
ICM WORK PLAN for DECONTAMINATION & DEMOLITION OF LUCAS AVENUE PLANT

DUNKIRK, NY

April 2001

0041-001-100

Prepared for:
RealCo, Inc.
Lake View, New York

Prepared by:



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1.0 INTRODUCTION

1.1 Background

The Lucas Avenue Plant (LAP) is a former manufacturing facility located in the southwest quadrant of the City of Dunkirk, New York (Figure 1-1). The LAP was formerly a part of the AL Tech Specialty Steel Facility and comprises a former manufacturing building of approximately 178,000 square feet on 8 acres of land (refer to Plate 1 in Appendix D). The facility was used primarily for cold drawing of stainless steel wire and related manufacturing operations including: pickling; lead, copper and lime coating; bright annealing and final spooling prior to shipment. All manufacturing operations in the building ceased in 1997. Subsequently, RealCo Inc. (RealCo) assumed title of the LAP site to manage the investigation, remediation and final disposition of the building and property.

A Phase I RCRA Facility Investigation (RFI) was completed for the entire Dunkirk Facility on behalf of AL Tech in October, 1998. The LAP was included in this RFI and focused on subsurface impacts from several Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). Specifically, the areas investigated at LAP included:

- SWMU 1: LAP West Pickle Facility
- SWMU 4: LAP East Pickle Facility
- SWMU 6: Former Barium Chloride Bath
- SWMU 7: Former Plating Operations
- SWMU 8: Former LAP Neutralization Plant
- AOC 2B & 2G: Battery Storage Areas
- AOC 5A: Lucas Avenue West Oil Tanks
- AOC 5B: Lucas Avenue East Oil Tanks

1.2 Scope and Purpose of Work Plan

RealCo has prepared this Interim Corrective Measures (ICM) Work Plan for the decontamination and demolition of the Lucas Avenue Plant in conjunction with ongoing RFI/CM activities being conducted under the provisions of the August 1995 Order on Consent. The Work



Plan was requested by the New York State Department of Environmental Conservation (NYSDEC) to document procedures and protocols necessary to both characterize and inventory impacted contents and areas within the LAP and to perform the actual decontamination and demolition of the above-grade and known underground structures associated with the building. To the extent feasible, the decontamination and demolition activities described in this Work Plan will be coordinated to minimize interference with ongoing Phase III and IV Interim Corrective Measures in the LAP West Pickle Area.

RealCo is concerned with potential structural collapse of portions of the building due to the deteriorating condition of the LAP roof and related structures. Any structural failure in areas containing known contaminated waste residuals within the building would complicate efforts to decontaminate and/or properly remove these materials and could potentially result in releases to soil or groundwater beneath the structure. RealCo and the NYSDEC are in general agreement that the decontamination and demolition of the LAP will minimize the potential for further dispersal of contaminated residues through contact with precipitation and/or collapsed structural material.

RealCo petitioned NYSDEC to allow for the decontamination and demolition of the LAP in an expedited manner. NYSDEC has approved this approach and directed RealCo to prepare a comprehensive Work Plan that provides for:

- An overall assessment of the building structure and contents;
- A sampling and analysis program to quantify and delineate potentially contaminated areas in the building;
- An asbestos survey and description of procedures and protocols to be used in the abatement of asbestos containing materials;
- Provisions for the decontamination, removal and proper disposal of contaminated residues and building materials for the proposed work;
- Procedures to be employed during the demolition of the structure, including Site Health & Safety and Community Air Monitoring Plans; and
- Cost estimates for the completion of the tasks outlined above.



2.0 FACILITY ASSESSMENT RESULTS

2.1 General

An initial assessment of the LAP was performed during the week of November 6, 2000 in support of the development of this Work Plan to collect the data and information necessary to identify, inventory, and document:

- Structural makeup and dimensions of the main areas of the building;
- Equipment/materials that may be salvaged during demolition;
- Asbestos containing materials;
- Areas of potentially impacted structural materials for further characterization (existing SWMUs, AOCs and others areas) for possible decontamination or, if necessary, off-site disposal; and,
- Waste residuals in open tanks and closed containers that require characterization for possible decontamination or off-site disposal

2.2 LAP Building and Equipment Inventory

As part of the initial assessment process and in order to provide an overview of structural demolition requirements, a gross inventory of building materials of construction (i.e., structural steel, brick, siding, etc.) and approximate quantities was documented. To simplify and facilitate tracking of the location of materials, samples, etc. during the inventory process, the building was divided into six major areas:

- East Warehouse;
- East Production Area;
- East Pickle Area;
- West Production Area;
- West Pickle Area; and,
- West Warehouse.

The LAP also includes a number of smaller areas and rooms that were included in the assessment. Table 2-1 presents a summary of the structural materials inventory for each major area



Table 2-1
RealCo LAP ICM Work Plan
Summary of Structural Components and Large Equipment by Area

East Warehouse

Quantity	Unit	Description	Notes
6	Each	Steel Truss ✓	Approximately 63' L X 15' H
308	L.F.	W-8 Steel Column ✓	14 columns x 22' tall
1	Each	Overhead Crane ✓	3-ton capacity
4,000	S.F.	Brick ✓	

East Pickle Area

Quantity	Unit	Description	Notes
200	L.F.	W-16 Steel Beam ✓	2 columns x 100' long
100	L.F.	W-10 Steel Beam ✓	1 column x 100' long
8,000	S.F.	Brick ✓	
5	Each	Steel Truss ✓	Approximately 63' L X 15' H
16	Each	Pallet Rack	Located along south wall
8	Each	Electric Motor ✓	
3	Each	Tank ✓	Cylindrical, approximately 5' D X 7' H
3	Each	Dip Tank ✓	Rectangular, various sizes, 2 steel and 1 plastic
1	Each	Overhead Crane ✓	2-ton capacity

East Drum Storage Room

Quantity	Unit	Description	Notes
1,600	S.F.	Brick ✓	
800	S.F.	Corrugated Metal ✓	

East Production Area

Quantity	Unit	Description	Notes
10	Each	Steel Truss ✓	Approximately 63' L X 15' H, located in south bays
392	L.F.	W-6 Column ✓	28 columns x 14' high
1	Each	Overhead Crane ✓	1-ton capacity
2	Each	Overhead Crane ✓	1/2-ton capacity
5	Each	Overhead Crane ✓	500-lb. capacity
5,900	S.F.	Brick ✓	
29,000	S.F.	Wood Block Flooring ✓	

West Production Area

Quantity	Unit	Description	Notes
1,302	L.F.	W-6 Column ✓	93 columns x 14' tall
448	L.F.	W-8 Column ✓	32 columns x 14' tall
112	L.F.	W-10 Column ✓	8 columns x 14' tall
1,000	L.F.	W-12 Beam ✓	2 beams x 500' long
300	L.F.	W-12 Beam ✓	1 beam x 300' long
200	L.F.	W-18 Beam ✓	1 beam x 200' long
25	Each	Steel Truss ✓	Various sizes
200	L.F.	W-16 Beam ✓	1 beam x 200' long
400	L.F.	2" wide Support Beams ✓	20 beams x 20' long

Table 2-1
RealCo LAP ICM Work Plan
Summary of Structural Components and Large Equipment by Area

West Production Area (Cont'd.)

Quantity	Unit	Description	Notes
450	L.F.	W-12 Beams ✓	9 beams x 50' long
15,000	S.F.	Wood Block Flooring ✓	
1,050	S.F.	Brick ✓	
15	Each	Wire Manufacturing Machinery	Approximately 5' W X 20' L X 3' H
14	Each	Electric Motors ✓	Approximately 3' W x 7' L x 3' H, located in electric room
6	Each	Lime Coating Tanks ✓	
25+	Each	Overhead Cranes/Hoists ✓	500 - 2000 lb. Capacity
20	Each	CO ₂ Fire Extinguishing Tanks	Approximately 5' tall

West Warehouse

Quantity	Unit	Description	Notes
528	L.F.	W-24 Column ✓	22 columns x 24' tall
400	L.F.	W-36 Beam ✓	2 beams x 200' long
22	Each	Steel Truss ✓	Located in east bays
220	L.F.	W-12 Column ✓	22 columns x 10' tall
880	L.F.	W-12 Column ✓	22 columns x 40' tall
440	L.F.	W-8 Column ✓	22 columns x 20' tall
400	L.F.	W-24 Beam ✓	2 beams x 200' long
220	L.F.	W-6 Column ✓	11 columns x 20' tall
1,200	S.F.	Brick ✓	
3	Each	Kilns/Furnaces ✓	Approximately 40' long x 20' tall
3	Each	Annealing Furnaces ✓	Approximately 20' tall

West Pickle Area

Quantity	Unit	Description	Notes
165	L.F.	W-8 Column ✓	11 columns x 15' tall
720	L.F.	W-24 Beam ✓	2 beams x 360' long
700	L.F.	W-10 Column ✓	20 columns x 35' tall
240	L.F.	W-10 Column ✓	8 columns x 30' tall
19	Each	Steel Truss ✓	Approximately 32' L x 15' H
4,000	S.F.	Corrugated Steel ✓	20' x 200'
12,200	S.F.	Brick ✓	
1	Each	Overhead Crane ✓	5-ton capacity
1	Each	Overhead Crane ✓	2-ton capacity
7	Each	Pickling tank ✓	Approximately 16' L x 8.5' W

Northwest Battery Room

Quantity	Unit	Description	Notes
20	Each	W-8 Column ✓	2 columns x 10' tall
1	Each	Overhead Crane ✓	2-ton capacity

Notes:

Additional miscellaneous support members, piping and ductwork present among trusses throughout entire plant.

in the building. The building areas described above and the structural inventory data are also presented on Plate 2 – LAP Building Inventory (Appendix D). A photographic record was also compiled during the initial inventory. The photographs have been labeled according to the above-referenced areas and are presented in Appendix A. A LAP area by area photo overview is also provided on Plate 3 (Appendix D).

2.3 Asbestos Survey

A comprehensive asbestos survey was conducted in November 2000 by two licensed New York State asbestos inspectors from Paradigm Environmental Services, Inc. Based on the inspector's field experience and understanding of potential areas of concern, a total of sixty-four (64) samples of suspected asbestos containing material (ACM) were collected for analysis of asbestos content. The samples covered a wide range of the building's materials suspected of containing asbestos including floor, wall, main roofing and interior office ceiling materials, surfacing materials, thermal systems insulation, window glazing and other miscellaneous materials. The samples were initially analyzed for asbestos fibers using the polarized light microscopy (PLM) method. The results from the PLM testing allowed for positive verification of the presence or absence (i.e. total asbestos content less than 1%) of asbestos in 58 of the 64 samples. The remaining 6 samples consisting of non-friable organically bound materials (e.g., roof membrane, mastics, moldings) where PLM results were inconclusive. These samples were re-analyzed using the transmission electron microscopy (TEM) method. In general, the survey confirmed that a significant portion of exposed piping insulation was asbestos containing, along with the majority of office/bathroom floor tiles and linoleum, molding, window glazing and small amounts of equipment insulation. Samples of roofing materials collected from representative portions of the east production area were negative for asbestos. A summary of materials found to contain asbestos, or materials that should be treated as asbestos-containing is presented in Table 2-2. A copy of the asbestos survey report is attached as Appendix B.



Table 2-2
RealCo LAP ICM Work Plan
Summary of Asbestos Containing Materials

Location	Description	Quantity	Unit
Throughout Plant	White Window Glaze	Unknown quantities	
Throughout Plant	Pipe Insulation	2100	Linear Feet
East Production Area	White Tank Insulation	8	Square Feet
East Offices	Brown 12" x 12" Floor Tile	200	Square Feet
East Offices	Brown 9" x 9" Floor Tile	500	Square Feet
East Offices	Black Floor Tile Mastic	1200	Square Feet
East Offices	Tan Linoleum	300	Square Feet
East Offices	Rust 9" x 9" Floor Tile	500	Square Feet
East Pickling Room	Brown Breech Insulation	20	Square Feet
West Production Area	Black Insulation	600	Square Feet
Exterior West Produciton Area	Grey Transite Siding	7000	Square Feet

10,320 sf.

2.4 Hazardous Materials Assessment

2.4.1 Initial Assessment of Potentially Hazardous Materials

In order to proceed with the proposed demolition of the building, it is necessary to delineate any materials that may be characterized as hazardous wastes and provide for their cleanup and/or removal prior to the general structural demolition. The Phase I RFI and subsequent Phase II and III Interim Corrective Measures investigations of the LAP focused primarily on identifying and characterizing subsurface environmental impacts on soils and groundwater. As a result of these investigations, and knowledge of past production and operating practices, there are building materials, equipment and miscellaneous items within the LAP that were known to be impacted or potentially impacted by chemical and/or petroleum residues. The extent and severity of the impacts have not been previously assessed. In addition, at the time of the shutdown of the LAP, numerous containers and tanks of partially used raw materials and/or waste residuals were left at the facility and require characterization for disposal purposes.

An initial building assessment was performed to identify potentially impacted media and sampling locations within the SWMUs and AOCs. Potentially impacted media identified during the initial assessment include:

- Plating bath impacted brick and mortar along the north wall of the East Pickle Area.
- Plating bath and Kolene process impacted brick and mortar along the north wall of the West Pickle Area.
- Plating bath and Kolene process impacted floors along the north wall of the West Pickle Area
- Residues (salts and other solidified and liquid sludges) remaining in several former pickling tanks in the West Pickle Area and the Barium Salt Bath line.
- Miscellaneous 20 to 55-gallon containers containing unused products, lubricants and miscellaneous waste residuals (e.g., drawing soap residues, waste oils, etc.).
- Copper and/or cyanide-impacted brick and mortar along the south wall of the East Warehouse Area.
- Barium-impacted brick and mortar in the wall separating the former Barium Salt Bath Process and the Battery Room.



- Petroleum-impacted wood block flooring located in both the east and west production areas.
- Residual wire drawing oils/sludges contained in basement-level bulk storage tanks and deposited on the floors of the storage rooms.
- Transformers and circuit breakers containing dielectric oils with elevated levels of PCBs.

2.4.2 Summary of Sampling And Analytical Results

A Sampling and Analysis Plan (SAP) was submitted under separate cover to NYSDEC on January 18, 2001 and approved by NYSDEC in February 2001. The purpose of the SAP was to address the characterization of: product, lubricants or waste residuals (e.g. tank sludges, drummed residues), potentially hazardous building materials, and other miscellaneous residues present within the LAP as described above.

Upon NYSDEC approval of the SAP, sampling of potentially hazardous media took place during February 2001. In general, individual grab samples of similar residues/sludges collected from the miscellaneous drums, containers and plating tanks throughout the plant were composited for analysis in accordance with the SAP. Individual grab samples of dielectric oil collected from each of the three transformers were composited into one sample and grab samples from each of the five circuit breakers were composited into one sample for analysis of PCBs.

Composite and discrete samples of brick, mortar, concrete and wood flooring building materials and other potentially hazardous materials/residues were collected and submitted for analysis. Table 2-3 summarizes the quantities and locations of samples collected, and their respective analytical parameters. Tables 2-4a through 2-4h summarize the analytical results from each of the SWMUs, AOCs and other containerized residuals sampled as part of this characterization task. Appendix C contains complete analytical laboratory reports including QA/QC data for all samples collected and analyzed. Figures 2-1 and 2-2 present the approximate locations of all samples (except misc. drums) collected during the characterization task.

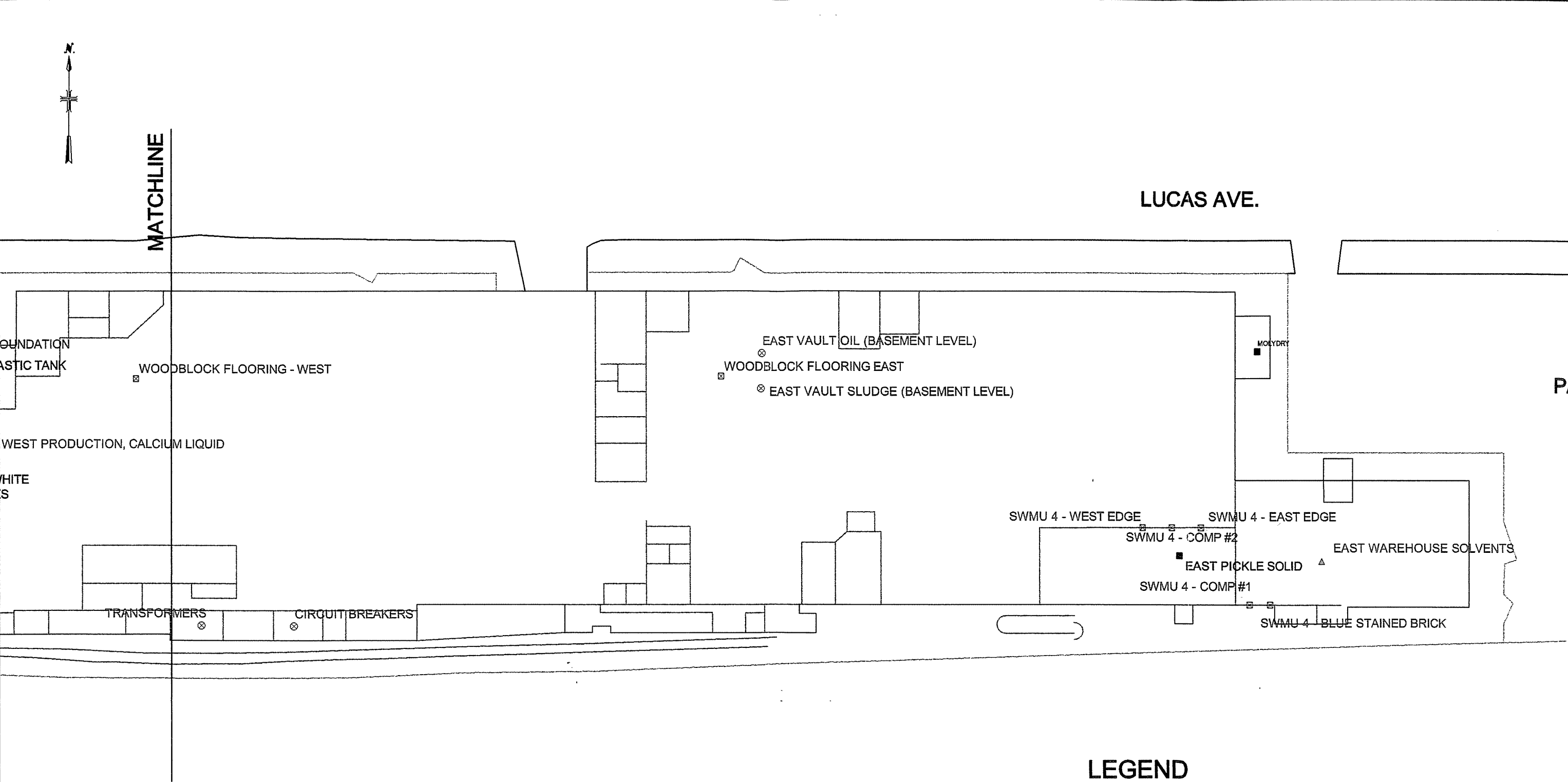
The Sampling and Analysis Plan conservatively assumed that additional samples might be needed once drums/containers were opened and the tank residues were collected and visually inspected. During sample collection, however, it was determined that many coating/plating bath residuals and drummed materials throughout the LAP had similar physical/chemical characteristics

*Have chem
review all
QA/QC
data*



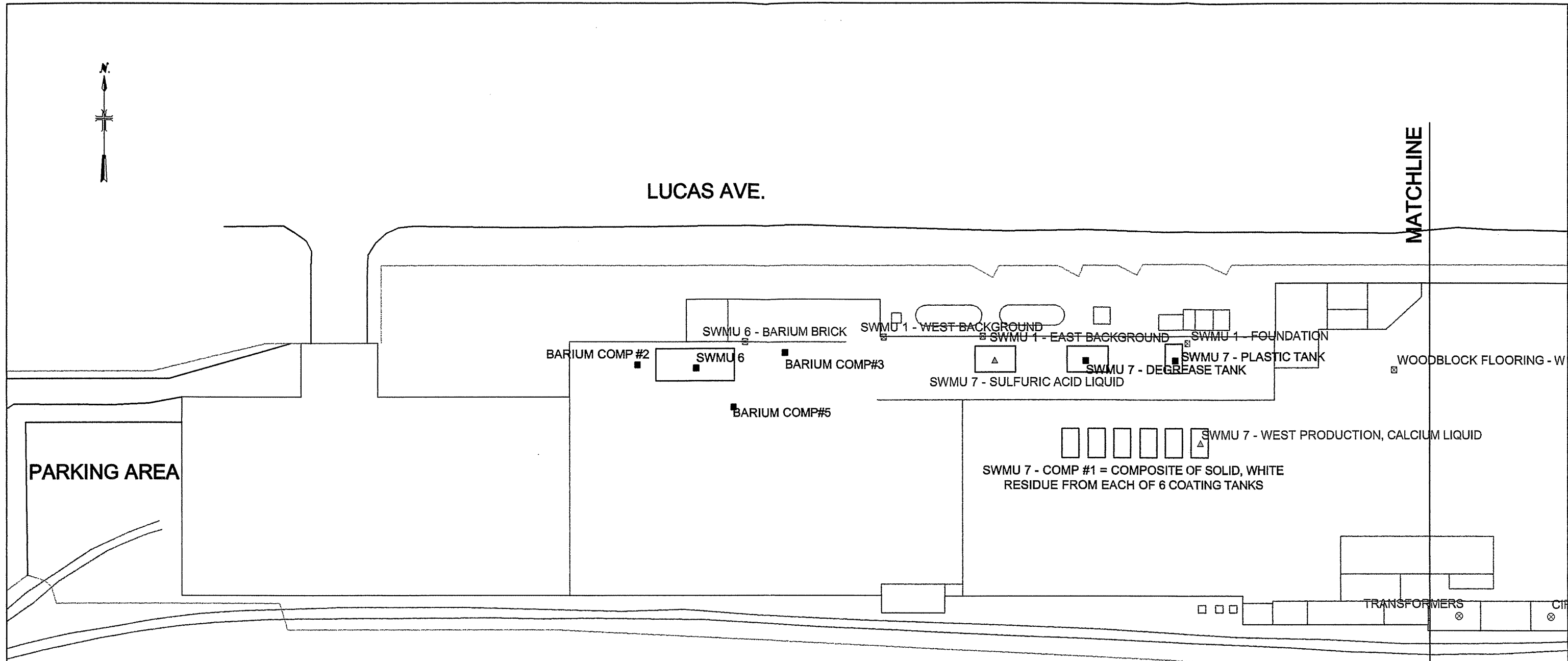
Table 2-3
RealCo LAP, ICM Work Plan
Summary of LAP Sampling

Location	Sample ID	Matrix	Composite/Grab	Analytical Parameters
SWMU 1 - West Pickle Facility	"SWMU 1, West Background"	Brick	Composite	TCLP Metals (Pb, Cr, Ba), Total Metals (Ba, Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 1, East Background"	Brick	Composite	TCLP Metals (Pb, Cr, Ba), Total Metals (Ba, Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 1, Foundation"	Brick	Composite	TCLP Metals (Pb, Cr, Ba), Total Metals (Ba, Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
SWMU 4 - East Pickle Facility	"SWMU 4, Blue Stained Brick"	Brick	Composite	TCLP Metals (Pb, Cr), Total Metals (Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 4, Composite #1"	Brick	Composite	TCLP Metals (Pb, Cr), Total Metals (Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 4, Composite #2"	Brick	Composite	TCLP Metals (Pb, Cr), Total Metals (Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 4, East Edge"	Brick	Composite	TCLP Metals (Pb, Cr), Total Metals (Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"SWMU 4, West Edge"	Brick	Composite	TCLP Metals (Pb, Cr), Total Metals (Cr, Cu, Pb, Ni), Total Cyanide, RCRA Corrosivity
	"East Pickling Solid"	Drummed Solid	Grab	TCLP RCRA Metals, pH
SWMU 6 - Barium Chloride Bath	"SWMU 6, Barium Brick"	Brick	Composite	TCLP Metals (Ba, Pb, Cr), Total Metals (Ba, Cr, Pb, Ni), RCRA Corrosivity
	"SWMU 6, White Solids"	Solid	Grab	TCLP Metals (Ba, Pb, Cr), Total Metals (Ba, Cr, Pb, Ni), RCRA Corrosivity
	"Composite 2, White Crystals"	Drummed Solid	Composite	TCLP RCRA Metals, pH
	"Composite 3, White Resin"	Drummed Solid	Composite	TCLP RCRA Metals, pH, RCRA Ignitability
	"Composite 5, White Residue"	Drummed Solid	Composite	TCLP Metals (Ba, Pb, Cr), Total Metals (Ba, Cr, Pb, Ni), RCRA Corrosivity
SWMU 7 - Former Plating Operations	"SWMU 7, Composite 1"	Solid	Composite	TCLP RCRA Metals (Ba, Pb, Cr), Total Metals (Cr, Ni), Hexavalent Chromium, RCRA Corrosivity, RCRA Reactivity
	"SWMU 7, West Production Calcium Liquid"	Water	Grab	Total Metals (Cr, Ni), Hexavalent Chromium, RCRA Corrosivity, RCRA Reactivity
	"SWMU 7, Sulfuric Acid Liquid"	Water	Grab	TCLP Metals (Pb, Cr, Ba), Total Metals (Cr, Ni), RCRA Corrosivity, RCRA Reactivity
	"SWMU 7, Degrease Tank"	Sludge	Grab	TCLP Metals (Pb, Cr, Ba), Total Metals (Cr, Ni), RCRA Corrosivity, RCRA Reactivity
	"SWMU 7, Plastic Tank"	Sludge	Grab	TCLP Metals (Pb, Cr, Ba), Total Metals (Cr, Ni), RCRA Corrosivity, RCRA Reactivity
AOC 1 - Circuit Breaker/Transformer Room	"Circuit Breakers"	Oil	Composite	PCBs, RCRA Ignitability
	"Transformers"	Oil	Composite	PCBs, RCRA Ignitability
AOC 2 - Battery Storage Room	"Sodium Monoxide"	Drummed Solid	Grab	TCLP RCRA Metals, pH
AOC 5B - East Vault Oil Storage	"East Vault Oil"	Water/Oil	Composite	PCBs, Total Metals (Ba, Cr, Pb, Ni), RCRA Ignitability
	"East Vault Sludge"	Sludge	Composite	PCBs, Total Metals (Ba, Cr, Pb, Ni), RCRA Ignitability
West Production Area	"Woodblock Flooring West"	Wood	Composite	PCBs, TCLP SVOCs, TCLP RCRA Metals
East Production Area	"Woodblock Flooring East"	Wood	Composite	PCBs, TCLP SVOCs, TCLP RCRA Metals
East Drum Storage Area	"Molydry, Composite E"	Drummed Solid	Composite	RCRA Metals, RCRA Ignitability
Various	"Woodblock Flooring, Background"	Wood	Composite	PCBs, TCLP SVOCs, TCLP RCRA Metals
	"East Warehouse Solvent"	Drummed Liquid	Composite	TCLP RCRA Metals, RCRA Ignitability
	"White Solid Residues, Composite A"	Drummed Solid	Composite	TCLP RCRA Metals, pH
	"Oils, Composite B"	Drummed Oils/Sludges	Composite	PCBs, RCRA Metals, RCRA Ignitability



LEGEND

- APPROXIMATE LOCATION OF BUILDING MATERIAL SAMPLES
 - ⊗ APPROXIMATE LOCATION OF OIL SAMPLES
 - △ APPROXIMATE LOCATION OF LIQUID SAMPLES
 - APPROXIMATE LOCATION OF SOLID SAMPLES
- REMAINING DRUM COMPOSITE SAMPLES TAKEN FROM LOCATIONS THROUGHOUT THE LAP



LEGEND

- ☐ APPROXIMATE LOCATION OF BUILDING MATERIAL SAMPLES
- ⊗ APPROXIMATE LOCATION OF OIL SAMPLES
- △ APPROXIMATE LOCATION OF LIQUID SAMPLES
- APPROXIMATE LOCATION OF SOLID SAMPLES
- REMAINING DRUM COMPOSITE SAMPLES TAKEN FROM LOCATIONS THROUGHOUT THE LAP

and could be composited accordingly. Any exceptions to the Sampling and Analysis Plan are noted for the specific SWMU or AOC as described in the following sections.

2.4.2.1 SWMU 1 (LAP West Pickle Area)

Based on comments received from the NYSDEC in their January 4, 2001 letter to RealCo on the SAP, no sampling of the brick and mortar was performed on the wall directly north of the former pickling (K062) operations that were visually impacted (i.e., yellow-green coloration). Samples of visually non-impacted brick were collected from east and west of the visually impacted K062 pickling area in order to determine the lateral extent of contamination. Only surface samples of brick and surrounding mortar were collected east of the impacted areas, as the collection of an entire brick (as originally proposed in the Sampling and Analysis Plan) was deemed to be unsafe and not practical with hand tools. West of the visually impacted areas, an entire brick was able to be removed and composited according to the Sampling and Analysis Plan. In addition, surface samples of visually impacted foundation bricks and the surrounding mortar were collected east of where the ICM was performed and submitted for analysis.

Refer to Table 2-4a for analytical results of three brick/mortar/foundation composites collected from this SWMU.

2.4.2.2 SWMU 4 (LAP East Pickle Area)

Surface brick and mortar samples were collected from visually impacted/corroded areas of the East Pickle Area. In addition, samples of visually non-impacted brick were collected east and west of the visually impacted areas in order to determine the lateral extent of potential contamination. Surface brick and mortar samples from two separate stained areas were also collected from the south wall of the adjacent East Warehouse area and submitted for analysis. Only surface samples of brick and surrounding mortar were collected in these areas, as the collection of an entire brick (as originally proposed in the Sampling and Analysis Plan) was deemed to be unsafe and not practical with hand tools. Refer to Table 2-4b for analytical results on the five brick /mortar composites collected from this SWMU.



Table 2-4a
RealCo LAP ICM Work Plan
SWMU 1 - West Pickle Area
Brick Composites Analytical Summary

*should be removed
as HW.*

Parameter	Units	Sample			Maximum TCLP ⁽¹⁾ Concentration (mg/L)
		"East Background"	"West Background"	"Foundation"	
TCLP Lead	mg/L	<0.01	<0.01	<0.01	5.0
TCLP Chromium	mg/L	0.28	2.1	5.4	5.0
TCLP Barium	mg/L	0.50	0.54	0.50	100.0
Total Barium	mg/kg	292	99.8	560	NA
Total Chromium	mg/kg	1360	106	7520	NA
Total Copper	mg/kg	56.6	18.8	376	NA
Total Lead	mg/kg	112	12.0	70.8	NA
Total Nickel	mg/kg	292	15.6	959	NA
Total Cyanide	ug/g	<1.0	<1.0	<1.0	NA
Leachable pH	S.U.	7.4	8.1	2.8	NA

Notes:

- 1.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 2.) Shading indicates materials are characteristic hazardous waste
- 3.) NA = Not Applicable

Table 2-4b
RealCo LAP ICM Work Plan
SWMU 4 - East Pickle Area
Brick Composites Analytical Summary

Parameter	Units	Sample <i>from virtually non-impacted areas</i>				Maximum TCLP ⁽¹⁾ Concentration (mg/L)
		"Blue Brick"	"Comp 1"	"Comp 2"	"East Edge" "West Edge"	
TCLP Lead	mg/L	0.096	3.2	0.072	0.027	0.16
TCLP Chromium	mg/L	0.0086	0.023	3.7	0.48	0.52
Total Chromium	mg/kg	19.1	27.6	901	1600	676
Total Copper	mg/kg	20700	134	188	334	432
Total Lead	mg/kg	60	433	164	383	308
Total Nickel	mg/kg	22.2	25.4	253	549	508
Total Cyanide	ug/g	748	24	16.6	18.1	28.5
Leachable pH	S.U.	8.7	7.4	3.1	7.4	6.5

Notes:

- 1.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 2.) NA = Not Applicable

2.4.2.3 SWMU 6 (Barium Chloride Bath)

In addition to the residues/solids collected from the former Barium Chloride Bath area, surface brick and mortar samples were collected from white-stained areas within the West Battery Storage Room, on the north side of the brick wall separating the Battery Room from the former Barium Chloride Bath area. Only surface samples of brick and surrounding mortar were collected in these areas, as the collection of an entire brick (as originally proposed in the Sampling and Analysis Plan) was deemed to be unsafe and not practical with hand tools. Refer to Table 2-4c for analytical results on the brick/mortar and white solids composites collected from this SWMU.

2.4.2.4 SWMU 7A, 7B, 7C, 7D (Former Plating Operations)

Grab samples of liquids or residues were collected from three plating tanks adjacent to the West Pickle Area. Residue samples were also collected and composited from a line of six lime coating tanks south of the West Pickle Area within the West Production Area. A liquid grab sample was collected from the eastern-most tank in this line. Frozen liquid was present in the western-most tank but was not sampled. For purposes of decontamination or disposal, it will be assumed that the western tank contains liquid with characteristics similar to that in the eastern-most tank. Refer to Table 2-4d for analytical results of the five plating bath residual samples collected from this SWMU.

2.4.2.5 Wire Drawing Oils (AOCs 5A and 5B)

Upon inspection of the four drawing oil tanks in the east basement-level drawing oil vault, no distinction could be made as to which were "dirty-oil" tanks and which were "clean-oil" tanks. Each tank was nearly filled with a similar oil/water mixture and therefore grab samples from each tank were composited and submitted for analysis. Samples were not collected from the west basement-level drawing oil vault because it was filled with infiltrated groundwater and could not be entered. Because both the east and west basement-level drawing oil vaults had similar production and operating practices in the past, it will be assumed that the western tanks contain oil and/or sludge with characteristics similar to those in the eastern vault for purposes of decontamination/disposal. Refer to Table 2-4e for analytical results of the oil and sludge composites from this AOC.



*dispose of as
HW.*

Table 2-4c
RealCo LAP ICM Work Plan
SWMU 6 - Barium Chloride Bath Residuals & Brick

Parameter	Units	Sample		Maximum TCLP ⁽¹⁾ Concentration (mg/L)
		"White Solids"	Brick	
TCLP Lead	mg/L	<0.01	1.3	5.0
TCLP Chromium	mg/L	<0.002	0.027	5.0
TCLP Barium	mg/L	4850	0.44	100.0
Total Barium	mg/kg	254000	7390	NA
Total Chromium	mg/kg	880	20.6	NA
Total Lead	mg/kg	92.5	174	NA
Total Nickel	mg/kg	211	17	NA
Leachable pH	S.U.	6.9	6.5	NA

Notes:

- 1.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 2.) Shading indicates materials are characteristic hazardous waste.
- 3.) NA = Not Applicable

Table 2-4d
RealCo LAP ICM Work Plan
SWMU 7A,7B,7C,7D - Plating Liquids & Residuals

Parameter	Units	Sample				Maximum TCLP ⁽¹⁾ Concentration (mg/L)
		"Degrease Tank"	"Plastic Tank"	"SWMU 7, Comp. 1"	"H ₂ SO ₄ Liquid"	"West Prod. Ca Liquid"
TCLP Lead	mg/L	0.24	2.3	<0.01	NA	NA
TCLP Chromium	mg/L	6.5	11.7	0.014	NA	NA
TCLP Barium	mg/L	0.65	0.79	0.45	NA	100.0
Total Chromium	mg/kg	1520	12300	85.9	16700	0.014
Total Nickel	mg/kg	312	13200	58	7.4	0.82
H ₂ S Released from Waste	mg/kg	25.7	<10	27.8	<10	<10 mg/L
HCN Released from Waste	mg/kg	<10	<10	<10	<10	<10
Total Hexavalent Chromium	mg/kg	<1.0	<1.0	<1.2	<1.0	<10 ug/L
Leachable pH	S.U.	10.1	3.7	9.3	9.5	9.8

Notes:

- 1.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 2.) Shading indicates materials are characteristic hazardous waste.
- 3.) NA = Not Applicable

Outside of
holding time

Table 2-4e
RealCo LAP ICM Work Plan
East Underground Vault Sludge & Liquids

Parameter	Units	Sample	
		East Vault Sludge Comp.	East Vault Oil Comp.
Aroclor 1016	ug/kg	< 23	< 1000
Aroclor 1221	ug/kg	< 23	< 1000
Aroclor 1232	ug/kg	< 23	< 1000
Aroclor 1242	ug/kg	< 23	< 1000
Aroclor 1248	ug/kg	< 23	< 1000
Aroclor 1254	ug/kg	< 23	< 1000
Aroclor 1260	ug/kg	< 23	< 1000
Total Arsenic	mg/kg	< 14.1	0.0097
Total Barium	mg/kg	114	0.17
Total Cadmium	mg/kg	1.4	0.0051
Total Chromium	mg/kg	106	377
Total Lead	mg/kg	1040	< 0.01
Total Mercury	mg/kg	< 0.15	0.004
Total Selenium	mg/kg	< 4.2	5.0
Total Silver	mg/kg	< 1.4	< 0.0002
Flashpoint	Degrees F	> 200	> 200

PCBS

Not the if < 50 ppm
 - No problem w/ PCBS

where do these come from? This appears to be results of a blank sample?

mg/l

Sludge has high concentr. of As, Cr, & Pb (should do JELP for Cr + Pb)
 Oil " " " Cr for sludge

2.4.2.6 AOC 2B (Transformer and Circuit Breaker Oils)

Grab samples were collected and composited from four of the five circuit breakers, as the drain plug on the eastern-most circuit breaker could not be opened. Because the circuit breakers are of similar age and appearance, it will be assumed that the eastern-most circuit breaker contains oil with characteristics similar to the other four circuit breakers for purposes of decontamination/disposal. Refer to Table 2-4f for analytical results of the two composite samples taken from this AOC.

2.4.2.7 Wood Block Flooring

The wood block flooring found throughout the LAP was not initially characterized as a SWMU or AOC, however, during the preparation of the SAP and a preliminary assessment of the facility, observations of the former wire drawing operations areas indicated that a significant portion of the wood block flooring may have been soaked with drawing oil and sampling of this media would be appropriate.

As proposed in the SAP, a composite sample of wood block flooring was collected in each of the former wire drawing areas (East & West Production Areas) where oil was used as a lubricating medium in the drawing machines and was observed to have impacted the floors. The composite was made up of four discrete samples collected from each bay in the wire drawing areas that displayed visual impact. A separate "background" composite sample of wood block flooring was also collected from four discrete samples taken in aisles and storage areas that were not directly impacted by manufacturing operations. Refer to Table 2-4g for analytical results of the three composite samples taken from these areas.

2.4.2.8 Drums/Containers

Approximately 130, 55-gallon or smaller containers spread throughout the LAP were sampled as part of this task. A total of seven (7) composites and two discrete samples were collected and analyzed based on their observed chemical/physical characteristics and composition. A majority of the containers (approximately 110) were composited into two samples. They are described as follows:



Table 2-4f
RealCo LAP ICM Work Plan
Transformer & Circuit Breaker Oil Composites

Parameter	Units	Sample	
		Transformer Composite	Breakers Comp
Aroclor 1016	mg/kg	< 10	< 1.0
Aroclor 1221	mg/kg	< 10	< 1.0
Aroclor 1232	mg/kg	< 10	< 1.0
Aroclor 1242	mg/kg	< 10	< 1.0
Aroclor 1248	mg/kg	< 10	< 1.0
Aroclor 1254	mg/kg	< 10	< 1.0
Aroclor 1260	mg/kg	310	< 1.0
Flashpoint	Degrees F	> 200	> 200

How since > 50 ppm

Table 2-4g

RealCo LAP ICM Work Plan
Woodblock Flooring Composites Analytical Summary

Parameter	Units	Sample			Maximum TCLP ⁽¹⁾ Concentration (mg/L)
		"Background"	"East"	"West"	
1,4-Dichlorobenzene	mg/L	<0.04	<0.04	<0.04	NA
2,4-Dinitrotoluene	mg/L	<0.04	<0.04	<0.04	NA
Hexachlorobenzene	mg/L	<0.04	<0.04	<0.04	NA
Hexachlorobutadiene	mg/L	<0.04	<0.04	<0.04	NA
Hexachloroethane	mg/L	<0.04	<0.04	<0.04	NA
3-Methyphenol	mg/L	0.59	0.1	0.018 J	NA
2-Methyphenol	mg/L	0.25	0.031 J	<0.04	NA
4-Methyphenol	mg/L	0.59	0.1	0.018 J	NA
Nitrobenzene	mg/L	<0.04	<0.04	<0.04	NA
Pentachlorophenol	mg/L	<0.2	<0.2	<0.2	NA
Pyridine	mg/L	<0.1	<0.1	<0.1	NA
2,4,5-Trichlorophenol	mg/L	<0.04	<0.04	<0.04	NA
2,4,6-Trichlorophenol	mg/L	<0.04	<0.04	<0.04	NA
Aroclor 1016	ug/kg	<17	<18	<180	NA
Aroclor 1221	ug/kg	<17	<18	<180	NA
Aroclor 1232	ug/kg	<17	<18	<180	NA
Aroclor 1242	ug/kg	<17	<18	<180	NA
Aroclor 1248	ug/kg	<17	<18	<180	NA
Aroclor 1254	ug/kg	72	160	<180	NA
Aroclor 1260	ug/kg	27	<18	<180	NA
TCLP Arsenic	mg/L	0.0095	<0.007	<0.007	5.0
TCLP Barium	mg/L	0.76	0.65	0.52	100.0
TCLP Cadmium	mg/L	0.16	0.037	0.022	1.0
TCLP Chromium	mg/L	0.042	0.029	0.071	5.0
TCLP Lead	mg/L	0.64	0.69	1.0	5.0
TCLP Mercury	mg/L	<0.002	<0.002	<0.002	0.2
TCLP Selenium	mg/L	<0.01	<0.01	<0.01	1.0
TCLP Silver	mg/L	<0.003	<0.003	<0.003	5.0

Notes:

- 1.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 2.) NA = Not Applicable
- 3.) J - Indicates an estimated value

*Used Method
 G010: grind wood
 & extract & then
 analyze the extract?
 - No problem w/ metals,
 PCB's, etc's &
 SVOC's.*

- White Solids, Comp A - approximately 40 containers throughout the LAP contained a white or off-white powdery, solid matrix consistent with the "Steelskin" wire drawing soap that was historically used in large quantities at the LAP. Containers with this characteristic material were composited as one sample, "White Solids, Comp. A".
- Oils, Comp B - approximately 70 containers throughout the facility contained virgin and waste oils, greases or oily sludges. These containers were composited as one sample, "Oils, Comp B".

