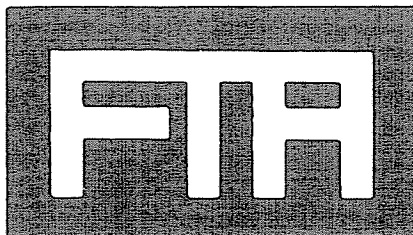


ENVIRONMENTAL SITE ASSESSMENT  
HILL/CORDOVA STREET EXTENSION AREA  
BUFFALO, NEW YORK



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HILL/CORDOVA STREET EXTENSION AREA  
BUFFALO, NEW YORK**

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ET-511-05

Prepared for:

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**ENVIRONMENTAL SITE ASSESSMENT  
HILL/CORDOVA STREET EXTENSION AREA  
BUFFALO, NEW YORK**

**1.0 SUMMARY**

Frontier Technical Associates, Inc. (FTA) completed a Environmental Site Assessment on a 5.05 acre parcel of land between the Conrail right-of-way, McCarthy Park, near the intersection of LaSalle Avenue and Cordova in Buffalo New York in support of environmental assessment of the property. This environmental site assessment included a site reconnaissance, a regulatory record review, a historical record review and determination of past and present uses of the site, soil borings, and analytical testing of soil. This environmental site assessment was conducted in accordance with FTA's Contract with the Buffalo Urban Renewal Agency.

The only identifiable past uses of this property are as a crushed stone quarry and a landfill. Currently the property is vacant. The property is part of the delisted NYSDEC Hazardous Waste Site known as the LaSalle Reservoir Site (Site No. 915033). The quarry has been filled to approximately the original grade with a approximately 44 feet of miscellaneous fill materials.

The primary usage of the property was as Quarry from at least 1916 to 1951. In the 1950's and 1960's the quarry was filled. The other portions of the former quarry are being used for storm water retention, residential (apartments), and recreational (McCarthy Park) uses. The subject property is vacant.

The soils on the property consist primarily of approximately 44 feet of fill materials. The materials in the fill consist of gravel, sand, silt, clay, bricks, glass, cinders, ash, wood, metal, tar, and unidentifiable miscellaneous fill materials. Total Petroleum Hydrocarbons were present in the fill indicating disposal of petroleum in the fill materials. Concentrations of lead, mercury and zinc above typical background levels were present in some of the soil

samples. Polyaromatic Hydrocarbons (PAHs) were present in one of the soil samples at concentrations above the NYSDEC Cleanup Guidance levels. PAHs are associated with tars, creosote, ash and cinders which were identified in the fill materials.



## **2.0 INTRODUCTION**

### **2.1 GENERAL**

Frontier Technical Associates, Inc. was requested and authorized to conduct an Environmental Site Assessment in accordance with the scope and provisions of Contract 1272-19 with the City of Buffalo Urban Renewal Agency. The subject property is located in Buffalo, New York at a former quarry site north of McCarthy Park. It is FTA's understanding that the proposed future use of the subject property is for residential, commercial, industrial, or transportation purposes.

### **2.2 PURPOSE AND SCOPE**

The purpose of this Environmental Site Assessment is to evaluate the environmental condition of the property in accordance with the standard of practice for these assessments as defined in ASTM E1527-93. To accomplish this assessment, Frontier Technical Associates Inc. completed the following scope of services:

- Conducted a site reconnaissance.
- Drilled seven borings to the top of the rock and visually classified the subsurface materials.
- Obtained and analyzed soil samples.
- Reviewed the available environmental regulatory files associated with this site.
- Reviewed available historical records for the site.
- Prepared this report of the findings.

### **2.3 TERMS, CONDITIONS AND LIMITATIONS**

The Environmental Site Assessment was performed in accordance with the conditions of the Contract dated November 18, 1994. Limitations to this report are as follows:

- Observations and information presented in this report were made under the

conditions stated in the report. The conclusions and opinions stated in the report are based solely on the services performed and not on tasks and procedures beyond the scope of contracted services.

- In preparing this report, FTA has relied on information provided by others. Some of this information has not been independently verified.
- Determination of compliance by past or present owners of the site with federal, state or local laws and regulations is not included in the scope of services.
- This report does not include an evaluation of the potential presence of asbestos, lead paint, wetlands, methane or radon unless specifically included in the scope of services as defined by the Contract.
- Due to the limited sampling and analysis, and the large amount of fill materials present undetected environmental contamination may be present.

#### **2.4 METHODOLOGY USED**

The Environmental Site Assessment was conducted in accordance with standard practice as defined in ASTM E 1527-93, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments Process". This site assessment included the following items as identified in the Scope of Work:

Location and Site Description

Site Vicinity Characteristics

Detailed Site Description

Current Uses of the Site

Past Uses of the Site

Regulatory Records

Historical Records

Site Reconnaissance

Findings and Conclusions



### **3.0 SITE DESCRIPTION**

#### **3.1 LOCATION AND SITE DESCRIPTION**

The subject site is located in Buffalo, New York, and consists of 5.05 acres of vacant land in a mixed use area. The location of the property is shown on the USGS Quadrangle on Figure 3-1. The specific property and boundaries of the investigation are shown on Figure 3-2. The subject property is L-shaped and is part of a former quarry site. Limited vehicle access is obtained from LaSalle Avenue. There are no structures on the site.

The topography of the property is generally flat. It appears that quarry has been backfilled to approximately the grade of the surrounding properties. Bedrock outcrops are apparent on the adjacent Conrail right-of-way to the west.

Historical aerial photographs (Appendix A) and Historical Sanborn maps (Figures 3-3 through 3-6) of the site show the presence of the quarry on the property. The segment of the property connecting the main portion of the site to Cordova Street probably was not mined and bedrock is likely close to the surface. The rim of the former quarry is believed to cut across the northern portion of the property and bedrock outside of the quarry will likely very near the surface.

#### **3.2 SITE AND VICINITY CHARACTERISTICS**

The property is in a mixed industrial, commercial and residential area in the City of Buffalo. The property is bounded on the south by vacant land/McCarthy Park and on the west by the a railroad right-of-way. The property is bounded to the north by a vacant parcel of land and a commercial property occupied by a radio station on LaSalle Ave. To the east the property is bounded by an apartment complex which is believed to be built on top of the fill materials in its portion of the former quarry.

#### **3.3 DETAILED SITE DESCRIPTION**

The subject property is a 5.05 acre vacant property as shown on Figure 3-2. The site

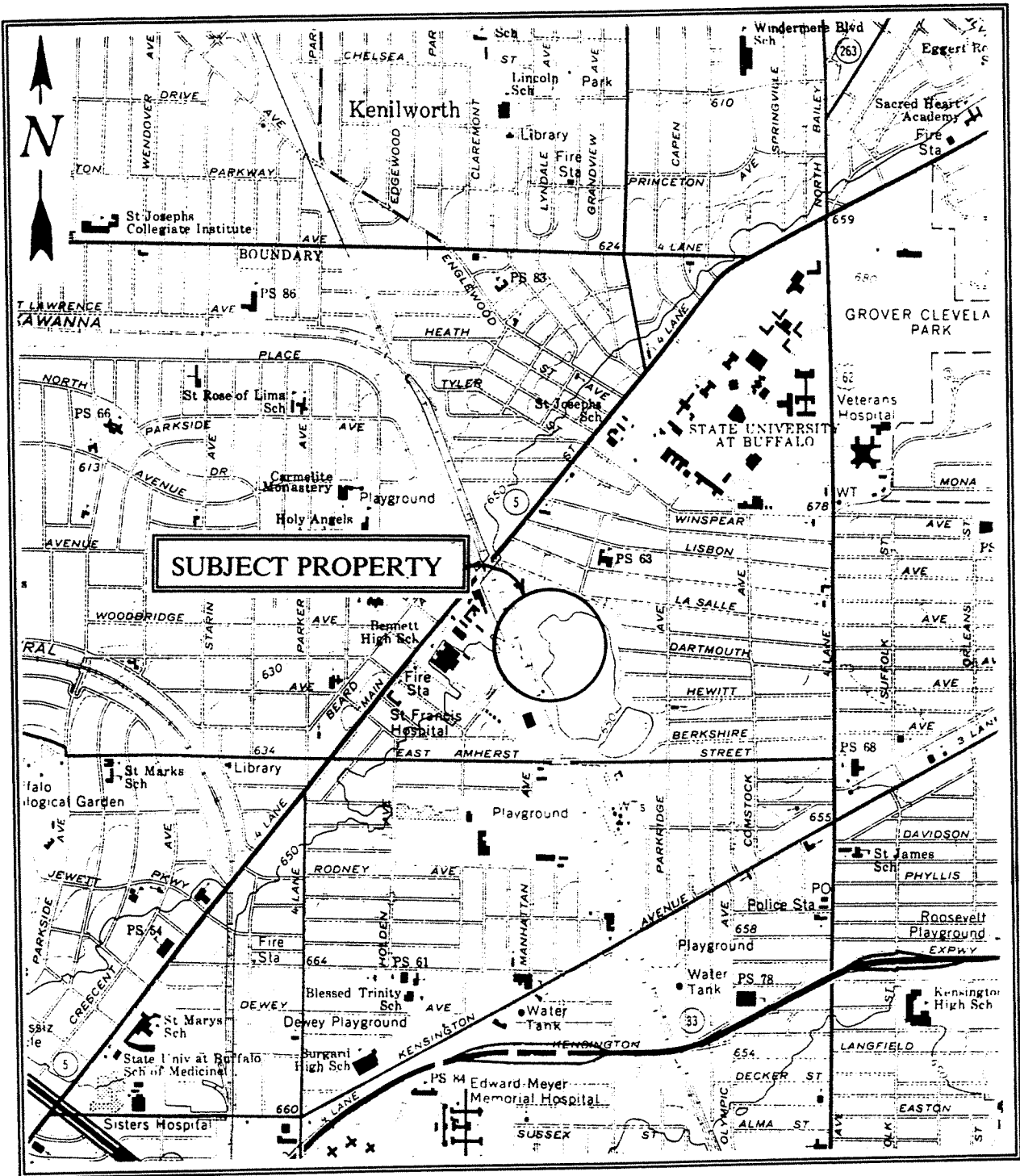
is generally covered with weeds, brush and small trees. A portion of the site near the Conrail right-of-way is covered with stone. Vehicle access is obtained along an entry road off LaSalle Avenue which runs parallel to the Conrail right-of-way.

#### **3.4 CURRENT USES OF SITE**

The current usages of the site are as vacant land.

#### **3.5 PAST USES OF SITE**

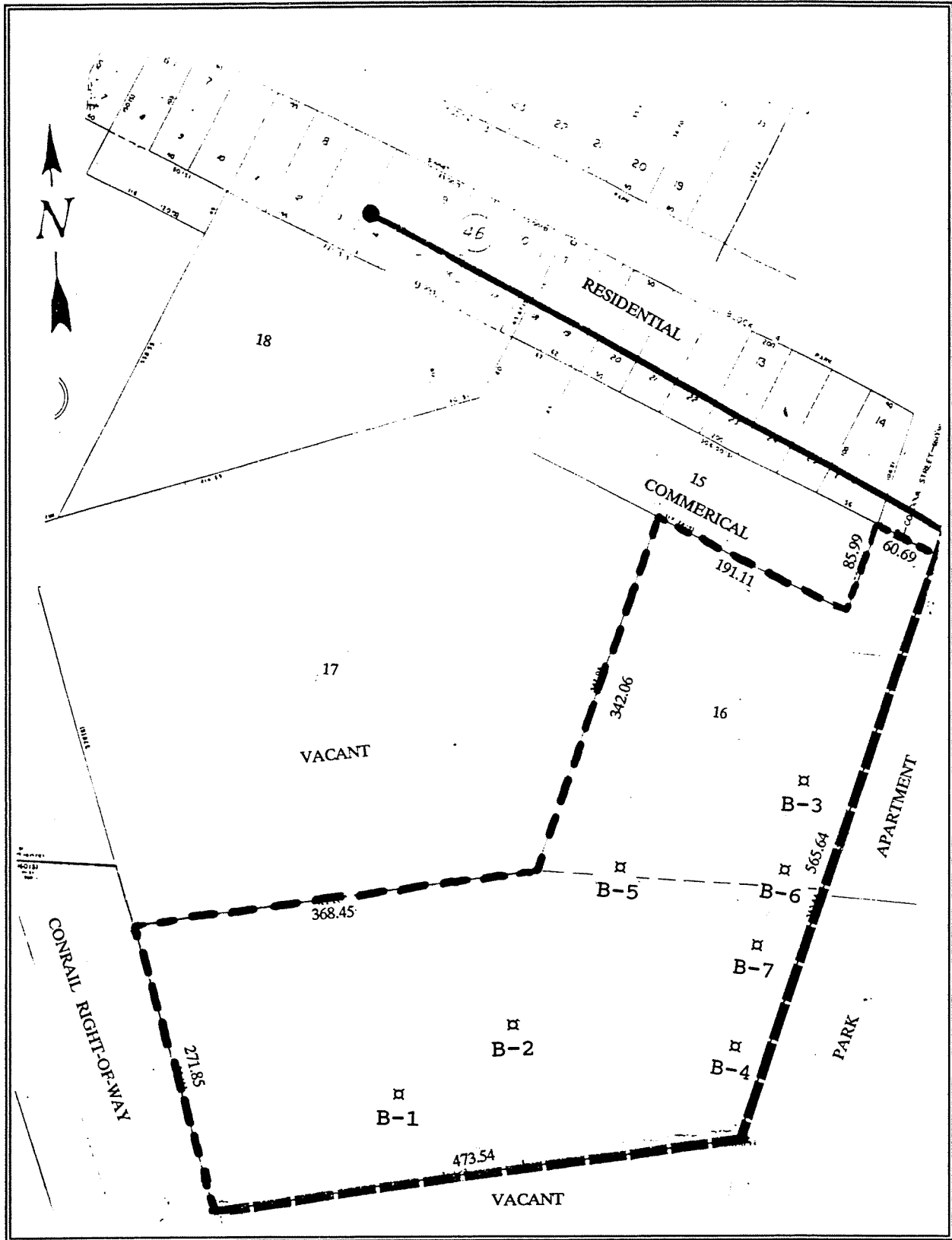
Based on the available information for the property, the only historical uses of the property have been as a crushed stone quarry and landfill.



**FIGURE 3-1**  
**SUBJECT PROPERTY LOCATION MAP**

Scale 1" = 2000'	Buffalo, NE Quad
September 1995	ET-511

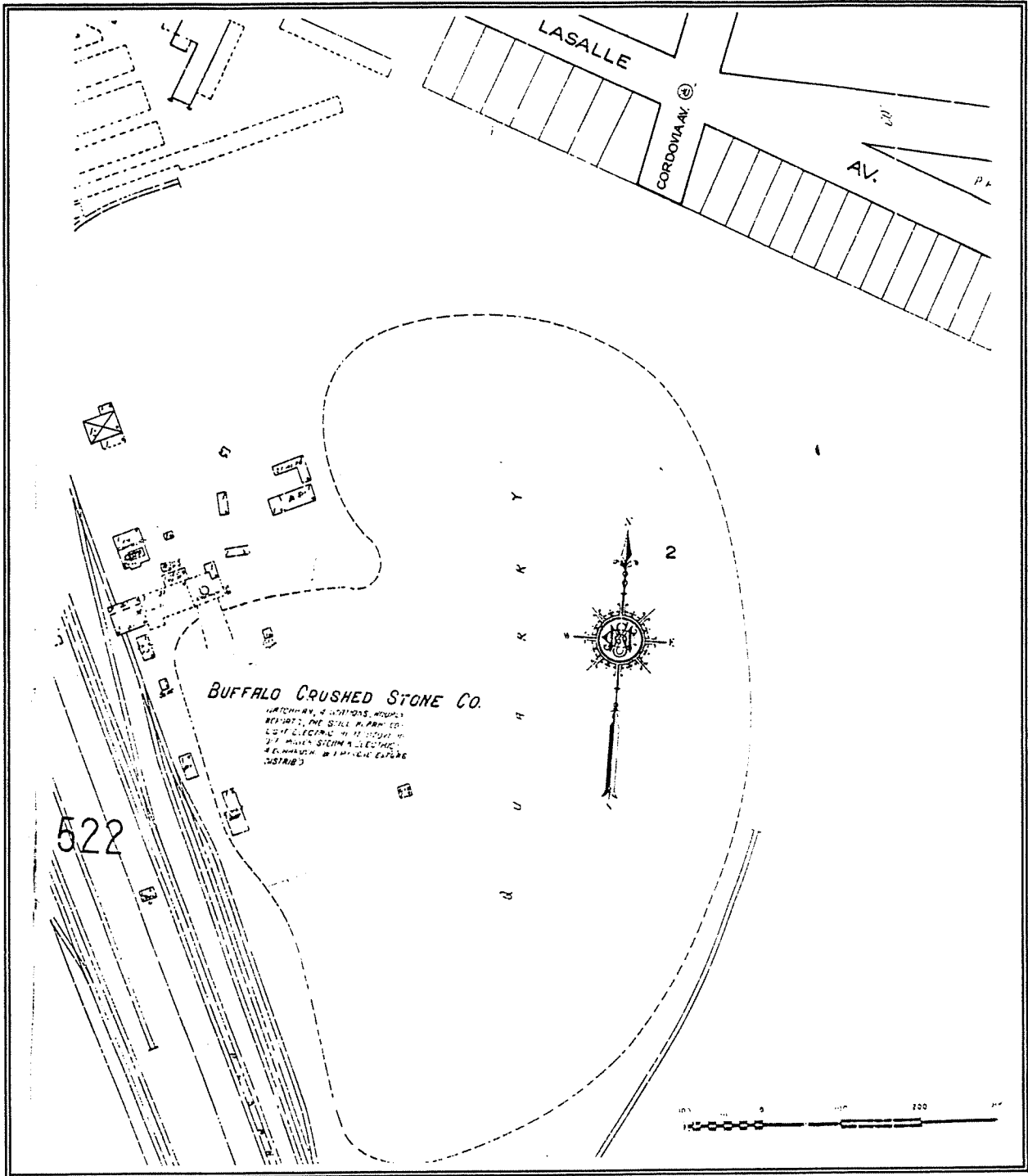




**FIGURE 3-2**  
**SOIL BORING LOCATIONS**

Source: Main and LaSalle Streets	ET-511
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**FIGURE 3-3**  
**1916 SANBORN MAP OF SUBJECT PROPERTY**

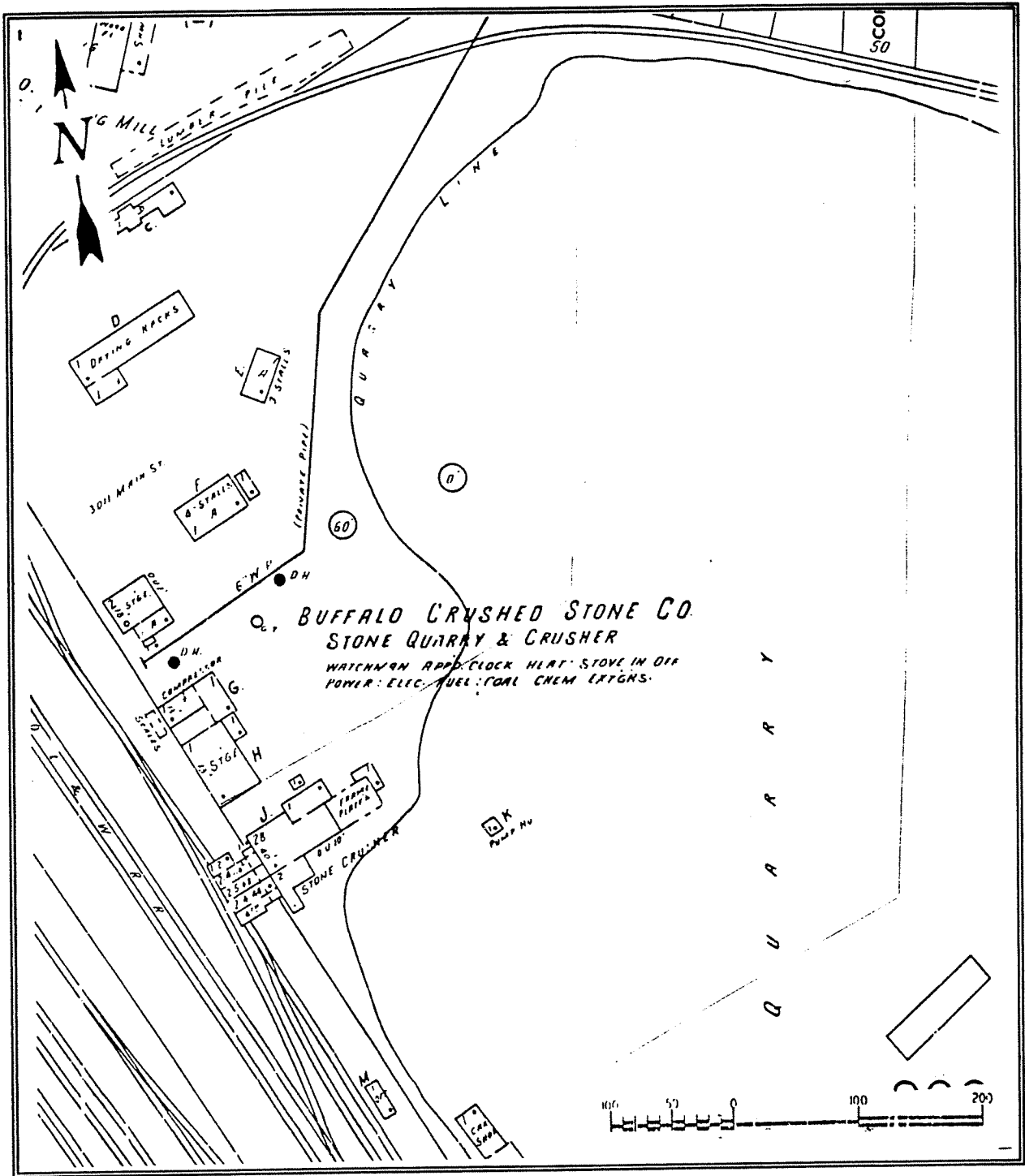
Scale: As Noted

Source: Sanborn Map

September 1995

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**FIGURE 3-4**  
**1935 SANBORN MAP OF SUBJECT PROPERTY**

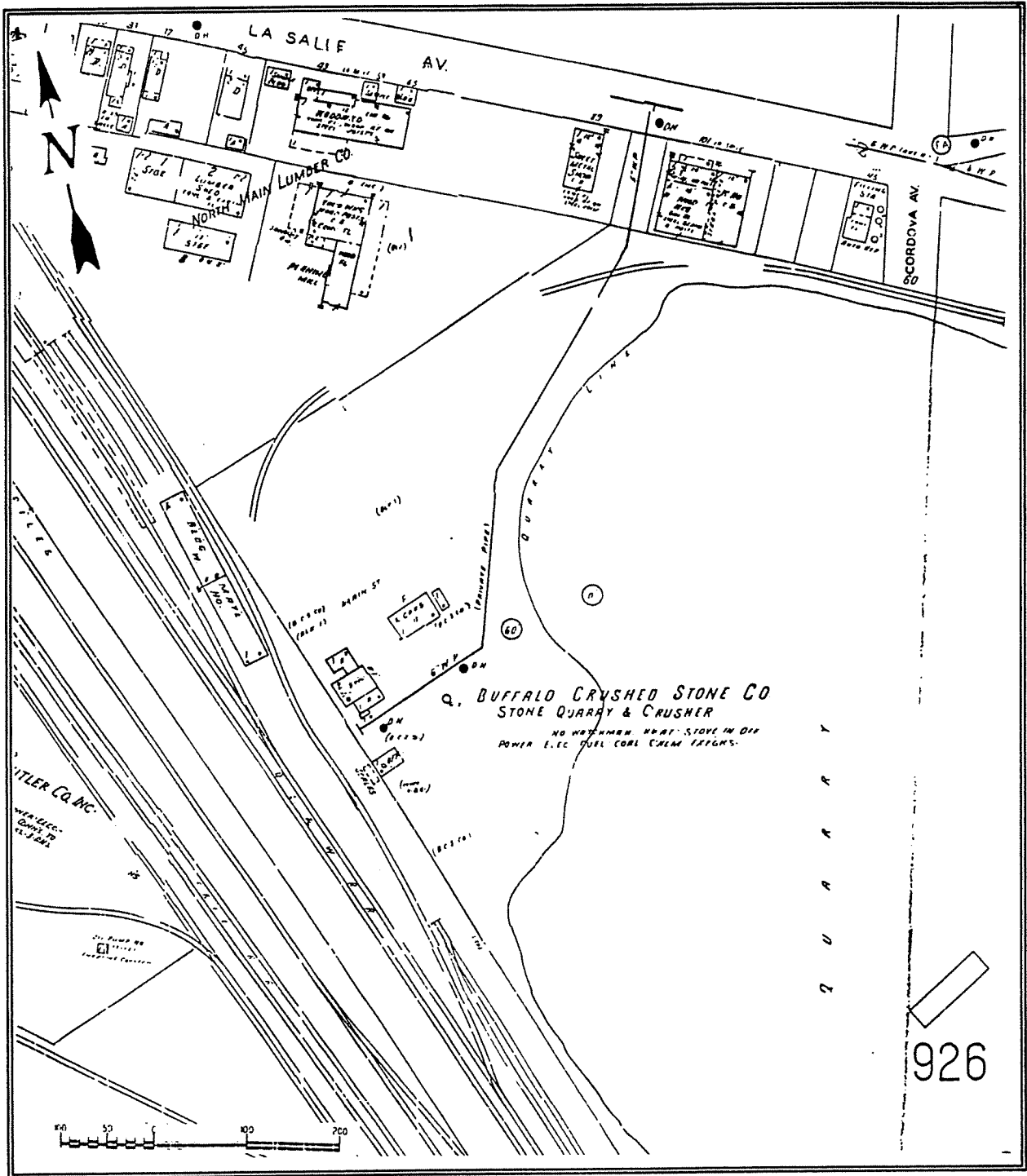
Scale: As Noted

Source: Sanborn Map

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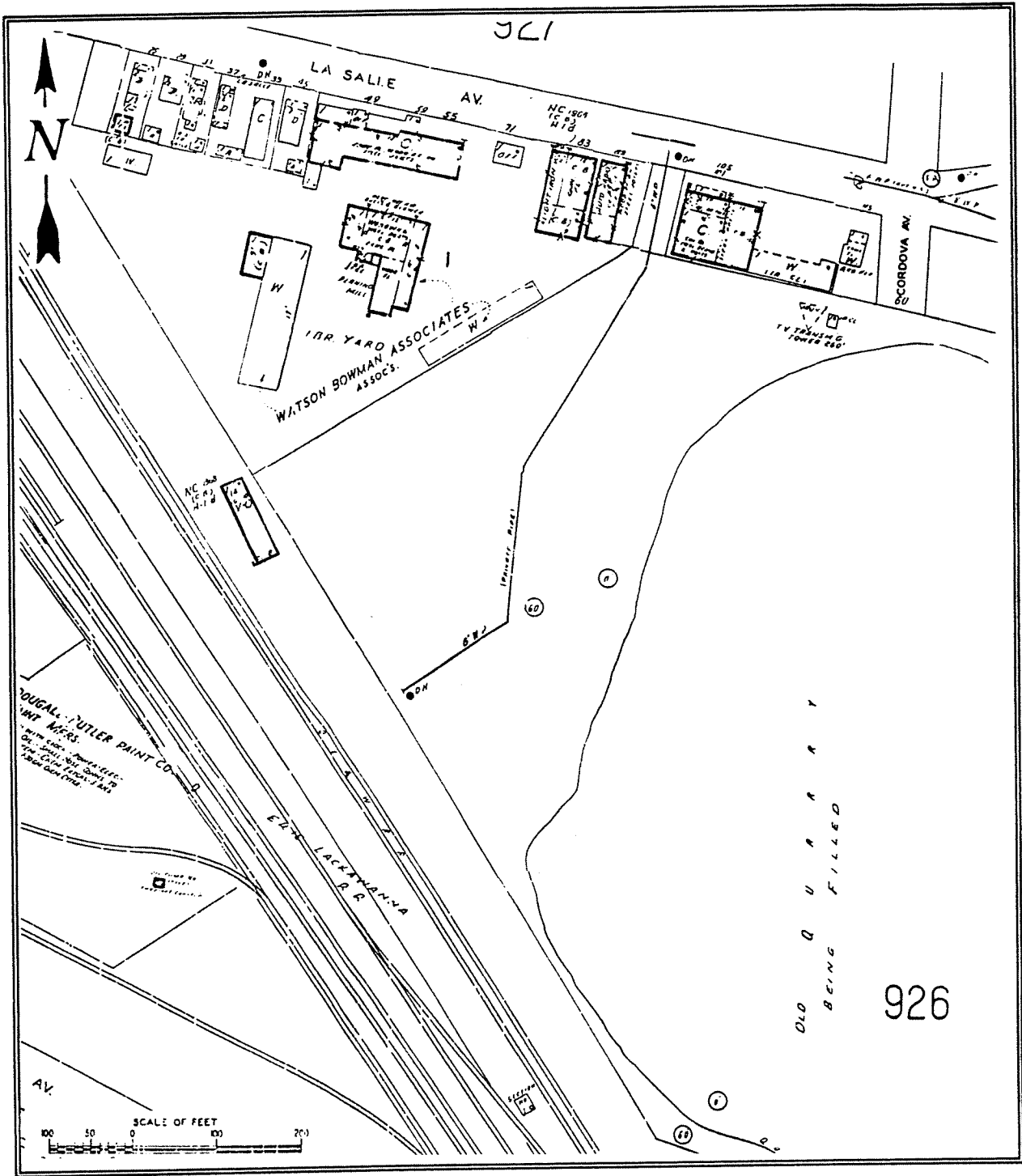




**FIGURE 3-5**  
**1950 SANBORN MAP OF SUBJECT PROPERTY**

Scale: As Noted	Source: Sanborn Map
September 1995	ET-511





<b>FIGURE 3-6</b>	
<b>1986 SANBORN MAP OF SUBJECT PROPERTY</b>	
Scale: As Noted	Source: Sanborn Map
September 1995	ET-511





## **4.0 RECORDS REVIEW**

### **4.1 REGULATORY RECORDS**

As part of the Environmental Site Assessment, Frontier Technical Associates reviewed the available NYSDEC records. In order to complete the environmental site assessment, Frontier Technical Associates utilized the services of a computerized data base firm (Environmental Data Resources Inc.) to access NYSDEC and USEPA data bases regarding the site and the adjacent properties. The sources of the records reviewed and a description of the contents of the record are presented in Appendix B and C. In accordance with the scope of services, Frontier Technical Associates obtained and reviewed information from the sources listed and determined the environmental status with regard to this site as presented on Table 4-1.

In addition to the subject property, adjacent and nearby facilities that may potentially impact the site are listed in Table 4-2. The search distances from the site used in locating these facilities were in accordance with ASTM specifications and were as follows:

USEPA NPL Sites	1.0 miles
USEPA CERCLIS Sites	0.5 miles
USEPA RCRA TSD Facilities	1.0 miles
RCRA Generators	Adjoining property
NYSDEC Inactive Haz. Waste Sites	0.5 miles
NYSDEC Solid Waste Disposal Sites	0.5 miles
NYSDEC Spills and Leaking UST's	0.5 miles
Registered UST	Adjoining property
Registered Above Ground Stor. Tank	Adjoining property

A NYSDEC funded Phase II Investigation (Reference 1) of the quarry including the subject property was performed in 1991. Portions of this Phase II Investigation report are presented in Appendix C. A Phase I Investigation was also completed on this site

(Reference 2) in 1985. The following information was excerpted from the Phase II Investigation Report (Reference 1):

- Site is a former limestone (Onondaga Limestone) quarry.
- Quarry is approximately 50 acres in area (Subject property is 5.05 acres of the 50 acres).
- Original owner of the quarry was Buffalo Cement Co. (subsequently Buffalo Crushed Stone Co.)
- In 1951, filling of the northern portion (subject property) was underway.
- By 1972, the entire quarry, with the exception of the retention basin area had been filled.
- The fill reportedly consists of municipal refuse, incinerator ash, construction and demolition debris, household appliances and tree parts. The site also received paint waste mixed with sawdust, floor sweepings and refuse from Buffalo Forge Co.
- The Erie County Department of Environment and Planning has indicated the possibility of industrial waste having been disposed on site.
- The depth of the quarry is approximately 45 feet below the adjacent ground surface.
- Samples from the fill and the groundwater adjacent to the site were obtained and analyzed and the results for samples obtained from the subject property (Waste sample WS-11 and monitoring well GW-2) are summarized on Table 4-3 through 4-5.
- The soil sample analysis revealed the presence of polyaromatic hydrocarbons (PAHs). PAHs are associated with tar and incomplete combustion of fuels, and are often found associated with ash, cinders and railroad ties (creosote).
- On-site air monitoring surveys, using a photoionization detector revealed no responses above background levels.
- The overall Hazardous Ranking System (HRS) score for the site was low (2.58), however the direct contact score was significant due to the high population and the use of the site for residential and recreation uses.

NYSDEC delisted the site from their inventory of Inactive Hazardous Waste Sites, however, the site was considered by the NYSDEC for further study under the Hazardous

Substance Waste Disposal Study. The site remains on NYSDEC inventory of Hazardous Substance Disposal Sites, however it was not identified on the list of sites requiring remediation (Reference 3).

#### **4.2 HISTORICAL RECORDS**

In developing the site history, information on the site was obtained from the review of historical aerial photographs, historical railroad maps, Sanborn maps and the NYSDEC files. Based on these historical records for the site, the following was determined:

- The 1916 Sanborn Map (Figure 3-3) of the area shows the Buffalo Crushed Stone Company quarry operations on the property. There were several structures on or immediately adjacent to the subject site including a stone crusher, office, car shop (in the quarry), air compressor and scales.
- The 1929 aerial photograph of the site clearly shows a quarry and mining activities on the site.
- On the 1935 Sanborn Map (Figure 3-4), Buffalo Crushed Stone operated a stone quarry immediately adjacent to the site. The structures on or immediately adjacent to the subject property included a stone crusher, office, car shop (in quarry), air compressor and scales.
- The 1945 Railroad Track Map of the adjacent site indicates the presence of a bulk materials loading (stone from quarry) station, a small shop building, compressor, and tool shed.
- The 1950 Sanborn Map (Figure 3-5) of the site shows Buffalo Crushed Stone operating a stone quarry on the site. The structures on or immediately adjacent to the subject property included a stone crusher, office, and scales.
- The 1958 aerial photograph of the site shows vegetation covering the subject property, with filling and/of quarry activities confined to the southern portion of the quarry.
- The 1960 aerial photograph of the site shows filling activities or ground surface disturbances was present on the quarry property.
- The 1965 USGS topographic map of the site shows the rim of the quarry (See Figure 3-1).
- On the 1986 Sanborn Map of the quarry structures are not present and a notation on the drawing indicates that the quarry is being filled.

In summary, based on the historical information the subject property was used for a quarry and associated activities and was subsequently filled. Information and records as to the nature of the filling activities and the control exercised in the quality of the fill was not identified.





<b>DATA SOURCE (See Appendix B for Description)</b>	<b>Site Listed</b>	<b>Site Not Listed</b>
USEPA NPL List (National Priorities List)		X
USEPA CERCLIS List (Comprehensive Environmental Response, Compensation, and Liability Information System)		X
USEPA ERNS (Emergency Response Notification System)		X
USEPA TDS (Treatment, Disposal and Storage) Facilities		X
USEPA RCRA (Resource Conservation and Recovery Act) Generators		X
USEPA FINDS (Facility Index System) List		X
NYSDEC Underground Storage Tank List		X
NYSDEC Spill Sites (Active and Inactive)		X
NYSDEC Inactive Hazardous Waste Sites	X*	
NYSDEC Solid Waste Disposal Sites (Part 360)	X*	

\* Site formerly a listed Hazardous Waste Site (Site No. 915033) and the site is believed to have been placed under the oversight of the NYSDEC Division of Solid Waste. The NYSDEC is in the process of evaluating hazardous substance sites and the LaSalle Reservoir site is one of the sites being reviewed for listing. A copy of a NYSDEC information sheet on this site is presented in Appendix C.



