11	NA		52.5	0.099
Cadmium - Total	MG/KG	0.11	0.061	40.5	0.057	NA		NA	
Calcium - Total	MG/KG	11400	2.4	20700	2.3	NA		768	2.0
Chromium - Total	MG/KG	7.4	0.15	44.7	0.14	NA		NA	
Cobalt - Total	MG/KG	5.3	0.12	43.5	0.11	NA		47.8	0.099
Copper - Total	MG/KG	12.6	0.18	53.6	0.17	NA		NA	
Iron - Total	MG/KG	10600	2.4	10300	2.3	NA		4510	2.0
Lead - Total	MG/KG	7.4	0.19	45.9	0.18	NA		45.4	0.16
Magnesium - Total	MG/KG	6180	2.4	13400	2.3	NA		697	2.0
Manganese - Total	MG/KG	136	0.12	199	0.11	NA		169	0.099
Mercury - Total	MG/KG	ND	0.040	0.77	0.040	2.3	0.32	NA	
Nickel - Total	MG/KG	12.6	0.16	49.6	0.15	NA		42.9	0.13
Potassium - Total	MG/KG	687	18.2	3080	17.2	NA		910	14.8
Selenium - Total	MG/KG	ND	0.49	35.7	0.46	NA		77.2	0.40
Silver - Total	MG/KG	ND	0.18	42.0	0.17	NA		36.8	0.15
Sodium - Total	MG/KG	98.2	30.4	2500	28.7	NA		840	24.7
Thallium - Total	MG/KG	1.6	0.64	42.2	0.61	NA		60.7	0.52
Vanadium - Total	MG/KG	9.8	0.15	49.4	0.14	NA		61.0	0.12
Zinc - Total	MG/KG	40.9	0.12	73.9	0.11	NA		125	0.15

Date: 07/31/99
Time: 10:43:37

Rept: AN0326

HYDRIX SOIL Samples
WET CHEMISTRY ANALYSIS

Client ID Job No Sample Date	Lab ID		Method Blank A99-4287	A9B0624804	Method Blank A99-4287	A9B0630504	Method Blank A99-4287	A9B0652504		
Analyte		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable Phosphorous		UG/G	ND	0.20	NA		NA		NA	
Nitrate		MG N/L	NA		ND	0.050	NA		NA	
Leachable Total Organic Carbon		UG/G	NA		NA		ND	200	NA	

Date: 07/31/1999
Time: 10:43:37

Rept: AN0326

HYDRIX SOIL Samples
WET CHEMISTRY ANALYSIS

Client ID		LCS		LCS		LCS		LCS	
Job No	Lab ID	A99-4287	A9B0614501	A99-4287	A9B0624801	A99-4287	A9B0630501	A99-4287	A9B0635201
Sample Date									

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH	S.U.	7.03	0.00000	NA		NA		NA	
Leachable Phosphorous	UG/G	NA		16.2	0.20	NA		NA	
Nitrate	MG N/L	NA		NA		2.4	0.050	NA	
Redox Potential	M.VOLTS	NA		NA		NA		228	0

Client ID		LCS		Matrix Spike B		Matrix Spike B		Matrix Spike B	
Job No	Lab ID	A99-4287	A9B0652501	A99-4287	A9B0624802	A99-4287	A9B0630502	A99-4287	A9B0652502
Sample Date									

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable Total Organic Carbon	UG/G	11400	200	NA		NA		1940	200
Leachable Phosphorous	UG/G	NA		9.6	0.20	NA		NA	
Nitrate	MG N/L	NA		NA		1.0	0.050	NA	

Client ID		Matrix Spike B		Matrix Spike B		Matrix Spike B			
Job No	Lab ID	A99-4287	A9B0624803	A99-4287	A9B0630503	A99-4287	A9B0652503		
Sample Date									

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable Phosphorous	UG/G	10.6	0.20	NA		NA		NA	
Nitrate	MG N/L	NA		1.0	0.050	NA		NA	
Leachable Total Organic Carbon	UG/G	NA		NA		1920	200	NA	

SDG: HYDRIX
Client Sample ID: VBLK19 MSB19
Lab Sample ID: A9428703 A9428704

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
METHOD 8260 - TCL VOLATILE ORGANICS					
1,1-Dichloroethene	UG/KG	60.9	50.0	122	64-147
Trichloroethene	UG/KG	47.1	50.0	94	66-126
Benzene	UG/KG	54.0	50.0	108	66-129
Toluene	UG/KG	48.9	50.0	98	61-124
Chlorobenzene	UG/KG	49.5	50.0	99	65-117

SDG: HYDRIX
Client Sample ID: Method Blank
Lab Sample ID: A9B0610902
Matrix Spike Blank
A9B0610901

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS					
Phenol	UG/KG	2031	3311	61	40-114
2-Chlorophenol	UG/KG	2205	3311	66	40-115
1,4-Dichlorobenzene	UG/KG	1923	3311	58	28-104
N-Nitroso-Di-n-propylamine	UG/KG	2541	3311	77	47-104
1,2,4-Trichlorobenzene	UG/KG	2156	3311	65	49-107
4-Chloro-3-methylphenol	UG/KG	2417	3311	73	51-129
Acenaphthene	UG/KG	2385	3311	72	52-104
4-Nitrophenol	UG/KG	2785	3311	84	47-114
[illegible]	UG/KG	2672	3311	81	60-114
Pentachlorophenol	UG/KG	2872	3311	87	57-141
Pyrene	UG/KG	2767	3311	84	59-128

* Indicates Result is Outside QC Limits

Date : 07/31/99 10:42
Job No: A99-4287

Rept: AN0364

GZA GEOENVIRONMENTAL, INC. SOIL ANALYSES

SDG: HYDRIX
Client Sample ID: Method Blank
Lab Sample ID: A9B0610302

Matrix Spike Blank
A9B0610301

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
METHOD 8082 PolyCHLORINATED BIPHENYLS					
Aroclor 1254	UG/KG	162	164	99	57-134

SDG: HYDRIX

Client Sample ID: Method Blank	Matrix Spike Blank	Matrix Spike Blk Dup
Lab Sample ID: A9B0626603	A9B0626601	A9B0626602

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			%	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg	RPD	RPD	REC.
METHOD 8081 - OCL PESTICIDES											
Aldrin	UG/KG	32.9	26.3	32.8	32.5	100	81	91	21	30.0	48-128
alpha-BHC	UG/KG	31.9	25.4	32.8	32.5	97	78	88	22	30.0	47-123
beta-BHC	UG/KG	33.3	27.0	32.8	32.5	101	83	92	20	30.0	56-129
delta-BHC	UG/KG	31.9	25.3	32.8	32.5	97	78	88	22	30.0	52-127
gamma-BHC (Lindane)	UG/KG	32.6	26.1	32.8	32.5	99	80	90	21	30.0	47-124
4,4'-DDD	UG/KG	34.8	27.7	32.8	32.5	106	85	96	22	30.0	52-133
4,4'-DDE	UG/KG	34.4	27.3	32.8	32.5	105	84	95	22	30.0	54-136
4,4'-DDT	UG/KG	34.6	27.4	32.8	32.5	105	84	95	22	30.0	59-148
[illegible]	UG/KG	35.7	28.4	32.8	32.5	109	88	99	21	30.0	51-132
Endosulfan I	UG/KG	32.6	25.8	32.8	32.5	98	80	89	20	30.0	52-132
Endosulfan II	UG/KG	34.9	27.9	32.8	32.5	106	86	96	21	30.0	54-135
Endosulfan Sulfate	UG/KG	33.7	27.0	32.8	32.5	103	83	93	22	30.0	52-136
Endrin aldehde	UG/KG	30.9	25.3	32.8	32.5	94	78	86	19	30.0	37-123
Endrin	UG/KG	35.3	28.1	32.8	32.5	108	86	97	23	30.0	61-132
Heptachlor	UG/KG	33.2	26.9	32.8	32.5	101	83	92	20	30.0	53-127
Heptachlor epoxide	UG/KG	34.4	27.8	32.8	32.5	105	86	96	20	30.0	55-128
Methoxychlor	UG/KG	36.0	29.2	32.8	32.5	110	90	100	20	30.0	72-180

* Indicates Result is outside QC Limits

000024

Date : 07/31/99 10:43
Job No: A99-4217

Rept: AN0364

GZA GEOENVIRONMENTAL, INC. SOIL ANALYSES
SAMPLE DATE 07/02/99

SDG: HYDRIX
Client Sample ID: 07029-1A
Lab Sample ID: A9428701

07029-1A
A9428701MS

Analyte	Units of Measure	Concentration Sample	Matrix Spike	Spike Amount	% Recovery MS	QC LIMITS
GZA-SW8463 - TA METALS						
TOTAL ANTIMONY	MG/KG	0	21.47	57.5	37 *	80-120
TOTAL ARSENIC	MG/KG	3.08	42.62	57.5	68 *	80-120
TOTAL BARIUM	MG/KG	22.99	69.06	57.5	80	80-120
TOTAL BERYLLIUM	MG/KG	0.419	39.81	57.5	68 *	80-120
TOTAL CADMIUM	MG/KG	0.0932	40.54	57.5	70 *	80-120
TOTAL CHROMIUM	MG/KG	6.59	44.69	57.5	66 *	80-120
TOTAL COBALT	MG/KG	4.87	43.63	57.5	67 *	80-120
TOTAL COPPER	MG/KG	11.80	53.65	57.5	72 *	80-120
TOTAL LEAD	MG/KG	7.35	45.88	57.5	67 *	80-120
TOTAL MANGANESE	MG/KG	129.2	198.6	57.5	120 *	80-120
TOTAL MERCURY	MG/KG	U	0.773	0.80	96	80-120
TOTAL NICKEL	MG/KG	12.31	49.56	57.5	64 *	80-120
TOTAL SELENIUM	MG/KG	0	35.66	57.5	62 *	80-120
TOTAL SILVER	MG/KG	0.0349	41.97	57.5	72 *	80-120
TOTAL THALLIUM	MG/KG	1.44	42.19	57.5	70 *	80-120
TOTAL VANADIUM	MG/KG	9.01	49.40	57.5	70 *	80-120
TOTAL ZINC	MG/KG	41.56	73.94	57.5	56 *	80-120

* Indicates [illegible] is outside QC limits

SDG: HYDRIX

Client Sample ID: Method Blank
Lab Sample ID: A980624804

Matrix Spike Blank
A9B0624802

Matrix Spike Blk Dup
A9B0624803

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			%	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg	RPD	RPD	REC.
WET CHEMISTRY ANALYSIS											
METHOD 365.2 LEACHABLE PHOSPHORCUS	UG/G	9.60	10.60	10	10	96	106	101	10	20.0	89-124

