SL-89

HOUDAILLE INDUSTRIES - MANZEL DIVISION

NEW YORK STATE SUPERFUND
PHASE I SUMMARY REPORT

DRAFT

September 6, 1983

Prepared By:

Recra Research, Inc.
4248 Ridge Lea Road
Amherst, New York 14226

For:

New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

HOUDAILLE INDUSTRIES - MANZEL DIVISION

NEW YORK STATE SUPERFUND

PHASE I SUMMARY REPORT

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1.0 Executive Summary

The Houdaille - Manzel Division plant was located at 315 Babcock Street, Buffalo, New York. the Manzel Divison used a small parcel of property owned by the City of Buffalo for the disposal of approximately 3850 gallons of industrial waste from 1968 to 1977. The waste materials generated from the hyoraulic pump manufacturing plant are listd as cutting oils and cooling compounds.

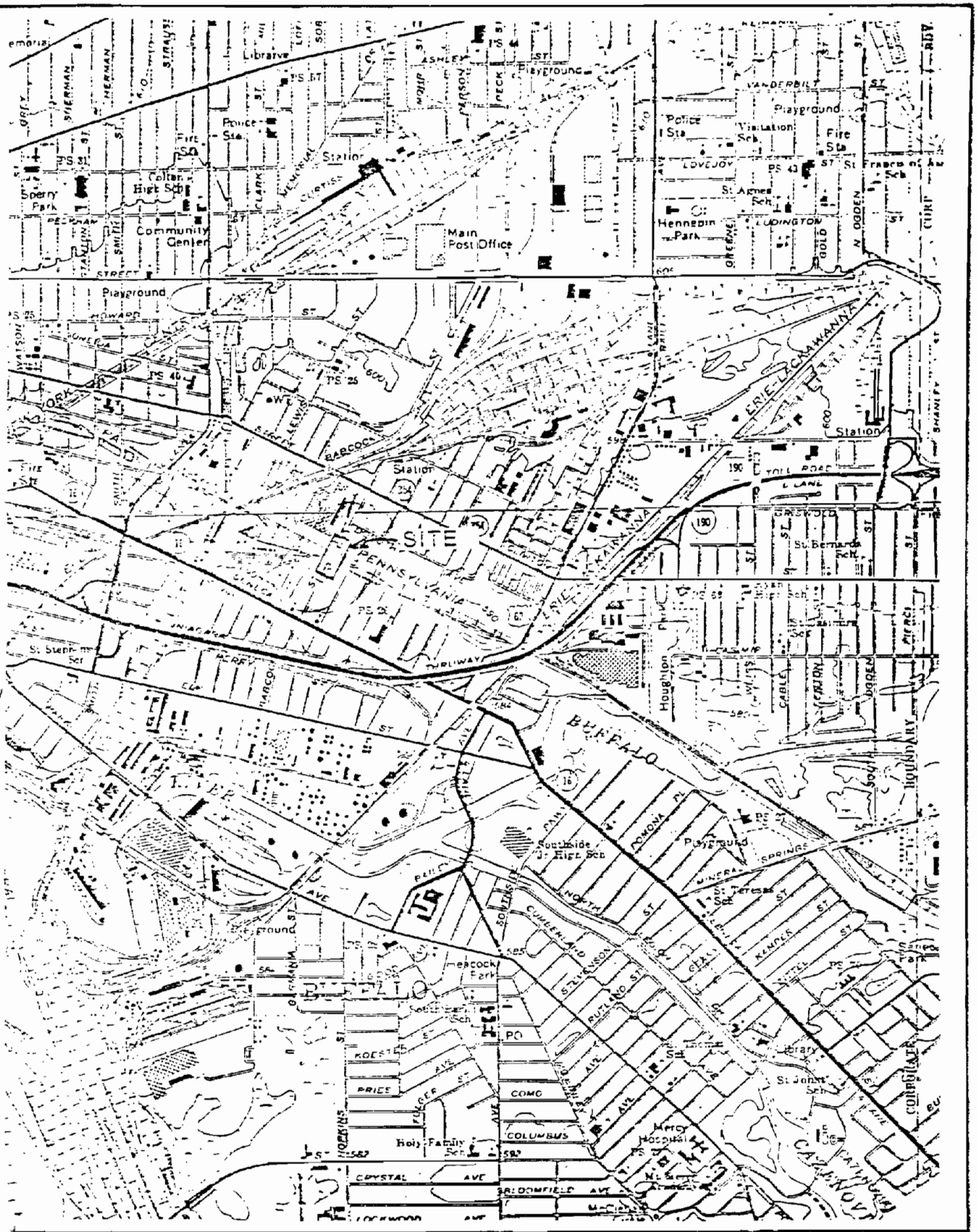
Analysis of soil samples, collected on the disposal area and along the plant perimeter, have revealed the presence of PCB's, heavy metals and chlorinated and non-chlorinated hydrocarbons.

Remedial steps taken by the City of Buffalo to reduce direct contact with the contaminant area includes; capping the area with 6 - 12 inches of soil and erecting a six (6) foot chain link fence. Since construction; however, this fence has been severely vandalized.

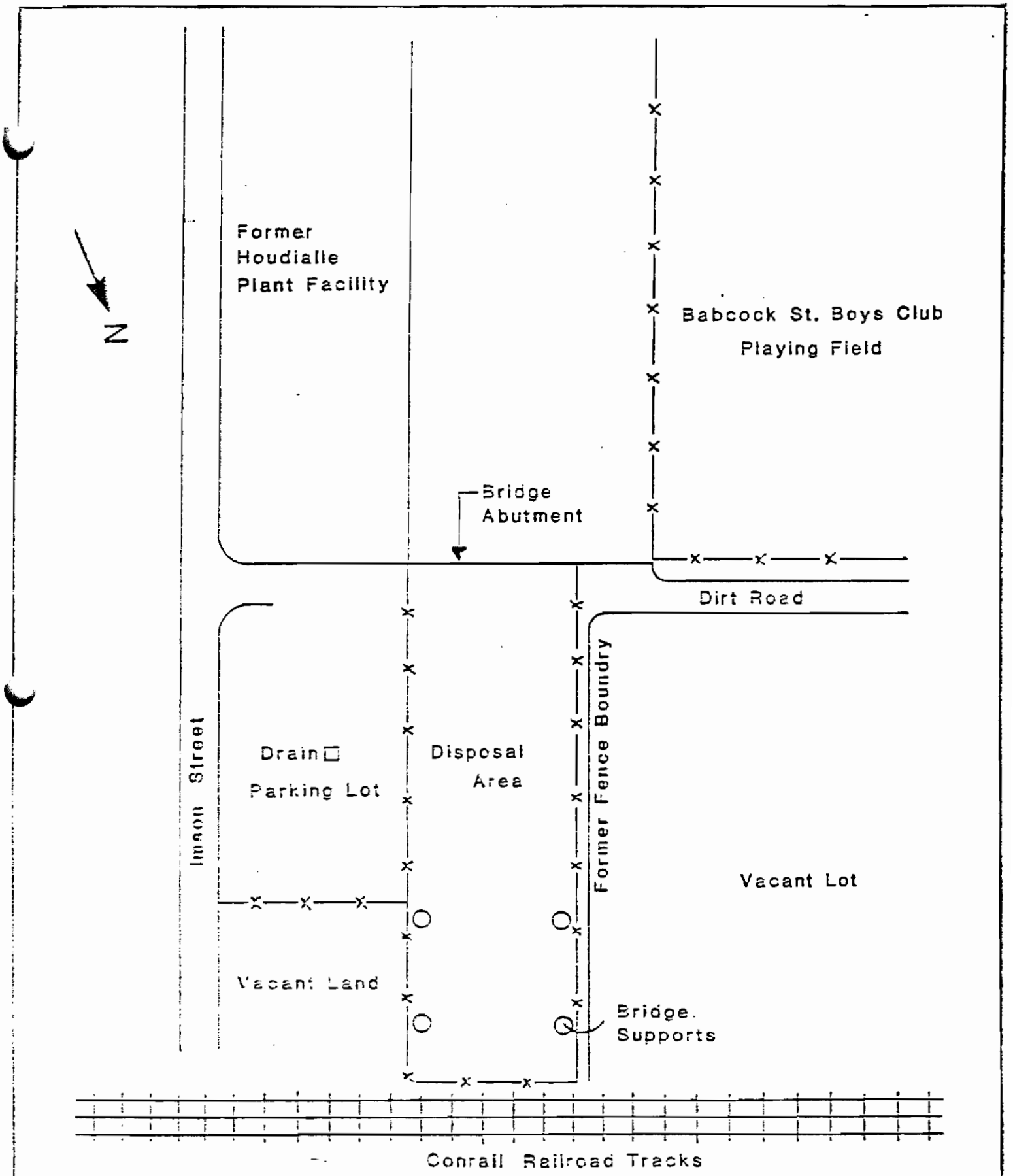
2.0 Site Description

The Houdaille - Manzel Division plant was located at 315 Babcock Street, Buffalo, Erie County, New York (Figure 1). The disposal area is located under the Babcock Street viaduct and is approximately 1750 square feet in size (Reference 9). The disposal site is bounded on the north by property owned by Conrail, to the south by the bridge abutment, west by an open field owned by Penn Central Estates and to the east by the former Houdaille plant, which is currently occupied by Chapel Industries (Figure 2).