Two containers that displayed unknown composition or physical characteristics, (i.e., drummed solids in East Pickle Area and container labeled "sodium monoxide") were collected as two discrete samples for analysis. Approximately 4 drums were unable to be sampled, because they contained frozen liquids, these drums are assumed to be aqueous based liquids that will be sampled and characterized at the time of decontamination. Refer to Table 2-4h for analytical results of the discrete and composite samples collected from the containers.

How are these 4 drums identified & distinguished from others?



Table 2-4h

RealCo LAP ICM Work Plan

Miscellaneous Drums & Containers Analytical Summary

Parameter	Units	Sample								Maximum TCLP ⁽²⁾ Concentration (mg/L)	
		Solids, Comp. A	Oils Comp. B	Barium Bath Composite 2	Barium Bath Composite 3	Barium Bath Composite 5	MolyDry Comp.	East Pickling Solid	Sodium Monoxide ⁽¹⁾		East Warehouse Solvent
Total Arsenic	mg/kg	NA	<0.97	NA	NA	9.7	<10.2	NA	NA	<1.0	NA
Total Barium	mg/kg	NA	90.3	NA	NA	328	250	NA	NA	<1.0	NA
Total Cadmium	mg/kg	NA	<0.48	NA	NA	0.69	NA	NA	NA	<0.50	NA
Total Chromium	mg/kg	NA	2.0	NA	NA	257	110	NA	NA	<2.0	NA
Total Lead	mg/kg	NA	25.3	NA	NA	267	104	NA	NA	<5.0	NA
Total Mercury	mg/kg	NA	<0.10	NA	NA	<0.12	<0.095	NA	NA	<0.091	NA
Total Selenium	mg/kg	NA	<2.9	NA	NA	<3.8	41.2	NA	NA	<3.0	NA
Total Silver	mg/kg	NA	<0.97	NA	NA	<1.2	<4.1	NA	NA	<1.0	NA
TCLP Arsenic	mg/L	0.016	NA	0.013	0.0098	0.038	NA	0.019	NA	NA	5.0
TCLP Barium	mg/L	0.22	NA	0.39	2.0	0.38	NA	3.3	NA	NA	100
TCLP Cadmium	mg/L	<0.001	NA	<0.001	<0.001	0.0071	NA	0.0016	NA	NA	1.0
TCLP Chromium	mg/L	0.022	NA	0.0029	0.22	0.13	NA	0.015	NA	NA	5.0
TCLP Lead	mg/L	<0.01	NA	0.053	0.02	2.0	NA	0.039	NA	NA	5.0
TCLP Mercury	mg/L	<0.0002	NA	<0.0002	<0.0002	<0.0002	NA	0.00022	NA	NA	0.2
TCLP Selenium	mg/L	<0.01	NA	<0.01	<0.01	<0.01	NA	0.01	NA	NA	1.0
TCLP Silver	mg/L	<0.003	NA	<0.003	<0.003	<0.003	NA	<0.003	NA	NA	5.0
Leachable pH	S.U.	12.2	NA	11.2	12.5	NA	NA	10.6	14.0	NA	NA
Flashpoint	Deg. F.	NA	NA	NA	>200	NA	>200	NA	NA	NA	NA
Aroclor 1016	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1248	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	ug/kg	NA	<2000	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- 1.) Based on the high result for leachable pH on this sample, further testing was suspended due to laboratory safety concerns.
- 2.) Concentrations in excess of maximum TCLP concentration are considered hazardous waste according to 40 CFR Part 261-Identification and Listing of Hazardous Waste.
- 3.) NA = Not Applicable

29000 each
 140 ppm
 (see lab results in pack)

2065-113
 750
 ppm

NO TCLP failures of metals

discrete
 discrete

3.0 DECONTAMINATION/CLEANUP APPROACH

*Should we public
notice this for
public participation?*

3.1 General

The results of the facility assessment and characterization tasks presented in Section 2 provide the basis for the proposed decontamination and cleanup strategies described for each SWMU, AOC or other impacted areas. In general, the results of the characterization indicate that the levels of contaminants in the majority of the areas and media tested are not elevated and do not trigger hazardous waste characteristic thresholds (with some exceptions that will be addressed below). Removal and/or decontamination of residuals utilizing standardized decontamination procedures is required only in a few areas prior to demolition.

The proposed decontamination and cleanup strategies for each area or media are presented in this Section as a framework or guide for these activities. In many cases, preparation for decontamination activities may require the relocation or removal of significant quantities of scrap material, equipment and miscellaneous debris prior to the initiation of cleanup activities. These preliminary procedures have not been specifically delineated for each clean-up task.

A description of the proposed pre-demolition cleanup approach to each area are presented below.

3.2 SWMU 1 (LAP West Pickle Area)

The results of the brick and foundation composite testing indicate that, as anticipated, total chromium levels are elevated but only marginally exceed the TCLP threshold along the base of the wall behind the former plating line. Based on these results, the proposed decontamination strategies for this area are:

- Removal of approximately two bays (i.e., 40 to 60 lineal feet by 25 feet high) of visually impacted brick and mortar in the north wall directly behind the former kolene coating line in the West Pickle area, which will be assumed to be a listed RCRA hazardous waste (K062). This constitutes the "obviously impacted" K062 areas previously discussed with the NYSDEC.
- Manual removal of surface residue on brick and mortar on walls adjacent to the former pickling area (east and west of the two bays to be removed) via wire-brushing or similar mechanical abrasion technique and simultaneous HEPA vacuuming of wall surfaces (this method is considered more practical and

*1000-1500 sq
tonnage?
150*

*Measurement
of 100 sq ft area
of surface to be cleaned
& have clean
debris surface.
2.0 cm = 0.29 in*

appropriate in this area where numerous floor cavities and deterioration of the floor surfaces would compromise containment and collection of sprayed washwater. Residuals on floor surfaces adjacent to and surrounding the pickling and plating tank areas shall be manually scraped and containerized. Where possible, flat floor surfaces may be pressure washed or wet vacuumed with equipment that provides for containment and collection of spent washwaters as part of the washing process.

must analyze residue

3.3 SWMU 4 (LAP East Pickle Area)

Results for the brick and mortar composites taken from visually impacted areas of the brick walls in this SWMU indicate that the levels of lead and chromium contamination are below regulatory TCLP thresholds. The composite sample collected from the south wall of the East Warehouse and denoted as "Blue Brick" showed elevated levels of copper as would be expected for this former copper/cyanide plating area.

Although the impacted walls are not be classified as hazardous waste, it is recommended that the decontamination approach presented for SWMU 1 (i.e. a dry mechanical removal and HEPA vacuuming of these vertical wall surfaces and contained power washing of the floor surfaces) be performed at this location. In the East Warehouse this activity would be confined to approximately one impacted bay (25 feet long by 20 feet high). In the East Pickle Room this activity would encompass approximately three bays in total (60 to 75 linear feet by 25 feet high).

See high lead not TCLP value for it. But how will washwaters be disposed? tonnage of bricks?

3.4 SWMU 6 (Barium Chloride Bath) and SWMU 7A, 7B, 7C & 7D (Former Plating Operations)

These former plating/coating areas were similar with respect to their status and decontamination strategy. At each location, a number of open-top plating and coating tanks remain. Some of these containers are empty or contain non-hazardous debris. Several tanks, however contain solid or liquid residuals left over from the processes conducted in the tanks. The results of samples obtained from these residuals indicate that some characteristic hazardous waste are present in the tanks and should be addressed as follows:

- SWMU 6 Tank Residuals and Tanks- Solid white residues in the former Barium Chloride bath tanks should be removed, containerized and disposed as

Steel tank?



hazardous waste (TCLP concentration of barium above 100.0 mg/L). Upon completion of residuals removal all tanks should be vacuumed for loose material, cut into flat pieces and disposed of as hazardous waste (further cleaning and pressure washing of the tanks may be performed if low levels of residuals are observed - this approach was not recommended in order to avoid the generation of barium contaminated washwater and the associated time and cost to collect and properly handle).

Cost for disposal of tank?

disposal as listed waste.

cheaper to dispose of the tank rather than wash it? unsafe?

- SWMU 6 Brick - Although the brick was characterized as non-hazardous based on the TCLP results, the elevated level of total barium detected in the brick composite warrants a decontamination of the wall directly north of the former salt bath (approximately 40 to 60 feet long by 20 feet high). Again, due to the floor depressions in this area and in order to minimize generation of contaminated washwater, decontamination should be performed using the recommended approach for SWMU 1 and 4. This cleaning should also be performed on the opposite face of the wall (the Battery Room side of the wall) as well, based on observation of intermittent precipitation of white residues on the mortar.

BA 7390 ppm

800-1200+ tonnage? when will material be sludged?

Which tanks were removed as part of AP West ICH?

■ SWMU 7A, 7B, 7C & 7D Tank Residuals and Tanks- Solid and liquid residues in the former "Degrease Tank", "Plastic Tank" and "Sulfuric Acid Tank" located in the West Pickle and Plating Operations areas should be removed, containerized and disposed of as hazardous waste (TCLP concentration of chromium above 5.0 mg/L). Upon completion of residuals removal from these tanks, they should be vacuumed for loose material, cut into flat pieces and disposed of as hazardous waste. All other tank residuals in the West Pickle plating and lime coating areas were found to be non-hazardous. These residues and the tanks should be cleaned out, removed and disposed of as non-hazardous waste.

TCLP not done but total Cr very high

steel tanks cheaper to dispose than pressure wash

- SWMU 7A, 7B, 7C, & 7D Floor Residues - Loose residues in areas adjacent to the plating lines and accumulated liquids in below grade tank pits shall be removed as part of the tank cleanup. Solids, sludges and liquids collected from these areas shall be considered to be characterized and profiled by the Decontamination Contractor to determine handling and disposal requirements.

listed waste

3.5 Wire Drawing Oils (AOCs 5A and 5B)

Not so! do TCLP Pb for sludge - may fail Total Extra oil was 377 lbs (above the 515 lb limit)

Results of oil and sludge composites collected from the East Vault indicate that these materials can be handled as a non-hazardous waste oil. Although access to the West Vault was not possible due to flooding in this room, the type of oils used in this process were identical and the same cleanup approach should apply.

The recommended decontamination approach for both vaults is:



- Pump-out residual oil, sludge and water in the holding tanks by vacuum truck and bulk for appropriate disposal. Floor surfaces will be scraped to remove loose sludge and debris, this material will be containerized and solidified for disposal as a non-hazardous solid. *Disposal of oils and sludge may be.*
- Steam clean all remaining oil impacted surfaces (tanks, pumps, piping, floors and walls, as necessary) and pump out generated residuals and water from existing floor sumps into vacuum truck for appropriate off-site treatment or disposal. *Most test results for the analysis.*

This approach assumes that RealCo will arrange with Empire Specialty Steel to receive pumped out flood waters from the West Vault into their pretreatment system (estimated to be between 30,000 to 35,000 gallons) through the LAP pump station. *Empire must know what they are receiving. Sample water in West Vault.*

3.6 AOC 2B (Transformer and Circuit Breaker Oils)

The results of the transformer and circuit breaker dielectric oil testing confirmed historical records that indicated the transformers are considered by regulation to be PCB-contaminated (i.e., 310 ppm [Arochlor 1260] was between 49 and 500 ppm PCBs). *OK*

EPA regulations [40 CFR Part 761.60(b)(4) and (5)] require that all free flowing liquid from these transformers be thermally incinerated. The disposal of the drained contaminated carcasses is not regulated [40 CFR Part 761.60(b) (5) (ii)], however they cannot be reused for parts or components and therefore, to minimize future liability they should be flushed and disposed of properly.

The circuit breaker oils were found to be free of PCBs. These units can be drained of their oil during the removal and bulking of the miscellaneous waste oil containers from the facility.

3.7 Wood Block Flooring

All samples of flooring tested in the east and west wire drawing process areas and background areas of the LAP indicated trace levels of site-specific parameters. These levels were below regulatory thresholds for hazardous waste classification for TCLP metals and PCBs (i.e., PCB concentrations in the block were below EPA 40 CFR Part 761.125 cleanup criteria for PCB spills and below the 1 ppm recommended soil cleanup objective NYSDEC



established in TAGM 4046, Jan. 1994). As such, the wood block flooring removed from the facility during demolition will be handled as a non-hazardous solid waste. OK

3.8 Drums/Containers

The results from the composite and discrete samples collected for the miscellaneous containers indicate that a majority of the contents of these containers are non-hazardous solids or liquids. Although every effort was made to sample all containers, a small quantity of containers remain that could not be safely sampled and will require further characterization to determine appropriate handling and disposal procedures as part of the decontamination activities. OK
were these
containers
segregated?

The proposed approach for the handling and disposal of the containers is based on the composite and discrete sampling performed:

- Waste oils and lubricants (approximately 45 containers) – bulk oils and ship to off-site waste oil recycling facility. OK
- Waste greases and high viscosity lubricants (approximately 25 containers) – solidify on-site and dispose of as non-hazardous solids. Tail of Oil, Comp B Sample or Warehouse sample?
- Drawing soap raw materials and residuals (approximately 40 containers) – perform verification samples for RCRA characteristic of corrosivity and profile/dispose of based on results of these analysis. why again?
- Barium bath solid residuals (approximately 10 containers) - perform verification sampling for RCRA characteristic of corrosivity on Composite 3 and profile/dispose of based on results of these analysis. Composites 2 and 5 will be handled as non-hazardous solids. What about pH for comp 5?
- East Pickling Solids and MolyDry (approximately 4 containers) – dispose of as a non-hazardous solid waste. OK
- East Warehouse Solvent (approximately 3 containers) – dispose of as a characteristic hazardous waste (ignitability) OK
- Sodium metal and sodium monoxide containers (approximately 5 containers) - due to safety concerns, drums labeled as “sodium metal” were not sampled and it is assumed that they will require overpacking and handling as water sensitive hazardous waste during the decontamination of the LAP. Similarly, the 5-gallon drum labeled “sodium monoxide” is also suspected to be elemental sodium because of its high pH. This container will be handled in the same manner as the containers of suspected sodium metal. OK
- Miscellaneous Containers with Unknown Contents (approximately 3 to 5 containers) – these containers will be sampled and profiled for disposal during the decontamination of the facility. OK



3.9 Decontamination Residue Handling and Disposal

The proposed decontamination approach outlined above have been recommended with the intent of minimizing the generation of additional hazardous residues and wastewaters. Proper handling, characterization and disposal of any hazardous residues generated as a result of the proposed decontamination and cleanup strategies will be the responsibility of the Decontamination Contractor. This includes provisions for containment, collection and containerization of residues as they are generated from the cleaning processes. Hazardous residues and wastes will be stored, handled, shipped and disposed of in accordance with all State and Federal laws.

3.10 Asbestos Abatement

Asbestos abatement shall be performed by an experienced, New York State Department of Labor (NYSDOL) licensed Asbestos Abatement Contractor. The contractor will be responsible for removing and properly disposing of all asbestos containing materials described in Table 2-2 in accordance with all State and Federal laws. Special care shall be taken to glove-bag all friable asbestos pipe and equipment insulation identified in the survey. Variances for removal and disposal of windows suspected of containing "white window glaze" as described by Paradigm Environmental Services, Inc. in their November 2000 asbestos survey, if deemed appropriate, may be obtained from the NYSDOL by the Asbestos Abatement Contractor prior to initiation of any abatement work. Other variances for non-friable office related materials (i.e., tiles and linoleum) may be recommended by the contractor and pursued prior to initiation of abatement work.

The selected abatement contractor shall coordinate and provide air monitoring during all abatement activities in accordance with NYSDOL site specific requirements and State and Federal laws.

All asbestos abatement will occur prior to initiation of any intrusive structural demolition activities to prevent liberation of airborne asbestos particles.



4.0 DEMOLITION STRATEGY

4.1 Structural Demolition

Upon completion of all asbestos abatement, decontamination activities, and removal of salvageable equipment and materials, structural demolition of the LAP will be performed. The selected Demolition Contractor will be required to maximize, to the extent feasible, the amount of structural materials (e.g., structural steel, brick, etc.) that can be salvaged and otherwise recycled from the facility. Equipment and demolished materials from the LAP that can not be salvaged or reused will be disposed of at a 6NYCRR Part 360 permitted construction and demolition debris landfill. The Demolition Contractor will be required to perform air monitoring during all demolition activities, as specified below, to monitor dust levels from the demolition activities and trigger mitigation measures, if necessary, to minimize particulate generation at the work site. *Must follow 7A01 4031 for fugitive dust & particulate*

The Demolition Contractor will be required to demolish and remove all materials down to the concrete floor level of the facility. The remaining concrete or brick base slabs shall be left in a clean dust and dirt free state. Wood block flooring must be removed from all floor surfaces. Below grade vaults (i.e., east and west Drawing Oil Rooms and the Cooling Water reservoir) shall be backfilled to grade with clean, crushed brick or concrete obtained from the demolition process. The Demolition Contractor shall be responsible for fencing all portions of the site not currently fenced or replacing fencing damaged during demolition.

The specific means and methods for the sequencing and completion of the structural demolition work shall be determined by the selected Demolition Contractor and reviewed with RealCo and the NYSDEC prior to the commencement of any work. No blasting will be allowed at the site. RealCo and the NYSDEC shall have final approval on all proposed demolition activities and sequencing proposed by the Demolition Contractor. *Must have HAZOP in place of Contingency plan.*

4.2 Community Air Monitoring

In accordance with both the New York State Department of Health's and the New York State Department of Environmental Conservation's guidance on the preparation of a Community Air Monitoring Plan, this Community Air Monitoring Plan has been prepared outlining air monitoring activities to be performed during decontamination and demolition activities at the Lucas Avenue Plant.



1
Total Cr, Cr+6, Ni, Cu, cyanide, Pb, Ba, PCB's (?)

Before Site Disturbance:

- ① PM₁₀ should be continuously sampled & recorded for a period of 5 consecutive days prior to initiation of site activities. 15-minute averages should be recorded & archived using an on-board data logger.
- ② The following constituents will be sampled for ~8-10 hrs during performance of remediation activities. Samples should be collected & analyzed for 5 consecutive days prior to initiation of site activities: Total Chromium, Cr+6, Total Nickel, Total Lead, total barium, total copper, & cyanide.

During Demolition activities:

- ① PM₁₀ will be continuously sampled & recorded throughout the duration of demolition activities. 15-minute averages will be recorded & archived using on-board data logger.
- ② Total Cr, Ni, lead, barium, copper, Cr+6 & cyanide will be sampled for ~8-10 hrs, in accordance of the following schedule:

4.2.1 Airborne Particulate Community Air Monitoring

define the exclusion zone
during hours of demolition activities
real-time
must follow TAG 4031 requirements or kept right in
PM10
Total particulate monitoring will be performed on a continuous basis at the upwind and downwind perimeter of the exclusion zone. The monitoring will be performed using a handheld DataRAM™ or equivalent real-time particulate meter capable of measuring total particulate concentrations from 1 ug/m³ to 400 mg/m³. The DataRAM™ will be used to calculate a moving 15-minute average (STEL) for comparison to the airborne particulate action levels described below. An audible alarm will be activated on the DataRAM™ to indicate exceedances of a 100 ug/m³ action level. In addition, fugitive dust migration will be visually assessed during all work activities. Readings will be interpreted as follows:

- If the downwind particulate level is 100 micrograms per cubic meter (ug/m³) greater than the background (upwind perimeter) reading for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression provided that the downwind particulate levels do not exceed 150 ug/m³ above the upwind level and that visible dust is not migrating from the work area.
levels must be integrated over a 15 minute time period
- If, after implementation of dust suppression techniques downwind particulate levels are greater than 150 ug/m³ above the upwind level, work activities must be stopped and dust suppression controls re-evaluated. Work can resume provided that supplemental dust suppression measures and/or other controls are successful in reducing the downwind particulate concentration to within 150 ug/m³ of the upwind level and in preventing visible dust migration.
All exceedances must be recorded & reported.

Atmospheric conditions
In addition, a portable weather station capable of measuring wind speed, wind direction, relative humidity, barometric pressure and temperature will be located at the site. All air monitoring equipment will be calibrated daily. All air monitoring readings will be recorded manually and will be available for NYSDEC and Department of Health (NYSDOH) personnel to review.
should also be done prior to initial use
continuously? How often?



5.0 DECONTAMINATION & DEMOLITION COST ESTIMATES

Preliminary opinions of probable cost for the decontamination and demolition of the Lucas Avenue Plant are presented on Table 5-1. The estimate presents probable costs for the major decontamination and cleanup activities and the costs associated with the facility structural demolition and disposal and potential material salvage credits. Due to the preliminary nature of the estimates, a contingency factor of 25 percent has been added to the project subtotal estimate. The opinion of probable costs for the decontamination and demolition of the LAP is \$1,533,000.



TABLE 5-1

RealCo LAP ICM Work Plan

Opinion of Probable Decontamination & Demolition Costs

ITEM DESCRIPTION	Units	Unit Cost (\$)	Quantity Estimated	Total Estimated	Comments
DECONTAMINATION					
Mobilization/Demobilization	LS	\$ 15,000	1	\$15,000	
Asbestos Abatement & Disposal	LS	\$ 45,000	1	\$45,000	
Removal & Loading of LAP West K062 Waste	Tons	\$ 50	150	\$7,500	
Transportation & Disposal of K062 waste	Tons	\$ 225	150	\$33,750	
East/West Oil Room Cleanout	EA	\$ 18,500	2	\$37,000	
SWMU 1, SWMU 4 & SWMU 6 Brick Wall Decontamination	SF	\$ 1.25	8,000	\$10,000	Including Residue Disposal
SWMU 1, SWMU 4 & SWMU 6 Floor Residue Decontamination	SF	\$ 2.00	10,000	\$20,000	Including Residue Disposal
SWMU 7A, 7B, 7C, 7D Plating Residues & Tank Decontamination	Tons	\$ 275	20	\$5,500	Including Residue & Tank Disposal
Transformer Oil & Carcass Disposal	EA	\$ 3,500	3	\$10,500	Removal & Disp.
Drum & Container Consolidation & Disposal	EA	\$ 75.00	130	\$9,750	Avg. Cost/Drum
Decontamination/Cleanup SubTotal:				\$194,000	
DEMOLITION					
Structural Demolition	SF	\$ 4.50	178,000	\$801,000	Contractor Quotations
Salvage Value (struct. steel.)	Tons	\$ 20.0	4,000	(\$80,000)	Credit to Realco
Salvage Value (copper, wood timbers, misc.)	LS	\$ 50,000	1	(\$50,000)	Credit to Realco
C & D Disposal	Tons	\$ 18.00	15,000	\$270,000	Trans. & Disposal
Demolition Subtotal:				\$941,000	
Project SubTotal:				\$1,135,000	
Contractor OH & P				\$114,000	10% of Project Subtotal
Contingency, Insurance, Legal & Engineering				\$284,000	25% of Project Subtotal
Total Cost:				\$1,533,000	

T-10 for listed waste seems high - Model City is very close.

Where is the cost for SWMU 6 tank disposal?

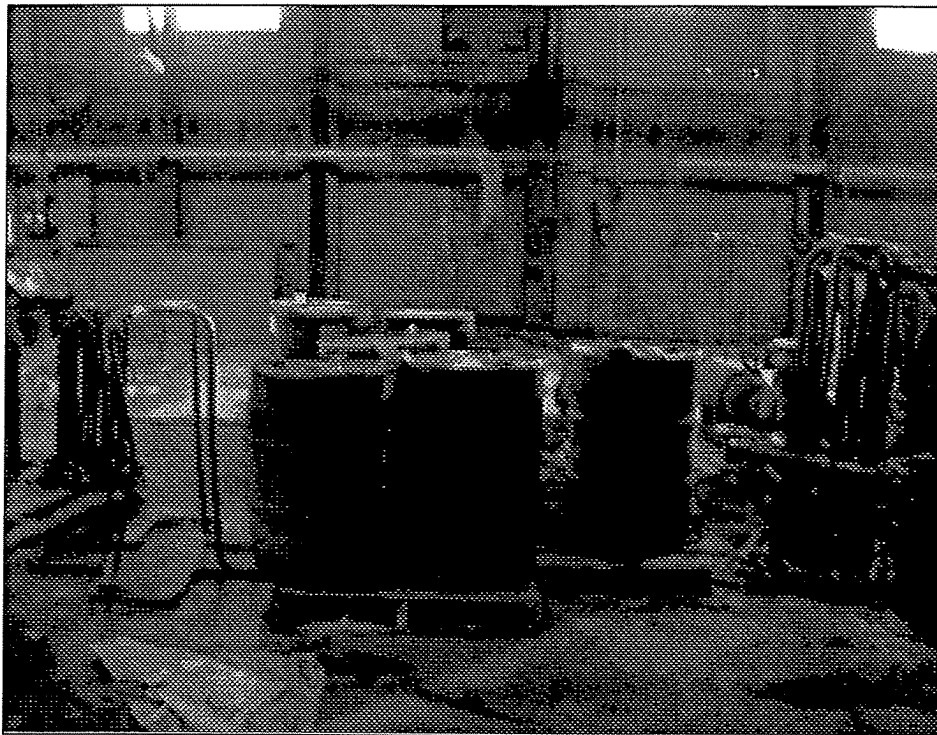
Assuming it does not have to be decontaminated such as vacuuming.



sampling & analysis - \$10,000 (?)

Appendix A

LAP Photographic Survey Compilation



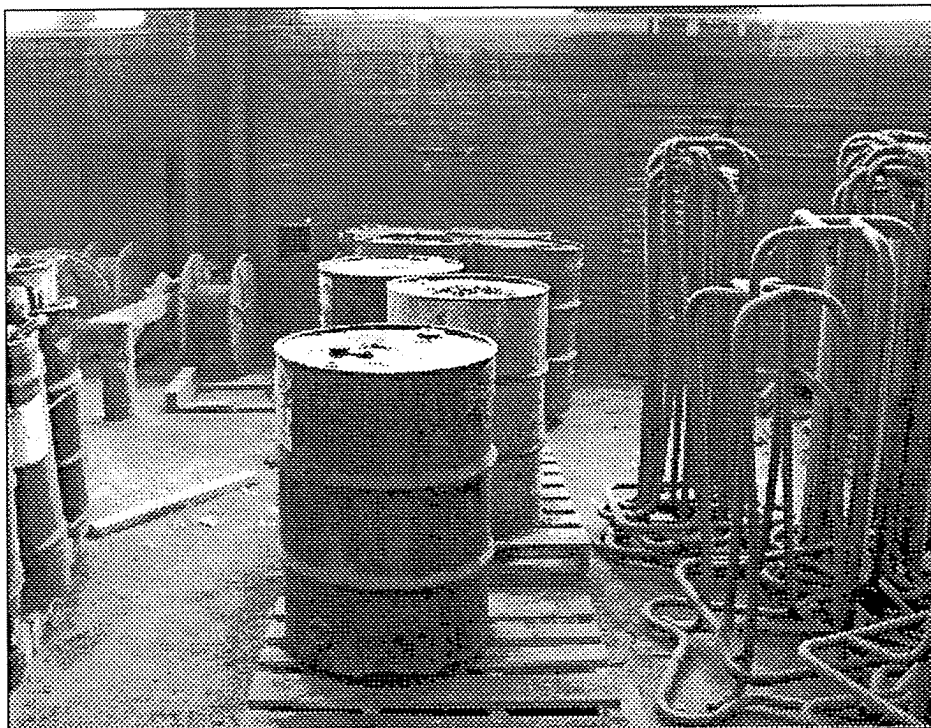
Closed drums in East Storage Room



Open drums in East Storage Room with scrap metal



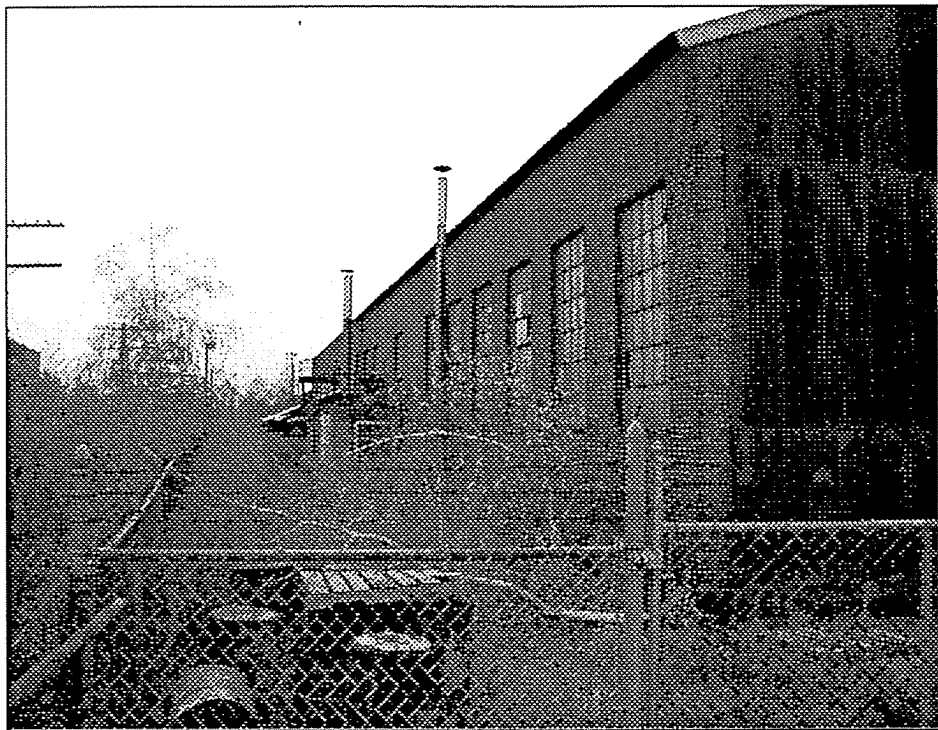
East Storage Room looking west



Closed drums in East Storage Room



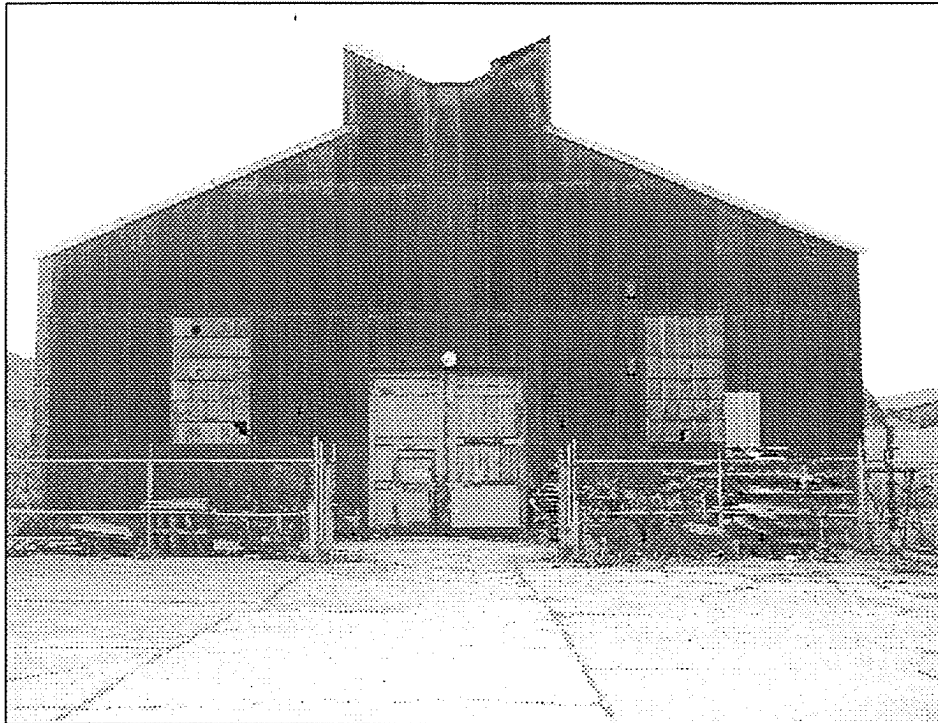
Miscellaneous drums in East Storage Room



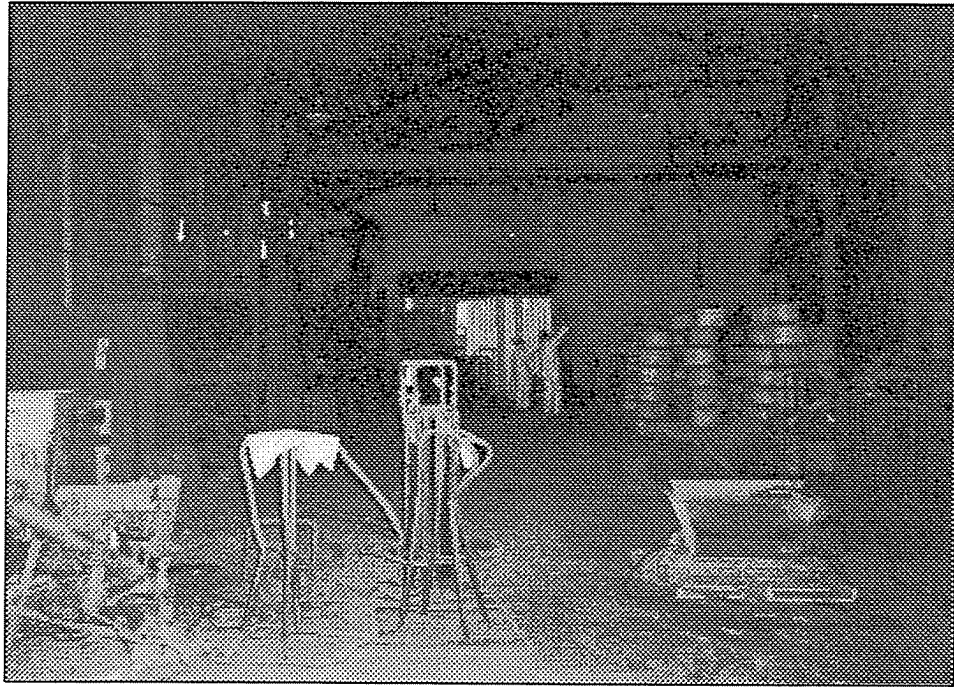
South side of building, looking west



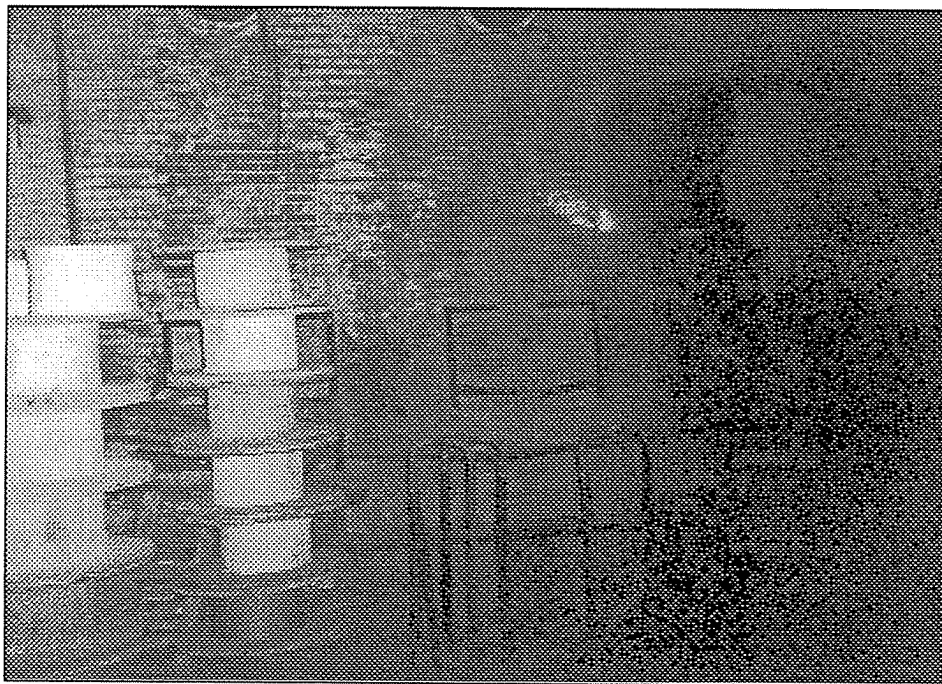
North side of building, looking west



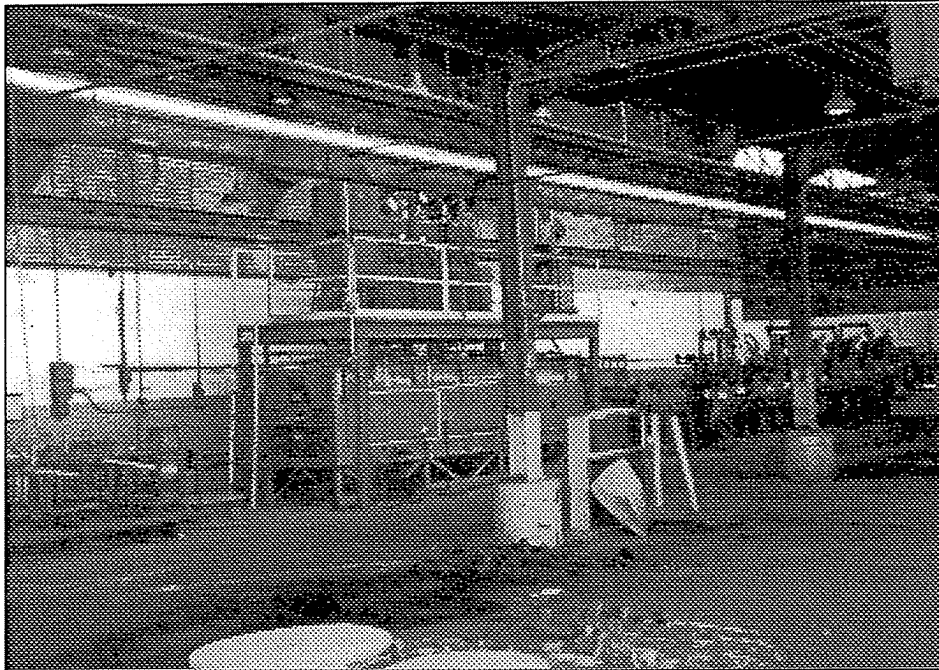
East end of building



East Pickle Room, looking west



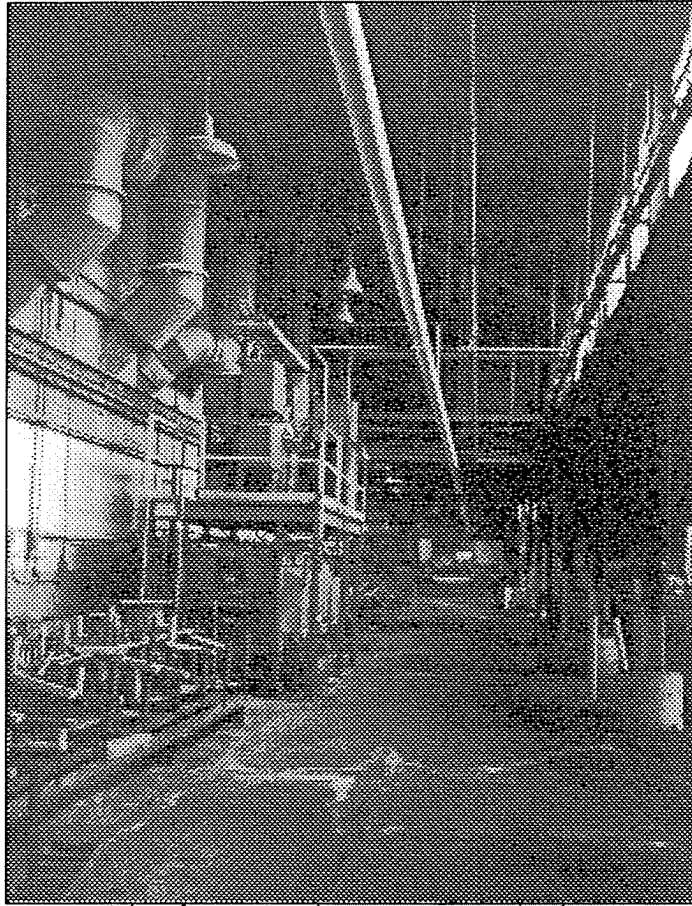
North wall of East Pickle Room



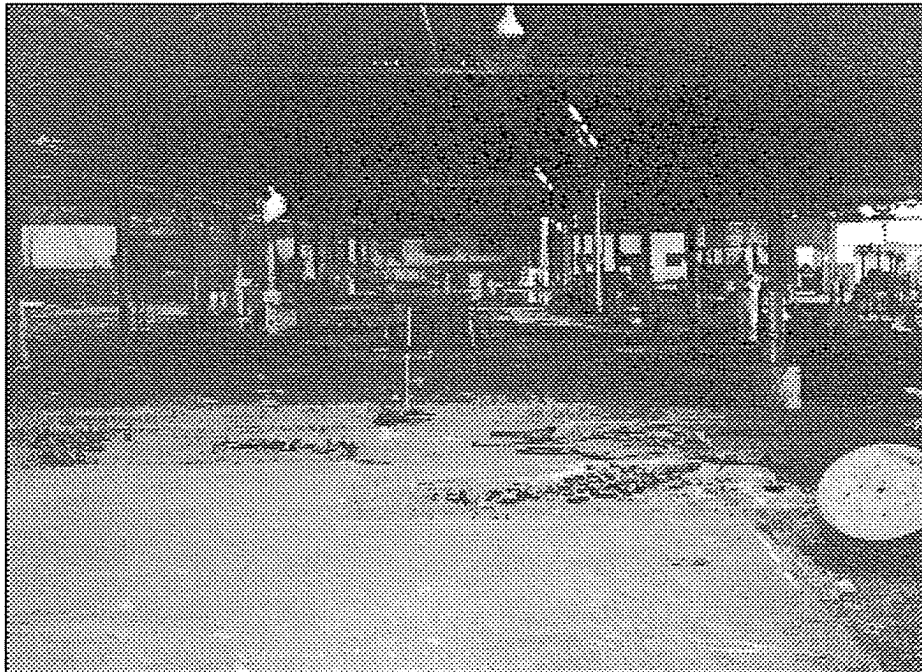
North wall of East Pickle Room looking south from East Production Room