* Indicates Result is outside QC Limits

Date : 07/31/99 10:44
Job No: A99-428

GZA GEOENVIRONMENTAL, INC. SOIL ANALYSES

Rept: ANO364

SDG: HYDRIX
Client Sample ID: Method Blank — Matrix Spike Blank — Matrix Spike Blk Dup
Lab Sample ID: A9B0630504 — A9B0630502 — A9B0630503

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
WET CHEMISTRY ANALYSIS											
METHOD 9200 NITRATE	MG N/L	1.00	1.00	1.0	1.0	100	100	100	0	20.0	74-122

000027

SFL Buffalo

SDG: HYDRIX

Client Sample ID:	Method Blank	Matrix Spike Blank	Matrix Spike Blk Dup
Lab Sample ID:	A9B0652504	A9B0652502	A9B0652503

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
WET CHEMISTRY ANALYSIS											
METHOD 9060 LEACHABLE TOTAL ORGANIC	UG/G	1940	1920	2000	2000	97	96	97	1	20.0	81-117

* Indicate Result is outside QC Limits

METHOD 8260 - ICL VOLATILE ORGANICS

ClientSample ID Job No & LabSample ID	07029-1A A99-4287 A9428701				
Sample Date	07/02/99	16:00			
Received Date	07/02/99	16:40			
Extraction Date	-				
Analysis Date	07/08/99	17:24			
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	SOIL	LOW			
Dilution Factor	1.0				
Sample wt/vol	5.15	GRAMS			
% Dry	81.69				

METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lat Sample ID	VBLK19 A99-4287 A9428703				
Sample Date					
Received Date					
Extraction Date	-				
Analysis Date	07/08/99 12:22				
Extraction Hl Met?	-				
Analytical Hl Met?	-				
Sample Matrix	SOIL LOW				
Dilution Factor	1.0				
Sample Wt/vol	5.0 GRAMS				
% Dry	100.00				

METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lat Sample ID	MSB19 A99-4287 A9428704				
Sample Date					
Received Date					
Extraction Date	-				
Analysis Date	07/08/99 11:15				
Extraction Hi Lt?					
Analytical Hi Lt?	-				
Sample Matrix	SOIL LOW				
Dilution Factor	1.0				
Sample wt/vol	5.0 GRAMS				
% Dry	100.00				

000031

STL Buffalo

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	07029-1A A99-4287 A9428701				
Sample Date	07/02/99 16:00				
Received Date	07/02/99 16:40				
Extraction Date	07/12/99 07:00				
Analysis Date	07/21/99 13:49				
Extraction 4? Met?	YES				
Analytical 4? Met?	YES				
Sample Matrix	SOIL LOW				
Dilution Factor	5.0				
Sample wt/vol	30.84 GRAMS				
% Dry	83.15				

000032

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	Method Blank A99-4287 A9B0610902			
Sample Date				
Received Date				
Extraction Date	07/12/99 07:00			
Analysis Date	07/21/99 10:44			
Extraction HT Met?	-			
Analytical HT Met?	-			
Sample Matrix	SOIL	LOW		
Dilution Factor	1.0			
Sample wt/vol	30.39	GRAMS		
% Dry	100.00			

000033

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A99-4287 A980610901					
Sample Date						
Received Date						
Extraction Date	07/12/99	07:00				
Analysis Date	07/21/99	14:56				
Extraction HT Met?	-					
Analytical HT Met?	-					
Sample Matrix	SOIL	LOW				
Dilution Factor	1.0					
Sample Wt/Vol	30.2	GRAMS				
% Dry	100.00					

METHOD 8081 - TCL PESTICIDES

Client Sample ID	07029-1A				
Job No & Lab Sample ID	A99-4287 A9428701				
Sample Date	07/02/99 16:00				
Received Date	07/02/99 16:40				
Extraction Date	07/14/99 07:00				
Analysis Date	07/23/99 06:43				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	SOIL LOW				
Dilution Factor	4.0				
Sample wt/vol	30.37 GRAMS				
% Dry	83.15				

METHOD 8082 - POLYCHLORINATED BIPHENYLS

Client Sample ID	07029-1A				
Job No & Lab Sample ID	A99-4287 A9428701				
Sample Date	07/02/99 16:00				
Received Date	07/02/99 16:40				
Extraction Date	07/09/99 07:00				
Analysis Date	07/10/99 12:01				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	SOIL LOW				
Dilution Factor	1.0				
Sample wt/vol	30.81 GRAMS				
% Dry	65.05				

Date: 07/31/99 10:44
Jobno: A99-4237

GZA GEOENVIRONMENTAL
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A980631702	Method Blank	MG/KG	Antimony - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Beryllium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Calcium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cobalt - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Iron - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Magnesium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Manganese - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Nickel - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Potassium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Sodium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Thallium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Vanadium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Zinc - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
A980622402	LCS	MG/KG	Mercury - Total	7471	1.00		- 16:40	NA	NA	07/13	Yes	SOIL
A980631701	LCS TCLP Soils	MG/KG	Aluminum - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Antimony - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Beryllium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Calcium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cobalt - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Iron - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Magnesium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Manganese - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Nickel - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Potassium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Sodium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Thallium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Vanadium - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Zinc - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL

AHT = Analy olding Time Met
THT = TCLP Holding Time Met

STL Buffalo

Date: 07/31/99 10:44
Jobno: A99-4287

GZA GEOENVIRONMENTAL
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A9428701	0709-1A	MG/KG	Aluminum - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Antimony - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Beryllium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cadmium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Calcium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cobalt - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Iron - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Magnesium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Manganese - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Mercury - Total	7471	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/15	Yes	SOIL
		MG/KG	Nickel - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Potassium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Sodium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Thallium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Vanadium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Zinc - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met

METHOD 8081 - 'CL PESTICIDES

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A99-4287 A9B0610301	Matrix Spike Blank A99-4287 A9B0626601	Matrix Spike Blk Dup A99-4287 A9B0626602		
Sample Date					
Received Date					
Extraction Dat		07/14/99 07:00	07/14/99 07:00		
Analysis Date		07/23/99 03:15	07/23/99 03:57		
Extraction Method	NA	-	-		
Analytical Method		-	-		
Sample Matrix		SOIL LOW	SOIL LOW		
Dilution Facto		1.0	1.0		
Sample wt/vo.		30.43 GRAMS	30.74 GRAMS		
% Dry		100.00	100.00		

METHOD 8082 - POLYCHLORINATED BIPHENYLS

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A99-4287 A9B0610301	Matrix Spike Blank A99-4287 A9B0626601	Matrix Spike Blk Dup A99-4287 A9B0626602		
Sample Date					
Received Date					
Extraction Dat	07/09/99 07:00				
Analysis Date	07/11/99 11:38				
Extraction Method	-	NA	NA		
Analytical Method	-				
Sample Matrix	SOIL LOW				
Dilution Facto	1.0				
Sample wt/vol	30.41 GRAMS				
% Dry	100.00				

METHOD 8081 - TCL PESTICIDES

Client Sample ID Job No & Lab Sample ID	Method Blank A99-4287 A9B0610302	Method Blank A99-4287 A9B0626603			
Sample Date		-			
Received Date					
Extraction Date		07/14/99 07:00			
Analysis Date		07/23/99 04:38			
Extraction HT Met?	NA	-			
Analytical HT Met?		-			
Sample Matrix		SOIL	LOW		
Dilution Factor		1.0			
Sample Wt/Vol		30.3	GRAMS		
% Dry		100.00			

METHOD 8082 - POLYCHLORINATED BIPHENYLS

Client Sample ID Job No & Lab Sample ID	Method Blank A99-4287 A9B0610302	Method Blank A99-4287 A9B0626603			
Sample Date					
Received Date					
Extraction Date	07/09/99 07:00				
Analysis Date	07/10/99 11:14				
Extraction HT Met?	-	NA			
Analytical HT Met?	-				
Sample Matrix	SOIL	LOW			
Dilution Factor	1.0				
Sample Wt/Vol	30.8	GRAMS			
% Dry	100.00				

Date: 07/31/99 10:44
Jobno: A99-437

GZA GEOENVIRONMENTAL
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A9428701MD	0709-1A	MG/KG	Aluminum - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Antimony - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Beryllium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cadmium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Calcium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cobalt - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Iron - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Magnesium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Manganese - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Mercury - Total	7471	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/13	Yes	SOIL
		MG/KG	Nickel - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Potassium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Sodium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Thallium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Vanadium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Zinc - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
A9428701MS	0709-1A	MG/KG	Aluminum - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Antimony - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Beryllium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cadmium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Calcium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Cobalt - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Iron - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Magnesium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Manganese - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Mercury - Total	7471	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/13	Yes	SOIL
		MG/KG	Nickel - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Potassium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Sodium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Thallium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Vanadium - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
		MG/KG	Zinc - Total	6010	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	SOIL
A980622401	Method Blank	MG/KG	Mercury - Total	7471	1.00		- 16:40	NA	NA	07/13	Yes	SOIL
A980631702	Method Blank	MG/KG	Aluminum - Total	6010	1.00	07/15/99 08:00	07/15 16:40	NA	NA	07/16	Yes	SOIL

AHT = Analysis Holding Time Met
THT = Total Holding Time Met

STL Buffalo

Date: 07/31/99 10:44
Jobno: A99-4287

GZA GEOENVIRONMENTAL
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A9428701	07029-1A	UG/G	Leachable Phosphorous	365.2	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/13	Yes	SOIL
		S.U.	Leachable pH	9045	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/09	Yes	SOIL
		UG/G	Leachable Total Organic Carbon	9060	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/20	Yes	SOIL
		INVALID	SHAKE EXTRACTION OF SOLID WASTE WITH WATER	D 3987-85	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/13	Yes	SOIL
A9428702	07029-1A (L)	MG N/L	Nitrate	9200	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/14	No	WATER
		M.VOLTS	Redox Potential	D-1498-76	1.00	07/02/99 16:00	07/02 16:40	NA	NA	07/16	Yes	WATER