The land surrounding the disposal area is well vegetated with tall highland grasses, trees, shrubs and weeds. The actual disposal site, which was covered with approximately 6 - 12 inches of soil in September, 1982, is completely barren. The applied soil cap appeared to be in fair condition with no signs of cracking or erosional features. However, a pit had been excavated to a depth of approximately 3 feet near the center of the disposal area exposing a profile of the underlying contaminated soils and cover material. The known contaminated area was restricted to the public by a posted 6 foot chain link fence with a locked swinging gate. However, during Recra Research's September 8, 1982 site inspection it was observed that all that remained of the fence were the vertical support posts. Also noted in the area were signs of public use as a result of unrestricted access.



USGS Topographic Map 7.5' Bflo. SE & NE Quad. 1965	Vicinity Map Houdaille Industries Manzel Division	Figure 1



Not to Scale	Site Map Houdialle Industries Manzel Division	Figure 2

3.0 PRELIMINARY HAZARDOUS RANKING SYSTEM SCORE

Facility name: Houdialle Industries Manzel Division

Location: 315 Babcock St., Bflo, NY 14210

EPA Region: 2

Person(s) in charge of the facility: City of Buffalo

City Hall

Buffalo, NY 14202

Name of Reviewer: Recra Research, Inc. Date: Sept. 6, 1983

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Houdialle Industries used a 1750 sq.ft. parcel of property located adjacent to their plant for the disposal of 3850 gallons of waste material such as cuttingoils and cooling compounds. Analytical testing of on-site soils has revealed contamination of PCB's, heavy metals & chlorinated & non-chlorinated hydrocarbons. Remedial action taken includes capping the area with 6-12" of cover soil and erecting a 6 ft.chain link fence; However, the fence has been severely vandalized.

Score: $S_M = 2.8$ ($S_{gw} = 4.7$ $S_{sw} = 0$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 20.8$ S_M Range for S_M = 2.0 to 30.0

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	0 (45)	1	45	45	3.1
If observed release is given a score of 45, proceed to line [4]. If observed release is given a score of 0, proceed to line [2].					
[2] Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 (2) 3	2	4	6	
Net Precipitation	0 (1) 2 3	1	1	3	
Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 [2] 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			20	26	
[5] Targets					3.5
Ground Water Use	0 (1) 2 3	3	3	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			3	49	
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]			2700	57,330	
[7] Divide line [6] by 57,330 and multiply by 100		S_{gw} =	4.7		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	[0] 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line [4]. If observed release is given a value of 0, proceed to line [2].					
[2] Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 (2) 3	2	4	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			9	15	
[3] Containment	0 1 2 (3)	1	3	3	4.3
[4] Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 [2] 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			20	26	
[5] Targets					4.5
Surface Water Use	(0) 1 2 3	3	0	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40–	
Total Targets Score			0	55	
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]			0	64,350	
[7] Divide line [6] by 64,350 and multiply by 100		S_{sw} =	0		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	[0] 45	1		45	5.1
Date and Location:					
Sampling Protocol:					
If line [1] is 0, the S_a = 0. Enter on line [5]. If line [1] is 45, then proceed to line [2].					
[2] Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
[4] Multiply [1] x [2] x [3]				35,100	
[5] Divide line [4] by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	4.7	22.1
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		22.1
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		4.7
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		2.8

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Incident	(0) 45	1	0	45	8.1
If line [1] is 45, proceed to line [4] If line [1] is 0, proceed to line [2]					
[2] Accessibility	0 [1] 2 3	1	1	3	8.2
[3] Containment	0 (15)	1	15	15	8.3
[4] Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
[5] Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			20	32	
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]			4500	21,600	
[7] Divide line [6] by 21,600 and multiply by 100			S_{DC} = 20.8		

FIGURE 12
DIRECT CONTACT WORK SHEET

3.1 DOCUMENTATION RECORDS FOR THE HAZARDOUS RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Houdialle Industries Manzel Div.

LOCATION: 315 Babcock St., Buffalo, NY 14202

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

LEAD
PCB'S
BENZENE

Rationale for attributing the contaminants to the facility:

ANALYTICAL RESULTS REPORTED BY: NYSDEC, USGS & E & E (HOUDAILLE'S CONTRACTORS).

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

LIMESTONE & SHALE AQUIFER ENCOUNTERED AT 20 FT BELOW GROUND SURFACE. INDUSTRIAL S USED ONLY.

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

20 FT'

Depth from the ground surface to the lowest point of waste disposal/ storage:

WASTE WAS SPILLED DIRECTLY ONTO GROUND SURFACE.

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

32"

Mean annual lake or seasonal evaporation (list months for seasonal):

28"

Net precipitation (subtract the above figures):

4"

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

GLACIOLACUSTRINE DEPOSITS OF CLAY, SILT AND FINE SAND.

Permeability associated with soil type:

$<10^{-5} > 10^{-7}$ CM/SEC

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

LIQUIDS

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NO CONTAINMENT

Method with highest score:

-

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

PCB'S
LEAD
BENZENE

Compound with highest score:

PCB'S

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

3850 GALLONS

Basis of estimating and/or computing waste quantity:

REF. 1

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

INDUSTRIAL

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

FORMER ARCTIC ICE COMPANY

Distance to above well or building:

1200'

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

0

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

0

Total population served by ground water within a 3-mile radius:

0

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

NO ANALYTICAL DATA OF THIS SORT

Rationale for attributing the contaminants to the facility:

—

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

0% U.S.G.S. BFLO. QUAD

Name/description of nearest downslope surface water:

BUFFALO RIVER - A CLASS "D" WATER SOURCE. SUITABLE FOR 2NDARY CONTACT RECREATION. WILL NOT SUPPORT FISH PROPAGATION.

Average slope of terrain between facility and above-cited surface water body in percent:

0%

Is the facility located either totally or partially in surface water?

NO

Is the facility completely surrounded by areas of higher elevation?

NO

1-Year 24-Hour Rainfall in Inches

2.2"

Distance to Nearest Downslope Surface Water

≈ 4000 FT

Physical State of Waste

LIQUID

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NO CONTAINMENT

Method with highest score:

-

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

PCB'S
LEAD

Compound with highest score:

BOTH

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

3850 GALLONS

Basis of estimating and/or computing waste quantity:

REF. 1

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

N/A

Is there tidal influence?

NO

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

N/A

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

N/A

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

>3 MILES

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

N/A

Total population served:

N/A

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

N/A

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

AIR QUALITY WAS EXAMINED DURING SOIL SAMPLING BY DEP. RESULTS CONSIDERED TO BE NEGATIVE.

AIR QUALITY EVALUATED WITH A H-NU REVEALED 15-30 PPM OF BENZENE.

Date and location of detection of contaminants

MAY, 20, 1983 - HOUDAILLE MANZEL DIVISION.

Methods used to detect the contaminants:

HNU PHOTOIONIZER; HOWEVER, SINCE THIS METHOD IS NOT CONSIDERED QUANTITATIVE METHOD BUT, RATHER AN INDICATOR OF AIR QUALITY THIS DATA WAS NOT ACCEPTABLE FOR COMPLETELY THE HITREMODEL.

Rationale for attributing the contaminants to the site:

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

-

Most incompatible pair of compounds:

-

Toxicity

Most toxic compound:

Hazardous Waste Quantity

Total quantity of hazardous waste:

Basis of estimating and/or computing waste quantity:

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Distance to critical habitat of an endangered species, if 1 mile or less:

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Distance to residential area, if 2 miles or less:

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

3.2 EPA PRELIMINARY ASSESSMENT

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE: | 02 SITE NUMBER:

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
HOUDAILLE INDUSTRIES (MANZEL DIV.)	315 BABCOCK ST.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
BUFFALO	NY	14210	ERIE		

09 COORDINATES: LATITUDE 42° 52' 28.0" | LONGITUDE 78° 49' 59.0"

10 DIRECTIONS TO SITE (Starting from nearest public road):

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
CITY OF BUFFALO	CITY HALL

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
BUFFALO	NY	14202	( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)

☐ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☑ YES DATE 9 / 6 / 83 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☑ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____

CONTRACTOR NAME(S): RECRA RESEARCH, INC. (Survey)

02 SITE STATUS (Check one)

☐ A. ACTIVE ☑ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

1968 (BEGINNING YEAR) | 1977 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

WASTE OILS AND SOLVENTS HAVE BEEN CONFIRMED AS BEING DISPOSED OF ON THE SITE.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

THE ANALYSES OF SOILS HAVE REVEALED CONTAMINATION OF LS WITH PCB'S, METALS & SOLVENTS (CHLORINATED & NON-)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☑ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
RICHARD L. CROUCH	RECRA RESEACH, INC.	(716) 856-6200

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
PATRICIA M. PERRY	S	SAME	( ) SAME	9 / 6 / 83 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE | 02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

- TONS _____
- CUBIC YARDS _____
- NO. OF DRUMS 70

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☑ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	UNKNOWN		REFERENCE IN LITERATURE
SOL	SOLVENTS	UNKNOWN		SUGGEST THAT 3850 GALLONS
PSD	PESTICIDES			OF WASTE MATERIAL
OOC	OTHER ORGANIC CHEMICALS			SUCH AS: CUTTING OILS
IOC	INORGANIC CHEMICALS			& SOLVENTS WERE SPILLED
ACD	ACIDS			DIRECTLY ONTO THE GROUND
BAS	BASES			SURFACE.
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S.G.S. REPORT AUG. 1982

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE POTENTIAL FOR CONTAMINANT MIGRATION TO THE GROUNDWATER AQUIFER IS THOUGHT TO BE LOW. THE SUBSURFACE SOIL IS DESCRIBED AS A CLAY (LACUSTRINE) & THE BEDROCK AQUIFER IS REPORTED AT A DEPTH OF 20 FT.