North wall of East Production Room



Main aisle of East Production Room, looking west



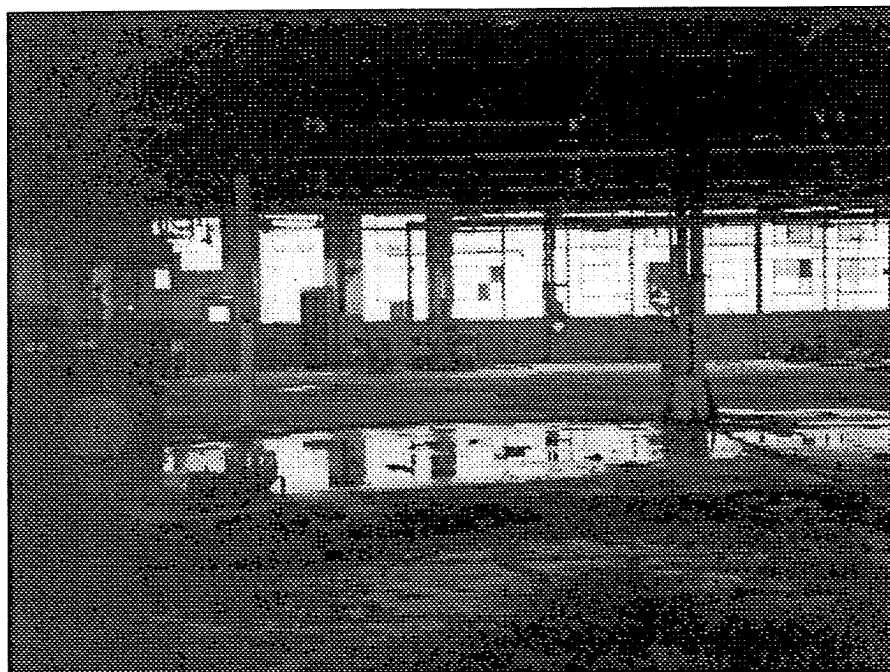
Middle bays of East Production Room, looking west



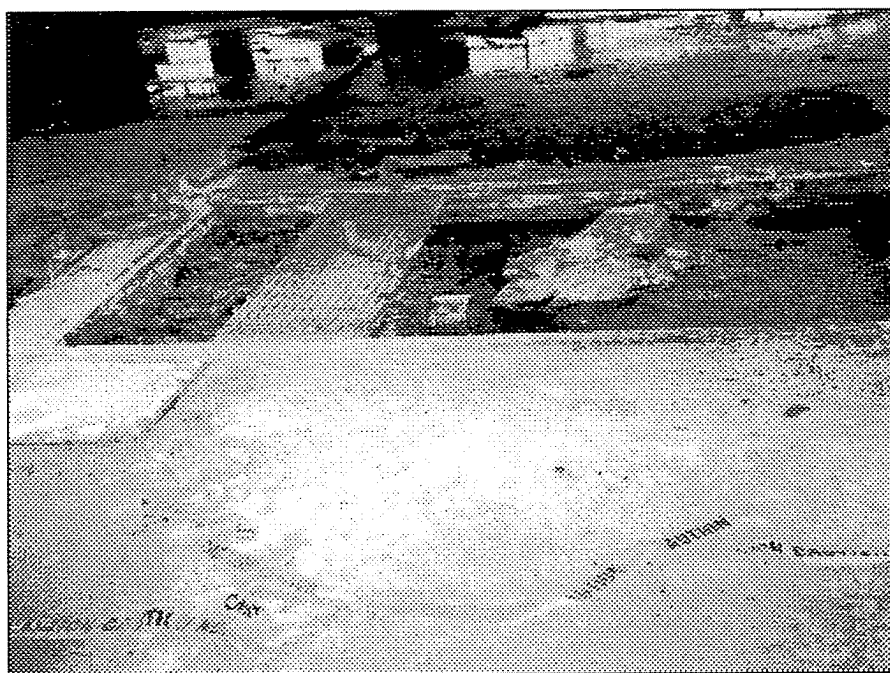
North bays of East Production Room, looking west



East Drum Storage Room, looking east



South bays of East Production Room, looking south



Hydrogen annealing floor pit in middle of East Production Room



Maintenance Crib in East Production Room



Southwest corner of East Production Room



Northwest corner of East Production Room



Main aisle of East Production Room, looking east



Middle bays of East Production Room, looking east



North bays of East Production Room, looking east



Oil-soaked wood block flooring in East Production Room



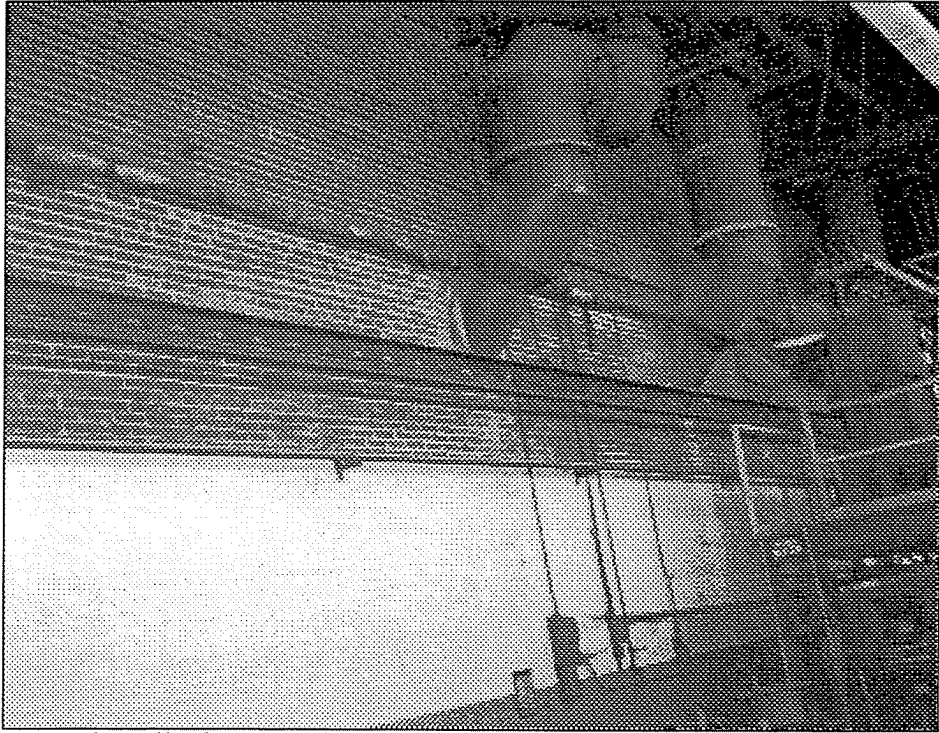
Wood block flooring in Drawing Oil Area of East Production Room



Collapsed roof in East Production Room



Sodium metal drums with white solids in East Drum Storage Room



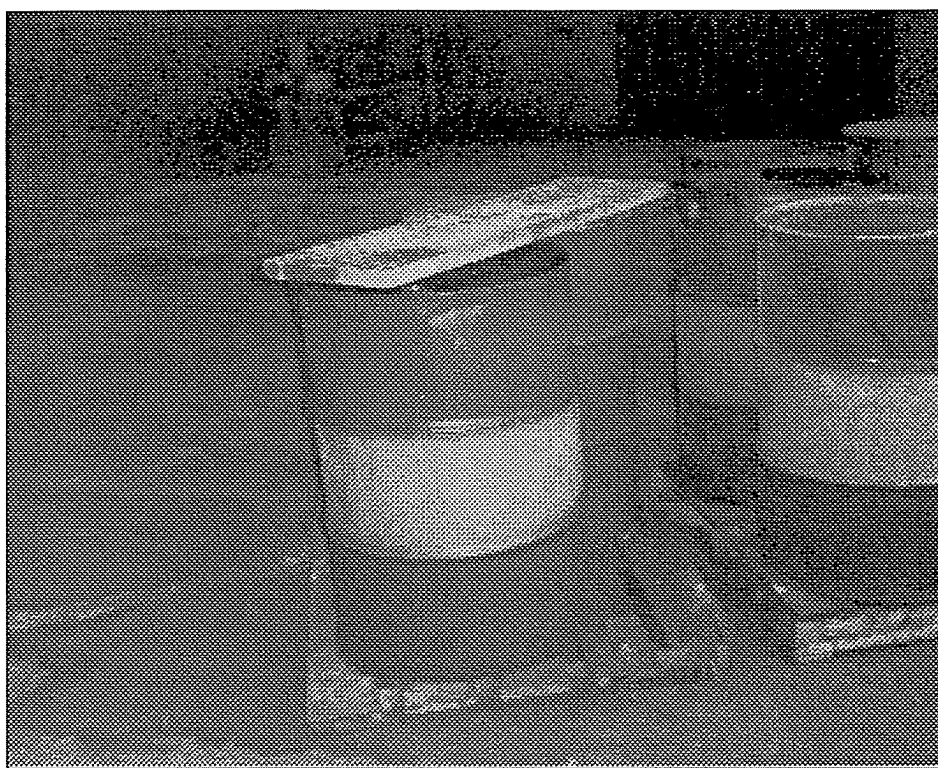
North wall of East Pickle Room taken from East Production Room



Ceiling in main aisle of East Production Room



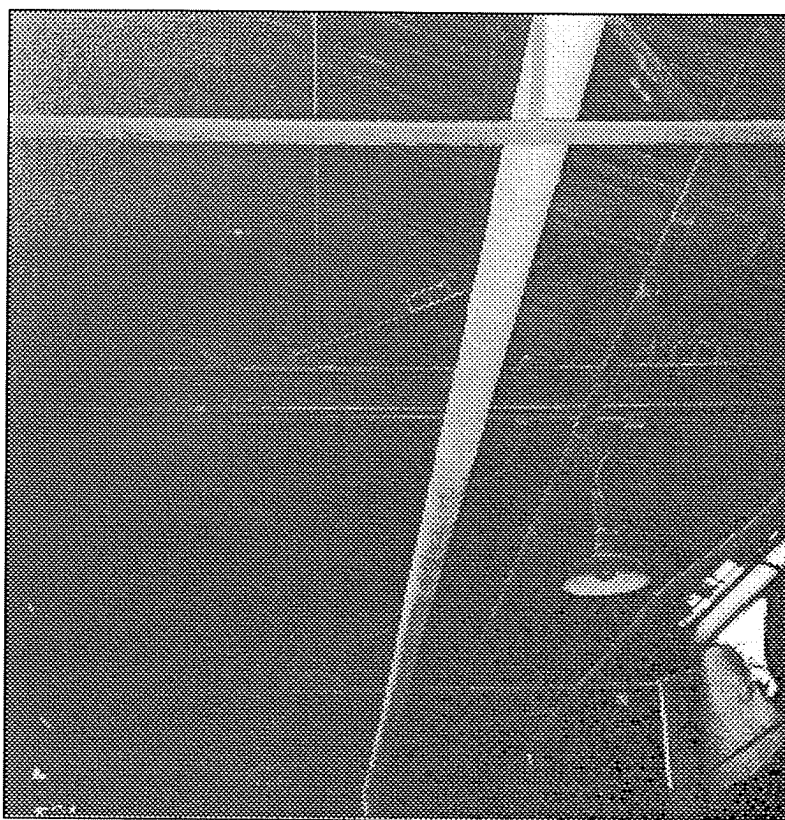
Ceiling of south bays in East Production Room



Drums with unknown substance in East Production Room



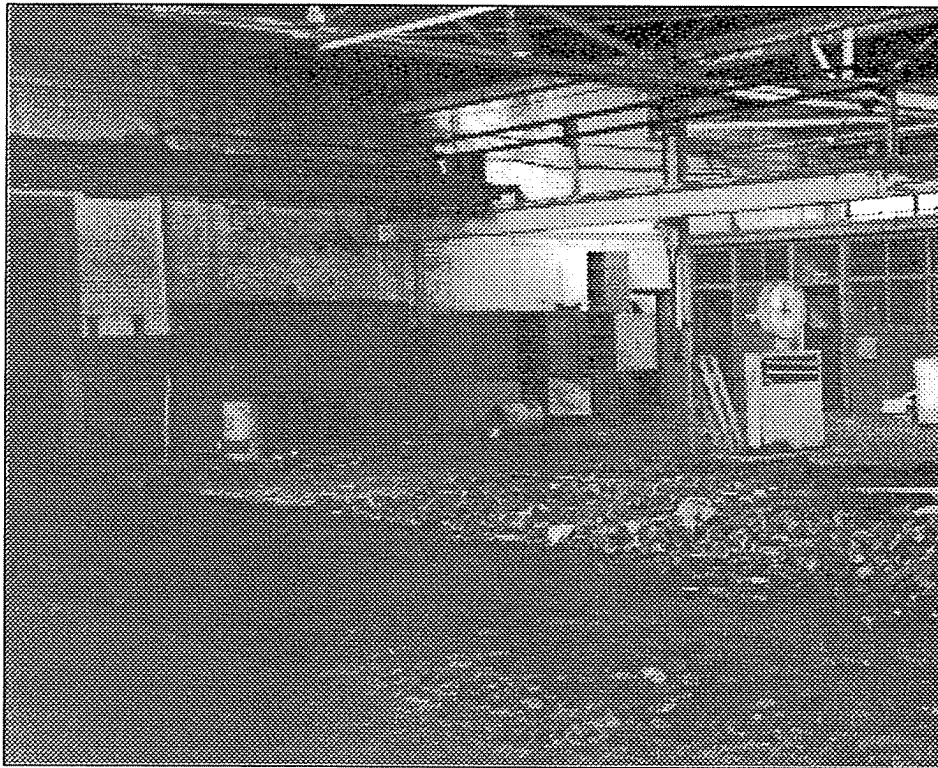
Hydrogen annealing floor pit in East Production Room



Piping along main aisle of East Production Room



Main aisle of West Production Room, looking west



Southeast corner of West Production Room



Middle aisle of West Production Room, looking west



North aisle of West Production Room, looking west



South wall of West Production Room



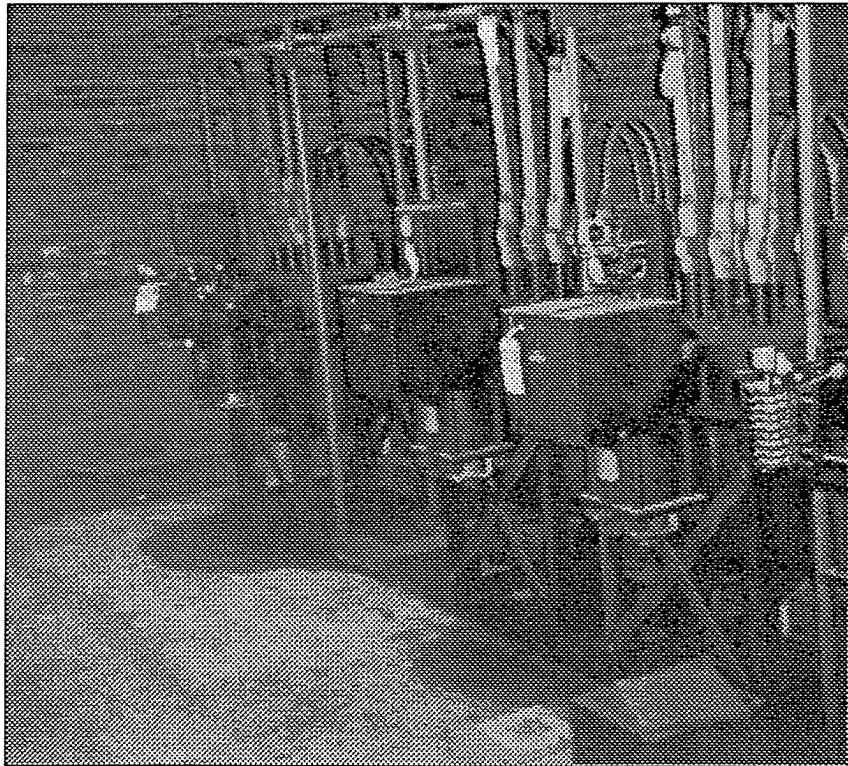
North wall of West Production Room



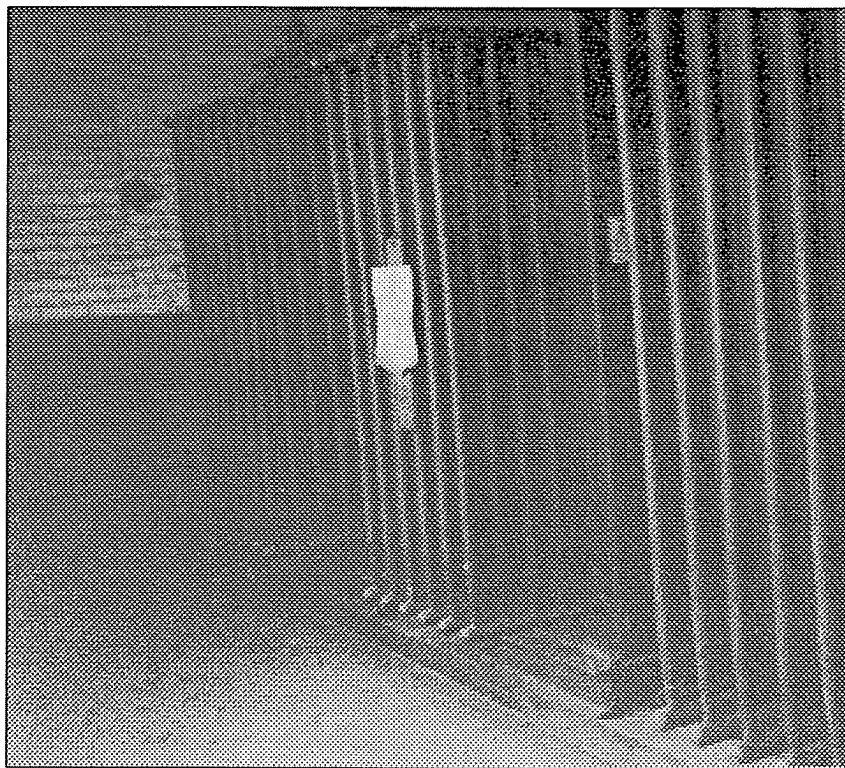
Oil-soaked wood block flooring in West Production Room



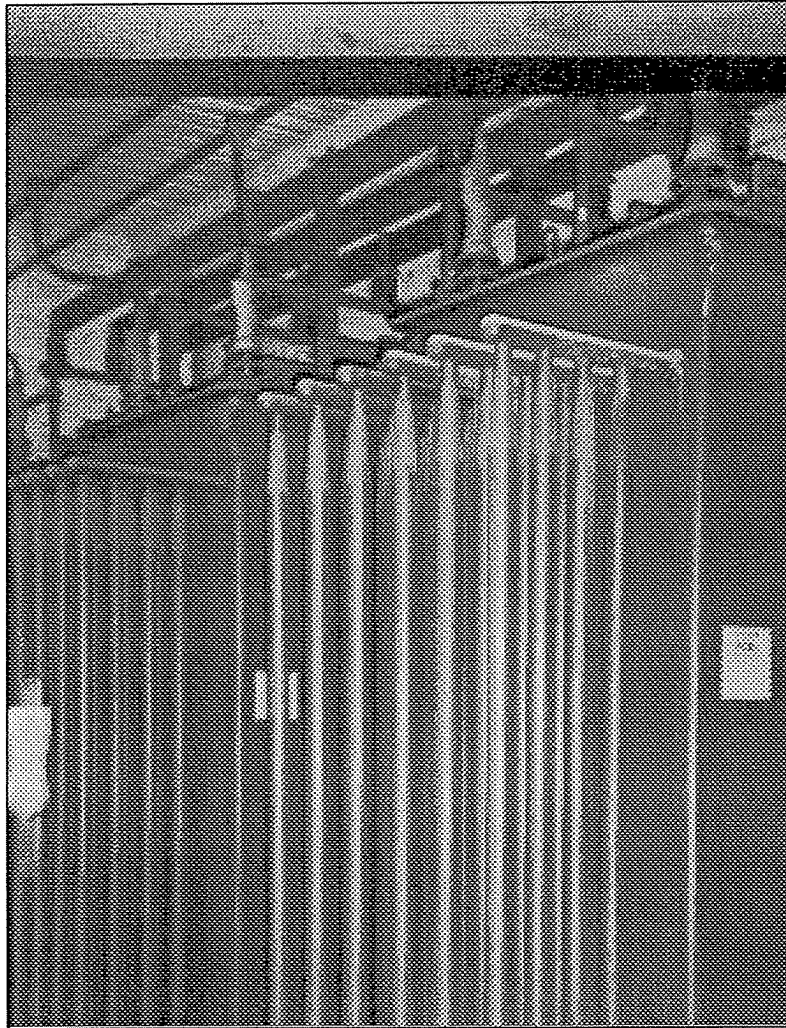
West Production Room, looking south toward Transformer Room



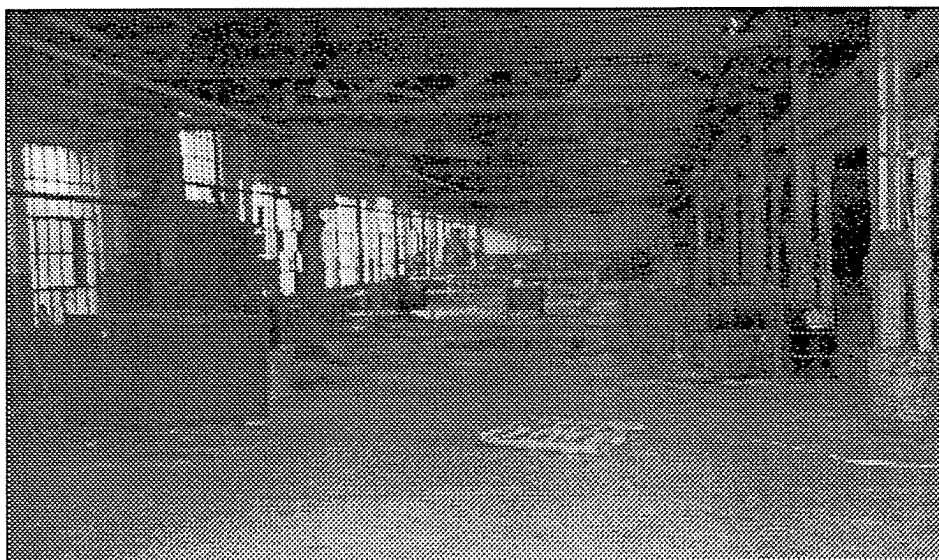
Capacitor Room



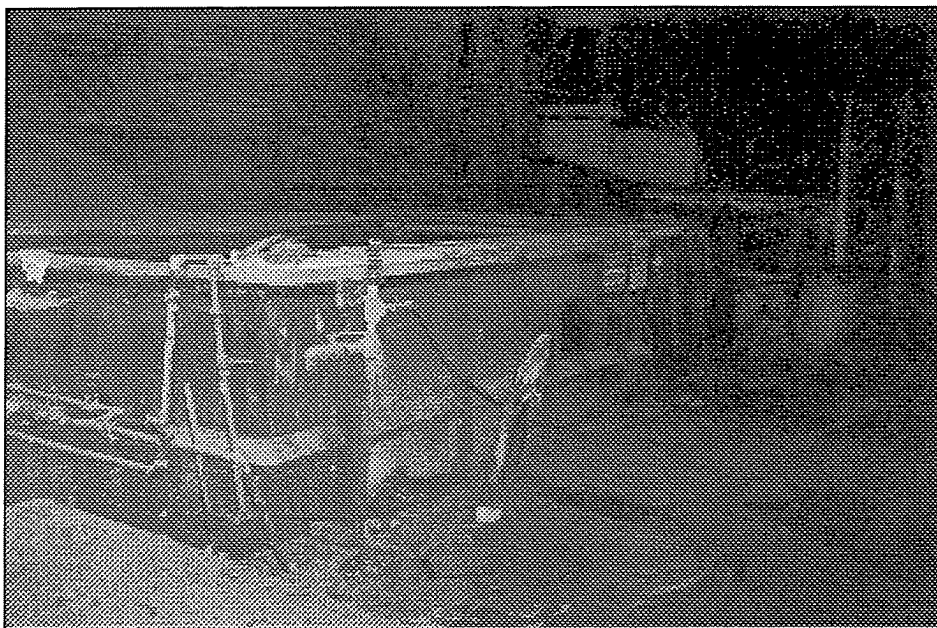
Transformer Room



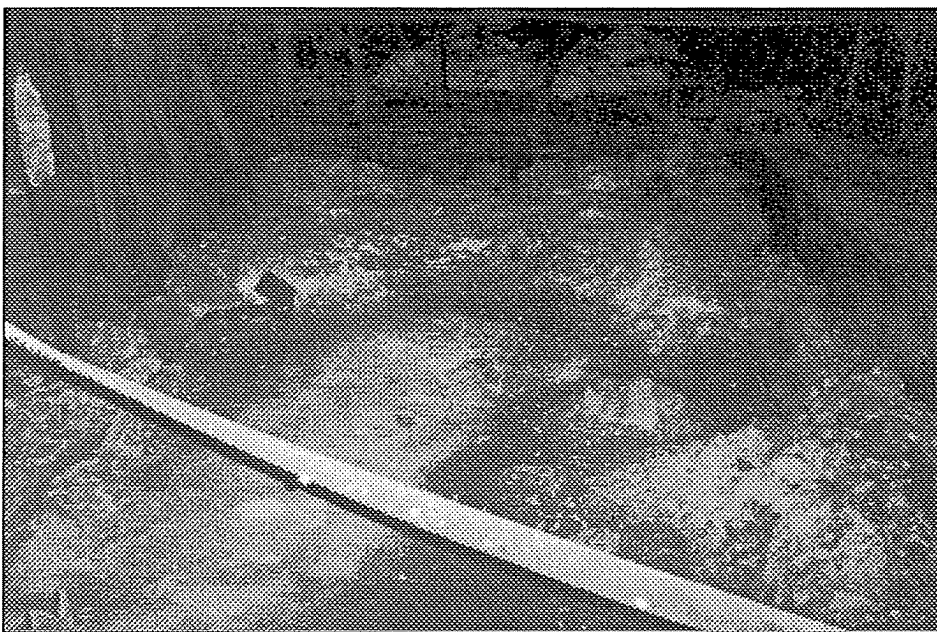
Transformer Room



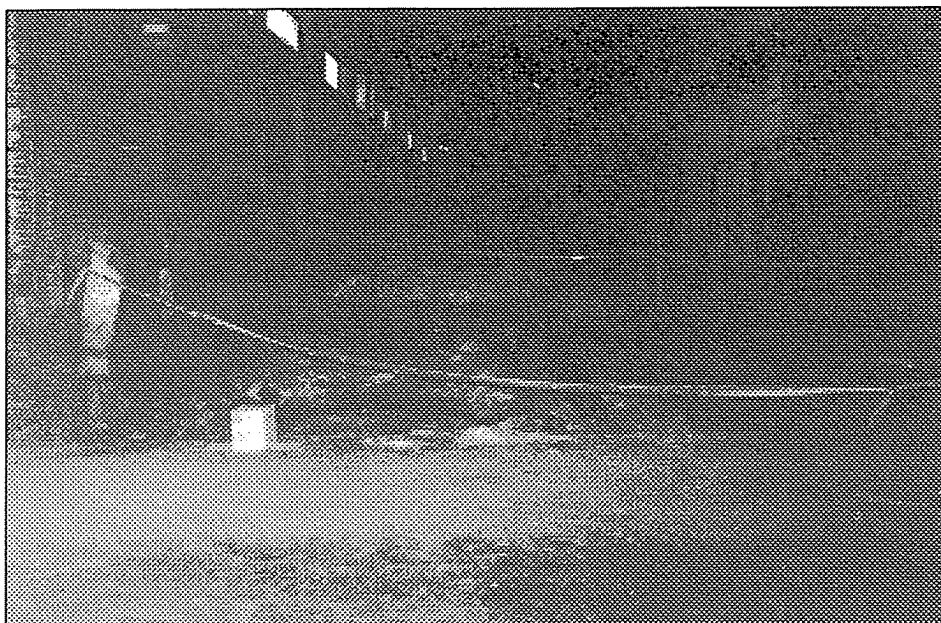
South bays of West Production Room, looking west



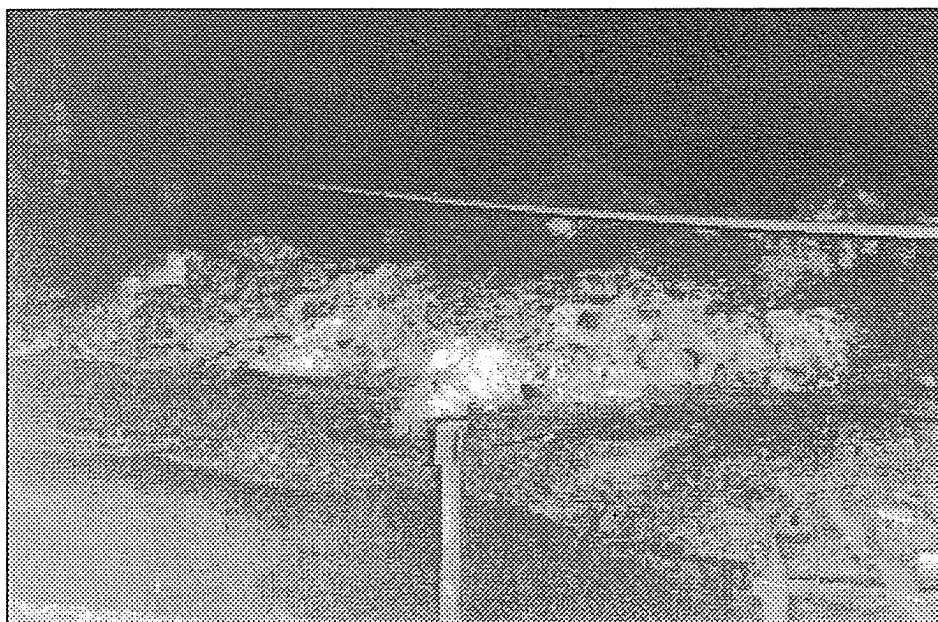
Pickling tanks in West Pickle Room



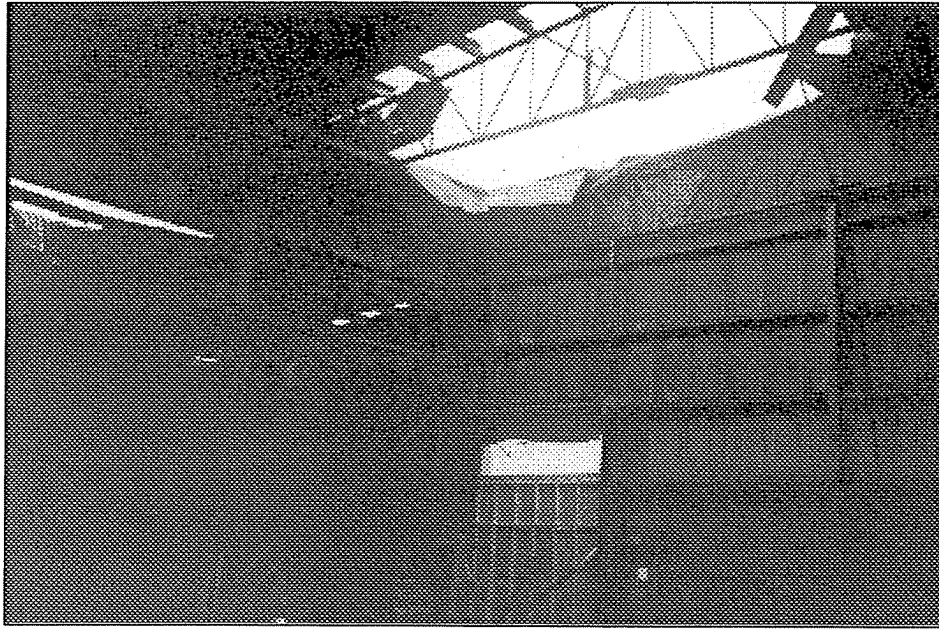
Former koline tank area in West Pickle Room



West Pickle Room, looking east



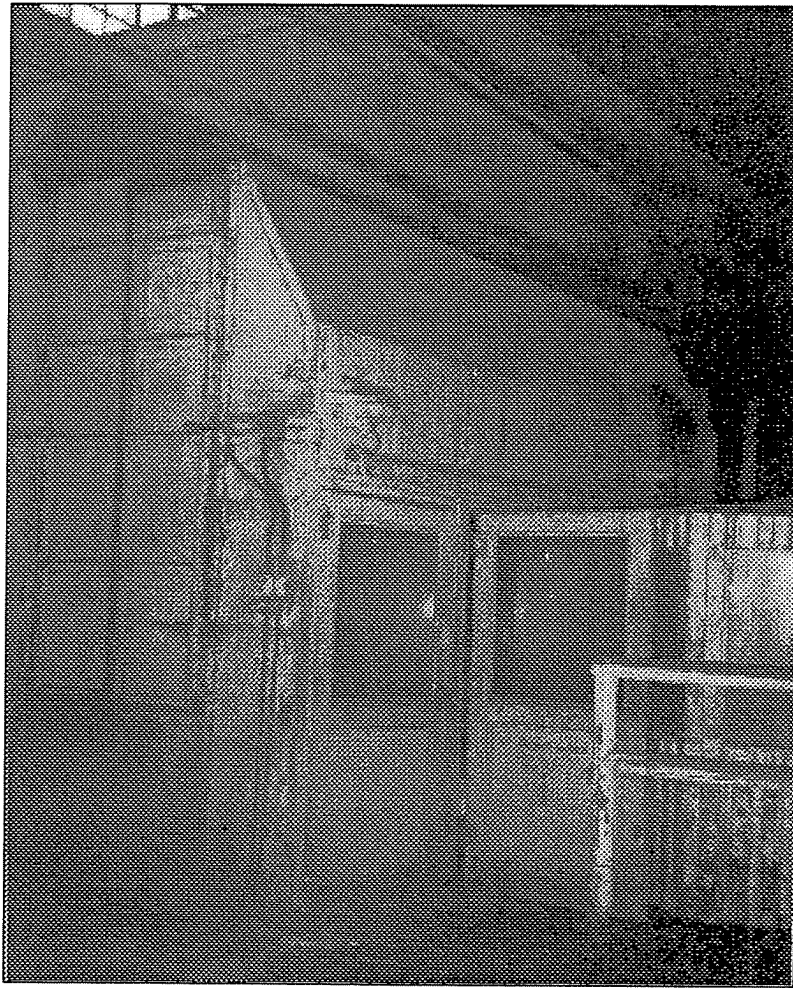
Sodium hydride pile in West Pickle Room



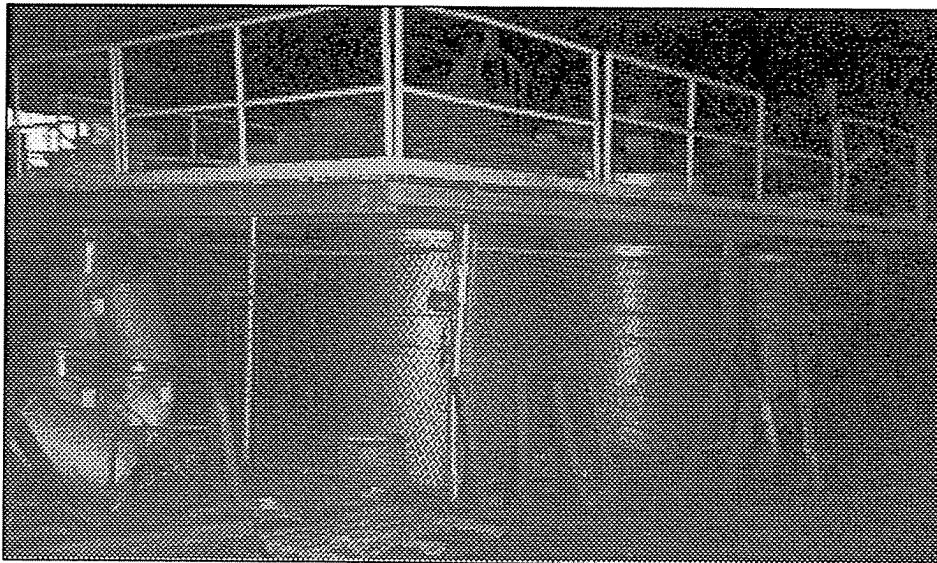
Collapsed roof in West Storage Room



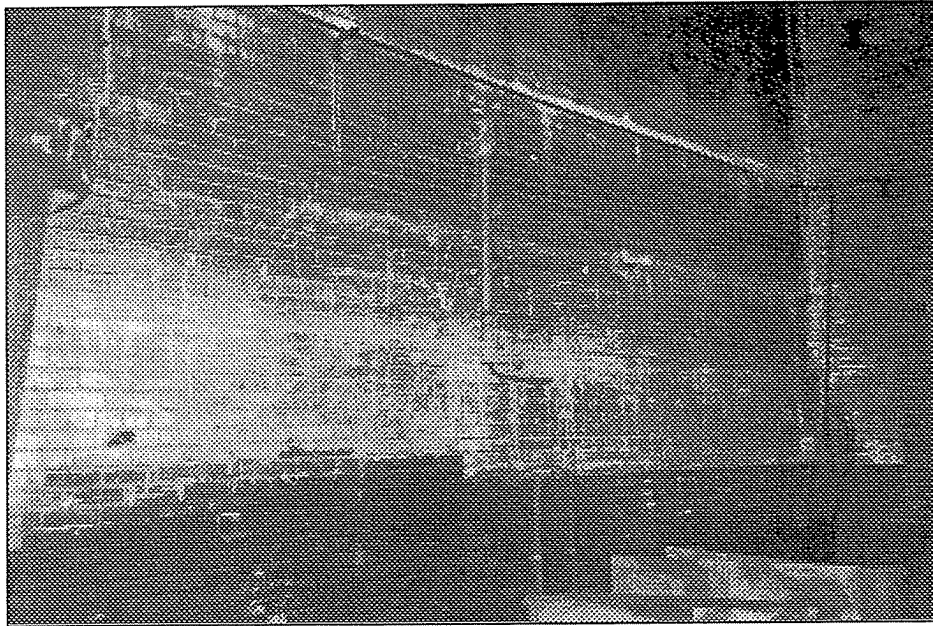
Koline bath tanks in West Storage Room



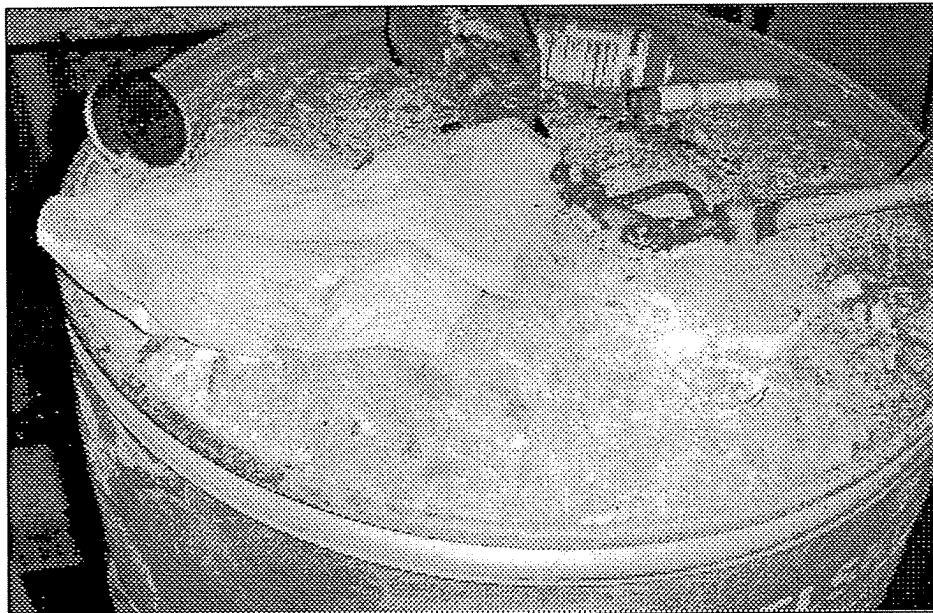
Barium salt bath in West Storage Room



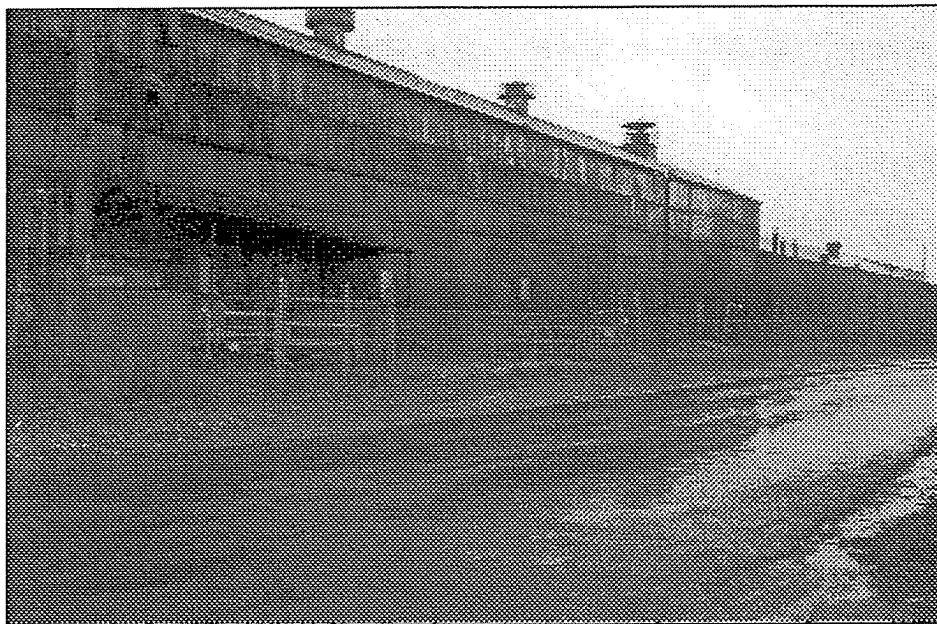
Furnaces in West Storage Room



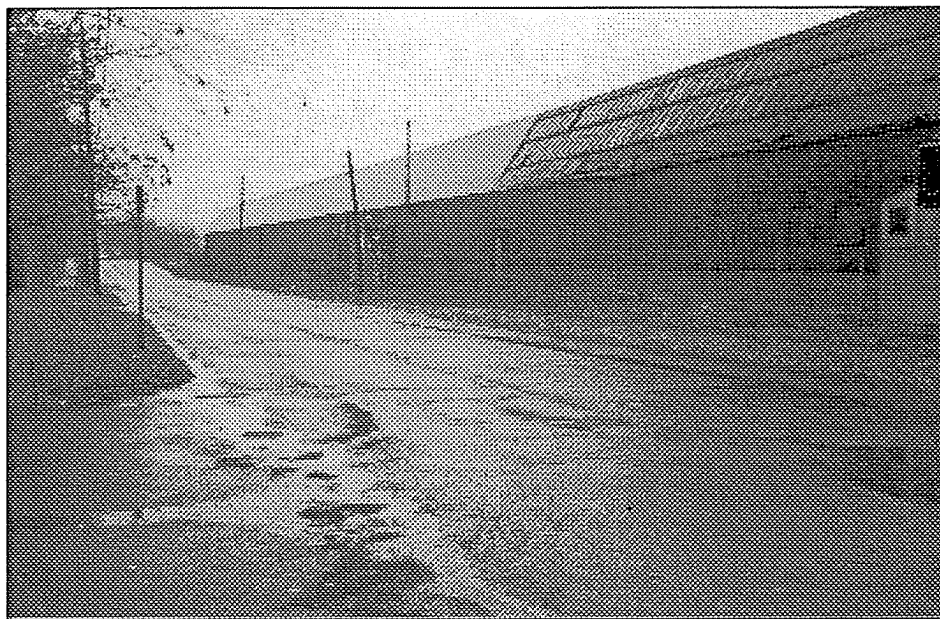
North wall of Battery Room, opposite barium salt bath



