915017

DONNER-HANNA COKE JOINT VENTURE

NEW YORK STATE SUPERFUND
PHASE I SUMMARY REPORT

915017

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

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1.0 Executive Summary

Donner-Hanna Coke Joint Venture is located at the intersection of Abby and Mystic Streets in the southern section of Buffalo, Erie County, New York. The general area can be characterized as urban/industrial with private residences occupying property adjacent to the site toward the east. Accessibility to the plant property is limited by chain link fences.

The company produces metallurgical coke by the process of pyrolyzing raw coal. By-products from this process have traditionally been recycled to the raw material for processing and recovery as the saleable product. Process waters have been lagooned for deposition of solids with the resulting sediment, consisting mainly of earthen material derived from Lake Erie water, being dredged and subsequently landspread. The supernatant is discharged to the Buffalo River.

The grounds in the southern part of the plant property were the scene of extensive fill activities over the years. This area was at one time a large pond and wetland, and is now used as a coke storage area. Fill material is reported to consist mainly of demolition debris, slag and dredgings from the settling lagoons.

EP Toxicity testing of the fill area has not detected contamination in the landspread sludges; however, groundwater and in-situ soils beneath the fill have not been analyzed.

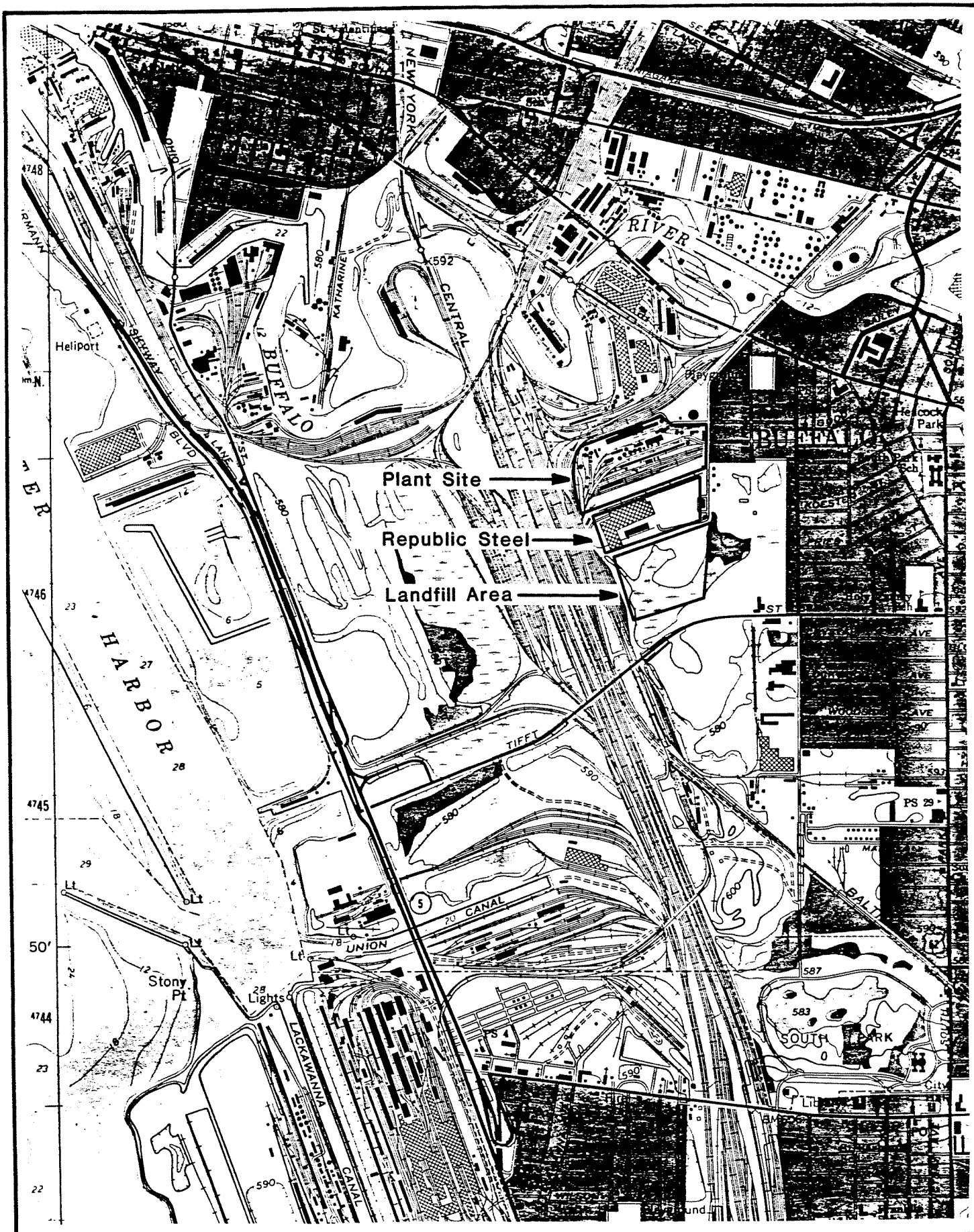
Due to high hydrogen sulfide content, the entire area is serviced by municipal water drawn from Lake Erie. Groundwater wells in the area are used for industrial purposes only.