AHT = Analys ding Time Met
THT = TCLP ng Time Met

STL Buffalo

Date: 07/31/99 10:44
Jobno: A99-4287

GZA GEOENVIRONMENTAL
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A9B0624802	Matrix Spike Blank	UG/G	Leachable Phosphorous	365.2	1.00		- 16:40	NA	NA	07/13	Yes	SOIL
A9B0630502	Matrix Spike Blank	MG N/L	Nitrate	9200	1.00		- 16:40	NA	NA	07/14	Yes	WATER
A9B0652502	Matrix Spike Blank	UG/G	Leachable Total Organic Carbon	9060	1.00		- 16:40	NA	NA	07/20	Yes	SOIL
A9B0624803	Matrix Spike Blk Dup	UG/G	Leachable Phosphorous	365.2	1.00		- 16:40	NA	NA	07/13	Yes	SOIL
A9B0630503	Matrix Spike Blk Dup	MG N/L	Nitrate	9200	1.00		- 16:40	NA	NA	07/14	Yes	WATER
A9B0652503	Matrix Spike Blk Dup	UG/G	Leachable Total Organic Carbon	9060	1.00		- 16:40	NA	NA	07/20	Yes	SOIL
A9B0630504	Method Blank	MG N/L	Nitrate	9200	1.00		- 16:40	NA	NA	07/14	Yes	WATER
A9B0652504	Method Blank	UG/G	Leachable Total Organic Carbon	9060	1.00		- 16:40	NA	NA	07/20	Yes	SOIL
A9B0614501	LCS	S.U.	Leachable pH	9045	1.00		- 16:40	NA	NA	07/09	Yes	SOIL
A9B0624801	LCS	UG/G	Leachable Phosphorous	365.2	1.00		- 16:40	NA	NA	07/13	Yes	SOIL
A9B0630501	LCS	MG N/L	Nitrate	9200	1.00		- 16:40	NA	NA	07/14	Yes	WATER
A9B0635201	LCS	M.VOLTS	Redox Potential	D-1498-76	1.00		- 16:40	NA	NA	07/16	Yes	WATER
A9B0652501	LCS	UG/G	Leachable Total Organic Carbon	9060	1.00		- 16:40	NA	NA	07/20	Yes	SOIL
A9B0624804	Method Blank	UG/G	Leachable Phosphorous	365.2	1.00		- 16:40	NA	NA	07/13	Yes	SOIL

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met

STL Buffalo

Chain of Custody

STL
Committed To *Your* Success

Report To:
Contact: ~~DAVID~~ DAVID BIRCH
Company: GZA GEOENVIRONMENTAL
Address: 364 NAGEL DR.
BUFFALO N.Y. 14225
Phone: 685-2300
Fax: 685-3629
E-Mail: BUFFALO@GZA.com

Bill To:
Contact: DAVE BIRCH
Company: GZA GEOENVIRONMENTAL
Address: 364 NAGEL DRIVE
BUFFALO N.Y. 14225
Phone: 685-2300
Fax: 685-3629
PO#: _____ Quote: _____

Internal Use Only

Sampler Name: DANIEL E. WOLF
Signature: Daniel E. Wolf
Project Name: NIAGARA COUNTY LANDFILL
Project Number: 55285.00
Project Location: WHEATFIELD N.Y.
Date Required: ASAP

STL Sample No.	Client Sample ID	Sampling Date	Sampling Time	MATRIX	COMP / GRAB	9045	9060	8260	8270	8081	6010/7000	D1498-76	9200	365.1						Additional Analyses / Remarks
	02029-1A	6/2/99	16:00	S	G	X	X	X	X	X	X	X	X	X						3 JARS OF SAMPLE

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Daniel E. Wolf	GZA	7/2/99	16:40		STL	7-2-99	1640
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

Matrix Key
WW = Wastewater
W = Water
S = Soil
SL = Sludge
MS = Miscellaneous Solids
OL = Oil
A = Air
C = _____

Container Key
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

Preservative Key
1. HCl, Cool to 4°
2. H_2SO_4, Cool to 4°
3. HNO_3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Courier:

Bill of Lading:

00044

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 28199058
Client I.D.: GZA

APPROVAL: _ _ _ _
QC: _ _ _ _
Lab I.D.: 10170
Sampled by: Client

ID:28199058 Mat:Soil 55350/GRATWICK PARK S-1 1015H 10/07/99 G

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Percent Solids	79%	10/08/99		WC7698
EPA Method 8150				
2,4-D	<420ug/kg dw	10/21/99		PA5287
2,4,5-T	<42ug/kg dw	10/21/99		PA5287
2,4,5-TP (Silvex)	<42ug/kg dw	10/21/99		PA5287
Dinoseb	<42ug/kg dw	10/21/99		PA5287

dw = Dry weight

Attachment 9

Attachment 9

Backfill Sample Results from Wetland Stockpile,
Used in Production Area Beneath Topsoil

DATE: 11/19/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 30299001
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: AJS
QC: JD
Lab I.D.: 10170

3467401 LACKAWANNA
PIT PILE-PILE 1 AM 10/28/99 C
Backfill Material + sub topsoil

ULI I.D.: 30299002
Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	Corrosivity				
	pH	7.9SU	11/03/99		WC80C
	Density	1.20g/ml	11/10/99		WC811
	Flash Point	>60degC	11/11/99		WC812
	Percent Solids	97%	10/29/99		WC796
	TOC	14,138mg/kg	11/04/99		SC00C
	RCRA Reactivity				
	Reactive Sulfide	<50mg/kg	10/29/99		WC797
	Reactive Cyanide	<1.0mg/kg	11/10/99		WC804
Total	Aluminum	1900mg/kg dw	11/03/99		ME240
Total	Antimony	<0.4mg/kg dw	11/03/99		ME24C
Total	Arsenic by furnace method	5.5mg/kg dw	11/03/99		ME24C
Total	Barium	42mg/kg dw	11/03/99		ME24C
Total	Beryllium	0.62mg/kg dw	11/03/99		ME24C
Total	Cadmium	1.6mg/kg dw	11/03/99		ME[illegible]
Total	Calcium	5000mg/kg dw	11/10/99		ME
Total	Chromium	20mg/kg dw	11/03/99		ME24C
Total	Cobalt	<5.1mg/kg dw	11/03/99		ME24C
Total	Copper	83mg/kg dw	11/03/99		ME24C
Total	Iron	19000mg/kg dw	11/03/99		ME24C
Total	Lead	82mg/kg dw	11/03/99		ME24C
Total	Magnesium	930mg/kg dw	11/10/99		ME241
Total	Manganese	670mg/kg dw	11/03/99		ME24C
Total	Mercury	0.23mg/kg dw	11/09/99		MB166
Total	Nickel	18mg/kg dw	11/03/99		ME24C
Total	Potassium	240mg/kg dw	11/10/99		ME241
Total	Selenium by furnace method	<0.2mg/kg dw	11/03/99		ME24C
Total	Silver	<5.1mg/kg dw	11/03/99		ME240
Total	Sodium	280mg/kg dw	11/10/99		ME241
Total	Thallium by furnace method	<0.4mg/kg dw	11/03/99		ME24C
Total	Vanadium	<31mg/kg dw	11/03/99		ME24C
Total	Zinc	160mg/kg dw	11/03/99		ME24C
TCLP	Arsenic	0.26mg/l	11/10/99		ME241
TCLP	Barium	0.4mg/l	11/10/99		ME241
TCLP	Cadmium	0.014mg/l	11/10/99		ME241
TCLP	Chromium	<0.05mg/l	11/10/99		ME241
TCLP	Lead	<0.1mg/l	11/10/99		ME241
TCLP	Mercury	<0.0004mg/l	11/09/99		MB165

dw = Dry weight

DATE: 11/19/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 30299001
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: CJS
QC: SD
Lab I.D.: 10170
3467401 LACKAWANNA
PIT PILE-PILE 1 AM 10/28/99 C

ULI I.D.: 30299002 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Selenium	<0.5mg/l	11/10/99		ME241
TCLP Silver	<0.05mg/l	11/10/99		ME241
TCL Volatiles by EPA Method 8260				
Chloromethane	<3ug/kg	11/08/99		VM265
Bromomethane	<3ug/kg	11/08/99		VM265
Vinyl Chloride	<2ug/kg	11/08/99		VM265
Chloroethane	<3ug/kg	11/08/99		VM265
Methylene Chloride	100ug/kg	11/08/99		VM265
Acetone	<10ug/kg	11/08/99		VM265
Carbon Disulfide	<3ug/kg	11/08/99		VM265
1,1-Dichloroethene	<3ug/kg	11/08/99		VM265
1,1-Dichloroethane	<3ug/kg	11/08/99		VM265
trans-1,2-Dichloroethene	<3ug/kg	11/08/99		VM265
cis-1,2-Dichloroethene	<3ug/kg	11/08/99		VM265
Chloroform	3ug/kg	11/08/99		VM265
1,2-Dichloroethane	<3ug/kg	11/08/99		VM265
2-Butanone	<10ug/kg	11/08/99		VM265
1,1,1-Trichloroethane	<3ug/kg	11/08/99		VM265
Carbon Tetrachloride	<3ug/kg	11/08/99		VM265
Bromodichloromethane	<3ug/kg	11/08/99		VM265
1,2-Dichloropropane	<3ug/kg	11/08/99		VM265
cis-1,3-Dichloropropene	<3ug/kg	11/08/99		VM265
Trichloroethene	<3ug/kg	11/08/99		VM265
Dibromochloromethane	<3ug/kg	11/08/99		VM265
1,1,2-Trichloroethane	<3ug/kg	11/08/99		VM265
Benzene	<3ug/kg	11/08/99		VM265
trans-1,3-Dichloropropene	<3ug/kg	11/08/99		VM265
Bromoform	<3ug/kg	11/08/99		VM265
4-Methyl-2-pentanone	<10ug/kg	11/08/99		VM265
2-Hexanone	<10ug/kg	11/08/99		VM265
Tetrachloroethene	<3ug/kg	11/08/99		VM265
1,1,2,2-Tetrachloroethane	<3ug/kg	11/08/99		VM265
Toluene	<3ug/kg	11/08/99		VM265
Chlorobenzene	<3ug/kg	11/08/99		VM265
Ethylbenzene	<3ug/kg	11/08/99		VM265
Styrene	<3ug/kg	11/08/99		VM265
m-Xylene and p-Xylene	<3ug/kg	11/08/99		VM265
o-Xylene	<3ug/kg	11/08/99		VM265

dw = Dry weight

DATE: 11/19/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 30299001
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: AJS
QC: SD AJS
Lab I.D.: 10170
3467401 LACKAWANNA
PIT PILE-PILE 1 AM 10/28/99 C