Fiber drum in West Production Room



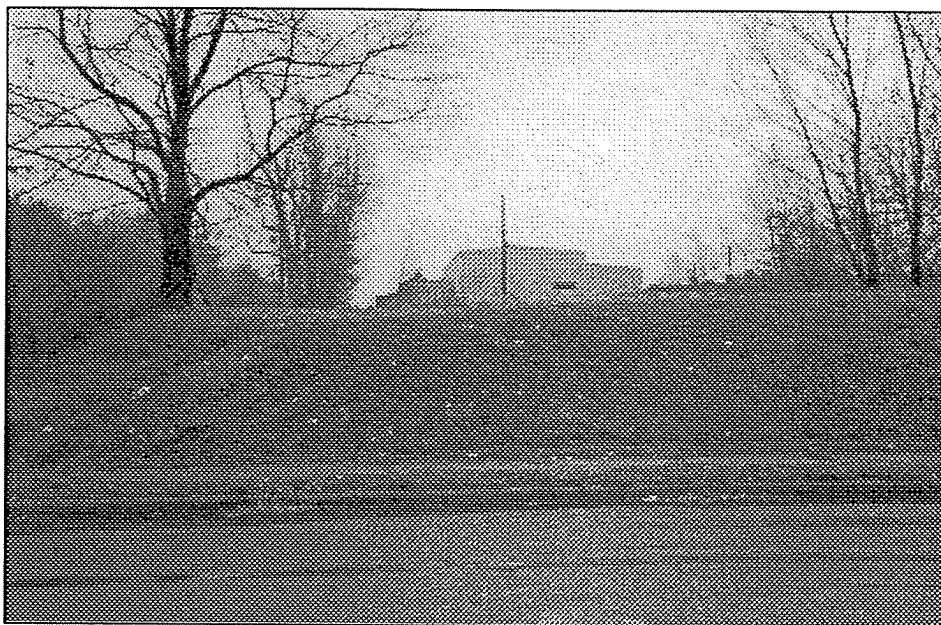
North side of building, looking west



North side of building, looking east



Outside of building, looking east



West end of building

Appendix B
Asbestos Survey Report

ASBESTOS SURVEY

at

***Al Tech Steel
Dunkirk, New York***

Prepared for:

**Benchmark Environmental
50 Fountain Plaza
Suite 1350
Buffalo, New York 14202-2212**

November 9 and 14, 2000

**REPORT PREPARED BY
PARADIGM ENVIRONMENTAL SERVICES, INC.**

**AL TECH STEEL
DUNKIRK, NEW YORK**

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INTRODUCTION

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CONCLUSIONS

DRAWINGS

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INTRODUCTION

Paradigm Environmental Services, Inc. was retained by *Benchmark Environmental* on November 9 and November 14, 2000 to conduct an inspection for the detection of asbestos containing materials located at **Al Tech Steel, Dunkirk, New York.**

Paradigm Environmental Services inspectors, Kevin Zielinski (Inspector #AH 99-21358) and Geoffrey Reed (Inspector #AH 88-12746) conducted this inspection with procedures and guidelines commonly used and accepted in New York State. The objective of this inspection was to identify the approximate locations and quantities of asbestos containing materials present at the above-referenced location.

An initial walkthrough of the area requiring inspection was conducted by an experienced inspector who observed and recorded many of the materials used in the construction of the building. The inspector proceeded by assessing floor, wall, ceiling materials, surfacing materials, thermal systems insulation, roofing materials and miscellaneous materials. The inspection was organized and approached systematically to observe, record, and prepare a list of building materials that are suspected to contain asbestos.

The inspector selected materials for inclusion in this report through an understanding of the historical uses of asbestos and the experience of the Paradigm staff. Generally, if a building material within a structure could contain asbestos the material was included in the survey.

Samples were collected from locations within each homogeneous sampling area. Samples consist of a small amount of the subject material. Sampling points were recorded and cross-referenced to prepared sketches. Individual samples were also recorded on a chain of custody document. Samples were then transported to the Paradigm analytical laboratory for asbestos analysis.

The Paradigm laboratory is accredited through NYSDOH/ELAP (Lab ID# 10958) for Solid and Hazardous Waste and Air and Emissions for Bulk Asbestos Fiber Analysis. The chain of custody record accompanies all samples from the point collected until they reach the laboratory. Samples are stored at the laboratory for 90 days then disposed of according to authoritative regulations.

The analysis methodology used is as follows:

Asbestos Bulk Samples:

- * New York State Department of Health, ELAP Method 198.1 ("Polarized Light Microscopy Methods for identifying and quantitating asbestos in bulk samples").
- * Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. This method is required by the New York State Department of Health.

LIMITATIONS

The information provided in this report was compiled from field and laboratory data and was prepared for reference to **Al Tech Steel, Dunkirk, New York.**

Observations noted and recorded are intended to represent the conditions that existed at the subject site at the time and date that the observations were made.

Determinations of suspect asbestos containing materials within the building were subject to the accessibility of individual areas or spaces. Paradigm Environmental Services, Inc. accepts no responsibility for the content of building materials within areas or spaces that were unknown to us or not reasonably accessible. Paradigm assumes no liability for any buildings that were not identified by the client that may fall under state or federal regulations.

Conclusions and recommendations provided in this report are based on the assumption that materials identified are homogeneous throughout their application.

CONCLUSIONS

An asbestos survey was conducted by Paradigm Environmental Services, Inc. at **Al Tech Steel, Dunkirk, New York** on November 9 and November 14, 2000. The Paradigm inspector conducted a walk-through of the building and from observations, notes, and drawings compiled a suspect list of materials that may contain asbestos.

In addition, analytical results from a 1989 asbestos survey by Fred Hart Associates, Inc. were utilized for some friable materials. These results indicated that all air cell type pipe insulation was positive for asbestos. Paradigm Environmental quantified these materials in conjunction with other materials determined to be asbestos containing by analysis. These quantities were estimated from visible materials, no destructive investigation was performed. These quantities should be field verified by contractors estimating abatement costs.

Sample locations and custody information were recorded and the samples were transported to the Paradigm laboratory for analysis. **The following materials were found to contain asbestos or are to be treated as asbestos containing:**

ASBESTOS CONTAINING MATERIALS

Throughout Plant

White Window Glaze		unknown quantities
Pipe Insulation	2,100	linear feet

East Production Area

White Tank Insulation	8	square feet
-----------------------	---	-------------

East Offices

Brown 12"x12" Floor Tile	200	square feet
Brown 9"x9" Floor Tile	500	square feet
Black Floor Tile Mastic	1,200	square feet
Tan Linoleum	300	square feet
Rust 9"x9" Floor Tile	500	square feet

East Pickling Room

Brown Breech Insulation	20	square feet
-------------------------	----	-------------

West Production Area

Black Insulation	600	square feet
------------------	-----	-------------

Exterior West Production Area

Grey Transite Siding	7,000	square feet
----------------------	-------	-------------

10,328 sf.
2100 lf of piping

Paradigm certifies that this report is based on Paradigm's observations and believes it to be an accurate representation of the conditions as they existed on November 9 and November 14, 2000.

*All quantities are approximations.

Sample Locations

MATCHLINE

LUCAS AVE.

EAST END

E. PRODUCTION AREA

RM 36
LC 33, 34, 35

M 32

SCT 8, 31

PW 9

PW 12

PW 3

PI-5

WG 4

WOMEN'S
LOCKER
ROOM

FB 6, 6A, 6B
BK 36+37

E. PICKLING RM

WG-2

PW 1

E. WAREHOUSE

PARKING

LUCAS AVE.

MATCHLINE

MATCHLINE

FT 15
FTM 16

E. OFFICES

FT 22

PW 13

PW 18
PI 56

FT 14

SCT 17
SCTM 23

WP 27-29
CP 24-26

CT 18

LIN 19
CM 20
CMM 21

PW 1A

PW 11
PW 10

LUCAS AVE.

MATCHLINE

W. PRODUCTION AREA

W. WAREHOUSE

REF 45-47

641
TKI 38-40
TKI 42-44

TS1B 4B-50
BI 52-54

TP55

TR51

Piping Diagrams

MATCHLINE

LUCAS AVE.

EAST PRODUCTION AREA

PARKING

PW#11

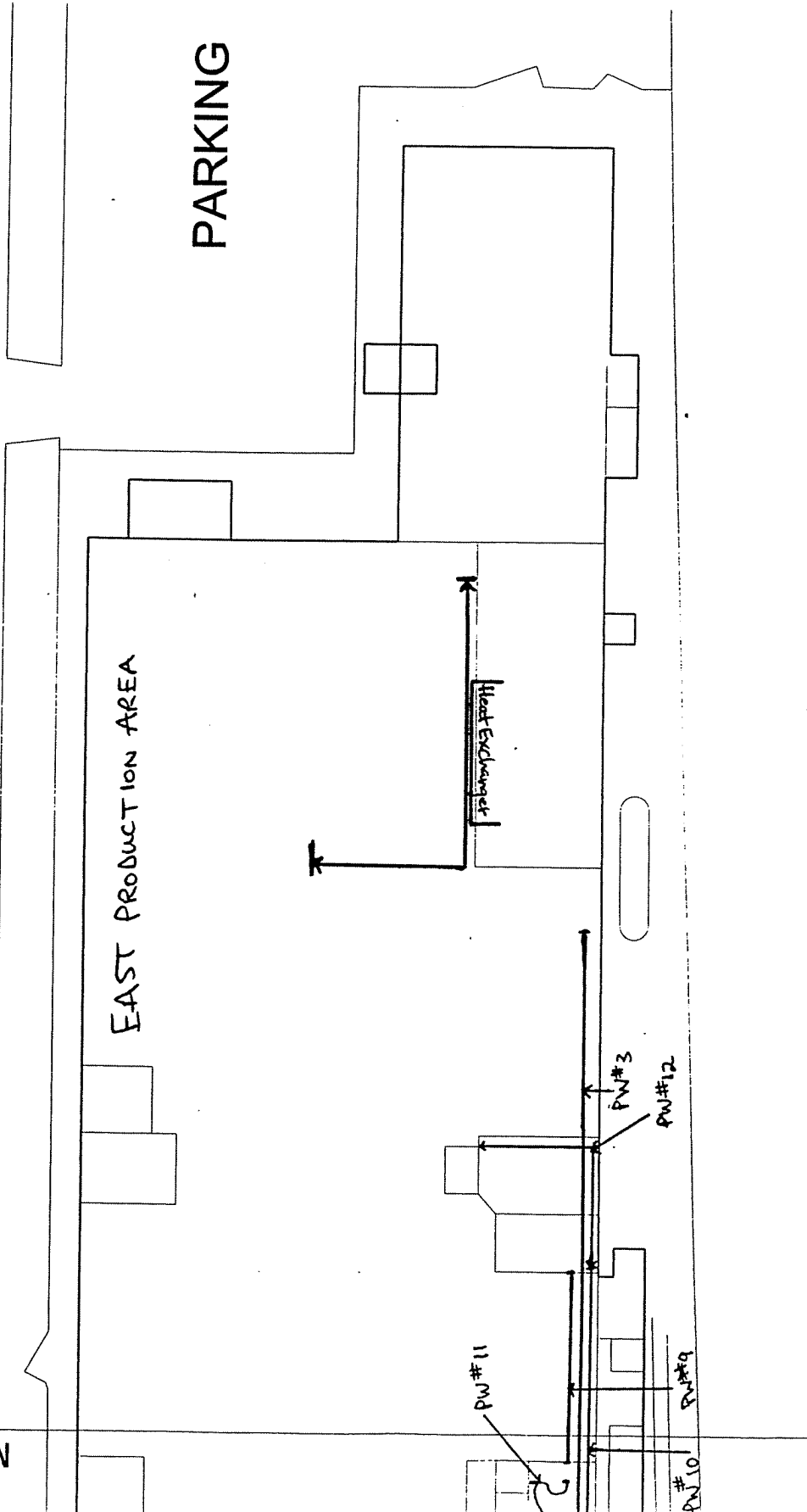
PW#3

PW#12

PW#9

PW#10

Heat Exchanger



MATCHLINE

LUCAS AVE.

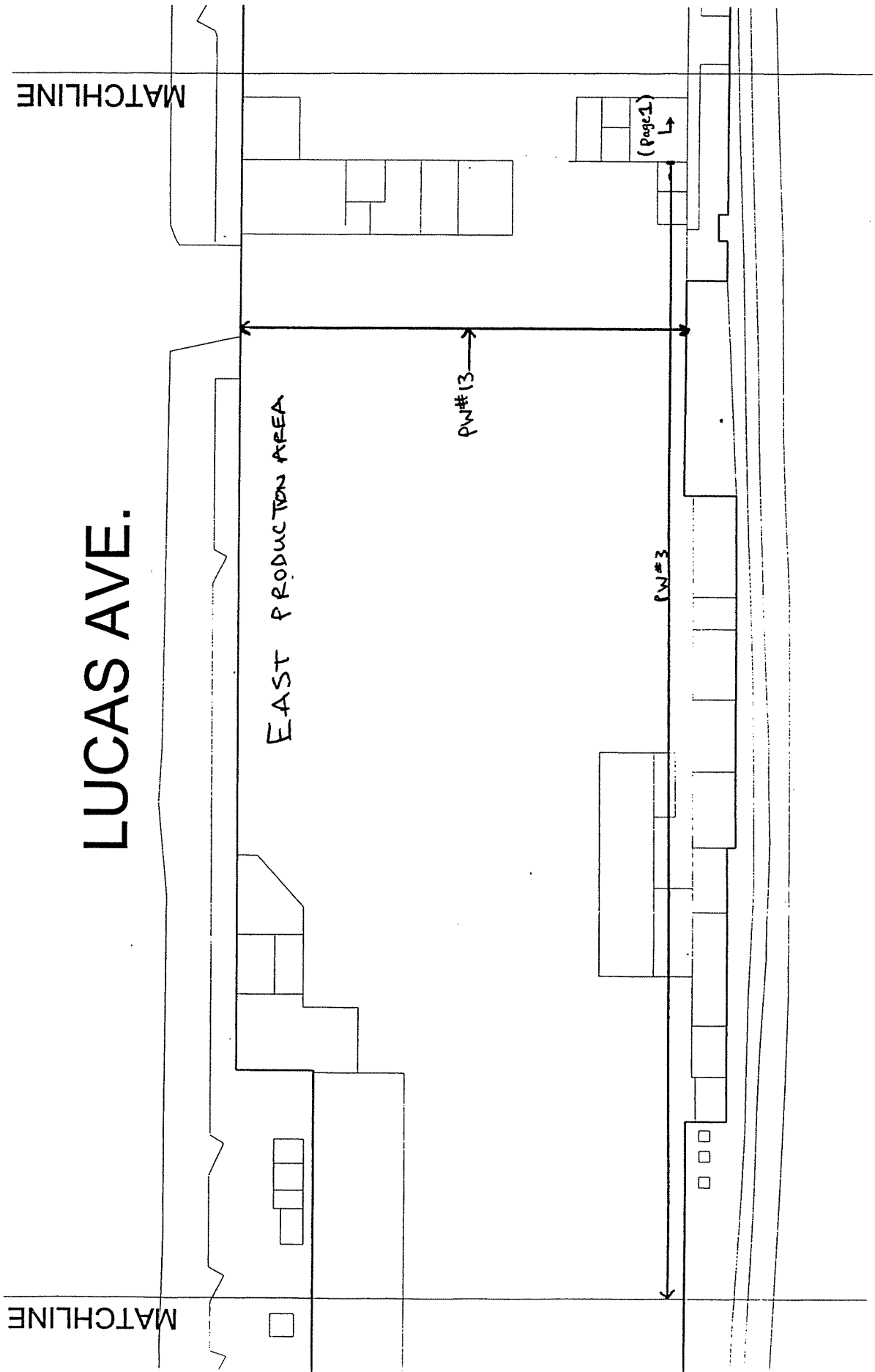
MATCHLINE

EAST PRODUCTION AREA

PW#13

PW#3

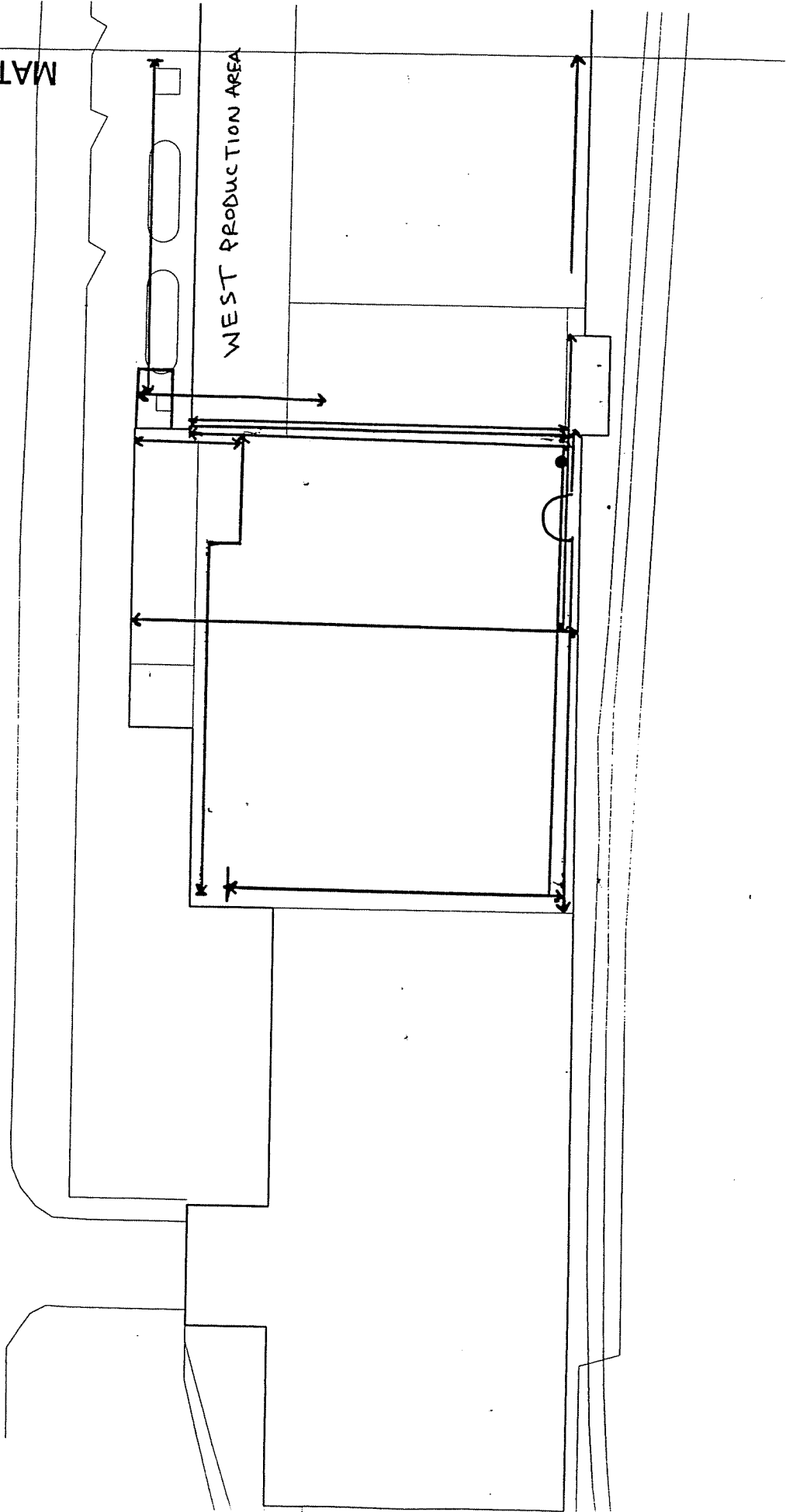
(Page 1)



LUCAS AVE.

MATCHLINE

WEST PRODUCTION AREA



Laboratory Reports

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: Al-Tech Steel Company, LAP Building
Dunkirk, NY
Sample Date: 11/14/2000

Job No: 14840-00
Page: 1 of 1

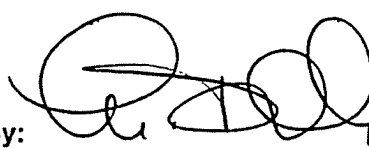
Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
PW-1	111774	East Warehouse	White Fibrous Pipe Wrap	None Detected	0%		Cellulose 66% Fiberglass 10%	24%
PW-1a	111775	East Warehouse	White Fibrous Pipe Wrap	None Detected	0%		Fiberglass 100%	0%
PW-1b	111776	East Warehouse	White Fibrous Pipe Wrap	None Detected	0%		Fiberglass 100%	0%
WG-2	111777	East Warehouse	White Window Glaze	Chrysotile 2%	2%		None Detected	98%
PW-3	111778	East Production Area	White Fibrous Upper Pipe Insulation	Chrysotile 66%	66%		None Detected	34%
WG-4	111779	East Production Area	White Window Glaze	Inconclusive No Asbestos Detected	0%	*	None Detected	100%
PI-5	111780	East Production Area	White Fibrous Pipe Insulation	None Detected	0%		Fiberglass 10% Synthetic 15%	75%
FB-6	111781	East Production Area	White Firebrick	None Detected	0%		None Detected	100%
FB-6a	111782	East Production Area	White Firebrick	None Detected	0%		None Detected	100%
FB-6b	111783	East Production Area	White Firebrick	None Detected	0%		None Detected	100%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Date Analyzed: 11/15/2000
Microscope: Olympus BH-2 #232953
Analyst: Patrick Fitzgerald

Laboratory Results Approved By: 

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: **Al-Tech Steel Company, LAP Building**
Dunkirk, NY
Sample Date: **11/14/2000**

Job No: **14840-00**
Page: **2 of 2**

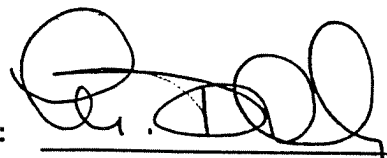
Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
TKI-7	111784	East Production Area	White Fibrous Tank Insulation	Amosite 10% Chrysotile 10%	20%		Fiberglass 35%	45%
SCT-8	111785	East Production Area	Gray Fibrous Suspended Ceiling Tile	None Detected	0%		Cellulose 55% Mineral Wool 20%	25%
PW-9	111786	East Production Area	White Fibrous Pipe Wrap	Chrysotile 80%	80%		None Detected	20%
PW-10	111787	East Production Area	White Fibrous Pipe Wrap	Chrysotile 57%	57%		Cellulose 23%	20%
PW-11	111788	East Production Area	White Fibrous Pipe Wrap	Chrysotile 36%	36%		Cellulose 13% Mineral Wool 51%	0%
PW-12	111789	East Production Area	Black Fibrous Pipe Wrap	Chrysotile 15%	15%		Animal Hair 25% Cellulose 45%	15%
PW-13	111790	East Production Area	White Fibrous Pipe Wrap	Chrysotile 57%	57%		Cellulose 13%	30%
FT-14	111791	East Offices	Brown Fibrous 12" x 12" Floor Tile	Chrysotile 10%	10%		None Detected	90%
FT-15	111792	East Offices	Brown Fibrous 9" x 9" Floor Tile	Chrysotile 17%	17%		None Detected	83%
FTM-16	111793	East Offices	Black Fibrous Floor Tile Mastic	Chrysotile 11%	11%		Cellulose 10%	79%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

Date Analyzed: **11/15/2000**
Microscope: **Olympus BH-2 #232953**
Analyst: **Patrick Fitzgerald**

Laboratory Results Approved By:



PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: Al-Tech Steel Company, LAP Building
Dunkirk, NY
Sample Date: 11/14/2000

Job No: 14842-00
Page: 1 of 1

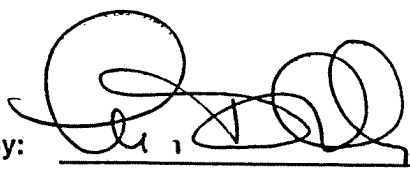
Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
CT-17	111794	East Offices	White Fibrous 12" x 12" Ceiling Tile	None Detected	0%		Cellulose 60% Wood Fiber 40%	0%
CT-18	111795	East Offices	White Fibrous 2' x 4' Ceiling Tile	None Detected	0%		Cellulose 75% Wood Fiber 25%	0%
LIN-19	111796	East Offices	Tan Fibrous Linoleum	Chrysotile 13%	13%		Cellulose 10%	77%
CM-20	111797	East Offices	Brown Cove Molding	Inconclusive No Asbestos Detected	0%	*	None Detected	100%
CMM-21	111798	East Offices	Brown Cove Molding Mastic	Inconclusive No Asbestos Detected	0%	*	None Detected	100%
FT-22	111799	East Offices	Rust Fibrous 9" x 9" Floor Tile	Chrysotile 12%	12%		None Detected	88%
CTM-23	111800	East Offices	Brown Ceiling Tile Mastic	Inconclusive No Asbestos Detected	0%	*	None Detected	100%
CP-24	111801	East Offices	Tan Ceiling Plaster	None Detected	0%		Wood Fiber 6%	94%
CP-25	111802	East Offices	Tan Ceiling Plaster	None Detected	0%		Wood Fiber 6%	94%
CP-26	111803	East Offices	Tan Ceiling Plaster	None Detected	0%		Wood Fiber 4% Animal Hair 2%	94%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Date Analyzed: 11/15/2000
Microscope: Olympus BH-2 #232953
Analyst: Patrick Fitzgerald

Laboratory Results Approved By: 

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: **Al-Tech Steel Co.**
LAP Building, Dunkirk, New York
Sample Date: **11/14/2000**

Job No: **14855-00**
Page: **1 of 1**

Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
WP-27	111889	East Offices	White Wall Plaster	None Detected	0%		Cellulose 5%	95%
WP-28	111890	East Offices	White Wall Plaster	None Detected	0%		Cellulose 5%	95%
WP-29	111891	East Offices	White Wall Plaster	None Detected	0%		Cellulose 5%	95%
RM-30	111892	East Production Area	Black Fibrous Roof Membrane	Inconclusive No Asbestos Detected	0%	*	Synthetic 15%	85%
CT-31	111893	Women's Locker Room	White Fibrous Ceiling Tile	None Detected	0%		Cellulose 90% Fiberglass 5%	5%
M-32	111894	East Production Area	Black Fibrous Mastic	Inconclusive No Asbestos Detected	0%	*	None Detected	100%
LC-33	111895	East Production Area	White Fibrous Leveling Compound	None Detected	0%		Cellulose 20%	80%
LC-34	111896	East Production Area	White Fibrous Leveling Compound	None Detected	0%		Cellulose 15%	85%
LC-35	111897	East Production Area	White Fibrous Leveling Compound	None Detected	0%		Cellulose 15%	85%
BR-36	111898	East Pickling Room	Brown Fibrous Breech Insulation	Amosite 12% Chrysotile 5%	17%		None Detected	83%

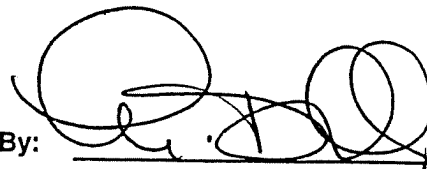
ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

* Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Date Analyzed: **11/16/2000**
Microscope: **Olympus BH-2 #232953**
Analyst: **Pete Donato**

Laboratory Results Approved By:



PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: Al-Tech Steel Co.
LAP Building, Dunkirk, New York
Sample Date: 11/14/2000

Job No: 14891-00
Page: 1 of 1

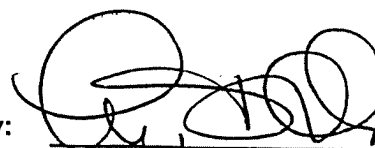
Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
BR-37	112173	East Pickling Room	White Fibrous Breeching	None Detected	0%		None Detected	100%
TKI-38	112174	West Production Area	White Tank Insulation	None Detected	0%		None Detected	100%
TKI-39	112175	West Production Area	White Tank Insulation	None Detected	0%		None Detected	100%
TKI-40	112176	West Production Area	White Tank Insulation	None Detected	0%		None Detected	100%
G-41	112177	West Production Area	Tan Fibrous Gasket	None Detected	0%		Fiberglass 85%	15%
TKI-42	112178	West Production Area	Grey Tank Insulation	None Detected	0%		None Detected	100%
TKI-43	112179	West Production Area	Grey Tank Insulation	None Detected	0%		None Detected	100%
TKI-44	112180	West Production Area	Grey Fibrous Tank Insulation	None Detected	0%		Cellulose 10% Synthetic 5%	85%
REF-45	112181	West Production Area	Yellow Refractory	None Detected	0%		Cellulose 2%	98%
REF-46	112182	West Production Area	Yellow Refractory	None Detected	0%		None Detected	100%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

Date Analyzed: 11/16/2000
Microscope: Olympus BH-2 #232953
Analyst: Pete Donato

Laboratory Results Approved By:



PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: **Al-Tech Steel Co.**
LAP Building, Dunkirk, New York
Sample Date: **11/14/2000**

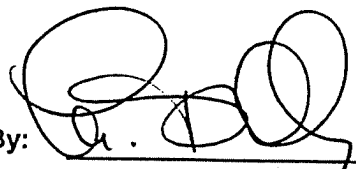
Job No: **14857-00**
Page: **1 of 1**

Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
REF-47	111899	West Production Area	Yellow Refractory	None Detected	0%		Fiberglass 2%	98%
TSIB-48	111900	West Production Area	White Fibrous Thermal System Insulation Blanket	None Detected	0%		Mineral Wool 95%	5%
TSIB-49	111901	West Production Area	White Fibrous Thermal System Insulation Blanket	None Detected	0%		Mineral Wool 95%	5%
TSIB-50	111902	West Production Area	White Fibrous Thermal System Insulation Blanket	None Detected	0%		Mineral Wool 95%	5%
TR-51	111903	Exterior West Production Area	Grey Fibrous Transite	Chrysotile 40%	40%		None Detected	60%
BI-52	111904	West Production Area	White Boiler Insulation	None Detected	0%		Cellulose 2% Fiberglass 2% Synthetic 2%	94%
BI-53	111905	West Production Area	White Boiler Insulation	None Detected	0%		Cellulose 2% Fiberglass 2% Synthetic 3%	93%
TP-55	111907	West Production Area	Black Fibrous Insulation	Chrysotile 36%	36%		Cellulose 30%	34%
PI-56	111908	East Production Area	White Pipe Insulation	None Detected	0%		Cellulose 5%	95%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for Identifying and quantifying asbestos in bulk samples").

Date Analyzed: **11/16/2000**
Microscope: **Olympus BH-2 #232953**
Analyst: **Pete Donato**

Laboratory Results Approved By: 

PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

Client: **Benchmark Environmental**
Location: Al-Tech Steel Company, LAP Building
Dunkirk, NY
Sample Date: 11/14/2000

Job No: 14843-00
Page: 1 of 1

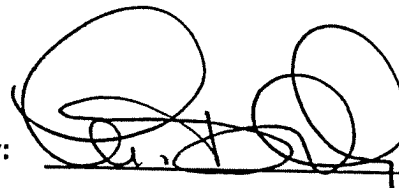
Client ID	Lab ID	Sampling Location	Description	Asbestos Fibers Type & Percentage	Total Asbestos	T E M	Non-Asbestos Fibers Type & Percentage	Matrix Material %
PW-57	111804	East Production Area	Yellow Fibrous Pipe Wrap	None Detected	0%		Fiberglass 100%	0%
PW-58	111805	East Production Area	Yellow Fibrous Pipe Wrap	None Detected	0%		Fiberglass 100%	0%
PW-59	111806	East Production Area	Yellow Fibrous Pipe Wrap	None Detected	0%		Fiberglass 100%	0%
PW-60	111807	East Production Area	Yellow Fibrous Pipe Wrap (Machine Insulation)	None Detected	0%		Fiberglass 100%	0%

ELAP ID No.: 10958

The samples were analyzed by Polarized Light Microscopy, according to the State of New York DOH ELAP Method 198.1 ("Polarized-Light Microscope Methods for identifying and quantifying asbestos in bulk samples").

Date Analyzed: 11/15/2000
Microscope: Olympus BH-2 #232953
Analyst: Patrick Fitzgerald

Laboratory Results Approved By:



PARADIGM
Environmental
Services, Inc.

179 Lake Avenue Rochester, New York 716-647-2530 FAX 716-647-3311

T.E.M. Analysis

Client: **Benchmark Environmental**
Location: Al-Tech Steel Company, LAP Building
Dunkirk, NY
Sample Date: 11/14/2000

Job No: 14843-00

Page: 1 of 1

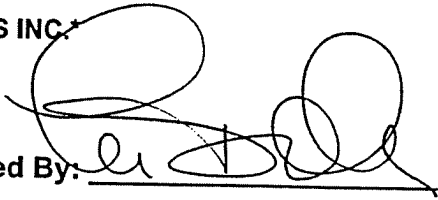
Client ID	Lab ID	Sampling Location	Description	TEM Analysis	
				Total Asbestos	Asbestos Type
WG-4	111779	East Production Area	White Window Glaze	9.1%	Chrysotile
RM-30	111892	East Production Area	Black Fibrous Roof Membrane	<1.0%	None Detected
M-32	111894	East Production Area	Black Fibrous Mastic	<1.0%	None Detected
CM-20	111797	East Offices	Brown Cove Molding	<1.0%	None Detected
CMM-21	111798	East Offices	Brown Cove Molding Mastic	<1.0%	None Detected
CTM-23	111800	East Offices	Brown Ceiling Tile Mastic	<1.0%	None Detected

ELAP ID No.: 10984

These samples were analyzed by Transmission Electron Microscopy, according to the State of New York DOH ELAP Method 198.1 and 198.4

TEM ANALYSIS ONLY PERFORMED BY SCIENTIFIC LABORATORIES INC.

Date Analyzed: 11/18/2000
Analyst: Rob Fleet

Laboratory Results Approved By: 

Appendix C

Analytical Data

**SEVERN
TRENT
SERVICES**

February 22, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1287

Dear Mr. Martin:

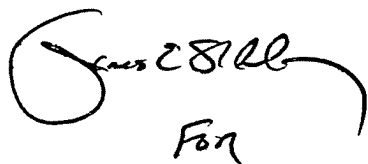
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Plating Operations - SWMU 7A, 7B, 7C, 7D
Matrix: Water
Sample Received: 02/09/01
Sample Date: 02/08/01

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

Sincerely,

STL Buffalo



For

Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1287
#NY1A8687

This report contains 21 pages which are individually numbered.

**SEVERN
TRENT
SERVICES**

STL Buffalo

METHODOLOGY

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, U.S. Environmental Protection Agency Office of Solid Waste.
- 40 CFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) United States Environmental Protection Agency.

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 Data Comment Page.

The cooler was received at an ambient temperature.