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

THE NEAREST SURFACE WATER IS THE BUFFALO RIVER LOCATED 4000 FT FROM THE SITE. MIGRATION OF CONTAMINANTS TO THIS SOURCE IS REMOTE. NO OTHER STREAMS, DRAINAGE DITCHES OR WETLANDS ARE IN THE SITE VICINITY.

01 ☑ C. CONTAMINATION OF AIR — 02 ☑ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☑ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE AREA OF DISPOSAL IS USED BY VICINITY JUVENILES AS A SHORT CUT TO THE BOYS CLUB FIELD AND GENERAL PLAY AREA IN AN ATTEMPT TO REDUCE DIRECT CONTACT W/CONTAMINATED SOIL THE AREA HAS BEEN COVERED W/ 6-12 INCHES OF SOIL.

01 ☑ F. CONTAMINATION OF SOIL — 02 ☑ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE SOILS OF THE SITE AREA HAVE BEEN ANALYTICAL CONFIRMED AS BEING CONTAMINATED W/ PCB, HEAVY METALS & CHLORINATED HYDROCARBONS.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE _____) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
THE AREA USE FOR A DISPOSAL SITE IS LOCATED UNDER A VIADUCT CREATING AN ENVIRONMENT WHICH DOES NOT PROMOTE PLANT LIFE. ALSO THE COVER MATERIAL WAS DERIVED FROM A CONSTRUCTION AREA THE SURROUNDING AREA WAS WELL VEGETATED.

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE _____) ☑ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A DRAIN ON THE HOUDAILLE PROPERTY WAS USED FOR THE DISPOSAL OF LIQUID WASTE. THE DRAIN DIRECTLY INTO THE CITY OF BFLO. SEWER SYSTEM.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION

3.3 EPA SITE INSPECTION REPORT

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
HOUDAILLE INDUSTRIES (MANZEL DIV.)	315 BABCOCK ST

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
BUFFALO	NY	14210	ERIE		

09 COORDINATES: LATITUDE 42° 52' 28.0" | LONGITUDE 78° 49' 59.0"

10 TYPE OF OWNERSHIP (Check one)
☑ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
9 6 83 (MONTH DAY YEAR)	☐ ACTIVE ☑ INACTIVE	1968 (BEGINNING YEAR) 1977 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☑ F. STATE CONTRACTOR RECRA RESEARCH (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
PATRICIA M. PERRY	STAFF GEOLOGIST	RECRA RESEARCH	(716) 856-620

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
CAMERON O'CONNOR	DEPT OF ENVIRONMENTAL PLANNING		(716) 846-455
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☐ PERMISSION ☐ WARRANT	2:06 PM	SUNNY & WINDY

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
RICHARD L. CROUCH	RECRA RESEARCH, INC.	( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
PATRICIA M. PERRY		SAME	SAME	9 6 85 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

- TONS _____
- CUBIC YARDS _____
- NO. OF DRUMS 70

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☑ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	UNKNOWN		REFERENCE IN LITERATURE
SOL	SOLVENTS	UNKNOWN		SUGGEST THAT 3850 GALLON
PSD	PESTICIDES			OF WASTE MATERIAL
OCC	OTHER ORGANIC CHEMICALS			SUCH AS: CUTTING OILS
IOC	INORGANIC CHEMICALS			& SOLVENTS WERE SPILLED
ACD	ACIDS			DIRECTLY ONTO THE GROUND
BAS	BASES			SURFACE.
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

U.S.G.S. REPORT AUG. 1982

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE POTENTIAL FOR CONTAMINANT MIGRATION TO THE GROUNDWATER AQUIFER IS THOUGHT TO BE LOW. THE SUBSURFACE SOIL IS DESCRIBED AS A CLAY (LACUSTRINE) & THE BEDROCK AQUIFER IS REPORTED AT A DEPTH OF 20 FT.

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE NEAREST SURFACE WATER IS THE BUFFALO RIVER LOCATED 4000 FT FROM THE SITE. MIGRATION OF CONTAMINANTS TO THIS SOURCE IS REMOTE. NO OTHER STREAMS, DRAINAGE DITCHES OR WETLANDS *

01 ☑ C. CONTAMINATION OF AIR — 02 ☑ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☑ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☑ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

THE AREA OF DISPOSAL IS USED BY VICINITY JUVENILES AS A SHORT CUT TO THE BOYS CLUB FIELD AND GENERAL PLAY AREA IN AN ATTEMPT TO REDUCE DIRECT CONTACT W/CONTAMINATED SOIL THE AREA HAS BEEN COVERED W/ 6-12 INCHES OF SOIL.

01 ☑ F. CONTAMINATION OF SOIL — 02 ☑ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (ACRES) — 04 NARRATIVE DESCRIPTION

THE SOILS OF THE SITE AREA HAVE BEEN ANALYTICAL CONFIRMED AS BEING CONTAMINATED W/ PCB, HEAVY METALS & CHLORINATED HYDRO CARBONS.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

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* ARE IN THE SITE VICINITY.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☑ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
THE AREA USE FOR A DISPOSAL SITE IS LOCATED UNDER A VIADUCT CREATING AN ENVIRONMENT WHICH DOES NOT PROMOTE PLANT LIFE. ALSO, THE COVER MATERIAL WAS DERIVED FROM A CONSTRUCTION AREA. THE SURROUNDING AREA WAS WELL VEGETATED.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ — 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE _____) — ☑ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
A DRAIN ON THE HOUDIALLE PROPERTY WAS USED FOR THE DISPOSAL OF LIQUID WASTE. THE DRAIN DIRECTLY INTO THE CITY OF BFLO. SEWER SYSTEM.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., State files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☑ H. OPEN DUMP	3850	GAL.
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

≈ 0.5 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☑ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

NO CONTAINMENT MEASURES TAKEN. THE WASTE MATERIAL WAS SPILLED DIRECTLY ONTO THE GROUND SURFACE.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☑ NO

02 COMMENTS

THE DISPOSAL SITE HAS BEEN CAPPED W/ 6-12 INCHES WITH COVER MATERIAL.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☑	B. ☐	A. ☐	B. ☐	C. ☐	A. < 4 (mi)
NON-COMMUNITY	C. ☐	D. ☐	D. ☐	E. ☐	F. ☐	B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☑ D. NOT USED, ~~UNUSEABLE~~

02 POPULATION SERVED BY GROUND WATER: 0

03 DISTANCE TO NEAREST DRINKING WATER WELL: 0.2 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
180 (ft)	NW	20 (ft)	30-300 (gpd)	☐ YES ☑ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and drinkings)

THE WELL IDENTIFIED ASME IS NO LONGER USED. HOWEVER, DURING IT'S FUNCTIONING PERIOD THE WELL WAS USED INDUSTRIALLY BY ARCTIC ICE CO.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION, DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☑ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
BUFFALO RIVER	☐	0.75 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN: ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 19,000 NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS	0.5 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
> 10,000	0.5 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

THE VICINITY OF THE HOUDIALLE SITE CAN BE CHARACTERIZED AS RESIDENTIAL, COMMERCIAL & INDUSTRIAL. A PRIVATE RESIDENCES ARE LOCATED WITHIN CLOSE PROXIMITY TO THE SITE.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☑ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
20 (ft)	UNDETERMINED (ft)		

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
4 (in)	2.2 (in)	0 %		0 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.10 (mi)	B. 0.50 (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

THE SITE AND SURROUNDING TERRAIN CAN BE DESCRIBED AS TOPOGRAPHICALLY FLAT. THE ONLY VARIATION IN TOPOGRAPHY OCCURS WHERE THE VIADUCT HAS BEEN CONSTRUCTED RESULTING IN THE ROAD BEEN ELEVATED ± 50-100 FT ABOVE THE SURROUNDING LAND.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☐ AERIAL

02 IN CUSTODY OF _____
(Name of organization or individual)

03 MAPS
☐ YES
☐ NO

04 LOCATION OF MAPS _____

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

VARIOUS FIELD SAMPLING PROGRAMS HAVE BEEN CONDUCTED SINCE 1981. THE RESULTS OF THESE PROGRAMS ARE DISCUSSED IN SECTION 5.0 WITHIN THE REPORT.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. State files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
CITY OF BUFFALO		CITY HALL		BFLO	NY	14202

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER

03 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS *(P.O. Box, RFD #, etc.)*	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
HOUDIALLE INDUSTRIES			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
315 BABCOCK			

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
BUFFALO	NY	14210			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	06 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ S. CAPPING/COVERING — 02 DATE 9-29-82 — 03 AGENCY _____
04 DESCRIPTION
THE CONTAMINATED WAS COVERED WITH 6-12" OF SILTY CLAY COVER MATERIAL

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling analyses, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

4.0 History

The Houdaille - Manzel Division plant was located at 315 Babcock Street, Buffalo, New York (Figure 1). This division of Houdaille Industries manufactured hydraulic pumps for compressors and small engines until 1978 when operations were discontinued (Reference 1). Industrial waste, generated by manufacturing processes employed at the Manzel facility, included cutting oils and cooling compounds. These wastes were disposed of on a small 1750 square foot parcel of city owned property from 1968 to 1977. This property, located adjacent to the facility parking lot received approximately 3850 gallons of the aforementioned waste materials which were spilled directly onto the ground surface (Figure 2). Waste materials were also spilled along the plant parking lot fence and poured into city sewers through a storm drain located in the center of the plant parking lot (Reference 1).