2.0 Site Description

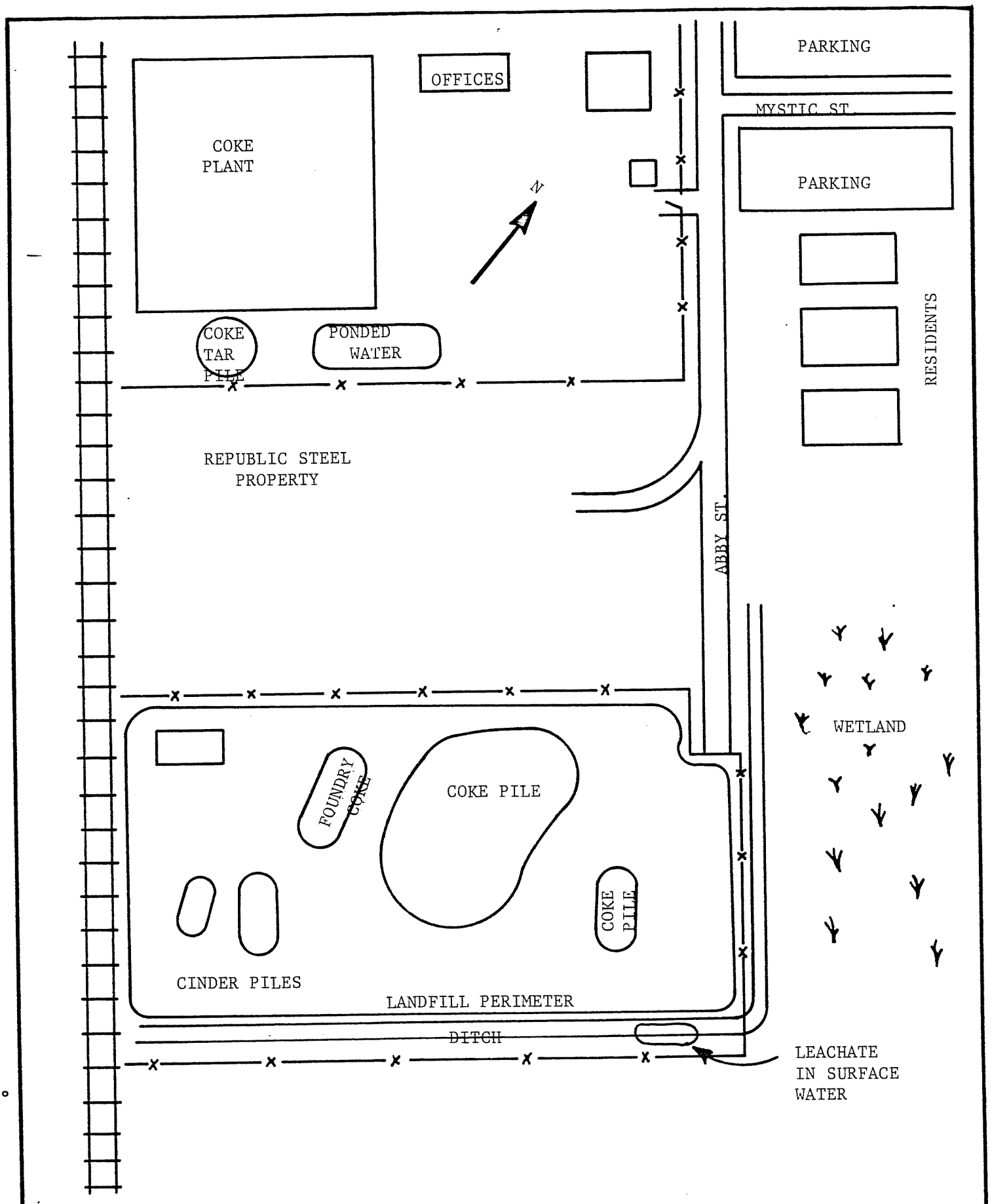
Donner-Hanna Coke Joint Venture occupies approximately fifty (50) acres of land in an urban/industrial area of southern Buffalo. The Donner-Hanna property is separated into two (2) approximately equal sized parcels of land by Republic Steel property (Figure 1). The plant facility is located north and a coke storage area is located south of Republic Steel (Figure 2). Production at the plant has been discontinued for the time being due to the depressed state of the steel industry. Access to both sections of the plant is controlled by chain link fences.