METALS

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

WET CHEMISTRY

Sample SWMU-7A7B7C7D WEST was analyzed outside analytical holding time for Hexavalent Chromium and Corrosivity.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 02/23/2001
Time: 10:42:23

Benchmark Environmental Engineering & Science
Plating Operations - SWMU 7A, 7B, 7C, 7D (liquids)
TOTAL METALS

Rept: AN0326

Client ID	Lab ID	SWMU-7A/7B/7C/7D WEST							
Job No		A01-1287							
Sample Date		02/08/2001							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/L	0.014	0.0020			NA		NA	
Nickel - Total	MG/L	0.82	0.010			NA		NA	

000004

Date: 02/20/2001
Time: 10:43:01

Benchmark Environmental Engineering & Science
Plating Operations - SHMU 7A, 7B, 7C, 7D (liquids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	SHMU-7A7B7C7D WEST A01-1287 02/08/2001		A1128701					
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Corrosivity (pH)			S.U.	9.8	0	NA		NA	
H2S Released From Waste			MG/L	ND	10	NA		NA	
HCN Released From Waste			MG/KG	ND	10	NA		NA	
Hexavalent Chromium - Total			UG/L	ND	10	NA		NA	

000005

000006

Chronology and QC Summary Package

Client ID Job No Sample Date		Lab ID		Method Blank A01-1287		A1B0118703					
Analyte		Units		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total		MG/L		ND	0.0020	NA		NA		NA	
Nickel - Total		MG/L		ND	0.010	NA		NA		NA	

000007

Date: 02/23/2001
Time: 10:42:23

Benchmark Environmental Engineering & Science
Plating Operations - SMMU 7A, 7B, 7C, 7D (Liquids)

Rept: AN0326

TOTAL METALS

Client ID Job No Sample Date	Lab ID	LFB A01-1287		A1B0118702							
		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Nickel - Total Chromium - Total		MG/L	0.20	0.010	NA		NA		NA		NA
		MG/L	0.20	0.0020	NA		NA		NA		NA

000008

Date : 02/23/2001 10:42:55
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

Rept: AN0364

Client Sample ID: Method Blank LFB
Lab Sample ID: A180118703 A180118702

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TOTAL METALS	MG/L	0.201	0.20	100	80-120
TOTAL CHROMIUM	MG/L	0.199	0.20	99	80-120
TOTAL NICKEL					

000009

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/23/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SMMU 7A, 7B, 7C, 7D (LIQUIDS)
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL A INI H	Matrix
A1128701	SMMU-7A7B7C7D WEST	RECNY RECNY	Chromium - Total Nickel - Total	6010 6010	1.0 1.0	0.05 L 0.05 L	02/08/01 12:15 02/08/01 12:15	02/09 14:55 02/09 14:55	NA NA		02/14 02/14	JNT Y JNT Y	WATER WATER

000010

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable
ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/23/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SWMU 7A, 7B, 7C, 7D (LIQUIDS)
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A1B0118702	LFB	RECNY RECNY	Chromium - Total Nickel - Total	6010 6010	1.0 1.0	0.05 L 0.05 L	- -	- -	NA NA		02/14 02/14	JWT JWT	Y Y	WATER WATER

000011

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable
ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/23/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SWMU 7A, 7B, 7C, 7D (LIQUIDS)
QC CHRONOLOGY

Rept: AN0881
Page: 3

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H Matrix
A180118703	Method Blank	RECNY RECNY	Chromium - Total Nickel - Total	6010 6010	1.0 1.0	0.05 L 0.05 L	- -	- -	NA NA		02/14 02/14	JWT Y JWT Y	WATER WATER

000012

ANL INI = Analyst Initials
DF = Dilution Factor

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/20/2001
Time: 10:43:01

Benchmark Environmental Engineering & Science
Plating Operations - SMU 7A, 7B, 7C, 7D (liquids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1287		Method Blank A01-1287		Method Blank A1B0123304			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexavalent Chromium - Total H2S Released From Waste HCN Released From Waste	UG/L	ND	10	NA	10	NA	10	NA	
	MG/L	NA		ND		NA		NA	
	MG/KG	NA		ND		NA		NA	

000013

Date: 02/20/2001
Time: 10:43:01

Benchmark Environmental Engineering & Science
Plating Operations - SMMU 7A, 7B, 7C, 7D (Liquids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1287		LCS A01-1287		LCS A01-1287		LCS A01-1287		LCS A01-1287	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexavalent Chromium - Total		ND	10	NA	0	NA	0	NA		NA	
Corrosivity (pH)		NA		7.0		NA		NA		NA	
H2S Released From Waste		NA		NA		152		152	10	NA	
HCN Released From Waste		NA		NA		300		300	10	NA	

000014

Date : 02/20/2001 10:43:32
Job No: A01-1287

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

Client Sample ID: Method Blank LCS
Lab Sample ID: A180116902 A180116901

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
WET CHEMISTRY ANALYSIS TURNKEY - METHOD 7196A/HEXAVALENT CHRO	UG/L	0.0480	0.050	96	90-110

000015

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date : 02/20/2001 10:43:32
Job No: A01-1287

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

Client Sample ID: Method Blank LCS
Lab Sample ID: A1B0123304 A1B0123302

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
WET CHEMISTRY ANALYSIS METHOD SECTION 7.3 - REACTIVITY (CYANI METHOD SECTION 7.3 - REACTIVITY (SULFI	MG/KG MG/L	300.0	1000	30	10- 65
		152.0	570	26	10- 65

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

000016

Date: 02/20/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SMMU 7A, 7B, 7C, 7D (LIQUIDS)
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL A INI H	Matrix
A1128701	SMMU-7A7B7C7D WEST	RECHY RECHY RECHY RECHY	Hexavalent Chromium - Total Corrosivity (pH) HCN Released From Waste H2S Released From Waste	7196A 9040 SECT7.3 SECT7.3	1.0 1.0 1.0 1.0	0.025 L 0.05 L	02/08/01 12:15 02/08/01 12:15 02/08/01 12:15 02/08/01 12:15	02/09 14:55 02/09 14:55 02/09 14:55 02/09 14:55	NA NA NA NA		02/12 02/13 02/14 02/14	RM EF ST ST	N WATER N WATER Y WATER Y WATER

000017

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable
ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/20/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SWMU 7A, 7B, 7C, 7D (LIQUIDS)
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A180116901	LCS	RECNY	Hexavalent Chromium - Total	7196A	1.0	0.025 L	-	-	NA		02/12	RM	Y	WATER
A180121301	LCS	RECNY	Corrosivity (pH)	9040	1.0	0.05 L	-	-	NA		02/13	EF	Y	WATER
A180123302	LCS	RECNY	HCN Released From Waste	SECT7.3	1.0		-	-	NA		02/14	ST	Y	WATER
		RECNY	H2S Released From Waste	SECT7.3	1.0		-	-	NA		02/14	ST	Y	WATER

000018

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/20/2001 10:43
Job No: A01-1287

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
PLATING OPERATIONS - SWMU 7A, 7B, 7C, 7D (LIQUIDS)
QC CHRONOLOGY

Rept: AN0881
Page: 3

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A180116902	Method Blank	RECNY	Hexavalent Chromium - Total	7196A	1.0	0.025 L	-	-	NA		02/12	RM	Y	WATER
A180123304	Method Blank	RECNY	HCN Released From Waste	SECT7.3	1.0		-	-	NA		02/14	ST	Y	WATER
		RECNY	H2S Released From Waste	SECT7.3	1.0		-	-	NA		02/14	ST	Y	WATER

0000019

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Chain of Custody

**SEVERN
TRENT
SERVICES**

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1290

Dear Mr. Martin:

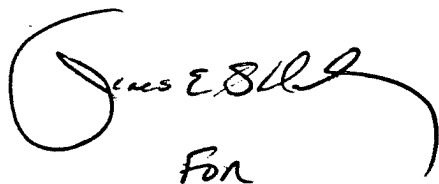
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Containers (Liquids)
Matrix: Water/Other; Soil/Other
Sample Received: 02/09/01
Sample Date: 02/08/01

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

Sincerely,

STL Buffalo



For

Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1290
#NY1A8687

This report contains 25 pages which are individually numbered.

METHODOLOGY

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METHOD 8082

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

METALS

Sample EAST VAULT TANK LIQ was analyzed at a dilution factor of 40 for Lead due to the original result exceeding the linear range of the curve.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

WET CHEMISTRY

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- ! Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 02/20/2001
Time: 11:48:10

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST VAULT TANK LIQ A01-1290 A1129002 02/08/2001		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1221	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1232	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1242	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1248	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1254	MG/KG	ND	1.0	NA		NA		NA		NA	
Aroclor 1260	MG/KG	ND	1.0	NA		NA		NA		NA	
SURROGATE(S)											
Tetrachloro-m-xylene	%	74	32-148	NA		NA		NA		NA	
Decachlorobiphenyl	%	82	36-153	NA		NA		NA		NA	

000004

Date: 02/23/2001
Time: 11:47:56

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST VAULT TANK LIQ A01-1290 02/08/2001							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	0.0097	0.0070	NA		NA		NA	
Barium - Total	MG/L	0.17	0.0010	NA		NA		NA	
Cadmium - Total	MG/L	0.0051	0.0010	NA		NA		NA	
Lead - Total	MG/L	377	0.40	NA		NA		NA	
Selenium - Total	MG/L	ND	0.010	NA		NA		NA	
Silver - Total	MG/L	0.0040	0.0030	NA		NA		NA	
Chromium - Total	MG/L	5.0	0.0020	NA		NA		NA	
Mercury - Total	MG/L	ND	0.00020	NA		NA		NA	

000005

Date: 02/20/2001
Time: 11:49:51

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID	Lab ID	EAST VAULT TANK LIQ A01-1290 02/08/2001 A1129001							
Job No		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Sample Date		>200	0	NA		NA		NA	
Analyte	Units								
Flashpoint	DEG F								

000006

000007

Chronology and QC Summary Package

Date: 02/20/2001
Time: 11:48:10

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1290	A1B0125102	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1221	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1232	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1242	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1248	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1254	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1260	MG/KG	ND	1.0	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	112	32-148	NA		NA		NA	
Decachlorobiphenyl	%	106	36-153	NA		NA		NA	

000008

Date: 02/20/2001
Time: 11:48:10

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Matrix Spike Blank A01-1290 A1B0125101							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1221	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1232	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1242	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1248	MG/KG	ND	1.0	NA		NA		NA	
Aroclor 1254	MG/KG	12	1.0	NA		NA		NA	
Aroclor 1260	MG/KG	ND	1.0	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	109	32-148	NA		NA		NA	
Decachlorobiphenyl	%	104	36-153	NA		NA		NA	

000009

Date : 02/20/2001 11:48:44
Job No: A01-1290

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868709

Client Sample ID: Method Blank
Lab Sample ID: A180125102

Matrix Spike Blank
A180125101

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TURNKEY - METHOD 8082/PCB'S IN OIL Aroclor 1254	MG/KG	11.8	10.0	118	52-153

000010

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/20/2001
Time: 11:48:32

Rept: AN0875
Page: 1

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S IN OIL

Job No & Lab Sample ID	Client Sample ID	EAST VAULT TANK LIQ A01-1290 A1129002			
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/08/2001 15:15 02/09/2001 14:55 02/15/2001 07:00 02/20/2001 03:57 NH YES YES SOTHER RECHY 1.0 0.5 100.00 GRAMS				

000011

NA = Not Applicable

STL Buffalo

Date: 02/20/2001
Time: 11:48:32

Rept: AN0875
Page: 2

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
QC SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S IN OIL

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1290 A1B0125101			
Sample Date/Time Received Date/Time Extraction Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 07:00 02/20/2001 02:42 BJ - - OIL RECNY 1.0 0.5 GRAMS 100.00			

000012

Date: 02/20/2001
Time: 11:48:32

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
QC SAMPLE CHRONOLOGY

Rept: AN0875
Page: 3

TURNKEY - METHOD 8082/PCB'S IN OIL

Client Sample ID Job No & Lab Sample ID	Method Blank A01-1290 A180125102			
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 07:00 02/20/2001 03:07 BJ - - OIL RECNY 1.0 0.5 100.00 GRAMS			

000013

Date: 02/23/2001
Time: 11:47:56

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1290		Method Blank A01-1290		Method Blank A01-1290		Method Blank A01-1290	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/L	ND	0.0020	NA		NA		NA	
Arsenic - Total	MG/L	ND	0.0070	NA		NA		NA	
Barium - Total	MG/L	ND	0.0010	NA		NA		NA	
Cadmium - Total	MG/L	ND	0.0010	NA		NA		NA	
Lead - Total	MG/L	ND	0.010	NA		NA		NA	
Selenium - Total	MG/L	ND	0.010	NA		NA		NA	
Silver - Total	MG/L	ND	0.0030	NA		NA		NA	
Mercury - Total	MG/L	NA		ND	0.00020	NA		NA	

000014

Date: 02/23/2001
Time: 11:47:56

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1290		A1B0128501		LFB A01-1290		A1B0123701			
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total			MG/L	NA		0.22	0.0020	NA		NA	
Cadmium - Total			MG/L	NA		0.21	0.0010	NA		NA	
Selenium - Total			MG/L	NA		0.20	0.010	NA		NA	
Arsenic - Total			MG/L	NA		0.20	0.0070	NA		NA	
Barium - Total			MG/L	NA		0.21	0.0010	NA		NA	
Lead - Total			MG/L	NA		0.21	0.010	NA		NA	
Silver - Total			MG/L	NA		0.22	0.0030	NA		NA	
Mercury - Total			MG/L	0.0062	0.00020	NA		NA		NA	

000015

Date : 02/23/2001 11:48:29
Job No: A01-1290

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868709
Client Sample ID: Method Blank LFB
Lab Sample ID: A180123702 A180123701

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
RCRA TOTAL METALS					
TOTAL ARSENIC	MG/L	0.204	0.20	102	80-120
TOTAL BARIUM	MG/L	0.208	0.20	104	80-120
TOTAL CADMIUM	MG/L	0.208	0.20	104	80-120
TOTAL CHROMIUM	MG/L	0.215	0.20	107	80-120
TOTAL LEAD	MG/L	0.213	0.20	106	80-120
TOTAL SELENIUM	MG/L	0.198	0.20	99	80-120
TOTAL SILVER	MG/L	0.219	0.20	109	80-120

000016

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date : 02/23/2001 11:48:29
Job No: A01-1290

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

Rept: AN0364

SDG: 868709
Client Sample ID: Method Blank LCS
Lab Sample ID: A1B0128501

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
RCRA TOTAL METALS TOTAL MERCURY	MG/L	0.00618	0.0066	92	80-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

000017

STL Buffalo

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
SAMPLE CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A1129001	EAST VAULT TANK LIQ	RECNY	Arsenic - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Lead - Total	6010	40.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/16	JWT	Y	WOTHER
		RECNY	Selenium - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 15:15	02/09 14:55	NA		02/15	JWT	Y	WOTHER
		RECNY	Mercury - Total	7470	1.0	0.03 L	02/08/01 15:15	02/09 14:55	NA		02/16	SW	Y	WOTHER

000018

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL A INI H	Matrix
A1B0128501	LCS	RECNY	Mercury - Total	7470	1.0	0.03 L	-	-	NA		02/16	SW	Y WATER
A1B0123701	LFB	RECNY	Arsenic - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Barium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Lead - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Selenium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Silver - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER
		RECNY	Chromium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y WATER

0000019

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A1B0123702	Method Blank	RECNY	Arsenic - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Barium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Lead - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Selenium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Silver - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
A1B0128502	Method Blank	RECNY	Chromium - Total	6010	1.0	0.05 L	-	-	NA		02/15	JWT	Y	WATER
		RECNY	Mercury - Total	7470	1.0	0.03 L	-	-	NA		02/16	SW	Y	WATER

000020

Date: 02/20/2001
Time: 11:49:51

Benchmark Environmental Engineering & Science
CONTAINERS (Liquids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1290	A1B0117102	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Flashpoint	DEG F	78.44	0	NA		NA		NA	

000021

Date: 02/20/2001 11:50
Job No: A01-1290

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H Matrix
A1129001	EAST VAULT TANK LIQ	RECNY	Flashpoint	1010	1.0		02/08/01 15:15	02/09 14:55	NA		02/12	RM	Y WOTHER

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable
ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

000022

Date: 02/20/2001 11:50
Job No: A01-1290

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (LIQUIDS)
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H Matrix
A1B0117102	LCS	RECNY	Flashpoint	1010	1.0	-	-	-	NA		02/12	Y	WATER

000023

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

000024

Chain of Custody

SEVERN

TRENT

SERVICES

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza, Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1285, A01-1296

Dear Mr. Martin:

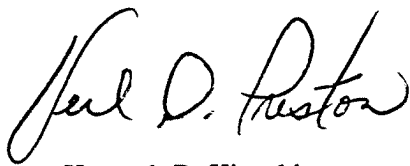
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Plating Operations - SWMU 7A, 7B, 7C, 7D (solids)
Matrix: Soil/Other
Samples Received: 02/09/01
Sample Dates: 02/08,09/01

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

Sincerely,

STL Buffalo



for Kenneth P. Kinecki
Program Manager

KPK/ekn
Enclosure

I.D. #A01-1285; A01-1296
#NY1A8687

This report contains 23 pages which are individually numbered.

**SEVERN
TRENT
SERVICES**

STL Buffalo

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, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METALS

Sample SWMU-7A7B7C7D H2SO4 was analyzed at a dilution factor of 20 for Chromium due to the original result exceeding the linear range of the curve.

Sample SWMU-7A7B7C7D PLASTI was analyzed at a dilution factor of 10 for Chromium and 10 for Nickel due to the original results exceeding the linear range of the curve.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

WET CHEMISTRY

Samples SWMU-7A7B7C7D DEGREa, SWMU-7A7B7C7D H2SO4, SWMU-7A7B7C7D PLASTI, and SWMU-7A7B7C7D WEST were analyzed outside of analytical holding time for Hexavalent Chromium.

Sample SWMU-7A7B7C7D H2SO4 was analyzed at a dilution factor of 5 for Hexavalent Chromium due to the original result exceeding the linear range of the curve.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995

000003

Sample Data Package

Date: 02/20/2001
Time: 16:07:04

Benchmark Environmental Engineering & Science
Plating Operations - SWMU 7A, 7B, 7C, 7D (solids)
TCLP METALS

Rept: AN0326

Client ID	Lab ID	SWMU-7A7B7C7D DEGRE A01-1296 02/09/2001	SWMU-7A7B7C7D PLASTI A01-1296 02/09/2001	SWMU-7A7B7C7D WEST A01-1285 02/08/2001	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Job No		A1129602	A1129603	A1128501				
Sample Date		02/09/2001	02/09/2001	02/08/2001				
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Lead - Total	MG/L	0.24	0.010	2.3	0.010	ND	0.010	NA
Chromium - Total	MG/L	6.5	0.0020	11.7	0.0020	0.014	0.0020	NA
Barium - Total	MG/L	0.65	0.0010	0.79	0.0010	0.45	0.0010	NA

000004

Rept: AN0326

Client ID Job No Sample Date	Lab ID	SMMU-7A7B7C7D DEGRE A01-1296 02/09/2001		SMMU-7A7B7C7D H2SO4 A01-1296 02/09/2001		SMMU-7A7B7C7D PLASTI A01-1296 02/09/2001		SMMU-7A7B7C7D WEST A01-1285 02/08/2001	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/KG	1520	3.6	16700	39.1	12300	36.6	85.9	2.0
	MG/KG	312	3.6	7.4	2.0	13200	36.6	58.0	2.0

000005

Client ID Job No Sample Date	Lab ID	SWMU-7A7B7C7D DEGRA A01-1296 02/09/2001	SWMU-7A7B7C7D H2S04 A01-1296 02/09/2001	SWMU-7A7B7C7D PLASTI A01-1296 02/09/2001	SWMU-7A7B7C7D WEST A01-1285 02/08/2001
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit
H2S Released From Waste	MG/KG	25.7	10	ND	10
HCN Released From Waste	MG/KG	ND	10	ND	10
Hexavalent Chromium - Total	MG/KG	ND	1.0	ND	1.2
Leachable pH	S.U.	10.1	0	3.7	0
				27.8	10
				ND	10
				ND	1.2
				9.3	0

0000006

000007

Chronology and QC Summary Package

Date: 02/20/2001
Time: 16:07:04

Benchmark Environmental Engineering & Science
Plating Operations - SMU 7A, 7B, 7C, 7D (solids)
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Extractor Blank A01-1296		Method Blank A01-1285		A1B0134101		A1B0134103			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total		0.0015	0.0010	ND	0.0010	NA	0.0010	NA		NA	
Lead - Total		ND	0.010	ND	0.010	NA	0.010	NA		NA	
Chromium - Total		0.0020	0.0020	ND	0.0020	NA	0.0020	NA		NA	

000008

Client ID Job No Sample Date	Lab ID	Method Blank A01-1285		Method Blank A01-1296		Method Blank A1B0122002			
		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Chromium - Total		MG/KG	ND	2.0	ND	2.0	NA		NA
Nickel - Total		MG/KG	ND	2.0	ND	2.0	NA		NA

0000009

Date: 02/20/2001
Time: 16:07:04

Benchmark Environmental Engineering & Science
Plating Operations - SMMU 7A, 7B, 7C, 7D (solids)
TCLP METALS

Rept: AN0326

Client ID	Lab ID	LFB A01-1285	A1B0134102				
Job No							
Sample Date							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Lead - Total	MG/L	0.21	0.010	NA		NA	
Chromium - Total	MG/L	0.21	0.0020	NA		NA	
Barium - Total	MG/L	0.20	0.0010	NA		NA	

000010

Date: 02/20/2001
Time: 16:07:04

Benchmark Environmental Engineering & Science
Plating Operations - SWMU 7A, 7B, 7C, 7D (solids)
TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS CLP Soils A01-1285		A1B0119201		LCS CLP Soils A01-1296		A1B0122001			
		Units	Sample Value	Reporting Limit		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Nickel - Total		MG/KG	66.6	2.0		64.2	1.9			NA	
Chromium - Total		MG/KG	128	2.0		122	1.9			NA	

000011

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID Job No Sample Date	Lab ID	Method Blank A01-1285		Method Blank A01-1296		Method Blank A1129605		Method Blank A01-1285		Method Blank A180123303	
		Units	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexavalent Chromium - Total H2S Released From Waste HCN Released From Waste		MG/KG	1.0	ND	1.0	ND	1.0	NA	10	NA	
		MG/KG		NA		NA		ND		NA	
		MG/KG		NA		NA		ND		NA	

000012

Date: 02/20/2001
Time: 16:08:11

Benchmark Environmental Engineering & Science
Plating Operations - SMU 7A, 7B, 7C, 7D (solids)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1285	A1128502	LCS A01-1296	A1129604	LCS A01-1296	A180117001	LCS A01-1285	A180123301
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexavalent Chromium - Total	MG/KG	18.4	1.0	18.4	1.0	NA	0	NA	
Leachable pH	S.U.	NA		NA		7.0		NA	
H2S Released From Waste	MG/KG	NA		NA		NA		152	10
HCN Released From Waste	MG/KG	NA		NA		NA		300	10

000013

SDG: 868704
Client Sample ID: Method Blank LCS
Lab Sample ID: A1B0134102

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP METALS					
TCLP TOTAL BARIUM	MG/L	0.203	0.20	101	80-120
TCLP TOTAL CHROMIUM	MG/L	0.209	0.20	104	80-120
TCLP TOTAL LEAD	MG/L	0.209	0.20	104	80-120

000014

SDG: 868704
Client Sample ID: Method Blank
Lab Sample ID: A1128503

LCS
A1128502

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS TURNKEY - METHOD 7196A/HEX CHROMIUM	MG/KG	18.40	40.0	46	17-193

* Indicates Result is outside QC Limits
 NC = Not Calculated ND = Not Calculated

SDG: 868704
Client Sample ID: Method Blank
Lab Sample ID: A1129605

LCS
A1129604

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS TURNKEY - METHOD 7196A/HEX CHROMIUM	MG/KG	18.40	40.0	46	17-193

* Indicates Result is outside QC Limits
 NC = Not Calculated ND = Not Calculated

SDG: 868704

Client Sample ID: Method Blank
Lab Sample ID: A1B0123303

LCS
A1B0123301

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS METHOD SECTION 7.3 - REACTIVITY (CYANI METHOD SECTION 7.3 - REACTIVITY (SULFI	MG/KG	300.0	1000	30	10- 65
	MG/KG	152.0	570	26	10- 65

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/20/2001 16:07:18
Jobno: A01-1296

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1129602	SWMU-7A7B7C7D DEGRE	MG/L	Lead - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	02/16 13:50	Yes	02/20 13:57	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	02/16 13:50	Yes	02/21 04:06	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	02/16 13:50	Yes	02/21 04:06	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	NA	NA	02/16 00:32	Yes	SOTHER
A1129601	SWMU-7A7B7C7D H2S04	MG/KG	Nickel - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	NA	NA	02/16 00:32	Yes	SOTHER
		MG/KG	Chromium - Total	6010	20.00	02/09/2001 09:55	02/09 14:55	NA	NA	02/16 15:04	Yes	SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/09/2001 09:55	02/09 14:55	NA	NA	02/16 00:27	Yes	OIL
		MG/L	Lead - Total	6010	1.00	02/09/2001 10:10	02/09 14:55	02/16 13:50	Yes	02/20 14:01	Yes	SOTHER
A1129603	SWMU-7A7B7C7D PLAST1	MG/L	Chromium - Total	6010	1.00	02/09/2001 10:10	02/09 14:55	02/16 13:50	Yes	02/20 14:01	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/09/2001 10:10	02/09 14:55	02/16 13:50	Yes	02/20 14:01	Yes	SOTHER
		MG/KG	Chromium - Total	6010	10.00	02/09/2001 10:10	02/09 14:55	NA	NA	02/16 15:13	Yes	SOTHER
		MG/KG	Nickel - Total	6010	10.00	02/09/2001 10:10	02/09 14:55	NA	NA	02/16 15:13	Yes	SOTHER
A1128501	SWMU-7A7B7C7D WEST	MG/L	Lead - Total	6010	1.00	02/08/2001 12:00	02/09 14:55	02/16 13:50	Yes	02/20 13:53	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/08/2001 12:00	02/09 14:55	02/16 13:50	Yes	02/20 13:53	Yes	SOTHER
		MG/KG	Barium - Total	6010	1.00	02/08/2001 12:00	02/09 14:55	02/16 13:50	Yes	02/20 13:53	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/08/2001 12:00	02/09 14:55	NA	NA	02/19 04:54	Yes	SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/08/2001 12:00	02/09 14:55	NA	NA	02/19 04:54	Yes	SOTHER

000018

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/20/2001 16:07:18
Jobno: A01-1285

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A180119202	Method Blank	MG/KG	Chromium - Total	6010	1.00	-	- 14:55	NA	NA	02/19 03:21	Yes	SOIL
A180122002	Method Blank	MG/KG	Nickel - Total	6010	1.00	-	- 14:55	NA	NA	02/19 03:21	Yes	SOIL
A180134103	Method Blank	MG/KG	Chromium - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:09	Yes	SOIL
		MG/L	Nickel - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
A180134101	Extractor Blank	MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
A180134102	LCS	MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
A180119201	LCS CLP Soils	MG/KG	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
A180122001	LCS CLP Soils	MG/KG	Nickel - Total	6010	1.00	-	- 14:55	NA	NA	02/19 03:25	Yes	SOIL
A180134102	LFB	MG/L	Chromium - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:14	Yes	SOIL
		MG/L	Nickel - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:14	Yes	SOIL
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER

000019

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/20/2001 16:08:26
Jobno: A01-1296

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1129602	SWMU-7A787C7D DEGREAS	S.U. MG/KG	Leachable pH Hexavalent Chromium - Total HCN Released From Waste H2S Released From Waste	9045 7196A SECT7.3 SECT7.3	1.00 1.00 1.00 1.00	02/09/2001 09:55 02/09/2001 09:55 02/09/2001 09:55 02/09/2001 09:55	02/09 14:55 02/09 14:55 02/09 14:55 02/09 14:55	NA NA NA NA	NA NA NA NA	02/12 22:30 02/22 17:30 02/14 13:05 02/14 13:05	Yes No Yes Yes	SOTHER SOTHER SOTHER SOTHER
A1129601	SWMU-7A787C7D H2S04	S.U. MG/KG	Leachable pH Hexavalent Chromium - Total HCN Released From Waste H2S Released From Waste	9045 7196A SECT7.3 SECT7.3	1.00 1.00 1.00 1.00	02/09/2001 09:40 02/09/2001 09:40 02/09/2001 09:40 02/09/2001 09:40	02/09 14:55 02/09 14:55 02/09 14:55 02/09 14:55	NA NA NA NA	NA NA NA NA	02/12 22:30 02/22 17:30 02/14 13:05 02/14 13:05	Yes No Yes Yes	OIL OIL OIL OIL
A1129603	SWMU-7A787C7D PLASTI	S.U. MG/KG	Leachable pH Hexavalent Chromium - Total HCN Released From Waste H2S Released From Waste	9045 7196A SECT7.3 SECT7.3	1.00 1.00 1.00 1.00	02/09/2001 10:10 02/09/2001 10:10 02/09/2001 10:10 02/09/2001 10:10	02/09 14:55 02/09 14:55 02/09 14:55 02/09 14:55	NA NA NA NA	NA NA NA NA	02/12 22:30 02/22 17:30 02/14 13:05 02/14 13:05	Yes No Yes Yes	SOTHER SOTHER SOTHER SOTHER
A1128501	SWMU-7A787C7D WEST	S.U. MG/KG	Leachable pH Hexavalent Chromium - Total HCN Released From Waste H2S Released From Waste	9045 7196A SECT7.3 SECT7.3	1.00 1.00 1.00 1.00	02/08/2001 12:00 02/08/2001 12:00 02/08/2001 12:00 02/08/2001 12:00	02/09 14:55 02/09 14:55 02/09 14:55 02/09 14:55	NA NA NA NA	NA NA NA NA	02/12 22:30 02/22 17:30 02/14 13:05 02/14 13:05	Yes No Yes Yes	SOTHER SOTHER SOTHER SOTHER

000020

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/20/2001 16:08:26
Jobno: A01-1285

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A1128503	Method Blank	MG/KG	Hexavalent Chromium - Total	7196A	1.00	-	- 14:55	NA	NA	02/22 17:30	Yes SOIL
A1129605	Method Blank	MG/KG	Hexavalent Chromium - Total	7196A	1.00	-	- 14:55	NA	NA	02/22 17:30	Yes SOIL
A180123303	Method Blank	MG/KG	HCN Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	H2S Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	HCN Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	H2S Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
A1128502	LCS	MG/KG	Hexavalent Chromium - Total	7196A	1.00	-	- 14:55	NA	NA	02/22 17:30	Yes SOIL
A1129604	LCS	MG/KG	Hexavalent Chromium - Total	7196A	1.00	-	- 14:55	NA	NA	02/22 17:30	Yes SOIL
A180117001	LCS	S.U.	Leachable pH	9045	1.00	-	- 14:55	NA	NA	02/12 22:30	Yes SOIL
		S.U.	Leachable pH	9045	1.00	-	- 14:55	NA	NA	02/12 22:30	Yes SOIL
A180123301	LCS	MG/KG	HCN Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	H2S Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	HCN Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL
		MG/KG	H2S Released From Waste	SECT7.3	1.00	-	- 14:55	NA	NA	02/14 13:05	Yes SOIL

000021

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000022

Chain of Custody

**SEVERN
TRENT
SERVICES**

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza, Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1291, A01-1298

Dear Mr. Martin:

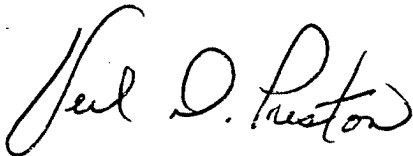
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: East LAP Pickle - SWMU 4
Matrix: Soil/Other
Samples Received: 02/08,09/01
Sample Dates: 02/07,09/01

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

Sincerely,

STL Buffalo



for Kenneth P. Kinecki
Program Manager

KPK/ekn
Enclosure

I.D. #A01-1291; A01-1298
#NY1A8687

This report contains 23 pages which are individually numbered.

**SEVERN
TRENT
SERVICES**

STL Buffalo

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, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METALS

Samples SWMU-4 COMP-2 MS and SWMU-4 COMP-2 SD exhibited spike recovery results above quality control limits for Chromium. However, the Laboratory Control Sample was compliant.

Sample SWMU-4 BLUE STAINED was analyzed at a dilution factor of 20 for Copper due to the original result exceeding the linear range of the curve.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

WET CHEMISTRY

Sample SWMU-4 BLUE STAINED was analyzed at a dilution factor of 20 for Cyanide due to the original result exceeding the linear range of the curve.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 02/20/2001
Time: 16:09:18

Benchmark Environmental Engineering & Science
East LAP Pickle - SMU 4
TCLP METALS

Rept: AH0326

Client ID Job No Sample Date	Lab ID	SMU-4 BLUE STAINED A01-1291 02/07/2001	SMU-4 COMP-1 A01-1291 02/07/2001	A1129102	SMU-4 COMP-2 A01-1291 02/07/2001	A1129103	SMU-4 EAST A01-1298 02/09/2001	A1129801
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Sample Value	Reporting Limit
Lead - Total	MG/L	0.096	0.010 0.0020	3.2 0.023	0.010 0.0020	0.072 3.7	0.027 0.48	0.010 0.0020
Chromium - Total	MG/L	0.0086						

Client ID Job No Sample Date	Lab ID	SMU-4 WEST A01-1298 02/09/2001	A1129802					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Sample Value	Reporting Limit
Lead - Total	MG/L	0.16 0.52	0.010 0.0020	NA NA		NA NA	NA NA	
Chromium - Total	MG/L							

000004

Date: 02/20/2001
Time: 16:09:18

Benchmark Environmental Engineering & Science
East LAP Pickle - SHMU 4
TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date		Lab ID	SHMU-4 BLUE STAINED A01-1291 02/07/2001		SHMU-4 COMP-1 A01-1291 02/07/2001		SHMU-4 COMP-2 A01-1291 02/07/2001		SHMU-4 EAST A01-1298 02/09/2001		A1129801
Analyte		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	
Chromium - Total		MG/KG	19.1	2.0	27.6	2.1	901	2.3	1600	2.0	
Copper - Total		MG/KG	20700	41.1	134	2.1	188	2.3	334	2.0	
Lead - Total		MG/KG	60.0	5.1	433	5.4	164	5.7	383	5.1	
Nickel - Total		MG/KG	22.2	2.0	25.4	2.1	253	2.3	549	2.0	

Client ID Job No Sample Date	Lab ID	SHMU-4 WEST A01-1298 02/09/2001	A1129802	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/KG	676	2.0	NA		NA	
Copper - Total	MG/KG	432	2.0	NA		NA	
Lead - Total	MG/KG	308	5.1	NA		NA	
Nickel - Total	MG/KG	508	2.0	NA		NA	

000005

Date: 02/20/2001
Time: 16:10:25

Benchmark Environmental Engineering & Science
East LAP Pickle - SWMU 4
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	SWMU-4 BLUE STAINED A01-1291 02/07/2001	SWMU-4 COMP-1 A01-1291 02/07/2001	A1129102	SWMU-4 COMP-2 A01-1291 02/07/2001	A1129103	SWMU-4 EAST A01-1298 02/09/2001	A1129801
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Cyanide - Total Leachable pH	UG/G S.U.	748 8.7	20.0 0	24.0 7.4	1.0 0	16.6 3.1	1.0 0	18.1 7.4
								1.0 0

Client ID Job No Sample Date	Lab ID	SWMU-4 WEST A01-1298 02/09/2001	A1129802	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Cyanide - Total Leachable pH	UG/G S.U.	28.5 6.5	1.0 0	NA NA	NA NA	NA NA	NA NA	NA NA

000006

000007

Chronology and QC Summary Package

Client ID Job No Sample Date	Lab ID	Extractor Blank A01-1298		Method Blank A01-1291		Method Blank A01-1298		Method Blank A180134103	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Lead - Total Chromium - Total		ND 0.0020	0.010 0.0020	ND ND	0.010 0.0020	ND ND	0.010 0.0020	NA NA	

000008

Client ID Job No Sample Date	Lab ID	Method Blank A01-1291	A1B0119202	Method Blank A01-1298	A1B0122002	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/KG	ND	2.0	ND	2.0	ND	2.0	NA		NA	
Copper - Total	MG/KG	ND	2.0	ND	2.0	ND	2.0	NA		NA	
Lead - Total	MG/KG	ND	5.0	ND	5.0	ND	5.0	NA		NA	
Nickel - Total	MG/KG	ND	2.0	ND	2.0	ND	2.0	NA		NA	

0000009

Date: 02/20/2001
Time: 16:09:18

Benchmark Environmental Engineering & Science
East LAP Pickle - SWMU 4
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1291	A180126705	LFB A01-1298	A180134102	SWMU-4 COMP-2 A01-1291 02/07/2001	A1129103MS	SWMU-4 COMP-2 A01-1291 02/07/2001	A1129103SD
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total	MG/L	0.20	0.0020	0.21	0.0020	4.0	0.0020	4.1	0.0020
Lead - Total	MG/L	0.20	0.010	0.21	0.010	0.26	0.010	0.27	0.010

000010

Client ID Job No Sample Date	Lab ID	LCS CLP Soils A01-1291		LCS CLP Soils A01-1298		A1B0122001			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Nickel - Total		MG/KG	66.6	2.0	64.2	1.9	NA	1.9	NA
Copper - Total		MG/KG	83.1	2.0	80.6	1.9	NA	1.9	NA
Chromium - Total		MG/KG	128	2.0	122	1.9	NA	1.9	NA
Lead - Total		MG/KG	106	5.0	99.9	4.9	NA	4.9	NA

000011

Client ID Job No Sample Date	Lab ID	Method Blank A01-1298				A180119004					
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit		
Cyanide - Total		UG/G		ND		1.0		NA			NA

000012

Date: 02/23/2001
Time: 16:16:14

Benchmark Environmental Engineering & Science
East LAP Pickle - SWMU 4
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1298	A1B0117001	LCS A01-1291	A1B0119002		
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH Cyanide - Total	S.U. UG/G	7.0 NA	0	NA 115	1.0	NA NA	

000013

SDG: 868702
Client Sample ID: SHMU-4 COMP-2
Lab Sample ID: A1129103

SHMU-4 COMP-2
A1129103MS

SHMU-4 COMP-2
A1129103SD

Analyte	Units of Measure	Sample	Concentration			Spike Amount		% Recovery		% RPD	QC LIMITS	
			Matrix Spike	Spike Duplicate	MS	MS	MSD	MSD	Avg		RPD	REC.
TCLP METALS												
TCLP TOTAL CHROMIUM	MG/L	3.74	4.03	4.08	0.20	143 *	170 *	99	157	17	20.0	80-120
TCLP TOTAL LEAD	MG/L	0.0720	0.261	0.271	0.20	94	99		97	5	20.0	80-120

000014

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

SDG: 868702

Client Sample ID: Method Blank LCS A1B0126705

Lab Sample ID: A1B0126706

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP METALS					
TCLP TOTAL CHROMIUM	MG/L	0.199	0.20	99	80-120
TCLP TOTAL LEAD	MG/L	0.202	0.20	101	80-120

000015

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date : 02/20/2001 16:09:46
Job No: A01-1298

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868702
Client Sample ID: Method Blank LFB
Lab Sample ID: A1B0134103 A1B0134102

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP METALS TCLP TOTAL CHROMIUM TCLP TOTAL LEAD	MG/L	0.209	0.20	104	80-120
	MG/L	0.209	0.20	104	80-120

000016

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

SDG: 868702

Client Sample ID: Method Blank
Lab Sample ID: A1B0119004

LCS
A1B0119002

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS TURNKEY - METHOD 9010 - TOTAL CYANIDE	UG/G	114.7	117	98	90-110

000017

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/20/2001 16:09:33
Jobno: A01-1291

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1129101	SMU-4 BLUE STAINED	MG/L	Lead - Total	6010	1.00	02/07/2001 11:15	02/08 08:40	02/15 14:30	Yes	02/19 06:23	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/07/2001 11:15	02/08 08:40	02/15 14:30	Yes	02/19 06:23	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/07/2001 11:15	02/08 08:40	NA	NA	02/19	Yes	SOTHER
		MG/KG	Copper - Total	6010	20.00	02/07/2001 11:15	02/08 08:40	NA	NA	02/20 11:26	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/07/2001 11:15	02/08 08:40	NA	NA	02/19 05:12	Yes	SOTHER
A1129102	SMU-4 COMP-1	MG/KG	Nickel - Total	6010	1.00	02/07/2001 11:15	02/08 08:40	NA	NA	02/19 05:12	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	02/15 14:30	Yes	02/19 06:28	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	02/15 14:30	Yes	02/19 06:28	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	NA	NA	02/19 05:16	Yes	SOTHER
		MG/KG	Copper - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	NA	NA	02/19 05:16	Yes	SOTHER
A1129103	SMU-4 COMP-2	MG/KG	Lead - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	NA	NA	02/19 05:16	Yes	SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/07/2001 11:30	02/08 08:40	NA	NA	02/19 05:16	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	02/15 14:30	Yes	02/19 06:32	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	02/15 14:30	Yes	02/19 06:32	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	NA	NA	02/19 05:20	Yes	SOTHER
A1129801	SMU-4 EAST	MG/KG	Copper - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	NA	NA	02/19 05:20	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	NA	NA	02/19 05:20	Yes	SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	NA	NA	02/19 05:20	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	02/16 13:50	Yes	02/20 14:42	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	02/16 13:50	Yes	02/20 14:42	Yes	SOTHER
A1129802	SMU-4 WEST	MG/KG	Chromium - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	NA	NA	02/16 00:45	Yes	SOTHER
		MG/KG	Copper - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	NA	NA	02/16 00:45	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	NA	NA	02/16 00:45	Yes	SOTHER
		MG/L	Nickel - Total	6010	1.00	02/09/2001 11:00	02/09 14:55	NA	NA	02/16 00:45	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	02/16 13:50	Yes	02/20 14:46	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	02/16 13:50	Yes	02/20 14:46	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	NA	NA	02/16 00:59	Yes	SOTHER
		MG/KG	Copper - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	NA	NA	02/16 00:59	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	NA	NA	02/16 00:59	Yes	SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/09/2001 11:20	02/09 14:55	NA	NA	02/16 00:59	Yes	SOTHER

000018

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/20/2001 16:09:33
Jobno: A01-1291

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1129103MS	SHMU-4 COMP-2	MG/L	Lead - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	02/15	Yes	02/19 06:36	Yes	SOTHER
A1129103SD	SHMU-4 COMP-2	MG/L	Chromium - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	02/15	Yes	02/19 06:36	Yes	SOTHER
A180119202	Method Blank	MG/L	Lead - Total	6010	1.00	02/07/2001 12:00	02/08 08:40	02/15	Yes	02/19 06:40	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:21	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:21	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:21	Yes	SOIL
A180122002	Method Blank	MG/KG	Nickel - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:21	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:21	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:09	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:09	Yes	SOIL
A180126706	Method Blank	MG/KG	Nickel - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:09	Yes	SOIL
		MG/L	Lead - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:09	Yes	SOIL
A180134103	Method Blank	MG/L	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/19 05:27	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 08:40	NA	NA	02/19 05:27	Yes	WATER
A180134101	Extractor Blank	MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:24	Yes	WATER
A180126705	LCS	MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:28	Yes	WATER
A180119201	LCS CLP Soils	MG/KG	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/19 05:48	Yes	WATER
		MG/KG	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/19 05:48	Yes	WATER
		MG/KG	Copper - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:25	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:25	Yes	SOIL
A180122001	LCS CLP Soils	MG/KG	Nickel - Total	6010	1.00	-	- 08:40	NA	NA	02/19 03:25	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	-	- 08:40	NA	NA	02/15 23:14	Yes	SOIL
		MG/KG	Copper - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:14	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:14	Yes	SOIL
A180134102	LFB	MG/L	Nickel - Total	6010	1.00	-	- 14:55	NA	NA	02/15 23:14	Yes	SOIL
		MG/L	Lead - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 14:55	02/16	Yes	02/20 13:32	Yes	WATER

000019

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/23/2001 16:16:25
Jobno: A01-1291

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A1129101	SMU-4 BLUE STAINED	UG/G S.U.	Cyanide - Total Leachable pH	9010 9045	20.00 1.00	02/07/2001 11:15 02/07/2001 11:15	02/08 08:40 02/08 08:40	NA NA	NA NA	02/14 15:05 02/12 22:30	Yes SOTHER Yes SOTHER
A1129102	SMU-4 COMP-1	UG/G S.U.	Cyanide - Total Leachable pH	9010 9045	1.00 1.00	02/07/2001 11:30 02/07/2001 11:30	02/08 08:40 02/08 08:40	NA NA	NA NA	02/14 15:05 02/12 22:30	Yes SOTHER Yes SOTHER
A1129103	SMU-4 COMP-2	UG/G S.U.	Cyanide - Total Leachable pH	9010 9045	1.00 1.00	02/07/2001 12:00 02/07/2001 12:00	02/08 08:40 02/08 08:40	NA NA	NA NA	02/14 15:05 02/12 22:30	Yes SOTHER Yes SOTHER
A1129801	SMU-4 EAST	UG/G S.U.	Cyanide - Total Leachable pH	9010 9045	1.00 1.00	02/09/2001 11:00 02/09/2001 11:00	02/09 14:55 02/09 14:55	NA NA	NA NA	02/14 15:05 02/12 22:30	Yes SOTHER Yes SOTHER
A1129802	SMU-4 WEST	UG/G S.U.	Cyanide - Total Leachable pH	9010 9045	1.00 1.00	02/09/2001 11:20 02/09/2001 11:20	02/09 14:55 02/09 14:55	NA NA	NA NA	02/14 15:05 02/12 22:30	Yes SOTHER Yes SOTHER

000020

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/23/2001 16:16:25
Jobno: A01-1291

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1B0119004	Method Blank	UG/G	Cyanide - Total	9010	1.00	-	- 08:40	NA	NA	02/14 15:05	Yes	SOIL
A1B0117001	LCS	UG/G	Cyanide - Total	9010	1.00	-	- 14:55	NA	NA	02/14 15:05	Yes	SOIL
		S.U.	Leachable pH	9045	1.00	-	- 08:40	NA	NA	02/12 22:30	Yes	SOIL
		S.U.	Leachable pH	9045	1.00	-	- 14:55	NA	NA	02/12 22:30	Yes	SOIL
A1B0119002	LCS	UG/G	Cyanide - Total	9010	1.00	-	- 08:40	NA	NA	02/14 15:05	Yes	SOIL
		UG/G	Cyanide - Total	9010	1.00	-	- 14:55	NA	NA	02/14 15:05	Yes	SOIL

000021

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000022

Chain of Custody

**SEVERN
TRENT
SERVICES**

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1284

Dear Mr. Martin:

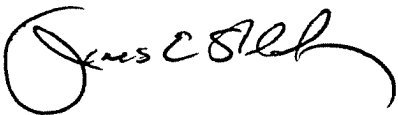
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-481
Project Name: West Lap Pickle - SWMU 1
Matrix: Soil/Other
Sample Received: 02/09/01
Sample Date: 02/08/01

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

Sincerely,

STL Buffalo



For

Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1284
#NY1A8687

This report contains 23 pages which are individually numbered.