Investigation of the Houdaille disposal site was prompted by information, supplied by a former plant employee in June 1981, which revealed that various solvents were disposed of on the property adjacent to the plant (Reference 2). Subsequently, the Erie County Department of Environment and Planning conducted preliminary analytical sampling on June 16, and August 19 and 27, 1981. Results revealed the presence of PCB's in concentration ranging from 0.31 to 38.1 ppm and chloroform in concentrations ranging from 250.0 to 425.0 ppm (Reference 3). Since 1981, various sampling programs have been conducted by the NYSDEC, U.S. Geological Survey and Ecology and Environment at the request of Houdaille Industries. Overall, the sampling results revealed contamination of on-site soils with PCB's, heavy metals and chlorinated and non-chlorinated organic hydrocarbons.

As a result of the analytical findings, measures were taken to restrict public access to the site which had been used as a shortcut route by neighboring residents. These measures first included a posted snow fence which encompassed the entire area. This fence was erected on September 15, 1982; by September 16, 1982 the fence was observed as having been purposely removed. On September 29, 1982, a soil cap was applied to the contaminated area and a six (6) foot chain link fence installed along the site perimeter. However, as mentioned in Section 2.0, the chain link fence has been severely vandalized.

5.0 Site Data

5.1 Site Area Surface Features

5.1.1 Topography and Drainage - The vicinity topography is flat and displays no naturally occurring variation. However, construction of a viaduct over the area has produced mounded area where the road was built up 20 - 30 feet to meet the overpass structure.

Surface run-off in the disposal area probably flows in all directions off the mounded cap which was applied in 1982. Drainage on the former Houdaille plant property is directed toward the Buffalo sewer system through a storm drain located in the center of the parking lot.

5.1.2 Environmental Setting - The area surrounding the Houdaille - Manzel Division disposal site can be described as a heavily populated urban/industrial district of the City of Buffalo. Private residences are located directly adjacent to the plant facility and approximately 0.1 miles from the contaminated area. Also located in the immediate site vicinity is the Babcock Street Boys Club playing field. This playing field was assessed, by Dr. Donald Thomas of the Erie County Health Department, for potential health hazards through contaminant migration. However, analytical results revealed that migration had not occurred and the field was approved for public use on

January 5, 1983.

The disposal site lies in an environmentally insensitive area. There are no protected wetlands or critical habitats of endangered species in the site vicinity. The site does lie within the 100 year floodplain zone of the Buffalo River as designated by the Federal Emergency Management Agency (Reference 5).

5.2 Site Hydrogeology

5.2.1 Geology - Bedrock underlying the Houdaille disposal site is the Onondaga Limestone Formation of Devonian age. In the immediate site area this formation is represented more specifically by the Moorehouse, Edgecliff and Nedrow Limestone Members. Characteristicly these members are comprised of dark gray limestone containing abundant fossils such as corals, brachropor and bryozoan. The exception to this description is the Nedrow Member which contains large amounts of blue-black chert and relatively lesser amounts of fossils (Reference 6).

The Onondaga Limestone Formation is encountered at approximately 20 feet below ground surface and has an overall thickness of 108 feet (Reference 1 and 6). Regional dip of the bedrock is .5 degrees to the south.

5.2.2 Soils - The unconsolidated material overlying bedrock in this area is a thin mantle of glacial till composed of non-sorted rock material in a silty clay matrix (Reference 7). This

material is overlain by interbedded clay, silt and fine sand sediments deposited in glacial lakes ancestral to the present Lake Erie (Reference 8). Permeabilities of these materials range from approximately 10^{-5} to 10^{-7} cm/sec (Reference 11). Surficial soils consist of fill and disturbed or altered original soils resulting from industrial development (Reference 8).

5.2.3 Groundwater - Groundwater wells are not used as a potable water source in the site vicinity. The area is serviced by municipal water which is drawn from Lake Erie. Groundwater wells are used for industrial purposes within the site vicinity and are reported to draw from the Onondaga Limestone and Camillus Shale Formations at depths ranging from 130 - 180 feet. Yields from these wells range from 30 - 300 gpm. The direction of groundwater flow is assumed to be southerly towards the Buffalo River.

5.3 Previous Sampling and Analyses

5.3.1 Groundwater Quality Data - No sampling of this nature performed.

5.3.2 Surface Water Quality Data - No sampling of this nature performed.

5.3.3 Air Quality Data - Screening of air quality at the disposal site was performed in conjunction with soil boring programs conducted on separate occasions by the Erie County Department

of Environment and Planning and NYSDEC. Air quality was tested in the boring holes using Drager tubes and an HNU photoionizer calibrated for detection of benzene. Results of testing are presented in the following colored pages.

5.3.4 Other Analytical Data - The soils on-site have been extensively sampled by the following agencies: Erie County Department of Environment and Planning, NYSDEC and Ecology and Environment at the request of Houdaille Industries. Analytical testing of these samples revealed that the area is contaminated with PCB's, heavy metals and chlorinated and non-chlorinated organic hydrocarbons. Results, sampling location and procedures for the available data are presented in the following colored pages.

HOUPAILLE - MANVEL, TEXAS
SAMPLING RESULTS

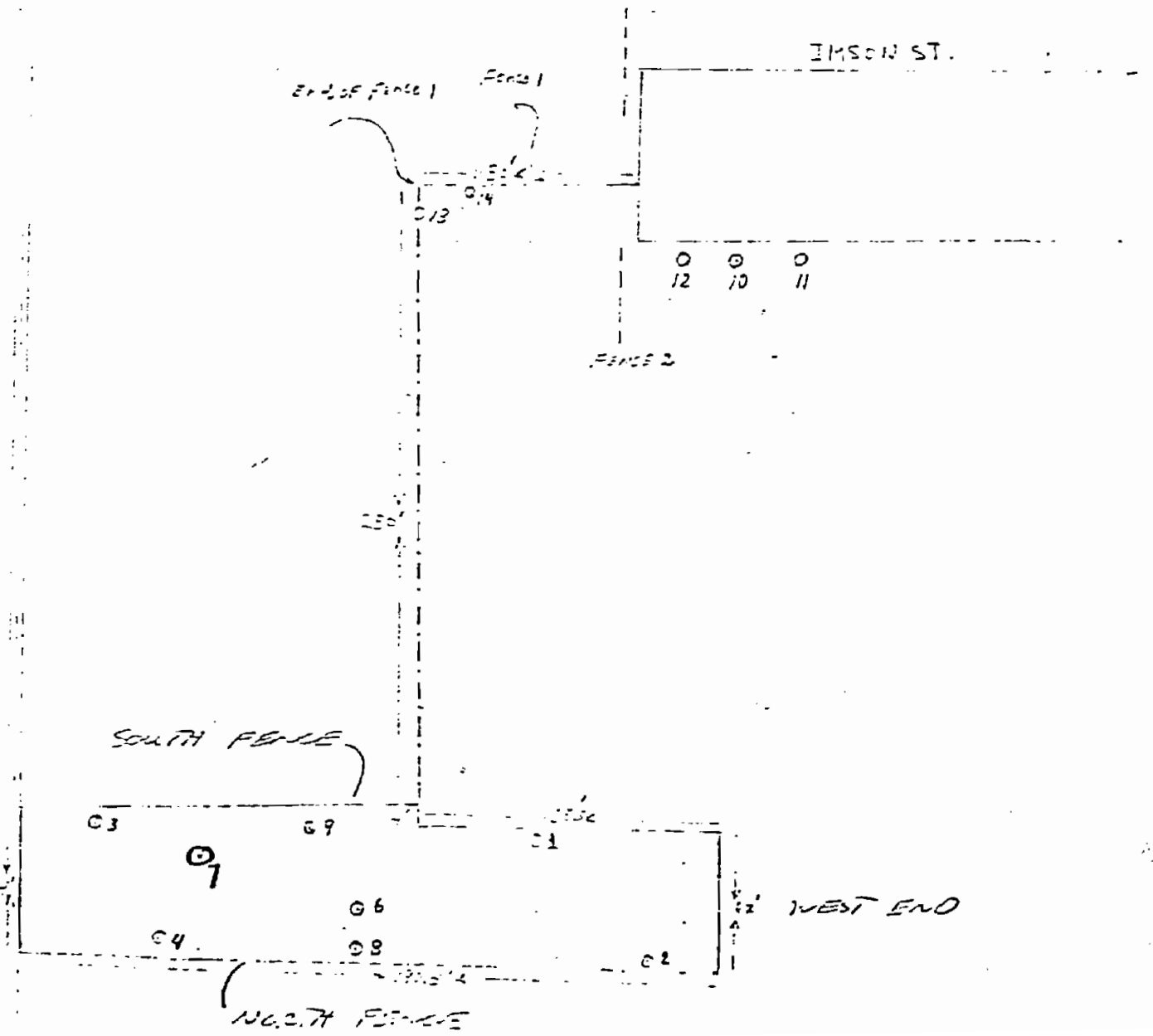
PARAMETER	#1	#2	#3	#4	#6	#7	#8	#9	#10	#11	#12	#13	#14
Copper (ppm)	78	200	200	220	92	1/	[illegible]	220	5,800	4,200	[illegible]	2,200	900
Iron (ppm)	30,000	40,000	60,000	84,000	50,000	1/	180,000	96,000	160,000	52,000	[illegible]	190,000	[illegible],000
Lead (ppm)	2,000	340	900	1,200	380	1/	530	1,500	2,200	860	[illegible]	[illegible]	[illegible]
Trichloroethene (ppm) 2/	0.4										[illegible]		
1,3-Dichlorobenzene (ppm) 2/													
1,4-Dichlorobenzene (ppm) 2/				0.5								[illegible]	[illegible]
Chloroform (ppm) 2/											[illegible]	[illegible]	0.03
PCB 1254 (ppm) 2/	N.D. 3/	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	[illegible]	[illegible]	[illegible]	[illegible]
Benzene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.9	[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]
Ethyl Benzene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	32	<[illegible]	[illegible]	<[illegible]	[illegible]
Para Xylene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.3	<0.05	26	0.5	[illegible]	[illegible]	[illegible]
Meta Xylene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	[illegible]	<[illegible]	[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]
Ortho Xylene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	2	<[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Toluene (ppm) 4/	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	[illegible]	<[illegible]	[illegible]	[illegible]	[illegible]

1/ Data Not Reported
2/ Data Received by Telephone Conversation 8/10/83
3/ PCB Detection Limit 0.05 ppm
4/ Data Received by Telephone Conversation 8/23/83

HOUDAILLE - MANZEL DIVISION SITE

LOCATION OF SAMPLING POINTS

DRAWING NOT TO SCALE



Upon completion of the sampling program, the samples were taken to the DEC Regional Office at 600 Delaware Avenue, Buffalo, New York and placed in a refrigerator in the office laboratory. The refrigerator was taped shut and the laboratory was locked. The samples were subsequently shipped to the New York State Department of Health Laboratory in Albany, New York on May 23, 1983, by Federal Express.