ULI I.D.: 30299002 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
TCLP Volatile Organic Compounds by 8260				
TCLP Benzene	<0.03mg/l	11/08/99		VM265
TCLP Carbon Tetrachloride	<0.03mg/l	11/08/99		VM265
TCLP Chlorobenzene	<0.03mg/l	11/08/99		VM265
TCLP Chloroform	<0.03mg/l	11/08/99		VM265
TCLP 1,4-Dichlorobenzene	<0.03mg/l	11/08/99		VM265
TCLP 1,2-Dichloroethane	<0.03mg/l	11/08/99		VM265
TCLP 1,1-Dichloroethene	<0.03mg/l	11/08/99		VM265
TCLP Methyl Ethyl Ketone	<0.1mg/l	11/08/99		VM265
TCLP Tetrachloroethene	<0.03mg/l	11/08/99		VM265
TCLP Trichloroethene	<0.03mg/l	11/08/99		VM265
TCLP Vinyl Chloride	<0.02mg/l	11/08/99		VM265
TCL Semivolatiles by EPA Method 8270				
Phenol	8700ug/kg dw	11/11/99		SA220
bis(2-Chloroethyl)ether	<3400ug/kg dw	11/11/99		SA220
2-Chlorophenol	<3400ug/kg dw	11/11/99		SA220
1,3-Dichlorobenzene	<3400ug/kg dw	11/11/99		SA
1,4-Dichlorobenzene	<3400ug/kg dw	11/11/99		SA220
1,2-Dichlorobenzene	<3400ug/kg dw	11/11/99		SA220
2-Methylphenol	<3400ug/kg dw	11/11/99		SA220
2,2'-Oxybis(1-Chloropropane)	<3400ug/kg dw	11/11/99		SA220
4-Methylphenol	<3400ug/kg dw	11/11/99		SA220
n-Nitrosodi-n-propylamine	<3400ug/kg dw	11/11/99		SA220
Hexachloroethane	<3400ug/kg dw	11/11/99		SA220
Nitrobenzene	<3400ug/kg dw	11/11/99		SA220
Isophorone	<3400ug/kg dw	11/11/99		SA220
2-Nitrophenol	<3400ug/kg dw	11/11/99		SA220
2,4-Dimethylphenol	<3400ug/kg dw	11/11/99		SA220
bis(2-Chloroethoxy)methane	<3400ug/kg dw	11/11/99		SA220
2,4-Dichlorophenol	<3400ug/kg dw	11/11/99		SA220
1,2,4-Trichlorobenzene	<3400ug/kg dw	11/11/99		SA220
Naphthalene	<3400ug/kg dw	11/11/99		SA220
4-Chloroaniline	<3400ug/kg dw	11/11/99		SA220
Hexachlorobutadiene	<3400ug/kg dw	11/11/99		SA220
4-Chloro-3-methylphenol	<3400ug/kg dw	11/11/99		SA220
2-Methylnaphthalene	<3400ug/kg dw	11/11/99		SA220
Hexachlorocyclopentadiene	<3400ug/kg dw	11/11/99		SA220
2,4,6-Trichlorophenol	<3400ug/kg dw	11/11/99		SA220

dw = Dry weight

DATE: 11/19/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 30299001
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: QS
QC: JO
Lab I.D.: 10170
3467401 LACKAWANNA
PIT PILE-PILE 1 AM 10/28/99 C

ULI I.D.: 30299002 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
2,4,5-Trichlorophenol	<3400ug/kg dw	11/11/99		SA220
2-Chloronaphthalene	<3400ug/kg dw	11/11/99		SA220
2-Nitroaniline	<34,000ug/kg dw	11/11/99		SA220
Dimethylphthalate	<3400ug/kg dw	11/11/99		SA220
Acenaphthylene	<3400ug/kg dw	11/11/99		SA220
2,6-Dinitrotoluene	<3400ug/kg dw	11/11/99		SA220
3-Nitroaniline	<34,000ug/kg dw	11/11/99		SA220
Acenaphthene	<3400ug/kg dw	11/11/99		SA220
2,4-Dinitrophenol	<34,000ug/kg dw	11/11/99		SA220
4-Nitrophenol	<34,000ug/kg dw	11/11/99		SA220
Dibenzofuran	<3400ug/kg dw	11/11/99		SA220
2,4-Dinitrotoluene	<3400ug/kg dw	11/11/99		SA220
Diethylphthalate	<3400ug/kg dw	11/11/99		SA220
4-Chlorophenylphenylether	<3400ug/kg dw	11/11/99		SA220
Fluorene	<3400ug/kg dw	11/11/99		SA220
4-Nitroaniline	<34,000ug/kg dw	11/11/99		SA220
2-Methyl-4,6-dinitrophenol	<34,000ug/kg dw	11/11/99		SA220
n-Nitrosodiphenylamine	<3400ug/kg dw	11/11/99		SA220
4-Bromophenylphenylether	<3400ug/kg dw	11/11/99		SA220
Hexachlorobenzene	<3400ug/kg dw	11/11/99		SA220
Pentachlorophenol	<690ug/kg dw	11/11/99		SA220
Phenanthrene	<3400ug/kg dw	11/11/99		SA220
Anthracene	<3400ug/kg dw	11/11/99		SA220
Carbazole	<3400ug/kg dw	11/11/99		SA220
di-n-butylphthalate	<3400ug/kg dw	11/11/99		SA220
Fluoranthene	<3400ug/kg dw	11/11/99		SA220
Pyrene	<3400ug/kg dw	11/11/99		SA220
Butylbenzylphthalate	<3400ug/kg dw	11/11/99		SA220
3,3'-Dichlorobenzidine	<3400ug/kg dw	11/11/99		SA220
Benzo(a)anthracene	<3400ug/kg dw	11/11/99		SA220
Chrysene	<3400ug/kg dw	11/11/99		SA220
bis(2-Ethylhexyl)phthalate	<3400ug/kg dw	11/11/99		SA220
di-n-octylphthalate	<3400ug/kg dw	11/11/99		SA220
Benzo(b)fluoranthene	<3400ug/kg dw	11/11/99		SA220
Benzo(k)fluoranthene	<3400ug/kg dw	11/11/99		SA220
Benzo(a)pyrene	<3400ug/kg dw	11/11/99		SA220
Indeno(1,2,3-cd)pyrene	<690ug/kg dw	11/11/99		SA220
Dibenzo(a,h)anthracene	<690ug/kg dw	11/11/99		SA220
Benzo(ghi)perylene	<690ug/kg dw	11/11/99		SA220

dw = Dry weight

DATE: 11/19/99

Upstate Laboratories, Inc.
Analysis Results
Report Number: 30299001
Client I.D.: EARTH TECH
Sampled by: Client

APPROVAL: QS
QC: QD QJ
Lab I.D.: 10170
3467401 LACKAWANNA
PIT PILE-PILE 1 AM 10/28/99 C

ULI I.D.: 30299002 Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	TCLP Semivolatile Compounds by 8270				
TCLP	Cresol, Total	<0.05mg/l	11/11/99		SA220
TCLP	2,4-Dinitrotoluene	<0.05mg/l	11/11/99		SA220
TCLP	Hexachlorobenzene	<0.05mg/l	11/11/99		SA220
TCLP	Hexachlorobutadiene	<0.05mg/l	11/11/99		SA220
TCLP	Hexachloroethane	<0.05mg/l	11/11/99		SA220
TCLP	Nitrobenzene	<0.05mg/l	11/11/99		SA220
TCLP	Pentachlorophenol	<0.10mg/l	11/11/99		SA220
TCLP	Pyridine	<0.05mg/l	11/11/99		SA220
TCLP	2,4,5-Trichlorophenol	<0.05mg/l	11/11/99		SA220
TCLP	2,4,6-Trichlorophenol	<0.05mg/l	11/11/99		SA220
	PCB (Aroclors) by EPA Method 8082				
	Aroclor 1016	<0.08mg/kg dw	11/17/99		PA535
	Aroclor 1221	<0.08mg/kg dw	11/17/99		PA535
	Aroclor 1232	<0.08mg/kg dw	11/17/99		PA535
	Aroclor 1242	<0.08mg/kg dw	11/17/99		PA
	Aroclor 1248	<0.08mg/kg dw	11/17/99		PA
	Aroclor 1254	<0.08mg/kg dw	11/17/99		PA535
	Aroclor 1260	<0.08mg/kg dw	11/17/99		PA535
	Total PCB	<0.08mg/kg dw	11/17/99		PA535

dw = Dry weight

PARAMETER	SO27	PILE 1
Arsenic	<0.5mg/l	0.26mg/l
Barium	<0.3mg/l	0.4mg/l
Cadmium	0.018mg/l	0.014mg/l
Chromium	<0.05mg/l	<0.05mg/l
Copper	0.21mg/l	
Lead	<0.1mg/l	<0.1mg/l
Mercury	<0.0004mg/l	<0.0004mg/l
Selenium	<0.5mg/l	<0.5mg/l
Silver	<0.05mg/l	<0.05mg/l
Zinc	1.3mg/l	
pH		7.9SU
Density		1.20g/ml
Flash Point		>60degC
Percent Solids		97%
TOC		14,138mg/kg
Reactive Sulfide		<50mg/kg
Reactive Cyanide		<1.0mg/kg
Total Aluminum		1900mg/kg dw
Total Antimony		<0.4mg/kg dw
Total Arsenic by furnace method		5.5mg/kg dw
Total Barium		42mg/kg dw
Total Beryllium		0.62mg/kg dw
Total Cadmium		1.6mg/kg dw
Total Calcium		5000mg/kg dw
Total Chromium		20mg/kg dw
Total Cobalt		<5.1mg/kg dw
Total Copper		83mg/kg dw
Total Iron		19000mg/kg dw
Total Lead		82mg/kg dw
Total Magnesium		930mg/kg dw
Total Manganese		670mg/kg dw
Total Mercury		0.23mg/kg dw
Total Nickel		18mg/kg dw
Total Potassium		240mg/kg dw
Total Selenium by furnace method		<0.2mg/kg dw
Total Silver		<5.1mg/kg dw
Total Sodium		280mg/kg dw

PARAMETER	SO27	PILE 1
Total Thallium by furnace method		<0.4mg/kg dw
Total Vanadium		<31mg/kg dw
Total Zinc		160mg/kg dw
Chloromethane		<3ug/kg
Bromomethane		<3ug/kg
Vinyl Chloride		<2ug/kg
Chloroethane		<3ug/kg
Methylene Chloride		100ug/kg
Acetone		<10ug/kg
Carbon Disulfide		<3ug/kg
1,1-Dichloroethene		<3ug/kg
1,1-Dichloroethane		<3ug/kg
trans-1,2-Dichloroethene		<3ug/kg
cis-1,2-Dichloroethene		<3ug/kg
Chloroform		3ug/kg
1,2-Dichloroethane		<3ug/kg
2-Butanone		<10ug/kg
1,1,1-Trichloroethane		<3ug/kg
Carbon Tetrachloride		<3ug/kg
Bromodichloromethane		<3ug/kg
1,2-Dichloropropane		<3ug/kg
cis-1,3-Dichloropropene		<3ug/kg
Trichloroethene		<3ug/kg
Dibromochloromethane		<3ug/kg
1,1,2-Trichloroethane		<3ug/kg
Benzene		<3ug/kg
trans-1,3-Dichloropropene		<3ug/kg
Bromoform		<3ug/kg
4-Methyl-2-pentanone		<10ug/kg
2-Hexanone		<10ug/kg
Tetrachloroethene		<3ug/kg
1,1,2,2-Tetrachloroethane		<3ug/kg
Toluene		<3ug/kg
Chlorobenzene		<3ug/kg
Ethylbenzene		<3ug/kg
Styrene		<3ug/kg
m-Xyle and p-Xylene		<3ug/kg