**SEVERN
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METHODOLOGY

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METALS

Sample SWMU-1 FOUNDATION was analyzed at a dilution factor of 10 for Chromium due to the original result exceeding the linear range of the curve.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

WET CHEMISTRY

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 02/23/2001
Time: 13:52:33

Benchmark Environmental Engineering & Science
West LAP Pickle - SWMU 1
TCLP METALS

Rept: AN0326

Client ID	Lab ID	SWMU-1 EAST A01-1284 02/08/2001		SWMU-1 FOUNDATION A01-1284 02/08/2001		SWMU-1 WEST A01-1284 02/08/2001		A1128402	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Lead - Total	MG/L	ND	0.010	ND	0.010	ND	0.010	NA	0.010
Chromium - Total	MG/L	0.28	0.0020	5.4	0.0020	2.1	0.0020	NA	0.0020
Barium - Total	MG/L	0.50	0.0010	0.50	0.0010	0.54	0.0010	NA	0.0010

000004

Client ID Job No Sample Date	Lab ID	SWMU-1 EAST A01-1284 02/08/2001	A1128401	SWMU-1 FOUNDATION A01-1284 02/08/2001	A1128403	SWMU-1 WEST A01-1284 02/08/2001	A1128402	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Barium - Total	MG/KG	292	1.0	560	1.0	99.8	1.0	1.0	NA		NA
Chromium - Total	MG/KG	1360	2.1	7520	20.6	106	2.0	2.0	NA		NA
Copper - Total	MG/KG	56.6	2.1	376	2.1	18.8	2.0	2.0	NA		NA
Lead - Total	MG/KG	112	5.3	70.8	5.2	12.0	5.1	5.1	NA		NA
Nickel - Total	MG/KG	292	2.1	959	2.1	15.6	2.0	2.0	NA		NA

000005

Date: 02/20/2001
Time: 13:53:05

Benchmark Environmental Engineering & Science
West LAP Pickle - SWMU 1
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	SWMU-1 EAST A01-1284 02/08/2001		A1128401		SWMU-1 FOUNDATION A01-1284 02/08/2001		A1128403		SWMU-1 WEST A01-1284 02/08/2001		A1128402	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit		
Cyanide - Total Leachable pH	UG/G S.U.	ND 7.4	1.0 0	ND 2.8	1.0 0	ND 8.1	1.0 0	ND 8.1	1.0 0	NA NA	NA NA		

000006

000007

Chronology and QC Summary Package

Client ID Job No Sample Date	Lab ID	Extractor Blank A01-1284 A1B0134101		Method Blank A01-1284 A1B0134103			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total	MG/L	0.0015	0.0010	ND	0.0010	NA	NA
Lead - Total	MG/L	ND	0.010	ND	0.010	NA	NA
Chromium - Total	MG/L	0.0020	0.0020	ND	0.0020	NA	NA

000008

Client ID		Lab ID	Method Blank		A1B0119202							
Job No	Sample Date		A01-1284									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Chromium - Total	MG/KG	ND	2.0	NA		NA		NA		NA		NA
Barium - Total	MG/KG	ND	1.0	NA		NA		NA		NA		NA
Copper - Total	MG/KG	ND	2.0	NA		NA		NA		NA		NA
Lead - Total	MG/KG	ND	5.0	NA		NA		NA		NA		NA
Nickel - Total	MG/KG	ND	2.0	NA		NA		NA		NA		NA

000009

Date: 02/23/2001
Time: 13:52:33

Benchmark Environmental Engineering & Science
West LAP Pickle - SHMU 1
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1284		A1B0134102					
		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Lead - Total		MG/L	0.21	0.010	NA		NA		NA
Chromium - Total		MG/L	0.21	0.0020	NA		NA		NA
Barium - Total		MG/L	0.20	0.0010	NA		NA		NA

000010

Date: 02/23/2001
Time: 13:52:33

Benchmark Environmental Engineering & Science
West LAP Pickle - SWMU 1
TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date		Lab ID	LCS CLP Soils A01-1284		A180119201							
Analyte		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Nickel - Total		MG/KG	66.6	2.0	NA		NA		NA		NA	
Copper - Total		MG/KG	83.1	2.0	NA		NA		NA		NA	
Barium - Total		MG/KG	164	1.0	NA		NA		NA		NA	
Chromium - Total		MG/KG	128	2.0	NA		NA		NA		NA	
Lead - Total		MG/KG	106	5.0	NA		NA		NA		NA	

000011

Date : 02/23/2001 13:53:06
Job No: A01-1284

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868701
Client Sample ID: Method Blank LCS
Lab Sample ID: A1B0134103 A1B0134102

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP METALS					
TCLP TOTAL BARIUM	MG/L	0.203	0.20	101	80-120
TCLP TOTAL CHROMIUM	MG/L	0.209	0.20	104	80-120
TCLP TOTAL LEAD	MG/L	0.209	0.20	104	80-120

000012

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H Matrix
A1128401	SIMU-1 EAST	RECNY	Barium - Total	6010	1.0	95.11	0.499 g	02/08/2001 09:30	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	95.11	0.499 g	02/08/2001 09:30	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Copper - Total	6010	1.0	95.11	0.499 g	02/08/2001 09:30	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Lead - Total	6010	1.0	95.11	0.499 g	02/08/2001 09:30	02/09 14:55	02/19	JMT	Y SOTHER
A1128403	SIMU-1 FOUNDATION	RECNY	Nickel - Total	6010	1.0	95.11	0.499 g	02/08/2001 09:30	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Barium - Total	6010	1.0	92.32	0.525 g	02/08/2001 10:00	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	10.0	92.32	0.5248 g	02/08/2001 10:00	02/09 14:55	02/20	JMT	Y SOTHER
		RECNY	Copper - Total	6010	1.0	92.32	0.525 g	02/08/2001 10:00	02/09 14:55	02/19	JMT	Y SOTHER
A1128402	SIMU-1 WEST	RECNY	Lead - Total	6010	1.0	92.32	0.525 g	02/08/2001 10:00	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Nickel - Total	6010	1.0	92.32	0.525 g	02/08/2001 10:00	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Barium - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Lead - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Nickel - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Barium - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	99.42	0.491 g	02/08/2001 09:45	02/09 14:55	02/19	JMT	Y SOTHER

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H Matrix
A1128401	SIMU-1 EAST	RECNY	Lead - Total	6010	1.0	0.05 L	02/08/01 09:30	02/09 14:55	02/16 13:50	Y	02/20 13:40	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 09:30	02/09 14:55	02/16 13:50	Y	02/20 13:40	JMT	Y SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/08/01 09:30	02/09 14:55	02/16 13:50	Y	02/20 13:40	JMT	Y SOTHER
		RECNY	Lead - Total	6010	1.0	0.05 L	02/08/01 10:00	02/09 14:55	02/16 13:50	Y	02/20 13:49	JMT	Y SOTHER
A1128403	SIMU-1 FOUNDATION	RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 10:00	02/09 14:55	02/16 13:50	Y	02/20 13:49	JMT	Y SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/08/01 10:00	02/09 14:55	02/16 13:50	Y	02/20 13:49	JMT	Y SOTHER
		RECNY	Lead - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER
A1128402	SIMU-1 WEST	RECNY	Barium - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER
		RECNY	Lead - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/08/01 09:45	02/09 14:55	02/16 13:50	Y	02/20 13:45	JMT	Y SOTHER

000013

Date: 02/23/2001 13:53
Job No: A01-1284

Rept: AN0881
Page: 2

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WEST LAP PICKLE - SUMU 1
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180119201	LCS CLP Soils	RECNY	Barium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JMT	Y	SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y	SOIL
		RECNY	Copper - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y	SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y	SOIL
		RECNY	Nickel - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y	SOIL

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A180134102	LCS	RECNY	Lead - Total	6010	1.0	0.05 L	-	-	02/16	Y	02/20 13:32	JMT	Y	WATER
		RECNY	Chromium - Total	6010	1.0	0.05 L	-	-	02/16	Y	02/20 13:32	JMT	Y	WATER
		RECNY	Barium - Total	6010	1.0	0.05 L	-	-	02/16	Y	02/20 13:32	JMT	Y	WATER

000014

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A180134101	Extractor Blank	RECNY RECNY RECNY	Lead - Total Chromium - Total Barium - Total	6010 6010 6010	1.0 1.0 1.0	0.05 L 0.05 L 0.05 L	- - -	- - -	02/16 02/16 02/16	Y Y Y	02/20 13:28 02/20 13:28 02/20	JWT JWT JWT	Y Y Y	WATER WATER WATER

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180119202	Method Blank	RECNY RECNY RECNY RECNY RECNY	Barium - Total Chromium - Total Copper - Total Lead - Total Nickel - Total	6010 6010 6010 6010 6010	1.0 1.0 1.0 1.0 1.0	100.00 100.00 100.00 100.00 100.00	0.5 g 0.5 g 0.5 g 0.5 g 0.5 g	- - - - -	- - - - -	02/19 02/19 02/19 02/19 02/19	JWT JWT JWT JWT JWT	Y Y Y Y Y	SOIL SOIL SOIL SOIL SOIL

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A180134103	Method Blank	RECNY RECNY RECNY	Lead - Total Chromium - Total Barium - Total	6010 6010 6010	1.0 1.0 1.0	0.05 L 0.05 L 0.05 L	- - -	- - -	02/16 02/16 02/16	Y Y Y	02/20 13:24 02/20 13:24 02/20	JWT JWT JWT	Y Y Y	WATER WATER WATER

000015

Date: 02/20/2001
Time: 13:53:05

Benchmark Environmental Engineering & Science
West LAP Pickle - SWMU 1
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID	Lab ID	Method Blank		A1B0119004					
Job No		A01-1284							
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Cyanide - Total	UG/G	ND	1.0	NA		NA		NA	

000016

Client ID Job No Sample Date	Lab ID	LCS A01-1284	A180117001	LCS A01-1284	A180119002		
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH Cyanide - Total	S.U. UG/G	7.0 NA	0	NA 115	1.0	NA NA	NA NA

000017

Date : 02/20/2001 13:53:36
Job No: A01-1284

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868701
Client Sample ID: Method Blank LCS
Lab Sample ID: A180119004 A180119002

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
HET CHEMISTRY ANALYSIS TURNKEY - METHOD 9010 - TOTAL CYANIDE	UG/G	114.7	117	98	90-110

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

000018

Date: 02/20/2001 13:53
Job No: A01-1284

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WEST LAP PICKLE - SHMU 1
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1128401	SHMU-1 EAST	RECNY	Cyanide - Total	9010	1.0			02/08/2001 09:30	02/09 14:55	02/14	CH	Y	SOTHER
A1128403	SHMU-1 FOUNDATION	RECNY	Leachable ph	9045	1.0			02/08/2001 09:30	02/09 14:55	02/12	RM	Y	SOTHER
		RECNY	Cyanide - Total	9010	1.0			02/08/2001 10:00	02/09 14:55	02/14	CH	Y	SOTHER
		RECNY	Leachable ph	9045	1.0			02/08/2001 10:00	02/09 14:55	02/12	RM	Y	SOTHER
A1128402	SHMU-1 WEST	RECNY	Cyanide - Total	9010	1.0			02/08/2001 09:45	02/09 14:55	02/14	CH	Y	SOTHER
		RECNY	Leachable ph	9045	1.0			02/08/2001 09:45	02/09 14:55	02/12	RM	Y	SOTHER

000019

ANL = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/20/2001 13:53
Job No: A01-1284

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WEST LAP PICKLE - SNMU 1
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180117001	LCS	RECNY	Leachable pH	9045	1.0	100.00		-	-	02/12	RM	Y	SOIL
A180119002	LCS	RECNY	Cyanide - Total	9010	1.0	100.00		-	-	02/14	CH	Y	SOIL

000020

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/20/2001 13:53
Job No: A01-1284

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WEST LAP PICKLE - SHMU 1
QC CHRONOLOGY

Rept: AN0881
Page: 3

Lab ID	Sample ID	Lab	Analyte	Method	DF	% DRY	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180119004	Method Blank	RECHY	Cyanide - Total	9010	1.0	100.00		-	-	02/14	CH	Y	SOIL

000021

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Chain of Custody

**SEVERN
TRENT
SERVICES**

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza, Ste 1350
Buffalo, NY 14202

RE: Analytical Results: A01-1283

Dear Mr. Martin:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY95-481
Site Name: Turnkey Environmental Restoration
Project Name: (Barium Chlor. Bath) - SWMU 6
Matrix: Soil/Other
Sample Received: 02/09/01
Sample Dates: 02/08-09/01

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

Sincerely,

STL Buffalo



for Kenneth P. Kinecki
Program Manager

KPK/rtv
Enclosure

I.D. #A01-1283, A01-1297
#NY1A8687

This report contains 21 pages which are individually numbered.

**SEVERN
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SERVICES**

STL Buffalo

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:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METALS

The Extractor Blank exhibited results for Barium and Chromium. However, all sample results for Barium were greater than ten (10) times that of the Method Blank. Sample SWMU-6 Ba BRICK was greater than ten (10) times that of the Method Blank for Chromium. Sample SWMU-6 was undetected for Chromium.

Sample SWMU-6 was analyzed at a dilution factor of 1000 for TCLP Barium and 500 for Non-TCLP Barium due to the original results exceeding the linear range of the curve. Samples SWMU-6 MS and SWMU-6 SD were analyzed at a dilution factor of 1000 for TCLP Barium due to the original results exceeding the linear range of the curve.

Sample SWMU-6 Ba BRICK was analyzed at a dilution factor of 20 for Non-TCLP Barium due to the original result exceeding the linear range of the curve.

Sample SWMU-6 MS exhibited spike recovery results outside quality control limits for TCLP Barium, Chromium, and Lead. However, all Laboratory Control Sample (LCS) recoveries were compliant.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

000002

SEVERN

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SERVICES

WET CHEMISTRY

STL Buffalo

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- † Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000004

Sample Data Package

Date: 02/20/2001
Time: 14:25:43

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SMU 6
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	SMU-6		SMU-6 Ba BRICK		SMU-6 Ba BRICK		SMU-6 Ba BRICK	
		A01-1297	A1129701	A01-1283	A1128301	02/08/2001	02/09/2001	02/08/2001	02/09/2001
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Lead - Total	MG/L	ND	0.010	1.3	0.010	NA	0.010	NA	NA
Chromium - Total	MG/L	ND	0.0020	0.027	0.0020	NA	0.0020	NA	NA
Barium - Total	MG/L	4850	1.0	0.44	0.0010	NA	0.0010	NA	NA

000005

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 02/20/2001
Time: 14:25:43

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SMU 6
TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Units	SMU-6		SMU-6 Ba BRICK		SMU-6 Ba BRICK		SMU-6 Ba BRICK	
			A01-1297	A1129701	A01-1283	A1128301	02/08/2001	02/09/2001	02/08/2001	02/09/2001
Analyte			Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total		MG/KG	254000	602	7390	20.8	NA	NA	NA	NA
Chromium - Total		MG/KG	880	2.4	20.6	2.1	NA	NA	NA	NA
Lead - Total		MG/KG	92.5	6.0	174	5.2	NA	NA	NA	NA
Nickel - Total		MG/KG	211	2.4	17.0	2.1	NA	NA	NA	NA

000006

Date: 02/23/2001
Time: 14:25:49

Benchmark Environmental Engineering & Science
(Barium Chlor-Bath) - SMMU 6
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID	Lab ID	SMMU-6 A01-1297 02/09/2001	A1129701	SMMU-6 Ba BRICK A01-1283 02/08/2001	A1128301		
Job No		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Sample Date	Units	6.9	0	6.5	0	NA	
Leachable pH	S.U.					NA	

000007

000008

Chronology and QC Summary Package

Date: 02/20/2001
Time: 14:25:43

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SUMU 6
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Extractor Blank A01-1297		Method Blank A01-1283		A180134103			
		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Barium - Total		MG/L	0.0015	0.0010	ND	0.0010	NA		NA
Lead - Total		MG/L	ND	0.010	ND	0.010	NA		NA
Chromium - Total		MG/L	0.0020	0.0020	ND	0.0020	NA		NA

000009

Client ID Job No Sample Date	Lab ID	Method Blank A01-1283 A1B0119202		Method Blank A01-1297 A1B0122002			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total		ND	2.0	ND	2.0	NA	
Barium - Total		ND	1.0	ND	1.0	NA	
Lead - Total		ND	5.0	ND	5.0	NA	
Nickel - Total		ND	2.0	ND	2.0	NA	

Date: 02/20/2001
Time: 14:25:43

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SWMU 6
TCLP METALS

Rept: AN0326

Client ID Job No Sample Date		Lab ID	Lcs A01-1297	A180134102	SWMU-6 A01-1297 02/09/2001	A1129701MS	SWMU-6 A01-1297 02/09/2001	A1129701SD	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	
Lead - Total		MG/L	0.21	0.010	0.030	0.010	0.029	0.010	NA	0.010	NA	
Chromium - Total		MG/L	0.21	0.0020	0.029	0.0020	0.027	0.0020	NA	0.0020	NA	
Barium - Total		MG/L	0.20	0.0010	3220	1.0	3030	1.0	NA	1.0	NA	

000011

Date: 02/20/2001
Time: 14:25:43

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SWMU 6
TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS CLP Soils A01-1283		A1B0119201		LCS CLP Soils A01-1297		A1B0122001			
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Nickel - Total	MG/KG	66.6	2.0	64.2	1.9	NA	NA	NA	NA	NA	NA
Barium - Total	MG/KG	164	1.0	152	0.97	NA	NA	NA	NA	NA	NA
Chromium - Total	MG/KG	128	2.0	122	1.9	NA	NA	NA	NA	NA	NA
Lead - Total	MG/KG	106	5.0	99.9	4.9	NA	NA	NA	NA	NA	NA

000012

Date: 02/23/2001
Time: 14:25:49

Benchmark Environmental Engineering & Science
(Barium Chlor.Bath) - SMU 6
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID	Lab ID	LCS	A180117001				
Job No		A01-1297					
Sample Date							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH	S.U.	7.0	0	NA		NA	

000013

SDG: 868703

Client Sample ID: SHMU-6
Lab Sample ID: A1129701

SHMU-6
A1129701MS

Analyte	Units of Measure	Concentration			% Recovery MS	QC LIMITS
		Sample	Matrix Spike	Spike Amount		
TCLP METALS						
TCLP TOTAL BARIUM	MG/L	4854	3223	200	-815 *	80-120
TCLP TOTAL CHROMIUM	MG/L	0	0.0290	0.20	14 *	80-120
TCLP TOTAL LEAD	MG/L	0	0.0305	0.20	15 *	80-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

SDG: 868703

Client Sample ID: Method Blank
Lab Sample ID: A1B0134103

Lcs
A1B0134102

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP METALS					
TCLP TOTAL BARIUM	MG/L	0.203	0.20	101	80-120
TCLP TOTAL CHROMIUM	MG/L	0.209	0.20	104	80-120
TCLP TOTAL LEAD	MG/L	0.209	0.20	104	80-120

000015

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/20/2001 14:25:55
Jobno: A01-1297

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A1129701	SMMU-6	MG/L	Lead - Total	6010	1.00	02/09/2001 10:30	02/09 14:55	02/16 13:50	Yes	02/20 14:15	Yes SOTHER
		MG/L	Chromium - Total	6010	1.00	02/09/2001 10:30	02/09 14:55	02/16 13:50	Yes	02/21 04:14	Yes SOTHER
		MG/L	Barium - Total	6010	1000.00	02/09/2001 10:30	02/09 14:55	02/16 13:50	Yes	02/21 04:14	Yes SOTHER
		MG/KG	Barium - Total	6010	500.00	02/09/2001 10:30	02/09 14:55	NA	NA	02/19 07:07	Yes SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/09/2001 10:30	02/09 14:55	NA	NA	02/16 00:40	Yes SOTHER
		MG/KG	Lead - Total	6010	1.00	02/09/2001 10:30	02/09 14:55	NA	NA	02/16 00:40	Yes SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/09/2001 10:30	02/09 14:55	NA	NA	02/16 00:40	Yes SOTHER
		MG/L	Lead - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	02/16 13:50	Yes	02/20 13:36	Yes SOTHER
		MG/L	Chromium - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	02/16 13:50	Yes	02/20 13:36	Yes SOTHER
		MG/L	Barium - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	02/16 13:50	Yes	02/20 13:36	Yes SOTHER
		MG/KG	Barium - Total	6010	20.00	02/08/2001 10:15	02/09 14:55	NA	NA	02/20 11:17	Yes SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	NA	NA	02/19 04:34	Yes SOTHER
		MG/KG	Lead - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	NA	NA	02/19 04:34	Yes SOTHER
		MG/KG	Nickel - Total	6010	1.00	02/08/2001 10:15	02/09 14:55	NA	NA	02/19 04:34	Yes SOTHER

000016

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/23/2001 14:25:59
Jobno: A01-1297

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1129701	SMU-6	S.U.	Leachable pH	9045	1.00	02/09/2001 10:30	02/09 14:55	NA	NA	02/12 22:30	Yes	SOTHER
A1128301	SMU-6 Ba BRICK	S.U.	Leachable pH	9045	1.00	02/08/2001 10:15	02/09 14:55	NA	NA	02/12 22:30	Yes	SOTHER

000018

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/23/2001 14:25:59
Jobno: A01-1283

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A180117001	LCS	S.U. S.U.	Leachable pH Leachable pH	9045 9045	1.00 1.00	- -	- 14:55 - 14:55	NA NA	NA NA	02/12 22:30 02/12 22:30	Yes SOIL Yes SOIL

000019

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000020

Chain of Custody

SEVERN

TRENT

SERVICES

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo

10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1293

Dear Mr. Martin:

Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Wood Block Flooring
Matrix: Soil/Other
Sample Received: 02/08/01
Sample Date: 02/07/01

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

Sincerely,

STL Buffalo



For Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1293
#NY1A8687

This report contains 29 pages which are individually numbered.

METHODOLOGY

STL Buffalo

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METHOD 8270

Sample WOOD BLOCK EAST MS and WOOD BLOCK EAST SD exhibited results for 3-Methylphenol, and 4-Methylphenol that exceeded the calibration range of the instrument ("E" qualifiers).

Sample WOOD BLOCK EAST MS and WOOD BLOCK EAST SD exhibited spike recovery results above quality control limits for Pentachlorophenol. However, the Matrix Spike Blank was compliant.

The relative percent difference (RPD) for spike recovery between the Matrix Spike Blank and the Matrix Spike Blank Duplicate was outside quality control limits for Hexachlorobutadiene, Hexachloroethane, and Pyridine.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

METHOD 8082

Sample WOOD BLOCK WEST was analyzed at a dilution factor of 10 due to matrix interference. Also, the sample exhibited surrogate recovery results outside quality control limits for Decachlorobiphenyl and Tetrachloro-m-xylene due to dilution effect.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

000002

SEVERN

TRENT

SERVICES

METALS

STL Buffalo

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000004

Sample Data Package

Date: 02/20/2001
Time: 12:36:21

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TURNKEY - TCLP SVOC'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	WOOD BLOCK BACKGROUND A1129301		WOOD BLOCK EAST A1129302		WOOD BLOCK WEST A01-1293 02/07/2001		A1129303	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,4-Dichlorobenzene	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
2,4-Dinitrotoluene	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
Hexachlorobenzene	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
Hexachlorobutadiene	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
Hexachloroethane	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
3-Methylphenol	MG/L	0.59	0.040	0.10	0.040	0.018 J	0.040	NA	0.040
2-Methylphenol	MG/L	0.25	0.040	0.031 J	0.040	ND	0.040	NA	0.040
4-Methylphenol	MG/L	0.59	0.040	0.10	0.040	0.018 J	0.040	NA	0.040
Nitrobenzene	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
Pentachlorophenol	MG/L	ND	0.20	ND	0.20	ND	0.20	NA	0.20
Pyridine	MG/L	ND	0.10	ND	0.10	ND	0.10	NA	0.10
2,4,5-Trichlorophenol	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
2,4,6-Trichlorophenol	MG/L	ND	0.040	ND	0.040	ND	0.040	NA	0.040
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	84	50-200	80	50-200	127	50-200	NA	50-200
Naphthalene-D8	%	83	50-200	75	50-200	123	50-200	NA	50-200
Acenaphthene-D10	%	86	50-200	78	50-200	123	50-200	NA	50-200
Phenanthrene-D10	%	91	50-200	88	50-200	131	50-200	NA	50-200
Chrysene-D12	%	89	50-200	108	50-200	162	50-200	NA	50-200
Perylene-D12	%	76	50-200	90	50-200	148	50-200	NA	50-200
Nitrobenzene-D5	%	77	27-120	90	27-120	70	27-120	NA	27-120
2-Fluorobiphenyl	%	71	29-120	89	29-120	82	29-120	NA	29-120
p-Terphenyl-d14	%	69	24-130	74	24-130	65	24-130	NA	24-130
Phenol-D5	%	26	10-120	33	10-120	29	10-120	NA	10-120
2-Fluorophenol	%	38	10-120	43	10-120	41	10-120	NA	10-120
2,4,6-Tribromophenol	%	81	26-137	94	26-137	103	26-137	NA	26-137

000005

Date: 02/23/2001
Time: 12:35:41

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Units	WOOD BLOCK BACKGROUN A01-1293 02/07/2001	WOOD BLOCK EAST A01-1293 02/07/2001	WOOD BLOCK WEST A01-1293 02/07/2001	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Aroclor 1016		UG/KG	ND	ND	ND	18	ND	180	NA
Aroclor 1221		UG/KG	ND	ND	ND	18	ND	180	NA
Aroclor 1232		UG/KG	ND	ND	ND	18	ND	180	NA
Aroclor 1242		UG/KG	ND	ND	ND	18	ND	180	NA
Aroclor 1248		UG/KG	ND	ND	ND	18	ND	180	NA
Aroclor 1254		UG/KG	72	160	ND	18	ND	180	NA
Aroclor 1260		UG/KG	27	ND	ND	18	ND	180	NA
SURROGATE(S)									
Tetrachloro-m-xylene		%	50	66	0 D	32-148	0 D	32-148	NA
Decachlorobiphenyl		%	58	90	0 D	36-153	0 D	36-153	NA

000006

Date: 02/23/2001
Time: 12:37:20

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TCLP RCRA METALS

Rept: AN0326

Client ID	Lab ID	Units	WOOD BLOCK BACKGROUN		WOOD BLOCK EAST		WOOD BLOCK WEST	
Job No			A01-1293	A1129301	A01-1293	A1129302	A01-1293	A1129303
Sample Date			02/07/2001		02/07/2001		02/07/2001	
Analyte			Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total		MG/L	0.0095	0.0070	ND	0.0070	ND	0.0070
Barium - Total		MG/L	0.76	0.0010	0.65	0.0010	0.52	0.0010
Cadmium - Total		MG/L	0.16	0.0010	0.037	0.0010	0.022	0.0010
Chromium - Total		MG/L	0.042	0.0020	0.029	0.0020	0.071	0.0020
Lead - Total		MG/L	0.64	0.010	0.69	0.010	1.0	0.010
Mercury - Total		MG/L	ND	0.00020	ND	0.00020	ND	0.00020
Selenium - Total		MG/L	ND	0.010	ND	0.010	ND	0.010
Silver - Total		MG/L	ND	0.0030	ND	0.0030	ND	0.0030

000007

000008

Chronology and QC Summary Package

Date: 02/20/2001
Time: 12:36:21

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TURNKEY - TCLP SVOC'S - S

Rept: AN0326

Client ID	Lab ID	J-1423 A01-1293 02/07/2001	A1129304	Method Blank A01-1293 A1B0134702	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,4-Dichlorobenzene	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
2,4-Dinitrotoluene	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
Hexachlorobenzene	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
Hexachlorobutadiene	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
Hexachloroethane	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
3-Methylphenol	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
2-Methylphenol	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
4-Methylphenol	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
Nitrobenzene	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
Pentachlorophenol	MG/L	ND	0.20	ND	0.010	NA	0.010	NA	
Pyridine	MG/L	ND	0.10	ND	0.025	NA	0.025	NA	
2,4,5-Trichlorophenol	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
2,4,6-Trichlorophenol	MG/L	ND	0.040	ND	0.010	NA	0.010	NA	
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	127	50-200	88	50-200	NA	50-200	NA	
Naphthalene-D8	%	121	50-200	84	50-200	NA	50-200	NA	
Acenaphthene-D10	%	115	50-200	83	50-200	NA	50-200	NA	
Phenanthrene-D10	%	115	50-200	84	50-200	NA	50-200	NA	
Chrysene-D12	%	124	50-200	82	50-200	NA	50-200	NA	
Perylene-D12	%	115	50-200	68	50-200	NA	50-200	NA	
Nitrobenzene-D5	%	77	27-120	84	27-120	NA	27-120	NA	
2-Fluorobiphenyl	%	84	29-120	84	29-120	NA	29-120	NA	
p-Terphenyl-d14	%	82	24-130	78	24-130	NA	24-130	NA	
Phenol-D5	%	28	10-120	32	10-120	NA	10-120	NA	
2-Fluorophenol	%	43	10-120	45	10-120	NA	10-120	NA	
2,4,6-Tribromophenol	%	115	26-137	86	26-137	NA	26-137	NA	

000009

Date: 02/20/2001
Time: 12:36:21

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TURNKEY - TCLP SVOC'S - S

Rept: AN0326

Client ID Job No Sample Date		Lab ID	Matrix Spike Blank A01-1293 A1B0134701	WOOD BLOCK EAST MS A01-1293 02/07/2001		WOOD BLOCK EAST SD A01-1293 02/07/2001	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,4-Dichlorobenzene	MG/L	0.060	0.010	0.22	0.040	0.28	0.040
2,4-Dinitrotoluene	MG/L	0.096	0.010	0.39	0.040	0.39	0.040
Hexachlorobenzene	MG/L	0.10	0.010	0.35	0.040	0.38	0.040
Hexachlorobutadiene	MG/L	0.054	0.010	0.17	0.040	0.28	0.040
Hexachloroethane	MG/L	0.058	0.010	0.19	0.040	0.29	0.040
3-Methylphenol	MG/L	0.14	0.010	0.68 E	0.040	0.74 E	0.040
2-Methylphenol	MG/L	0.075	0.010	0.36	0.040	0.39	0.040
4-Methylphenol	MG/L	0.14	0.010	0.68 E	0.040	0.74 E	0.040
Nitrobenzene	MG/L	0.082	0.010	0.33	0.040	0.38	0.040
Pentachlorophenol	MG/L	0.057	0.050	0.49	0.20	0.52	0.20
Pyridine	MG/L	0.0099 J	0.025	0.038 J	0.10	0.084 J	0.10
2,4,5-Trichlorophenol	MG/L	0.096	0.010	0.37	0.040	0.41	0.040
2,4,6-Trichlorophenol	MG/L	0.096	0.010	0.37	0.040	0.41	0.040
---IS/SURROGATE(S)---							
1,4-Dichlorobenzene-D4	%	95	50-200	92	50-200	117	50-200
Naphthalene-D8	%	90	50-200	89	50-200	115	50-200
Acenaphthene-D10	%	88	50-200	93	50-200	118	50-200
Phenanthrene-D10	%	90	50-200	101	50-200	126	50-200
Chrysene-D12	%	92	50-200	122	50-200	162	50-200
Perylene-D12	%	80	50-200	99	50-200	152	50-200
Nitrobenzene-D5	%	83	27-120	91	27-120	92	27-120
2-Fluorobiphenyl	%	86	29-120	87	29-120	88	29-120
p-Terphenyl-d14	%	80	24-130	77	24-130	70	24-130
Phenol-D5	%	30	10-120	35	10-120	37	10-120
2-Fluorophenol	%	45	10-120	46	10-120	51	10-120
2,4,6-Tribromophenol	%	103	26-137	101	26-137	109	26-137

000010

Date : 02/20/2001 12:36:55
Job No: A01-1293

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
SAMPLE DATE 02/07/2001

Rept: AN0364

SDG: 868710

Client Sample ID: WOOD BLOCK EAST
Lab Sample ID: A1129302

WOOD BLOCK EAST MS
A1129302MS

WOOD BLOCK EAST SD
A1129302SD

Analyte	Units of Measure	Sample	Concentration			% Recovery		% RPD	QC LIMITS	
			Matrix Spike	Spike Duplicate	Spike Amount	MS	MSD		RPD	REC.
TURNKEY - TCLP SVOC'S - S										
1,4-Dichlorobenzene	MG/L	0	0.221	0.278	0.400	0.400	70	24	30.0	15-120
2,4-Dinitrotoluene	MG/L	0	0.392	0.390	0.400	0.400	98	0	30.0	56-118
Hexachlorobenzene	MG/L	0	0.353	0.381	0.400	0.400	95	8	30.0	33-125
Hexachlorobutadiene	MG/L	0	0.173	0.276	0.400	0.400	69	46 *	30.0	9-120
Hexachloroethane	MG/L	0	0.186	0.290	0.400	0.400	72	42 *	30.0	9-120
2-Methylphenol	MG/L	0.0306	0.360	0.390	0.400	0.400	90	9	30.0	31-120
3-Methylphenol	MG/L	0.105	0.679	0.740	0.800	0.800	79	9	30.0	25-120
4-Methylphenol	MG/L	0.105	0.679	0.740	0.800	0.800	79	9	30.0	28-120
Nitrobenzene	MG/L	0	0.331	0.377	0.400	0.400	94	12	30.0	39-117
Pentachlorophenol	MG/L	0	0.491	0.525	0.400	0.400	131 *	6	30.0	26-118
Pyridine	MG/L	0	0.0382	0.0845	0.400	0.400	21	71 *	30.0	1-120
2,4,5-Trichlorophenol	MG/L	0	0.370	0.409	0.400	0.400	102	9	30.0	54-118
2,4,6-Trichlorophenol	MG/L	0	0.370	0.409	0.400	0.400	102	9	30.0	54-117

000011

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date : 02/20/2001 12:36:55
Job No: A01-1293

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868710

Client Sample ID: Method Blank
Lab Sample ID: A1B0134702

Matrix Spike Blank
A1B0134701

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TURNKEY - TCLP SVOC'S - S					
1,4-Dichlorobenzene	MG/L	0.0605	0.100	60	15-120
2,4-Dinitrotoluene	MG/L	0.0964	0.100	96	56-118
Hexachlorobenzene	MG/L	0.105	0.100	106	33-125
Hexachlorobutadiene	MG/L	0.0539	0.100	54	9-120
Hexachloroethane	MG/L	0.0585	0.100	58	9-120
2-Methylphenol	MG/L	0.0751	0.100	75	31-120
3-Methylphenol	MG/L	0.136	0.200	68	28-120
4-Methylphenol	MG/L	0.136	0.200	68	25-120
Nitrobenzene	MG/L	0.0822	0.100	82	39-117
Pentachlorophenol	MG/L	0.0572	0.100	57	26-118
Pyridine	MG/L	0.00991	0.100	10	1-120
2,4,5-Trichlorophenol	MG/L	0.0961	0.100	96	54-118
2,4,6-Trichlorophenol	MG/L	0.0961	0.100	96	54-117

000012

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

STL Buffalo

Date: 02/20/2001
Time: 12:36:44

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
SAMPLE CHRONOLOGY

Rept: AN0875
Page: 1

TURNKEY - TCLP SVOC'S - S

Client Sample ID Job No & Lab Sample ID	WOOD BLOCK BACKGROUND A01-1293 A1129301	WOOD BLOCK EAST A01-1293 A1129302	WOOD BLOCK WEST A01-1293 A1129303	
Sample Date/Time Received Date/Time TCLP Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials TCLP Extraction HT Met? Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/07/2001 08:40 02/08/2001 14:30 02/15/2001 08:00 02/19/2001 12:50 PM YES YES YES SOTHER RECNY 1.0 0.25 LITERS	02/07/2001 16:00 02/08/2001 08:40 02/15/2001 14:30 02/19/2001 08:00 02/20/2001 13:31 PM YES YES YES SOTHER RECNY 1.0 0.25 LITERS	02/07/2001 16:30 02/08/2001 08:40 02/15/2001 14:30 02/19/2001 08:00 02/20/2001 15:36 PM YES YES YES SOTHER RECNY 1.0 0.25 LITERS	