Following is a site by site record of the sampling program:

Site 1 - Sample taken at 3 to 3½ feet
Clay layer at 3½ feet
No response on H-Nu

Site 5 - Drill rig set up on this site but could not collect sample due to limited height of bridge deck above location. Site abandoned.

Site 2 - Sample taken at 2 to 2½ feet
Clay layer at 2½ feet
No response on H-Nu

Site 8 - Sample taken at 2 to 2½ feet
Clay at 2½ feet
Sample had noticable solvent odor.
H-Nu reading with probe in hole about 10 to 12 ppm above background

Site 4 - Sample taken at 2 to 2½ feet
Clay at 2½ feet
Sample had slight odor of solvent
No response on H-Nu

Site 3 - Sample taken at 3 to 3½ feet
Clay at 3½ feet
Sample had slight oily odor.
No response on H-Nu

Site 7 - Sample taken at 3½ to 4 feet
Clay at 4½ feet
H-Nu reading with probe in hole about 0.6 ppm above background

Site 9 - Sample taken at 2 to 2½ feet
Clay at 3 feet

Site 6 - Sample taken at 3½ to 4 feet
Clay at 4 feet
Sample had solvent odor
H-Nu reading with probe in hole about 12½ to 14 ppm above background

Site 10 - Sample taken at 6 inches to 1 foot
Sample had strong odor of oils and solvents as did the general area where sample was collected. Area was oil stained.
H-Nu reading with probe in hole about 30 to 40 ppm above background.

Site 11 - Sample taken at 0 to 8 inches
Sample had strong odor of oils and solvents. Area was oil stained.

Site 12 - Sample taken at 0 to 8 inches
Sample had odor of oils and solvents
Hard black material encountered in bottom of hole.

Site 14 - Sample taken at 0 to 8 inches
Hard blue and red material encountered in hole
No response on H-Nu

Site 13 - Sample taken at 0 to 10 inches
No response on H-Nu
Glass, metal and fabric encountered in hole.

HOUDAILLE - MANZEL DIVISION SITE
LOCATION OF SAMPLING POINTS

Location Number	Distance From The Western End	Distance From The Northern Fence	Distance From The Southern Fence
1	67'		2.5'
2	19'	2'	
3	175'		3'
4	166'	3'	
6	100'	23'	
7	155.5'		16'
8	200'	4'	
9	114.5'		5'
	From Center of Imson St.		Distance From Fence 2
10	20'		31'
11	20'		43'
12	20'		19'
	Distance From End of Fence 1		Distance From Fence 1
13	2.5'		
14	25'		0'

HOUDAILLE - MANZEL DIVISION SITE

Measurement of Volatile Organics
In Samples Collected on May 20, 1983

Site Number	Background Reading On E-Nu, ppm	Reading on E-Nu With Probe in Bottle, ppm
1	.2	.5
2	0	.2
3	0	0
4	.2	.4
6	.4	7
7	0	.2
8	0	15-16
9	0	0
10	0	25-30
11	.4	14
12	.4	6

CONCLUSION

KW 2 tubes will change to a brown indicating [illegible] benzines, or mixtures with aromatics. Pulevy aromatic hydrocarbons will produce red discolorations, non-quantitative. Howevr, humidity will also produce red discoloration "rings" according to operating instructions. A KW 2 was later tested over a steaming water pot in the office and showed a red color after eight pumps. The red color obtained at S-10 after 24 pumps may reflect the increased humidity of later afternoon on that day.

As the results of all Drager tests except for S-9 for HC can be considered negative, it can be concluded that the air in the holes at the time of testing contained less than:

1) 3 mg HC/liter (trace indicated)

2) 5 ppm carbon tetrachloride

3) 5 ppm toluene

Tests were conducted for the worse conditions.

Ambient concentrations above the ground surface would be much lower. Benzene Drager tubes with a low end sensitivity of 0.5 ppm are available, as are chloroform at 2 ppm. Both these compounds were identified in previous samples. The sensitivity of these tubes are well below the TLV levels.

LOUIS J. BREHM
Princ. Env. Quality Technician

b

LJB:dp

cc: A. T. Voell
C. O'Connor

SAMPLE SITE S-1 A hole was dug [illegible] barely detectable solvent/chemical odor in the soil. A Drager tube was pumped 24 times, drawing from the bottom of the hole, a few inches from the surface. Negative Results .

- No color change observed -

(It was decided not to draw from an inverted funnel over the hole as the site was windless and the tube could be pointed closer to the ground without it).

Carbon tetrachloride and tuluene tubes were tested, both with negative results.

A KW 2 tube which was pumped 24 times with Negative Results on sample site S-3 showed a red color starting on the indicator layer after 10 pumps and progressing to 1/4 of the layer at 24 pumps.

Another KW 2 tube wa pumped 24 times with no color change.

SAMPLE SITE S-3 A hole was dug along fence line on other side of parking area behind building. The KW 2 tube that indicated negative on site S-1 after 24 pumps also showed a red color change similar to that which occurred on S-1 after testing at this site. A KW 2 tube after 24 pumps indicated Negative Results .

- No color change observed -

- Odor of top soil only noted at this site, soil color brown.

SAMPLE SITE S-9 A hole was dug under the bridge, noting that the recently applied cover appeared to be largely clay and stones to a depth of 8 to 12 inches. The underlying soil appeared black and had an odor of solvent/chemicals. A KW 2 tube was tested and showed a slight brown discoloration after 24 pumps. Tests for carbon tetra chloride and toluene were negative, no color change. The brown color change for KW 2 indicates HC under 3 mg/L.

SAMPLE SITE S-10 A hole was dug in a non-vegetated area approximately 10' x 6' adjacent to the snow fence. A KW 2 tube showed a red trace after 24 pumps, carbon tetrachloride and tolune were negative, no color change.

- soil was brown/black and had a slight solvent/chemical odor.

RESULTS OF ANALYSIS FOR
SOIL SAMPLES FOR HEAVY METALS
(in mg/kg dry weight)

Field Number	001	002	003	004	005	006	007	008	009	010	011	012	013	014
EPA Laboratory Number 83-	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562
Antimony	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	1.00	1.37	<0.6	<0.6	<0.6	0.65	0.90
Arsenic	9.46	11.4	10.2	6.02	6.17	10.0	14.4	15.4	20.6	5.83	10.9	8.26	9.44	23.0
Beryllium	0.712	0.702	0.863	0.877	0.602	0.712	<0.60	0.958	<0.60	<0.60	0.937	1.21	1.08	0.740
Cadmium	<1	1.4	<1	<1	<1	<1	2.45	1.29	96.5	<1	10.2	5.63	5.57	0.85
Chromium	30.6	21.1	37.1	35.8	19.8	30.1	16.5	64.6	266	12.4	306	97.9	129	141
Copper	30.2	67.2	36.1	30.4	18.0	33.5	46.7	199	1530	31.7	(2500)	323	<259	393
Lead	27.4	130	30.5	28.7	26.1	100	124	807	(2760)	81.3	(2990)	(1000)	1310	(1120)
Mercury	0.565	0.344	<0.25	<0.25	<0.25	0.345	<0.25	<0.25	>2.5	0.360	<0.25	<0.25	<0.25	0.643
Nickel	31.2	23.0	31.7	29.2	12.8	21.2	19.0	33.7	273	6.48	702	51.0	60.7	110
Selenium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Silver	<0.06	0.177	<0.06	<0.06	<0.06	<0.06	<0.06	0.163	0.791	<0.06	0.534	0.346	0.559	0.482
Thallium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.35
Zinc	122	148	86.9	78.9	39.6	99.1	90.1	897	1400	55.2	1970	1600	2320	1680
Aroclor 1254	<0.87	<0.27	(0.80)	<0.04	<0.04	<0.04	<0.04	(2.0)	4.77	<0.23	11.5	5.77	1.26	1.44
Aroclor 1260	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aroclor 1016	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aroclor 1221	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aroclor 1232	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aroclor 1242	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aroclor 1248	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04

Figure 1-2 SITE PLAN OF EA'S SAMPLING LOCATIONS

.--Analyses of substrate samples from Mansel Division,

Buffalo, New York.