PARAMETER	SO27	PILE 1
o – Xylene		<3ug/kg
Benzene		<0.03mg/l
Carbon Tetrachloride		<0.03mg/l
Chlorobenzene		<0.03mg/l
Chloroform		<0.03mg/l
1,4 – Dichlorobenzene		<0.03mg/l
1,2 – Dichloroethane		<0.03mg/l
1,1 – Dichloroethene		<0.03mg/l
Methyl Ethyl Ketone		<0.1mg/l
Tetrachloroethene		<0.03mg/l
Trichloroethene		<0.03mg/l
Vinyl Chloride		<0.02mg/l
Phenol		8700ug/kg dw
bis(2 – Chloroethyl)ether		<3400ug/kg dw
2 – Chlorophenol		<3400ug/kg dw
1,3 – Dichlorobenzene		<3400ug/kg dw
1,4 – Dichlorobenzene		<3400ug/kg dw
1,2 – Dichlorobenzene		<3400ug/kg dw
2 – Methylphenol		<3400ug/kg dw
2,2' – Oxybis(1 – Chloropropane)		<3400ug/kg dw
4 – Methylphenol		<3400ug/kg dw
n – Nitrosodi – n – propylamine		<3400ug/kg dw
Hexachloroethane		<3400ug/kg dw
Nitrobenzene		<3400ug/kg dw
Isophorone		<3400ug/kg dw
2 – Nitrophenol		<3400ug/kg dw
2,4 – Dimethylphenol		<3400ug/kg dw
bis(2 – Chloroethoxy)methane		<3400ug/kg dw
2,4 – Dichlorophenol		<3400ug/kg dw
1,2,4 – Trichlorobenzene		<3400ug/kg dw
Naphthalene		<3400ug/kg dw
4 – Chloroaniline		<3400ug/kg dw
Hexachlorobutadiene		<3400ug/kg dw
4 – Chloro – 3 – methylphenol		<3400ug/kg dw
2 – Methylnaphthalene		<3400ug/kg dw
Hexachlorocyclopentadiene		<3400ug/kg dw
2,4,6 – Trichlorophenol		<3400ug/kg dw

PARAMETER	SO27	PILE 1
2,4,5–Trichlorophenol		<3400ug/kg dw
2–Chloronaphthalene		<3400ug/kg dw
2–Nitroaniline		<34,000ug/kg dw
Dimethylphthalate		<3400ug/kg dw
Acenaphthylene		<3400ug/kg dw
2,6–Dinitrotoluene		<3400ug/kg dw
3–Nitroaniline		<34,000ug/kg dw
Acenaphthene		<3400ug/kg dw
2,4–Dinitrophenol		<34,000ug/kg dw
4–Nitrophenol		<34,000ug/kg dw
Dibenzofuran		<3400ug/kg dw
2,4–Dinitrotoluene		<3400ug/kg dw
Diethylphthalate		<3400ug/kg dw
4–Chlorophenylphenylether		<3400ug/kg dw
Fluorene		<3400ug/kg dw
4–Nitroaniline		<34,000ug/kg dw
2–Methyl–4,6–dinitrophenol		<34,000ug/kg dw
n–Nitrosodiphenylamine		<3400ug/kg dw
4–Bromophenylphenylether		<3400ug/kg dw
Hexachlorobenzene		<3400ug/kg dw
Pentachlorophenol		<690ug/kg dw
Phenanthrene		<3400ug/kg dw
Anthracene		<3400ug/kg dw
Carbazole		<3400ug/kg dw
di–n–butylphthalate		<3400ug/kg dw
Fluoranthene		<3400ug/kg dw
Pyrene		<3400ug/kg dw
Butylbenzylphthalate		<3400ug/kg dw
3,3'–Dichlorobenzidine		<3400ug/kg dw
Benzo(a)anthracene		<3400ug/kg dw
Chrysene		<3400ug/kg dw
bis(2–Ethylhexyl)phthalate		<3400ug/kg dw
di–n–octylphthalate		<3400ug/kg dw
Benzo(b)fluoranthene		<3400ug/kg dw
Benzo(k)fluoranthene		<3400ug/kg dw
Benzo(a)pyrene		<3400ug/kg dw
Indeno ',3–cd)pyrene		<690ug/kg dw

PARAMETER	SO27	PILE 1
Dibenzo(a,h)anthracene		<690ug/kg dw
Benzo(ghi)perylene		<690ug/kg dw
Cresol, Total		<0.05mg/l
2,4-Dinitrotoluene		<0.05mg/l
Hexachlorobenzene		<0.05mg/l
Hexachlorobutadiene		<0.05mg/l
Hexachloroethane		<0.05mg/l
Nitrobenzene		<0.05mg/l
Pentachlorophenol		<0.10mg/l
Pyridine		<0.05mg/l
2,4.5-Trichlorophenol		<0.05mg/l
2,4,6-Trichlorophenol		<0.05mg/l
Aroclor 1016		<0.08mg/kg dw
Aroclor 1221		<0.08mg/kg dw
Aroclor 1232		<0.08mg/kg dw
Aroclor 1242		<0.08mg/kg dw
Aroclor 1248		<0.08mg/kg dw
Aroclor 1254		<0.08mg/kg dw
Aroclor 1260		<0.08mg/kg dw
Total PCB		<0.08mg/kg dw

Earth Tech
2229 Tomlynn Street
Richmond, Virginia 23230
(804) 358-5400

30299001 - 2

№ 0083

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
[illegible]	[illegible]

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP metals	TCLP VOAs	TCLP Semis	PCBs	TAL metals	TCL VOA	TCL Semis	REMARKS
~~[illegible]~~	~~10/28~~	~~AM~~	~~x~~		~~[illegible] Pile S27~~ *	1	✓							[illegible]
Pile 1	10/28	AM	x		Pit Pile - Pile 1	1	✓	✓	✓	✓	✓	✓	✓	(x) [illegible]
					S027									IFB [illegible]
					3 day TAT									10 Day TAT
														[illegible]
														Contact [illegible]
														Phone (716) [illegible]
														Fax (716) [illegible]

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	10/28/99	[signature]	[signature]	10/28/99 1730	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		[signature]	10/29/99 0940		

Attachment 10

Attachment 10

Topsoil Analysis, E. Brenon Source

Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
Mailing: Box 289 • Syracuse, NY 13206
Albany (518) 459-3134
Binghamton (607) 724-0478
Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

May 18, 2000

1st Topsoil sample

Ms. Lane Aulick
Earth Tech
7870 Villa Park Dr.
Suite 400
Richmond, VA 23228

Re: Analysis Report #13100037 - 38340 Lackawanna Foundry

Dear Ms. Aulick:

Please find enclosed the results for your sample which was received on May 10, 2000.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

AJS/lw

Enclosures: report, spreadsheets, disk

cc/encs: N. Scala, ULI
file
M. Kromis, Earth Tech (category B deliverables to follow)

Note: Faxed results were given to your office and K. Matheis on 5/16 and 5/17/00. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 05/18/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13100037
Client I.D.: EARTH TECH
Sampled by:

APPROVAL:
QC:
Lab I.D.: 10170

38340 LACKAWANNA
FOUNDRY 1ST STA MAIN ENTRANCE 05/09/00 G

ULI I.D.: 13100037 Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	Percent Solids	87%	05/10/00		WD0174
Total	Aluminum	5400mg/kg dw	05/15/00		ME2805
Total	Antimony	<2mg/kg dw	05/15/00		ME2805
Total	Arsenic by furnace method	<2mg/kg dw	05/15/00		ME2805
Total	Barium	56mg/kg dw	05/15/00		ME2805
Total	Beryllium	<0.4mg/kg dw	05/15/00		ME2805
Total	Cadmium	1.3mg/kg dw	05/15/00		ME2805
Total	Calcium	2900mg/kg dw	05/15/00		ME2805
Total	Chromium	8.8mg/kg dw	05/15/00		ME2805
Total	Cobalt	3.0mg/kg dw	05/15/00		ME2805
Total	Copper	5.3mg/kg dw	05/15/00		ME2805
Total	Iron	10,000mg/kg dw	05/15/00		ME2805
Total	Lead	8.8mg/kg dw	05/15/00		ME2805
Total	Magnesium	1200mg/kg dw	05/15/00		ME2805
Total	Manganese	93mg/kg dw	05/15/00		ME2805
Total	Mercury	<0.3mg/kg dw	05/11/00		MB2123
Total	Nickel	7.8mg/kg dw	05/15/00		ME2805
Total	Potassium	490mg/kg dw	05/15/00		ME2805
Total	Selenium by furnace method	<0.6mg/kg dw	05/16/00		ME2807
Total	Silver	<2mg/kg dw	05/16/00		ME2[illegible]
Total	Sodium	230mg/kg dw	05/15/00		ME28[illegible]
Total	Thallium by furnace method	<2mg/kg dw	05/15/00		ME2805
Total	Vanadium	14mg/kg dw	05/15/00		ME2805
Total	Zinc	35mg/kg dw	05/15/00		ME2805
	TCL Volatiles by EPA Method 8260				
	Chloromethane	<3ug/kg dw	05/12/00		VM2880
	Bromomethane	<3ug/kg dw	05/12/00		VM2880
	Vinyl Chloride	<2ug/kg dw	05/12/00		VM2880
	Chloroethane	<3ug/kg dw	05/12/00		VM2880
	Methylene Chloride	19ug/kg dw	05/12/00	44	VM2880
	Acetone	<11ug/kg dw	05/12/00		VM2880
	Carbon Disulfide	<3ug/kg dw	05/12/00		VM2880
	1,1-Dichloroethene	<3ug/kg dw	05/12/00		VM2880
	1,1-Dichloroethane	<3ug/kg dw	05/12/00		VM2880
	trans-1,2-Dichloroethene	<3ug/kg dw	05/12/00		VM2880
	cis-1,2-Dichloroethene	<3ug/kg dw	05/12/00		VM2880
	Chloroform	<3ug/kg dw	05/12/00		VM2880
	1,2-Dichloroethane	<3ug/kg dw	05/12/00		VM2880
	2-Butanone	<11ug/kg dw	05/12/00		VM2880

dw = Dry weight

DATE: 05/18/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13100037
Client I.D.: EARTH TECH
Sampled by:

APPROVAL:
QC:
Lab I.D.: 10170
38340 LACKAWANNA
FOUNDRY 1ST STA MAIN ENTRANCE 05/09/00 G

ULI I.D.: 13100037 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
1,1,1-Trichloroethane	<3ug/kg dw	05/12/00		VM2880
Carbon Tetrachloride	<3ug/kg dw	05/12/00		VM2880
Bromodichloromethane	<3ug/kg dw	05/12/00		VM2880
1,2-Dichloropropane	<3ug/kg dw	05/12/00		VM2880
cis-1,3-Dichloropropene	<3ug/kg dw	05/12/00		VM2880
Trichloroethene	<3ug/kg dw	05/12/00		VM2880
Dibromochloromethane	<3ug/kg dw	05/12/00		VM2880
1,1,2-Trichloroethane	<3ug/kg dw	05/12/00		VM2880
Benzene	<3ug/kg dw	05/12/00		VM2880
trans-1,3-Dichloropropene	<3ug/kg dw	05/12/00		VM2880
Bromoform	<3ug/kg dw	05/12/00		VM2880
4-Methyl-2-pentanone	<11ug/kg dw	05/12/00		VM2880
2-Hexanone	<11ug/kg dw	05/12/00		VM2880
Tetrachloroethene	<3ug/kg dw	05/12/00		VM2880
1,1,2,2-Tetrachloroethane	<3ug/kg dw	05/12/00		VM2880
Toluene	<3ug/kg dw	05/12/00		VM2880
Chlorobenzene	<3ug/kg dw	05/12/00		VM2880
Ethylbenzene	<3ug/kg dw	05/12/00		VM2880
Styrene	<3ug/kg dw	05/12/00		VM2880
m-Xylene and p-Xylene	<3ug/kg dw	05/12/00		VM2880
o-Xylene	<3ug/kg dw	05/12/00		VM2880
TCL Semivolatiles by EPA Method 8270				
Phenol	<380ug/kg dw	05/16/00		SA2409
bis(2-Chloroethyl)ether	<380ug/kg dw	05/16/00		SA2409
2-Chlorophenol	<380ug/kg dw	05/16/00		SA2409
1,3-Dichlorobenzene	<380ug/kg dw	05/16/00		SA2409
1,4-Dichlorobenzene	<380ug/kg dw	05/16/00		SA2409
1,2-Dichlorobenzene	<380ug/kg dw	05/16/00		SA2409
2-Methylphenol	<380ug/kg dw	05/16/00		SA2409
2,2'-Oxybis(1-Chloropropane)	<380ug/kg dw	05/16/00		SA2409
4-Methylphenol	<380ug/kg dw	05/16/00		SA2409
n-Nitrosodi-n-propylamine	<380ug/kg dw	05/16/00		SA2409
Hexachloroethane	<380ug/kg dw	05/16/00		SA2409
Nitrobenzene	<380ug/kg dw	05/16/00		SA2409
Isophorone	<380ug/kg dw	05/16/00		SA2409
2-Nitrophenol	<380ug/kg dw	05/16/00		SA2409
2,4-Dimethylphenol	<380ug/kg dw	05/16/00		SA2409
bis(2-Chloroethoxy)methane	<380ug/kg dw	05/16/00		SA2409
2,4-Dichlorophenol	<380ug/kg dw	05/16/00		SA2409

dw = Dry weight

DATE: 05/18/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13100037
Client I.D.: EARTH TECH
Sampled by:

APPROVAL: CS
QC: SD
Lab I.D.: 10170

38340 LACKAWANNA
FOUNDRY 1ST STA MAIN ENTRANCE 05/09/00 G

ULI I.D.: 13100037

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
1,2,4-Trichlorobenzene	<380ug/kg dw	05/16/00		SA2409
Naphthalene	<380ug/kg dw	05/16/00		SA2409
4-Chloroaniline	<380ug/kg dw	05/16/00		SA2409
Hexachlorobutadiene	<380ug/kg dw	05/16/00		SA2409
4-Chloro-3-methylphenol	<380ug/kg dw	05/16/00		SA2409
2-Methylnaphthalene	<380ug/kg dw	05/16/00		SA2409
Hexachlorocyclopentadiene	<380ug/kg dw	05/16/00		SA2409
2,4,6-Trichlorophenol	<380ug/kg dw	05/16/00		SA2409
2,4,5-Trichlorophenol	<380ug/kg dw	05/16/00		SA2409
2-Chloronaphthalene	<380ug/kg dw	05/16/00		SA2409
2-Nitroaniline	<3800ug/kg dw	05/16/00		SA2409
Dimethylphthalate	<380ug/kg dw	05/16/00		SA2409
Acenaphthylene	<380ug/kg dw	05/16/00		SA2409
2,6-Dinitrotoluene	<380ug/kg dw	05/16/00		SA2409
3-Nitroaniline	<3800ug/kg dw	05/16/00		SA2409
Acenaphthene	<380ug/kg dw	05/16/00		SA2409
2,4-Dinitrophenol	<3800ug/kg dw	05/16/00		SA2409
4-Nitrophenol	<3800ug/kg dw	05/16/00		SA2409
Dibenzofuran	<380ug/kg dw	05/16/00		SA2409
2,4-Dinitrotoluene	<380ug/kg dw	05/16/00		SA2
Diethylphthalate	<380ug/kg dw	05/16/00		SA2
4-Chlorophenylphenylether	<380ug/kg dw	05/16/00		SA2409
Fluorene	<380ug/kg dw	05/16/00		SA2409
4-Nitroaniline	<3800ug/kg dw	05/16/00		SA2409
2-Methyl-4,6-dinitrophenol	<3800ug/kg dw	05/16/00		SA2409
n-Nitrosodiphenylamine	<380ug/kg dw	05/16/00		SA2409
4-Bromophenylphenylether	<380ug/kg dw	05/16/00		SA2409
Hexachlorobenzene	<380ug/kg dw	05/16/00		SA2409
Pentachlorophenol	<760ug/kg dw	05/16/00		SA2409
Phenanthrene	<380ug/kg dw	05/16/00		SA2409
Anthracene	<380ug/kg dw	05/16/00		SA2409
Carbazole	<380ug/kg dw	05/16/00		SA2409
di-n-butylphthalate	<380ug/kg dw	05/16/00		SA2409
Fluoranthene	<380ug/kg dw	05/16/00		SA2409
Pyrene	<380ug/kg dw	05/16/00		SA2409
Butylbenzylphthalate	<380ug/kg dw	05/16/00		SA2409
3,3'-Dichlorobenzidine	<380ug/kg dw	05/16/00		SA2409
Benzo(a)anthracene	<380ug/kg dw	05/16/00		SA2409
Chrysene	<380ug/kg dw	05/16/00		SA2409
bis(2-Ethylhexyl)phthalate	<380ug/kg dw	05/16/00		SA2409

dw = Dry weight

DATE: 05/18/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 13100037
Client I.D.: EARTH TECH
Sampled by:

APPROVAL: QNS
QC: SD
Lab I.D.: 10170
38340 LACKAWANNA
FOUNDRY 1ST STA MAIN ENTRANCE 05/09/00 G

ULI I.D.: 13100037 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
di-n-octylphthalate	<380ug/kg dw	05/16/00		SA2409
Benzo(b)fluoranthene	<380ug/kg dw	05/16/00		SA2409
Benzo(k)fluoranthene	<380ug/kg dw	05/16/00		SA2409
Benzo(a)pyrene	<380ug/kg dw	05/16/00		SA2409
Indeno(1,2,3-cd)pyrene	<380ug/kg dw	05/16/00		SA2409
Dibenzo(a,h)anthracene	<380ug/kg dw	05/16/00		SA2409
Benzo(ghi)perylene	<380ug/kg dw	05/16/00		SA2409
TCL Pesticides by EPA Method 8080				
BHC (a-isomer)	<2.0ug/kg dw	05/17/00		GA0077
BHC (b-isomer)	<2.0ug/kg dw	05/17/00		GA0077
BHC (d-isomer)	<2.0ug/kg dw	05/17/00		GA0077
BHC (g-isomer)	<2.0ug/kg dw	05/17/00		GA0077
Heptachlor	<2.0ug/kg dw	05/17/00		GA0077
Aldrin	<2.0ug/kg dw	05/17/00		GA0077
Heptachlor Epoxide	<2.0ug/kg dw	05/17/00		GA0077
Endosulfan I	<2.0ug/kg dw	05/17/00		GA0077
Dieldrin	<3.8ug/kg dw	05/17/00		GA0077
4,4'-DDE	<3.8ug/kg dw	05/17/00		GA0077
Endrin	<3.8ug/kg dw	05/17/00		GA0077
Endosulfan II	<3.8ug/kg dw	05/17/00		GA0077
4,4'-DDD	<3.8ug/kg dw	05/17/00		GA0077
Endosulfan Sulfate	<3.8ug/kg dw	05/17/00		GA0077
4,4'-DDT	<3.8ug/kg dw	05/17/00		GA0077
Methoxychlor	<20ug/kg dw	05/17/00		GA0077
Endrin Ketone	<3.8ug/kg dw	05/17/00		GA0077
Endrin Aldehyde	<3.8ug/kg dw	05/17/00		GA0077
alpha-Chlordane	<2.0ug/kg dw	05/17/00		GA0077
gamma-Chlordane	<2.0ug/kg dw	05/17/00		GA0077
Toxaphene	<195ug/kg dw	05/17/00		GA0077

dw = Dry weight

KEY PAGE

1 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS
2 MATRIX INTERFERENCE
3 PRESENT IN BLANK
4 ANALYSIS NOT PERFORMED BECAUSE OF INSUFFICIENT SAMPLE
5 THE PRESENCE OF OTHER TARGET ANALYTE(S) PRECLUDES LOWER DETECTION LIMITS
6 BLANK CORRECTED
7 HEAD SPACE PRESENT IN SAMPLE
8 QUANTITATION LIMIT IS GREATER THAN THE CALCULATED REGULATORY LEVEL. THE QUANTITATION LIMIT THEREFORE BECOMES THE REGULATORY LEVEL.
9 THE OIL WAS TREATED AS A SOLID AND LEACHED WITH EXTRACTION FLUID
10 ADL(AVERAGE DETECTION LIMITS)
11 PQL(PRACTICAL QUANTITATION LIMITS)
12 SAMPLE ANALYZED OVER HOLDING TIME
13 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL DUE TO CONTAMINATION FROM THE FILTERING PROCEDURE
14 SAMPLED BY ULI
15 DISSOLVED VALUE MAY BE HIGHER THAN TOTAL; HOWEVER, THE VALUES ARE WITHIN EXPERIMENTAL ERROR
16 AN INHIBITORY FACTOR WAS OBSERVED IN THIS ANALYSIS
17 PARAMETER NOT ANALYZED WITHIN 15 MINUTES OF SAMPLING
18 THE SERIAL DILUTION OF THIS SAMPLE SUGGESTS A POSSIBLE PHYSICAL AND/OR CHEMICAL INTERFERENT IN THIS DETERMINATION. THE DATA MAY BE BIASED EITHER HIGH OR LOW.
19 CALCULATION BASED ON DRY WEIGHT
20 INDICATES AN ESTIMATED VALUE, DETECTED BUT BELOW THE PRACTICAL QUANTITATION LIMITS
21 UG/KG AS REC.D / UG/KG DRY WT
22 MG/KG AS REC.D / MG/KG DRY WT
23 INSUFFICIENT SAMPLE PRECLUDES LOWER DETECTION LIMITS
24 SAMPLE DILUTED/BLANK CORRECTED
25 ND(NON-DETECTED)
26 MATRIX INTERFERENCE PRECLUDES LOWER DETECTION LIMITS/BLANK CORRECTED
27 SPIKE RECOVERY ABNORMALLY HIGH/LOW DUE TO MATRIX INTERFERENCE
28 POST-DIGESTION SPIKE FOR FURNACE AA ANALYSIS IS OUTSIDE OF THE CONTROL LIMITS (85-115%); HOWEVER, THE SAMPLE CONCENTRATION IS BELOW THE PQL
29 ANALYZED BY METHOD OF STANDARD ADDITIONS
30 METHOD PERFORMANCE STUDY HAS NOT BEEN COMPLETED/ND(NON-DETECTED)
31 FIELD MEASURED PARAMETER TAKEN BY CLIENT
32 TARGET ANALYTE IS BIODEGRADED AND/OR ENVIRONMENTALLY WEATHERED
33 NON-POTABLE WATER SOURCE
34 VOLATILE ASP CODES