000013

Date: 02/20/2001
Time: 12:36:44

Rept: AN0875
Page: 2

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
QC SAMPLE CHRONOLOGY

TURNKEY - TCLP SVOC'S - S

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1293 A180134701	WOOD BLOCK EAST MS A01-1293 A1129302MS	WOOD BLOCK EAST SD A01-1293 A1129302SD	
Sample Date/Time Received Date/Time TCLP Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials TCLP Extraction HT Met? Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 14:30 02/19/2001 08:00 02/20/2001 11:28 PM YES - - SOIL RECNY 1.0 1.0 LITERS	02/07/2001 16:00 02/08/2001 08:40 02/15/2001 14:30 02/19/2001 08:00 02/20/2001 14:11 PM YES YES YES SOTHER RECNY 1.0 0.25 LITERS	02/07/2001 16:00 02/08/2001 08:40 02/15/2001 14:30 02/19/2001 08:00 02/20/2001 14:52 PM YES YES YES SOTHER RECNY 1.0 0.25 LITERS	

000014

Date: 02/23/2001
Time: 12:35:41

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Matrix Spike Blank A01-1293 A1B0128301		Matrix Spike Blk Dup A01-1293 A1B0128302			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016		UG/KG	16	ND	16	NA	
Aroclor 1221		UG/KG	16	ND	16	NA	
Aroclor 1232		UG/KG	16	ND	16	NA	
Aroclor 1242		UG/KG	16	ND	16	NA	
Aroclor 1248		UG/KG	16	ND	16	NA	
Aroclor 1254		UG/KG	16	140	16	NA	
Aroclor 1260		UG/KG	16	ND	16	NA	
SURROGATE(S)							
Tetrachloro-m-xylene	%	72	32-148	74	32-148	NA	
Decachlorobiphenyl	%	108	36-153	92	36-153	NA	

0000017

Date : 02/23/2001 12:36:15
Job No: A01-1293

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868710

Client Sample ID: Method Blank
Lab Sample ID: A1B0128303

Matrix Spike Blank
A1B0128301

Matrix Spike Blk Dup
A1B0128302

Analyte	Units of Measure	Concentration			Spike Amount			% Recovery			QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SB	SBD	Avg	SB	SBD	Avg	RPD	REC.
TURNKEY - METHOD 8082/PCB'S - S Aroclor 1254	UG/KG	184	144	164	163	88	100	112	88	100	30.0	52-153

000018

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/23/2001
Time: 12:36:04

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
SAMPLE CHRONOLOGY

Rept: AN0875
Page: 1

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	WOOD BLOCK BACKGROUN A01-1293 A1129301	WOOD BLOCK EAST A01-1293 A1129302	WOOD BLOCK WEST A01-1293 A1129303	
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/07/2001 08:40 02/08/2001 08:40 02/16/2001 16:00 02/20/2001 14:39 KPJ YES YES SOTHER RECNY 1.0 32.39 90.91 GRAMS	02/07/2001 16:00 02/08/2001 08:40 02/16/2001 16:00 02/20/2001 15:04 KPJ YES YES SOTHER RECNY 1.0 30.66 90.79 GRAMS	02/07/2001 16:30 02/08/2001 08:40 02/16/2001 16:00 02/21/2001 15:55 KPJ YES YES SOTHER RECNY 10.0 30.31 89.64 GRAMS	

000019

Date: 02/23/2001
Time: 12:36:04

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
QC SAMPLE CHRONOLOGY

Rept: AN0875
Page: 2

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1293 A1B0128301	Matrix Spike Blk Dup A01-1293 A1B0128302		
Sample Date/Time Received Date/Time Extraction Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/16/2001 16:00 02/20/2001 11:43 KPJ - - SOIL RECNY 1.0 30.32 100.00 GRAMS	02/16/2001 16:00 02/20/2001 12:08 KPJ - - SOIL RECNY 1.0 30.5 100.00 GRAMS		

000020

Date: 02/23/2001
Time: 12:36:04

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
QC SAMPLE CHRONOLOGY

Rept: AN0875
Page: 3

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	Method Blank A01-1293 A180128303			
Sample Date/Time Received Date/Time Extraction Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/16/2001 16:00 02/20/2001 12:33 KPJ - - SOIL LOW RECNY 1.0 30.5 GRAMS 100.00			

000021

Date: 02/23/2001
Time: 12:37:20

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TCLP RCRA METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1293		Method Blank A01-1293		Method Blank A01-1293		Method Blank A01-1293		Method Blank A01-1293	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total		ND	0.0070	NA		NA		NA		NA	
Barium - Total		ND	0.0010	NA		NA		NA		NA	
Cadmium - Total		ND	0.0010	NA		NA		NA		NA	
Chromium - Total		ND	0.0020	NA		NA		NA		NA	
Lead - Total		ND	0.010	NA		NA		NA		NA	
Mercury - Total		NA		ND		ND	0.0020	NA		NA	
Selenium - Total		ND	0.010	NA		NA		NA		NA	
Silver - Total		ND	0.0030	NA		NA		NA		NA	

000022

Date: 02/23/2001
Time: 12:37:20

Benchmark Environmental Engineering & Science
WOOD BLOCK FLOORING
TCLP RCRA METALS

Rept: AN0326

Client ID	Lab ID	LCS A01-1293	A1B0128501	LFB A01-1293	A1B0126705	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	NA		0.20	0.0070	NA		NA	
Barium - Total	MG/L	NA		0.20	0.0010	NA		NA	
Cadmium - Total	MG/L	NA		0.20	0.0010	NA		NA	
Chromium - Total	MG/L	NA		0.20	0.0020	NA		NA	
Lead - Total	MG/L	NA		0.20	0.010	NA		NA	
Mercury - Total	MG/L	0.0060	0.00020	NA		NA		NA	
Selenium - Total	MG/L	NA		0.19	0.010	NA		NA	
Silver - Total	MG/L	NA		0.21	0.0030	NA		NA	

000023

Date : 02/23/2001 12:37:49
Job No: A01-1293

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 868710

Client Sample ID: Method Blank
Lab Sample ID: A1B0126706

LFB
A1B0126705

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP RCRA METALS					
TCLP TOTAL ARSENIC	MG/L	0.195	0.20	97	80-120
TCLP TOTAL BARIUM	MG/L	0.201	0.20	100	80-120
TCLP TOTAL CADMIUM	MG/L	0.203	0.20	101	80-120
TCLP TOTAL CHROMIUM	MG/L	0.199	0.20	99	80-120
TCLP TOTAL LEAD	MG/L	0.202	0.20	101	80-120
TCLP TOTAL SELENIUM	MG/L	0.189	0.20	94	80-120
TCLP TOTAL SILVER	MG/L	0.208	0.20	104	80-120

000024

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

STL Buffalo

Date: 02/23/2001 12:37
Job No: A01-1293

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A1129301	WOOD BLOCK BACKGROUND	RECNY	Arsenic - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:54	JWT	Y	SOTHER
		RECNY	Arsenic - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
A1129302	WOOD BLOCK EAST	RECNY	Cadmium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Arsenic - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
A1129303	WOOD BLOCK WEST	RECNY	Lead - Total	6010	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 06:58	JWT	Y	SOTHER
		RECNY	Arsenic - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
A1129303	WOOD BLOCK WEST	RECNY	Selenium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Arsenic - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	0.03 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/16	SW	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	0.05 L	02/07/01	02/08 08:40	02/15 14:30	Y	02/19 07:03	JWT	Y	SOTHER

000025

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/23/2001 12:37
Job No: A01-1293

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL A INI H Matrix
A180128501	LCS	RECNY	Mercury - Total	7471	1.0	0.03 L	-	-	02/15	Y	02/16	SW Y WATER

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL A INI H Matrix
A180126705	LFB	RECNY	Arsenic - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Barium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Chromium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Lead - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Selenium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER
		RECNY	Silver - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:48	JWT Y WATER

000026

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
WOOD BLOCK FLOORING
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A1B0126706	Method Blank	RECNY	Arsenic - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Barium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Cadmium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Chromium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Lead - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Selenium - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
A1B0128502	Method Blank	RECNY	Silver - Total	6010	1.0	0.05 L	-	-	NA		02/19 05:27	JWT	Y	WATER
		RECNY	Mercury - Total	7471	1.0	0.03 L	-	-	NA		02/19 05:27	JWT	Y	WATER
									02/15	Y	02/16	SW	Y	WATER

000027

000028

Chain of Custody



Committed To Your Success

Report To:

Contact: PAT MCELROY
Company: Benachmark Env Eng
Address: 50 Fawcett Plaza
Suite 1350 Buffalo NY
Phone: 856-0593
Fax: 856-0583
E-Mail: admin@benachmark.com

Bill To:

Contact: _____

 Company: _____

 Address: *SPC* _____

 Phone: _____

 Fax: _____

 PO: _____
 Quote: _____

Internal Use Only

[illegible]

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
<i>[Signature]</i>	UNION	2/7/01	8:30 PM	<i>[Signature]</i>	13 ENCLINER	2/7/01	8:30 PM
<i>[Signature]</i>	UNION	2/8/01		<i>[Signature]</i>	UNION	2/8/01	
<i>[Signature]</i>	13 ENCLINER	2/8/01		<i>[Signature]</i>	UNION	2/8/01	
<i>[Signature]</i>	UNION	2/8/01		<i>[Signature]</i>	UNION	2/8/01	

Matrix Key WW = Wastewater W = Water S = Soil SL = Sludge MS = Miscellaneous Solids OI = Oil A = Air	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. H2SO4, Cool to 4° 3. HNO3, 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:
AMP					

**SEVERN
TRENT
SERVICES**

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo
10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1288

Dear Mr. Martin:

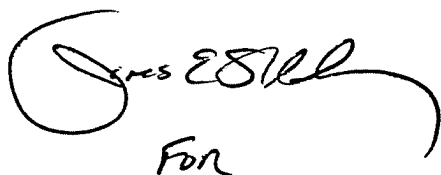
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Containers (Solids/Sludges)
Matrix: Sludge
Sample Received: 02/09/01
Sample Date: 02/08/01

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

Sincerely,

STL Buffalo



For

Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1288
#NY1A8687

This report contains 23 pages which are individually numbered.

**SEVERN
TRENT
SERVICES**

STL Buffalo

METHODOLOGY

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METHOD 8082

Sample EAST VAULT SLUDGE exhibited surrogate recovery results outside quality control limits for Decachlorobiphenyl due to matrix interference. However, the sample was compliant for Tetrachloro-m-xylene.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

METALS

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

WET CHEMISTRY

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

300003

Sample Data Package

Date: 02/23/2001
Time: 11:26:33

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST VAULT SLUDGE A01-1288 02/08/2001		A1128801							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1221	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1232	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1242	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1248	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1254	UG/KG	ND	23	NA		NA		NA		NA	
Aroclor 1260	UG/KG	ND	23	NA		NA		NA		NA	
SURROGATE(S)											
Tetrachloro-m-xylene	%	84	32-148	NA		NA		NA		NA	
Decachlorobiphenyl	%	5.0 *	36-153	NA		NA		NA		NA	

000004

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 02/20/2001
Time: 11:27:39

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST VAULT SLUDGE A01-1288 A1128801 02/08/2001							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/KG	ND	14.1	NA		NA		NA	
Barium - Total	MG/KG	114	1.4	NA		NA		NA	
Cadmium - Total	MG/KG	1.4	0.70	NA		NA		NA	
Chromium - Total	MG/KG	106	2.8	NA		NA		NA	
Lead - Total	MG/KG	1040	7.0	NA		NA		NA	
Mercury - Total	MG/KG	ND	0.15	NA		NA		NA	
Selenium - Total	MG/KG	ND	4.2	NA		NA		NA	
Silver - Total	MG/KG	ND	1.4	NA		NA		NA	

000005

Date: 02/23/2001
Time: 11:28:10

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST VAULT SLUDGE A01-1288 A1128801 02/08/2001							
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units								
Flashpoint	DEG F	>200	0	NA		NA		NA	

000006

000007

Chronology and QC Summary Package

Date: 02/23/2001
Time: 11:26:33

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1288		A1B0128303					
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016			UG/KG	ND	16	NA		NA	
Aroclor 1221			UG/KG	ND	16	NA		NA	
Aroclor 1232			UG/KG	ND	16	NA		NA	
Aroclor 1242			UG/KG	ND	16	NA		NA	
Aroclor 1248			UG/KG	ND	16	NA		NA	
Aroclor 1254			UG/KG	ND	16	NA		NA	
Aroclor 1260			UG/KG	ND	16	NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene			%	67	32-148	NA		NA	
Decachlorobiphenyl			%	97	36-153	NA		NA	

000008

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 02/23/2001
Time: 11:26:33

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Matrix Spike Blank A01-1288 A180128301		Matrix Spike Blk Dup A01-1288 A180128302			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016		ND	16	ND	16	NA	
Aroclor 1221		ND	16	ND	16	NA	
Aroclor 1232		ND	16	ND	16	NA	
Aroclor 1242		ND	16	ND	16	NA	
Aroclor 1248		ND	16	ND	16	NA	
Aroclor 1254		180	16	140	16	NA	
Aroclor 1260		ND	16	ND	16	NA	
SURROGATE(S)							
Tetrachloro-m-xylene	%	72	32-148	74	32-148	NA	
Decachlorobiphenyl	%	108	36-153	92	36-153	NA	

000009

Date : 02/23/2001 11:27:04
Job No: A01-1288

Rept: AN0364

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

Client Sample ID: Method Blank
Lab Sample ID: A1B0128303

Matrix Spike Blank
A1B0128301

Matrix Spike Blk Dup
A1B0128302

Analyte	Units of Measure	Concentration			Spike Amount		% Recovery			QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SB	SBD	SB	SBD	Avg	RPD	REC.
TURNKEY - METHOD 8082/PCB'S - S Aroclor 1254	UG/KG	184	144	164		163	112	88	100	24	30.0 52-153

000010

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/23/2001
Time: 11:26:54

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
SAMPLE CHRONOLOGY

Rept: AN0875
Page: 1

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	EAST VAULT SLUDGE A01-1288 A1128801			
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/08/2001 15:00 02/09/2001 14:55 02/16/2001 16:00 02/19/2001 19:35 KPJ YES YES SLUDGE RECNY 1.0 30.62 68.23			

000011

Date: 02/23/2001
Time: 11:26:54

Rept: AN0875
Page: 2

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
QC SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1288 A1B0128301	Matrix Spike Blk Dup A01-1288 A1B0128302		
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/16/2001 16:00 02/20/2001 11:43 KPJ - - SOIL LOW RECNY 1.0 30.32 GRAMS 100.00	02/16/2001 16:00 02/20/2001 12:08 KPJ - - SOIL LOW RECNY 1.0 30.5 GRAMS 100.00		

000012

Date: 02/23/2001
Time: 11:26:54

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
QC SAMPLE CHRONOLOGY

Rept: AN0875
Page: 3

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	Method Blank A01-1288 A1B0128303				
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/16/2001 16:00 02/20/2001 12:33 KPJ - - SOIL LOW RECNY 1.0 30.5 GRAMS 100.00				

000013

Date: 02/20/2001
Time: 11:27:39

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1288 A180119202		Method Blank A01-1288 A180125902			
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Chromium - Total							
Silver - Total			2.0	NA		NA	
Arsenic - Total			1.0	NA		NA	
Barium - Total			10	NA		NA	
Cadmium - Total			1.0	NA		NA	
Lead - Total			0.50	NA		NA	
Mercury - Total			5.0	NA		NA	
Selenium - Total			3.0	ND		NA	

000014

Date: 02/20/2001
Time: 11:27:39

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)

Rept: AN0326

RCRA TOTAL METALS

Client ID Job No Sample Date	Lab ID	LCS		LCS CLP Soils		Reporting Limit		Reporting Limit		Reporting Limit	
		A01-1288	A1B0125901	A01-1288	A1B0119201	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total		NA		158	10	NA		NA		NA	
Cadmium - Total		NA		56.3	0.50	NA		NA		NA	
Selenium - Total		NA		132	3.0	NA		NA		NA	
Barium - Total		NA		164	1.0	NA		NA		NA	
Chromium - Total		NA		128	2.0	NA		NA		NA	
Lead - Total		NA		106	5.0	NA		NA		NA	
Mercury - Total		1.8	0.62	NA		NA		NA		NA	
Silver - Total		NA		81.1	1.0	NA		NA		NA	

000015

Date: 02/20/2001 11:28
Job No: A01-1288

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1128801	EAST VAULT SLUDGE	RECNY	Arsenic - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Barium - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Cadmium - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Chromium - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Lead - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Mercury - Total	7471	1.0	68.23	0.5762 g	02/08/2001 15:00	02/09 14:55	02/15	SW	Y	SLUDGE
		RECNY	Selenium - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE
		RECNY	Silver - Total	6010	1.0	68.23	0.52 g	02/08/2001 15:00	02/09 14:55	02/19	JWT	Y	SLUDGE

000016

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H Matrix
A180119201	LCS CLP Soils	RECNY	Arsenic - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JMT	Y SOIL
		RECNY	Cadmium - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL
		RECNY	Silver - Total	6010	1.0	100.00	0.501 g	-	-	02/19	JMT	Y SOIL

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H Matrix
A180125901	LCS	RECNY	Mercury - Total	7471	1.0	100.00	0.0974 g	-	-	02/15	SW	Y SOIL

000017

Date: 02/20/2001 11:28
Job No: A01-1288

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
QC CHRONOLOGY

Rept: AN0881
Page: 3

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1B0119202	Method Blank	RECNY	Arsenic - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Cadmium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
A1B0125902	Method Blank	RECNY	Silver - Total	6010	1.0	100.00	0.5 g	-	-	02/19	JWT	Y	SOIL
		RECNY	Mercury - Total	7471	1.0	100.00	0.6 g	-	-	02/15	SW	Y	SOIL

000018

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Client ID	Lab ID	LCS	A1B0117101						
Job No		A01-1288							
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Flashpoint	DEG F	78.44	0	NA		NA		NA	

000019

Date: 02/23/2001 11:28
Job No: A01-1288

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1128801	EAST VAULT SLUDGE	RECNY	Flashpoint	1010	1.0			02/08/2001 15:00	02/09 14:55	02/12	RM	Y	SLUDGE

000020

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable
ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/23/2001 11:28
Job No: A01-1288

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
CONTAINERS (SOLIDS/SLUDGES)
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180117101	LCS	RECNY	Flashpoint	1010	1.0	100.00		-	-	02/12	Y		SOIL

000021

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

000022

Chain of Custody



Report To:

Contact: Blackburn Env Engls
Company: SO FORTUNE FLORA
Address: 21K 1350 Bldg Wy 14702
Phone: 836-0543
Fax: 876-0583
E-mail: murphy@blackburnenv.com

BMI To:

Contact: _____
Company: _____
Address: _____
Phone: _____
Fax: _____
POB: _____

Internal Use Only

Signature: <u>R. D. 2/A. Murphy</u>		Signature: <u>[Signature]</u>	
Project Name: <u>Ranko</u>		Project Number: _____	
Project Location: _____		Date Requested: _____	
Client	Sample ID	Sampling Date	Time
Summit - 1st Env	2/2/01	10:00	AS
Summit - 1st Env	0930	MS	
Summit - 1st Env	0945	MS	
Summit - 1st Env	10:00	MS	
Summit - 1st Env	12:00	MS	
Summit - 1st Env	12:15	W	
Summit - 1st Env	3:00	SL	
Summit - 1st Env	3:15	SL	

RELINQUISHED BY: <u>[Signature]</u>	COMPANY: <u>Blackburn</u>	DATE: <u>2/2/01</u>	TIME: <u>8:30 AM</u>
RELINQUISHED BY: <u>[Signature]</u>	COMPANY: <u>Blackburn</u>	DATE: <u>2/2/01</u>	TIME: <u>11:30 AM</u>
RELINQUISHED BY: <u>[Signature]</u>	COMPANY: <u>Blackburn</u>	DATE: <u>2/2/01</u>	TIME: <u>11:30 AM</u>

Matrix Key: W - Water S - Soil SL - Sludge MB - Miscellaneous Solids CL - CL A - Air	Container Key: 1. VOCs 2. VOCs 3. VOCs 4. VOCs 5. VOCs 6. VOCs	Preservative Key: 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. H2O2, Cool to 4° 5. H2O2, Cool to 4° 6. H2O2, Cool to 4° 7. None	Comments: <u>24/11/02 Hudson Inc UV</u> <u>Hxcr</u> <u>AMB</u>	Courtesy: <u>00023</u>
--	--	--	---	---------------------------

SEVERN

TRENT

SERVICES

February 23, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza
Suite 1350
Buffalo, NY 14202

STL Buffalo

10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1292

Dear Mr. Martin:

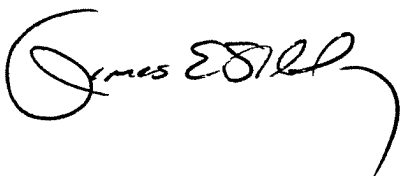
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Transformers, AOC 1
Matrix: Oil
Sample Received: 02/08/01
Sample Date: 02/07/01

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

Sincerely,

STL Buffalo



Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1292
#NY1A8687

This report contains 17 pages which are individually numbered.

**SEVERN
TRENT
SERVICES**

STL Buffalo

METHODOLOGY

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data tables. The method numbers presented refer to the following U.S. Environmental Protection Agency references:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at an ambient temperature.

METHOD 8082

Sample AOC-1 TRANSFORMERS was analyzed at a dilution factor of 10 due to high levels of target compounds.

No other deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

WET CHEMISTRY

No deviations from protocol that affected the acceptability of the analytical results were encountered during the analytical procedures.

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

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected.

- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.

- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 02/23/2001
Time: 11:49:21

Benchmark Environmental Engineering & Science
Transformers - AOC 1
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Units	AOC-1 CIRCUIT BREAK A01-1292 A1129202 02/07/2001		AOC-1 TRANSFORMERS A01-1292 A1129201 02/07/2001			
Analyte			Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1221		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1232		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1242		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1248		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1254		MG/KG	ND	1.0	ND	10	NA	
Aroclor 1260		MG/KG	ND	1.0	310	10	NA	
SURROGATE(S)								
Tetrachloro-m-xylene		%	68	32-148	65	32-148	NA	
Decachlorobiphenyl		%	95	36-153	95	36-153	NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

000004

Date: 02/20/2001
Time: 11:51:14

Benchmark Environmental Engineering & Science
Transformers - AOC 1
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID	Lab ID	AOC-1 TRANSFORMERS A01-1292 A1129201 02/07/2001				Reporting Limit	
Job No		AOC-1 CIRCUIT BREAK A01-1292 A1129202 02/07/2001				Reporting Limit	
Sample Date		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
	Units						
Flashpoint	DEG F	>200	0	>200	0	NA	NA

000005

000006

Chronology and QC Summary Package

Date: 02/23/2001
Time: 11:49:21

Benchmark Environmental Engineering & Science
Transformers - AOC 1
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1292		A1B0125102					
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016			MG/KG	ND	1.0	NA		NA	
Aroclor 1221			MG/KG	ND	1.0	NA		NA	
Aroclor 1232			MG/KG	ND	1.0	NA		NA	
Aroclor 1242			MG/KG	ND	1.0	NA		NA	
Aroclor 1248			MG/KG	ND	1.0	NA		NA	
Aroclor 1254			MG/KG	ND	1.0	NA		NA	
Aroclor 1260			MG/KG	ND	1.0	NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene		%		112	32-148	NA		NA	
Decachlorobiphenyl		%		106	36-153	NA		NA	

0000007

Date: 02/23/2001
Time: 11:49:21

Benchmark Environmental Engineering & Science
Transformers - AOC 1
TURNKEY - METHOD 8082/PCB'S IN OIL

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Matrix Spike Blank A01-1292 A180125101		Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1221	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1232	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1242	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1248	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1254	MG/KG	12	1.0	NA	NA	NA	NA	NA	NA
Aroclor 1260	MG/KG	ND	1.0	NA	NA	NA	NA	NA	NA
---SURROGATE(S)---									
Tetrachloro-m-xylene	%	109	32-148	NA	NA	NA	NA	NA	NA
Decachlorobiphenyl	%	104	36-153	NA	NA	NA	NA	NA	NA

0000008

SDG: 868706

Client Sample ID: Method Blank
Lab Sample ID: A1B0125102

Matrix Spike Blank
A1B0125101

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TURNKEY - METHOD 8082/PCB'S IN OIL Aroclor 1254	MG/KG	11.8	10.0	118	52-153

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 02/23/2001
Time: 11:49:43

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
TRANSFORMERS - AOC 1
SAMPLE CHRONOLOGY

Rept: AN0875
Page: 1

TURNKEY - METHOD 8082/PCB'S IN OIL

Client Sample ID Job No & Lab Sample ID	AOC-1 CIRCUIT BREAK A01-1292 A1129202	AOC-1 TRANSFORMERS A01-1292 A1129201		
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/07/2001 14:00 02/08/2001 08:40 02/15/2001 07:00 02/20/2001 03:32 BJ YES YES OIL RECNY 1.0 0.5 100.00	02/07/2001 14:30 02/08/2001 08:40 02/15/2001 07:00 02/20/2001 19:48 BJ YES YES OIL RECNY 10.0 0.5 100.00		

0000010

Date: 02/23/2001
Time: 11:49:43

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
TRANSFORMERS - AOC 1
QC SAMPLE CHRONOLOGY

Rept: AN0875
Page: 2

TURNKEY - METHOD 8082/PCB'S IN OIL

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1292 A1B0125101			
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 07:00 02/20/2001 02:42 BJ - - OIL RECNY 1.0 0.5 100.00 GRAMS			

000011

Date: 02/23/2001
Time: 11:49:43

Rept: AN0875
Page: 3

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
TRANSFORMERS - AOC 1
QC SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S IN OIL

Client Sample ID Job No & Lab Sample ID	Method Blank A01-1292 A1B0125102			
Sample Date/Time Received Date/Time Extraction Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 07:00 02/20/2001 03:07 BJ - - OIL RECNY 1.0 0.5 GRAMS 100.00			

000012

Date: 02/20/2001
Time: 11:51:14

Benchmark Environmental Engineering & Science
Transformers - AOC 1
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1292	A1B0117101				
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Flashpoint	DEG F	78.44	0	NA		NA	

000013

Date: 02/20/2001 11:51
Job No: A01-1292

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
TRANSFORMERS - AOC 1
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1129202	AOC-1 CIRCUIT BREAK	RECNY	Flashpoint	1010	1.0			02/07/2001 14:00	02/08 08:40	02/12	RM	Y	OIL
A1129201	AOC-1 TRANSFORMERS	RECNY	Flashpoint	1010	1.0			02/07/2001 14:30	02/08 08:40	02/12	RM	Y	OIL

000014

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Date: 02/20/2001 11:51
Job No: A01-1292

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
TRANSFORMERS - AOC 1
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL A INI H	Matrix
A180117101	LCS	RECNY	Flashpoint	1010	1.0	100.00		-	-	02/12	Y	SOIL

0000015

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

000016

Chain of Custody

SEVERN

TRENT

SERVICES

March 1, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza, Suite 1350
Buffalo, NY 14202

STL Buffalo

10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1490, A01-1599

Dear Mr. Martin:

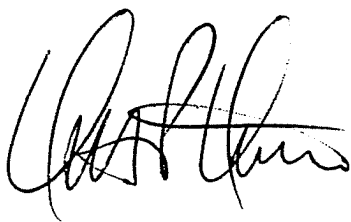
Please find enclosed analytical results concerning the samples recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: Containers (Solids/Sludge)
Matrix: Soil/Other
Samples Received: 02/15/01
Sample Dates: 02/12,13,15/01

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

Sincerely,

STL Buffalo



Kenneth P. Kinecki
Program Manager

KPK/ekn
Enclosure

I.D. #A01-1490, A01-1599
#NY1A8687

This report contains 26 pages which are individually numbered.

METHODOLOGY

STL Buffalo

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:

- "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), Third Edition, Update III, December 1996, 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 Data Comment Page.

The cooler was received at a temperature of 2°C.

METALS

The relative percent difference (RPD) for spike recovery between samples BA AREA COMP-5 MS and BA AREA COMP-5 SD was above quality control limits for Total Arsenic. However, the individual recovery results were compliant.

Sample BA AREA COMP-5 MS exhibited spike recovery results below quality control limits for Total Barium. The relative percent difference (RPD) for spike recovery between samples BA AREA COMP-5 MS and BA AREA COMP-5 SD was above quality control limits also. However, sample BA AREA COMP-5 SD was compliant.

Sample BA AREA COMP-5 MS exhibited spike recovery results above quality control limits for Total Chromium. Sample BA AREA COMP-5 SD exhibited spike recovery results below quality control limits for Total Chromium. The relative percent difference (RPD) for spike recovery between samples BA AREA COMP-5 MS and BA AREA COMP-5 SD was above quality control limits also. However, the Laboratory Fortified Blank was compliant.

Samples BA AREA COMP-5 MS and BA AREA COMP-5 SD exhibited spike recovery results below quality control limits for Total Lead and Total Mercury and above quality control limits for TCLP Total Lead. However, the Laboratory Fortified Blank was compliant.

Sample BA AREA COMP-5 MS exhibited spike recovery results above quality control limits for TCLP Total Barium. However, the Laboratory Fortified Blank was compliant.

Sample BA AREA COMP-5 SD exhibited spike recovery results below quality control limits for TCLP Total Chromium. However, the Laboratory Fortified Blank was compliant.

METALS CON'T

Samples MOLY DRY COMP ID E MS and MOLY DRY COMP ID E SD exhibited spike recovery results above quality control limits for Total Arsenic and Total Chromium. The relative percent difference (RPD) for spike recovery between the samples was above quality control limits also. However, the Laboratory Fortified Blank was compliant.

Sample MOLY DRY COMP ID E MS exhibited spike recovery results above quality control limits for Total Barium. Sample MOLY DRY COMP ID E SD exhibited spike recovery results below quality control limits for Total Barium. The relative percent difference (RPD) for spike recovery between the samples was above quality control limits also. However, the Laboratory Fortified Blank was compliant.

Sample MOLY DRY COMP ID E MS exhibited spike recovery results above quality control limits for Total Lead. Sample MOLY DRY COMP ID E SD exhibited spike recovery results below quality control limits for Total Lead. However, the Laboratory Fortified Blank was compliant.

Sample MOLY DRY COMP ID E MS exhibited spike recovery results above quality control limits for Total Selenium. The relative percent difference (RPD) for spike recovery between the samples was above quality control limits also. However, the Laboratory Fortified Blank was compliant.

Sample MOLY DRY COMP ID E SD exhibited spike recovery results below quality control limits for Total Silver. However, the Laboratory Fortified Blank was compliant.

Samples MOLY DRY COMP ID E and MOLY DRY COMP ID E MS were analyzed at a dilution factor of 10 for Arsenic, 10 for Barium, 10 for Chromium, 10 for Lead, 10 for Selenium, and 20 for Silver due to matrix interference.

Sample MOLY DRY COMP ID E SD was analyzed at a dilution factor of 20 for Silver due to matrix interference.

LCS CLP Soils (A1B0139401) was analyzed at a dilution factor of 2 for Arsenic and 2 for Cadmium due to matrix interference.

LCS CLP Soils (A1B0147901) was analyzed at a dilution factor of 2 for Arsenic, 2 for Barium, 2 for Cadmium, 2 for Chromium, 2 for Lead, 2 for Selenium, and 20 for Silver due to matrix interference.

Cadmium could not be quantified in sample MOLY DRY COMP ID E due to high level spectral interference.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

WET CHEMISTRY

STL Buffalo

No deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

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

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995

000005

Sample Data Package

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date		Lab ID	BA AREA COMP-5 A01-1490 02/13/2001		A1149004		MOLY DRY COMP ID E A01-1490 02/12/2001		A1149005			
Analyte		Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total		MG/KG	9.7	1.2	ND	10.2	NA	10.2	NA	NA	NA	
Barium - Total		MG/KG	328	1.2	250	10.2	NA	10.2	NA	NA	NA	
Cadmium - Total		MG/KG	0.69	0.63	NA		NA		NA	NA	NA	
Chromium - Total		MG/KG	257	2.5	110	20.3	NA	20.3	NA	NA	NA	
Lead - Total		MG/KG	267	6.3	104	50.8	NA	50.8	NA	NA	NA	
Mercury - Total		MG/KG	ND	0.12	ND	0.095	NA	0.095	NA	NA	NA	
Selenium - Total		MG/KG	ND	3.8	41.2	30.5	NA	30.5	NA	NA	NA	
Silver - Total		MG/KG	ND	1.2	ND	4.1	NA	4.1	NA	NA	NA	

000006

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TCLP RCRA METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	BA AREA COMP-2 A01-1490 02/13/2001		BA AREA COMP-3 A01-1490 02/13/2001		BA AREA COMP-5 A01-1490 02/13/2001		EAST PICKENS SOLID A01-1490 02/12/2001	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	0.013	0.0070	0.0098	0.0070	0.038	0.0070	0.019	0.0070
Barium - Total	MG/L	0.39	0.0010	2.0	0.0010	0.38	0.0010	3.3	0.0010
Cadmium - Total	MG/L	ND	0.0010	ND	0.0010	0.0071	0.0010	0.0016	0.0010
Chromium - Total	MG/L	0.0029	0.0020	0.22	0.0020	0.13	0.0020	0.015	0.0020
Lead - Total	MG/L	0.053	0.010	0.020	0.010	2.0	0.010	0.039	0.010
Mercury - Total	MG/L	ND	0.00020	ND	0.00020	ND	0.00020	0.00022	0.00020
Selenium - Total	MG/L	ND	0.010	ND	0.010	ND	0.010	0.012	0.010
Silver - Total	MG/L	ND	0.0030	ND	0.0030	ND	0.0030	ND	0.0030

Client ID Job No Sample Date	Lab ID	WHITE SOLID COMP IDA A01-1490 02/12/2001							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	0.016	0.0070	NA		NA		NA	
Barium - Total	MG/L	0.22	0.0010	NA		NA		NA	
Cadmium - Total	MG/L	ND	0.0010	NA		NA		NA	
Chromium - Total	MG/L	0.022	0.0020	NA		NA		NA	
Lead - Total	MG/L	ND	0.010	NA		NA		NA	
Mercury - Total	MG/L	ND	0.00020	NA		NA		NA	
Selenium - Total	MG/L	ND	0.010	NA		NA		NA	
Silver - Total	MG/L	ND	0.0030	NA		NA		NA	

000007

Date: 02/26/2001
Time: 13:11:32

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Studges)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	BA AREA COMP-2 A01-1490 02/13/2001		BA AREA COMP-3 A01-1490 02/13/2001		EAST PICKENS SOLID A01-1490 02/12/2001		MOLY DRY COMP ID E A01-1490 02/12/2001	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH Flashpoint	S.U. DEG F	11.2 NA	0	12.5 >200	0 0	10.6 NA	0	NA >200	0

Client ID Job No Sample Date	Lab ID	SODIUM MONOXIDE A01-1599 02/15/2001		WHITE SOLID COMP IDA A01-1490 02/12/2001			
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH	S.U.	14.0	0	12.2	0	NA	

8000000

000009

Chronology and QC Summary Package

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1490		Method Blank A01-1490		Method Blank A01-1490		Method Blank A01-1490	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total		ND	1.0	NA		ND	1.0	NA	
Chromium - Total		ND	2.0	NA		ND	2.0	NA	
Lead - Total		ND	5.0	NA		ND	5.0	NA	
Arsenic - Total		ND	1.0	NA		ND	1.0	NA	
Cadmium - Total		ND	0.50	NA		ND	0.50	NA	
Mercury - Total		NA		ND	0.10	NA		NA	
Selenium - Total		ND	3.0	NA		ND	3.0	NA	
Silver - Total		ND	1.0	NA		ND	0.20	NA	

000010

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TCLP RCRA METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Extractor Blank A01-1490		Method Blank A01-1490		Method Blank A01-1490		Method Blank A180154804	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	ND	0.0070	NA		ND	0.0070	NA	
Barium - Total	MG/L	0.0013	0.0010	NA		ND	0.0010	NA	
Cadmium - Total	MG/L	ND	0.0010	NA		ND	0.0010	NA	
Chromium - Total	MG/L	ND	0.0020	NA		ND	0.0020	NA	
Lead - Total	MG/L	ND	0.010	NA		ND	0.010	NA	
Mercury - Total	MG/L	NA		ND	0.00020	NA		NA	
Selenium - Total	MG/L	ND	0.010	NA		ND	0.010	NA	
Silver - Total	MG/L	ND	0.0030	NA		ND	0.0030	NA	

000011

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
RCRA TOTAL METALS

Rept: A00326

Client ID Job No Sample Date	Lab ID	BA AREA COMP-5 A01-1490 02/13/2001	A1149004HD	BA AREA COMP-5 A01-1490 02/13/2001	A1149004MS	BA AREA COMP-5 A01-1490 02/13/2001	Reporting Limit	Sample Value	Reporting Limit	A1149004SD	LCS A01-1490	A180145201
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	
Arsenic - Total	MG/KG	NA		40.2	1.3	31.3	1.2	NA	1.2	NA		
Barium - Total	MG/KG	NA		312	1.3	355	1.2	NA	1.2	NA		
Cadmium - Total	MG/KG	NA		25.1	0.65	23.6	0.62	NA	0.62	NA		
Chromium - Total	MG/KG	NA		335	2.6	247	2.5	NA	2.5	NA		
Lead - Total	MG/KG	NA		182	6.5	242	6.2	NA	6.2	NA		
Mercury - Total	MG/KG	ND	0.12	0.36	0.12	0.34	0.12	NA	0.12	2.1	0.64	
Selenium - Total	MG/KG	NA		24.4	3.9	22.8	3.8	NA	3.8	NA		
Silver - Total	MG/KG	NA		25.6	1.3	23.8	1.2	NA	1.2	NA		

Client ID Job No Sample Date	Lab ID	LCS CLP Soils A01-1490	A180139401	LCS CLP Soils A01-1490	A180147901	MOLY DRY COMP ID E A01-1490 02/12/2001	A1149005MS	MOLY DRY COMP ID E A01-1490 02/12/2001	A1149005SD
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total	MG/KG	169	0.98	154	2.1	295	10.1	210	1.0
Chromium - Total	MG/KG	126	2.0	129	4.1	270	20.2	169	2.0
Cadmium - Total	MG/KG	59.5	0.98	70.2	1.0	NA	10.1	NA	1.0
Arsenic - Total	MG/KG	178	2.0	186	2.1	45.9	50.4	79.6	5.1
Lead - Total	MG/KG	113	4.9	112	10.3	162	30.2	ND	3.1
Selenium - Total	MG/KG	133	3.0	155	6.2	85.9	4.0	62.9	4.1
Silver - Total	MG/KG	81.7	0.98	94.8	4.1	22.6		19.5	

000012

Date: 02/26/2001
Time: 13:10:25

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
TCLP RCRA METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	BA AREA COMP-5 A01-1490 02/13/2001	A1149004WD A1149004WD	BA AREA COMP-5 A01-1490 02/13/2001	A1149004MS A1149004MS	BA AREA COMP-5 A01-1490 02/13/2001	A1149004SD A1149004SD	LCS A01-1490	A180148301
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	0.028	0.0070	0.24	0.0070	0.23	0.0070	NA	0.0070
Barium - Total	MG/L	0.45	0.0010	0.64	0.0010	0.60	0.0010	NA	0.0010
Cadmium - Total	MG/L	0.0072	0.0010	0.20	0.0010	0.20	0.0010	NA	0.0010
Chromium - Total	MG/L	0.11	0.0020	0.29	0.0020	0.28	0.0020	NA	0.0020
Lead - Total	MG/L	3.1	0.010	3.2	0.010	3.1	0.010	NA	0.010
Mercury - Total	MG/L	ND	0.00020	0.0064	0.00020	0.0064	0.00020	0.0061	0.00020
Selenium - Total	MG/L	ND	0.010	0.22	0.010	0.21	0.010	NA	0.010
Silver - Total	MG/L	ND	0.0030	0.23	0.0030	0.22	0.0030	NA	0.0030

Client ID Job No Sample Date	Lab ID	LFB A01-1490	A180148302	LFB A01-1490	A180154801	LFB A01-1490	A180154801	LFB A01-1490	A180154801
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Arsenic - Total	MG/L	NA		0.19	0.0070	NA	0.0070	NA	0.0070
Barium - Total	MG/L	NA		0.19	0.0010	NA	0.0010	NA	0.0010
Cadmium - Total	MG/L	NA		0.19	0.0010	NA	0.0010	NA	0.0010
Chromium - Total	MG/L	NA		0.19	0.0020	NA	0.0020	NA	0.0020
Lead - Total	MG/L	NA		0.19	0.010	NA	0.010	NA	0.010
Mercury - Total	MG/L	0.0067	0.00020	NA		NA		NA	
Selenium - Total	MG/L	NA		0.18	0.010	NA	0.010	NA	0.010
Silver - Total	MG/L	NA		0.20	0.0030	NA	0.0030	NA	0.0030

000013

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 02/26/2001
Time: 13:11:32

Benchmark Environmental Engineering & Science
CONTAINERS (Solids/Sludges)
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1490	A180138901	LCS A01-1490	A180139101	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Leachable pH Flashpoint	S.U. DEG F	7.0 NA	0	NA 77.92	0	NA 77.92	0	NA 77.92	NA NA	NA NA	NA NA