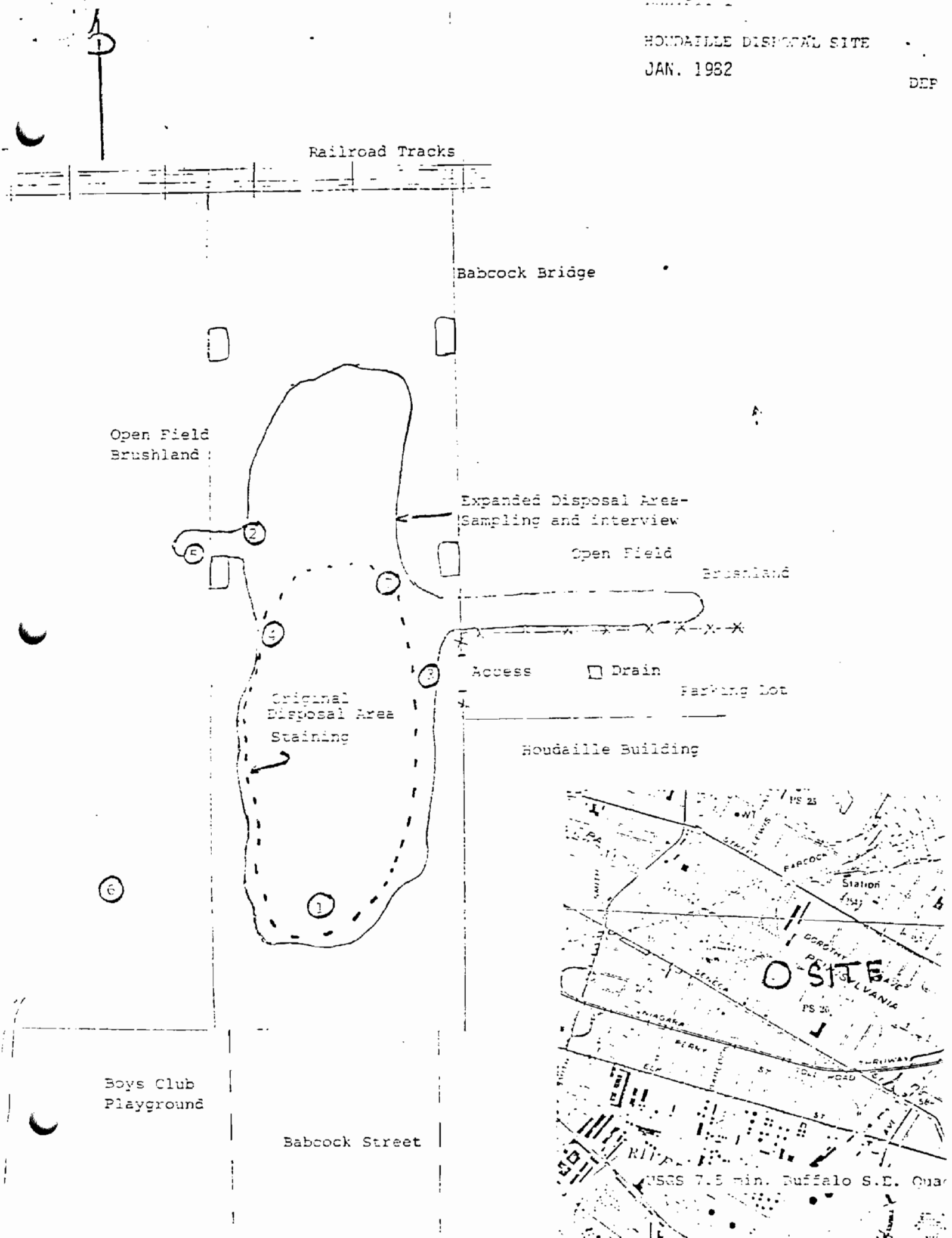
	Sample Number			
	1	2	3	4
Date collected	080682	080682	080682	080682
Depth (ft)	4.0	3.0	3.0	2.5
Sample Type[1]	S	S	S	S
pH				
Conductivity (uMHOS)				
Temperature (°C)				
Inorganic Constituents[2]				
Antimony				
Arsenic				
Cadmium				
Chromium				
Copper	2000	<1000	190000	<1100
Iron	620000	67000	1600000	1850000
Lead	<10000	<10000	10000	11000
Mercury				
Nickel	<10000	<10000	<10000	<13000
Selenium				
Zinc				
Fluoride				
Sulfide				
Cyanide				

[illegible]

[1] Sample type: ground water, surface water, and substrate.
[2] Concentrations: ug/L for water and ug/Kg for substrate. Blank spaces indicate that no analyses were performed; dashes indicate that [illegible] and compounds were not found.
[3] Cu(D): analysis done by direct aspiration because of high iron concentration.
[4] Identity determined by library match; no standard available. Concentration results are semiquantitative and are based on the response factor of the internal standard.
[5] Identity based on less than library match; identification seemed reasonable. As for footnote 4, concentration results are semiquantitative.
[6] Volatile found in GC/ms extractions. Concentration results probably less than actual.
[7] Low surrogate recoveries.
[8] Estimated value less than detection limit.
(Mead): Analyses performed by Mead CompuChem, Inc., Research Triangle Park NC

HOUDAILLE DISPOSAL SITE
JAN. 1982

DEP



Soil Samples Taken by DEP on June 16, August 19 and 27, 1981

	Benzene	Toluene	Xylene	Chloroform	PCB's
Sample 1	L.T. 7.0	L.T. 7.0	L.T. 7.0	311.4	.31
Sample 2	L.T. 7.0	L.T. 7.0	L.T. 7.0	265.9	38.1
Sample 3	L.T. 7.0	L.T. 7.0	L.T. 7.0	265.9	2.7
Sample 4	L.T. 7.0	L.T. 7.0	L.T. 7.0	291.9	1.43
Sample 5	L.T. 7.0	L.T. 7.0	L.T. 7.0	253.0	.33
Sample 6	L.T. 7.0	L.T. 7.0	L.T. 7.0	425.5	1.9
Sample 7	.56	L.T. 7	L.T. 7	N.D.	-

All results in parts per million (PPM)

Sample 7 was the original sample taken on June 16, 1981.
Analysis for PCB was not requested.

Sample 1 through 5 were taken on August 19, 1981.
Analysis for Aromatics and PCB's requested.

Sample # 6 was taken August 27, 1981.
Its original intent was a check (background sample).
Analysis for Aromatics and PCB's requested.

EXHIBIT 2

SAMPLING RESULTS

DEP JAN. 1982

6.0 Adequacy of Available Data

In completing the Hazards Ranking Score, the Houdaille - Manzel Division disposal site was found to have a migration potential score (S_m) equal to 2.8. However, due to data inadequacies, a certain degree of subjectivity is involved, therefore a range for S_m has been developed. The S_m range was found to be 2.0 to 30.0 for this site. Data inadequacies are as follows:

- Lack of analytical data regarding groundwater quality.
- Insufficient data regarding the geological and hydrogeological characteristics of the site area.
- Air sampling of data was collected by methods which are not considered a quantitive but rather indicators of air borne contaminants.

7.0 PROPOSED PHASE II WORK PLAN

7.1 Objectives - As per the inadequacies of the data base that were itemized in the preceding section, a work plan has been developed which, to the extent practical, will provide the information required to address the following:

- o Potential environmental effects of the landfill.
- o The extent and magnitude of contamination, based on site specific hydrogeologic conditions.
- o The data inputs necessary to effectuate the development and recommendation of cost effective remedial actions.

Detailed descriptions of the elements of this work plan are herein provided.

7.2 Scope of Work - The primary purpose of this work element is to fill the data gaps identified in the preliminary assessment so as to permit a complete site characterization/ranking (HRS) and engineering evaluation of remedial alternatives. The preliminary field investigation includes the following items:

- o Air Monitoring
- o Geophysical Exploration
- o Subsurface Investigation

- o Monitoring Well Installation
- o Sampling and Analysis

Throughout the investigative effort, field activities will be performed in strict accordance with established safety protocol, presented in Recra Research, Inc.'s Operation Manual - Field and Analytical Services (previously submitted to NYSDEC by Recra as part of a prequalifying submission).

7.2.1 Air Monitoring - Prior to implementation of the various field investigative techniques associated with this element, an initial site screening will be conducted using a Century Organic Vapor Analyzer (OVA) and/or an HNU photoionizer. Based upon described site characteristics, Recra team personnel engaged in this activity will enter the site equipped with level 3 respiratory protection. A grid pattern will be established at the site and readings taken and recorded at each grid point. This survey will determine the initial level of protection necessary for workers' safety. In addition, upgradient and downgradient air monitoring stations will be established at both sites.

If the results are indicative of air quality problems, additional testing will be initiated at specified distances away from the site.

During actual field investigative work, ambient and worker air

monitoring will be conducted periodically using appropriate instrumentation, such as the photoionizer and/or OVA. When deemed necessary from actual readings, the level of respiratory protection will be adjusted to meet existing conditions. All disposable equipment necessary for worker safety will be placed daily into covered on-site drums provided by Recra, and removed from the site and disposed of either upon reaching full capacity or upon completion of all field work.

7.2.2 Geophysical Exploration - After initial assessment of the ambient air quality at the site, a geophysical program will be performed, if possible, to determine the limits of the disposal area. It will also aid in determining the possibility and extent of groundwater contamination. The geophysical method proposed is the VLF-EM Terrain Conductivity survey. This method is considered sufficient to define the bedrock surface and any possible contaminant plume on the site. However, due to the location of the site and potential limitations of the geophysical method proposed due to interference from outside sources (i.e. electrical, road noise, etc.) this method may not be suitable under these conditions.