**TABLE 4-2  
SUMMARY OF FACILITIES NEAR SITE  
HILL/CORDOVA STREET EXTENSION AREA, BUFFALO NEW YORK**

1. **NPL Sites.** There are no NPL (National Priority List) sites within a one-mile radius of the center of the site.
2. **CERCLIS Sites.** There is no CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) sites within a 0.5 miles radius of the center of the site.
3. **RCRA TSD Facilities** There are no RCRA TSD facilities within a 0.5 mile radius of site.
4. **RCRA Generators.** There are no Generators of Hazardous Waste adjacent to the Site.
5. **NYSDEC Inactive Hazardous Waste Sites.** There are no listed inactive hazardous waste sites within 0.5 miles of the site. The site and the adjacent properties (apartment complex and McCarthy Park are part of the LaSalle Reservoir Site which is a delisted hazardous waste site (Registry No. 915033).
6. **NYSDEC Solid Waste Disposal Sites.** There are no listed solid waste landfills is within (Part 360 permitted solid waste disposal site (landfill)) 0.5 miles of the property, however the property and the adjacent properties are believed to managed under the NYSDEC Division of Solid Waste.
7. **NYSDEC Spills and Leaking Underground Storage Tanks.** The computerized data base search in Appendix B lists the identified spills and leaking underground storage tanks. A review of the available data indicates no spills or releases that would be likely to impact the subject property.
8. **Underground Storage Tanks.** There are no registered underground storage tanks on the adjacent properties.
9. **Above Ground Storage Tanks.** There are no registered above ground storage tanks on the adjacent properties.



**TABLE 4-3  
SUMMARY OF TARGET ANALYTE LIST (TAL) CONCENTRATIONS  
IN SOIL SAMPLE (WS-11) OBTAINED DURING  
PHASE II INVESTIGATION AT SUBJECT SITE (Source: Reference 1)**

ANALYTE	CONCENTRATION (mg/kg, ppm)	
	Soil Sample (WS-11)	Range of Background Concentrations in Soil *
Aluminum	6,440	1,000 to 25,000
Antimony	ND	Unknown
Arsenic	6.5	0.1 to 45
Barium	559	15 to 600
Beryllium	ND	0.1 to 10
Cadmium	1.4	0.01 to 2
Calcium	29,700	10 to 35,000
Chromium	12.9	1 to 100
Cobalt	7.0 B	0.1 to 60
Copper	45.0	2 to 250
Iron	14,100	2,000 to 555,000
Lead	202	4 to 61
Magnesium	8,480	100 to 9,000
Manganese	235	10 to 5,000
Mercury	ND	0.1 to 0.2
Nickel	19.2	0.5 to 60
Potassium	800 B	100 to 43,000
Selenium	ND	0.1 to 12
Silver	ND	Unknown
Sodium	159 B	500 to 50,000
Thallium	ND	Unknown
Vanadium	22.7	1 to 300
Zinc	176	10 to 300
Cyanide	ND	Unknown

\* Source: NYSDEC, "Background Concentrations of 20 Elements in Soils with Special Regard for New York State."

Shading denotes concentrations in soil sample greater than range of background concentrations.

ND = Not Detected



**TABLE 4-4  
SUMMARY OF TARGET COMPOUND LIST (TCL) ORGANIC COMPOUNDS  
SOIL SAMPLE (WS-11) OBTAINED DURING  
PHASE II INVESTIGATION AT SUBJECT SITE  
(Source: Reference 1)**

COMPOUND	CONCENTRATION (mg/kg, ppm)	
	Soil Sample (WS-11)	Recommended Cleanup Guidelines *
Methylene Chloride	0.008 B	0.1
Acetone	0.043 B	0.2
Chloroform	0.003 J	0.3
Naphthalene	0.067 J	13.0
Acenaphthene	0.089 J	50
Dibenzofuran	0.084 J	6.2
Fluorene	0.092 J	50
Phenanthrene	0.860	50
Anthracene	0.280 J	50
Di-n-Butylphthalate	0.280 BJ	8.1
Fluoranthene	3.2	50
Pyrene	5.1	50
Benzo(a)anthracene	4.6	0.224
Chrysene	4.6	0.4
Bis(2-ethylhexyl)phthalate	0.910 B	50
Benzo(b)fluoranthrene	11.0 E	1.1
Benzo(b)pyrene	6.9 E	0.061
Indeno(1,2,3-cd)pyrene	7.2 E	3.2
Dibenz(a,h)anthracene	2.6	0.014
Benzo(g,h,i)perylene	5.4	50

\* Source: NYSDEC, "Determination of Soil Cleanup Objectives and Cleanup Levels", TAGM HWR-94-4046, Revised January 24, 1994.

Shading indicates concentration above the Recommended Cleanup Guideline value.

E = Estimated Value, B = Present in Blank, J = Detected below analytical detection level.



PARAMETER	CONCENTRATION (mg/l)	
	Well GW-2	NYSDEC Class GA Standard
2-Chlorophenol	0.001 J	0.001
Bis(2-ethylhexyl)phthalate	0.003 BJ	0.050
Aluminum	0.129 B	NS
Barium	0.0532 B	1.0
Calcium	159	NS
Iron	0.574	0.3
Magnesium	103	35
Manganese	0.0753	0.3
Potassium	16.5	NS
Sodium	21.1	20
Zinc	0.0246	0.3

NS = No Class GA Standard

Shading denotes concentrations above Class GA Standard.



## 5.0 SITE RECONNAISSANCE

The site reconnaissance was conducted on June 14, 1995, by Frontier Technical Associates, Inc. The purpose of the site reconnaissance was to inspect the surface of the property, identify potential environmental concerns, and locate test boring and soil sampling locations.

### 5.1 LAND SURFACE INSPECTION

The property was covered with weeds, brush, trees and visible fill materials during the site reconnaissance. Vegetation in the areas covered with crushed stone was limited. Refuse, debris and litter was present on the some of the surface. It appears that this property has been used for the unauthorized disposal of miscellaneous refuse and tires. The property is not secure (no fencing) and is assessable through numerous trails and paths, and the access road.

FTA's observations regarding the subject property during the site reconnaissance conducted on June 14, 1995 are summarized as follows:

1. Underground Storage Tanks - No indications of underground storage tanks were observed.
2. Above Ground Storage Tanks - No above ground storage tanks were observed.
3. Drums - No drums were observed on the site.
4. Bulk Materials - Construction and demolition debris materials (bricks, sand and soils) were observed on the adjacent railroad property but were not observed on the subject property.
5. Hazardous Substances and Petroleum - No storage, treatment or disposal of hazardous substances or petroleum products were identified.
6. Lagoons, Ponds and Pits - No lagoons, ponds, or pits were present.
7. PCBs - No transformers were observed on the subject property.

8. Solid Waste Disposal - Significant evidence of solid waste disposal was identified on the site as the former quarry is essentially completely filled in. Filling activities have occurred over all portions of the site within the rim of the former quarry.
9. Wastewater, Groundwater Wells and Septic Systems - There is no evidence of wastewater treatment or disposal on the property. No groundwater wells were observed, although the E&E Phase II report identifies a well on or adjacent to the site it was not located.

## 5.2 QUARRY ACTIVITIES

The site has been used as quarry prior to 1916 and up to approximately 1951 to produce crushed limestone.

## 5.3 FILLING ACTIVITIES

Detailed information on the filling activities was not found. The filling activities apparently began around 1951 and and ceased prior to 1972. The quarry was filled to approximately the original grade.

## 5.4 ADJACENT PROPERTIES

FTA's observations from a property line survey regarding the adjacent properties during the site reconnaissance on June 14, 1995 are summarized below:

1. Underground Storage Tanks - No underground storage tanks were noted.
2. Above Ground Storage Tanks - No above ground storage tanks were observed.
3. Drums - Four empty drums were observed outside along the Conrail right-of-way.
4. Bulk Materials - Outside storage and/or disposal of debris was observed along the Conrail right-of-way.
5. Hazardous Substances and Petroleum - No hazardous substances or petroleum storage or usage was observed at the adjacent properties.
6. Lagoons, Ponds and Pits - No lagoons, ponds or pits were observed.

7. PCBs - There is a possibility of pole-mounted PCB transformer on the adjacent Conrail right-of-way.
8. Stained Soil or Stressed Vegetation - Direct access to the adjacent sites would be required to properly assess the presence of stained soil and stressed vegetation.
9. Solid Waste Disposal - See Bulk Material discussion.
10. Wastewater, Groundwater Wells and Septic Systems - No wastewater discharge, groundwater monitoring wells or septic systems were observed on adjacent properties. The E&E Phase II Investigation identifies several wells surrounding the delisted hazardous waste site. One of these wells (GW-2) was on or near the southwest corner of the site, however it was not found during the site reconnaissance.





## **SECTION 6**

### **SUBSURFACE INVESTIGATION AND ANALYTICAL TESTING**

#### **6.1 SCOPE**

The Environmental Site Assessment included subsurface exploration and soil sampling and analysis. Soil borings were drilled at seven locations across the site as shown on Figure 3-2. The purpose of the soil borings was to evaluate the subsurface materials, determine the depth to bedrock and obtain soil samples for analysis.

#### **6.2 SOIL BORINGS**

Soil borings were drilled at the locations shown on Figure 3-2. The drilling occurred between June 14, 1995 and June 19, 1995. The drilling was performed by SJB Services under subcontract and direction of Frontier Technical Associates, Inc. Boring logs for each of the holes are presented in Appendix D. The borings were drilled through the fill materials to the bottom of the former quarry (top of bedrock). Table 6-1 summarizes the depth of each of the borings and the materials found. On the average there was approximately 44 feet of fill materials and the approximate volume of fill materials beneath the subject property is 350,000 cubic yards. Most of the fill materials were dry (unsaturated), however there appears to be approximately zero to two feet of water above the top of bedrock (bottom of the fill).

The soil borings generally consisted of fill materials (sand, gravel, broken rock, clay, silt, cinders, debris, wood, ash, slag, glass, paper, tar, metal, and bricks). The fill materials appear to represent general filling of the quarry to establish grade, disposal of quarry waste rock and overburden, and disposal of construction and demolition debris. From an environmental perspective, these fill materials generally do not represent a significant environmental concern, however the filling activities have occurred over many years on a relatively large site, and it is possible that the seven borings did not intercept all potential environmental contaminants in locations not drilled. Future development of the site should

factor in the type, thickness and possible contamination of fill present. These fill materials may be inappropriate for foundations or residential properties.

### 6.3 SAMPLING AND ANALYSIS

In accordance with the requested scope of services, soil samples were obtained from the borings for analytical testing. Sample locations were selected by FTA based on observations during the site reconnaissance and past uses of the property, and the visual characteristics of the recovered samples. Sample locations are shown on Figure 3-2. Soil samples were collected directly from the split spoon sampler and placed directly into glass sample containers. Standard chain-of-custody procedures were used. Analytical services were provided by General Testing Corporation under subcontract to Frontier Technical Associates, Inc.

The soil samples were obtained from the following borings and depths:

<u>Boring No.</u>	<u>Depth (feet)</u>
B-1	Composite from 4' to 41' (interval at 9 to 11' not analyzed due to insufficient sample recovery).
B-3	Composite from 4' to 41'
B-4	Sample Interval 44' to 46' (Samples below the groundwater).
B-7	Composite from 14' to 45.8'

The vertical composite samples (B-1, B-3 and B-7) are designed to identify contamination that may have been placed in the various layers of the fill material as it was placed. The sample from boring B-4 is designed to sample the soil below the groundwater to identify pollutants that are potentially being transported in the groundwater along the bedrock/fill interface.

### 6.4 ANALYTICAL RESULTS

The soil samples were analyzed for the Target Compound List (TCL) volatile parameters, TCL semi-volatile parameters, TCL pesticides/PCBs and Target Analyte List

(TAL) parameters (metals and cyanide) and Total Petroleum Hydrocarbons. There were no TCL pesticides or PCBs (polychlorinated biphenyls) in the soil samples analyzed.

The result of the metals analysis of the soil samples are summarized in Tables 6-2, 6-3 and the laboratory report is presented in Appendix E. The concentrations of the various metals present do not represent indications of contamination with hazardous waste, however, several of the "toxic" metals are present in concentrations above typical background levels (lead, mercury and zinc). The concentrations of lead, mercury and zinc although elevated above background levels are probably not at concentrations that the NYSDEC would require cleanup.

The detectable concentrations of TCL organic compounds are summarized in Table 6-3. Concentrations of Polyaromatic Hydrocarbons (PAH's) in soil from boring B-1 were greater than the NYSDEC recommended cleanup criteria. These PAH compounds are associated with tars (roofing tar, road tar, coal tar), creosote, ash and cinders and are often found where these materials are present.

Total petroleum hydrocarbons (TPH) was present in three of the four samples tested (See Table 6-3). Although NYSDEC does not have formal cleanup criteria based on TPH, the concentrations detected in two of the samples (B-1 and B-7) are strong indications of the presence of petroleum in the fill.



**TABLE 6-1**  
**SUMMARY OF SOIL BORINGS AT HILL/CORDOVA STREET EXTENSION AREA**

Soil Boring No.	Fill Thickness	Fill Materials	Depth to Groundwater	Bedrock Encountered
B-1	43.1	Sand, brick, rock, cinders, silt, clay, wood debris, ash, miscellaneous fill*	42.3'	Yes
B-2	42.9	Clay, silt, black cinders, bricks, trace glass, organic debris, wood, slag, sand, gravel, miscellaneous fill*	Dry	Yes
B-3	43.0	Silt, clay, sand, gravel, ash, paper, tar, miscellaneous fill*	42.8	Yes
B-4	45.7	Silt, gravel, cinders, clay, sand, wood, glass, metal, miscellaneous fill*	43.8'	Yes
B-5	43.9	Silt, clay, sand, gravel, glass, wood, cinders, ash, metal, miscellaneous fill*	Dry	Yes
B-6	44.3	Silt, ash, gravel, clay, sand, miscellaneous fill*	Dry	Yes
B-7	45.8	Silt, gravel, sand, clay, brick, glass, wood, metal, peat, wood, miscellaneous fill*	45.8'	Yes

\* Miscellaneous fill is fill material that can not be readily identified based on visual appearance.



**TABLE 6-2  
SUMMARY OF DETECTABLE TCL METALS CONCENTRATIONS IN SOIL  
QUARRY FILL MATERIALS**

Parameter	CONCENTRATION (mg/kg)(ppm)				
	BORING LOCATION				Range of Background Concentrations in Soils **
	B-1	B-3	B-4	B-7	
Aluminum	6,750	4,150	3,390	6,360	1,000 to 25,000
Antimony*	ND	12.5	ND	14.1	Unknown
Arsenic*	24.5	14.3	15	17.3	0.1 to 45
Barium	516	262	29.8	363	15 to 600
Beryllium*	ND	ND	ND	2.09	0.1 to 10
Cadmium*	2.61	ND	ND	2.14	0.1 to 10
Calcium	31,400	69,200	119,000	26,700	10 to 35,000
Chromium*	28.9	25.9	9.47	60.2	1 to 100
Cobalt	7.31	ND	7.66	9.12	0.1 to 60
Copper*	146	53.9	13.4	201	2 to 250
Iron	18,700	18,200	9,350	21,200	2,000 to 550,000
Lead*	246	89.0	21.2	251	4 to 61
Magnesium	7,570	6,670	74,000	2,980	100 to 9,000
Manganese	374	3,740	151	180	10 to 5,000
Mercury*	0.726	0.284	ND	ND	0.001 to 0.2
Nickel*	50.6	15.6	16.9	53.2	0.5 to 60
Potassium	795	570	1,530	716	100 to 43,000
Selenium*	0.646	1.59	1.01	1.49	0.01 to 12
Silver*	ND	ND	ND	ND	Unknown
Sodium	264	214	209	324	500 to 50,000
Thallium	3.12	3.66	1.41	ND	Unknown
Vanadium	23.7	34.7	8.78	41.3	1 to 300
Zinc*	292	274	11.6	408	10 to 300

\* Hazardous Substance, ND = Not Detected

\*\* Source: NYSDEC, "Background Concentrations of 20 Elements in Soils with Special Regard for New York State.

Shading denotes concentrations in soil sample greater than range of background concentrations.



**TABLE 6-3  
SUMMARY OF DETECTABLE TCL ORGANIC COMPOUNDS AND CYANIDE  
IN QUARRY FILL MATERIALS**

Parameter	Concentration (mg/kg)				Recommended Cleanup Standard**
	B-1	B-3	B-4	B-7*	
Cyanide	ND	36.9	ND	ND	Varies
Total Petroleum Hydrocarbons	1,110	226	ND	8,960	1,000 typ. ***
Acetone	0.08	0.029	0.05	ND	0.2
Acenaphthene	1.1	ND	ND	ND	41
Anthracene	3.2	ND	ND	ND	50
Benzo(a)anthracene	3.6	ND	ND	ND	0.224
Benzo(a)pyrene	2.0	ND	ND	ND	0.061
Benzo(b)fluoranthene	3.9	ND	ND	ND	1.1
Benzo(g,h,i)perylene	0.49	ND	ND	ND	50
Benzo(k)fluoranthene	1.4	ND	ND	ND	1.1
Di-n-butylphthalate	5.2	ND	2.9	ND	8.1
Indeno(1,2,3-cd)pyrene	0.54	ND	ND	ND	3.2
Chrysene	4.0	ND	ND	ND	0.4
Dibenzofuran	0.62	ND	ND	ND	6.2
Bis(2-ethylhexyl) phthalate	0.93	ND	ND	ND	50
Fluoranthene	11.0	0.44	ND	ND	50
Fluorene	1.3	ND	ND	ND	50
Phenanthrene	3.6	0.65	ND	ND	50
Pyrene	12.0	0.85	ND	ND	50
Butyl benzyl phthalate	ND	4.2	ND	ND	50

ND = Not Detected

\* Analytical detections levels increased due to presence of matrix interferences associated with the total petroleum hydrocarbons present in the sample.

\*\* Source: NYSDEC "Determination of Soil Cleanup Objectives and Cleanup Levels", TAGM HWR-94-4046, Revised January 24, 1994.

\*\*\* Based on Engineering Judgement and practices in other states.



## 7.0 FINDINGS AND CONCLUSIONS

In conclusion, in accordance with the scope and limitations of ASTM Practice E 1527 and the scope and provisions of BURA Contract 1272-19, FTA has performed an Environmental Site Assessment of the Hill/Cordova Street Extension property in Buffalo, New York. Exceptions to, deletions from and limitations to this practice are described in Section 2.2 of this report and the qualifications of the individuals performing this assessment are presented in Appendix F. This assessment has revealed the following environmental conditions in connection with the property:

- The disposal of approximately 350,000 cubic yards of miscellaneous fill materials over an approximate 20 year period.
- The presence of lead, mercury and zinc in one or more of the samples in concentrations greater than the range of typical background levels.
- The presence of Total Petroleum Hydrocarbons in three of the four samples is an indication of possible disposal of oils and/or other petroleum products in the fill materials.
- The visible presence of tar in boring B-3.
- The presence of PAH compounds in the fill materials.
- Due to the accessibility of the site, the proximity to industries and the remote nature of the site, a possibility of undetected contamination may be present.

Frontier Technical Associates recommends that an engineering assessment (environmental and geotechnical) be made of the acceptability of the various fill materials on site relative to the proposed uses of the property. Differential settlement of structures may occur as the fill materials decompose and/or are compacted. Further investigation of records is recommended to determine the sources of fill materials used to fill the quarry. FTA recommends that a copy of this report be provided to the NYSDEC and the NYSDEC be consulted regarding development of this site as it is listed on their inventory of Hazardous Substance Sites. If the development is residential, then the use of a barrier layer

of soil to minimize contact with the fill materials is recommended. Structures should incorporate subsurface venting and other engineering controls in the design to vent possible methane gas associated with the decay of the organic material in the fill.





## 8.0 REFERENCES

1. Ecology and Environment Engineering, P.C., "Engineering Investigations at Inactive Hazardous Waste Sites in the State of New York, Phase II Investigations, LaSalle Reservoir Site, Site No. 915033", April 1991, Prepared for the NYSDEC, Division of Hazardous Waste Remediation.
2. RECRA Environmental, Inc., "Engineering Investigations at Inactive Hazardous Waste Site in the State of New York Phase I Investigations, LaSalle Reservoir, Buffalo, Erie County, New York, Site #905033", Prepared for the NYSDEC Division of Solid and Hazardous Waste.
3. NYSDEC, "Report on Hazardous Substance Waste Disposal Site Study," Final Report, June 13, 1995.



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX A**

**HISTORICAL AERIAL PHOTOGRAPHS**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive. Buffalo, New York 14221 (716) 634-2293

1929

Main St.

LaSalle Ave.

Concordia St.

Amherst St.



1929 AERIAL PHOTOGRAPH

Photo No. 8226-222

ET-511

Source: SUNY at Buffalo - S & E Library Map Room

8/11/2008

ARF-3V-11



SUBJECT PROPERTY

1958 AERIAL PHOTOGRAPH  
Source: National Aerial Photographs ET-511



Main St.

1960

1960



1960 AERIAL PHOTOGRAPH	
Photo No.	ET-511
Source: Erie County Environment & Planning	



SUBJECT PROPERTY



1981 AERIAL PHOTOGRAPH  
Source: National Aerial Photographs ET-511



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX B**

**COMPUTER SEARCH DOCUMENTATION**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive Buffalo New York 14221 (716) 634-2293



**Environmental  
Data  
Resources, Inc.**

Creators of Toxichack®

**The EDR-Radius Map™  
Report**

**BURA - Conrail Property  
Manhattan Avenue  
Buffalo, NY 14214**

**Inquiry Number: 062012.5r**

**November 28, 1994**

***The Source  
For Environmental  
Risk Management  
Data***

3530 Post Road  
Southport, Connecticut 06490

**Nationwide Customer Service**

Telephone: 1-800-352-0050  
Facsimilie: 1-800-231-6802



**FEDERAL NON-ASTM RECORDS:**

**FINDS:** Facility Index System

Source: EPA/NTIS

Telephone: 800-908-2493

FINDS: Facility Index System. FINDS contains both facility information and "pointers" to other sources that contain more detail. These include: RCRIIS, PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]), CERCLIS, DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), FRDS (Federal Reporting Data System), SIA (Surface Impoundments), CICIS (TSCA Chemicals in Commerce Information System), PADS, RCRA-J (medical waste transporters/disposers), TRIS and TSCA.

Date of Government Version: 09/14/93

Date of Next Scheduled Update: 01/21/95

**PADS:** PCB Activity Database System

Source: EPA

Telephone: 202-260-3992

PADS: PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/17/94

Date of Next Scheduled Update: 12/26/94

**RAATS:** RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-260-2810

RAATS: RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA.

Date of Government Version: 04/06/94

Date of Next Scheduled Update: 01/07/95

**TRIS:** Toxic Chemical Release Inventory System

Source: EPA/NTIS

Telephone: 202-260-2320

TRIS: Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/91

Date of Next Scheduled Update: 01/20/95

**TSCA:** Toxic Substances Control Act

Source: EPA/NTIS

Telephone: 202-260-1444

TSCA: Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site. USEPA has no current plan to update and/or re-issue this database.

Date of Government Version: 05/15/86

Date of Next Scheduled Update: 02/10/95

**HMIRS:** Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation

Telephone: 202-366-4555

HMIRS: Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/93

Date of Next Scheduled Update: 02/07/95

**NPL LIENS:** Federal Superfund Liens

Source: EPA

Telephone: 202-260-3733

NPL LIENS: Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91

Date of Next Scheduled Update: 01/25/95

## STATE OF NEW YORK ASTM RECORDS:

### LUST: Spills Information Database

Source: Department of Environmental Conservation

Telephone: 518-457-2462

LUST: Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 06/15/94

Date of Data Arrival at EDR: 06/22/94

Date Made Active at EDR: 07/05/94

Elapsed ASTM days: 13

### SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Source: Department of Environmental Conservation

Telephone: 518-457-0747

SHWS: State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/30/94

Date of Data Arrival at EDR: 07/08/94

Date Made Active at EDR: 09/17/94

Elapsed ASTM days: 71

### SWF/LS: Facility Register

Source: Department of Environmental Conservation

Telephone: 518-457-2051

SWF/LS: Solid Waste Facilities/Landfill Sites. SWF/LS type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Section 2004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 03/01/94

Date of Data Arrival at EDR: 04/04/94

Date Made Active at EDR: 04/20/94

Elapsed ASTM days: 16

### UST: Petroleum Bulk Storage (PBS, CBS, MOSF) Database

Source: Department of Environmental Conservation

Telephone: 518-457-4351

UST: Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 06/27/94

Date of Data Arrival at EDR: 06/30/94

Date Made Active at EDR: 08/17/94

Elapsed ASTM days: 48

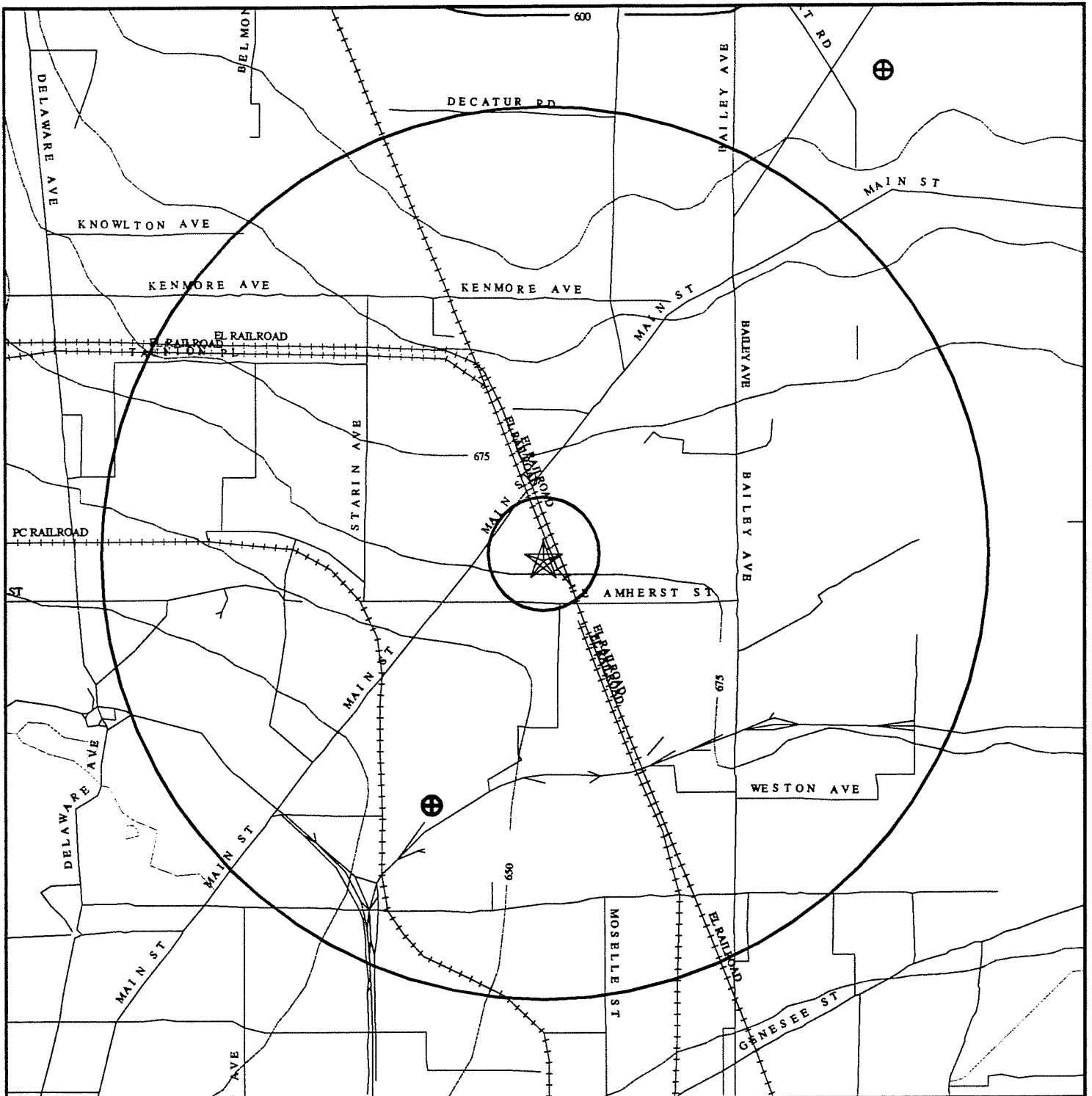
## Historical and Other Database(s)

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

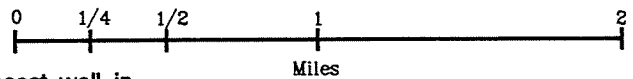
### Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

TOPOGRAPHIC MAP - 062012.5r - Frontier Technical Assoc.



Source: US Geological Survey 1-Degree Digital Elevation Model  
 Compiled 09/15/92



- Major Roads
- Contour lines (25 foot interval unless otherwise shown)
- Waterways

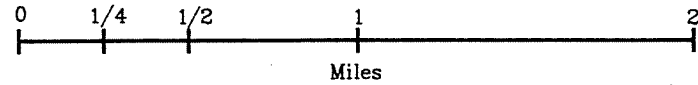
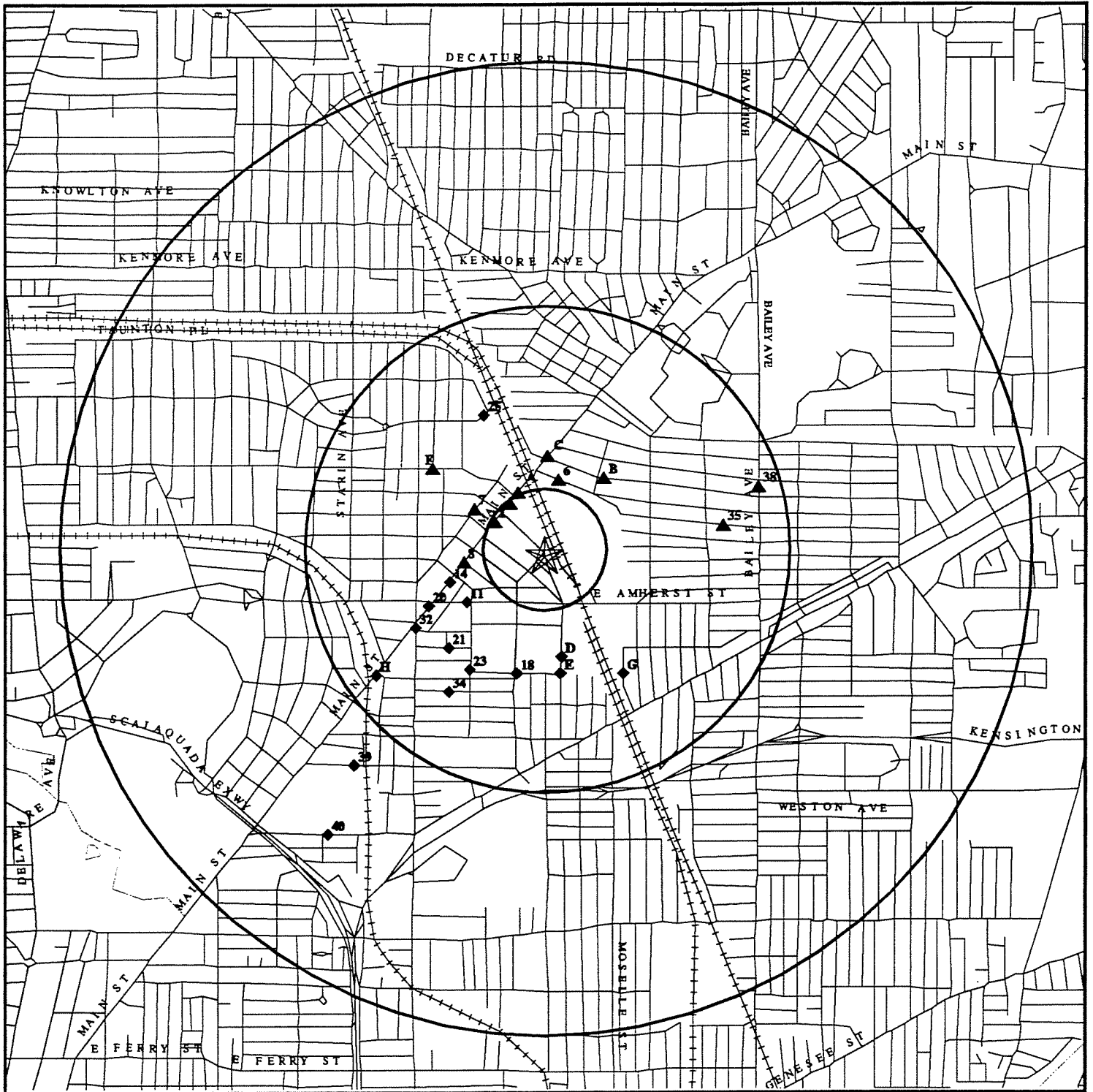
- Indicates closest well in quadrant to target property.
- Indicates closest public water supply well(s) to target property.