(B)POSSIBLE/PROBABLE BLANK CONTAMINATION (D)ALL COMPOUNDS IDENTIFIED AT A SECONDARY DILUTION FACTOR (J)DETECTED BELOW THE CRQL
35 THE HYDROCARBONS DETECTED IN THE SAMPLE DID NOT CROSS-MATCH WITH COMMON PETROLEUM DISTILLATES
36 MATRIX INTERFERENCE CAUSING SPIKES TO RESULT IN LESS THAN 50.0% RECOVERY
37 MILLIGRAMS PER LITER (MG/L) / POUNDS (LBS) PER DAY
38 MILLIGRAMS PER LITER (MG/L) OF RESIDUAL CHLORINE (CL2) / POUNDS (LBS) PER DAY OF CL2
39 MICROGRAMS PER LITER (UG/L) / POUNDS (LBS) PER DAY
40 MILLIGRAMS PER LITER (MG/L) LINEAR ALKYL SULFONATE (LAS) / POUNDS (LBS) PER DAY LAS
41 RESULTS ARE REPORTED ON AN AS REC.D BASIS
42 THE SAMPLE WAS ANALYZED ON A TOTAL BASIS; THE TEST RESULT CAN BE COMPARED TO THE TCLP REGULATORY CRITERIA BY DIVIDING THE TEST RESULT BY 20, CREATING A THEORETICAL TCLP VALUE
43 METAL BY CONCENTRATION PROCEDURE
44 POSSIBLE CONTAMINATION FROM FIELD/LABORATORY

PARAMETER	1st Station Main Entrance
Percent Solids	87%
Total Aluminum	5400mg/kg dw
Total Antimony	<2mg/kg dw
Total Arsenic by furnace method	<2mg/kg dw
Total Barium	56mg/kg dw
Total Beryllium	<0.4mg/kg dw
Total Cadmium	1.3mg/kg dw
Total Calcium	2900mg/kg dw
Total Chromium	8.8mg/kg dw
Total Cobalt	3.0mg/kg dw
Total Copper	5.3mg/kg dw
Total Iron	10,000mg/kg dw
Total Lead	8.8mg/kg dw
Total Magnesium	1200mg/kg dw
Total Manganese	93mg/kg dw
Total Mercury	<0.3mg/kg dw
Total Nickel	7.8mg/kg dw
Total Potassium	490mg/kg dw
Total Selenium by furnace method	<0.6mg/kg dw
Total Silver	<2mg/kg dw
Total Sodium	230mg/kg dw
Total Thallium by furnace method	<2mg/kg dw
Total Vanadium	14mg/kg dw
Total Zinc	35mg/kg dw
Chloromethane	<3ug/kg dw
Bromomethane	<3ug/kg dw
Vinyl Chloride	<2ug/kg dw
Chloroethane	<3ug/kg dw
Methylene Chloride	19ug/kg dw
Acetone	<11ug/kg dw
Carbon Disulfide	<3ug/kg dw
1,1-Dichloroethene	<3ug/kg dw
1,1-Dichloroethane	<3ug/kg dw
trans-1,2-Dichloroethene	<3ug/kg dw
cis-1,2-Dichloroethene	<3ug/kg dw
Chloroform	<3ug/kg dw
1,2-Dichloroethane	<3ug/kg dw

PARAMETER	1st Station Main Entrance
2-Butanone	<11ug/kg dw
1,1,1-Trichloroethane	<3ug/kg dw
Carbon Tetrachloride	<3ug/kg dw
Bromodichloromethane	<3ug/kg dw
1,2-Dichloropropane	<3ug/kg dw
cis-1,3-Dichloropropene	<3ug/kg dw
Trichloroethene	<3ug/kg dw
Dibromochloromethane	<3ug/kg dw
1,1,2-Trichloroethane	<3ug/kg dw
Benzene	<3ug/kg dw
trans-1,3-Dichloropropene	<3ug/kg dw
Bromoform	<3ug/kg dw
4-Methyl-2-pentanone	<11ug/kg dw
2-Hexanone	<11ug/kg dw
Tetrachloroethene	<3ug/kg dw
1,1,2,2-Tetrachloroethane	<3ug/kg dw
Toluene	<3ug/kg dw
Chlorobenzene	<3ug/kg dw
Ethylbenzene	<3ug/kg dw
Styrene	<3ug/kg dw
m-Xylene and p-Xylene	<3ug/kg dw
o-Xylene	<3ug/kg dw
Phenol	<380ug/kg dw
bis(2-Chloroethyl)ether	<380ug/kg dw
2-Chlorophenol	<380ug/kg dw
1,3-Dichlorobenzene	<380ug/kg dw
1,4-Dichlorobenzene	<380ug/kg dw
1,2-Dichlorobenzene	<380ug/kg dw
2-Methylphenol	<380ug/kg dw
2,2'-Oxybis(1-Chloropropane)	<380ug/kg dw
4-Methylphenol	<380ug/kg dw
n-Nitrosodi-n-propylamine	<380ug/kg dw
Hexachloroethane	<380ug/kg dw
Nitrobenzene	<380ug/kg dw
Isophorone	<380ug/kg dw
2-Nitrophenol	<380ug/kg dw
2,4-D' thylphenol	<380ug/kg dw

PARAMETER	1st Station Main Entrance
bis(2-Chloroethoxy)methane	<380ug/kg dw
2,4-Dichlorophenol	<380ug/kg dw
1,2,4-Trichlorobenzene	<380ug/kg dw
Naphthalene	<380ug/kg dw
4-Chloroaniline	<380ug/kg dw
Hexachlorobutadiene	<380ug/kg dw
4-Chloro-3-methylphenol	<380ug/kg dw
2-Methylnaphthalene	<380ug/kg dw
Hexachlorocyclopentadiene	<380ug/kg dw
2,4,6-Trichlorophenol	<380ug/kg dw
2,4,5-Trichlorophenol	<380ug/kg dw
2-Chloronaphthalene	<380ug/kg dw
2-Nitroaniline	<3800ug/kg dw
Dimethylphthalate	<380ug/kg dw
Acenaphthylene	<380ug/kg dw
2,6-Dinitrotoluene	<380ug/kg dw
3-Nitroaniline	<3800ug/kg dw
Acenaphthene	<380ug/kg dw
2,4-Dinitrophenol	<3800ug/kg dw
4-Nitrophenol	<3800ug/kg dw
Dibenzofuran	<380ug/kg dw
2,4-Dinitrotoluene	<380ug/kg dw
Diethylphthalate	<380ug/kg dw
4-Chlorophenylphenylether	<380ug/kg dw
Fluorene	<380ug/kg dw
4-Nitroaniline	<3800ug/kg dw
2-Methyl-4,6-dinitrophenol	<3800ug/kg dw
n-Nitrosodiphenylamine	<380ug/kg dw
4-Bromophenylphenylether	<380ug/kg dw
Hexachlorobenzene	<380ug/kg dw
Pentachlorophenol	<760ug/kg dw
Phenanthrene	<380ug/kg dw
Anthracene	<380ug/kg dw
Carbazole	<380ug/kg dw
di-n-butylphthalate	<380ug/kg dw
Fluoranthene	<380ug/kg dw
Pyrene	<380ug/kg dw

PARAMETER	1st Station Main Entrance
Butylbenzylphthalate	<380ug/kg dw
3,3'-Dichlorobenzidine	<380ug/kg dw
Benzo(a)anthracene	<380ug/kg dw
Chrysene	<380ug/kg dw
bis(2-Ethylhexyl)phthalate	<380ug/kg dw
di-n-octylphthalate	<380ug/kg dw
Benzo(b)fluoranthene	<380ug/kg dw
Benzo(k)fluoranthene	<380ug/kg dw
Benzo(a)pyrene	<380ug/kg dw
Indeno(1,2,3-cd)pyrene	<380ug/kg dw
Dibenzo(a,h)anthracene	<380ug/kg dw
Benzo(ghi)perylene	<380ug/kg dw
BHC (a-isomer)	<2.0ug/kg dw
BHC (b-isomer)	<2.0ug/kg dw
BHC (d-isomer)	<2.0ug/kg dw
BHC (g-isomer)	<2.0ug/kg dw
Heptachlor	<2.0ug/kg dw
Aldrin	<2.0ug/kg dw
Heptachlor Epoxide	<2.0ug/kg dw
Endosulfan I	<2.0ug/kg dw
Dieldrin	<3.8ug/kg dw
4,4'-DDE	<3.8ug/kg dw
Endrin	<3.8ug/kg dw
Endosulfan II	<3.8ug/kg dw
4,4'-DDD	<3.8ug/kg dw
Endosulfan Sulfate	<3.8ug/kg dw
4,4'-DDT	<3.8ug/kg dw
Methoxychlor	<20ug/kg dw
Endrin Ketone	<3.8ug/kg dw
Endrin Aldehyde	<3.8ug/kg dw
alpha-Chlordane	<2.0ug/kg dw
gamma-Chlordane	<2.0ug/kg dw
Toxaphene	<195ug/kg dw

131000

№ 5/16 HDD

Earth Tech
2229 Tomlynn Street
Richmond, Virginia 23230
(804) 358-5400

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
38340	Lackawanna Foundry

SAMPLERS: *(Signature)* [signature]

STA NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metal	Total organic	Total Pesticide	% Solids			REMARKS
1 Top soil	5/9/02			X	1st station, main entrance	(4)	X	X	X	X			72 hour TAT
													Fax Results
													TB
													716-827-3036
													Kevin Mathews

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[signature]	5/9/02 5:00pm				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks	
		R. C Crump	5/10/02 1030		

Attachment 11

Attachment 11

Topsoil Analysis, Pariso Source

Attachment 9

Carmen Pariso Topsoil Analysis

Upstate Laboratories inc.