The coke storage area was at one time a wetland which has been filled, and used for coke storage. This area is bounded on the south by property owned by Hood Welding, the east by wetlands and the west by railroad tracks which separate Donner-Hanna property from Tifft Farm Nature Preserve. The entire site is now covered with fragments of coke and is almost completely unvegetated except for occasional short grasses. Large coke piles occupy the central portion of the site. Some railroad car demolition debris is scattered in the northwest part of this area.

Topography of the site area is flat with the exception of the coke piles. Drainage ditches are east and south of the fill area perimeter. Surface runoff flows toward the Buffalo River, approximately 0.5 miles to the north. A black and orange oily looking material was observed in the drainage ditch toward the southeast corner of the site; however, the origin of this material is unknown.



USGS Topographic Map 7.5' Bflo. SW Quad. 1965	Vicinity Map Donner-Hanna Coke	Figure 1



NOT TO SCALE	SITE MAP DONNER HANNA COKE	FIGURE 2

3.0 PRELIMINARY HAZARD RANKING SYSTEM SCORE

Facility name: Donner Hanna Coke

Location: Abby and Mystic Streets

EPA Region: 2

Person(s) in charge of the facility: Edwin J. Hartman (Superintendant)

Box A South Park Station

Buffalo, NY 14220

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.)

Wetland area in the southern section of the plant property has been filled for storage of coke. Fill material is reportedly sediments from process waters deposited between 1951 and 1978. EP toxicity testing determined the fill material to be within standards. No other testing has been conducted in the area.

Scores: S_M = .3 (S_{gw} = .2 S_{sw} = .5 S_a = 0)

S_{FE} = 2.6

S_{DC} = 3.3

RANGE 0.3 to 15

HRS COVER SHEET

Ground 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	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	2	6	
Net Precipitation	0 1 (2) 3	1	2	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			8	15	
[3] Containment	0 [1] 2 3	1	1	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 [12] 15 18	1	12	18	
Hazardous Waste Quantity	0 1 [2] 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			14	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]			336	57,330	
[7] Divide line [6] by 57,330 and multiply by 100			S_{gw} = .5		

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	1	3	4.3
[4] Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 [12] 15 18	1	12	18	
Hazardous Waste Quantity	0 1 [2] 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			14	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	1	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			1	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]			126	64,350	
[7] Divide line [6] by 64,350 and multiply by 100		S_{sw} =	.2		