TARGET PROPERTY: BURA - Conrail Property  
 ADDRESS: Manhattan Avenue  
 CITY/STATE/ZIP: Buffalo NY 14214  
 LAT/LONG: 42.9431 / 78.8293

CUSTOMER: Frontier Technical Assoc.  
 CONTACT: Dave Harty  
 INQUIRY #: 062012.5r  
 DATE: November 28, 1994

**OVERVIEW MAP - 062012.5r - Frontier Technical Assoc.**



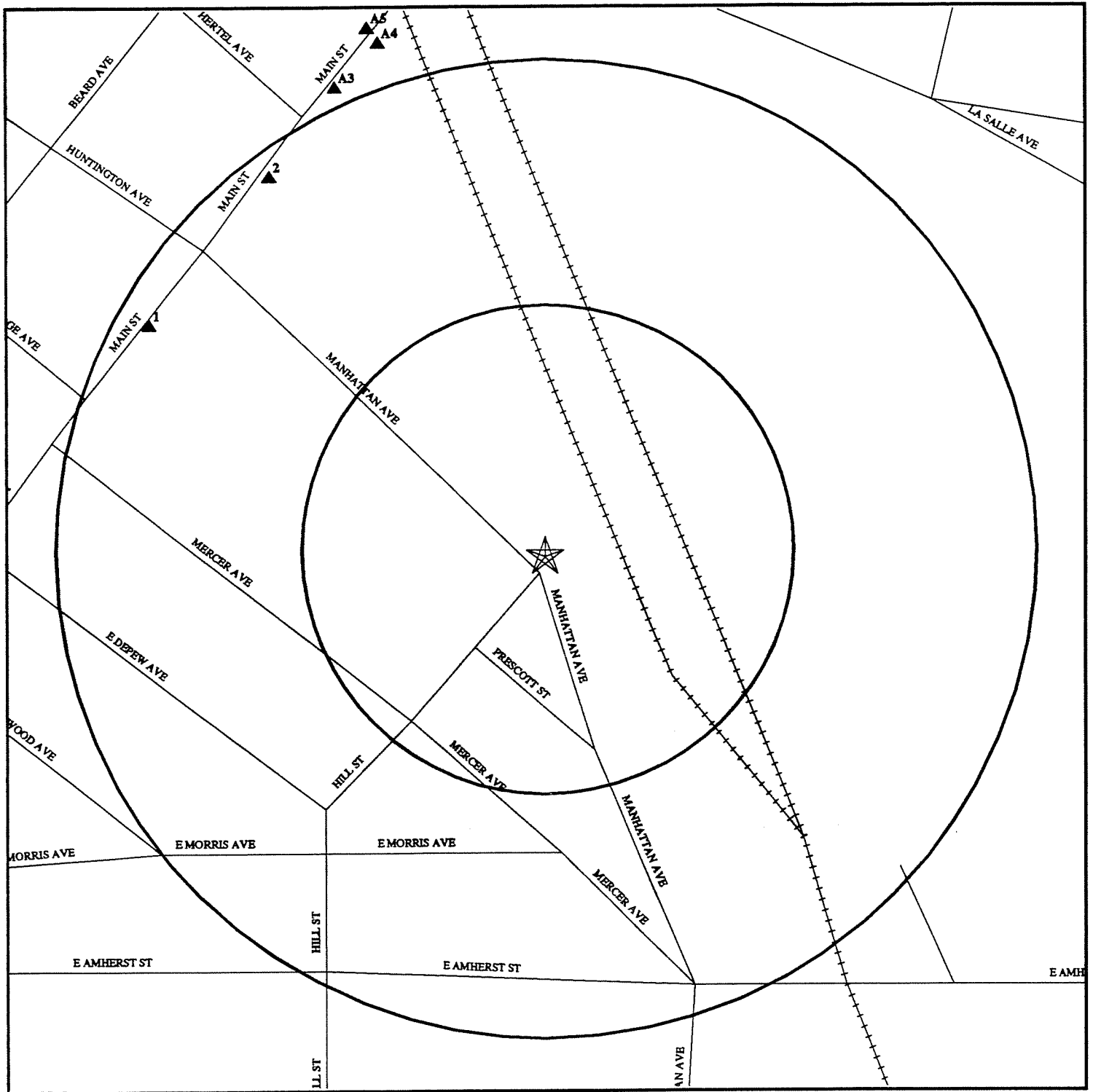
- ★ - Indicates TARGET PROPERTY.
- ▲ - Indicates environmental elements at elevations higher than or equal to the target property.
- ◆ - Indicates environmental elements at elevations lower than the target property.
- ▲ (with vertical line) - Coal Gasification Sites (if requested)
- - National Priority List Sites



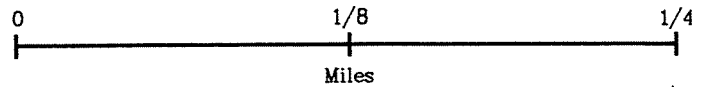
**TARGET PROPERTY:** BURA - Conrail Property  
**ADDRESS:** Manhattan Avenue  
**CITY/STATE/ZIP:** Buffalo NY 14214  
**LAT/LONG:** 42.9431 / 78.8293

**CUSTOMER:** Frontier Technical Assoc.  
**CONTACT:** Dave Harty  
**INQUIRY #:** 062012.5r  
**DATE:** November 28, 1994

DETAIL MAP - 062012.5r - Frontier Technical Assoc.



- ★ - Indicates TARGET PROPERTY.
- ▲ - Indicates environmental elements at elevations higher than or equal to the target property.
- ◆ - Indicates environmental elements at elevations lower than the target property.
- ▲ (with triangle) - Coal Gasification Sites (if requested)
- (with triangle) - National Priority List Sites



TARGET PROPERTY: BURA - Conrail Property  
 ADDRESS: Manhattan Avenue  
 CITY/STATE/ZIP: Buffalo NY 14214  
 LAT/LONG: 42.9431 / 78.8293

CUSTOMER: Frontier Technical Assoc.  
 CONTACT: Dave Harty  
 INQUIRY #: 062012.5r  
 DATE: November 28, 1994

MAP FINDINGS SUMMARY SHOWING  
ALL SITES

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
NPL		1.500	0	0	0	0	0	0
RCRIS-TSD		1.500	0	0	0	1	1	2
State Haz. Waste		1.500	0	0	0	0	1	1
CERCLIS		1.000	0	0	0	0	NR	0
State Landfill		1.000	0	0	0	0	NR	0
LUST		1.000	0	0	1	9	NR	10
UST		0.625	0	1	5	4	NR	10
RAATS		TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.625	0	2	6	8	NR	16
RCRIS Lg. Quan. Gen.		0.625	0	0	4	3	NR	7
HMIRS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

\* Sites may be listed in more than one database

MAP FINDINGS SUMMARY SHOWING  
ONLY SITES HIGHER THAN OR THE SAME ALTITUDE AS TP

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
NPL		1.500	0	0	0	0	0	0
RCRIS-TSD		1.500	0	0	0	0	0	0
State Haz. Waste		1.500	0	0	0	0	0	0
CERCLIS		1.000	0	0	0	0	NR	0
State Landfill		1.000	0	0	0	0	NR	0
LUST		1.000	0	0	1	3	NR	4
UST		0.625	0	1	2	2	NR	5
RAATS	TP	TP	NR	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.625	0	2	5	4	NR	11
RCRIS Lg. Quan. Gen.		0.625	0	0	3	0	NR	3
HMIRS	TP	TP	NR	NR	NR	NR	NR	0
PADS	TP	TP	NR	NR	NR	NR	NR	0
ERNS	TP	TP	NR	NR	NR	NR	NR	0
FINDS	TP	TP	NR	NR	NR	NR	NR	0
TRIS	TP	TP	NR	NR	NR	NR	NR	0
NPL Liens	TP	TP	NR	NR	NR	NR	NR	0
TSCA	TP	TP	NR	NR	NR	NR	NR	0
Coal Gas		1.000	0	0	0	0	NR	0

TP = Target Property

NR = Not Requested at this Search Distance

\* Sites may be listed in more than one database

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

1				BENNETT HIGH SCHOOL 2885 MAIN ST BUFFALO, NY 14214	RCRIS-SQG FINDS	1000548582 NYD980761571	
---	--	--	--	--	--------------------	----------------------------	--

RCRIS: Not Reported

Other Pertinent Environmental Activity Identified at Site:  
facility is involved with pesticide/toxic substances production

2				KEY TECH FINISHING 2929 MAIN ST BUFFALO, NY 14214	RCRIS-SQG FINDS UST	1000259758 NYD002112399	
---	--	--	--	---	---------------------------	----------------------------	--

RCRIS:

Owner: JACK A KARET  
(212) 555-1212

Contact: RONALD HELMS  
(716) 832-1232

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D002	Not reported	Notification	F001	Not reported	Notification
F002	Not reported	Notification	F006	Not reported	Notification
F007	Not reported	Notification	F008	Not reported	Notification
F009	Not reported	Notification	F019	Not reported	Notification
F024	Not reported	Notification	P029	Not reported	Notification
P098	Not reported	Notification	P099	Not reported	Notification
P106	Not reported	Notification			

Other Pertinent Environmental Activity Identified at Site:  
facility has an emission permit under the Clean Air Act  
civil judicial and administrative enforcement cases against facility

UST:

Facility ID:	9-000002	Total Tanks:	2
Contact Name:	Not reported	Telephone:	(716) 832-1232
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	19930708	Cert Exp Date:	Not reported
Capacity:	850	Product:	Not reported
Installation date:	10/66	Tank Int Prot:	NONE
Piping Type:	NOT DEFINED	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	FARM		
Tank ID:	00003		
Tank Type:	FIBERGLASS REINFORCED PLASTIC (FRP)		
Tank Status:	IN SERVICE		
Tank Location:	ABOVEGROUND		
Piping Location:	NONE		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE		
Piping Sec Containment:	NONE		



MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

KEY TECH FINISHING (Continued)

1000259758

Facility ID:	9-000002	Total Tanks:	2
Contact Name:	Not reported	Telephone:	(716) 832-1232
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	19930708	Cert Exp Date:	Not reported
Capacity:	370	Product:	Not reported
Installation date:	09/55	Tank Int Prot:	NONE
Piping Type:	NOT DEFINED	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	FARM		
Tank ID:	00002		
Tank Type:	FIBERGLASS REINFORCED PLASTIC (FRP)		
Tank Status:	IN SERVICE		
Tank Location:	ABOVEGROUND		
Piping Location:	NONE		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE		
Piping Sec Containment:	NONE		

Facility ID:	9-000002	Total Tanks:	2
Contact Name:	Not reported	Telephone:	(716) 832-1232
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	19930708	Cert Exp Date:	Not reported
Capacity:	370	Product:	Not reported
Installation date:	09/55	Tank Int Prot:	NONE
Piping Type:	NOT DEFINED	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	ACTIVE FACILITY		
Facility Type:	FARM		
Tank ID:	00004		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	TANK CONVERTED TO NON-REGULATED USE		
Tank Location:	ABOVEGROUND		
Piping Location:	NONE		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE		
Piping Sec Containment:	NONE		

MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site

Database(s)

EDR ID Number  
EPA ID Number

KEY TECH FINISHING (Continued)

1000259758

Facility ID: 9-221430  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 05/29/92  
 Capacity: 15000  
 Installation date: 00/75  
 Piping Type: STEEL/IRON  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 1  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: IN SERVICE  
 Tank Location: ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE  
 Piping Location: ABOVEGROUND/UNDERGROUND COMBINATION  
 Leak Detection: NONE/NONE  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE/NONE  
 Piping Sec Containment: Not reported

Total Tanks: 2  
 Telephone: (716) 832-1232  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970529  
 Product: NOS 1,2, OR 4 FUEL OIL  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: Not reported

Facility ID: 9-221430  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 05/29/92  
 Capacity: 15000  
 Installation date: 00/00  
 Piping Type: STEEL/IRON  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 2  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: IN SERVICE  
 Tank Location: ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE  
 Piping Location: ABOVEGROUND  
 Leak Detection: NONE/NONE  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE/NONE  
 Piping Sec Containment: Not reported

Total Tanks: 2  
 Telephone: (716) 832-1232  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970529  
 Product: NOS 1,2, OR 4 FUEL OIL  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: Not reported

A3 MONRO MUFFLER BRAKE #51  
 NNW 2955 MAIN ST  
 1/4-1/2 BUFFALO, NY 14214  
 Higher

RCRIS-SQG 1000366081  
 FINDS NYD982740490

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EPA ID Number	EDR ID Number
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MONRO MUFFLER BRAKE #51 (Continued)

1000366081

RCRIS:

Owner: MONRO MUFFLER BRAKE  
(212) 555-1212

Contact: GEORGE JARRETT  
(716) 427-2280

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	D001	Not reported	Notification
X001	Not reported	Notification			

A4  
NNW  
1/4-1/2  
Higher

WILLIAMS ADVANCED MATERIALS  
2978 MAIN ST  
BUFFALO, NY 14214

FINDS 1000283898  
RCRIS-LQG NYD982739104  
UST

RCRIS:

Owner: BRUSH WELLMAN CORP  
(212) 555-1212

Contact: LEE OMAN  
(716) 837-1000

Waste	Quantity	Info Source	Waste	Quantity	Info Source
F001	Not reported	Notification	F002	Not reported	Notification
F003	Not reported	Notification	F006	Not reported	Notification

UST:

Facility ID: 9-000141  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 19930712  
 Capacity: 1500  
 Installation date: 06/86  
 Piping Type: NOT DEFINED  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: MANUFACTURING  
 Tank ID: 001  
 Tank Type: FIBERGLASS COATED STEEL  
 Tank Status: CLOSED-REMOVED  
 Tank Location: ABOVEGROUND  
 Piping Location: ABOVEGROUND  
 Leak Detection: CONCRETE PAD W/CHANNELS  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: VAULT  
 Piping Sec Containment: NONE

Total Tanks: 2  
 Telephone: (716) 837-1000  
 Lic Issue Date: Not reported  
 Cert Exp Date: Not reported  
 Product: Not reported  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: 10/92

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EPA ID Number	EDR ID Number
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WILLIAMS ADVANCED MATERIALS (Continued)

1000283898

Facility ID:	9-000141	Total Tanks:	2
Contact Name:	Not reported	Telephone:	(716) 837-1000
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	19930712	Cert Exp Date:	Not reported
Capacity:	5000	Product:	Not reported
Installation date:	07/90	Tank Int Prot:	Not reported
Piping Type:	NOT DEFINED	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	ACTIVE FACILITY		
Facility Type:	MANUFACTURING		
Tank ID:	002		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	CLOSED-REMOVED		
Tank Location:	ABOVEGROUND		
Piping Location:	Not reported		
Leak Detection:	Not reported		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	VAULT		
Piping Sec Containment:	Not reported		

Facility ID:	9-000141	Total Tanks:	2
Contact Name:	Not reported	Telephone:	(716) 837-1000
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	19930712	Cert Exp Date:	Not reported
Capacity:	5000	Product:	Not reported
Installation date:	07/90	Tank Int Prot:	NONE
Piping Type:	NOT DEFINED	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	MANUFACTURING		
Tank ID:	002		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	IN SERVICE		
Tank Location:	ABOVEGROUND		
Piping Location:	ABOVEGROUND		
Leak Detection:	CONCRETE PAD W/CHANNELS		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	VAULT		
Piping Sec Containment:	NONE		



MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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KUBERKA - ODOR (Continued)

S100668510

LUST:

Facility ID:	8602658	Spill Date:	19860716
First notified:	REGIONAL OFFICE	Material class:	UNKNOWN
Material spilled:	UNKNOWN	Release QTY:	0.00
Water body affected:	Not reported	Origin:	PRIVATE DWELLING
Resource affected:	GROUNDWATER	Notifier:	AFFECTED PERSONS
Basin of spill:	0	Project ID:	0
Cleaner:	NO ACTION TAKEN	Date cleaned:	19861204
Initiated clean up:	Not reported	Close date:	19861204
Last inspection:	Not reported	Investigator:	Not reported
PBS #:	Not reported	UST Trust Fund:	Not reported
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	OTHER		
Emergency response:	Not reported		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

8  
West  
1/4-1/2  
Higher

ST. FRANCIS HOSPITAL OF BUFFALO N.Y.  
2787 MAIN STREET  
BUFFALO, NY 14214

RCRIS-SQG 1000114475  
FINDS NYD074044603

RCRIS:

Owner: ST. MARY OF THE ANGELS CONVENT  
(212) 555-1212

Contact: JOSEPH WARTINGER  
(716) 837-4200

Waste	Quantity	Info Source
X002	Not reported	Notification

B9  
NE  
1/4-1/2  
Higher

PUBLIC SCHOOL 63 CAMPUS NORTH  
120 MINNESOTA AVE  
BUFFALO, NY 14214

UST U001328695  
N/A

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EPA ID Number	EDR ID Number
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PUBLIC SCHOOL 63 CAMPUS NORTH (Continued)

U001328695

UST:

Facility ID:	9-425354	Total Tanks:	1
Contact Name:	Not reported	Telephone:	(716) 836-9965
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/02/93	Cert Exp Date:	19971214
Capacity:	10000	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	01/73	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	09/93	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	1		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	IN SERVICE		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	TANK AUDITOR		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		

B10  
NE  
1/4-1/2  
Higher

SCHOOL 63 - CAMPUS NORTH  
120 MINNESOTA AVE  
BUFFALO, NY 14214

FINDS 1000447087  
RCRIS-LQG NYD986912608

RCRIS:

Owner: BUFFALO SCHOOL DIST  
(212) 555-1212  
  
Contact: DAVID BAKER  
(716) 842-3269

Waste	Quantity	Info Source	Waste	Quantity	Info Source
X002	Not reported	Notification	X003	Not reported	Notification

11  
SW  
1/4-1/2  
Lower

FIRST MART  
72 EAST AMHERST STREET  
BUFFALO, NY 14214

UST U001852616  
N/A

UST: Not Reported

C12  
North  
1/4-1/2  
Higher

GREAT LAKES MOTOR CORP.  
3068 MAIN STREET  
BUFFALO, NY 14214

RCRIS-SQG 1000158506  
FINDS NYD013727821

MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site Database(s) EDR ID Number  
EPA ID Number

GREAT LAKES MOTOR CORP. (Continued)

1000158506

RCRIS:

Owner: CHARLES LAMASTRA  
(212) 555-1212

Contact: RICHARD BROWN  
(716) 832-1137

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D001	Not reported	Notification	X001	Not reported	Notification

C13  
North  
1/4-1/2  
Higher

WILSON BUICK INC  
3070 MAIN ST  
BUFFALO, NY 14214

RCRIS-SQG 1000384244  
FINDS NYD013702295

RCRIS:

Owner: JOHNIE F. WILSON  
(212) 555-1212

Contact: BILL HUTCHISON  
(716) 836-1000

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	D001	Not reported	Notification
D002	Not reported	Notification	F001	Not reported	Notification
F002	Not reported	Notification	F003	Not reported	Notification
F005	Not reported	Notification	X001	Not reported	Notification

14  
WSW  
1/4-1/2  
Lower

NEW YORK TELEPHONE  
2743 MAIN ST  
BUFFALO, NY 14214

FINDS 1000136967  
RCRIS-LQG NYD980772966  
UST

RCRIS: Not Reported

UST:

Facility ID:	9-418439	Total Tanks:	1
Contact Name:	Not reported	Telephone:	(716) 852-2622
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	09/14/92	Cert Exp Date:	19970826
Capacity:	8000	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	01/58	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	1		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	6		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		



MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site

Database(s)

EDR ID Number  
EPA ID Number

NEW YORK TELEPHONE (Continued)

1000136967

Facility ID: 9-418439  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 09/14/92  
 Capacity: 8000  
 Installation date: 01/54  
 Piping Type: STEEL/IRON  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 2  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: 6  
 Tank Location: UNDERGROUND  
 Piping Location: Not reported  
 Leak Detection: NONE  
 Testing Method: Not reported  
 Piping Ext Prot: Not reported  
 Tank Ext Prot: Not reported  
 Tank Sec Containment: NONE  
 Piping Sec Containment: Not reported

Total Tanks: 1  
 Telephone: (716) 852-2622  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970826  
 Product: DIESEL  
 Tank Int Prot: Not reported  
 Piping Int Prot: Not reported  
 Close Date: 00/00

Facility ID: 9-418439  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 09/14/92  
 Capacity: 8000  
 Installation date: 06/88  
 Piping Type: STEEL/IRON  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 3  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: IN SERVICE  
 Tank Location: UNDERGROUND  
 Piping Location: UNDERGROUND  
 Leak Detection: NONE/INTERSTITIAL MONITORING  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE/DOUBLED-WALLED TANK  
 Piping Sec Containment: Not reported

Total Tanks: 1  
 Telephone: (716) 852-2622  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970826  
 Product: NOS 1,2, OR 4 FUEL OIL  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: Not reported

D15  
South  
1/4-1/2  
Lower

US POSTAL OFFICE - CENTRAL PARK  
 170 MANHATTAN AVE  
 BUFFALO, NY 14215

RCRIS-SQG 1000792081  
 FINDS NY9180000326

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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US POSTAL OFFICE - CENTRAL PARK (Continued) 1000792081

RCRIS:

Owner: US POSTAL SERVICE  
(716) 846-2516

Contact: MICHAEL FULLER  
(716) 846-2516

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D001	Not reported	Notification	D008	Not reported	Notification
D018	Not reported	Notification			

D16	U S POSTAL SERVICE CENTRAL PK	UST	U001326908
South	170 MANHATTAN AVENUE		N/A
1/4-1/2	BUFFALO, NY 14215		
Lower			

UST:

Facility ID:	9-026883	Total Tanks:	1
Contact Name:	Not reported	Telephone:	(716) 846-2515
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/23/92	Cert Exp Date:	19960919
Capacity:	10000	Product:	UNLEADED GASOLINE
Installation date:	08/81	Tank Int Prot:	Not reported
Piping Type:	GALVANIZED STEEL	Piping Int Prot:	Not reported
Next Test Date:	01/92	Close Date:	07/92
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	8		
Tank Type:	FIBERGLASS REINFORCED PLASTIC (FRP)		
Tank Status:	CLOSED-REMOVED		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE/OTHER		
Testing Method:	TANKOLOGY (VACUTECT)		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE/DOUBLED-WALLED TANK		
Piping Sec Containment:	Not reported		

MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site

Database(s)

EDR ID Number  
EPA ID Number

U S POSTAL SERVICE CENTRAL PK (Continued)

U001326908

Facility ID:	9-026883	Total Tanks:	1
Contact Name:	Not reported	Telephone:	(716) 846-2515
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/23/92	Cert Exp Date:	19960919
Capacity:	10000	Product:	UNLEADED GASOLINE
Installation date:	07/92	Tank Int Prot:	FIBERGLASS LINER (FRP)
Piping Type:	NOT DEFINED	Piping Int Prot:	FIBERGLASS LINER (FRP)
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	UL630122		
Tank Type:	FIBERGLASS REINFORCED PLASTIC (FRP)		
Tank Status:	IN SERVICE		
Tank Location:	UNDERGROUND		
Piping Location:	UNDERGROUND		
Leak Detection:	INTERSTITIAL MONITORING/IN-TANK SYSTEM		
Testing Method:	Not reported		
Piping Ext Prot:	IMPRESSED CURRENT		
Tank Ext Prot:	IMPRESSED CURRENT		
Tank Sec Containment:	DOUBLED-WALLED TANK/NONE		
Piping Sec Containment:	Not reported		

E17  
South  
1/2-1  
Lower

CIMINELLI DEVELOPMENT CO INC  
135 MANHATTAN AVE  
BUFFALO, NY 14214

RCRIS-SQG

1000890438  
NY0000365676

RCRIS:

Owner: FRANK CIMINELLI  
(716) 631-8000

Contact: FREDERICK KRAJACIC  
(716) 631-8000

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D001	Not reported	Notification	D002	Not reported	Notification

18  
SSW  
1/2-1  
Lower

BROOKS CENTRAL PARK CLNRS  
250 CENTRAL PARK PLAZA  
BUFFALO, NY 14214

RCRIS-SQG  
FINDS

1000333222  
NYD981177686

RCRIS:

Owner: VENRIS BROOKS  
(212) 555-1212

Contact: BROOKS VENRIS  
(716) 837-4339

Waste	Quantity	Info Source
F002	Not reported	Notification

E19  
South  
1/2-1  
Lower

BURNING AT 125 MANHATTAN  
125 MANHATTAN  
BUFFALO, NY 14215

LUST

S100669727  
N/A

MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site Database(s) EDR ID Number  
EPA ID Number

BURNING AT 125 MANHATTAN (Continued)

S100669727

LUST:

Facility ID:	9306059	Spill Date:	19930817
First notified:	C	Material class:	NONPETRO\NONHAZ
Material spilled:	UNKNOWN	Release QTY:	0.00 Not Defined
Water body affected:	Not reported	Origin:	PRIVATE DWELLING
Resource affected:	AIR	Notifier:	CITIZEN
Basin of spill:	103	Project ID:	0
Cleaner:	NO ACTION TAKEN	Date cleaned:	19930817
Initiated clean up:	Not reported	Close date:	19930817
Last inspection:	Not reported	Investigator:	KAH
PBS #:	0	UST Trust Fund:	F
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	OTHER		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

20  
WSW  
1/2-1  
Lower

CRANZ RUBBER & GASKET INC  
2671 MAIN ST  
BUFFALO, NY 14214

RCRIS-SQG 1000457852  
FINDS NYD986931319

RCRIS:

Owner: CRANZ RUBBER & GASKET INC  
(212) 555-1212  
Contact: LINDA COMSTOCK  
(716) 832-3300

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	D001	Not reported	Notification
F002	Not reported	Notification	F003	Not reported	Notification
F005	Not reported	Notification			

21  
SW  
1/2-1  
Lower

MAGICLEAN PRODUCTS INC  
55 CHALMERS AVE  
BUFFALO, NY 14214

FINDS 1000247134  
RCRIS-LQG NYD982182073

RCRIS:

Owner: SCHAPIRO HOWARD  
(212) 555-1212  
Contact: HOWARD SCHAPIRO  
(716) 873-5250

Waste	Quantity	Info Source
D001	Not reported	Notification

F22  
NW  
1/2-1  
Higher

TURNER & CLARK HERTEL SERVICE STATION  
1900 HERTEL AVE  
BUFFALO, NY 14214

UST U001851302  
N/A

UST: Not Reported

MAP FINDINGS

Map ID Direction Distance Altitude	Site	Database(s)	EDR ID Number EPA ID Number																																																												
23 SSW 1/2-1 Lower	BROOKS CLNRS 140 HOLDEN ST. BUFFALO, NY 14201	RCRIS-SQG FINDS	1000333223 NYD982542235																																																												
<p>RCRIS: Owner: * (212) 555-1212</p> <p>Contact: BROOKS VENRIS (716) 837-4339</p> <table border="1"> <thead> <tr> <th>Waste</th> <th>Quantity</th> <th>Info Source</th> </tr> </thead> <tbody> <tr> <td>F002</td> <td>Not reported</td> <td>Notification</td> </tr> </tbody> </table>				Waste	Quantity	Info Source	F002	Not reported	Notification																																																						
Waste	Quantity	Info Source																																																													
F002	Not reported	Notification																																																													
G24 SSE 1/2-1 Lower	H & R TOOL WORKS INC 65 CLYDE AVE BUFFALO, NY 14215	FINDS RCRIS-LQG	1000129293 NYD002113777																																																												
<p>RCRIS: Owner: H&amp;R TOOLS WORKS INC (212) 555-1212</p> <p>Contact: GUSTAV HAHNEMANN (716) 834-6710</p> <table border="1"> <thead> <tr> <th>Waste</th> <th>Quantity</th> <th>Info Source</th> <th>Waste</th> <th>Quantity</th> <th>Info Source</th> </tr> </thead> <tbody> <tr> <td>U043</td> <td>Not reported</td> <td>Notification</td> <td>NONE</td> <td>Not reported</td> <td>EPA Inspection</td> </tr> </tbody> </table>				Waste	Quantity	Info Source	Waste	Quantity	Info Source	U043	Not reported	Notification	NONE	Not reported	EPA Inspection																																																
Waste	Quantity	Info Source	Waste	Quantity	Info Source																																																										
U043	Not reported	Notification	NONE	Not reported	EPA Inspection																																																										
25 NNW 1/2-1 Lower	PARKSIDE COURT (54) 54 PARKSIDE COURT CHEEKTOWAGA, NY 14214	LUST	S100669092 N/A																																																												
<p>LUST:</p> <table border="0"> <tr> <td>Facility ID:</td> <td>8800025</td> <td>Spill Date:</td> <td>19880401</td> </tr> <tr> <td>First notified:</td> <td>ANSWERING SERVICE</td> <td>Material class:</td> <td>UNKNOWN</td> </tr> <tr> <td>Material spilled:</td> <td>Not Reported</td> <td>Release QTY:</td> <td>0.00 GALLONS</td> </tr> <tr> <td>Water body affected:</td> <td>Not reported</td> <td>Origin:</td> <td>UNKNOWN</td> </tr> <tr> <td>Resource affected:</td> <td>GROUNDWATER</td> <td>Notifier:</td> <td>CITIZEN</td> </tr> <tr> <td>Basin of spill:</td> <td>102</td> <td>Project ID:</td> <td>0</td> </tr> <tr> <td>Cleaner:</td> <td>NO ACTION TAKEN</td> <td>Date cleaned:</td> <td>19880405</td> </tr> <tr> <td>Initiated clean up:</td> <td>Not reported</td> <td>Close date:</td> <td>19880405</td> </tr> <tr> <td>Last inspection:</td> <td>Not reported</td> <td>Investigator:</td> <td>JDC</td> </tr> <tr> <td>PBS #:</td> <td>0</td> <td>UST Trust Fund:</td> <td>F</td> </tr> <tr> <td>Status:</td> <td>MEANS ITS BEEN RESOLVED</td> <td>Penalty:</td> <td>NO PENALTY</td> </tr> <tr> <td>Quantity recovered:</td> <td>0.00</td> <td></td> <td></td> </tr> <tr> <td>Cause:</td> <td>OTHER</td> <td></td> <td></td> </tr> <tr> <td>Emergency response:</td> <td>IT WAS NOT TAKEN</td> <td></td> <td></td> </tr> <tr> <td>Facility status:</td> <td colspan="3">COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)</td> </tr> </table>				Facility ID:	8800025	Spill Date:	19880401	First notified:	ANSWERING SERVICE	Material class:	UNKNOWN	Material spilled:	Not Reported	Release QTY:	0.00 GALLONS	Water body affected:	Not reported	Origin:	UNKNOWN	Resource affected:	GROUNDWATER	Notifier:	CITIZEN	Basin of spill:	102	Project ID:	0	Cleaner:	NO ACTION TAKEN	Date cleaned:	19880405	Initiated clean up:	Not reported	Close date:	19880405	Last inspection:	Not reported	Investigator:	JDC	PBS #:	0	UST Trust Fund:	F	Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY	Quantity recovered:	0.00			Cause:	OTHER			Emergency response:	IT WAS NOT TAKEN			Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		
Facility ID:	8800025	Spill Date:	19880401																																																												
First notified:	ANSWERING SERVICE	Material class:	UNKNOWN																																																												
Material spilled:	Not Reported	Release QTY:	0.00 GALLONS																																																												
Water body affected:	Not reported	Origin:	UNKNOWN																																																												
Resource affected:	GROUNDWATER	Notifier:	CITIZEN																																																												
Basin of spill:	102	Project ID:	0																																																												
Cleaner:	NO ACTION TAKEN	Date cleaned:	19880405																																																												
Initiated clean up:	Not reported	Close date:	19880405																																																												
Last inspection:	Not reported	Investigator:	JDC																																																												
PBS #:	0	UST Trust Fund:	F																																																												
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY																																																												
Quantity recovered:	0.00																																																														
Cause:	OTHER																																																														
Emergency response:	IT WAS NOT TAKEN																																																														
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)																																																														
F26 NW 1/2-1 Higher	DINO AUTO SERVICE 1871 HERTEL AVE BUFFALO, NY 14216	UST	U001327641 N/A																																																												

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

DINO AUTO SERVICE (Continued)

U001327641

UST:

Facility ID:	9-384453	Total Tanks:	3
Contact Name:	Not reported	Telephone:	(716) 836-9943
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	01/06/93	Cert Exp Date:	19970720
Capacity:	16000	Product:	UNLEADED GASOLINE
Installation date:	09/70	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	1		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	6		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		

Facility ID:	9-384453	Total Tanks:	3
Contact Name:	Not reported	Telephone:	(716) 836-9943
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	01/06/93	Cert Exp Date:	19970720
Capacity:	16000	Product:	UNLEADED GASOLINE
Installation date:	09/70	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	2		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	6		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		

MAP FINDINGS

Map ID  
Direction  
Distance  
Altitude

Site

Database(s)

EDR ID Number  
EPA ID Number

DINO AUTO SERVICE (Continued)

U001327641

Facility ID: 9-384453  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 01/06/93  
 Capacity: 16000  
 Installation date: 09/70  
 Piping Type: STEEL/IRON  
 Next Test Date: 12/92  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 3  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: IN SERVICE  
 Tank Location: UNDERGROUND  
 Piping Location: Not reported  
 Leak Detection: NONE/GROUNDWATER WELL  
 Testing Method: HORNER  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE  
 Piping Sec Containment: Not reported

Total Tanks: 3  
 Telephone: (716) 836-9943  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970720  
 Product: LEADED GASOLINE  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: Not reported

Facility ID: 9-384453  
 Contact Name: Not reported  
 SPED #: Not reported  
 Cert Issue Date: 01/06/93  
 Capacity: 16000  
 Installation date: 09/87  
 Piping Type: GALVANIZED STEEL  
 Next Test Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 4  
 Tank Type: FIBERGLASS REINFORCED PLASTIC (FRP)  
 Tank Status: IN SERVICE  
 Tank Location: UNDERGROUND  
 Piping Location: Not reported  
 Leak Detection: IN-TANK SYSTEM/GROUNDWATER WELL  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: EXCAVATION LINER  
 Piping Sec Containment: Not reported

Total Tanks: 3  
 Telephone: (716) 836-9943  
 Lic Issue Date: Not reported  
 Cert Exp Date: 19970720  
 Product: UNLEADED GASOLINE  
 Tank Int Prot: NONE  
 Piping Int Prot: NONE  
 Close Date: Not reported

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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DINO AUTO SERVICE (Continued)

U001327641

Facility ID:	9-384453	Total Tanks:	3
Contact Name:	Not reported	Telephone:	(716) 836-9943
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	01/06/93	Cert Exp Date:	19970720
Capacity:	16000	Product:	UNLEADED GASOLINE
Installation date:	09/87	Tank Int Prot:	NONE
Piping Type:	GALVANIZED STEEL	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	5		
Tank Type:	FIBERGLASS REINFORCED PLASTIC (FRP)		
Tank Status:	IN SERVICE		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	IN-TANK SYSTEM/GROUNDWATER WELL		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	EXCAVATION LINER		
Piping Sec Containment:	Not reported		

F27  
NW  
1/2-1  
Higher

ATLANTIC SERVICE STATION  
HARLEM & CLEVELAND RDS  
CHEEKTOWAGA, NY 14215

RCRIS-SQG 1000552091  
NYD986944825

RCRIS:  
Owner: ATLANTIC REFINING & MARKETING  
(215) 977-6108  
Contact: WILLIAM DELAUGHTER  
(215) 977-6108

Waste	Quantity	Info Source
D001	Not reported	Notification

F28  
NW  
1/2-1  
Higher

ATLANTIC SERVICE STATION  
1390 DELAWARE AVE & E DELAVAN ST  
BUFFALO, NY 14209

RCRIS-SQG 1000552988  
FINDS NYD986953941  
LUST

RCRIS:  
Owner: ATLANTIC REFINING & MARKETING  
(215) 977-6108  
Contact: WILLIAM DELAUGHTER  
(215) 977-6108

Waste	Quantity	Info Source
D001	Not reported	Notification



MAP FINDINGS

Map ID Direction Distance Altitude	Site	Database(s)	EDR ID Number EPA ID Number
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ATLANTIC SERVICE STATION (Continued)

1000552988

LUST:

Facility ID:	9012069	Spill Date:	19910219
First notified:	C	Material class:	PETROLEUM
Material spilled:	GASOLINE	Release QTY:	0.00 Not Defined
Water body affected:	Not reported	Origin:	GAS STATION
Resource affected:	GROUNDWATER	Notifier:	TANK TESTER
Basin of spill:	101	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	Not reported
Initiated clean up:	Not reported	Close date:	Not reported
Last inspection:	Not reported	Investigator:	MJS
PBS #:	0	UST Trust Fund:	T
Status:	Not reported	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK TEST FAILURE (BULK STORE. PRO.)		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	ACTIVE SPILL (ON GOING)		

F29  
NW  
1/2-1  
Higher

ATLANTIC SERVICE STATION  
DELAWARE & KENMORE AVES  
BUFFALO, NY 14216

RCRIS-SQG 1000552094  
FINDS NYD986944858

RCRIS:

Owner: ATLANTIC REFINING & MARKETING  
(215) 977-6108

Contact: WILLIAM DELAUGHTER  
(215) 977-6108

Waste	Quantity	Info Source
D001	Not reported	Notification

F30  
NW  
1/2-1  
Higher

ATLANTIC SERVICE STATION  
KEMORE & STARNE AVES  
BUFFALO, NY 14216

RCRIS-SQG 1000551503  
FINDS NYD986938454

RCRIS:

Owner: ATLANTIC REFINING & MARKETING  
(212) 555-1212

Contact: WILLIAM DELAUGHTER  
(215) 977-6108

Waste	Quantity	Info Source
D001	Not reported	Notification

G31  
SSE  
1/2-1  
Lower

HARRISON RADIATOR DIV GMC BLDG  
56 CLYDE AVE  
BUFFALO, NY 14215

UST U001851855  
N/A

UST: Not Reported

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EPA ID Number	EDR ID Number
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32	WSW	1/2-1	Lower	KAUFMAN BAKERY 2381 FILLMORE AVENUE BUFFALO, NY 14214	LUST		S100119479 N/A
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LUST:

Facility ID:	8708144	Spill Date:	19871219
First notified:	ANSWERING SERVICE	Material class:	PETROLEUM
Material spilled:	#2 FUEL	Release QTY:	0.00 GALLONS
Water body affected:	Not reported	Origin:	COMM/INDUST
Resource affected:	GROUNDWATER	Notifier:	TANK TESTER
Basin of spill:	101	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	19880217
Initiated clean up:	Not reported	Close date:	19880217
Last inspection:	Not reported	Investigator:	JDC
PBS #:	0	UST Trust Fund:	F
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK FAILURE		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

G33	SSE	1/2-1	Lower	GMC HARRISON RADIATOR-PLANT 3 56 CLYDE AVENUE BUFFALO, NY 14215	FINDS LUST RCRIS-LQG UST		1000212497 NYD080331507
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RCRIS:

Owner: GENERAL MOTORS CORPORATION  
(212) 555-1212

Contact: L E CHAMBERLIN  
(716) 439-2192

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	D001	Not reported	Notification
D002	Not reported	Notification	D003	Not reported	Notification
F001	Not reported	Notification	F003	Not reported	Notification
F005	Not reported	Notification	F007	Not reported	Notification
F008	Not reported	Notification	F009	Not reported	Notification
F017	Not reported	Notification	F018	Not reported	Notification
U002	Not reported	Notification	U019	Not reported	Notification
U075	Not reported	Notification	U080	Not reported	Notification
U117	Not reported	Notification	U121	Not reported	Notification
U122	Not reported	Notification	U151	Not reported	Notification
U159	Not reported	Notification	U161	Not reported	Notification
U188	Not reported	Notification	U220	Not reported	Notification
U226	Not reported	Notification	U239	Not reported	Notification

Other Pertinent Environmental Activity Identified at Site:  
facility has an emission permit under the Clean Air Act

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

LUST:

Facility ID:	8604645	Spill Date:	19861006
First notified:	REGIONAL OFFICE	Material class:	PETROLEUM
Material spilled:	GASOLINE	Release QTY:	0.00
Water body affected:	Not reported	Origin:	COMM\INDUST
Resource affected:	GROUNDWATER	Notifier:	RESPONSIBLE PARTY
Basin of spill:	0	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	19861212
Initiated clean up:	Not reported	Close date:	19861212
Last inspection:	Not reported	Investigator:	Not reported
PBS #:	Not reported	UST Trust Fund:	T
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK TEST FAILURE (BULK STORE. PRO.)		
Emergency response:	Not reported		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

Facility ID:	8606288	Spill Date:	19870109
First notified:	REGIONAL OFFICE	Material class:	PETROLEUM
Material spilled:	#4 FUEL	Release QTY:	0.00 GALLONS
Water body affected:	Not reported	Origin:	COMM\INDUST
Resource affected:	GROUNDWATER	Notifier:	TANK TESTER
Basin of spill:	0	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	19870123
Initiated clean up:	Not reported	Close date:	19870123
Last inspection:	Not reported	Investigator:	Not reported
PBS #:	Not reported	UST Trust Fund:	Not reported
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK TEST FAILURE (BULK STORE. PRO.)		
Emergency response:	Not reported		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

UST:

Facility ID:	9-222836	Total Tanks:	6
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/12/92	Cert Exp Date:	19970919
Capacity:	51589	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	08/72	Tank Int Prot:	NONE
Piping Type:	STEEL/IRON	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	301		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	TEMPORARILY OUT OF SERVICE		
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE		
Piping Location:	ABOVEGROUND		
Leak Detection:	NONE/GROUNDWATER WELL		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	EARTHEN DIKE/CONCRETE DIKE		
Piping Sec Containment:	Not reported		

Facility ID:	9-222836	Total Tanks:	6
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/12/92	Cert Exp Date:	19970919
Capacity:	51589	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	08/72	Tank Int Prot:	NONE
Piping Type:	STEEL/IRON	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	302		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	TEMPORARILY OUT OF SERVICE		
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE		
Piping Location:	ABOVEGROUND		
Leak Detection:	NONE/GROUNDWATER WELL		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	EARTHEN DIKE/CONCRETE DIKE		
Piping Sec Containment:	Not reported		

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

Facility ID:	9-222836	Total Tanks:	6
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/12/92	Cert Exp Date:	19970919
Capacity:	51589	Product:	UNLEADED GASOLINE
Installation date:	12/86	Tank Int Prot:	NONE
Piping Type:	STEEL/IRON	Piping Int Prot:	NONE
Next Test Date:	11/88	Close Date:	10/92
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	303		
Tank Type:	FIBERGLASS COATED STEEL		
Tank Status:	CLOSED-REMOVED		
Tank Location:	UNDERGROUND		
Piping Location:	UNDERGROUND		
Leak Detection:	NONE/GROUNDWATER WELL		
Testing Method:	PETRO-TITE		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE/NONE		
Piping Sec Containment:	Not reported		

Facility ID:	9-222836	Total Tanks:	6
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/12/92	Cert Exp Date:	19970919
Capacity:	51589	Product:	DIESEL
Installation date:	07/70	Tank Int Prot:	NONE
Piping Type:	STEEL/IRON	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	304		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	TEMPORARILY OUT OF SERVICE		
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE		
Piping Location:	ABOVEGROUND		
Leak Detection:	NONE/NONE		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE/CONCRETE DIKE		
Piping Sec Containment:	Not reported		

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

Facility ID: 9-222836 Total Tanks: 6  
 Contact Name: Not reported Telephone: (716) 693-4300  
 SPED #: Not reported Lic Issue Date: Not reported  
 Cert Issue Date: 11/12/92 Cert Exp Date: 19970919  
 Capacity: 51589 Product: DIESEL  
 Installation date: 09/73 Tank Int Prot: NONE  
 Piping Type: STEEL/IRON Piping Int Prot: NONE  
 Next Test Date: / Close Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 305  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: TEMPORARILY OUT OF SERVICE  
 Tank Location: ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE  
 Piping Location: ABOVEGROUND  
 Leak Detection: NONE/NONE  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE/CONCRETE DIKE  
 Piping Sec Containment: Not reported

Facility ID: 9-222836 Total Tanks: 6  
 Contact Name: Not reported Telephone: (716) 693-4300  
 SPED #: Not reported Lic Issue Date: Not reported  
 Cert Issue Date: 11/12/92 Cert Exp Date: 19970919  
 Capacity: 51589 Product: DIESEL  
 Installation date: 09/73 Tank Int Prot: NONE  
 Piping Type: STEEL/IRON Piping Int Prot: NONE  
 Next Test Date: Not reported Close Date: Not reported  
 Facility Status: ACTIVE FACILITY  
 Facility Type: Not reported  
 Tank ID: 306  
 Tank Type: STEEL/CARBON STEEL  
 Tank Status: TEMPORARILY OUT OF SERVICE  
 Tank Location: ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE  
 Piping Location: ABOVEGROUND  
 Leak Detection: NONE/NONE  
 Testing Method: Not reported  
 Piping Ext Prot: NONE  
 Tank Ext Prot: NONE  
 Tank Sec Containment: NONE/CONCRETE DIKE  
 Piping Sec Containment: Not reported

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Altitude

Site

Database(s)

EDR ID Number  
 EPA ID Number

GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

Facility ID:	9-222836	Total Tanks:	6
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	11/12/92	Cert Exp Date:	19970919
Capacity:	51589	Product:	DIESEL
Installation date:	09/73	Tank Int Prot:	NONE
Piping Type:	STEEL/IRON	Piping Int Prot:	NONE
Next Test Date:	Not reported	Close Date:	Not reported
Facility Status:	ACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	307		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	TEMPORARILY OUT OF SERVICE		
Tank Location:	ABOVEGROUND ON SADDLES LEGS, STILTS, RACK, OR CRADLE		
Piping Location:	ABOVEGROUND		
Leak Detection:	NONE/NONE		
Testing Method:	Not reported		
Piping Ext Prot:	NONE		
Tank Ext Prot:	NONE		
Tank Sec Containment:	NONE/CONCRETE DIKE		
Piping Sec Containment:	Not reported		
Facility ID:	9-222828	Total Tanks:	0
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	08/17/87	Cert Exp Date:	19920817
Capacity:	0	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	06/47	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	INACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	308		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	6		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EPA ID Number	EDR ID Number
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GMC HARRISON RADIATOR-PLANT 3 (Continued)

1000212497

Facility ID:	9-222828	Total Tanks:	0
Contact Name:	Not reported	Telephone:	(716) 693-4300
SPED #:	Not reported	Lic Issue Date:	Not reported
Cert Issue Date:	08/17/87	Cert Exp Date:	19920817
Capacity:	0	Product:	NOS 1,2, OR 4 FUEL OIL
Installation date:	06/47	Tank Int Prot:	Not reported
Piping Type:	STEEL/IRON	Piping Int Prot:	Not reported
Next Test Date:	Not reported	Close Date:	00/00
Facility Status:	INACTIVE FACILITY		
Facility Type:	Not reported		
Tank ID:	309		
Tank Type:	STEEL/CARBON STEEL		
Tank Status:	6		
Tank Location:	UNDERGROUND		
Piping Location:	Not reported		
Leak Detection:	NONE		
Testing Method:	Not reported		
Piping Ext Prot:	Not reported		
Tank Ext Prot:	Not reported		
Tank Sec Containment:	NONE		
Piping Sec Containment:	Not reported		

34  
SW  
1/2-1  
Lower

HECTOR HARDWARE  
69 VICTORIA AVE.  
KENMORE, NY 14214

LUST

S100668491  
N/A

LUST:

Facility ID:	8600181	Spill Date:	19860407
First notified:	ANSWERING SERVICE	Material class:	HAZARDOUS MATERIAL
Material spilled:	UNKNOWN	Release QTY:	0.00
Water body affected:	Not reported	Origin:	COMM\INDUST
Resource affected:	AIR	Notifier:	CITIZEN
Basin of spill:	101	Project ID:	0
Cleaner:	NO ACTION TAKEN	Date cleaned:	19860425
Initiated clean up:	Not reported	Close date:	19860425
Last inspection:	Not reported	Investigator:	Not reported
PBS #:	Not reported	UST Trust Fund:	Not reported
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	OTHER		
Emergency response:	Not reported		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

35  
East  
1/2-1  
Higher

ACID 208 SHIRLEY  
208 SHIRLEY AVENUE  
BUFFALO, NY 14215

LUST

S100782027  
N/A





MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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TRI-MAIN DEVELOPMENT (Continued)

1000693989

LUST:

Facility ID:	9204066	Spill Date:	19920701
First notified:	REGIONAL OFFICE	Material class:	PETROLEUM
Material spilled:	#6 FUEL	Release QTY:	0.00 GALLONS
Water body affected:	Not reported	Origin:	COMM\INDUST
Resource affected:	ON LAND	Notifier:	RESPONSIBLE PARTY
Basin of spill:	103	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	Not reported
Initiated clean up:	Not reported	Close date:	Not reported
Last inspection:	Not reported	Investigator:	RMC
PBS #:	0	UST Trust Fund:	F
Status:	Not reported	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK FAILURE		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	ACTIVE SPILL (ON GOING)		

38  
ENE  
1/2-1  
Higher

STOP-N-GO #2010  
3364 BAILEY AVENUE  
BUFFALO, NY 14215

LUST

S100669204  
N/A

LUST:

Facility ID:	8908593	Spill Date:	19891116
First notified:	C	Material class:	PETROLEUM
Material spilled:	GASOLINE	Release QTY:	0.00 GALLONS
Water body affected:	Not reported	Origin:	GAS STATION
Resource affected:	GROUNDWATER	Notifier:	RESPONSIBLE PARTY
Basin of spill:	101	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	19900130
Initiated clean up:	Not reported	Close date:	19900130
Last inspection:	Not reported	Investigator:	LQR
PBS #:	390895	UST Trust Fund:	T
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	OTHER		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

39  
SW  
> 1  
Lower

NIAGARA MOHAWK DEWEY AVENUE  
93 DEWEY AVENUE  
BUFFALO, NY 14241

RCRIS-SQG 1000232786  
FINDS NYD000730390  
LUST  
RCRIS-TSD

RCRIS:

Owner: NIAGARA MOHAWK POWER CORPORATION  
(212) 555-1212

Contact: JOHN TOENNIES  
(315) 474-1511

Waste	Quantity	Info Source	Waste	Quantity	Info Source
D000	Not reported	Notification	F001	Not reported	Notification
F003	Not reported	Notification			

MAP FINDINGS

Map ID	Direction	Distance	Altitude	Site	Database(s)	EDR ID Number	EPA ID Number
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NIAGARA MOHAWK DEWEY AVENUE (Continued)

1000232786

LUST:

Facility ID:	8803599	Spill Date:	19880725
First notified:	REGIONAL OFFICE	Material class:	PETROLEUM
Material spilled:	GASOLINE	Release QTY:	0.00 GALLONS
Water body affected:	Not reported	Origin:	COMM\INDUST
Resource affected:	GROUNDWATER	Notifier:	OTHER
Basin of spill:	101	Project ID:	0
Cleaner:	SPILLER	Date cleaned:	19890913
Initiated clean up:	Not reported	Close date:	19890913
Last inspection:	Not reported	Investigator:	CAF
PBS #:	0	UST Trust Fund:	T
Status:	MEANS ITS BEEN RESOLVED	Penalty:	NO PENALTY
Quantity recovered:	0.00		
Cause:	TANK FAILURE		
Emergency response:	IT WAS NOT TAKEN		
Facility status:	COMPLETED SPILL (SPILL IS CLEANED UP AND ALL PAPERWORK IS COMPLETED)		

(For more information on this site, call your EDR Customer Service Rep.)

40  
SW  
> 1  
Lower

NIAGARA MOHAWK DEWEY AVE. SERVICE STA.  
144 KENSINGTON AVENUE  
BUFFALO, NY 14214

SHWS

S101008689  
N/A

HWS: Not Reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
AMHERST	1000218907	AMHERST DUMP	HOPKINS RD	14226	CERCLIS, FINDS	9010141
AMHERST	S100250642	MOBIL S/S	4505 MAIN STREET	14226	LUST	8908630
AMHERST	S100154548	MOBIL OIL	3514 MAIN STREET	14226	LUST	9304444
AMHERST	U001327232	MIKE'S AUTO REPAIR (SUNOCO)	3931 MAIN ST	14226	LUST, UST	9300420
AMHERST	S100669566	KAUFMANN - BOULEVARD MALL	NIAGARA FALLS BLVD.	14214	LUST	8908977
AMHERST	S100118188	CUMBERLANDS FARMS	NIAGARA FALLS BLVD	14214	LUST	8605722
AMHERST	S100154810	FIRESTONE TIRE	NIAGARA FALLS BOULEVARD	14214	LUST	9206303
AMHERST	S100493950	FIRESTONE	NIAGARA FALLS BLVD. MAPLE	14214	LUST	9206340
AMHERST	S100493953	FIRESTONE 955 NFB	NIAGARA FALLS BLVD MAPLE	14214	LUST	
AMHERST	1000362397	MORRIS & REIMANN	RENSCH RD	14226	CERCLIS, FINDS	
AMHERST	S100493920	UNKNOWN TRUCK	ROUTE 198 EAST		LUST	9206074
BUFFALO	1000554402	NYS DOT	RTE 5 MAIN ST OVER RTE 198	14214	FINDS, RCRIS-LQG	
BUFFALO	S101103413	HANNA FURNACE	ROUTE 5		LUST	
BUFFALO	S100669207	TANKER KIISLA	ROUTE 5 - LAKE ERIE		LUST	8909426
BUFFALO	S100669208	KIELSA TANKER	ROUTE 5 - BUFFALO HARBOR		LUST	8909457
BUFFALO	1000693533	B M H A - KENFIELD HOMES GROUP 5	AREA OF TOWER & OAKMONT	14215	RCRIS-SQG, FINDS	
BUFFALO	1000693532	B M H A - KENFIELD HOMES GROUP 4	AREA OF TOWER & SUFFOLK &	14215	RCRIS-SQG, FINDS	
BUFFALO	1000693531	B M H A - KENFIELD HOMES GROUP 3	AREA OF SUN & TOWER &	14215	RCRIS-SQG, FINDS	
BUFFALO	1000693530	B M H A - KENFIELD HOMES GROUP 2	AREA OF OAKMNT & SUN EDISON &	14215	RCRIS-SQG, FINDS	
BUFFALO	1000693529	B M H A - KENFIELD HOMES GROUP 1	AREA OF NY-33 & EDISON &	14215	RCRIS-SQG, FINDS	
BUFFALO	U001329226	RED APPLE FOOD MART #326	3385 BAILEY AND LISBON	14215	UST	9-497967
BUFFALO	S100669144	BAILEY AND WINSPEAR	BAILEY AT WINSPEAR		LUST	8808636
BUFFALO	S100668592	SKUNK	BAILEY / WINSPEAR		LUST	8704917
BUFFALO	S100119249	BATTENFELD-AMERICAN, INC.	BAILEY AVENUE		LUST	8704080
BUFFALO	S100154139	UNITED PARCEL SERVICE	BAILEY AVENUE		LUST	8800609
BUFFALO	1000871837	B M H A - LASALLE COURTS GROUP 2	BLOCK BOUNDED BY BLUM GROVE	14216	RCRIS-SQG	
BUFFALO	1000871836	B M H A - LASALLE COURTS GROUP 1	BLOCK BOUNDED BY KENMORE GROVE	14216	RCRIS-SQG	
BUFFALO	1000872189	B M H A - LANGFIELD GROUP 4	BLOCK BOUNDED BY EDISON EGGERT	14215	RCRIS-SQG	
BUFFALO	1000872188	B M H A - LANGFIELD GROUP 3	BLOCK BOUNDED BY HAZELWOOD	14215	RCRIS-SQG	
BUFFALO	1000872187	B M H A - LANGFIELD GROUP 2	BLOCK BOUNDED BY NEWBURG LANG-	14215	RCRIS-SQG	
BUFFALO	1000872186	B M H A - LANGFIELD GROUP 1	BLOCK BOUNDED BY SUFFOLK LANG-	14215	RCRIS-SQG	
BUFFALO	S100668537	BUFFALO STATE COLLEGE	BUFFALO STATE COLLEGE		LUST	8605107
BUFFALO	S100668506	BUFFALO COLOR	BUFFALO COLOR ON S. PARK		LUST	8602079
BUFFALO	1000235053	HOUGHTON PARK LF	CLINTON ST	14216	CERCLIS	
BUFFALO	S101102925	CITY OF BUFFALO	108 COLLINGWOOD	14215	LUST	
BUFFALO	S100668499	CONRAIL	CONRAIL		LUST	8601300
BUFFALO	S100668618	CONRAIL FRONTIER YARDS	CONRAIL FRONTIER YARD		LUST	8710005
BUFFALO	U001327180	ATLANTIC #0363-1538	2075 DELAWARE & AMHERST	14216	UST	
BUFFALO	U001851431	MOBIL S/S 08-D5G	2058 DELAWARE & AMHERST	14216	UST	
BUFFALO	S100521086	SAGINAW - BUFFALO	1001 EAST DELEVAN AVENUE	14215	SHWS	
BUFFALO	U001851534	ATLANTIC #0363-9374	1981 FILLMORE AVE @ KENSINGTON	14214	UST	
BUFFALO	S100176885	CONRAIL TANK	HENDERSON STREET	14226	LUST	9108470
BUFFALO	S100669518	CONRAIL	HERTEL AVENUE		LUST	9008771

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
BUFFALO	S100494159	7-ELEVEN AT KEN+GODFREY	11273 KENSINGTON AVENUE		LUST	9208205
BUFFALO	S100494168	BUFFALO URBAN RENEWAL	290 LEROY / HOLDEN		LUST	9208261
BUFFALO	S100781797	NYSOGS - DONOVAN BUILDING	125 MAIN STREET		LUST	9307616
BUFFALO	S100118156	MAIN - SUMMER CORPORATION	MAIN / SUMMER STREETS		LUST	8908322
BUFFALO	U001853346	WILLIAMS ADVANCED MATERIALS	2978 MAIN ST.	14214	UST	
BUFFALO	U001329074	WILSON BUICK INC	3080 MAIN ST	14214	UST	9-483788
BUFFALO	U001852433	7-ELEVEN STORE #22491	3488 MAIN STREET	14214	UST	
BUFFALO	U001852422	PETRO USA	2603 MAIN STREET	14214	UST	
BUFFALO	U001328341	ST JOSEPH'S CHURCH	3269 MAIN ST	14214	UST	
BUFFALO	U001326997	MOBIL S/S 08-DSY	3198 MAIN & WINSPEAR	14214	UST	9-120081
BUFFALO	1000872395	MOBIL OI CORP SS #HA1	3514 MAIN ST	14214	RCRIS-SQG	9-040827
BUFFALO	S100669170	OIL FROM BURNT OUT BLDG	3160 MAIN STREET	14214	LUST	8903195
BUFFALO	S100667921	TANKS 3080 MAIN STREET	3080 MAIN STREET	14214	LUST	9208505
BUFFALO	S100250672	NATIONAL FINISHING CORP.	2929 MAIN ST.	14214	LUST	8602203
BUFFALO	S100781781	UB 3435 MAIN STREET	3435 MAIN STREET	14214	LUST	9307528
BUFFALO	S100155177	PETROLEUM SALES & SERVICE	2603 MAIN STREET	14214	LUST	8709725
BUFFALO	S100155237	NY TELEPHONE	2743 MAIN STREET	14214	LUST	8606621
BUFFALO	S100120290	NYS UNIVERSITY AT BUFFALO	3435 MAIN STREET	14214	LUST	9004852
BUFFALO	S100560589	KURK FUEL OIL CO.	125 MAIN STREET	14214	LUST	9303066
BUFFALO	S100117475	PHYSICANS IMAGING	979 MAIN STREET	14214	LUST	8806781
BUFFALO	S100117551	NIRELL'S GULF STATION	1038 MAIN / NORTH	14214	LUST	8808014
BUFFALO	S100250728	NYS DOT DONOVAN BLDG.	125 MAIN STREET	14214	LUST	8805107
BUFFALO	1000397714	STATE UNIVERSITY OF N.Y. AT BUFFALO	307 MICHAEL HL 3435 MAIN ST.	14214	FINDS, RCRIS-LOG	
BUFFALO	S100494245	ACQUEST - STATLER GARAGE	111 WEST MOHAWK DELAWARE		LUST	9208804
BUFFALO	S100669098	ELLCOTT CREEK PARK	NIAGARA FALLS BLVD	14214	LUST	8800804
BUFFALO	S101103226	G & G PETROLEUM	NIAGARA STREET		LUST	
BUFFALO	S100879121	DAVE "THE HANDYMAN"	NIAGARA STREET		LUST	9312535
BUFFALO	S100667148	SEWAGE ODOR-SQUAW IS.	NIAGARA ST. SQUAW ISLAND		LUST	9104370
BUFFALO	S100667138	CORNELIUS CREEK OVERFLOW	NIAGARA / ONTARIO STREETS		LUST	9101947
BUFFALO	S100119729	GAS STATIONS NIA-MOHAWK	NIAGARA STREET AT MOHAWK		LUST	8709512
BUFFALO	S100154549	MOBIL OIL	NIAGARA/ONTARIO STREETS		LUST	8908724
BUFFALO	U001851417	STATE UNIV OF NY @ BUFLO NORTH	OFFICE OF E H & S 3435 MAIN ST	14214	UST	
BUFFALO	S100669500	OGDEN ST - DUPONT	1190 OGDEN ST TOLL		LUST	9005726
BUFFALO	S100119848	185 OLYMPIC TANKS	185 OLYMPIC STREET	14215	LUST	8905478
BUFFALO	S100154197	CUMBERLAND FARMS	SOUTH PARK / READING STS.	14215	LUST	8803519
BUFFALO	S100669467	HEWITT-ROBBINS	PAULY NEAR KENSINGTON		LUST	9001921
BUFFALO	1000890345	NYS DOT BIN 1071980 D256194	PEDESTRIAN BRG OVER RTE 33	14215	RCRIS-LOG	
BUFFALO	S101008743	TIFF AND HOPKINS	PROVIDENCE ST. (PAPER)		SHWS	
BUFFALO	S100560320	NY TELEPHONE - NYNEX	79 ROSALIA STREET	14216	LUST	9302596
BUFFALO	1000555051	BUFFALO CITY OF PARKS DEPT	SCAJAQUADA EXPWY RTE 98	14214	RCRIS-SQG, FINDS	
BUFFALO	S100669526	CITY OF BUFFALO TANK	SENECA / BAILEY		LUST	9010144
BUFFALO	S100667693	CUMBERLAND FARMS	STARIN / TAUNTON AVENUES		LUST	9200528
BUFFALO	1000397720	STATE UNIVERSITY CONSTRUCTION FUND	SUNY AT BUFFALO 3435 MAIN ST	14214	RCRIS-SQG, FINDS	
BUFFALO	S1000560380	SUNY - SOUTH CAMPUS	220 WIDMER PLACE	14215	LUST	9303771
BUFFALO	S100667143	PRIVATE RESIDENCE	315 WINSPEAR	14215	LUST	9103302
CHEEKTOWAGA	S101008694	LEICA, INC.	EGGERT / SUGAR ROADS		SHWS	
ERIE COUNTY	S100443964	NIAGARA LANDFILL INC			SWFLF	

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
ERIE COUNTY	S100443767	EAST SIDE T.S.			SWF/LF	

## EPA Waste Codes Addendum

Code	Description
D000	NOT DEFINED
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D003	A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D018	BENZENE
F001	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F002	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F003	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F005	THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE,

## EPA Waste Codes Addendum

Code	Description
	CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
F006	WASTEWATER TREATMENT SLUDGES FROM ELECTROPLATING OPERATIONS EXCEPT FROM THE FOLLOWING PROCESSES: (1) SULFURIC ACID ANODIZING OF ALUMINUM; (2) TIN PLATING ON CARBON STEEL; (3) ZINC PLATING (SEGREGATED BASIS) ON CARBON STEEL; (4) ALUMINUM OR ZINC-ALUMINUM PLATING ON CARBON STEEL; (5) CLEANING/STRIPPING ASSOCIATED WITH TIN, ZINC AND ALUMINUM PLATING ON CARBON STEEL; AND (6) CHEMICAL ETCHING AND MILLING OF ALUMINUM.
F007	SPENT CYANIDE PLATING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS
F008	PLATING BATH RESIDUES FROM THE BOTTOM OF PLATING BATHS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.
F009	SPENT STRIPPING AND CLEANING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.
F017	NOT DEFINED
F018	NOT DEFINED
F019	WASTEWATER TREATMENT SLUDGES FROM THE CHEMICAL CONVERSION COATING OF ALUMINUM EXCEPT FROM ZIRCONIUM PHOSPHATING IN ALUMINUM CAN WASHING WHEN SUCH PHOSPHATING IS AN EXCLUSIVE CONVERSION COATING PROCESS.
F024	PROCESS WASTES, INCLUDING BUT NOT LIMITED TO, DISTILLATION RESIDUES, HEAVY ENDS, TARS, AND REACTOR CLEAN-OUT WASTES, FROM THE PRODUCTION OF CERTAIN CHLORINATED ALIPHATIC HYDROCARBONS BY FREE RADICAL CATALYZED PROCESSES. THESE CHLORINATED ALIPHATIC HYDROCARBONS ARE THOSE HAVING CARBON CHAIN LENGTHS RANGING FROM ONE TO AND INCLUDING FIVE, WITH VARYING AMOUNTS AND POSITIONS OF CHLORINE SUBSTITUTION. (THIS LISTING DOES NOT INCLUDE WASTEWATERS, WASTEWATER TREATMENT SLUDGES, SPENT CATALYSTS, AND WASTES LISTED IN SECTION 261.31 OR SECTION 261.32).
NONE	NONE
P029	COPPER CYANIDE
P029	COPPER CYANIDE CU(CN)
P098	POTASSIUM CYANIDE
P098	POTASSIUM CYANIDE K(CN)
P099	ARGENTATE(1-), BIS(CYANO-C)-, POTASSIUM
P099	POTASSIUM SILVER CYANIDE
P106	SODIUM CYANIDE
P106	SODIUM CYANIDE NA(CN)
U002	ACETONE (I)
U002	2-PROPANONE (I)
U019	BENZENE (I,T)



## EPA Waste Codes Addendum

Code	Description
U043	ETHENE, CHLORO-
U043	VINYL CHLORIDE
U075	DICHLORODIFLUOROMETHANE
U075	METHANE, DICHLORODIFLUORO-
U080	METHANE, DICHLORO-
U080	METHYLENE CHLORIDE
U117	ETHANE, 1,1'-OXYBIS-(I)
U117	ETHYL ETHER (I)
U121	METHANE, TRICHLOROFLUORO-
U121	TRICHLOROMONOFUOROMETHANE
U122	FORMALDEHYDE
U151	MERCURY
U159	2-BUTANONE (I,T)
U159	METHYL ETHYL KETONE (MEK) (I,T)
U161	METHYL ISOBUTYL KETONE (I)
U161	4-METHYL-2-PENTANONE (I)
U161	PENTANOL, 4-METHYL-
U188	PHENOL
U220	BENZENE, METHYL-
U220	TOLUENE
U226	ETHANE, 1,1,1-TRICHLORO-
U226	METHYL CHLOROFORM
U239	BENZENE, DIMETHYL- (I,T)
U239	XYLENE (I)
X001	NOT DEFINED
X002	NOT DEFINED
X003	NOT DEFINED

**GEOCHECK VERSION 1.2  
SUMMARY**

**HYDROGEOLOGICAL INFORMATION**

<u>WELL QUADRANT</u>	<u>DISTANCE FROM TP</u>	<u>LITHOLOGY</u>	<u>DEPTH TO WATER TABLE</u>
Southern	1 - 2 Miles	Limestone	20 ft.

**AREA RADON INFORMATION**

ERIE COUNTY, NY

Living Area

Average Activity:	1.000 pCi/L
% <4 pCi/L:	89%
% 4-20 pCi/L:	11%
% >20 pCi/L:	0%

Basement Area

Average Activity:	1.150 pCi/L
% <4 pCi/L:	87%
% 4-20 pCi/L:	11%
% >20 pCi/L:	2%

**GEOCHECK VERSION 1.2**  
**HYDROGEOLOGICAL INFORMATION**  
Well Closest to Target Property (Southern Quadrant)

**BASIC WELL DATA**

Site ID:	425541078501901	Distance from TP:	1 - 2 Miles
Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Erie
Altitude:	660.00 ft.	State:	New York
Well Depth:	90.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	20.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	01011951	Prim. Use of Water:	Commercial

**LITHOLOGIC DATA**

Lithologic Unit:	Devonian-Middle
Lithology of Unit:	Limestone
Lithology Modifier:	Not Reported

**WATER LEVEL VARIABILITY**

Not Reported

**GEOCHECK VERSION 1.2**  
**PUBLIC WATER SYSTEM INFORMATION**

Searched by Nearest Well.

**PWS SUMMARY:**

PWS ID:	NY0011663	PWS Status:	Active	Distance from TP:	>2 Miles
Dir relative to TP:	North	Date Initiated:	Not Reported	Date Deactivated	Not Reported
PWS Name:	D J'S CAMPGROUND W LAKE ROAD BROCTON, NY 14716				

Addressee / Facility Type:	System Owner/Responsible Party
Facility Name:	MORO DUSAN J C/O DUSAN MORO 77 WOODCREST DRIVE AMHERST, NY 14226

Facility Latitude:	42.5818	Facility Longitude:	078.4806
City Served:	PORTLAND (T)	Population Served:	Not Reported:
Treatment Class	Not Reported		

Well currently has or has had major violation(s): No



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX C**

**REGULATORY AND HISTORICAL RECORDS**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive. Buffalo, New York 14221 (716) 634-2293

915033

# ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK

## PHASE II INVESTIGATIONS

**LaSalle Reservoir Site**  
**Site Number 915033**  
**City of Buffalo, Erie County**

**April 1991**



Prepared for:

**New York State Department  
of Environmental Conservation**

50 Wolf Road, Albany, New York 12233

*Thomas C. Jorling, Commissioner*

**Division of Hazardous Waste Remediation**

*Michael J. O'Toole, Jr., P.E., Director*

Prepared by:

**Ecology and Environment Engineering, P.C.**

## 1. EXECUTIVE SUMMARY

### 1.1 SITE DESCRIPTION AND BACKGROUND

The LaSalle Reservoir site is a former limestone quarry approximately 50 acres in size located in the City of Buffalo, Erie County, New York (see Figures 1-1 and 1-2).

The site was originally owned by the Buffalo Cement Company and was used as a limestone quarry beginning sometime prior to 1927, according to aerial photos. In 1947, the Buffalo Crushed Stone Company (successor in title to the Buffalo Cement Company) conveyed the area of the present retention basin to the City of Buffalo. Subsequently, the City of Buffalo acquired an adjacent 0.6-acre parcel from the Buffalo Crushed Stone Company. By 1951, filling of the quarry was well underway, especially in the northern section. Aerial photos from 1958 and 1960 show continued filling activity. In 1960, the city acquired an adjoining 24.75 acres from Houdaille Industries, Inc. (successor in title to Buffalo Crushed Stone Company) on the condition that the area would be filled and used as a public park. By 1972, the entire original quarry area had been filled.

The fill allegedly consists of municipal refuse, incinerator ash, construction and demolition debris, household appliances, and tree parts. The site also received paint waste mixed with sawdust, floor sweepings, and refuse from Buffalo Forge Company. Additionally, the Erie County Department of Environment and Planning (DEP) has indicated the possibility of industrial waste having been disposed on site. The site now consists of a housing development and a playground and borders a remaining portion of the quarry which is utilized as a stormwater retention basin by the Buffalo Sewer Authority. The depth of this basin and the former quarry is approximately 45 feet below the natural ground

surface. A Phase I investigation was completed for this site by Recra Environmental, Inc., in November 1985. No previous analytical data is known to exist for the site.

In 1989, a geotechnical report was prepared for the Buffalo Sewer Authority concerning the Hertel Avenue/North Buffalo Tunnel project proposed to traverse the southwest portion of the site. This study included the installation of an observation well, which is located on the west side of the site. A groundwater sample was collected from this observation well (boring location HA-4) and tested for corrosive properties and water quality. Analyses included bicarbonate (alkalinity), sulfate, carbonate (alkalinity), chloride, free CO<sub>2</sub>, and total hardness. Test results indicated that the sulfate content exceeded the "corrosive threshold" (2 to 3 ppm) and that free CO<sub>2</sub> existed at elevated levels. (Jenny Engineering Corporation 1989).

## 1.2 PHASE II INVESTIGATION

The Phase II field investigation conducted by Ecology and Environment Engineering, P.C. (E & E) in the spring of 1989 included an initial site reconnaissance, electromagnetic terrain conductivity (EM31) survey, and portable proton magnetometer survey to define the site geological conditions, locate any buried materials, and determine the presence of contaminant plumes. Three bedrock groundwater monitoring wells were installed. Groundwater, subsurface soil, surficial soil, and waste samples were collected and analyzed.

## 1.3 SITE ASSESSMENT

The geophysical surveys indicated that the proposed monitoring well locations did not contain buried metallic objects. Geologic logs from the on-site drilling indicate the overburden ranges from 7.5 to 22 feet thick above an underlying bedrock of fractured limestone.

Three groundwater monitoring wells were installed into the bedrock. The August 1989 depth to water in these wells ranged from 33.2 to 44.5 feet below ground surface. Local groundwater flow based on the three bedrock wells is apparently to the northwest.

Groundwater, waste, and subsurface soil samples from borings were analyzed for Target Compound List (TCL) organics, including volatile



organics, base/neutral and acid extractables (BNAs), and pesticides/polychlorinated biphenyls (PCBs). These samples along with six additional surface soil samples were analyzed for inorganics and cyanide.

Three groundwater samples were collected and analyzed. Five TCL organic compounds were found above the quantifiable detection limit in samples from one of the three bedrock wells, with the level of 1,1,1-trichloroethene exceeding proposed United States Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) groundwater guidelines. Nine metals were detected, with concentrations of iron exceeding New York State Class GA standards in wells GW-2 and GW-3.