The VLF-EM Terrain Conductivity survey will be performed by recording continuous conductivity measurements on an EM-31 terrain conductivity meter equipped with a strip chart recorder. These measurements will be taken on a grid pattern

established using a tape and level, in the area of the disposal site.

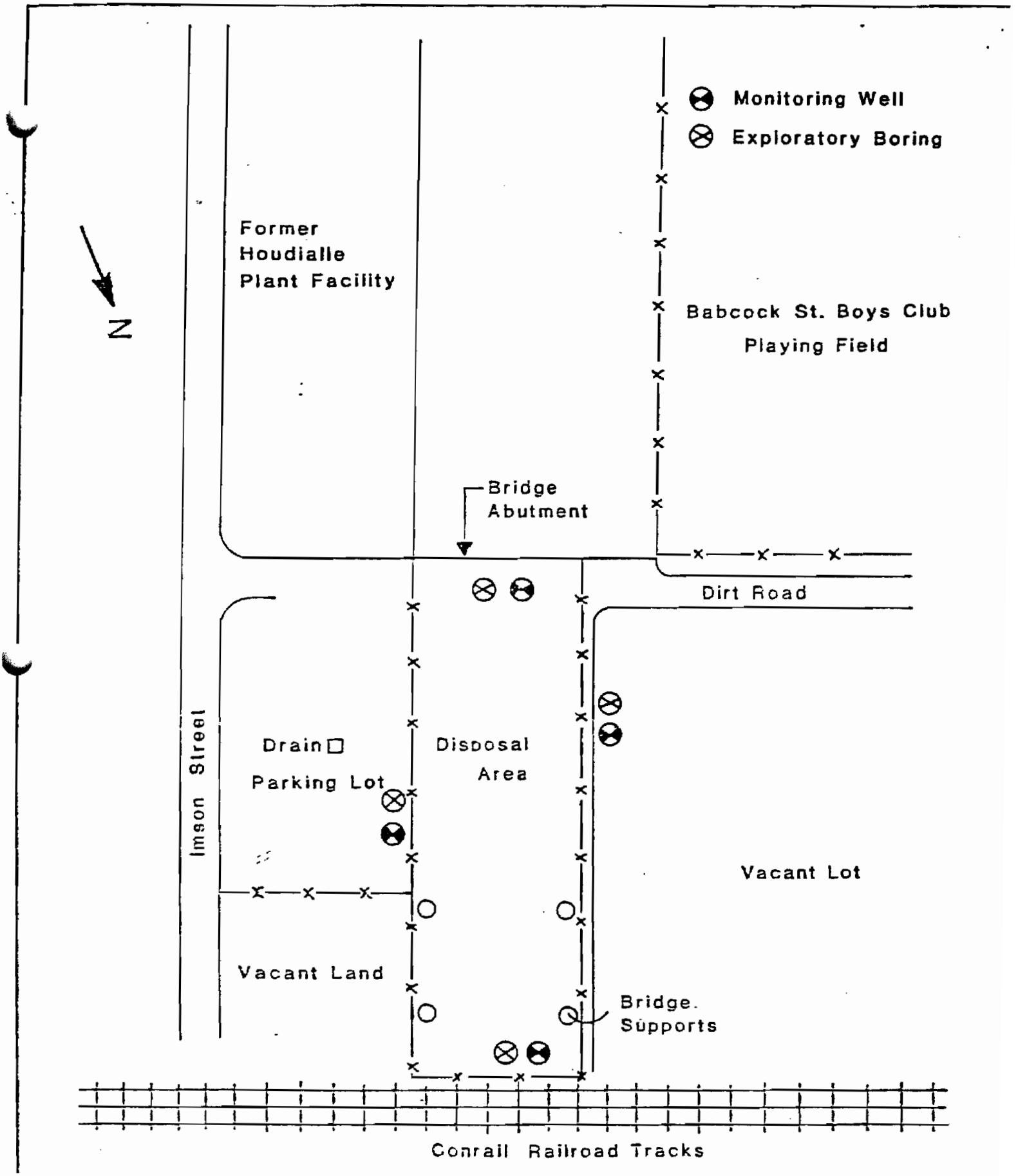
7.2.3 Subsurface Investigation - In order to facilitate additional information concerning possible groundwater contamination, preliminary findings indicate a need for subsurface investigations. This investigation will include:

A. Four (4) exploratory borings around the periphery of the disposal area. These samples will be extended to bedrock and sampled continuously to determine the vertical extent of contaminant migration and site specific geologic conditions. Upon completion, the borings will be backfilled with bentonite and capped with cement. This procedure will inhibit further vertical migration of contaminants within the boring.

B. Four (4) monitoring wells around the periphery of the disposal area. The first of these wells will be located upgradient of groundwater flow which is assumed to be on the northeast side of the site. The remaining three (3) wells will be installed at selected points on the other three (3) sides of the site which are assumed to be downgradient of the initial well.

Well sampling locations are illustrated in Figure 3.

All exploratory borings will be drilled with a truck, trailer,



Not to Scale	Sampling & Well Locations Houdialle Industries Manzel Division	Figure 3

and/or all-terrain-mounted auger rig using hollow stem augers. During construction of the borings, split spoon samples will be continuously obtained in all four (4) borings. Shelby tube samples will also be obtained during these borings to determine undisturbed soil permeability.

The acquired samples will be visually identified in the field following the procedure set forth in ASTM-D-2488, noted appropriately on the boring logs with the sample number and recorded standard penetration test results (ASTM-D-1586), and placed in pre-cleaned, teflon-lined, screw-cap glass jars for return to Recra Research, Inc.'s Tonawanda, New York laboratory.

In order to avoid possible cross-contamination during construction of the exploratory borings, the apparent upgradient boring will be completed first; then the downgradient holes will be drilled. Between each boring, the augers will be cleaned with water obtained from a known non-contaminated source. Also, between each split spoon sample, the split spoon will be cleaned with water, acetone and distilled water. All spent water/acetone liquid accumulated during this process will be disposed of in an on-site drum. Prior to leaving the site, the drill rig will be decontaminated using high pressure water.

7.2.4 Monitoring Well Installation - The monitoring wells will be constructed of two-inch I.D. cast iron riser pipe with a five-foot long galvanized, wire-wound-wrapped steel screen. Although the use of PVC casing and screens would be less expensive, the possible presence of solvents suggests the use of galvanized steel screens and risers. The screen will be placed just below the first encountered water table. The annulus between the casing/screen and boring well will be properly sand-packed and sealed (cement/bentonite and cement) to the ground surface and the well provided with a locking cap. A typical monitoring well in unconsolidated material is illustrated in Figure 4.

Upon completion of well construction, all monitoring wells will be properly developed, and all test borings and/or top of well casings will be surveyed to determine their location and elevation above sea level. At that time, variable head tests will be performed on the wells around the site to estimate the in-situ permeability of the screened interval.

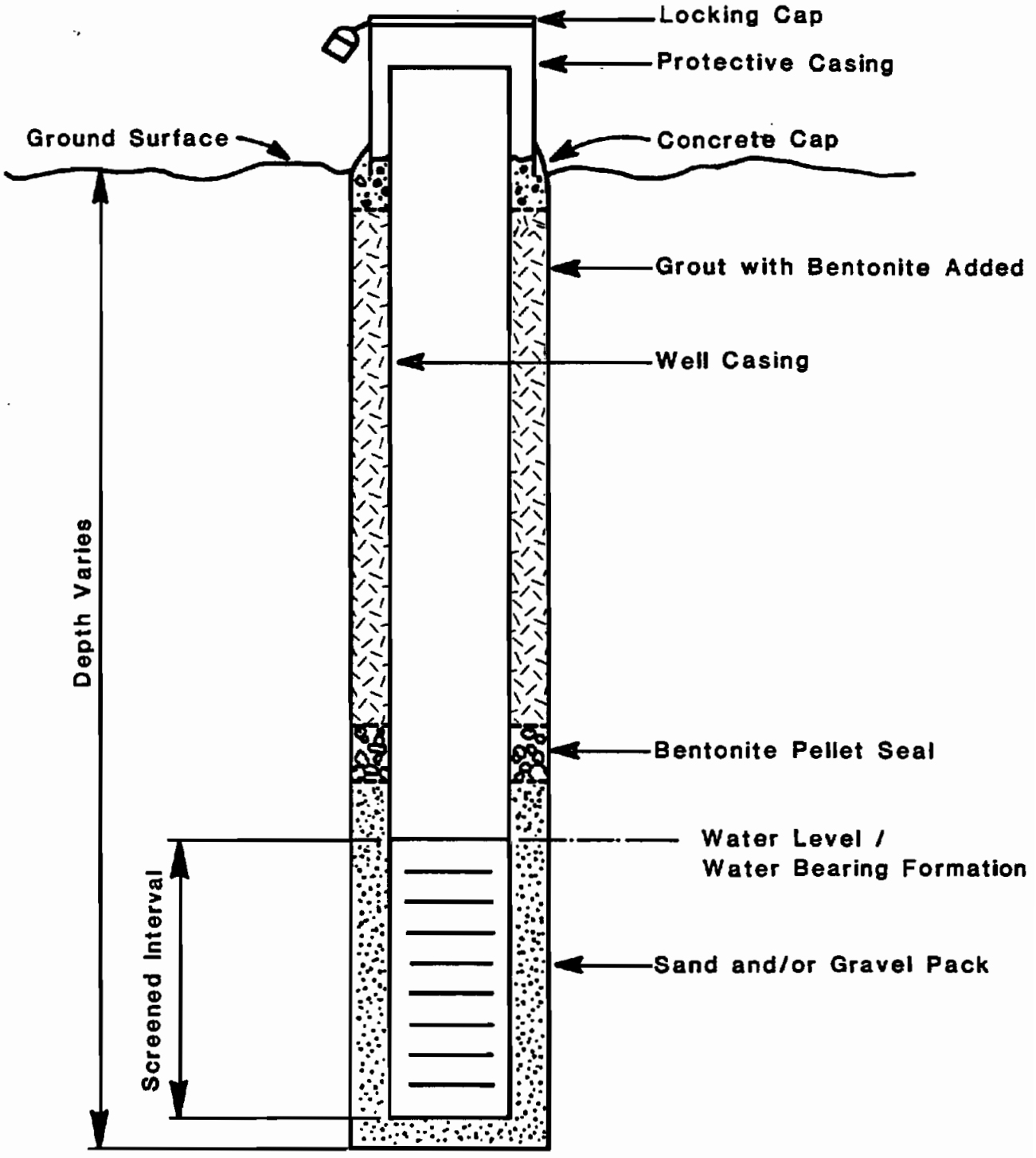
All field activity will be under the direct supervision of a qualified geologist and/or hydrogeologist.