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	0	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})	.2	0.04
Surface Water Route Score (S_{sw})	.5	0.25
Air Route Score (S_a)	0.0	0.0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		.29
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		.54
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		.31

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	1	3	7.1
[2] Waste Characteristics					7.2
Direct Evidence	(0) 3	1	0	3	
Ignitability	(0) 1 2 3	1	0	3	
Reactivity	(0) 1 2 3	1	0	3	
Incompatibility	(0) 1 2 3	1	0	3	
Hazardous Waste Quantity	0 1 [2] 3 4 5 6 7 8	1	2	8	
Total Waste Characteristics Score			2	20	
[3] Targets					7.3
Distance to Nearest Population	0 1 2 3 (4) 5	1	4	5	
Distance to Nearest Building	0 1 (2) 3	1	2	3	
Distance to Sensitive Environment	(0) 1 2 3	1	0	3	
Land Use	0 1 2 (3)	1	3	3	
Population Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
Buildings Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
Total Targets Score			19	24	
[4] Multiply [1] x [2] x [3]			38	1,440	
[5] Divide line [4] by 1,440 and multiply by 100			S_{FE} = 2.6		

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	2	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	16	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			16	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]			7200	21,600	
[7] Divide line [6] by 21,600 and multiply by 100			S_{DC} = 3.3		

FIGURE 12
DIRECT CONTACT WORK SHEET

3.1 Documentation Records for Hazard 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: Donner-Hanna Coke

LOCATION: Abby and Mystic Streets, Buffalo, NY

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

Rationale for attributing the contaminants to the facility:

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

CAYUGA LIMESTONE - DARK DENSE TEXTURED LIMESTONE WITH INTERBEDDED SHALE. OVERALL THICKNESS ≈110 FT. SOLUTION OF JOINTS AND BEDDING PLANES CREATES OPENING FOR STORAGE AND TRANSMISSION OF LARGE VOLUMES OF WATER.

CANANDAIGUA SHALE - GRAY SHALE WITH INTERBEDDED LIMESTONE AND DOLOMITE. DISSOLVING OF GYPSUM BEDS LEAVES OPENINGS FOR STORAGE OF LARGE VOLUMES OF WATER. MOST PRODUCTIVE AQUIFER IN THE AREA. HIGH H_2S CONTENT LIMITS USE, ≈ 400 FT THICK (REF 3 & 5)

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

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

0 FEET

Net Precipitation

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

36 INCHES (REF 6)

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

27 INCHES (REF 6)

Net precipitation (subtract the above figures):

9 INCHES

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

SILTY CLAY MATRIX. REF 2

Permeability associated with soil type:

$< 10^{-5} \geq 10^{-7}$ cm/sec (Ref 6)

Physical State

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

SLUDGE (Ref 8)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NO CONTAINMENT EMPLOYED

Method with highest score:

NONE 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

NYSDEC HAS DETERMINED THAT LANDSPREAD SLUDGES PASSED THE EP TOXICITY TEST
NO OTHER SAMPLING HAS BEEN PERFORMED.

Compound with highest score:

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):

Basis of estimating and/or computing waste quantity:

* * *

5. TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:
INDUSTRIAL IS THE ONLY DOCUMENTED USE OF GROUNDWATER. ENTIRE AREA IS SERVICED BY MUNICIPAL WATER DRAWN FROM LAKE ERIE. (REF 3)

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:
INDUSTRIAL WELL IS LOCATED ON THE PLANT PROPERTY. (REF 3)

Distance to above well or building:

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:
ALL RECORDED WELLS ARE USED FOR INDUSTRIAL PURPOSES (REF 3)

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):
NA

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

SURFACE WATER ROUTE

1 OBSERVED RELEASE

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

(1) [illegible]

Rationale for attributing the contaminants to the facility:

—

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

$\frac{\Delta \text{ VERT}}{\Delta \text{ HORIZ}} = \frac{0 \text{ FT}}{2000 \text{ FT}} = 0\%$ (REF 4)

Name/description of nearest downslope surface water:

BUFFALO RIVER — CLASS D WATER RESOURCE (REF 7). DISCHARGES INTO LAKE ERIE NEAR THE SOURCE OF THE NIAGARA RIVER. (REF 4)

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

$\frac{\Delta \text{ VERT}}{\Delta \text{ HORIZ}} = \frac{0 \text{ FT}}{2000 \text{ FT}} = 0\%$ (REF 4)

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

2.1 INCHES

Distance to Nearest Downslope Surface Water

2000 FT (REF 4)

Physical State of Waste

SLUDGE

* * *

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

NA

Compound with highest score:

NA

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):

Basis of estimating and/or computing waste quantity:

* * *

5 TARGETS

Surface Water Use

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

DRINKING
COMMERCIAL
RECREATIONAL

LAKE ERIE AND THE NIA aka RIVER ARE RATED AS CLASS A SPECIAL (INTERNATIONAL BOUNDARY) WATER RESOURCES. BEST USES INCLUDE SOURCE OF DRINKING WATER SUPPLY AND USE FOR CULINARY FOOD PROCESSING. (REF 7)

Is there tidal influence?

No

Distance to a Sensitive Environment

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

NA

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

TIFFT FARM NATURE PRESERVE IS LOCATED 3900 FT WEST OF THE PLANT. (REF 4)

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

NA

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:

POPULATION APPROXIMATELY 700,000

BUFFALO PUBLIC WATER INTAKE IS LOCATED IN LAKE ERIE NEAR THE SOURCE OF THE NIAGARA RIVER APPROXIMATELY 5 MILES FROM THE SITE. (REF 4)

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

NA

Total population served:

APPROXIMATELY 700,000

Name/description of nearest of above water bodies:

LAKE ERIE - CLASS A SPECIAL (INTERNATIONAL BOUNDARY) WATER RESOURCE.

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

INTAKES ARE APPROXIMATELY 5 MILES FROM THE SITE. (REF 4)

AIR ROUTE

1 OBSERVED RELEASE

NA

Contaminants detected:

NA

Date and location of detection of contaminants

Methods used to detect the contaminants:

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 det ned:

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

Distance to a Sensitive Environment

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

Distance to 5-acre (minimum) fresh-water wetland, if 1 mi r 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?

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
DONNER HANNA COKE	ABBY & MYSTIC STREETS

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
BUFFALO	NY	14220	ERIE		

09 COORDINATES LATITUDE	LONGITUDE
42 51 15.2	078 53 32.2

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
REPUBLIC STEEL	

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

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 ___/___/___ (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: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☐ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
_____ BEGINNING YEAR _____ ENDING YEAR ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

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 RESEARCH, INC.	(716) 838-6200

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
ANDRE J. LAPRES	—	RECRA	(716) 838-6200	___/___/___ (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
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 _____

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			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
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)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
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

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

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

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

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 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

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

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
(Spills/runoff/standing liquids/leaking drums)
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

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 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				
DOUDER - HANNA COKE	ABBY & MYSTIC STREETS				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
BUFFALO	NY	14220	ERIE		

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
42° 51' 15.0 LATITUDE / 078° 50' 30.0 LONGITUDE	☐ 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
7 28 83 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	_____ BEGINNING YEAR _____ 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 _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
ANDRE J. LAPRES	GEOLOGIST	RECRA RESEARCH INC	(716) 838-6200
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
PATRICIA PERRY	GEOLOGIST	"	( ) "
DIANE M. WERDEIWSKI	GEOLOGIST	"	( ) "
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
ED HARTMAN	SUPERINTENDENT	ABBY & MYSTICS STREETS	( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10:00 AM	OVERCAST, WARM

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
RICHARD L CROUCH	RECRA RESEARCH INC	(716) 838-6200

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
ANDRE J. LAPRES	Same			9 2 83 (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 _____

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			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
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)

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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
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
POSSIBLE PRESENCE OF CONTAMINANTS, POTENTIAL FOR LEACHING INTO GROUND WATER