Waste samples were collected at eight locations over the landfilled area at depths of 2 to 4 feet where possible. Organic compounds detected include polynuclear aromatic hydrocarbons (PAHs), dibenzofuran, 4,4'-DDT, and 4,4'-DDD. Sixteen metals were detected in waste samples. Concentrations of lead exceeded average soil concentrations for soils of the eastern United States in two of the eight waste sample locations.

Subsurface soil samples were collected during the drilling of two of the three well borings. Organic compounds, including PAHs, were detected in soil samples collected from GW-3. Sixteen inorganic elements were detected in both GW-1 and GW-3. None of these exceeded published naturally occurring ranges.

Six surficial soil samples were collected and analyzed for inorganic analysis only. No metals were detected in concentrations exceeding average soil concentrations for soils of the eastern United States.

The on-site air monitoring surveys, using a portable HNu photoionization detector, revealed no responses above background levels. In summary, the types and concentrations of organic and inorganic compounds detected are consistent with the LaSalle Reservoir site's former use as a municipal solid waste landfill. Analytical results have revealed the potential for encountering contamination problems during the site's present use as a playground and housing complex.

#### 1.4 HAZARD RANKING SYSTEM SCORE

The Hazard Ranking System (HRS) score was compiled to quantify risks associated with the site. The HRS score is applied to inactive hazardous waste sites in New York State to prioritize those needing

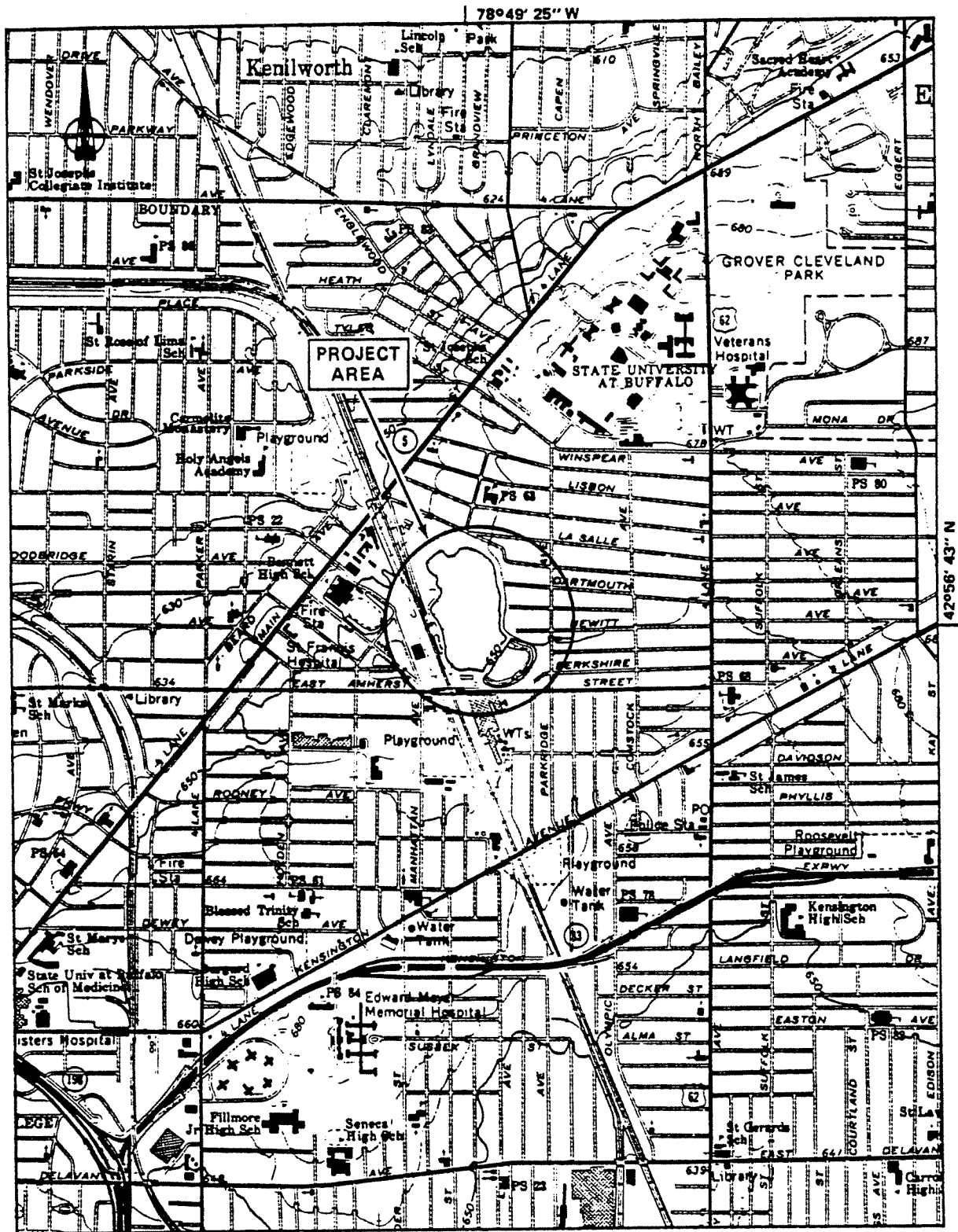
additional investigation and remediation. The system evaluates site characteristics, containment measures, waste types, and potential contaminant receptors.

Under the HRS, three numerical scores are computed to express the site's relative risk of damage to the population and the environment. The three scores are described below:

- o  $S_M$  reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility via groundwater, surface water, or air. It is a composite of separate scores for each of the three routes ( $S_{gw}$  = groundwater route score,  $S_{sw}$  = surface water route score, and  $S_a$  = air route score).
- o  $S_{FE}$  reflects the potential for harm from substances that can explode or cause fires.
- o  $S_{DC}$  reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

Based on the results of this and previous studies, the HRS scores for the LaSalle Reservoir site have been calculated as follows:

$$\begin{aligned} S_M &= 2.58 && (S_{gw} = 4.47; S_{sw} = 0; S_a = 0) \\ S_{FE} &= 0 \\ S_{DC} &= 62.5 \end{aligned}$$



SOURCE: USGS 7.5 Minute Series (Topographic) Quadrangle; Buffalo, N. Y. 1965.

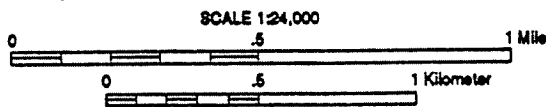
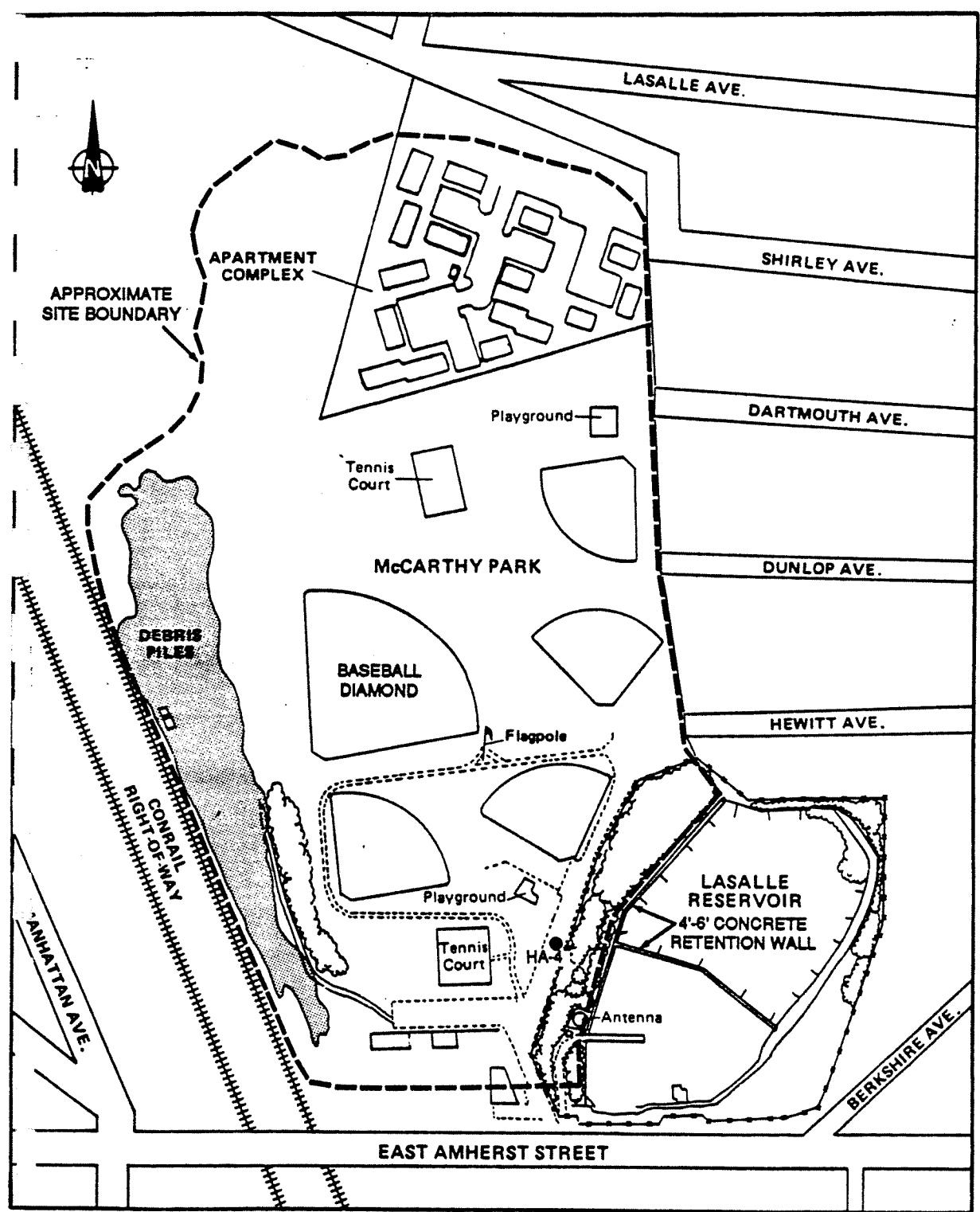


Figure 1-1  
LOCATION MAP: LASALLE RESERVOIR SITE



Source: JRCE: Ecology and Environment Engineering, P.C.

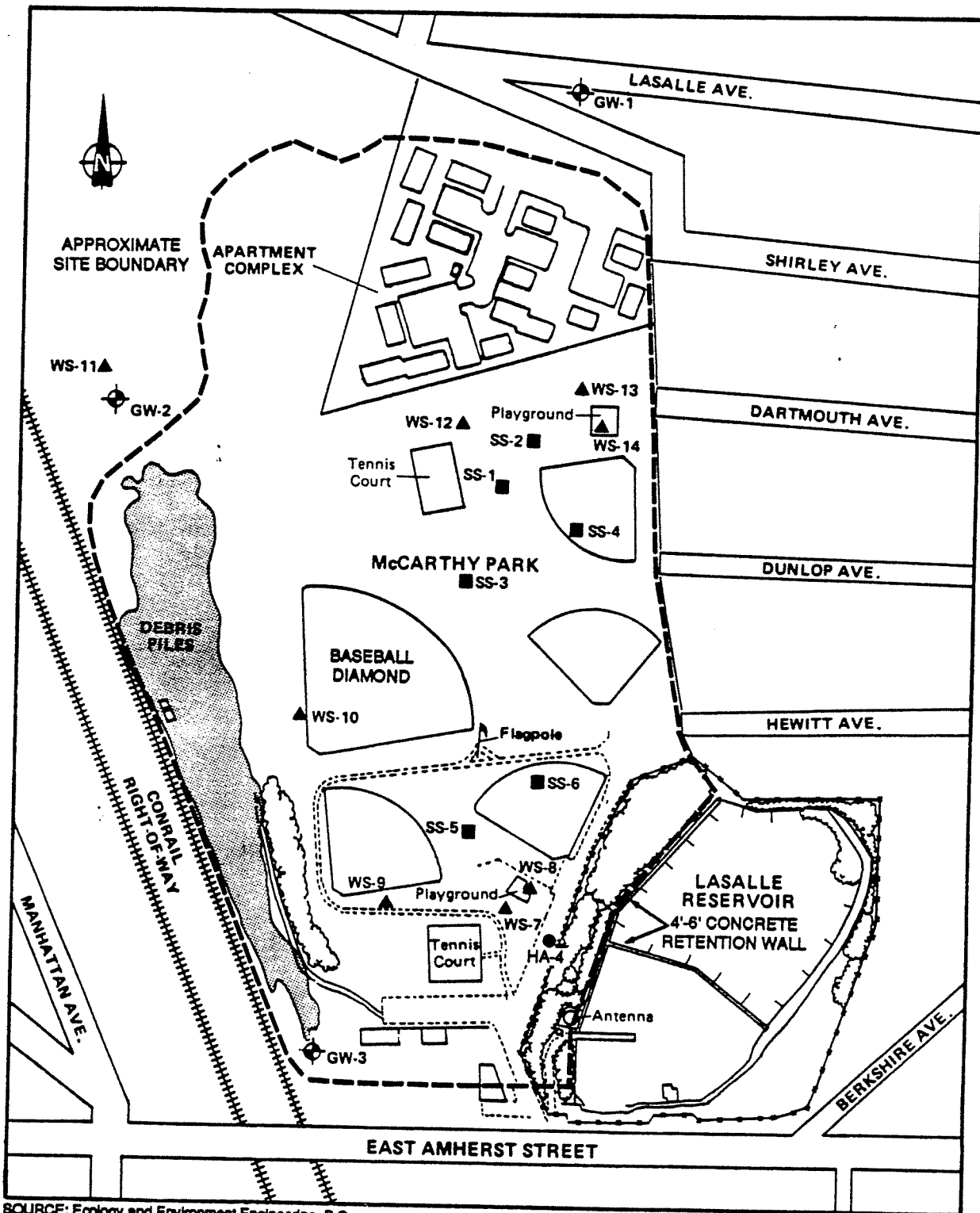
NOT TO SCALE

- Approximate Site Boundary
- Buffalo Sewer Authority Well

Figure 1-2  
SITE SKETCH: LASALLE RESERVOIR SITE

## ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

1. Site Name LaSalle Reservoir Site		2. Site Number 915033	3. Town Buffalo	4. County Erie
5. Region 9	6. Classification Current <u>2a</u> / Proposed <u>D1</u>	7. Activity <input type="checkbox"/> Add <input type="checkbox"/> Reclassify <input checked="" type="checkbox"/> Delist <input type="checkbox"/> Modify _____		
8a. Describe location of site (attach USGS topographic map showing site location). The site is located on the north side of East Amherst Street, south of Main Street, east of abandoned railroad tracks in the City of Buffalo. Figure 1-1 of the Phase II report shows the actual location of the site. 90.23-7-10				
b. Quadrangle <u>Buffalo</u> c. Site latitude <u>42°56'43"N</u> Longitude <u>78°49'25"W</u> d. Tax Map Number <u>90.23-7-1</u>				
9a. Briefly describe the site (attach site plan showing disposal/sampling locations) The site consists of an open quarry now used by the Buffalo Sewer Authority for storm water retention, and a recreational park (McCarthy Park). The park was built on the former portion of the quarry that was filled. Figure 3-2 shows well and soil sample locations.				
b. Area <u>50</u> acres c. EPA ID number <u>NYD980534606</u> d. PA/SI <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
e. Completed: <input checked="" type="checkbox"/> Phase I <input checked="" type="checkbox"/> Phase II <input type="checkbox"/> PSA <input checked="" type="checkbox"/> Sampling				
10. Briefly list the type and quantity of the hazardous waste and the dates that it was disposed of at this site. Fill material allegedly consisted of unknown quantities of municipal refuse, incinerator ash, construction and demolition debris, household appliances, tree limbs and paint waste mixed with sawdust, floor sweepings, and refuse from Buffalo Forge Company.				
11a. Summarized sampling data attached <input type="checkbox"/> Air <input checked="" type="checkbox"/> Groundwater <input type="checkbox"/> Surface Water <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/> Waste <input type="checkbox"/> EP Tox <input type="checkbox"/> TCLP				
b. List contravened parameters and values Groundwater: 1,1-DCE (13 µg/L); 1,1-DCA (140 µg/L); total-1,2-DCE (21 µg/L); 1,1,1-TCA (280 µg/L); Fe (574-2,800 µg/L); Mg (43,000 - 103,000 µg/L).				
12. Site impact data				
a. Nearest surface water: Distance <u>10,500</u> ft. Direction <u>Southwest</u> Classification <u>D</u>				
b. Nearest groundwater: Depth <u>30.4</u> ft. Flow direction <u>NW</u> <input type="checkbox"/> Sole source <input type="checkbox"/> Primary <input type="checkbox"/> Principal				
c. Nearest water supply: Distance <u>&gt;15,000</u> ft. Direction <u>West</u> Active <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
d. Nearest building: Distance <u>&lt;25</u> ft. Direction <u>South</u> Use <u>Commercial</u>				
e. Crops/livestock on site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No j. Within a State Economic Development Zone? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
f. Exposed hazardous waste? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No k. For Class 2A: Code _____ Health model score _____				
g. Controlled site access? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No l. For Class 2: Priority category _____				
h. Documented fish or wildlife mortality? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No m. HRS Score <u>SM = 2.58</u>				
i. Impact on special status fish or wildlife resource? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No n. Significant threat <input type="checkbox"/> Yes _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown				
13. Site owner's name City of Buffalo		14. Address Buffalo, NY		15. Telephone Number (716) 851-4200
16. Preparer <u>Barbara Topor, Geologist, Ecology and Environment Engineering, P.C.</u> Name, title, and organization				
<u>4-5-91</u> Date		<u>Barbara Topor</u> Signature		
17. Approved _____ Name, title, and organization				
_____ Date		_____ Signature		



SOURCE: Ecology and Environment Engineering, P.C.

KEY:

- ⊕ Groundwater Monitoring Well
- ▲ Waste Sample
- Surficial Soil Sample
- Buffalo Sewer Authority Well

NOT TO SCALE

Figure 3-2  
MONITORING WELL, SURFACE SOIL, AND WASTE SAMPLING LOCATIONS

STARTED 7-19-89  
 FINISHED 7-25-89  
 BT 1 OF 5



E + E DRILLING AND TESTING CO., INC.  
 SUBSURFACE LOG

HOLE NUMBER G11-2  
 SURFACE ELEVATION \_\_\_\_\_  
 GROUNDWATER DEPTH \_\_\_\_\_

PROJECT LaSalle Reservoir Phase II

LOCATION \_\_\_\_\_

WELL DIAGRAM	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER				PROFILE	FIELD IDENTIFICATION OF SOILS	NOTES	
			0	6	8	12				
							Cl   Si   Sd   Gr			
	○		8	28				0-2' 0-6' - silt, ash, pulverized bricks, etc. 0.6'-1.05' - limestone, light gray 1.05'-1.2' - black ash or other industrial by-product	Recovery = 1.2' 1720	
			11	13						
		○		14	9				2'-4' 2'-2.8' - gravelly soil, organic, traces of limestone 2.8'-3.1' - limestone, pulverized from split spoon	Recovery = 1.1' 1730
				13	1					
		?		13	14				4'-6' 4.0'-5.1' - C and D fill, gravel, etc. 5.1'-5.4' - limestone	HNU getting rained on - unreliable
				13	3				6'-8' 6.0'-6.5' - limestone with upper cavings	Recovery = 0.5' 1800
	○		7	5				8'-10' 8-9.25' - gravelly silt, brown, damp	Refusal at 9.25' 1805	
			5	7				9.25'-14' - dark to medium gray limestone with black chert and stylolites; breaks occur along stylolites; bedding is finely laminated and irregular; top 3" broken (weathered) horizontal fracture at 8.5" from top - Onondaga Limestone	Core No. 1 Recovery = 100%	
	○		3	6				14'-17' - Onondaga Limestone, chert noted horizontal fractures at 15.0', 15.7', and 16.0' bgs; weathering is low to moderate in these	NX Run No. 1 Recovery = 100% RQD = 85% Water circulation lost at 16'-17'	
			10	3"						

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C-6

CLASSIFICATION/BY

ecology and environment  
 Jim Richert / Don Johnson  
 ecology and environment  
 ecology and environment

7-19-89  
7-25-89  
5



E + E DRILLING AND TESTING CO., INC.  
SUBSURFACE LOG

HOLE NUMBER G11-2  
SURFACE ELEVATION \_\_\_\_\_  
GROUNDWATER DEPTH \_\_\_\_\_

PROJECT LaSalle Reservoir Phase II

LOCATION \_\_\_\_\_

SAMPLE NO.	BLOWS ON SAMPLER	PROFILE	FIELD IDENTIFICATION OF SOILS	NOTES							
					0	8	8	12	12	18	18
		9.25'	fractures	Approx. coring rate = 4.25 min/foot							
		Bedrock Onondagas.	17' - 22' - light gray, fine grained limestone, fossils minimal horizontal fractures at 17.8', 18.65', <u>21.8'</u> - moderate weathering, subangular fragments	NX Run No. 2 Coring continued with Mobile B-57 truck-mounted drilling rig using NX-size rock core barrel, wire line method							
		27.85'	Akron Dolostone	NX Run No. 3 Recovery = 100% RQD = 73%							
		34.9'	Bertie Formation	NX Run No. 4 Recovery = 100% RQD = 80%							
		27' - 32'	27' - 27.85' - Onondaga Limestone 27.85' Suspected formation contact - Onondaga Ls. and underlying Akron Dolostone - light gray, mottled limestone which exhibits small (0.75" φ) vugs; green staining (glauconite)								

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recycled paper

C-7

CLASSIFICATION/BY Don Johnson  
ecology and environment  
ecology and environment  
ecology and environment

ecology and environment





DATE STARTED 7-19-89  
 FINISHED 7-25-89  
 SHEET 4 OF 5



E + E DRILLING AND TESTING CO., INC.  
 SUBSURFACE LOG

HOLE NUMBER GU-2  
 SURFACE ELEVATION \_\_\_\_\_  
 GROUNDWATER DEPTH \_\_\_\_\_

PROJECT LaSalle Reservoir Phase II

LOCATION \_\_\_\_\_

WELL DIAGRAM	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER				PROFILE Cl Si Sd Gr	FIELD IDENTIFICATION OF SOILS	NOTES
			0-6	6-12	12-18	18-24			
							of interbedded shale horizontal fractures at 41.7', 41.91', 42.3', 42.58', 42.63', 42.69'	NX Run No. 7 continued	
							42.75-45.50' - same limestone, dark gray, with increasing shale, laminated, suspected Scajaguada Member horizontal fractures at 42.9', 43.45', 44.5'; at 43.45' - a weathered, greenish pyrite layer; fractured zone from 44.6' to 45.50' with clay, limestone fragments	NX Run No. 8 Recovery=100% RQD=81%	
							45.50'-47.40' 45.5'-46' - limestone with some shale and many stylolites (one every 1/4 inch) 46'-47.4' - Suspected Falkirk member of the Bertie formation; light gray dolostone with brecciated areas and contorted bedding; few pyrite inclusions; no stylolites; 5 horizontal fractures	NX Run No. 9 Recovery=100% RQD=65%	
							47.4'-52.3' - same dolostone with several stylolites, 8 natural horizontal fractures	NX Run No. 10 Recovery=98% RQD=65%	
							52.3'-57.4' - same dolostone with six horizontal fractures, some stylolites, and a gypsum stringer at 52.55'	NX Run No. 11 Recovery=100% RQD=42%	



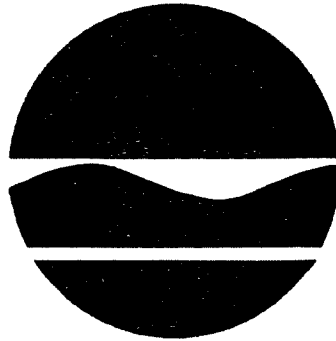
Appendix J

# HAZARDOUS SUBSTANCE WASTE DISPOSAL SITE STUDY

*Hazardous Substance Waste Disposal Site Descriptions*

***FINAL REPORT***

June 13, 1995



Prepared for:

The New York State Legislature

Prepared by:

New York State  
Department of Environmental Conservation

In Consultation with:

New York State Department of Health

New York State Department of Environmental Conservation  
Division of Hazardous Waste Remediation

Hazardous Substance Waste Disposal Site - Description

<b>Site Name</b>	LaSalle Reservoir	<b>Registry</b>	D	<b>Site Number</b>	HS9033	<b>Hazardous Substances Disposed</b>			
<b>Address</b>	Parkridge Ave & E. Amherst St. Buffalo 14215	<b>Reg. Site ID</b>	915033	<b>HRS Score</b>	2.58	<b>VOCs</b>	N	<b>Pesticides</b>	Y
<b>County</b>	Erie	<b>Site Type</b>	3A	<b>HRS Date</b>	Unknown	<b>Semi-VOCs</b>	Y	<b>Metals</b>	Y
<b>Region</b>	9	<b>RCRA</b>	U	<b>Acres</b>	50.00	<b>PCBs</b>	N	<b>Asbestos</b>	N
<b>Owner</b>	M	<b>EPA ID</b>	NYD980534606	<b>Samples Collected</b>					
<b>Owner Name</b>	City of Buffalo	<b>Latitude</b>	42 56 43 N						
<b>Address</b>	Buffalo, NY	<b>Longitude</b>	78 49 25 W						
<b>Telephone</b>	(716)851-4200	<b>Quadrangle</b>	Buffalo						
		<b>Is Site Active</b>	U						
<b>Operator</b>	M	<b>Years of Operation</b>	U	<b>to U</b>	<b>Groundwater</b>				
<b>Operator Name</b>	Same	<b>Completed Investigation?</b>	U	<b>Phase 2</b>					
<b>Operator Address</b>	Same								
<b>Operator Telephone</b>	Same								

Site Impact Data - Affected Media

<b>Contamination of...</b>		<b>Active Drinking Water Supply?</b>	U
...Surface Water?	U	<b>Hazardous Substance Exposed?</b>	N
...Groundwater?	Y	<b>Controlled Site Access?</b>	N
...Drinking Water?	U	<b>Ambient Air Contamination?</b>	U
<b>Surface Water Class</b>	D	<b>Threat of Direct Contact?</b>	Y
<b>Groundwater Class</b>	U	<b>Documented Fish or Wildlife Mortality?</b>	N
		<b>Impact on special status fish or wildlife resource?</b>	N

Does a threat to the Environment or the Public Health exist? **P**

**Describe the threat posed by disposed hazardous substance.**  
The site studies do not support verification of CR-T-K paint waste disposal. The contaminants in the groundwater are highest in monitoring well GW-3 which was the presumed upgradient well. The source of contamination may be from an offsite source.

**Describe the site.**  
The site consists of an open quarry now used by the Buffalo Sewer Authority for storm water retention and a recreational park. The park was built on a former portion of the quarry that was filled. The park is actively used by the public. Materials disposed include municipal refuse, incinerator ash, C&D debris, household appliances, tree limbs and paint waste mixed with sawdust, floor sweepings, and refuse from Buffalo Forge Co.

**Hazardous Substances Disposed**  
Lead, pesticides, PAH's and dibenzofuran

<b>Selected Analytical Information</b>	<b>Groundwater</b>
<b>Air</b>	
<b>Surface Water</b>	<b>Sediment</b>
<b>Surface Soil</b>	<b>Subsurface Soil</b>
<b>Waste</b>	<b>Leachate</b>
Lead, pesticides, PAH's and dibenzofuran were found in the waste.	<b>TCLP</b>
<b>EPToxicity</b>	

<b>Site Impact Data</b>	<b>Fish or Wildlife Mortality</b>
<b>Surface Water</b>	U
10,500 feet, southwest	<b>Special Status Fish or Wildlife Resource</b>
<b>Groundwater</b>	U
30.4 feet, northwest	<b>Building</b>
<b>Drinking Water</b>	< 25 feet, south lies a commercial area
the nearest drinking well is west of the site. The distance is unknown.	

<b>Regulatory Agencies Involved</b>	<b>Preparer</b>	<b>Nominated By</b>
NYSDOH	Julie Welch	
NYSDEC	NYSDEC	
	EnvEngrTech2	
	July 18, 1994	



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX D**  
**BORING LOGS**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive. Buffalo. New York 14221 (716) 634-2293

PROJECT: <b>Main and LaSalle Streets</b>	Sheet: <b>1 of 4</b>
CLIENT: <b>Buffalo Urban Renewal Agency</b>	Job No. <b>ET-511</b>
DRILLING CONTRACTOR: <b>SJB Contract Drilling &amp; Testing</b>	Meas. Pt. Elev
PURPOSE: <b>Site Investigations</b>	Ground Elev
DRILLING METHOD: <b>4 1/2" Hollow Stem Auger</b>	Datum
DRILL RIG TYPE: <b>CME55</b>	Date Started: <b>6/14/95</b>
GROUND WATER DEPT: <b>42.3'</b>	Date Finished: <b>6/14/95</b>
MEAS. PT.: <b>Ground level</b>	Driver: <b>D. Butzer</b>
DATE OF MEAS.: <b>6/14/95</b>	Inspector: <b>J. Grady</b>

Depth (Feet)	Sample Number	Box Count	Notes	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
0 - 4					1st Four Feet Augered Rock, brick, and Cobbles	
4 - 6	#1 8 17 28 20				Brown Coarse to medium SAND, Coarse to Fine Gravel, Trace Cinders rock fragments Black Coarse to Fine SAND Some Silt (6.0)	N = 45 Rec = 0.8
6 - 9						
9 - 10	#2 4 4				Red Brown silty CLAY And wood debris	N = 5 Rec = 0.2

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Test Boring Log

Boring No. B-1

PROJECT: Main & LaSalle Streets

Sheet 2 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. RT-511

Depth (Feet)	Sample Number	Blow Counts	Unified Classif. Code	Visual Log Description	Geologic Description	Remarks
11		1		/		
		3				
14	#3	4		/	Black Green Silty CLAY, some coarse to fine sand + gravel Trace wood debris	Nz 6 Rec = 1.6
		3				
		3				
		6				
19	#4	2		/	Wood and Ash debris Some medium to fine gravel Trace Brown Silty clay	Nz 2 Rec = 1.0
		1				
		1				
		2				
24	#5	5		/	Brown Silty CLAY some wood debris Brick layer	Nz 6 Rec = 1.1
		3				



PROJECT: Main and LaSalle

Sheet 3 of 4

CLIENT Buffalo Urban Renewal Agency

Job No E+511

Depth (Feet)	Sample Number	Bow Counts	Unit Class	Soil Log Description	Geologic Description	Remarks
26		3		↑ ↓	Red Brown SILT & CLAY Trace Fine Gravel	
		2				
29	#6	4		↑ ↓	Black Brown SILT and Coarse to Fine SAND, Some Wood debris, Trace Fine Gravel	N=6 Rec = 0.8
		3				
		6				
		3				
31				↑ ↓		
34	#7	4		↑ ↓	Black Brown SILT and Coarse to Fine SAND, Some Ash debris ..... Becomes Red-Brown, Trace Fine Gravel	N=12 Rec = 1.0
		5				
		7				
		9				
36				↑ ↓		
39	#8	6		↑ ↓	Black-Brown Clayey SILT some Coarse to Fine SAND	N=12 Rec = 1.2
		3				

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Test Boring Log

Boring No. B-1

PROJECT: Main and La Salle Streets

Sheet 4 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Soil Class.	Soil Log Description	Geologic Description	Remarks
41		9		↕	Becomes Red Brown	
		7			Becomes Green, some coarse to medium Gravel	
43					<p>Rock Encountered at 43.1'</p> <p>End of Boring</p> <p>Total Depth = 43.1'</p> <p>Augers to 43.1'</p> <p>Cuttings Back Filled</p> <p>Water at 42.3'</p>	

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Test Boring Log

Boring No. **B-2**

PROJECT: <b>Main and LaSalle Streets</b>	Sheet: <b>1 of 4</b>
CLIENT: <b>Buffalo Urban Renewal Agency</b>	Job No: <b>ET-511</b>
DRILLING CONTRACTOR: <b>S&amp;B Contract Drilling and Testing</b>	Meas. Pt. Elev
PURPOSE: <b>Site Investigation</b>	Ground Elev
DRILLING METHOD: <b>4 1/4" Hollow Stem Auger</b>	Datum
DRILL RIG TYPE: <b>CME 55</b> TYPE: <b>sp/sp</b> CASING: <b>HSA</b>	Date Started: <b>6/14/95</b>
GROUNDWATER DEPT: <b>Dry</b> DIA: <b>2" OD</b> <b>4 1/4" ID</b>	Date Finished: <b>6/15/95</b>
MEAS. PT.: <b>Ground level</b> WEIGHT: <b>140 lbs</b>	Operator: <b>D. Butzer</b>
DATE OF MEAS.: <b>6/15/95</b> FALL: <b>30"</b>	Inspector: <b>L. Grady</b>

Depth (Feet)	Sample Number	Box Count	SOIL CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
4	#1	4			Brown Clayey SILT, some medium to Fine SAND ----- Black Cinders ----- Red Brick layer -----	N=20 Rec z 1.2
		5				
		15				
		16				
9	#2	2			Miscellaneous Fill	N=2
		1			Trace glass	Rec z 0.5

PROJECT Main and LaSalle Streets

Sheet 2 of 4

CLIENT Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Bow Counts	Void Ratio	Soil Log Description	Geologic Description	Remarks	
11		1		/	Miscellaneous Fill cont.		
		1					
14	#3	6		/	Brown CLAY & SILT, some organic debris	N=7	
		5				Black Cinders	Rec=0.6
		2				Red Brick	
		4					
19	#4	5		/	Wood and miscellaneous Fill	N=5	
		3					Rec=1.0
		2					
		5					
24	#5	4		/	Black Clayey SILT Some Organic debris	N=7	
		4					Rec=0.4

PROJECT *Main and LaSalle Streets*

Sheet 3 of 4

CLIENT *Buffalo Urban Renewal Agency*

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Soil Gas	See Log Description	Geologic Description	Remarks
26		3		↕	Black Clayey SILT Some Organic debris	
		2				
29				↕	miscellaneous Fill Some wood and slag debris	N=6 Rec=1.1
	#6	2				
		3				
		3				
31		2		↕		
34				↕	Brown-yellow Coarse to Fine SAND and Coarse to Fine Gravel	N=11 Rec=1.0
	#7	4				
		5				
		5				
36				↕		
39				↕	Brown silty CLAY and Coarse to Fine Gravel	N=7 Rec=1.2
	#8	3				
		3				

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Test Boring Log

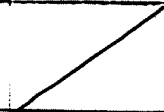
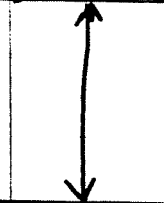
Boring No. B-2

PROJECT Main and LaSalle Streets

Sheet 4 of 4

CLIENT Buffalo Urban Renewal Agency

Job No Et-511

Depth (Feet)	Sample Number	Bow Counts	SPT Blows	Soil Log Description	Geologic Description	Remarks
41		4				
42.9		15				
					<p>Rock encountered at 42.9'</p> <p>End of Boring</p> <p>Total Depth = 42.9'</p> <p>Augers to 42.9'</p> <p>Cuttings Backfilled</p> <p>No water encountered</p>	

PROJECT: Main And LaSalle Streets	Sheet 1 of 4
CLIENT: Buffalo Urban Renewal Agency	Job No. ET-511
DRILLING CONTRACTOR: SJB Contract Drilling + Testing	Meas. P.L. E. or
PURPOSE: Site Investigation	Ground E. or
DRILLING METHOD: 4 1/4" Hollow Stem Auger	SAMPLE CORE CASING Datum
DRILL RIG TYPE: CME 55 TYPE: Spl/Sp HSA	Date Started: 6/15/95
GROUNDWATER DEPTH: 43.8' DIA: 2" OD	Date Finished: 6/15/95
MEAS. PT.: Ground Level NEG-T 140 lbs	Owner: D. Butler
DATE OF MEAS.: 6/15/95	Inspector: J. Grady