7.2.5 Sampling and Analysis - The following procedures will encompass the sampling of groundwater from the newly installed wells, the analysis of samples obtained from these wells and the analysis of selected soil samples from the exploratory borings. If

Figure 4

MONITORING WELL DETAIL

In Unconsolidated Formation



desired, all samples will be split with the owner of the site. Also, upon completion of the analytical program, the owner will be notified of the results if he so requests. All samples will be analyzed for the parameters listed in Table 1.

7.2.5.1 Groundwater - Following equilibrium of water levels within the installed wells, water elevations will be measured to determine the water table surface. Representative groundwater samples will then be collected after the wells have been fully evacuated or a volume of three (3) times the well contents have been removed.

Evacuation of water from the wells and the acquisition of the samples will be accomplished with an ISCO Model 1580 peristaltic pump, using separate low-density polyethylene tubing for each well and changing the silicon rubber tubing within the ISCO between wells. An exception to this procedure will be employed when obtaining the required volume of sample for volatile organic analysis. This will be accomplished using small volume galvanized steel bailers that have been separately designated for each well.

Upon collection of the samples, field pH, temperature and conductivity measurements will be recorded. The samples will be placed in appropriate precleaned bottles/septa

TABLE 1: ANALYTICAL PARAMETERS

Parameters	Surface Water	Groundwater
pH	.	.
Specific Conductance	.	.
Chloride	.	.
Sulfate	.	.
Total Organic Carbon	.	.
Cadmium	.	.
Chromium (Total)	*	o
Chromium (Hexavalent)	*	o
Copper	*	o
Iron	*	o
Lead	*	o
Mercury	*	o
Nickel	*	o
Silver	*	o
Zinc	*	o
PCB's	*	o
Total Recoverable Phenolics	.	.
Oils & Greases	.	.
Volatile Organic Scan (VOS)	.	.
Halogenated Organic Scan (HOS)	.	.
Volatile Halogenated Organic Scan	.	.
Dry Weight		

o = Soluble Metals * = Total Metals

VOS is a screening procedure to identify the presence or absence of volatile chlorinated organic compounds. Analyses are performed via purge and trap concentration, gas, liquid chromatography and an electrolytic conductivity detector.

HOS is a screening procedure to identify the presence or absence of halogenated organics. Analyses are performed via solvent extraction concentration gas liquid chromatography and an electron capture detector.

vials, labelled, chilled and immediately returned to Recra's Tonawanda, New York laboratory for preservation and analyses of previously listed chemical parameters. If the samples cannot be returned to Recra's laboratory in a timely fashion,field preservation will be performed prior to chilling.

7.2.5.2 Soil - Selected subsurface soil samples will undergo both physical and chemical analyses. The remaining samples will be archived by Recra Research, Inc. for a period of six (6) months after completion of the contract.

The physical analysis will aid in the characterization of the underlying unconsolidated material. The physical parameters of concern during this investigation are grain size distribution (ASTM-D-422), Atterberg limits (ASTM-D-423 and 424) and classification (ASTM-D-248). The number of samples to undergo analysis for the above parameters is dependent on the homogeneity of the subsurface conditions underlying the bottom of the uncontrolled landfill. The results from these tests, in conjunction with Standard Penetration Test results, will aid in the design and evaluation of remedial programs.

Chemical analyses of selected samples will be used to characterize attenuation by on-site soils. A sample from

the unsaturated zone and a sample from the saturated zone will generally be utilized from each boring.

7.2.6 Chemical Analytical Methods - The procedures to be utilized for analyses of water, sediment and soil samples during this investigation are in basic accordance with one or more of the following reference texts:

- Methods for Chemical Analysis of Water and Wastes, United States Environmental Protection Agency,
- NIOSH Manual of Analytical Methods, 2nd Edition, United States Department of Health, Education and Welfare,
- Standard Methods for the Examination of Water and Wastewater, 14th Edition, APHA, AWWA, WPCF.

7.2.7 Quality Assurance Program - An overall Quality Assurance Program is essential for the production of high-quality analytical data. Such a program requires precise control of laboratory activities. For the Quality Assurance Program in effect at the laboratories of Recra Research, Inc., the reader is referred to a document previously submitted by Recra Research, Inc. to NYSDEC, entitled "Operations Manual - Field and Analytical Services".

7.2.8 Engineering Evaluation Report/HRS Score - The purpose of this evaluation report is to compile all existing and newly-developed information concerning the sites, and utilize this information to:

- Evaluate feasible remedial alternatives at the sites and prepare budget-level cost estimates for these alternatives.

- Based upon this evaluation, recommend the most cost-effective and environmentally sound course of remedial action.

- Prepare a Hazard Ranking System (HRS) score for the sites.

It is presently anticipated that the output from this Evaluation Report will consist of a single bound report, subdivided into at least the following sections:

- HRS Score - Utilizing USEPA's formal method of presentation (Federal Register/Vol. 47, No. 137/Friday, July 16, 1982, the following completed work sheets will be included in this opening section: HRS Cover Sheet; Groundwater Route Work Sheet; Surface Water Route Work Sheet; Air Route Work Sheet; Fire and Explosion Work Sheet; and Direct Contact Work Sheet.

- Background

- Summary of Project Activities

- Identification and Evaluation of Remedial Alternatives

- Recommendations

- Appendix - Complete Site Data Base

7.3 Estimated Costs

The estimated cost per individual element of the preceding scope of work are listed as follows:

o	Preliminary Field Investigation	$12,118
o	Sampling and Analysis	10,316
o	Engineering Evaluation	4,624
	Total Cost	$27,058

APPENDIX A

REFERENCES

1.) Summary report prepared by Erie County Department of Environment and Planning; January 1982.

2.) Department of Environment and Planning Division of Environmental Control, Memorandum,. a chronological summary of events regarding county involvement in the Houdaille Site; November 15, 1982.

3.) Analytical results from samples collected by the DEP; June 16, August 19 and 27, 1981.

4.) Minutes of Meeting conducted by Councilman Bakos; January 5, 1983.

5.) Telephone conversation with NYSDEC regarding floodplain information; August 1, 1983.

6.) Geology of Erie County, New York, by Buehler and Tesmer. Buffalo Society of Natural Sciences, Volume 21, Number 3, Buffalo; 1963.

7.) New York State Water Resources Commission. Erie-Niagara Basin groundwater resources ENB-3; 1968.

8.) U.S. Department of Agriculture Soil Conservation Services. General soils map and interpretation for Erie County, New York; May 1979.

9.) Interagency Task force on Hazardous Wastes. Draft report; March 1979.

10.) Site Inspection of Houdaille - Manzel Division conducted by Recra Research, Inc., Patricia M. Perry; September 6, 1983.

11.) Mitre Inc., Hazard Ranking System Users Manual; June 10, 1982.

APPENDIX B

HAZARDOUS WASTE DISPOSAL SITE REPORT

REVISED

Code:

Site Code: 915037

Name of Site: Houdaille - Manzel Division

Region: 9

County: Erie

Town/City: Buffalo (C)

Street Address: 315 Babcock Street, Buffalo, New York

Status of Site:

- Inactive site
- Size: 1750 square feet
- Property owned by the City of Buffalo
- Site was used without the consent of the city officials. Waste materials were disposed of directly on the ground surface resulting in contaminated soils with PCB, heavy metals and chlorinated and non-chlorinated hydrocarbons.
- Site is located within a heavily populated urban/industrial area of Buffalo.
- Private residences located within 0.10 miles of contaminated area.
- Area is supplied with municipal water.
- Soils of the area are listed as urban land connotating that the nature soils have been altered by industrial development.
- Soil borings have indicated that the area is underlain by a silty clay

matrix.

Type of Site:

Hazardous Waste Disposed:

Type and Quantity of Hazardous Wastes:

- Cutting oils
- Cooling compounds
- 3850 gallons

Present Owner: City of Buffalo

Time Period Site was used: 1968 to 1977

Types of Samples: Soil

Remedial Action: The disposal area has been capped and fenced in

Status of Legal Action: Litigation pending

Permits Issued: None

Assessment of Environmental Problems:

- To date, the playing field of the Boy's Club has been investigated and found not to be contaminated.

- The area is generally thought to be environmental insensitive.

Assessment of Health Problems: None known

Person completing this form: Patricia M. Perry, Recra Research, Inc.