000014

NA = Not Applicable ND = Not Detected

STL Buffalo

SDG: 1490

Client Sample ID: BA AREA COMP-5
Lab Sample ID: A1149004

BA AREA COMP-5
A1149004MS

BA AREA COMP-5
A1149004SD

Analyte	Units of Measure	Sample	Concentration			Spike Amount		% Recovery		% RPD	QC LIMITS	
			Matrix Spike	Spike Duplicate	MS	MS	MSD	MS	MSD		RPD	REC.
RCRA TOTAL METALS												
TOTAL ARSENIC	MG/KG	9.66	40.15	31.31	26.0	25.0	117	86	102	30	20.0	80-120
TOTAL BARIUM	MG/KG	327.8	312.2	355.1	26.0	25.0	-59 *	109	25	680	20.0	80-120
TOTAL CADMIUM	MG/KG	0.689	25.14	23.62	26.0	25.0	94	91	93	2	20.0	80-120
TOTAL CHROMIUM	MG/KG	257.2	334.8	247.1	26.0	25.0	298 *	-40 *	129	263	20.0	80-120
TOTAL LEAD	MG/KG	266.9	182.2	242.3	26.0	25.0	-325 *	-98 *	-212	0	20.0	80-120
TOTAL MERCURY	MG/KG	0	0.361	0.338	26.0	25.0	1 *	1 *	1	3	20.0	80-120
TOTAL SELENIUM	MG/KG	1.09	24.40	22.76	26.0	25.0	89	86	88	3	20.0	80-120
TOTAL SILVER	MG/KG	0.125	25.56	23.81	26.0	25.0	97	94	96	3	20.0	80-120
TCLP RCRA METALS												
TCLP TOTAL ARSENIC	MG/L	0.0384	0.238	0.231	0.20	0.20	100	96	98	3	20.0	80-120
TCLP TOTAL BARIUM	MG/L	0.378	0.639	0.604	0.20	0.20	130 *	112	121	14	20.0	80-120
TCLP TOTAL CADMIUM	MG/L	0.00710	0.205	0.197	0.20	0.20	99	95	97	4	20.0	80-120
TCLP TOTAL CHROMIUM	MG/L	0.131	0.294	0.282	0.20	0.20	81	75 *	78	8	20.0	80-120
TCLP TOTAL LEAD	MG/L	1.99	3.25	3.13	0.20	0.20	631 *	571 *	601	10	20.0	80-120
TCLP TOTAL MERCURY	MG/L	0	0.00638	0.00635	0.0066	0.0066	95	95	95	0	20.0	80-120
TCLP TOTAL SELENIUM	MG/L	0	0.219	0.210	0.20	0.20	109	105	107	4	20.0	80-120
TCLP TOTAL SILVER	MG/L	0	0.228	0.216	0.20	0.20	114	108	111	5	20.0	80-120

000015

Date : 02/26/2001 13:10:56
Job No: A01-1490

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
SAMPLE DATE 02/12/2001

Rept: AN0364

SGD: 1490

Client Sample ID: MOLY DRY COMP ID E A1149005
Lab Sample ID: A1149005MS
MOLY DRY COMP ID E A1149005SD

Analyte	Units of Measure	Sample	Concentration			Spike Amount		% Recovery		% RPD	QC LIMITS	
			Matrix Spike	Spike Duplicate	MS	MS	MSD	MSD	Avg		RPD	REC.
RCRA TOTAL METALS												
TOTAL ARSENIC	MG/KG	8.02	45.94	79.58	20.2	187 *	349 *	268	60	*	20.0	80-120
TOTAL BARIUM	MG/KG	250.4	295.2	209.5	20.2	222 *	-199 *	12	3720	*	20.0	80-120
TOTAL CHROMIUM	MG/KG	109.7	269.7	169.3	20.2	791 *	290 *	541	93	*	20.0	80-120
TOTAL LEAD	MG/KG	103.9	162.5	0	20.2	289 *	-507 *	-109	0	*	20.0	80-120
TOTAL SELENIUM	MG/KG	41.23	85.93	62.89	20.2	221 *	105	163	71	*	20.0	80-120
TOTAL SILVER	MG/KG	3.32	22.62	19.51	20.2	95	78 *	87	19	*	20.0	80-120

000016

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE

SDG: 1490
Client Sample ID: Method Blank LFB
Lab Sample ID: A1B0154804 A1B0154801

Analyte	Units of Measure	Concentration		% Recovery Blank Spike	QC LIMITS
		Blank Spike	Spike Amount		
TCLP RCRA METALS					
TCLP TOTAL ARSENIC	MG/L	0.190	0.20	95	80-120
TCLP TOTAL BARIUM	MG/L	0.193	0.20	96	80-120
TCLP TOTAL CADMIUM	MG/L	0.193	0.20	96	80-120
TCLP TOTAL CHROMIUM	MG/L	0.186	0.20	93	80-120
TCLP TOTAL LEAD	MG/L	0.190	0.20	95	80-120
TCLP TOTAL SELENIUM	MG/L	0.183	0.20	91	80-120
TCLP TOTAL SILVER	MG/L	0.197	0.20	98	80-120

000017

Date: 02/26/2001 13:10:40
Jobno: A01-1490

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	ICLP Date	THT	Analysis Date	AHT	Matrix
A1149002	BA AREA COMP-2	MG/L	Arsenic - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 10:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:28	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
A1149003	BA AREA COMP-3	MG/L	Cadmium - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 10:30	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 10:30	02/15 15:10	02/23	Yes	02/25 14:32	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/KG	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/KG	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
A1149004	BA AREA COMP-5	MG/KG	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/KG	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/21	Yes	SOTHER
		MG/KG	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/KG	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:39	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
A1149006	EAST PICKENS SOLID	MG/L	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:36	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/12/2001 09:45	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/12/2001 09:45	02/15 15:10	02/23	Yes	02/25 15:11	Yes	SOTHER
A1149005	MOLY DRY COMP ID E	MG/KG	Arsenic - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:55	Yes	SOTHER
		MG/KG	Barium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:55	Yes	SOTHER
		MG/KG	Chromium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:55	Yes	SOTHER
		MG/KG	Lead - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:55	Yes	SOTHER
		MG/KG	Mercury - Total	7471	1.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/21	Yes	SOTHER
		MG/KG	Selenium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:55	Yes	SOTHER
		MG/KG	Silver - Total	6020	20.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/28 10:02	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
A1149001	WHITE SOLID COMP ID A	MG/L	Arsenic - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/12/2001 10:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER
		MG/KG	Barium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes	SOTHER

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000018

Date: 02/26/2001 13:10:40
Jobno: A01-1490

TURNKEY ENVIRONMENTAL RESTORATION, LLC
SAMPLE CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A1149001	WHITE SOLID COMP IDA	MG/L	Barium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER
		MG/L	Chromium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER
		MG/L	Lead - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER
		MG/L	Mercury - Total	7471	1.00	02/12/2001 10:00	02/15 15:10	02/22	Yes	02/24	Yes SOTHER
		MG/L	Selenium - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER
		MG/L	Silver - Total	6010	1.00	02/12/2001 10:00	02/15 15:10	02/23	Yes	02/25 14:23	Yes SOTHER

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AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 02/26/2001 13:10:40
Jobno: A01-1490

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1149004WD	BA AREA COMP-5	MG/KG	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/21	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 14:49	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/KG	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/KG	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
A1149004WS	BA AREA COMP-5	MG/KG	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/21	Yes	SOTHER
		MG/KG	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/KG	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:43	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:02	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/KG	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/KG	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
A1149004SD	BA AREA COMP-5	MG/KG	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/KG	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/21	Yes	SOTHER
		MG/KG	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/KG	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/23 06:48	Yes	SOTHER
		MG/L	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Barium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Cadmium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Chromium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Lead - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Mercury - Total	7471	1.00	02/13/2001 11:00	02/15 15:10	02/22	Yes	02/24	Yes	SOTHER
		MG/L	Selenium - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/L	Silver - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	02/23	Yes	02/25 15:07	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/13/2001 11:00	02/15 15:10	NA	NA	02/26 12:59	Yes	SOTHER
A1149005MS	MOLY DRY COMP ID E	MG/KG	Barium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:59	Yes	SOTHER
		MG/KG	Chromium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:59	Yes	SOTHER
		MG/KG	Lead - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:59	Yes	SOTHER
		MG/KG	Selenium - Total	6010	10.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 12:59	Yes	SOTHER
A1149005SD	MOLY DRY COMP ID E	MG/KG	Silver - Total	6020	20.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 10:10	Yes	SOTHER
		MG/KG	Arsenic - Total	6010	1.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/26 11:16	Yes	SOTHER

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000020

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A1149005SD	MOLY DRY COMP ID E	MG/KG	Barium - Total	6010	1.00	02/12/2001	09:00	NA	NA	02/26 11:16	Yes	SOTHER
		MG/KG	Chromium - Total	6010	1.00	02/12/2001	09:00	NA	NA	02/26 11:16	Yes	SOTHER
		MG/KG	Lead - Total	6010	1.00	02/12/2001	09:00	NA	NA	02/26 11:16	Yes	SOTHER
		MG/KG	Selenium - Total	6010	1.00	02/12/2001	09:00	NA	NA	02/26 11:16	Yes	SOTHER
		MG/KG	Silver - Total	6020	20.00	02/12/2001	09:00	NA	NA	02/28 10:14	Yes	SOTHER
A1B0139402	Method Blank	MG/KG	Arsenic - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Cadmium - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	-	-	15:10	NA	02/23 06:22	Yes	SOIL
		MG/KG	Mercury - Total	7471	1.00	-	-	15:10	NA	02/21	Yes	SOIL
		MG/KG	Arsenic - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
		MG/KG	Barium - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
A1B0145202	Method Blank	MG/KG	Cadmium - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
		MG/KG	Chromium - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
		MG/KG	Lead - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	-	-	15:10	NA	02/26 10:44	Yes	SOIL
		MG/KG	Silver - Total	6020	1.00	-	-	15:10	NA	02/28 09:55	Yes	SOIL
		MG/L	Mercury - Total	7471	1.00	-	-	15:10	02/22	Yes	WATER	
		MG/L	Arsenic - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Cadmium - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
A1B0154805	Extractor Blank	MG/L	Lead - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Selenium - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Silver - Total	6010	1.00	-	-	15:10	NA	02/25 13:36	Yes	WATER
		MG/L	Arsenic - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Cadmium - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Selenium - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
		MG/L	Silver - Total	6010	1.00	-	-	15:10	NA	02/25 13:48	Yes	WATER
A1B0145201	LCS	MG/KG	Mercury - Total	7471	1.00	-	-	15:10	NA	02/21	Yes	SOIL
		MG/L	Arsenic - Total	7471	1.00	-	-	15:10	02/22	Yes	WATER	
		MG/KG	Barium - Total	6010	2.00	-	-	15:10	NA	02/23 06:27	Yes	SOIL
		MG/KG	Cadmium - Total	6010	2.00	-	-	15:10	NA	02/23 06:27	Yes	SOIL
		MG/KG	Chromium - Total	6010	2.00	-	-	15:10	NA	02/23 06:27	Yes	SOIL
A1B0148301	LCS CLP Soils	MG/KG	Lead - Total	6010	1.00	-	-	15:10	NA	02/23 06:31	Yes	SOIL
		MG/KG	Selenium - Total	6010	1.00	-	-	15:10	NA	02/23 06:31	Yes	SOIL
		MG/KG	Silver - Total	6010	1.00	-	-	15:10	NA	02/23 06:31	Yes	SOIL
		MG/KG	Arsenic - Total	6010	2.00	-	-	15:10	NA	02/23 06:31	Yes	SOIL
		MG/KG	Barium - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL
A1B0147901	LCS CLP Soils	MG/KG	Cadmium - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL
		MG/KG	Chromium - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL
		MG/KG	Lead - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL
		MG/KG	Selenium - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL
		MG/KG	Silver - Total	6010	2.00	-	-	15:10	NA	02/26 10:48	Yes	SOIL

AHT = Analysis Holding Time Met
 THT = TCLP Holding Time Met
 NA = Not Applicable

STL Buffalo

Date: 02/26/2001 13:10:40
Jobno: A01-1490

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT	Matrix
A180147901	LCS CLP Soils	MG/KG	Lead - Total	6010	2.00	-	- 15:10	NA	NA	02/26 10:48	Yes	SOIL
		MG/KG	Selenium - Total	6010	2.00	-	- 15:10	NA	NA	02/26 10:48	Yes	SOIL
		MG/KG	Silver - Total	6020	20.00	-	- 15:10	NA	NA	02/28 09:59	Yes	SOIL
A180148302	LFB	MG/L	Mercury - Total	7471	1.00	-	- 15:10	02/22	Yes	02/24	Yes	WATER
A180154801	LFB	MG/L	Arsenic - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Barium - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Cadmium - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Chromium - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Lead - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Selenium - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER
		MG/L	Silver - Total	6010	1.00	-	- 15:10	NA	NA	02/25 13:53	Yes	WATER

000022

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A1149002	BA AREA COMP-2	S.U.	Leachable pH	9045	1.00	02/13/2001 10:00	02/15 15:10	NA	NA	02/19 22:35	Yes SOTHER
A1149003	BA AREA COMP-3	S.U.	Leachable pH	9045	1.00	02/13/2001 10:30	02/15 15:10	NA	NA	02/19 22:35	Yes SOTHER
		DEG F	Flashpoint	1010	1.00	02/13/2001 10:30	02/15 15:10	NA	NA	02/19 19:00	Yes SOTHER
A1149006	EAST PICKENS SOLID	S.U.	Leachable pH	9045	1.00	02/12/2001 09:45	02/15 15:10	NA	NA	02/19 22:35	Yes SOTHER
A1149005	MOLY DRY COMP ID E	DEG F	Flashpoint	1010	1.00	02/12/2001 09:00	02/15 15:10	NA	NA	02/19 19:00	Yes SOTHER
A1149007	SODIUM MONOXIDE	S.U.	Leachable pH	9045	1.00	02/15/2001 10:30	02/15 12:00	NA	NA	02/21	Yes SOTHER
A1149001	WHITE SOLID COMP IDA	S.U.	Leachable pH	9045	1.00	02/12/2001 10:00	02/15 15:10	NA	NA	02/19 22:35	Yes SOTHER

000023

Date: 02/26/2001 13:11:43
Jobno: A01-1490

TURNKEY ENVIRONMENTAL RESTORATION, LLC
QC CHRONOLOGY

Rept: AN0369

Lab ID	Sample ID	Units	Analyte	Method	Dilution Factor	Sample Date	Receive Date	TCLP Date	THT	Analysis Date	AHT Matrix
A180138901	LCS	S.U.	Leachable pH	9045	1.00	-	- 15:10	NA	NA	02/19 22:35	Yes SOIL
A180139101	LCS	DEG F	Flashpoint	1010	1.00	-	- 15:10	NA	NA	02/19 19:00	Yes SOIL

000024

AHT = Analysis Holding Time Met
THT = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

000025

Chain of Custody



Internal Use Only

Report To:

Bill To:

Contact: BAT PARTN
Company: BENHAMK ENV & ENG
Address: 50 FANTAIN PLAZA
BUFFALO, NY 14202
Phone: 716 856-0549
Fax: 856-0583
E-Mail: _____
Quote: _____

Sampler Name: R. Busz / A. Murphy
Project Name: REALCO
Project Location: _____
Signature: _____
Project Number: _____
Date Required: _____

INDICATE PRESERVATIVE USING KEY BELOW (OPTIONAL)

INDICATE PRESERVATIVE USING KEY BELOW (OPTIONAL)

COMP / GRA B

M A T R I X

COMP / GRA B

M A T R I X

COMP / GRA B

M A T R I X

COMP / GRA B

M A T R I X

COMP / GRA B

M A T R I X

COMP / GRA B

M A T R I X

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Preservative Key
1. HCl, Cool to 4°
2. H₂SO₄, Cool to 4°
3. HNO₃, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn Acetate, Cool to 4°
6. Cool to 4°
7. None

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

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

Courier:

Bill of Lading:

000026

**SEVERN
TRENT
SERVICES**

March 7, 2001

Mr. Patrick Martin
Key Tower
50 Fountain Plaza, Suite 1350
Buffalo, NY 14202

STL Buffalo

10 Hazelwood Drive
Suite 106
Amherst, NY 14228

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

RE: Analytical Results: A01-1488

Dear Mr. Martin:

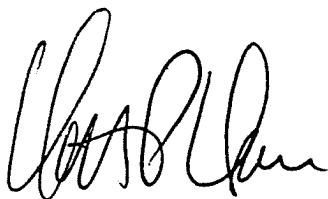
Please find enclosed analytical results concerning the sample recently submitted by your firm. The pertinent information regarding these analyses is listed below:

Quote #: NY00-344
Project Name: LAP East & West Oil Tanks - AOC 5A & 5B
Matrix: Soil/Other; Oil
Sample Received: 02/15/01
Sample Date: 02/15/01

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

Sincerely,

STL Buffalo



Kenneth P. Kinecki
Program Manager

KPK/csm
Enclosure

I.D. #A01-1488
#NY1A8687

This report contains 21 pages which are individually numbered.

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, Update III, December 1996, 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 Data Comment Page.

The cooler was received at a temperature of 2°C.

METHOD 8082

Samples OIL COMP-1D-B, OIL COMP-1D-B MS, and OIL COMP-1D-B SD were analyzed at a dilution factor of 20 due to matrix interference. Surrogates were diluted out.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

METALS

Sample LCS CLP SOILS (A1B0139401) was analyzed at a dilution factor of 2 for Arsenic and Cadmium due to the original result exceeding the linear range of the curve.

Sample LCS CLP SOILS (A1B0164501) was analyzed at a dilution factor of 2 for Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver due to the original result exceeding the linear range of the curve.

No other deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

WET CHEMISTRY

No deviations that affected the acceptability of the analytical results were encountered during the analytical procedure.

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

DATA COMMENT PAGE

000002

ORGANIC DATA QUALIFIERS

- ND or U Indicates compound was analyzed for, but not detected.
- J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation 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 instrument for that specific analysis.
- D This flag identifies all compounds identified in an analysis at the secondary dilution factor.
- N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the 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 the data page and flagged with a "P".
- A This flag indicates that a TIC is a suspected aldol-condensation product.
- 1 Indicates coelution.
- * Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

- ND or U Indicates element was analyzed for, but not detected. Report with the detection limit value.
- J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
- N Indicates spike sample recovery is not within the quality control limits.
- K Indicates the post digestion spike recovery is not within the quality control limits.
- S Indicates value determined by the Method of Standard Addition.
- M Indicates duplicate injection results exceeded quality control limits.
- W Post digestion spike for Furnace AA analysis is out of quality 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 interferences.
- H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
- * Indicates analysis is not within the quality control limits.
- + Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

000003

Sample Data Package

Date: 03/07/2001
Time: 16:29:09

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID	Lab ID	OILS COMP-1D-B A01-1488 02/15/2001	A1148802	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1221	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1232	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1242	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1248	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1254	UG/KG	ND	20000	NA		NA		NA	
Aroclor 1260	UG/KG	ND	20000	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	0 D	32-148	NA		NA		NA	
Decachlorobiphenyl	%	0 D	36-153	NA		NA		NA	

<140 ppm
See Table 2.4h

000094

Date: 03/07/2001
Time: 16:30:42

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST WHAREHOUSE SOL.		OILS COMP-1D-B		A1148802			
		A01-1488 02/15/2001	Sample Value	Reporting Limit	A01-1488 02/15/2001	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units								
Arsenic - Total	MG/KG		ND	1.0	ND	0.97	0.97	NA	
Barium - Total	MG/KG		ND	1.0	90.3	0.97	0.97	NA	
Cadmium - Total	MG/KG		ND	0.50	ND	0.48	0.48	NA	
Chromium - Total	MG/KG		ND	2.0	2.0	1.9	1.9	NA	
Lead - Total	MG/KG		ND	5.0	25.3	4.8	4.8	NA	
Mercury - Total	MG/KG		ND	0.091	ND	0.10	0.10	NA	
Selenium - Total	MG/KG		ND	3.0	ND	2.9	2.9	NA	
Silver - Total	MG/KG		ND	1.0	ND	0.97	0.97	NA	

000005

Date: 03/07/2001
Time: 16:32:10

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	EAST WHAREHOUSE SOL.		OILS COMP-1D-B		Reporting Limit		Sample Value		Reporting Limit		Sample Value		Reporting Limit	
		A01-1488 02/15/2001	A1148801	A01-1488 02/15/2001	A1148802	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Flashpoint	DEG F	>200	0	>200	0	>200	0	>200	0	>200	0	NA	NA	NA	NA

000006

000007

Chronology and QC Summary Package

Date: 03/07/2001
Time: 16:29:09

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
TURNKEY - METHOD 8082/PCB'S - S

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1488	A180136902	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Aroclor 1016	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1221	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1232	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1242	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1248	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1254	UG/KG	ND	1000	NA		NA		NA	
Aroclor 1260	UG/KG	ND	1000	NA		NA		NA	
SURROGATE(S)									
Tetrachloro-m-xylene	%	109	32-148	NA		NA		NA	
Decachlorobiphenyl	%	118	36-153	NA		NA		NA	

000008

Client Sample ID: Method Blank
Lab Sample ID: A180136902

Matrix Spike Blank
A180136901

Analyte	Units of Measure	Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
TURNKEY - METHOD 8082/PCB'S - S Aroclor 1254	UG/KG	10132	10000	101	52-153

000009

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Calculated

Date: 03/07/2001
Time: 16:29:29

Rept: AN0875
Page: 1

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S - S

Job No & Lab Sample ID	Client Sample ID	OILS COMP-1D-B A01-1488 A1148802			
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/15/2001 12:00 02/15/2001 15:10 02/19/2001 16:00 02/22/2001 19:00 NH YES YES OIL RECNY 20.0 0.5 100.00	GRAMS			

000010

Date: 03/07/2001
Time: 16:29:29

Rept: AN0875
Page: 2

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
QC SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S - S

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A01-1488 A180136901	OILS COMP-1D-B MS A01-1488 A1148802MS	OILS COMP-1D-B SD A01-1488 A1148802SD	
Sample Date/Time Received Date/Time Extraction Date/Time Analysis Date/Time Analyst Initials Extraction HT Met? Analytical HT Met? Sample Matrix Laboratory Dilution Factor Sample wt/vol % Dry	02/19/2001 16:00 02/22/2001 20:44 NH - - OIL RECNY 1.0 0.5 100.00	02/15/2001 12:00 02/15/2001 15:10 02/19/2001 16:00 02/22/2001 19:35 NH YES YES OIL RECNY 20.0 0.5 100.00	02/15/2001 12:00 02/15/2001 15:10 02/19/2001 16:00 02/22/2001 20:09 NH YES YES OIL RECNY 20.0 0.5 100.00	

000011

Date: 03/07/2001
Time: 16:29:29

Rept: AN0875
Page: 3

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
QC SAMPLE CHRONOLOGY

TURNKEY - METHOD 8082/PCB'S - S

Job No & Lab Sample ID	Client Sample ID	Method Blank			
		A01-1488 A1B0136902			
Sample Date/Time	02/19/2001 16:00				
Received Date/Time	02/22/2001 21:19				
Extraction Date/Time	NH				
Analyst Initials	-				
Extraction HT Met?	-				
Analytical HT Met?	OIL				
Sample Matrix	RECNY				
Laboratory	1.0				
Dilution Factor	0.5				
Sample wt/vol	100.00				
% Dry	GRAMS				

000012

Date: 03/07/2001
Time: 16:30:42

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
RCRA TOTAL METALS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	Method Blank A01-1488		Method Blank A01-1488		Method Blank A01-1488		Method Blank A01-1488		Method Blank A01-1488	
		Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Barium - Total		ND	1.0	NA		ND	1.0	NA		NA	
Chromium - Total		ND	2.0	NA		ND	2.0	NA		NA	
Lead - Total		ND	5.0	NA		ND	5.0	NA		NA	
Arsenic - Total		ND	1.0	NA		ND	1.0	NA		NA	
Cadmium - Total		ND	0.50	NA		ND	0.50	NA		NA	
Mercury - Total		NA		ND	0.10	NA		ND		ND	0.10
Selenium - Total		ND	3.0	NA		ND	3.0	NA		ND	
Silver - Total		ND	1.0	NA		ND	1.0	NA		NA	

000013

NA = Not Applicable ND = Not Detected

STL Buffalo

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
SAMPLE CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1148801	EAST WHAREHOUSE SOL.	RECNY	Arsenic - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Mercury - Total	7471	1.0	100.00	0.661 g	02/15/2001 11:45	02/15 15:10	03/01	JMB	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	100.00	0.499 g	02/15/2001 11:45	02/15 15:10	03/01	JWT	Y	SOTHER
		RECNY	Arsenic - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
		RECNY	Barium - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
A1148802	OILS COMP-1D-B	RECNY	Cadmium - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
		RECNY	Lead - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
		RECNY	Mercury - Total	7471	1.0	100.00	0.5752 g	02/15/2001 12:00	02/15 15:10	02/21	JMB	Y	OIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL
		RECNY	Silver - Total	6010	1.0	100.00	0.516 g	02/15/2001 12:00	02/15 15:10	02/23	JWT	Y	OIL

000014

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI H	A Matrix
A180139401	LCS CLP Soils	RECNY	Arsenic - Total	6010	2.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Cadmium - Total	6010	2.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
A180164501	LCS CLP Soils	RECNY	Silver - Total	6010	2.0	100.00	0.508 g	-	-	02/23	JWT	Y SOIL
		RECNY	Arsenic - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Barium - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Cadmium - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Chromium - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Lead - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Selenium - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL
		RECNY	Silver - Total	6010	2.0	100.00	0.488 g	-	-	03/01	JWT	Y SOIL

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI H	A Matrix
A180145201	LCS	RECNY	Mercury - Total	7471	1.0	100.00	0.094 g	-	-	02/21	JMB	Y SOIL
		RECNY	Mercury - Total	7471	1.0	100.00	0.0985 g	-	-	03/01	JMB	Y SOIL

000015

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
QC CHRONOLOGY

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180139402	Method Blank	RECNY	Arsenic - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Cadmium - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
A180145202	Method Blank	RECNY	Selenium - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Silver - Total	6010	1.0	100.00	0.5 g	-	-	02/23	JWT	Y	SOIL
		RECNY	Mercury - Total	7471	1.0	100.00	0.5 g	-	-	02/21	JWT	Y	SOIL
		RECNY	Arsenic - Total	6010	1.0	100.00	0.6 g	-	-	03/01	JMB	Y	SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
A180164502	Method Blank	RECNY	Cadmium - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
		RECNY	Silver - Total	6010	1.0	100.00	0.5 g	-	-	03/01	JWT	Y	SOIL
A180166502	Method Blank	RECNY	Mercury - Total	7471	1.0	100.00	0.6 g	-	-	03/01	JMB	Y	SOIL

000016

Date: 03/07/2001
Time: 16:32:10

Benchmark Environmental Engineering & Science
LAP East & West Oil Tanks - AOC 5A & 5B
WET CHEMISTRY ANALYSIS

Rept: AN0326

Client ID Job No Sample Date	Lab ID	LCS A01-1488		A1B0139101					
		Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Flashpoint			DEG F	77.92	0	NA		NA	

000017

Date: 03/07/2001 16:32
Job No: A01-1488

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
SAMPLE CHRONOLOGY

Rept: AN0881
Page: 1

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A1148801	EAST WHAREHOUSE SOL.	RECNY	Flashpoint	1010	1.0			02/15/2001 11:45	02/15 15:10	02/19	RM	Y	SOTHER
A1148802	OILS COMP-ID-B	RECNY	Flashpoint	1010	1.0			02/15/2001 12:00	02/15 15:10	02/19	RM	Y	OIL

0000018

ANL INI = Analyst Initials
DF = Dilution Factor

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

STL Buffalo

Date: 03/07/2001 16:32
Job No: A01-1488

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE
LAP EAST & WEST OIL TANKS - AOC 5A & 5B
QC CHRONOLOGY

Rept: AN0881
Page: 2

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A180139101	LCS	RECNY	Flashpoint	1010	1.0	100.00		-	-	02/19	RM	Y	SOIL

000019

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

STL Buffalo

Chain of Custody

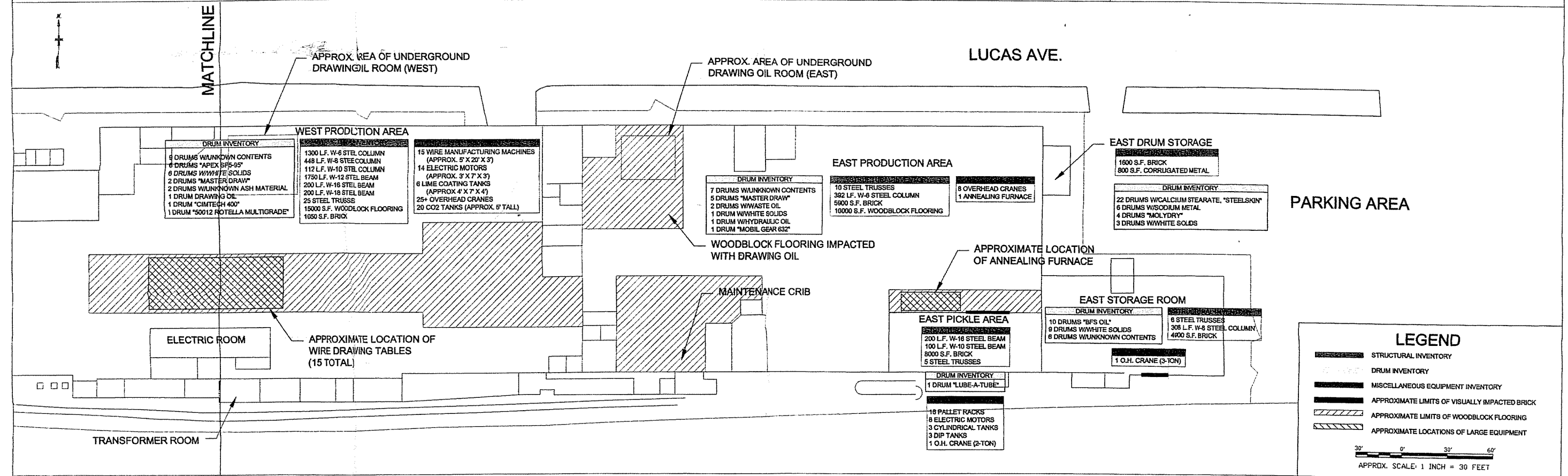
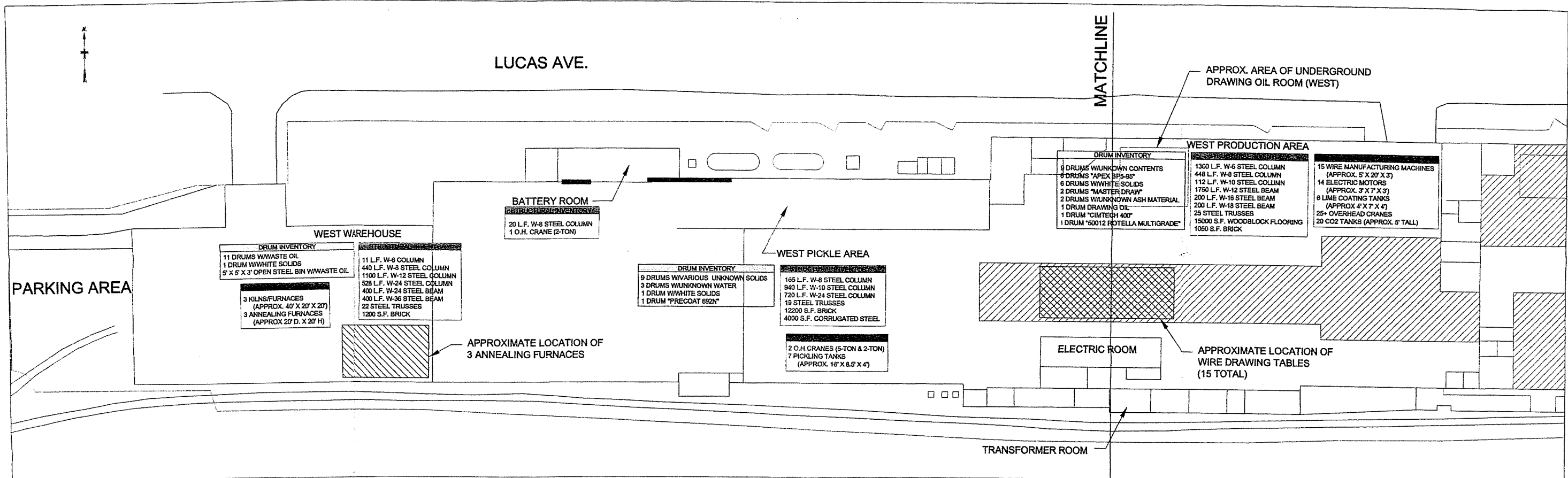
Appendix D

LAP Inventory Plates

Plate 1: Lucas Avenue Plant Site Plan

Plate 2: Building Inventory

Plate 3: Photo Inventory

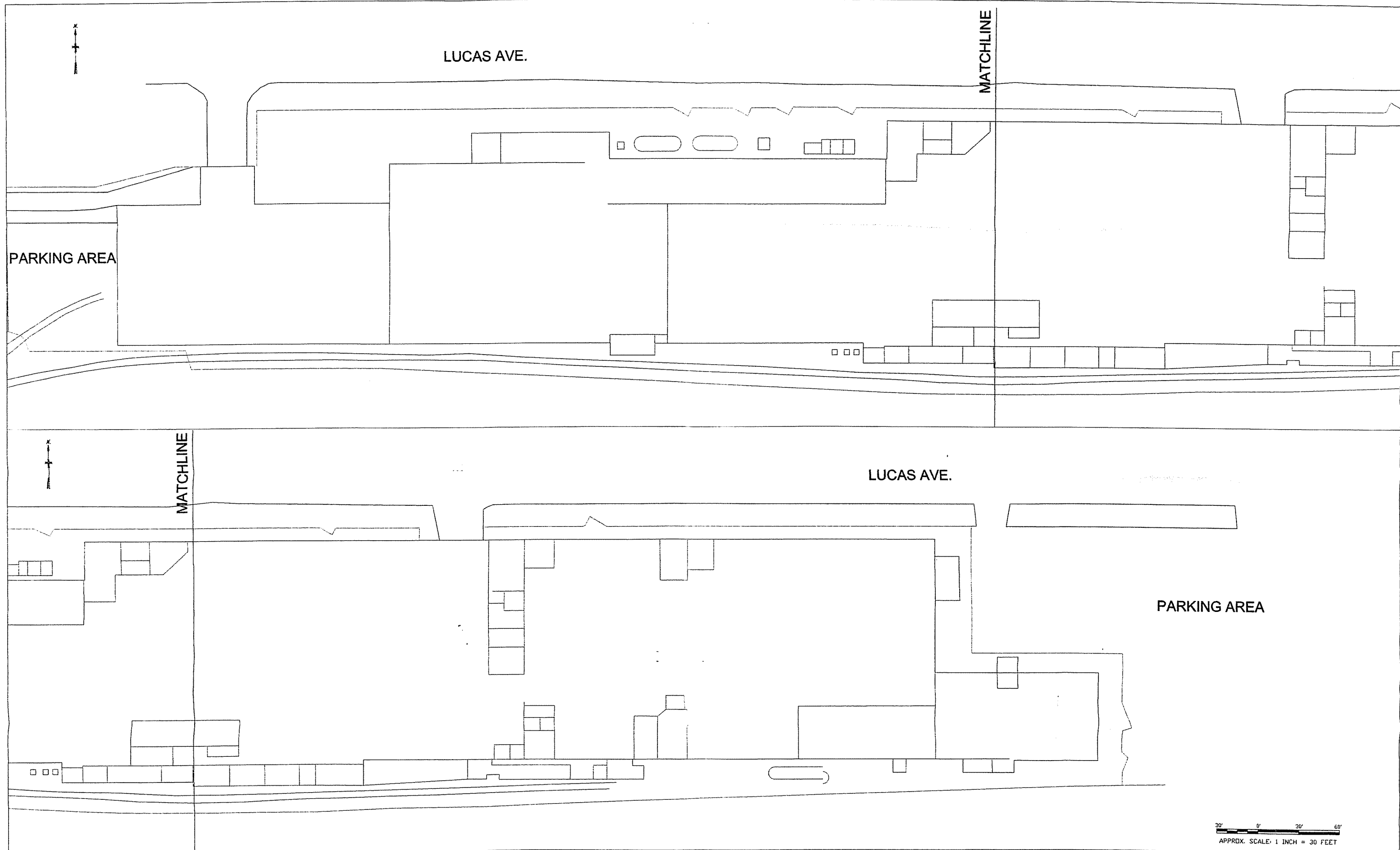


LEGEND

- STRUCTURAL INVENTORY
- DRUM INVENTORY
- MISCELLANEOUS EQUIPMENT INVENTORY
- APPROXIMATE LIMITS OF VISUALLY IMPACTED BRICK
- APPROXIMATE LIMITS OF WOODBLOCK FLOORING
- APPROXIMATE LOCATIONS OF LARGE EQUIPMENT

30' 0' 30' 60'

APPROX. SCALE: 1 INCH = 30 FEET

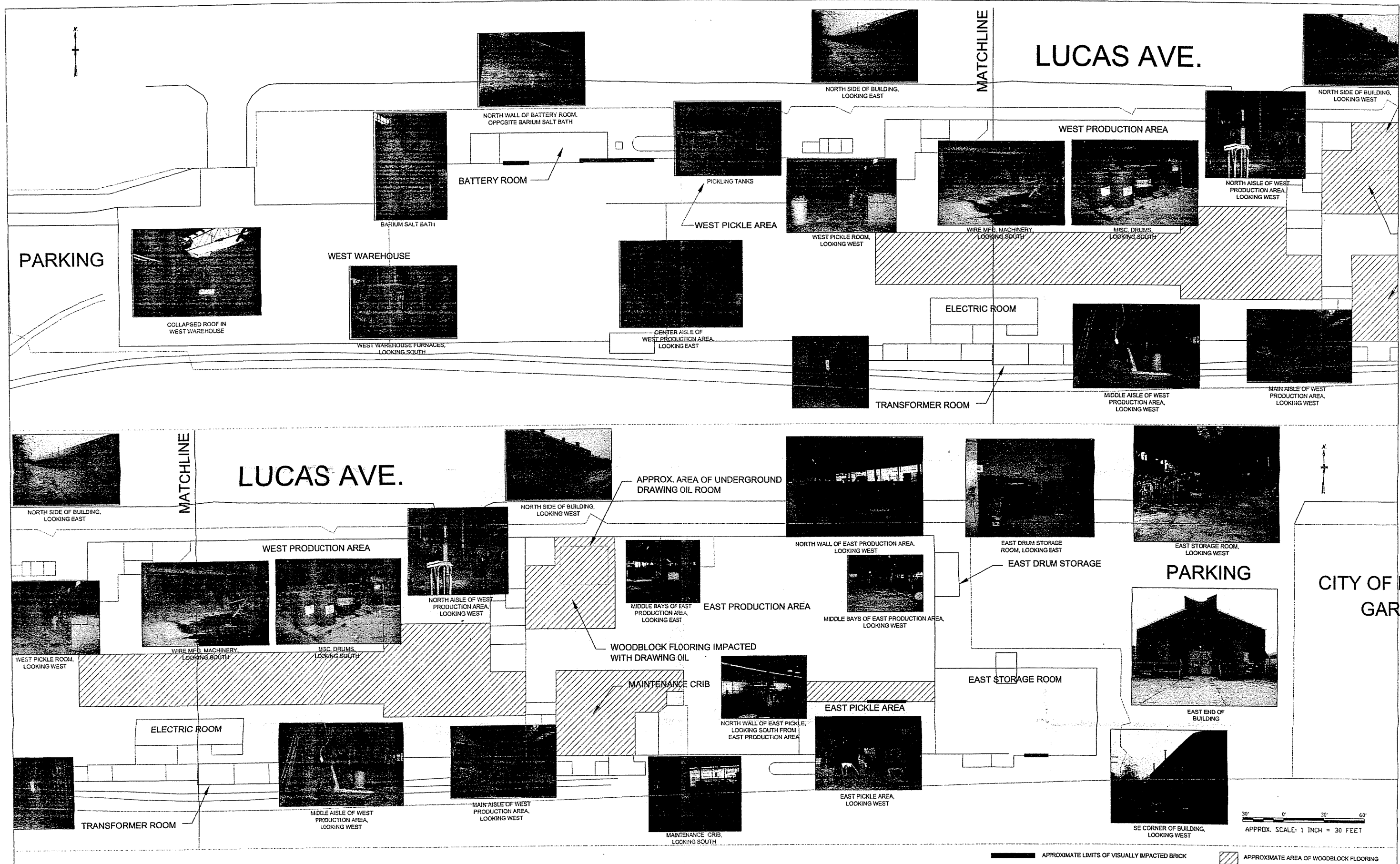


REVISIONS				DES	DWN	CHK
NO.	BY	DATE	REMARKS			

REALCO, INC.
ICM WORKPLAN

LUCAS AVENUE PLANT

DATE NOVEMBER 2000
SHEET 1 OF 3
CAD REF. NO. Lucas Ave Plant

[illegible]

DES	_____
DWN	_____
CKD	_____

REALCO, INC.
ICM WORKPLAN

LUCAS AVENUE PLANT
PHOTO INVENTORY

DATE DECEMBER 2000

SHEET 3 OF 3

CAD REF. NO. PHOTOLOG.DWG