Depth (Feet)	Sample Number	Blow Count	SOIL CLASSIFICATION	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	#1	5			Brown-Black SILT & CLAY, and Coarse to Fine Gravel	N=25 Rec=0.9
		11				
		14				
		7				
4	#2	10		Coarse GRAVEL and Cobbles Rock Fragments (Limestone)	N=25 Rec=0.2	
		13				
		12				
		6				
9	#3	11		Red-Brown Silty CLAY Trace Gravel	N=13 Rec=0.4	
		8				

PROJECT Main and LaSalle Streets

Sheet 2 of 4

CLIENT Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Bow Counts	Soil Log Description	Geologic Description	Remarks
11		5	[Diagonal hatching]	Rock Fragments (Limestones)	
		4			
14	#4	3	[Diagonal hatching]	Black-Brown Clayey Silt and medium to fine Gravel	N = 4 Rec = 1.0
		2			
		2			
		3			
16			[Diagonal hatching]		
19	#5	7	[Diagonal hatching]	Miscellaneous Fill, some Brown Clayey Silt, Trace medium to fine Gravel	N = 12 Rec = 1.1
		8			
		4			
		2			
21			[Diagonal hatching]		
24	#6	1	[Diagonal hatching]	Miscellaneous Fill, some Ash and paper product	N = 2 Rec = 1.0
		1			







PROJECT: <b>Main and LaSalle Streets</b>	Sheet: <b>1 of 4</b>
CLIENT: <b>Buffalo Urban Renewal Agency</b>	Job No: <b>ET-511</b>
DRILLING CONTRACTOR: <b>SUB Contract Drilling + Testing</b>	Meas. P.L. E. #:
PURPOSE: <b>Site Investigation</b>	Ground E. #:
DRILLING METHOD: <b>4 1/2" Hollow Stem Auger</b>	DATE: <b>6/15/95</b>
DRILL BIT TYPE: <b>CME 55</b> TYPE: <b>Splice</b> CASING: <b>HSA</b>	Date Finished: <b>6/16/95</b>
GROUNDWATER DEPTH: <b>43.8</b> DIA: <b>2" OD</b> <b>4 1/2" ID</b>	Operator: <b>D. Butzer</b>
MEAS. PT.: <b>Ground level</b> HEIGHT: <b>140 lbs</b>	Inspector: <b>J. Grady</b>
DATE OF MEAS.: <b>6/16/95</b> FALL: <b>30"</b>	

Depth (Feet)	Sample Number	Soil Column	LOG	GEOLOGICAL DESCRIPTION	REMARKS
2	#1	4	[Diagram showing soil column with arrows indicating depth intervals]	Brown Clayey SILT and Coarse to Fine Gravel Trace rock Fragments	N=33 Rec=0.5
		8			
		25			
		26			
4	#2	10	[Diagram showing soil column with arrows indicating depth intervals]	Black Cinders, some Clayey Silt, Trace Fine Gravel Trace miscellaneous fill	N=17 Rec=0.8
		10			
		7			
		5			
9	#3	3	[Diagram showing soil column with arrows indicating depth intervals]	Black cinders	N=5 Rec=0.7
		3			

PROJECT Main and LaSalle Streets

Sheet 2 of 4

CLIENT Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Penetration	Soil Log Description	Geologic Description	Remarks
11		2			Brown CLAY & SILT, some Coarse to Fine Gravel	
		5				
14	#4	7			BLACK SILT & CLAY, some Coarse to Fine Sand, Trace Coarse to medium Gravel	N= 10 Rec=0.95
		4				
		6				
		5				
16						
19	#5	6			BLACK SILT & CLAY and Coarse to Fine Gravel, some wood + glass debris	N= 7 Rec=0.7
		4				
		3				
		2				
21						
24	#6	3			miscellaneous Fill, some Black silt & Clay, Trace medium to Fine Gravel	N= 4 Rec=1.0
		2				

PROJECT: Main and LaSalle Streets

Sheet 3 of 4

CLIENT Buffalo Urban Renewal Agency

Job No ET-511

Depth (Feet)	Sample Number	Blow Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
26		2		/		
		2				
29	#7	5		/	miscellaneous Fill, some wood + metal debris Trace Brown silt + clay Trace Fine Gravel	N=8 Rec=1.0
		4				
		4				
		3				
31				/		
34	#8	3		/	miscellaneous Fill Trace glass debris	N=4 Rec=1.15
		2				
		2				
		3				
36				/		
39	#9	3		/	miscellaneous Fill,	N=4 Rec=1.5
		2				

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Test Boring Log

Boring No. B-4

PROJECT: Main and LaSalle Streets

Sheet: 4 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Box Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
41		2			Some Brown Silt & Clay, Little Coarse to Fine Sand	
		3				
44	#10	23			Shale Fragments and Black Silt and Coarse to Fine Sand  (45.7)	N = 72 Rc = 1.3
		31				
		41				
		50/1				
46					Rock encountered at 45.7 End of Boring Total Depth = 45.7' Augers to = 44' water at 43.8	

PROJECT <b>Main and LaSalle Streets</b>	Sheet: <b>1 of 4</b>
CLIENT <b>Buffalo Urban Renewal Agency</b>	Job No. <b>ET-511</b>
DRILLING CONTRACTOR <b>SUB Contract Drilling and Testing</b>	Meas. P.L. E.g.
PURPOSE <b>Site Investigation</b>	Ground E.g.
DRILLING METHOD <b>4 1/2" Hollow Stem Auger</b>	DATE
DRILL BIT TYPE <b>CME 55</b>	DATE STARTED <b>6/16/95</b>
GROUNDWATER DEPT. <b>Dry</b>	DATE FINISHED <b>6/16/95</b>
MEAS. PT. <b>Ground level</b>	DRIVER <b>D. Butzer</b>
DATE OF MEAS. <b>6/16/95</b>	INSPECTOR <b>J. Grady</b>

DEPTH (Feet)	SAMPLE NUMBER	ROW COLUMN	LOG	GEOLOGIC DESCRIPTION	REMARKS
2	#1	2 23 16 19		Brown Clayey SILT, some medium to Fine Gravel Broken rock Fragments	N=39 Rec=1.0
4	#2	5 4 3 6		Miscellaneous Fill and Clay & Silt, some medium to Fine Gravel	N=7 Rec=1.04
9	#3	3 1		Miscellaneous Fill, some coarse to Fine Gravel, Trace shale fragments, Trace glass	N=2 Rec=0.75

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Test Boring Log

Boring No. B-5

PROJECT: Main and LaSalle Street

Sheet 2 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No ET-511

Depth (Feet)	Sample Number	Bow Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
11		1		/		
		2				
14	#4	3		/	miscellaneous Fill and wood debris	N=3 Rec=20.7
		2				
		1				
		1				
16				/	miscellaneous Fill, some medium to fine Gravel	
19	#5	2		/	miscellaneous Fill and wood & Ash debris	N=2 Rec=10.1
		1				
		1				
		2				
21				/	Brown Clayey SILT and wood (organic debris)	
24	#6	16		/	BLACK CLAY & SILT and Coarse to Fine Gravel	N=22 Rec=0.7
		12				



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Test Boring Log

Boring No. B-5

PROJECT: Main and LaSalle Streets

Sheet 3 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No ET-511

Depth (Feet)	Sample Number	Blow Counts	Notes	Visual Log Description	Geologic Description	Remarks
26		10		/	Yellow-Brown coarse to fine SAND, and coarse to fine Gravel, Trace debris	
		8				
29				/	Black CLAY & SILT, and miscellaneous Fill, some coarse to fine Gravel wood debris (organic)	
		4				
		2				
		2				
31	#7	6		/	Brown Silty CLAY, and wood, some coarse to fine Gravel miscellaneous Fill and Ash, Trace medium to fine Gravel	N=4 Rec=0.75
34	#8	1		/	Black Cinders, some wood debris, Trace GLASS	
		4				
		3				
		3				
36				/		
39	#9	7		/		
		4				

FRONTIER TECHNICAL ASSOCIATES BUFFALO, NY (716) 634-2293			Test Boring Log		Boring No. B-5	
PROJECT: Main and LaSalle Streets					Sheet: 4 of 4	
CLIENT: Buffalo Urban Renewal Agency					Job No. ET-511	
Depth (Feet)	Sample Number	Blow Counts	USCS Classif. Code	Visual Log Description	Geologic Description	Remarks
41		3		/	Black CLAY & SILT and Ginders Trace Coarse to Fine Gravel Trace metal SCRAP	
		3				
43.9				↕		
					Rock Encountered at 43.9' End of Boring Total Depth = 43.9' Augers to 43.9' Cuttings BACK Filled No water in hole	

FRONTIER TECHNICAL ASSOCIATES BUFFALO, NY (716) 634-2293		Test Boring Log			Boring No. <b>B-6</b>
PROJECT: <b>Main and LaSalle Street</b>				Sheet 1 of 4	
CLIENT: <b>Buffalo Urban Renewal Agency</b>				Job No. <b>ET-511</b>	
DRILLING CONTRACTOR: <b>SJB Contract Drilling and Testing</b>				Meas. Pt. Elev.	
PURPOSE: <b>Site Investigation</b>				Ground Elev.	
DRILLING METHOD: <b>4 1/2" Hollow Stem Auger</b>		SAMPLE	CORE	CASING	Datum
DRILL RIG TYPE: <b>CME 55</b>	TYPE: <b>Spl 2 P</b>	<b>NA</b>	<b>NA</b>	<b>HSA</b>	Date Started: <b>6/19/95</b>
GROUNDWATER DEPTH: <b>Dry</b>	DIAM.: <b>2" OD</b>			<b>4 1/2"</b>	Date Finished: <b>6/19/95</b>
MEAS. PT.: <b>Ground level</b>	WEIGHT: <b>140 lbs</b>				Driller: <b>D. Butzer</b>
DATE OF MEAS.: <b>6/18/95</b>	FALL: <b>30"</b>				Inspector: <b>J. Grady</b>

Depth (Feet)	Sample Number	Blow Count	Unified Classification	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	#1	5			Brown Clayey SILT and Ash, some Coarse Gravel	N = 76 Rec = 1.6
		39				
		37				
		24				
4	#2	13			miscellaneous Fill And Ash, some Coarse to Fine Gravel ----- Green-Black Silty CLAY, Trace Coarse to Fine Sand, Trace medium to Fine Gravel	N = 12 Rec = 1.4
		7				
		5				
		4				
9	#3	10			Brown Black silty CLAY, Some Coarse to Fine Sand	N = 19 Rec = 0.75
		10				

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Test Boring Log

Boring No. B-6

PROJECT: Main And LaSalle Streets

Sheet 2 of 4

CLIENT Buffalo Urban Renewal Agency

Job No ET-511

Depth (Feet)	Sample Number	Blow Counts	Soils Log Class	Soils Log Description	Geologic Description	Remarks
11		9				
		7				
14	#4	16			Yellow-Brown silty CLAY, Trace medium to Fine Sand Trace medium to Fine Gravel Becomes Red Brown	N = 5 Rec = 1.4
		3				
		2				
		3				
19	#5	14			BLACK Clayey SILT, Trace medium to Fine Sand ----- miscellaneous Fill	N = 17 Rec = 1.4
		11				
		6				
		2				
24	#6	6			miscellaneous Fill -----	N = 2 Rec = 1.3
		2				

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Test Boring Log

Boring No. B-6

PROJECT: Main and LaSalle Streets

Sheet 3 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
26		2		/	Black SILT, and medium to Fine Sand	
		4				
29	#7	10	/	/	Black SILT, and medium to Fine Sand	N=21
		10				Rec = 1.8
		11				
		12				
31	#8	3	/	/	Black Clayey SILT, Trace medium to Fine Sand and Gravel Miscellaneous Fill	
		2				
		3				
		3				
34	#9	3	/	/	miscellaneous Fill	N=5
		4				Rec = 1.7
36		3				
39	#9	3	/	/	miscellaneous Fill	N=8
		4				Rec = 1.2

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Test Boring Log

Boring No. B-6

PROJECT: Main and LaSalle Streets

Sheet 4 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Box Counts	Soils Class.	Soils Log Description	Geologic Description	Remarks
41		4 2			Brown Silty CLAY and Coarse to Fine Gravel	
44	# 10	50/13			Black Silty CLAY, some Coarse to Fine Gravel, little rock fragments	Rec = 0.3
					Rock Encountered at 44.3' End of Boring Total Depth = 44.3' Augers to 44' Cuttings BACKFILLED No water in Boring hole	

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Test Boring Log

Boring No. **B-7**

PROJECT: **Main and LaSalle Streets**  
 CLIENT: **Buffalo Urban Renewal Agency**  
 DRILLING CONTRACTOR: **Sub Contract Drilling and Testing**

Sheet 1 of 4  
 Job No. **ET-511**  
 Meas. Pt. Elev.

PURPOSE: **Site Investigation**  
 DRILLING METHOD: **4 1/2" Hollow stem Auger** SAMPLE CORE CASING  
 DRILL RIG TYPE: **CME 55** TYPE: **SP/SP** NA HSA  
 GROUNDWATER DEPT: **Trace** CAM: **2" OD** **4 1/2" ID**  
 MEAS. PT.: **Ground level** WEIGHT: **140 lbs**  
 DATE OF MEAS.: **6/18/95** FALL **30"**

Ground Elev.  
 Datum  
 Date Started: **6/19/95**  
 Date Finished: **6/19/95**  
 Driller: **D. Butzer**  
 Inspector: **J. Grady**

Depth (Feet)	Sample Number	Blow Count	Soil Class.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	REMARKS
2	#1	7			Brown CLAYE SILT, and Coarse to Fine Gravel, Trace Coarse to Fine Sand, Trace Coarse to Fine Gravel	N = 47 Rec = 1.45
		10				
		37				
		17				
6	#2	10			Brown CLAY & SILT, Trace medium to Fine Gravel BLACK Clayey SILT and miscellaneous Fill, little Coarse to Fine Gravel	N = 8 Rec = 1.45
		5				
		3				
		3				
9	#3	3			Brick and Glass debris, some miscellaneous Fill, TRACE medium to Fine Gravel	N = 6 Rec = 0.7
		3				

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Test Boring Log

Boring No. B-7

PROJECT: Main and LaSalle Streets

Sheet 2 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Unified Classif. Code	Visual Log Description	Geologic Description	Remarks
11		3		/		
		3		/		
14	#4	2		/	miscellaneous Fill, some Coarse to Fine Gravel, Trace wood & metal debris	N = 2 Rec = 0.8
		1		/		
		1		/		
16				/		
19	#5	3		/	miscellaneous Fill ----- Wood debris ----- BLACK SILT and Fine Sand -----	N = 3 Rec = 1.0
		2		/		
		1		/		
		2		/		
21				/		
24	#6	7		/	miscellaneous Fill, some wood debris, Trace medium to Fine Gravel	N = 6 Rec = 1.0
		3		/		



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Test Boring Log

Boring No. B-7

PROJECT: Main and LaSalle Streets

Sheet 3 of 4

CLIENT: Buffalo Urban Renewal Agency

Job No. ET-511

Depth (Feet)	Sample Number	Blow Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
26		3				
		3				
29	#7	4			miscellaneous Fill and Coarse to Fine Gravel	N = 6 Rec = 0.8
		4				
		2				
		3				
31						
34	#8	16			miscellaneous Fill, some wood debris, little Black Silt and Fine Sand	N = 14 Rec = 1.2
		8				
		6				
		7				
36						
39	#9	8			miscellaneous Fill	N = 7 Rec = 1.05
		4				

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Test Boring Log

Boring No. B-7

PROJECT: Main and LaSalle Streets

Sheet 4 of 4

CLIENT Buffalo Urban Renewal Agency

Job No Et-511

Depth (Feet)	Sample Number	Blow Counts	Soil Class	Soil Log Description	Geologic Description	Remarks
41		3 3				
44	#10	4 4 14			Peat and vegetation some coarse to fine Gravel	N=18 Rec=0.7
45.8		50/3			Rock Encountered at 45.8' End of Boring Total Depth 45.8' Augers to 44' Cutting Back Filled Trace water in Boring hole	



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX E**

**LABORATORY REPORTS**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive. Buffalo, New York 14221 (716) 634-2293

General  
Testing  
Corporation



A FULL SERVICE ENVIRONMENTAL LABORATORY

July 7, 1995

Mr. David Harty  
Frontier Technical Associates  
8675 Sheridan Drive  
Williamsville, NY 14221

RE: PROJECT ET-511 QUARRY SITE  
Submission #:9506000356

Dear Mr. Harty

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at 454-3760.

Thank you for letting us provide this service.

Sincerely,

GENERAL TESTING CORPORATION



Janice Jaeger  
Client Service Representative

Enc.

This package has been reviewed by General Testing Corporation's QA Department/Laboratory Director prior to report submittal. MVP 7/7/95

710 Exchange Street • Rochester, NY 14608 • Tele:(716)454-3760 • Fax:(716)454-1245  
85 Trinity Place • Hackensack, NJ 07601 • Tele:(201)488-5242 • Fax:(201)488-6386  
435 Lawrence Bell Drive • Amherst, NY 14421 • Tele:(716)634-0454 • Fax:(716)634-9019



A Full Service Environmental Laboratory

Effective 05/09/95

**GTC LIST OF QUALIFIERS**

(The basis of this proposal are the EPA-CLP Qualifiers)

- U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. For further explanation see case narrative / cover letter.
- 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.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- N - Spiked sample recovery not within control limits.  
(Flag the entire batch - Inorganic analysis only)
- \* - Duplicate analysis not within control limits.  
(Flag the entire batch - Inorganic analysis only)  
  
- Also used to qualify Organics QC data outside limits.
- D - Spike diluted out.
- S - Reported value determined by Method of Standard Additions. (MSA)
- X - As specified in the case narrative.

**GTC Lab ID # for State Certifications**

NY ID # in Rochester: 10145  
NY ID # in Hackensack: 10801  
NY ID # in Massachusetts: M-NY032

NJ ID # in Rochester: 73331  
NJ ID # in Hackensack: 02317



## CASE NARRATIVE

COMPANY: Frontier Technical Associates  
Project ET-511 Quarry Site  
SUBMISSION #: 9506000356

Frontier soil samples were collected on 6/14, 15, 16, 19/95 and received by GTC on 6/16/95 and 6/20/95 in good condition.

### INORGANIC ANALYSIS

Four Frontier soil samples were analyzed for Target Analyte List (TAL) of metals and Total Cyanide using SW-846 methods. Mercury was analyzed using CVAA method 7470; all other metals were analyzed by ICP method 6010; and Total Cyanide by method 9010.

No analytical or QC problems were encountered.

### TPH ANALYSIS

Four Frontier soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) using EPA method 418.1.

No analytical or QC problems were encountered.

### VOLATILE ORGANICS

Four Frontier soil samples were analyzed for the Target Compound List (TCL) of Volatiles by method 8260 from SW-846.

All Tuning criteria for BFB were within limits.

All initial and continuing calibration check criteria were met.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within acceptance limits.

All Laboratory Blanks were free of contamination.

Sample B-7 S-4 to S-10 was analyzed at a 1/125 dilution due to matrix interferences in the and the level of non-target analytes detected which were probably aliphatic hydrocarbons.

All samples were analyzed within the stated holding time for method 8260.

No other analytical or QC problems were encountered.

**SEMIVOLATILE ORGANICS**

Four Frontier soil samples were analyzed for TCL Semivolatile Organics by method 8270 from SW-846.

All Tuning criteria for DFTPP were within QC limits.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within acceptance limits for all samples.

The Laboratory Blanks were free from contamination.

Samle B-7 S-4 to S-10 was diluted 1/10 due to matrix interferences in the sample which were not removed with GPC cleanup procedure.

No other analytical or QC problems were encountered.

**PESTICIDE/PCB ANALYSIS**

Four Frontier soil water samples were analyzed for TCL Pesticides/PCBs by SW-846 method 8080.

All initial and continuing calibration criteria were met.

The surrogate standard recoveries for TCMX and for DBC were diluted on sample B-7 S-4 to S-10 and have been flagged with a "D". The recovery for DBC on sample B-1 and for TCMX on sample B-4 were outside of advisory QC limits and have been flagged with an "\*\*\*". In both cases the second surrogate recovery was within limits, therefore the data was accepted.

The Laboratory Blanks were free from contamination.

Samples B-1 and B-4 were analyzed at 1/10 dilutions and samle B-7 S-4 to S-10 was analyzed at a 1/10 dilution due to matrix interferences which were not removed with the appropriate cleanup procedures.

No other analytical or QC problems were encountered.



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-1

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Date Sampled :	06/14/95	GTC Order # :	21395	Sample Matrix:	SOIL/SEDIMENT
Date Received:	06/16/95	Submission #:	9506000356		

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ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	1.00	1.26 U	UG/G	06/21/95	1.0
TOTAL PETROLEUM HYDROCARBONS	33.0	1110	UG/G	06/21/95	1.0
PERCENT SOLIDS	1.0	79.2	%		1.0

---





Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-1

Date Sampled : 06/14/95      GTC Order # : 21395      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95      Submission #: 9506000356

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	10.0	6750	UG/G	06/21/95	1.0
ANTIMONY	10.0	12.6 U	UG/G	06/21/95	1.0
ARSENIC	1.00	24.5	UG/G	06/29/95	1.0
BARIUM	2.00	516	UG/G	06/21/95	1.0
BERYLLIUM	0.500	0.631 U	UG/G	06/21/95	1.0
CADMIUM	0.500	2.61	UG/G	06/21/95	1.0
CALCIUM	50.0	31400	UG/G	06/21/95	1.0
CHROMIUM	1.00	28.9	UG/G	06/21/95	1.0
COBALT	5.00	7.31	UG/G	06/23/95	1.0
COPPER	2.00	146	UG/G	06/21/95	1.0
IRON	5.00	18700	UG/G	06/21/95	1.0
LEAD	5.00	246	UG/G	06/21/95	1.0
MAGNESIUM	50.0	7570	UG/G	06/21/95	1.0
MANGANESE	1.00	374	UG/G	06/21/95	1.0
MERCURY	0.100	0.726	UG/G	06/20/95	1.0
NICKEL	4.00	50.6	UG/G	06/21/95	1.0
POTASSIUM	100	795	UG/G	06/23/95	1.0
SELENIUM	0.500	0.646	UG/G	06/28/95	1.0
SILVER	1.00	1.26 U	UG/G	06/21/95	1.0
SODIUM	50.0	264	UG/G	06/21/95	1.0
THALLIUM	1.00	3.12	UG/G	06/29/95	1.0
TUNGSTEN	5.00	23.7	UG/G	06/23/95	1.0
ZINC	1.00	292	UG/G	06/21/95	1.0

Frontier Technical Associates  
Project Reference: PROJECT ET-511 QUARRY SITE  
Client Sample ID : B-1

NOTE :  
Date Sampled : 06/14/95 GTC Order # : 21395 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 79.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/22/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACETONE	10	80	UG/KG
BENZENE	5.0	6.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.3 U	UG/KG
BROMOFORM	5.0	6.3 U	UG/KG
BROMOMETHANE	5.0	6.3 U	UG/KG
2-BUTANONE (MEK)	10	13 U	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.3 U	UG/KG
CHLOROBENZENE	5.0	6.3 U	UG/KG
CHLOROETHANE	5.0	6.3 U	UG/KG
CHLOROFORM	5.0	6.3 U	UG/KG
CHLOROMETHANE	5.0	6.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
ETHYLBENZENE	5.0	6.3 U	UG/KG
2-HEXANONE	10	13 U	UG/KG
METHYLENE CHLORIDE	5.0	6.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
STYRENE	5.0	6.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.3 U	UG/KG
TETRACHLOROETHENE	5.0	6.3 U	UG/KG
TOLUENE	5.0	6.3 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.3 U	UG/KG
TRICHLOROETHENE	5.0	6.3 U	UG/KG
VINYL CHLORIDE	5.0	6.3 U	UG/KG
m-XYLENE	5.0	6.3 U	UG/KG
m+P-XYLENE	5.0	6.3 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

1,4-DIBROMOFLUOROBENZENE	(74 - 121 %)	72	%
TOLUENE-D8	(81 - 117 %)	90	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	94	%



EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-1

NOTE :  
 Date Sampled : 06/14/95 GTC Order # : 21395 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 79.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
2-METHYLNAPHTHALENE	670	850 U	UG/KG
,6-DINITRO-2-METHYLPHENOL	1300	1600 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	850 U	UG/KG
2-METHYLPHENOL	670	850 U	UG/KG
-METHYLPHENOL	670	850 U	UG/KG
APHTHALENE	330	420 U	UG/KG
2-NITROANILINE	330	420 U	UG/KG
-NITROANILINE	330	420 U	UG/KG
-NITROANILINE	330	420 U	UG/KG
NITROBENZENE	330	420 U	UG/KG
2-NITROPHENOL	670	850 U	UG/KG
-NITROPHENOL	1300	1600 U	UG/KG
..-NITROSODIMETHYLAMINE	330	420 U	UG/KG
N-NITROSODIPHENYLAMINE	330	420 U	UG/KG
I-N-OCTYL PHTHALATE	330	420 U	UG/KG
ENTACHLOROPHENOL	1300	1600 U	UG/KG
PHENANTHRENE	330	3600	UG/KG
PHENOL	670	850 U	UG/KG
-BROMOPHENYL-PHENYLEETHER	330	420 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	420 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	420 U	UG/KG
YRENE	330	12000	UG/KG
-, 2, 4-TRICHLOROBENZENE	330	420 U	UG/KG
2, 4, 6-TRICHLOROPHENOL	670	850 U	UG/KG
, 4, 5-TRICHLOROPHENOL	670	850 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
ERPHENYL-d14	(18 - 137 %)	122	%
NITROBENZENE-d5	(23 - 120 %)	80	%
PHENOL-d6	(24 - 113 %)	72	%
-FLUOROBIPHENYL	(30 - 115 %)	83	%
-FLUOROPHENOL	(25 - 121 %)	70	%
2, 4, 6-TRIBROMOPHENOL	(19 - 122 %)	82	%





**EXTRACTABLE ORGANICS**  
**METHOD 8080**  
 Reported: 07/09/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-1

**NOTE :**  
 Date Sampled : 06/14/95 GTC Order # : 21395 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 79.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 10.0			
ALDRIN	1.7	21 U	UG/KG
ALPHA-BHC	1.7	21 U	UG/KG
BETA-BHC	1.7	21 U	UG/KG
DELTA-BHC	1.7	21 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	21 U	UG/KG
ALPHA-CHLORDANE	1.7	21 U	UG/KG
GAMMA-CHLORDANE	1.7	21 U	UG/KG
1,4'-DDD	1.7	21 U	UG/KG
1,4'-DDE	1.7	21 U	UG/KG
4,4'-DDT	3.3	42 U	UG/KG
DIELDRIN	1.7	21 U	UG/KG
ALPHA-ENDOSULFAN	1.7	21 U	UG/KG
BETA-ENDOSULFAN	3.3	42 U	UG/KG
ENDOSULFAN SULFATE	3.3	42 U	UG/KG
ENDRIN	1.7	21 U	UG/KG
ENDRIN ALDEHYDE	3.3	42 U	UG/KG
ENDRIN KETONE	3.3	42 U	UG/KG
HEPTACHLOR	1.7	21 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	21 U	UG/KG
METHOXYCHLOR	6.6	83 U	UG/KG
PCB 1016	17	210 U	UG/KG
PCB 1221	17	210 U	UG/KG
PCB 1232	17	210 U	UG/KG
PCB 1242	17	210 U	UG/KG
PCB 1248	17	210 U	UG/KG
PCB 1254	17	210 U	UG/KG
PCB 1260	17	210 U	UG/KG
TOXAPHENE	33	420 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

IBUTYLCHLORENDATE (DBC)	(24 - 150 %)	216 *	%
HEPTACHLORO-META-XYLENE (TCMX)	(60 - 150 %)	138	%



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-3

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Date Sampled :	06/15/95	GTC Order # :	21397	Sample Matrix:	SOIL/SEDIMENT
Date Received:	06/16/95	Submission #:	9506000356		

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ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	1.00	1.25 U	UG/G	06/21/95	1.0
TOTAL PETROLEUM HYDROCARBONS	33.0	226	UG/G	06/21/95	1.0
PERCENT SOLIDS	1.0	80.0	%		1.0

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Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-3

Date Sampled : 06/15/95 GTC Order # : 21397 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	10.0	4150	UG/G	06/21/95	1.0
ANTIMONY	10.0	12.5	UG/G	06/21/95	1.0
ARSENIC	1.00	14.3	UG/G	06/29/95	1.0
BARIUM	2.00	262	UG/G	06/21/95	1.0
BERYLLIUM	0.500	0.625 U	UG/G	06/21/95	1.0
CADMIUM	0.500	0.625 U	UG/G	06/21/95	1.0
CALCIUM	50.0	69200	UG/G	06/21/95	1.0
CHROMIUM	1.00	25.9	UG/G	06/21/95	1.0
COBALT	5.00	6.25 U	UG/G	06/23/95	1.0
COPPER	2.00	53.9	UG/G	06/21/95	1.0
IRON	5.00	18200	UG/G	06/21/95	1.0
LEAD	5.00	89.0	UG/G	06/21/95	1.0
MAGNESIUM	50.0	6670	UG/G	06/21/95	1.0
MANGANESE	1.00	3740	UG/G	06/21/95	1.0
MERCURY	0.100	0.284	UG/G	06/20/95	1.0
NICKEL	4.00	15.6	UG/G	06/21/95	1.0
POTASSIUM	100	570	UG/G	06/23/95	1.0
SELENIUM	0.500	1.59	UG/G	06/28/95	1.0
SILVER	1.00	1.25 U	UG/G	06/21/95	1.0
SODIUM	50.0	214	UG/G	06/21/95	1.0
THALLIUM	1.00	3.66	UG/G	06/29/95	1.0
TANTALUM	5.00	34.7	UG/G	06/23/95	1.0
ZINC	1.00	274	UG/G	06/21/95	1.0

Frontier Technical Associates  
Project Reference: PROJECT ET-511 QUARRY SITE  
Client Sample ID : B-3

NOTE :  
Date Sampled : 06/15/95 GTC Order # : 21397 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 80.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/21/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACETONE	10	29	UG/KG
BENZENE	5.0	6.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.3 U	UG/KG
BROMOFORM	5.0	6.3 U	UG/KG
BROMOMETHANE	5.0	6.3 U	UG/KG
-BUTANONE (MEK)	10	13 U	UG/KG
CARBON DISULFIDE	10	13 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.3 U	UG/KG
CHLOROBENZENE	5.0	6.3 U	UG/KG
CHLOROETHANE	5.0	6.3 U	UG/KG
CHLOROFORM	5.0	6.3 U	UG/KG
CHLOROMETHANE	5.0	6.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.3 U	UG/KG
ETHYLBENZENE	5.0	6.3 U	UG/KG
-HEXANONE	10	13 U	UG/KG
1,1,1-ETHYLENE CHLORIDE	5.0	6.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	13 U	UG/KG
1,2,4-TRIMETHYLBENZENE (TOLUENE)	5.0	6.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.3 U	UG/KG
TETRACHLOROETHENE	5.0	6.3 U	UG/KG
TOLUENE	5.0	6.3 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	6.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.3 U	UG/KG
TRICHLOROETHENE	5.0	6.3 U	UG/KG
VINYL CHLORIDE	5.0	6.3 U	UG/KG
-XYLENE	5.0	6.3 U	UG/KG
M+P-XYLENE	5.0	6.3 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	93	%
TOLUENE-D8	(81 - 117 %)	100	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	98	%





EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-3

NOTE :  
 Date Sampled : 06/15/95 GTC Order # : 21397 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 80.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
CENAPHTHENE	330	410 U	UG/KG
CENAPHTHYLENE	330	410 U	UG/KG
ANTHRACENE	330	410 U	UG/KG
BENZO (A) ANTHRACENE	330	410 U	UG/KG
BENZO (A) PYRENE	330	410 U	UG/KG
BENZO (B) FLUORANTHENE	330	410 U	UG/KG
BENZO (G, H, I) PERYLENE	330	410 U	UG/KG
BENZO (K) FLUORANTHENE	330	410 U	UG/KG
BENZYL ALCOHOL	330	410 U	UG/KG
BUTYL BENZYL PHTHALATE	330	410 U	UG/KG
DI-N-BUTYL PHTHALATE	330	4200	UG/KG
CARBAZOLE	330	410 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	410 U	UG/KG
4-CHLOROANILINE	330	410 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	410 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	410 U	UG/KG
2-CHLORONAPHTHALENE	330	410 U	UG/KG
2-CHLOROPHENOL	670	840 U	UG/KG
1, 2'-OXYBIS (1-CHLOROPROPANE)	330	410 U	UG/KG
CHRYSENE	330	410 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	410 U	UG/KG
DIBENZOFURAN	330	410 U	UG/KG
1, 3-DICHLOROBENZENE	330	410 U	UG/KG
1, 2-DICHLOROBENZENE	330	410 U	UG/KG
1, 4-DICHLOROBENZENE	330	410 U	UG/KG
1, 3'-DICHLOROBENZIDINE	330	410 U	UG/KG
2, 4-DICHLOROPHENOL	670	840 U	UG/KG
DIETHYL PHTHALATE	330	410 U	UG/KG
DIMETHYL PHTHALATE	330	410 U	UG/KG
2, 4-DIMETHYLPHENOL	670	840 U	UG/KG
2, 4-DINITROPHENOL	1300	1600 U	UG/KG
2, 4-DINITROTOLUENE	330	410 U	UG/KG
2, 6-DINITROTOLUENE	330	410 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	410 U	UG/KG
FLUORANTHENE	330	440	UG/KG
FLUORENE	330	410 U	UG/KG
HEXACHLOROBENZENE	330	410 U	UG/KG
HEXACHLOROBUTADIENE	330	410 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	410 U	UG/KG
HEXACHLOROETHANE	330	410 U	UG/KG
ISOPHORONE	330	410 U	UG/KG



EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-3

NOTE :  
 Date Sampled : 06/15/95 GTC Order # : 21397 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 80.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
2-METHYLNAPHTHALENE	670	840 U	UG/KG
2,6-DINITRO-2-METHYLPHENOL	1300	1600 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	840 U	UG/KG
2-METHYLPHENOL	670	840 U	UG/KG
4-METHYLPHENOL	670	840 U	UG/KG
1-NAPHTHALENE	330	410 U	UG/KG
2-NITROANILINE	330	410 U	UG/KG
4-NITROANILINE	330	410 U	UG/KG
3-NITROANILINE	330	410 U	UG/KG
NITROBENZENE	330	410 U	UG/KG
2-NITROPHENOL	670	840 U	UG/KG
4-NITROPHENOL	1300	1600 U	UG/KG
N-NITROSODIMETHYLAMINE	330	410 U	UG/KG
N-NITROSODIPHENYLAMINE	330	410 U	UG/KG
DI-N-OCTYL PHTHALATE	330	410 U	UG/KG
PENTACHLOROPHENOL	1300	1600 U	UG/KG
PHENANTHRENE	330	650	UG/KG
PHENOL	670	840 U	UG/KG
1-BROMOPHENYL-PHENYLEETHER	330	410 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	410 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	410 U	UG/KG
XYRENE	330	850	UG/KG
1,2,4-TRICHLOROBENZENE	330	410 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	840 U	UG/KG
1,4,5-TRICHLOROPHENOL	670	840 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

1,2,4-TRICHLOROPHENOL-d14	(18 - 137 %)	140	%
NITROBENZENE-d5	(23 - 120 %)	78	%
PHENOL-d6	(24 - 113 %)	73	%
1,2-DIBROMO-4-FLUOROBIPHENYL	(30 - 115 %)	77	%
1,2-DIBROMO-4-FLUOROPHENOL	(25 - 121 %)	71	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	75	%



EXTRACTABLE ORGANICS  
 METHOD 8080  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-3