Shipping: 6034 Corporate Dr. • E. Syracuse, NY 13057-1017 • (315) 437-0255 • Fax (315) 437-1209
Mailing: Box 289 • Syracuse, NY 13206
Albany (518) 459-3134
Binghamton (607) 724-0478
Buffalo (716) 649-2533
Rochester (716) 436-9070
New Jersey (201) 703-1324

June 28, 2000

2nd Back F. 11/
Top Soil Sample

Ms. Lane Aulick
Earth Tech
7870 Villa Park Dr.
Suite 400
Richmond, VA 23228

Re: Analysis Report #16400197 - 38340 Lackawanna Foundry

Dear Ms. Aulick:

Please find enclosed the results for your sample which was picked up by ULI personnel on June 9, 2000.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your sample. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,

UPSTATE LABORATORIES, INC.

Anthony J. Scala
Director

AJS/lw

Enclosures: report, spreadsheets, disk

cc/encs: N. Scala, ULI
file
K. Matheis, USEPA-Region 2 (copy report, copy spreadsheets)
M. Kromis, Earth Tech (data deliverables to follow)

Note: Faxed results were given to your office and K. Matheis, USEPA-Region 2 previous to this report. AJS

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

DATE: 06/28/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16400197
Client I.D.: EARTH TECH
Sampled by:

APPROVAL: CDP
QC: SD
Lab I.D.: 10170

38340 LACKAWANNA
FOUNDRY PARISOS TOP SOIL BACK 1430H 05/24/00 C

ULI I.D.: 16400197 Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	Percent Solids	85%	06/13/00		WD0579
Total	Aluminum	5000mg/kg dw	06/20/00		ME2883
Total	Antimony	<36mg/kg dw	06/20/00		ME2883
Total	Arsenic by furnace method	<1.2mg/kg dw	06/20/00		ME2883
Total	Barium	60mg/kg dw	06/20/00		ME2883
Total	Beryllium	<0.59mg/kg dw	06/20/00		ME2883
Total	Cadmium	0.74mg/kg dw	06/20/00		ME2883
Total	Calcium	5100mg/kg dw	06/20/00		ME2883
Total	Chromium	7.3mg/kg dw	06/20/00		ME2883
Total	Cobalt	<5.9mg/kg dw	06/20/00		ME2883
Total	Copper	6.9mg/kg dw	06/20/00		ME2883
Total	Iron	6900mg/kg dw	06/20/00		ME2883
Total	Lead	<12mg/kg dw	06/20/00		ME2883
Total	Magnesium	1800mg/kg dw	06/20/00		ME2883
Total	Manganese	120mg/kg dw	06/20/00		ME2883
Total	Mercury	<0.3mg/kg dw	06/20/00		MB2494
Total	Nickel	7.6mg/kg dw	06/20/00		ME2883
Total	Potassium	730mg/kg dw	06/20/00		ME2883
Total	Selenium by furnace method	5.7mg/kg dw	06/20/00		ME2883
Total	Silver	<6.0mg/kg dw	06/20/00		ME2883
Total	Sodium	240mg/kg dw	06/20/00		ME2883
Total	Thallium by furnace method	<0.35mg/kg dw	06/20/00		ME2883
Total	Vanadium	<36mg/kg dw	06/20/00		ME2883
Total	Zinc	38mg/kg dw	06/20/00		ME2883
	PCB (Aroclors) by EPA Method 8080				
	Aroclor 1016	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1221	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1232	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1242	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1248	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1254	<2.0ug/kg dw	06/13/00		GA0136
	Aroclor 1260	<2.0ug/kg dw	06/13/00		GA0136
	Total PCB	<2.0ug/kg dw	06/13/00		GA0136
	TCL Pesticides by EPA Method 8080				
	BHC (a-isomer)	<2.0ug/kg dw	06/13/00		GA0136
	BHC (b-isomer)	<2.0ug/kg dw	06/13/00		GA0136
	BHC (d-isomer)	<2.0ug/kg dw	06/13/00		GA0136
	BHC (g-isomer)	<2.0ug/kg dw	06/13/00		GA0136

dw = Dry weight

DATE: 06/28/00

Upstate Laboratories, Inc.
Analysis Results
Report Number: 16400197
Client I.D.: EARTH TECH
Sampled by:

APPROVAL:
QC:
Lab I.D.: 10170
38340 LACKAWANNA
FOUNDRY PARISOS TOP SOIL BACK 1430H 05/24/00 C

ULI I.D.: 16400197
Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Heptachlor	<2.0ug/kg dw	06/13/00		GA013
Aldrin	<2.0ug/kg dw	06/13/00		GA013
Heptachlor Epoxide	<2.0ug/kg dw	06/13/00		GA013
Endosulfan I	<2.0ug/kg dw	06/13/00		GA013
Dieldrin	<3.9ug/kg dw	06/13/00		GA013
4,4'-DDE	8.9ug/kg dw	06/13/00		GA013
Endrin	<3.9ug/kg dw	06/13/00		GA013
Endosulfan II	<3.9ug/kg dw	06/13/00		GA013
4,4'-DDD	<3.9ug/kg dw	06/13/00		GA013
Endosulfan Sulfate	<3.9ug/kg dw	06/13/00		GA013
4,4'-DDT	6.4ug/kg dw	06/13/00		GA013
Methoxychlor	<20ug/kg dw	06/13/00		GA013
Endrin Ketone	<3.9ug/kg dw	06/13/00		GA013
Endrin Aldehyde	<3.9ug/kg dw	06/13/00		GA013
alpha-Chlordane	<2.0ug/kg dw	06/13/00		GA013
gamma-Chlordane	<2.0ug/kg dw	06/13/00		GA013
Toxaphene	<200ug/kg dw	06/13/00		GA013

dw = Dry weight

PARAMETER	TS-001 Parisos Top Soil Backup
Percent Solids	85%
Total Aluminum	5000mg/kg dw
Total Antimony	<36mg/kg dw
Total Arsenic by furnace method	<1.2mg/kg dw
Total Barium	60mg/kg dw
Total Beryllium	<0.59mg/kg dw
Total Cadmium	0.74mg/kg dw
Total Calcium	5100mg/kg dw
Total Chromium	7.3mg/kg dw
Total Cobalt	<5.9mg/kg dw
Total Copper	6.9mg/kg dw
Total Iron	6900mg/kg dw
Total Lead	<12mg/kg dw
Total Magnesium	1800mg/kg dw
Total Manganese	120mg/kg dw
Total Mercury	<0.3mg/kg dw
Total Nickel	7.6mg/kg dw
Total Potassium	730mg/kg dw
Total Selenium by furnace method	5.7mg/kg dw
Total Silver	<6.0mg/kg dw
Total Sodium	240mg/kg dw
Total Thallium by furnace method	<0.35mg/kg dw
Total Vanadium	<36mg/kg dw
Total Zinc	38mg/kg dw
Aroclor 1016	<2.0ug/kg dw
Aroclor 1221	<2.0ug/kg dw
Aroclor 1232	<2.0ug/kg dw
Aroclor 1242	<2.0ug/kg dw
Aroclor 1248	<2.0ug/kg dw
Aroclor 1254	<2.0ug/kg dw
Aroclor 1260	<2.0ug/kg dw
Total PCB	<2.0ug/kg dw
BHC (a--isomer)	<2.0ug/kg dw
BHC (b--isomer)	<2.0ug/kg dw
BHC (d--isomer)	<2.0ug/kg dw
BHC (g--isomer)	<2.0ug/kg dw
Heptachlor	<2.0ug/kg dw

[illegible]TER	TS--001 Parisos Top Soil Backup
[illegible]drin	<2.0ug/kg dw
Heptachlor Epoxide	<2.0ug/kg dw
Endosulfan I	<2.0ug/kg dw
Dieldrin	<3.9ug/kg dw
4,4'--DDE	8.9ug/kg dw
Endrin	<3.9ug/kg dw
Endosulfan II	<3.9ug/kg dw
4,4'--DDD	<3.9ug/kg dw
Endosulfan Sulfate	<3.9ug/kg dw
4,4'--DDT	6.4ug/kg dw
Methoxychlor	<20ug/kg dw
Endrin Ketone	<3.9ug/kg dw
Endrin Aldehyde	<3.9ug/kg dw
alpha--Chlordane	<2.0ug/kg dw
gamma--Chlordane	<2.0ug/kg dw
Toxaphene	<200ug/kg dw

Earth Tech
2229 Tomlynn Street
Richmond, Virginia 23230
(804) 358-5400

No

CHAIN OF CUSTODY RECORD

PROJ. NO. 38340 | PROJECT NAME Lackawanna Foundry

SAMPLERS: (Signature) [signature]

STA NO	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total Metals	PCB	Total Pesticides	% Solids			REMARKS
197 TS-001	6/2/00	1430	X		Parsons Top soil Backup	(1)	X	X	X	(X)			7 day TAT
													Please fax the results to
													Kevin Mathews @ 716 827-3036
													& Lowe Hubick @ 508-315-8317
					After June 16th Mail the hard copy to USEPA Reg II Attn Kevin Mathews 1110 Huron St. Room 1114 Buffalo, NY 14202		Fax to 716-551-9744						Mail a hard copy to USEPA Reg II Attn Kevin Mathews 3 Elm St Lackawanna, NY 14218

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	6/9/00 0730	[signature]	[signature]	6/9/00 1000	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) K Crump	Date / Time 6/9/00 1610	Remarks	

Site Photographs

Lackawanna Foundry Site - Site conditions upon EPA mobilization to site.

Lackawanna Foundry Site - Condition of Buildings along eastern edge of Site, during fence installation.

Lackawanna Foundry Site - Condition of central wetlands prior to EPA removal action.

Lackawanna Foundry Site - PCB capacitors in trench of PCB vault area.

Lackawanna Foundry Site - Assessment prior to recreational area excavations.

Lackawanna Foundry Site - Central Wetlands prior to removal action

Lackawanna Foundry Site - Removal of PCB capacitos from PCB Vault Area

Lackawanna Foundry Site - Production building demolition

Lackawanna Foundry Site - Production building demolition

Lackawanna Foundry Site - Demolition of office building in main building area

Lackawanna Foundry Site - Excavation of PCB Contaminated soils from PCB vault area

Lackawanna Foundry Site - Excavation of PCB vault area contaminated soils.

Lackawanna Foundry Site - PCB Capacitors in vault in main building area.

Lackawanna Foundry Site - PCB vault excavation in main building area.

Lackawanna Foundry Site - PCB soil awaiting disposal in production area.

Lackawanna Foundry Site - (top bottom photo) Concrete pad in production building prior to backfill and topsoil placement.

March 2000 excavations of arsenic contaminated soils.

Lackawanna Foundry Site - Backfilling and grading site, prior to topsoil placement

Lackawanna Foundry Site - Backfilling and grading prior to topsoil placement

Lackawanna Foundry Site - (top and bottom) Final grading after topsoil placement.

Lackawanna Foundry Site - (top and bottom) Wetland restoration operations

Lackawanna Foundry Site - Wetland restoration after placement of Buckhorn Marsh soils.

Lackawanna Foundry Site - Smokes Creek bank restoration.

Lackawanna Foundry Site - Site after restoration completed. View from Smokes Creek looking south (top photo) and west (bottom photo).