NOTE :  
 Date Sampled : 06/15/95 GTC Order # : 21397 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 80.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 10.0			
ALDRIN	1.7	21 U	UG/KG
ALPHA-BHC	1.7	21 U	UG/KG
BETA-BHC	1.7	21 U	UG/KG
DELTA-BHC	1.7	21 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	21 U	UG/KG
ALPHA-CHLORDANE	1.7	21 U	UG/KG
GAMMA-CHLORDANE	1.7	21 U	UG/KG
1,4'-DDD	1.7	21 U	UG/KG
1,4'-DDE	1.7	21 U	UG/KG
4,4'-DDT	3.3	41 U	UG/KG
DIELDRIN	1.7	21 U	UG/KG
ALPHA-ENDOSULFAN	1.7	21 U	UG/KG
BETA-ENDOSULFAN	3.3	41 U	UG/KG
ENDOSULFAN SULFATE	3.3	41 U	UG/KG
ENDRIN	1.7	21 U	UG/KG
ENDRIN ALDEHYDE	3.3	41 U	UG/KG
ENDRIN KETONE	3.3	41 U	UG/KG
HEPTACHLOR	1.7	21 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	21 U	UG/KG
METHOXYCHLOR	6.6	83 U	UG/KG
PCB 1016	17	210 U	UG/KG
PCB 1221	17	210 U	UG/KG
PCB 1232	17	210 U	UG/KG
PCB 1242	17	210 U	UG/KG
PCB 1248	17	210 U	UG/KG
PCB 1254	17	210 U	UG/KG
PCB 1260	17	210 U	UG/KG
TOXAPHENE	33	410 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

IBUTYLCHLORENDATE (DBC)	(24 - 150 %)	79	%
TETRACHLORO-META-XYLENE (TCMX)	(60 - 150 %)	131	%



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-4

Date Sampled : 06/16/95 GTC Order # : 21398 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356

ANALYTE	PQL	RESULT		DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	10.0	3390		UG/G	06/21/95	1.0
ANTIMONY	10.0	10.8	U	UG/G	06/21/95	1.0
ARSENIC	1.00	15.0		UG/G	06/29/95	1.0
BARIUM	2.00	29.8		UG/G	06/21/95	1.0
BERYLLIUM	0.500	0.538	U	UG/G	06/21/95	1.0
BISMUTH	0.500	0.538	U	UG/G	06/21/95	1.0
CALCIUM	50.0	119000		UG/G	06/21/95	1.0
CHROMIUM	1.00	9.47		UG/G	06/21/95	1.0
COBALT	5.00	7.66		UG/G	06/23/95	1.0
COPPER	2.00	13.4		UG/G	06/21/95	1.0
IRON	5.00	9350		UG/G	06/21/95	1.0
LEAD	5.00	21.2		UG/G	06/21/95	1.0
MAGNESIUM	50.0	74000		UG/G	06/21/95	1.0
MANGANESE	1.00	151		UG/G	06/21/95	1.0
MERCURY	0.100	0.108	U	UG/G	06/20/95	1.0
NICKEL	4.00	16.9		UG/G	06/21/95	1.0
POTASSIUM	100	1530		UG/G	06/23/95	1.0
SELENIUM	0.500	1.01	S	UG/G	06/28/95	1.0
SILVER	1.00	1.08	U	UG/G	06/21/95	1.0
SODIUM	50.0	209		UG/G	06/21/95	1.0
THALLIUM	1.00	1.41		UG/G	06/29/95	1.0
TANTALUM	5.00	8.78		UG/G	06/23/95	1.0
ZINC	1.00	11.6		UG/G	06/21/95	1.0



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 QUARRY SITE

Client Sample ID : B-4

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Date Sampled :	06/16/95	GTC Order # :	21398	Sample Matrix:	SOIL/SEDIMENT
Date Received:	06/16/95	Submission #:	9506000356		

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ANALYTE	PQL	RESULT		DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	1.00	1.08	U	UG/G	06/21/95	1.0
TOTAL PETROLEUM HYDROCARBONS	33.0	35.5	U	UG/G	06/21/95	1.0
PERCENT SOLIDS	1.0	93.0		%		1.0

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VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-4

NOTE :  
 Date Sampled : 06/16/95 GTC Order # : 21398 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 93.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/21/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACETONE	10	50	UG/KG
BENZENE	5.0	5.4 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.4 U	UG/KG
BROMOFORM	5.0	5.4 U	UG/KG
BROMOMETHANE	5.0	5.4 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.4 U	UG/KG
CHLOROBENZENE	5.0	5.4 U	UG/KG
CHLOROETHANE	5.0	5.4 U	UG/KG
CHLOROFORM	5.0	5.4 U	UG/KG
CHLOROMETHANE	5.0	5.4 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.4 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.4 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
ETHYLBENZENE	5.0	5.4 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.4 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.4 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.4 U	UG/KG
TETRACHLOROETHENE	5.0	5.4 U	UG/KG
TOLUENE	5.0	5.4 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.4 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.4 U	UG/KG
TRICHLOROETHENE	5.0	5.4 U	UG/KG
VINYL CHLORIDE	5.0	5.4 U	UG/KG
O-XYLENE	5.0	5.4 U	UG/KG
M+P-XYLENE	5.0	5.4 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	101	%
TOLUENE-D8	(81 - 117 %)	101	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	97	%



**EXTRACTABLE ORGANICS**  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-4

NOTE :  
 Date Sampled : 06/16/95 GTC Order # : 21398 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 93.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACENAPHTHENE	330	350 U	UG/KG
ACENAPHTHYLENE	330	350 U	UG/KG
ANTHRACENE	330	350 U	UG/KG
BENZO (A) ANTHRACENE	330	350 U	UG/KG
BENZO (A) PYRENE	330	350 U	UG/KG
BENZO (B) FLUORANTHENE	330	350 U	UG/KG
BENZO (G, H, I) PERYLENE	330	350 U	UG/KG
BENZO (K) FLUORANTHENE	330	350 U	UG/KG
BENZYL ALCOHOL	330	350 U	UG/KG
BUTYL BENZYL PHTHALATE	330	350 U	UG/KG
DI-N-BUTYLPHthalate	330	2900	UG/KG
CARBAZOLE	330	350 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	350 U	UG/KG
4-CHLOROANILINE	330	350 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	350 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	350 U	UG/KG
2-CHLORONAPHTHALENE	330	350 U	UG/KG
2-CHLOROPHENOL	670	720 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	350 U	UG/KG
CHRYSENE	330	350 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	350 U	UG/KG
DIBENZOFURAN	330	350 U	UG/KG
1, 3-DICHLOROBENZENE	330	350 U	UG/KG
1, 2-DICHLOROBENZENE	330	350 U	UG/KG
1, 4-DICHLOROBENZENE	330	350 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	350 U	UG/KG
2, 4-DICHLOROPHENOL	670	720 U	UG/KG
DIETHYLPHthalate	330	350 U	UG/KG
DIMETHYL PHTHALATE	330	350 U	UG/KG
2, 4-DIMETHYLPHENOL	670	720 U	UG/KG
2, 4-DINITROPHENOL	1300	1400 U	UG/KG
2, 4-DINITROTOLUENE	330	350 U	UG/KG
2, 6-DINITROTOLUENE	330	350 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	350 U	UG/KG
FLUORANTHENE	330	350 U	UG/KG
FLUORENE	330	350 U	UG/KG
HEXACHLOROBENZENE	330	350 U	UG/KG
HEXACHLOROBUTADIENE	330	350 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	350 U	UG/KG
HEXACHLOROETHANE	330	350 U	UG/KG
ISOPHORONE	330	350 U	UG/KG



**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-4

**NOTE :**  
 Date Sampled : 06/16/95    GTC Order # : 21398    Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95    Submission #: 9506000356    Percent Solid: 93.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
1-METHYLNAPHTHALENE	670	720 U	UG/KG
2,6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	720 U	UG/KG
2-METHYLPHENOL	670	720 U	UG/KG
3-METHYLPHENOL	670	720 U	UG/KG
1-NAPHTHALENE	330	350 U	UG/KG
2-NITROANILINE	330	350 U	UG/KG
3-NITROANILINE	330	350 U	UG/KG
4-NITROANILINE	330	350 U	UG/KG
NITROBENZENE	330	350 U	UG/KG
2-NITROPHENOL	670	720 U	UG/KG
3-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	350 U	UG/KG
N-NITROSODIPHENYLAMINE	330	350 U	UG/KG
DI-N-OCTYL PHTHALATE	330	350 U	UG/KG
2,4,6-TRICHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	350 U	UG/KG
PHENOL	670	720 U	UG/KG
1-BROMOPHENYL-PHENYLETHER	330	350 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	350 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	350 U	UG/KG
1-NAPHTHYLENE	330	350 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	350 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	720 U	UG/KG
1,2,4,5-TRICHLOROPHENOL	670	720 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

1,2,4-TRICHLOROPHENOL-d14	(18 - 137 %)	144	%
NITROBENZENE-d5	(23 - 120 %)	74	%
PHENOL-d6	(24 - 113 %)	76	%
1,2-DIFLUOROBIPHENYL	(30 - 115 %)	70	%
2,4-DIFLUOROPHENOL	(25 - 121 %)	69	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	67	%





EXTRACTABLE ORGANICS  
 METHOD 8080  
 Reported: 07/09/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 QUARRY SITE  
 Client Sample ID : B-4

NOTE :  
 Date Sampled : 06/16/95 GTC Order # : 21398 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/16/95 Submission #: 9506000356 Percent Solid: 93.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/21/95			Dry Weight
ANALYTICAL DILUTION: 10.0			

ALDRIN	1.7	18 U	UG/KG
ALPHA-BHC	1.7	18 U	UG/KG
BETA-BHC	1.7	18 U	UG/KG
DELTA-BHC	1.7	18 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	18 U	UG/KG
ALPHA-CHLORDANE	1.7	18 U	UG/KG
GAMMA-CHLORDANE	1.7	18 U	UG/KG
1,4'-DDD	1.7	18 U	UG/KG
1,4'-DDE	1.7	18 U	UG/KG
4,4'-DDT	3.3	35 U	UG/KG
DIELDRIN	1.7	18 U	UG/KG
ALPHA-ENDOSULFAN	1.7	18 U	UG/KG
BETA-ENDOSULFAN	3.3	35 U	UG/KG
ENDOSULFAN SULFATE	3.3	35 U	UG/KG
ENDRIN	1.7	18 U	UG/KG
ENDRIN ALDEHYDE	3.3	35 U	UG/KG
ENDRIN KETONE	3.3	35 U	UG/KG
HEPTACHLOR	1.7	18 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	18 U	UG/KG
METHOXYCHLOR	6.6	71 U	UG/KG
PCB 1016	17	180 U	UG/KG
PCB 1221	17	180 U	UG/KG
PCB 1232	17	180 U	UG/KG
PCB 1242	17	180 U	UG/KG
PCB 1248	17	180 U	UG/KG
PCB 1254	17	180 U	UG/KG
PCB 1260	17	180 U	UG/KG
TOXAPHENE	33	350 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DIBUTYLCHLORENDATE (DBC)	(24 - 150 %)	134	%
TETRACHLORO-META-XYLENE (TCMX)	(60 - 150 %)	39 *	%



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 - QUARRY SITE

Client Sample ID : B-7 S-4 TO S-10

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Date Sampled :	06/19/95	GTC Order # :	22324	Sample Matrix:	SOIL/SEDIMENT
Date Received:	06/20/95	Submission #:	9506000356		

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ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
TOTAL CYANIDE	1.00	1.32 U	UG/G	06/28/95	1.0
TOTAL PETROLEUM HYDROCARBONS	33.0	8960	UG/G	06/26/95	10.0
PERCENT SOLIDS	1.0	76.0	%	06/26/95	1.0

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VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 07/07/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 - QUARRY SITE  
 Client Sample ID : B-7 S-4 TO S-10

NOTE :  
 Date Sampled : 06/19/95 GTC Order # : 22324 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/20/95 Submission #: 9506000356 Percent Solid: 76.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/27/95			Dry Weight
ANALYTICAL DILUTION: 125.0			
ACETONE	10	1600 U	UG/KG
BENZENE	5.0	820 U	UG/KG
BROMODICHLOROMETHANE	5.0	820 U	UG/KG
BROMOFORM	5.0	820 U	UG/KG
BROMOMETHANE	5.0	820 U	UG/KG
2-BUTANONE (MEK)	10	1600 U	UG/KG
CARBON DISULFIDE	10	1600 U	UG/KG
CARBON TETRACHLORIDE	5.0	820 U	UG/KG
CHLOROBENZENE	5.0	820 U	UG/KG
CHLOROETHANE	5.0	820 U	UG/KG
CHLOROFORM	5.0	820 U	UG/KG
CHLOROMETHANE	5.0	820 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	820 U	UG/KG
1,1-DICHLOROETHANE	5.0	820 U	UG/KG
1,2-DICHLOROETHANE	5.0	820 U	UG/KG
1,1-DICHLOROETHENE	5.0	820 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	820 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	820 U	UG/KG
1,2-DICHLOROPROPANE	5.0	820 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	820 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	820 U	UG/KG
ETHYLBENZENE	5.0	820 U	UG/KG
2-HEXANONE	10	1600 U	UG/KG
METHYLENE CHLORIDE	5.0	820 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	1600 U	UG/KG
1-TYRENE	5.0	820 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	820 U	UG/KG
TETRACHLOROETHENE	5.0	820 U	UG/KG
TOLUENE	5.0	820 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	820 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	820 U	UG/KG
TRICHLOROETHENE	5.0	820 U	UG/KG
VINYL CHLORIDE	5.0	820 U	UG/KG
o-XYLENE	5.0	820 U	UG/KG
m+p-XYLENE	5.0	820 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
1,4-DIBROMOFLUOROBENZENE	(74 - 121 %)	102	%
TOLUENE-D8	(81 - 117 %)	104	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	97	%



Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 - QUARRY SITE  
 Client Sample ID : B-7 S-4 TO S-10

Date Sampled : 06/19/95 GTC Order # : 22324 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/20/95 Submission #: 9506000356

ANALYTE	PQL	RESULT	DRY WT. UNITS	DATE ANALYZED	ANALYTICAL DILUTION
ALUMINUM	10.0	6360	UG/G	06/28/95	1.0
ANTIMONY	10.0	14.1	UG/G	06/28/95	1.0
ARSENIC	0.500	17.3	UG/G	07/03/95	1.0
BARIUM	2.00	363	UG/G	06/28/95	1.0
BERYLLIUM	0.500	2.09	UG/G	06/28/95	1.0
BISMUTH	0.500	2.14	UG/G	06/28/95	1.0
CALCIUM	50.0	26700	UG/G	07/03/95	1.0
CHROMIUM	1.00	60.2	UG/G	06/28/95	1.0
CADMIUM	5.00	9.12	UG/G	06/28/95	1.0
COPPER	2.00	201	UG/G	06/28/95	1.0
IRON	5.00	21200	UG/G	07/03/95	1.0
LEAD	5.00	251	UG/G	06/28/95	1.0
MAGNESIUM	50.0	2980	UG/G	06/28/95	1.0
MANGANESE	1.00	180	UG/G	06/28/95	1.0
MERCURY	0.100	0.132 U	UG/G	06/29/95	1.0
NICKEL	4.00	53.2	UG/G	06/28/95	1.0
POTASSIUM	100	716	UG/G	06/28/95	1.0
SELENIUM	0.500	1.49	UG/G	07/05/95	1.0
SILVER	1.00	1.32 U	UG/G	06/28/95	1.0
SODIUM	50.0	324	UG/G	07/03/95	1.0
THALLIUM	0.100	0.132 U	UG/G	07/05/95	1.0
TUNGSTEN	5.00	41.3	UG/G	06/28/95	1.0
ZINC	1.00	408	UG/G	06/28/95	1.0



EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 - QUARRY SITE

Client Sample ID : B-7 S-4 TO S-10

NOTE :  
 Date Sampled : 06/19/95 GTC Order # : 22324 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/20/95 Submission #: 9506000356 Percent Solid: 76.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/23/95			
DATE ANALYZED : 06/23/95			Dry Weight
ANALYTICAL DILUTION: 10.0			
CENAPHTHENE	330	4300 U	UG/KG
CENAPHTHYLENE	330	4300 U	UG/KG
ANTHRACENE	330	4300 U	UG/KG
BENZO (A) ANTHRACENE	330	4300 U	UG/KG
BENZO (A) PYRENE	330	4300 U	UG/KG
BENZO (B) FLUORANTHENE	330	4300 U	UG/KG
BENZO (G, H, I) PERYLENE	330	4300 U	UG/KG
BENZO (K) FLUORANTHENE	330	4300 U	UG/KG
BENZYL ALCOHOL	330	4300 U	UG/KG
BUTYL BENZYL PHTHALATE	330	4300 U	UG/KG
DI-N-BUTYLPHTHALATE	330	4300 U	UG/KG
PARABAZOLE	330	4300 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	4300 U	UG/KG
4-CHLOROANILINE	330	4300 U	UG/KG
1,2-DICHLOROETHOXY METHANE	330	4300 U	UG/KG
1,2-DICHLOROETHYL ETHER	330	4300 U	UG/KG
2-CHLORONAPHTHALENE	330	4300 U	UG/KG
2-CHLOROPHENOL	670	8800 U	UG/KG
1,2'-OXYBIS (1-CHLOROPROPANE)	330	4300 U	UG/KG
CHRYSENE	330	4300 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	4300 U	UG/KG
1-BENZOFURAN	330	4300 U	UG/KG
1,3-DICHLOROBENZENE	330	4300 U	UG/KG
1,2-DICHLOROBENZENE	330	4300 U	UG/KG
1,4-DICHLOROBENZENE	330	4300 U	UG/KG
1,3'-DICHLOROBENZIDINE	330	4300 U	UG/KG
2,4-DICHLOROPHENOL	670	8800 U	UG/KG
DIETHYLPHTHALATE	330	4300 U	UG/KG
DIMETHYL PHTHALATE	330	4300 U	UG/KG
2,4-DIMETHYLPHENOL	670	8800 U	UG/KG
2,4-DINITROPHENOL	1300	17000 U	UG/KG
2,4-DINITROTOLUENE	330	4300 U	UG/KG
2,6-DINITROTOLUENE	330	4300 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	4300 U	UG/KG
FLUORANTHENE	330	4300 U	UG/KG
FLUORENE	330	4300 U	UG/KG
HEXACHLOROBENZENE	330	4300 U	UG/KG
HEXACHLOROBUTADIENE	330	4300 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	4300 U	UG/KG
HEXACHLOROETHANE	330	4300 U	UG/KG
ISOPHORONE	330	4300 U	UG/KG



EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 07/07/95

Frontier Technical Associates

Project Reference: PROJECT ET-511 - QUARRY SITE

Client Sample ID : B-7 S-4 TO S-10

NOTE :  
 Date Sampled : 06/19/95 GTC Order # : 22324 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/20/95 Submission #: 9506000356 Percent Solid: 76.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/23/95			
DATE ANALYZED : 06/23/95			Dry Weight
ANALYTICAL DILUTION: 10.0			
1-METHYLNAPHTHALENE	670	8800 U	UG/KG
1,6-DINITRO-2-METHYLPHENOL	1300	17000 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	8800 U	UG/KG
2-METHYLPHENOL	670	8800 U	UG/KG
1-METHYLPHENOL	670	8800 U	UG/KG
1-NAPHTHALENE	330	4300 U	UG/KG
2-NITROANILINE	330	4300 U	UG/KG
1-NITROANILINE	330	4300 U	UG/KG
3-NITROANILINE	330	4300 U	UG/KG
NITROBENZENE	330	4300 U	UG/KG
2-NITROPHENOL	670	8800 U	UG/KG
1-NITROPHENOL	1300	17000 U	UG/KG
N-NITROSODIMETHYLAMINE	330	4300 U	UG/KG
N-NITROSODIPHENYLAMINE	330	4300 U	UG/KG
DI-N-OCTYL PHTHALATE	330	4300 U	UG/KG
2,4-DICHLOROPHENOL	1300	17000 U	UG/KG
PHENANTHRENE	330	4300 U	UG/KG
PHENOL	670	8800 U	UG/KG
1-BROMOPHENYL-PHENYLEETHER	330	4300 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	4300 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	4300 U	UG/KG
1-NAPHTHYLENE	330	4300 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	4300 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	8800 U	UG/KG
1,4,5-TRICHLOROPHENOL	670	8800 U	UG/KG
SURROGATE RECOVERIES		QC LIMITS	
1-NAPHTHYLENE-d14	(18 - 137 %)	110	%
NITROBENZENE-d5	(23 - 120 %)	77	%
PHENOL-d6	(24 - 113 %)	78	%
1-FLUOROBIPHENYL	(30 - 115 %)	93	%
1-FLUOROPHENOL	(25 - 121 %)	76	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	96	%



**EXTRACTABLE ORGANICS**  
**METHOD 8080**  
 Reported: 07/09/95

Frontier Technical Associates  
 Project Reference: PROJECT ET-511 - QUARRY SITE  
 Client Sample ID : B-7 S-4 TO S-10

**NOTE :**  
 Date Sampled : 06/19/95 GTC Order # : 22324 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 06/20/95 Submission #: 9506000356 Percent Solid: 76.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/23/95			
DATE ANALYZED : 06/26/95			Dry Weight
ANALYTICAL DILUTION: 100.0			
ALDRIN	1.7	220 U	UG/KG
ALPHA-BHC	1.7	220 U	UG/KG
BETA-BHC	1.7	220 U	UG/KG
DELTA-BHC	1.7	220 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	220 U	UG/KG
ALPHA-CHLORDANE	1.7	220 U	UG/KG
GAMMA-CHLORDANE	1.7	220 U	UG/KG
1,4'-DDD	1.7	220 U	UG/KG
1,4'-DDE	1.7	220 U	UG/KG
4,4'-DDT	3.3	430 U	UG/KG
DIELDRIN	1.7	220 U	UG/KG
ALPHA-ENDOSULFAN	1.7	220 U	UG/KG
BETA-ENDOSULFAN	3.3	430 U	UG/KG
ENDOSULFAN SULFATE	3.3	430 U	UG/KG
ENDRIN	1.7	220 U	UG/KG
ENDRIN ALDEHYDE	3.3	430 U	UG/KG
ENDRIN KETONE	3.3	430 U	UG/KG
HEPTACHLOR	1.7	220 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	220 U	UG/KG
METHOXYCHLOR	6.6	870 U	UG/KG
PCB 1016	17	2200 U	UG/KG
PCB 1221	17	2200 U	UG/KG
PCB 1232	17	2200 U	UG/KG
PCB 1242	17	2200 U	UG/KG
PCB 1248	17	2200 U	UG/KG
PCB 1254	17	2200 U	UG/KG
PCB 1260	17	2200 U	UG/KG
TOXAPHENE	33	4300 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DIBUTYLCHLORENDATE (DBC)	(24 - 150 %)	D	%
TETRACHLORO-META-XYLENE (TCMX)	(60 - 150 %)	D	%



VOLATILE ORGANICS  
 Method 8260 TCL  
 Reported: 07/07/95

LABORATORY METHOD BLANK SUMMARY

GTC Order #: 23155 Analytical Run #: 1599

ANALYTE	PQL	RESULT	UNITS
Date Analyzed : 06/21/95			
Analytical Dilution: 1.0			
CETONE	10	10 U	UG/KG
BENZENE	5.0	5.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.0 U	UG/KG
BROMOFORM	5.0	5.0 U	UG/KG
BROMOMETHANE	5.0	5.0 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.0 U	UG/KG
CHLOROBENZENE	5.0	5.0 U	UG/KG
CHLOROETHANE	5.0	5.0 U	UG/KG
CHLOROFORM	5.0	5.0 U	UG/KG
CHLOROMETHANE	5.0	5.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
ETHYLBENZENE	5.0	5.0 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
ETHYLENE CHLORIDE	5.0	5.0 U	UG/KG
1-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/KG
TETRACHLOROETHENE	5.0	5.0 U	UG/KG
TOLUENE	5.0	5.0 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHENE	5.0	5.0 U	UG/KG
1,1,1-TRICHLOROETHENE	5.0	5.0 U	UG/KG
VINYL CHLORIDE	5.0	5.0 U	UG/KG
M-XYLENE	5.0	5.0 U	UG/KG
P-XYLENE	5.0	5.0 U	UG/KG

SURROGATE RECOVERIES	LIMITS		
4-BROMOFLUOROBENZENE	74	- 121	98 %
TOLUENE-D8	81	- 117	97 %
1-BROMOFLUOROMETHANE	80	- 120	95 %





Project Reference:  
 Client Sample ID : METHOD BLANK

NOTE :  
 Date Sampled : GTC Order # : 22660 Sample Matrix: SOIL/SEDIMENT  
 Date Received: Submission #: Percent Solid: 100.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/22/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACETONE	10	10 U	UG/KG
BENZENE	5.0	5.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.0 U	UG/KG
BROMOFORM	5.0	5.0 U	UG/KG
BROMOMETHANE	5.0	5.0 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.0 U	UG/KG
CHLOROBENZENE	5.0	5.0 U	UG/KG
CHLOROETHANE	5.0	5.0 U	UG/KG
CHLOROFORM	5.0	5.0 U	UG/KG
CHLOROMETHANE	5.0	5.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
ETHYLBENZENE	5.0	5.0 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/KG
TETRACHLOROETHENE	5.0	5.0 U	UG/KG
TOLUENE	5.0	5.0 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/KG
TRICHLOROETHENE	5.0	5.0 U	UG/KG
VINYL CHLORIDE	5.0	5.0 U	UG/KG
O-XYLENE	5.0	5.0 U	UG/KG
M+P-XYLENE	5.0	5.0 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(74 - 121 %)	97	%
TOLUENE-D8	(81 - 117 %)	97	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	93	%



VOLATILE ORGANICS  
 Method 8260 TCL  
 Reported: 07/07/95

LABORATORY METHOD BLANK SUMMARY

GTC Order #: 23273 Analytical Run #: 1606

ANALYTE	PQL	RESULT	UNITS
Date Analyzed : 06/27/95			
Analytical Dilution: 125.0			
ACETONE	10	1300 U	UG/KG
BENZENE	5.0	630 U	UG/KG
BROMODICHLOROMETHANE	5.0	630 U	UG/KG
BROMOFORM	5.0	630 U	UG/KG
BROMOMETHANE	5.0	630 U	UG/KG
2-BUTANONE (MEK)	10	1300 U	UG/KG
CARBON DISULFIDE	10	1300 U	UG/KG
CARBON TETRACHLORIDE	5.0	630 U	UG/KG
CHLOROBENZENE	5.0	630 U	UG/KG
CHLOROETHANE	5.0	630 U	UG/KG
CHLOROFORM	5.0	630 U	UG/KG
CHLOROMETHANE	5.0	630 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	630 U	UG/KG
1,1-DICHLOROETHANE	5.0	630 U	UG/KG
1,2-DICHLOROETHANE	5.0	630 U	UG/KG
1,1-DICHLOROETHENE	5.0	630 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	630 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	630 U	UG/KG
1,2-DICHLOROPROPANE	5.0	630 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	630 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	630 U	UG/KG
1-METHYLBENZENE	5.0	630 U	UG/KG
2-HEXANONE	10	1300 U	UG/KG
1,1-DIFLUOROETHYLENE CHLORIDE	5.0	630 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	1300 U	UG/KG
STYRENE	5.0	630 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	630 U	UG/KG
1,1-DICHLOROETHENE	5.0	630 U	UG/KG
TOLUENE	5.0	630 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	630 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	630 U	UG/KG
1,1-DICHLOROETHENE	5.0	630 U	UG/KG
VINYL CHLORIDE	5.0	630 U	UG/KG
o-XYLENE	5.0	630 U	UG/KG
m-p-XYLENE	5.0	630 U	UG/KG

SURROGATE RECOVERIES

LIMITS

4-BROMOFLUOROBENZENE	74 - 121	100	%
TOLUENE-D8	81 - 117	101	%
1-BROMOFLUOROMETHANE	80 - 120	100	%



Project Reference:  
 Client Sample ID : METHOD BLANK

NOTE :  
 Date Sampled : GTC Order # : 21678 Sample Matrix: SOIL/SEDIMENT  
 Date Received: Submission #: Percent Solid: 100.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACENAPHTHENE	330	330 U	UG/KG
ACENAPHTHYLENE	330	330 U	UG/KG
ANTHRACENE	330	330 U	UG/KG
BENZO (A) ANTHRACENE	330	330 U	UG/KG
BENZO (A) PYRENE	330	330 U	UG/KG
BENZO (B) FLUORANTHENE	330	330 U	UG/KG
BENZO (G, H, I) PERYLENE	330	330 U	UG/KG
BENZO (K) FLUORANTHENE	330	330 U	UG/KG
BENZYL ALCOHOL	330	330 U	UG/KG
BUTYL BENZYL PHTHALATE	330	330 U	UG/KG
DI-N-BUTYLPHTHALATE	330	330 U	UG/KG
IMIDAZOLE	330	330 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	330 U	UG/KG
4-CHLOROANILINE	330	330 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	330 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	330 U	UG/KG
2-CHLORONAPHTHALENE	330	330 U	UG/KG
2-CHLOROPHENOL	670	670 U	UG/KG
1, 2'-OXYBIS (1-CHLOROPROPANE)	330	330 U	UG/KG
CHRYSENE	330	330 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	330 U	UG/KG
IMIDAZOLE	330	330 U	UG/KG
1, 3-DICHLOROBENZENE	330	330 U	UG/KG
1, 2-DICHLOROBENZENE	330	330 U	UG/KG
1, 4-DICHLOROBENZENE	330	330 U	UG/KG
1, 3'-DICHLOROBENZIDINE	330	330 U	UG/KG
2, 4-DICHLOROPHENOL	670	670 U	UG/KG
DIETHYLPHTHALATE	330	330 U	UG/KG
DIMETHYL PHTHALATE	330	330 U	UG/KG
1, 4-DIMETHYLPHENOL	670	670 U	UG/KG
2, 4-DINITROPHENOL	1300	1300 U	UG/KG
1, 4-DINITROTOLUENE	330	330 U	UG/KG
1, 6-DINITROTOLUENE	330	330 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	330 U	UG/KG
FLUORANTHENE	330	330 U	UG/KG
FLUORENE	330	330 U	UG/KG
HEXACHLOROBENZENE	330	330 U	UG/KG
HEXACHLOROBUTADIENE	330	330 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	330 U	UG/KG
HEXACHLOROETHANE	330	330 U	UG/KG
ISOPHORONE	330	330 U	UG/KG



Project Reference:  
 Client Sample ID : METHOD BLANK

NOTE :  
 Date Sampled : GTC Order # : 21678 Sample Matrix: SOIL/SEDIMENT  
 Date Received: Submission #: Percent Solid: 100.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/20/95			
DATE ANALYZED : 06/20/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
1-METHYLNAPHTHALENE	670	670 U	UG/KG
2,6-DINITRO-2-METHYLPHENOL	1300	1300 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	670 U	UG/KG
2-METHYLPHENOL	670	670 U	UG/KG
1-METHYLPHENOL	670	670 U	UG/KG
1-NAPHTHALENE	330	330 U	UG/KG
2-NITROANILINE	330	330 U	UG/KG
3-NITROANILINE	330	330 U	UG/KG
4-NITROANILINE	330	330 U	UG/KG
NITROBENZENE	330	330 U	UG/KG
2-NITROPHENOL	670	670 U	UG/KG
4-NITROPHENOL	1300	1300 U	UG/KG
N-NITROSODIMETHYLAMINE	330	330 U	UG/KG
N-NITROSODIPHENYLAMINE	330	330 U	UG/KG
DI-N-OCTYL PHTHALATE	330	330 U	UG/KG
2,4-DICHLOROPHENOL	1300	1300 U	UG/KG
PHENANTHRENE	330	330 U	UG/KG
PHENOL	670	670 U	UG/KG
1-BROMOPHENYL-PHENYLETHER	330	330 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	330 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	330 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	330 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	670 U	UG/KG
1,2,4,5-TRICHLOROPHENOL	670	670 U	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
1,2,4-TRICHLOROPHENOL-d14	(18 - 137 %)	85	%
1,2,4-TRICHLOROPHENOL-d5	(23 - 120 %)	74	%
1,2,4-TRICHLOROPHENOL-d6	(24 - 113 %)	67	%
1,2,4-TRICHLOROPHENOL-d6-FLUOROBIPHENYL	(30 - 115 %)	81	%
1,2,4-TRICHLOROPHENOL-d6-FLUOROPHENOL	(25 - 121 %)	68	%
1,2,4,6-TRIBROMOPHENOL	(19 - 122 %)	76	%



Project Reference:  
 Client Sample ID : METHOD BLANK

NOTE :  
 Date Sampled : GTC Order # : 22660 Sample Matrix: SOIL/SEDIMENT  
 Date Received: Submission #: Percent Solid: 100.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/23/95			
DATE ANALYZED : 06/23/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
ACENAPHTHENE	330	330 U	UG/KG
ACENAPHTHYLENE	330	330 U	UG/KG
ANTHRACENE	330	330 U	UG/KG
BENZO (A) ANTHRACENE	330	330 U	UG/KG
BENZO (A) PYRENE	330	330 U	UG/KG
BENZO (B) FLUORANTHENE	330	330 U	UG/KG
BENZO (G, H, I) PERYLENE	330	330 U	UG/KG
BENZO (K) FLUORANTHENE	330	330 U	UG/KG
BENZYL ALCOHOL	330	330 U	UG/KG
BUTYL BENZYL PHTHALATE	330	330 U	UG/KG
DI-N-BUTYLPHthalate	330	330 U	UG/KG
CARBAZOLE	330	330 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	330 U	UG/KG
4-CHLOROANILINE	330	330 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	330 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	330 U	UG/KG
2-CHLORONAPHTHALENE	330	330 U	UG/KG
2-CHLOROPHENOL	670	670 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	330 U	UG/KG
CHRYSENE	330	330 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	330 U	UG/KG
DIBENZOFURAN	330	330 U	UG/KG
1, 3-DICHLOROBENZENE	330	330 U	UG/KG
1, 2-DICHLOROBENZENE	330	330 U	UG/KG
1, 4-DICHLOROBENZENE	330	330 U	UG/KG
1, 3'-DICHLOROBENZIDINE	330	330 U	UG/KG
2, 4-DICHLOROPHENOL	670	670 U	UG/KG
DIETHYLPHthalate	330	330 U	UG/KG
DIMETHYL PHTHALATE	330	330 U	UG/KG
2, 4-DIMETHYLPHENOL	670	670 U	UG/KG
2, 4-DINITROPHENOL	1300	1300 U	UG/KG
2, 4-DINITROTOLUENE	330	330 U	UG/KG
2, 6-DINITROTOLUENE	330	330 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	330 U	UG/KG
FLUORANTHENE	330	330 U	UG/KG
FLUORENE	330	330 U	UG/KG
HEXACHLOROBENZENE	330	330 U	UG/KG
HEXACHLOROBUTADIENE	330	330 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	330 U	UG/KG
HEXACHLOROETHANE	330	330 U	UG/KG
ISOPHORONE	330	330 U	UG/KG



**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 07/09/95

**Project Reference:**  
**Client Sample ID : METHOD BLANK**

**NOTE :**  
**Date Sampled :** GTC Order # : 22660 **Sample Matrix: SOIL/SEDIMENT**  
**Date Received:** Submission #: **Percent Solid: 100.0**

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/23/95			
DATE ANALYZED : 06/23/95			Dry Weight
ANALYTICAL DILUTION: 1.0			
2-METHYLNAPHTHALENE	670	670 U	UG/KG
1,6-DINITRO-2-METHYLPHENOL	1300	1300 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	670 U	UG/KG
2-METHYLPHENOL	670	670 U	UG/KG
1-METHYLPHENOL	670	670 U	UG/KG
NAPHTHALENE	330	330 U	UG/KG
2-NITROANILINE	330	330 U	UG/KG
3-NITROANILINE	330	330 U	UG/KG
1-NITROANILINE	330	330 U	UG/KG
NITROBENZENE	330	330 U	UG/KG
2-NITROPHENOL	670	670 U	UG/KG
1-NITROPHENOL	1300	1300 U	UG/KG
N-NITROSODIMETHYLAMINE	330	330 U	UG/KG
N-NITROSODIPHENYLAMINE	330	330 U	UG/KG
DI-N-OCTYL PHTHALATE	330	330 U	UG/KG
PENTACHLOROPHENOL	1300	1300 U	UG/KG
PHENANTHRENE	330	330 U	UG/KG
PHENOL	670	670 U	UG/KG
1-BROMOPHENYL-PHENYLEETHER	330	330 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	330 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	330 U	UG/KG
PYRENE	330	330 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	330 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	670 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	670 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
PERPHENYL-d14	(18 - 137 %)	64	%
NITROBENZENE-d5	(23 - 120 %)	63	%
PHENOL-d6	(24 - 113 %)	61	%
1-FLUOROBIPHENYL	(30 - 115 %)	63	%
2-FLUOROPHENOL	(25 - 121 %)	63	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	71	%



EXTRACTABLE ORGANICS  
 Method 8080  
 Reported: 07/07/95

LABORATORY METHOD BLANK SUMMARY

GTC Order #: 21847 Analytical Run #: 1485

ANALYTE	PQL	RESULT	UNITS
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Date Extracted : 06/20/95  
 Date Analyzed : 06/20/95  
 Analytical Dilution: 1.0

ALDRIN	1.7	1.7 U	UG/KG
ALPHA-BHC	1.7	1.7 U	UG/KG
ETA-BHC	1.7	1.7 U	UG/KG
ELTA-BHC	1.7	1.7 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	1.7 U	UG/KG
ALPHA-CHLORDANE	1.7	1.7 U	UG/KG
BETA-CHLORDANE	1.7	1.7 U	UG/KG
4,4'-DDD	1.7	1.7 U	UG/KG
4,4'-DDE	1.7	1.7 U	UG/KG
4,4'-DDT	3.3	3.3 U	UG/KG
DELDRIN	1.7	1.7 U	UG/KG
ALPHA-ENDOSULFAN	1.7	1.7 U	UG/KG
BETA-ENDOSULFAN	3.3	3.3 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.3 U	UG/KG
ENDRIN	1.7	1.7 U	UG/KG
ENDRIN ALDEHYDE	3.3	3.3 U	UG/KG
ENDRIN KETONE	3.3	3.3 U	UG/KG
HEPTACHLOR	1.7	1.7 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	1.7 U	UG/KG
HEPTACHLOR ETHOXYCHLOR	6.6	6.6 U	UG/KG
PCB 1016	17	17 U	UG/KG
PCB 1221	17	17 U	UG/KG
PCB 1232	17	17 U	UG/KG
PCB 1242	17	17 U	UG/KG
PCB 1248	17	17 U	UG/KG
PCB 1254	17	17 U	UG/KG
PCB 1260	17	17 U	UG/KG
TOXAPHENE	33	33 U	UG/KG

SURROGATE RECOVERIES

LIMITS

DIBUTYLCHLORENDATE (DBC)	24 - 150	129	%
TETRACHLORO-META-XYLENE (TCMX)	60 - 150	122	%



EXTRACTABLE ORGANICS  
 Method 8080  
 Reported: 07/07/95

LABORATORY METHOD BLANK SUMMARY

GTC Order #: 22976 Analytical Run #: 1582

ANALYTE	PQL	RESULT	UNITS
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Date Extracted : 06/23/95  
 Date Analyzed : 06/26/95  
 Analytical Dilution: 1.0

ALDRIN	1.7	1.7 U	UG/KG
ALPHA-BHC	1.7	1.7 U	UG/KG
ETA-BHC	1.7	1.7 U	UG/KG
DELTA-BHC	1.7	1.7 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	1.7 U	UG/KG
ALPHA-CHLORDANE	1.7	1.7 U	UG/KG
BETA-CHLORDANE	1.7	1.7 U	UG/KG
4,4'-DDD	1.7	1.7 U	UG/KG
4,4'-DDE	1.7	1.7 U	UG/KG
4,4'-DDT	3.3	3.3 U	UG/KG
DIELDRIN	1.7	1.7 U	UG/KG
ALPHA-ENDOSULFAN	1.7	1.7 U	UG/KG
BETA-ENDOSULFAN	3.3	3.3 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.3 U	UG/KG
ENDRIN	1.7	1.7 U	UG/KG
ENDRIN ALDEHYDE	3.3	3.3 U	UG/KG
ENDRIN KETONE	3.3	3.3 U	UG/KG
HEPTACHLOR	1.7	1.7 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	1.7 U	UG/KG
HEPTACHLOR	6.6	6.6 U	UG/KG
PCB 1016	17	17 U	UG/KG
PCB 1221	17	17 U	UG/KG
PCB 1232	17	17 U	UG/KG
PCB 1242	17	17 U	UG/KG
PCB 1248	17	17 U	UG/KG
PCB 1254	17	17 U	UG/KG
PCB 1260	17	17 U	UG/KG
TOXAPHENE	33	33 U	UG/KG

SURROGATE RECOVERIES

LIMITS

DIBUTYLCHLORENDATE (DBC)	24 - 150	113	%
HEPTACHLORO-META-XYLENE (TCMX)	60 - 150	101	%



**GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD**

710 Exchange Street 85 Trinity Place  
 Rochester, NY 14608 Hackensack, NJ 07601

GTC Job No. \_\_\_\_\_  
 Client Project No. ET-511

**Sample Origination & Shipping Information**

Collection Site Frontier Technical - Quarry Site  
 Address 8675 Sheridan Drive, Buffalo NY 14221  
 Street City State Zip  
 Collector David Hartz Signature David M Hartz

Bottles Prepared by GTC Rec'd by \_\_\_\_\_  
 Bottles Shipped to Client via \_\_\_\_\_ Seal/Shipping # \_\_\_\_\_  
 Samples Shipped via click Seal/Shipping # \_\_\_\_\_

Sample(s) Relinquished by:	Received by:	Date/Time
1. Sign <u>David M Hartz</u>	1. Sign <u>C. Chazotte</u>	<u>6/16/95</u>
for <u>ETA</u>	for <u>GTC</u>	<u>13:51</u>
2. Sign <u>C. Chazotte</u>	2. Sign <u>Clayton</u>	<u>6/19/95</u>
for <u>GTC</u>	for _____	<u>10:30</u>
3. Sign _____	3. Sign _____	<u>1 1</u>
for _____	for _____	_____

Sample(s) Received in Laboratory by BB/Gardner 6/19/95 @ 12:18

Client I.D.#	Sample Location Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep		Bottle Set(s) (see below)	Rec'd at GTC
				Preserved Y N	Filtered Y N		
1	B-1 (S1, 2, 3, 4, 5 6, 7, 8) 6/14/95 2:00pm	S	TCL/TAL/TPH	X	X	10, 11 3 bottles	
2	B-3 (S1-10) 6/15/95 4:00pm	S	TCL/TAL/TPH	X	X	10, 11 3 bottles	
3	B-4 S-10 6/16/95 10:00	S	TCL/TAL/TPH	X	X	10, 11 2 bottles	
4	/ / :						
5	/ / :						

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.	250	500
# of each										6	6

Additional Analytes Reference Dan Project (Third Revision) 94-1009HWB

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.  
 \* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H), River or Stream (R), Pond (P), Industrial Discharge (I), \_\_\_\_\_ (X), \_\_\_\_\_ (Y).

# GENERAL TESTING CORPORATION/CHAIN-OF-CUSTODY RECORD

710 Exchange Street 85 Trinity Place  
 Rochester, NY 14608 Hackensack, NJ 07601

GTC Job No. 9506-356  
 Client Project No. ET-571

**Sample Origination & Shipping Information**

Collection Site FTA - Quarry Site  
 Address 8675 Sheridan Drive Buffalo NY 14221  
Street City State Zip  
 Collector Jerry Grady  
Print Signature

Bottles Prepared by GTC Rec'd by \_\_\_\_\_  
 Bottles Shipped to Client via \_\_\_\_\_ Seal/Shipping # \_\_\_\_\_  
 Samples Shipped via \_\_\_\_\_ Seal/Shipping # \_\_\_\_\_

Sample(s) Relinquished by:	Received by:	Date/Time
1. Sign <u>Jerry Grady</u> for <u>FTA</u>	1. Sign <u>C. Morrison</u> for <u>GTC</u>	<u>6/20/95</u> <u>11:50</u>
2. Sign <u>C. Morrison</u> for <u>GTC</u>	2. Sign <u>Chuck Low</u> for _____	<u>6/21/95</u> <u>10:30</u>
3. Sign _____ for _____	3. Sign _____ for _____	<u>1 1</u> :

Sample(s) Received in Laboratory by \_\_\_\_\_ 6/21/95 @ 12:30

Client I.D.#	Sample Location Date/Time	*	Analyte or Analyte Group(s) Required (see below for additional)	Sample Prep		Bottle Set(s) (see below)	Rec'd at GTC
				Preserved Y N	Filtered Y N		
1	<u>4</u> <u>B-7 S-4 to 5-10</u> <u>6/19/95 4:00pm</u>	<u>S</u>	<u>TCL/TAL/PH</u>	<u>X</u>	<u>X</u>	<u>10, 11</u>	
2	/ / :						
3	/ / :						
4	/ / :						
5	/ / :						

Use Bottle No. for indicating type bottles used in each bottle set and fill in box with # of bottles used for each type.

Bottle No.	1	2	3	4	5	6	7	8	9	10	11
Bottle Type	40 ml Vial	Pint Glass	Qt. Glass	4 oz. Plastic	8 oz. Plastic	16 oz. Plastic	Qt. Pl.	Gal. Pl.	Steril. Pl.	<u>250</u>	<u>500</u>
# of each										<u>6</u>	<u>6</u>
										<u>2</u>	<u>1</u>

Additional Analytes Reference Dan Project (Third Revision) 94-1004 KWB

Shaded area for Lab use only; bottom copy for client; maximum of 5 samples per page.  
 \* Source Codes: Monitoring Well (W), Soil (S), Treatment Plant (T), Drinking Water (D), Leachate (L), Hazardous Waste (H),  
 River or Stream (R), Pond (P), Industrial Discharge (I), \_\_\_\_\_ (X), \_\_\_\_\_ (Y).



**FRONTIER TECHNICAL ASSOCIATES INC.**

**APPENDIX F**

**QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS PARTICIPATING  
IN ENVIRONMENTAL SITE ASSESSMENT**

**FRONTIER TECHNICAL ASSOCIATES INC.**

8675 Sheridan Drive. Buffalo, New York 14221 (716) 634-2293



# FRONTIER TECHNICAL ASSOCIATES INC.

**DAVID M. HARTY, P.E.**

**Vice President**

## **EDUCATION**

MS (Environmental Engineering) 1985; State University of New York at Buffalo  
BS (Civil Engineering) 1979; State University of New York at Buffalo

## **REGISTRATION and CERTIFICATION**

Professional Engineer--New York (1984)  
Diplomate American Academy of Environmental Engineers

## **SOCIETIES**

American Society of Civil Engineers  
Air and Waste Management Association

## **SUMMARY OF EXPERIENCE**

Mr. Harty has over 15 years of professional environmental engineering consulting experience. His experience includes solid and hazardous waste management, subsurface investigation, environmental monitoring, commercial and industrial audits, wastewater treatment process evaluation, and environmental property assessments.

## **DETAILED EXPERIENCE**

1994-Present; 1979-1988      Frontier Technical Associates, Inc.

- Consultant to the EPA Effluent Guidelines Division. Assisted in development of effluent guidelines for industrial dischargers in the Coal Mining Industry, Ore Mining and Dressing Industry, Inorganic Chemicals Industry, and Phosphate Fertilizer Industry. This effort included evaluation of existing wastewater treatment systems and evaluation of best economically achievable wastewater treatment systems.
- Conducted end-of-pipe pilot-scale treatability studies for the EPA to evaluate dual-media filtration, polymer-aided and unaided settleability of solids, and cyanide destruction.
- Designed and supervised the construction of a secondary spill containment and wastewater treatment system for a liquid rocket fuel testing facility.



# FRONTIER TECHNICAL ASSOCIATES INC.

DAVID M. HARTY, P.E.

Vice President

- Prepared closure plan, post closure plan, specifications and design of the closure of an inactive hazardous waste surface impoundment that contained chlorinated solvents and liquid rocket fuel residuals. Supervised and certified the final closure of this impoundment.
- Evaluated the basis of the NYSDEC water quality standard for phenol to determine if the limitation was scientifically based for an industrial client.
- Prepared a SPDES variance request for industrial client to modify the permit for phenol.
- Provided engineering consulting to industries with respect to spill control, wastewater treatment and process modifications. This work included storm sewer tie-in investigations, electroplating process modifications, and spill control systems.
- Designed and conducted dual-media filtration study for zinc removal at largest zinc chloride manufacturing plant in the U.S. (Dupont-Cleveland).
- Supervised and conducted a jointly funded (NYSDEC and USEPA) storm water runoff evaluation program from five industrial sites along the Buffalo River.
- Evaluated 50 different flue gas desulfurization technologies to determine industry trends, the markets and technical specifications for the lime and limestone used in many of the FGD processes.
- Developed regulatory options for the USEPA Effluent Guidelines Division for wastewater treatment from anthracite coal mines and preparation plants. Project included sampling and evaluation of wastewater treatment facilities.
- Determined the size, nature and trends in the flue gas desulfurization control industry. Projected short-term and long-term growth of the FGD industry for specific market areas (Paducah, KY, Luttrell, TN).
- Evaluated the wastewater and solid wastes generated in selected ore mining subcategories to develop a profile for the USEPA. The study evaluated the solid wastes from antimony, mercury, aluminum, vanadium, tungsten, nickel and titanium mining and milling facilities.



# FRONTIER TECHNICAL ASSOCIATES INC.

**DAVID M. HARTY, P.E.**

**Vice President**

- Projected the sulfur and ash content of coal as a function of depth and areal extent to assist in the development of a selective mining plan for a large semi-bituminous surface mine in Montana.
- Developed and evaluated information on the growth of the coal, oil and natural gas power generation markets to assess the need for pollution control equipment.
- Developed and evaluated wastewater treatment technologies for Alaskan gold placer mining operations. Treatability studies performed involved settling tests with and without polymer addition.
- Investigated Trichloroethene, Methylene Chloride and Dichloroethene groundwater contamination at an Inactive Hazardous Waste Site.
- Tested carbon monoxide and fuel detectors to evaluate the accuracy, sensitivity and effects of interfering gases on their operations.
- Conducted asbestos surveys and air monitoring for asbestos.

1991-1994

**Malcolm Pirnie, Inc.**

- Developed scope of subsurface remedial investigation for phenol-contaminated leachate from Niagara Mohawk's inactive fly ash disposal landfill in Tonawanda, NY. The remedial design encompassed a treatment of storm water flows using an on-site mobile treatment system, and bioremediation of contaminated soil. The project won a 1992 honor award from the New York Consulting Engineers Council.
- Completed a bioremediation project that resulted in successful bioremediation of 7,000 cubic yards of phenol-contaminated soil and fly ash for Niagara Mohawk.
- Developed a work plan and led a remediation verification project for cleanup of contaminated soil at a Niagara Mohawk facility.
- Completed an environmental audit of large machining facility in Western New York.
- Prepared a detailed Work Plan for a Pilot-Scale Treatability Study for the advanced wastewater treatment from an organic chemical manufacturing operation.



# FRONTIER TECHNICAL ASSOCIATES INC.

DAVID M. HARTY, P.E.

Vice President

- Managed a storm water monitoring project at two inactive hazardous waste landfills. The project involved sampling and analysis of the runoff of capped landfills to evaluate the quality relative to the EPA storm water requirements.
- Managed a storm water monitoring program for Niagara Mohawk industrial facilities and developed a training program to have site personnel monitor flow and collect the proper samples. Four sites were monitored including coal pile runoff and runoff from industrial process areas.
- Managed quarterly groundwater monitoring activities at seven solid and hazardous waste sites.
- Finalized RI/FS Work Plan and IRM (Interim Remedial Measures) Concept Design for an inactive hazardous waste site in Steuben County, NY.
- Led a five-month treatability study of leachate that involved investigation of the use of physical/chemical treatment, sequencing batch reactors, and biotowers.
- Managed remedial investigations/feasibility studies (RI/FS) at two hazardous waste sites in Western New York for the NYSDEC Superfund Program.

1988-1991

Empire Soils Investigations, Inc.

- Managed regional environmental engineering division including preparation of proposals, client development, scheduling of projects and personnel, and technical review of work.
- Supervised a major PCB remediation project and cleanup verification project at Niagara Mohawk Dewey Avenue facility including preparation of the remediation plan, design of the cleanup verification plan, public meetings and preparation of a final report on the cleanup.
- Prepared an interim closure plan for a four-acre solid waste disposal site, which utilized the waste material to form an impermeable cap at an iron and steel manufacturing facility.



# FRONTIER TECHNICAL ASSOCIATES INC.

**DAVID M. HARTY, P.E.**

**Vice President**

- Conducted numerous investigations and environmental assessments at industrial sites. Field activities have included soil gas surveys, groundwater monitoring, test pit explorations, and collection, analysis and interpretation of data.
- Conducted environmental audits for metal fabrication and metal forming facilities to determine compliance with Federal, State and Local environmental regulations.
- Prepared specifications for the removal of underground petroleum storage tanks incorporating federal, state and local requirements.
- Project Manager for a NYSDEC Phase II Investigation of a 100 acre inactive hazardous waste site along the Buffalo, NY waterfront.
- Supervised SPDES and POTW discharge monitoring for a steel manufacturing facility. This included both dry and wet weather flow monitoring and sampling to support a permit modification.
- Represented industrial and commercial clients in their environmental discussions and negotiations with the NYSDEC. This has included permit negotiations, variance requests, and negotiations of consent orders.
- Conducted or provided senior level technical review of over 50 Phase I Environmental Site Assessment of commercial and industrial properties.
- Developed well installation specifications for hydrogeological investigations at inactive hazardous waste sites and solid waste disposal sites. Supervised and conducted groundwater monitoring programs to evaluate potential environmental concerns.
- Prepared work plans for Phase II Investigation at an inactive hazardous waste site to investigate chlorinated solvent contamination of soil and groundwater. The work plan included sampling and analysis plan, health and safety plan, and quality assurance project plan.
- Prepared air emissions permit application for a new above ground gasoline storage tank for a refinery.





# FRONTIER TECHNICAL ASSOCIATES INC.

**DAVID M. HARTY, P.E.**

**Vice President**

- Conducted an investigation of corrosion in the underground portion of Buffalo's Light Rail Transit System. Work included evaluation of air and water quality in the tunnels.
- Conducted a hazardous waste investigation of chemical disposal site containing phenol. Investigation included a soil gas survey, soil borings, test pits, monitoring wells. Remedial alternatives were screened and cost estimates to remediate the site were prepared.



**P. MICHAEL TERLECKY**

**President**

**1 EDUCATION**

University of Rochester: Ph.D., Geology (1970)  
Duke University: M.S., Geological Oceanography (1968)  
University of Buffalo: B.A., Geology (1965)

**2 SUMMARY OF EXPERIENCE**

Dr. Terlecky's long-standing interest and background in geological and natural resource research has been broadened by his leadership and participation in environmental research programs combining multi-disciplinary talents. He has directed large engineer-scientist teams on a variety of environmental programs: environmental standards development, environmental impact assessments and statements, wastewater and solid waste sampling and analysis, ground and surface water quality studies, landfill site suitability, hazardous waste disposal, earth properties, and natural resource and commodity assessments. Over the past 20 years, Dr. Terlecky has directed programs totalling over \$33 million in funding primarily for the Federal Government and industrial clients. The largest single program he directed totaled \$2.1 million in funding in a single year and included direction of a project team of 40 persons. In 1988, Dr. Terlecky earned certification as a professional hydrogeologist from the American Institute of Hydrology. He is a certified laboratory director under the New York Environmental Laboratory Accreditation Program for FTA. In addition, he has received an asbestos handling certificate from the New York State Department of Labor. In recent years, he has also directed industrial hygiene and chemical safety sampling efforts for several clients. He is a registered professional geologist in two states.

Recently, he has been providing critical review of DOE environmental impact statements and assessments prepared under the Clean Coal Technology program. These include the EIS for the Healy Clean Coal Project (Healy, AK), the environmental assessment of the Custom Coals International project in Southwestern Pennsylvania, and the flue gas treatment demonstration project for New York State Electric & Gas' Milliken Station near Ithaca, NY.

He was responsible for the technical direction of a program for the US Army Corps of Engineers and Orange and Rockland Utilities, Inc.--the final environmental impact statement for a fossil-fueled power generating station on the Hudson River. This program involved a comprehensive description and evaluation of the impact of the generating station on area ecology, including air and water quality, wildlife and aquatic organisms, economics, and other environmental concerns. Although previous



# FRONTIER TECHNICAL ASSOCIATES INC.

## P. MICHAEL TERLECKY

efforts were unsuccessful, this comprehensive program resulted in approval and go-ahead on the project, after the EIS was approved by the ACE and the Council on Environmental Quality.

Dr. Terlecky has been a project engineer and principal investigator on a number of water quality and dredge disposal studies. He performed a water quality study of the Ashtabula, Ohio area to delineate the effects of industrial effluents on water chemistry and biota, and led a combined water chemistry/remote sensing survey of the City of Saratoga Springs, New York and surrounding area to determine the source of nutrient enrichment of nearby Saratoga Lake. He has also conducted an internally sponsored study of the effects of dredging upon water quality.

### 3 EMPLOYMENT HISTORY

#### **September 1993 to present: Frontier Technical Associates, Inc., President and Laboratory Director**

Dr. Terlecky is responsible for all environmental consulting services at FTA. He is a Laboratory Director under the NY Environmental Laboratory Accreditation Program. He supervises and participates in all project activities and is responsible for the day-to-day business operations of the company. He has continued previous work performed for commercial clients in the fields of compliance monitoring, industrial hygiene, subsurface investigations and ground water quality, safety and training, preparation of spill and contingency plans, and environmental impact assessment.

#### **December 1990 to August 1993: Science Applications International Corp., Sr. Proj. Mgr., Buffalo Operations Mgr., Lab. Director**

Dr. Terlecky was the Manager of SAIC's Buffalo, NY office. In this capacity, he was the Project Manager for the engineering and environmental compliance contracts with Bell Aerospace Textron, Carborundum Abrasives, Atlantic Research Corporation, and many local commercial clients. He has continued all work previously conducted at FTA. His recent work included hydrogeologic investigations employing observation wells for major remediation projects, development of emergency and contingency plans, SPCC plans, compliance monitoring for permit compliance, solid waste management unit closure reports, industrial hygiene monitoring, and response to federal and state regulatory requirements. Most recently, he provided consultation on the development of effluent limit regulations for the Ontario Ministry of the Environment in the Inorganic Chemicals Manufacturing Sector and the Industrial Minerals Sector.



## **FRONTIER TECHNICAL ASSOCIATES INC.**

### **P. MICHAEL TERLECKY**

**1978 to December 1990: Frontier Technical Associates, Inc., Vice President and Laboratory Director**

As a Vice-President at FTA, Dr. Terlecky was responsible for all programs associated with environmental problems, energy, and natural resource assessments. His leadership resulted in acquisition and initiation of several key projects for the company including development of new federal sponsorship of regulatory standards development, environmental problems, commercial environmental and geological consultation work, groundwater evaluation and disposal site location, and natural resource-related work. Recent federally sponsored regulatory efforts have been directed at developing effluent standards for discharges from the energy, mining, fertilizer, crushed stone, and inorganic chemical point source categories. For the US EPA Solid Waste program, he directed FTA support of determination of the appropriateness of regulating solid waste in metal ore, phosphate rock mining, and oil shale mining industries. He was the principal author of a Report to Congress on the subject of hazardous waste in the mining industry. Industrial experience included air and effluent control at several metal finishing and electroplating plants, development and implementation of an air and water quality surveillance plan for an aerospace design, research, and manufacturing facility, submission of closure plans and design of remedial action plans, and design of groundwater evaluation and citing plans for installation of several secure landfills for hazardous solid wastes.

At FTA, Dr. Terlecky served as a Laboratory Director under the New York Environmental Laboratory Accreditation Program from its inception. He directed industrial wastewater sampling programs and groundwater monitoring of contaminated sites for commercial and governmental clients.

At FTA, and earlier at Calspan, Dr. Terlecky has conducted hydrogeologic investigations and assisted in the preparation of permit applications for state approval of hazardous waste disposal facilities. He has designed the sampling network, prepared reports, and met with state and federal officials on behalf of industrial clients to secure permit approval. He has directed efforts to secure RCRA Pt. B permits, designed remedial groundwater sampling and collections systems, written surface impoundment closure plans, and provided lead technical consultation for surface impoundment closure to meet NYDEC and USEPA requirements. Certified as a professional hydrologist by the American Institute of Hydrology, Dr. Terlecky directed all FTA efforts related to groundwater monitoring and pollutant plume definition.

**1973 to present: State University of New York at Buffalo, Dept. of Geology, Rachael Carson College, and Soc. Science Interdisciplinary Environmental Studies Program**

Dr. Terlecky also has maintained a wide diversity of interests in academic areas by serving as an Adjunct Assistant Professor in the Geology Department, Rachel Carson



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## **P. MICHAEL TERLECKY**

College, and the Social Science Inter-disciplinary Program (Environmental Studies) at the State University of New York at Buffalo since 1973. In 1988, Rachel Carson College was reorganized as the Environmental Studies Program. His primary emphasis since then has been teaching undergraduate courses in environmental geology and environmental problems. These include environmental impact statements, water pollution, alternative energy systems, introduction to environmental problems, air and water quality, environmental problems in the local region, and the field study of environmental impact. He also directs independent study students. In 1988 and 1989, Dr. Terlecky and two other geologists from SUNY at Buffalo were awarded a grant and a follow-on renewal grant from the New York State Hazardous Waste Center to develop a new method of extracting organic solvents from contaminated soil and rock materials by using surfactant washing. The demonstration was successful and has continued under commercial funding. In 1991, he was honored for teaching excellence at the State University of New York at Buffalo.

### **1973 to 1978: Calspan Corporation**

As Section Head and Principal Scientist of the Environmental Systems Department at Calspan, Dr. Terlecky was responsible for a broad range of environmental programs for federal, state, local and commercial organizations. He directed, initiated, secured funding, and conducted programs involving large, multidisciplinary project teams consisting of engineers, chemists, geologists, biologists, physicists and many subdisciplines. In 1974-1975, he directed the largest environmental program ever undertaken at Calspan involving 39 personnel. This program resulted in the recommendation and preparation of effluent limitations guidelines for the USEPA in the following categories: ore mining and dressing (BPT, BAT, NSPS), eleven categories of inorganic chemicals, miscellaneous nonferrous metals smelting and refining, metallurgical acid plants, and secondary copper and aluminum (pretreatment). Dr. Terlecky directed a staff of 13 engineers, scientists, and economists on a day-to-day basis as a senior section head while at Calspan.

At Calspan, he also directed and participated in a program support effort for the USAF which evaluated the environmental impact of the B-1 bomber. This consisted of an assessment of the draft EIS and an assessment of the availability and consumption of various strategic metals. Dr. Terlecky maintained a Top Secret clearance while at Calspan and previously with the U.S. Air Force.

### **1978 to 1981: Daemen College**

Dr. Terlecky also held an appointment as an Adjunct Associate Professor in the Science Department of Daemen College for two years while teaching earth science, environmental science and oceanography.



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## **P. MICHAEL TERLECKY**

### **1976 to 1977: Empire State College (Buffalo Campus)**

At Empire State College, Dr. Terlecky served as a mentor (supervisor) for several independent study courses and assisted in the design of programs to meet specific needs of individual students.

### **1973 to 1975: N.Y. Air National Guard (Niagara Falls AFB)**

At the conclusion of active service with the U.S. Air Force, Dr. Terlecky (Captain, USAF) served as the Nuclear Safety Officer for the 107th Fighter-Interceptor Group (Air National Guard) at Niagara Falls AFB. On a limited duty basis, he acted as the safety officer responsible for ground safety and flight safety as well.

### **1971 to 1973: U.S. Air Force Cambridge Research Lab**

At the Terrestrial Research Lab (Air Force Cambridge Research Laboratory), Dr. Terlecky studied terrestrial materials to improve techniques and develop instrumentation to determine earth properties and evaluate their mechanical behavior. Emphasis in this effort was on soil and rock structure and mineralogy. He led a scanning electron microscope/x-ray diffraction study of soil-clay mineral interactions with soil stabilizing agents. The objective of this investigation was to increase bearing strength and trafficability of natural surfaces for aircraft.

### **1969 to 1971: Air Force Weapons Laboratory**

As a research geologist at the Air Force Weapons Laboratory, Albuquerque, New Mexico, Dr. Terlecky was responsible for formulating and guiding research for the analysis of geologic response to nuclear and high-explosive environments. He directed field tests and field parties to test new theories and techniques applied to geologic media.

He provided technical supervision and guidance to other division personnel in areas of geology, geophysics, soil mechanics, and high-explosive field experimentation as applied to survivability/vulnerability of strategic structures. Dr. Terlecky served as director for two Defense Nuclear Agency sponsored projects, and monitored contracts and directed contractor research for USAF sponsored geologic and geophysical research contracts. All of this work supported the upgrade of the Minuteman ballistic missile system. He maintained a Top Secret Clearance with CNWDI access while at AFWL. He was promoted to Captain, USAF, and awarded the Air Force Commendation Medal for his efforts.

### **1970 to 1971: University of New Mexico**

While serving as an Adjunct Assistant Professor at the University of New Mexico, Dr.



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Terlecky was responsible for teaching senior level undergraduate and graduate courses in sedimentation and sedimentary petrology as well as supervising independent study courses. He also served as a graduate thesis advisor.

### **1968: Dolomite Products Corporation**

Consultant responsible for stratigraphic correlation and quarry expansion, to meet contractual requirements of the New York DOT.

### **1967: University of Rochester**

Instructor for Introductory Geology courses. Supervised teaching assistants.

## **4 PROFESSIONAL LICENSES AND MEMBERSHIPS**

Certified Professional Hydrogeologist--American Institute of Hydrology  
Registered Professional Geologist in Delaware and Georgia  
New York and EPA Asbestos Handling Certificates  
Laboratory Director--New York Environmental Laboratory Accreditation  
Program (Laboratory 10475; 1985-present)  
Buffalo Sewer Authority Advisory Council  
American Conference of Governmental Industrial Hygienists  
Society of Economic Paleontologists and Mineralogists  
Society of Mining Engineers  
Society of American Military Engineers  
Sigma Xi  
Buffalo Association of Professional Geologists, Inc.

## **5 AWARDS AND REPORTS**

Air Force Commendation Medal (1971)  
Award for Teaching Excellence--State University of New York at Buffalo (1991)  
Chancellor's Award University at Buffalo 1965



# FRONTIER TECHNICAL ASSOCIATES INC.

GERARD P. GRADY

Manager of Field Services

## EDUCATION

State University of NY at Buffalo: B.A., Geography (1987)

State University of NY at Buffalo: Graduate Studies - Geography and Geology

## SUMMARY OF EXPERIENCE

Experience at Frontier Technical Associates, Inc. and Science Applications International Corporation (SAIC) includes environmental water sampling at various sites to monitor industrial and sanitary wastewater discharges. These industrial sites have included an electroplating plant, a metal finishing operation, a major electrical component and aerospace manufacturing plant, a food processing plant, gypsum mine, cogeneration plant, automobile dismantler, and a major abrasive product manufacturing operation. He has performed water sampling at various locations to determine possible sources of phenol discharges and emissions. Mr. Grady has conducted soil sampling for the evaluation and presence of PCB's and volatile organic compounds. Additional monitoring experience includes groundwater sampling, potable water testing, industrial hygiene air sampling, and soil sampling in conjunction with underground fuel tank removal and evaluation of possible releases from solid waste management units.

Mr. Grady has performed soil sampling as part of the Superfund Innovative Technology Evaluation (SITE) Program at demonstration sites in Michigan, Mississippi, Arizona, Toronto, Ont., Canada and Minnesota. He has performed baseline sampling for development of the Chemical Waste Treater's Effluent Limitations Guidelines at operations in Texas and Connecticut. Mr. Grady has performed split-spoon sampling to determine the effectiveness of bioremediation, bioventing, and subsurface volatilization and ventilation treatment of soil. In addition, he has calibrated and operated instrumentation including organic vapor analyzers and combustible gas meters in the field. He also directed the installation of 30 pressure probes in order to evaluate the extraction of volatile organics from soil and groundwater as part of the SITE Program at a demonstration site in Michigan.

As a research assistant for the State University of New York at Buffalo, Mr. Grady was responsible for helping formulate and guide research to determine the erosional effects of raindrop impact to that of overland flow. He has helped direct field tests and field parties at the USDA experimental watershed, Walnut Gulch, Tombstone, Arizona to test new theories of erosion on natural hillslopes.

Geography experience gained while at the State University of New York at Buffalo has included surveying for the purpose of developing contour maps of various locations, soil sampling and particle size analysis, and collection of stream flow velocity data to produce cross-sectional profiles of stream flow velocity contours.



Mr. Grady has completed the 40-hour training required for hazardous waste site workers as defined in 29 CFR 1910.120. In addition, he is familiar with sampling protocols conducted under federal and state jurisdiction.

Terlecky, P.M. and Grady, G.P., "Analysis of Potable Water from Drinking Fountains at Atlantic Research Corporation, Niagara Falls, NY," FTA Report ET-428-1, January 15, 1990.

Terlecky, P.M. and Grady, G.P., "Industrial Hygiene Monitoring Report--Bell Aerospace Textron, December 1989," FTA Report ET-420-1, February 5, 1990.

Terlecky, P.M. and Grady, G.P., "Evaluation of Fire Fighting Water Supply from Underground Sources at Whiting Roll-Up Door, Akron, NY," FTA Report ET-384-1, December 7, 1990.

Terlecky, P.M. and Grady, G.P., "Industrial Hygiene Monitoring Report--Bell Aerospace Textron," Frontier Technical Associates Report, ET-459-1, January 23, 1991.

Terlecky, P.M. and Grady, G.P., "Soil Sampling Results for Fuel Tank Removal--Bell Aerospace Textron," SAIC Report ET-460-1, March 1, 1991.

Grady, G.P. and Terlecky, P.M., "Sampling and Analysis of Wastewater for Isophorone and 1,1,1-Trichloroethane at Carborundum Abrasives Company (January-March 1991)," SAIC Report ET-869-01, April 16, 1991.

Terlecky, P.M. and Grady, G.P., "Solid Waste Management Unit Reconnaissance Soil Sampling--Bell Aerospace Textron," SAIC Report ET-418-2, April 30, 1991.

Terlecky, P.M. and Grady, G.P., "Groundwater Sampling and Analysis Investigation--Landfill Area, Carborundum Abrasives Company," SAIC Report, ET-465-2, May 30, 1991.

Terlecky, P.M. and Grady, G.P., "Air Emission Test Results--Grieve Curing Oven," SAIC Report ET-274-1, for Bell Aerospace Textron, Wheatfield, NY, June 4, 1991.

Terlecky, P.M. and Grady, G.P., "Waste Sample Analysis by TCLP--Hasbrouck Plastics," SAIC Report ET-278-1, July 25, 1991.

Terlecky, P.M. and Grady, G.P., "Quarterly and Annual Report--Groundwater Monitoring at Bell Aerospace Textron (July 1991)," SAIC Report ET-441-6, August 19, 1991.

Terlecky, P.M. and Grady, G.P., "Compliance Monitoring Report, Wastewater Discharges to the Buffalo Sewer Authority," SAIC Report ET-1192-04, Lonestar Energy Company, April 15, 1993.

Terlecky, P.M. and Grady, G.P., "Groundwater Sampling and Analysis--Inactive Landfill Area, Carborundum Abrasive Co.," SAIC Report ET-1830-GWI, May 19, 1993.