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
POSSIBLE PRESENCE OF CONTAMINANTS, POTENTIAL FOR LEACHING INTO SURFACE WATERS

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

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

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

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
POSSIBLE PRESENCE OF CONTAMINANTS, POTENTIAL FOR LEACHING INTO SOILS

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

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

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

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

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

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	NY0003310			
☐ 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	UNKNOWN	
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ 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

_____ (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 EMPLOYED

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☐ NO

02 COMMENTS

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
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
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 _____ (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
_____ (ft)	_____	_____ (ft)	_____ (gpd)	☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

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
_____	☐	_____ (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
A. >10,000 NO. OF PERSONS	B. >10,000 NO. OF PERSONS	C. >10,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

1.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

_____

04 DISTANCE TO NEAREST OFF-SITE BUILDING

_____ (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)

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	
_____ (ft)	_____ (ft)	_____	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	_____ %		_____ %

09 FLOOD POTENTIAL	10
SITE IS IN _____ YEAR FLOODPLAIN	☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)		12 DISTANCE TO CRITICAL HABITAT (of endangered species)
ESTUARINE	OTHER	_____ (mi)
A. _____ (mi)	B. _____ (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	AG LAND	
A. _____ (mi)	B. 1.25 (mi)	C. _____ (mi)	D. _____ (mi)	

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

THE SITE IS LOCATED IN A TOPOGRAPHICALLY FLAT REGION

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

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)*

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)

Field	Owner 1	Owner 2	Owner 3	Owner 4
01 NAME	50% REPUBLIC STEEL	50% NATIONAL STEEL		
02 D+B NUMBER				
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	Box A South PARK STATION	20 STANWIX ST		
04 SIC CODE				
05 CITY	BUFFALO	PITTSBURGH		
06 STATE	NY	PA		
07 ZIP CODE	14220	15222		

PARENT COMPANY *(If applicable)*

Field	Parent 1	Parent 2	Parent 3	Parent 4
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)*

Field	Owner 1	Owner 2	Owner 3
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)*

Field	Owner 1	Owner 2	Owner 3
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, sample analysis, reports)*

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

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

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

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

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
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	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	05 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 _____ — 03 AGENCY _____
04 DESCRIPTION

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, sample analysis, 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 Site History

Donner-Hanna Coke Corporation has been a producer of metallurgical coke since its establishment in 1919. The company is owned equally by National Steel and Republic Steel. Apparently, after the acquisition of Donner-Hanna by National and Republic, the name of the company was changed to Donner-Hanna Coke Joint Venture. Production at the plant has recently been discontinued due to the depressed state of the steel industry.

The basic process employed at the plant is pyrolizing raw coal to drive off the volatile constituents so that the fixed carbon and ash are fused together in the resulting coke. By-products which are recovered from this process include water containing phenol and ammonium chloride, and process wastes containing sodium phenolate, methylene chloride, ammonium sulfate, tars and light oil containing benzene, toluene, xylene and naphthalene (Reference 2). Ammonia still effluent, which is a lime slurry effluent, was apparently generated by an ammonia stripping still. This portion of the production process produced a reported 255 tons per year of toxic sludge.

Disposal practices at the plant have varied over the years. The company reports that they have consistently used the practice of pyrolizing process wastes into saleable products by blending the waste material with raw coal prior to the coking process. Available information indicates the company has never contracted with haulers for off-premises disposal of process wastes (Reference 16).

For four (4) years prior to 1952, the company reportedly disposed of ammonia still wastes through a 145 foot deep well into the "black water" bedrock stratum. Since that time these process wastewaters, containing ammonium chloride and small amounts of phenol and cyanide, have been treated before discharge to the Buffalo River. Initial treatment of these waters involved neutralization with lime prior to distillation to remove ammonia. Between 1975 and 1977, lime was replaced with another alkaline material which reduced the quantities of sludge produced from 255 tons per year to 42 tons per year (Reference 13). Treated wastewater was passed through a settling basin and two ponds. The settled material reportedly consisted of silt from Lake Erie waters, calcium chloride and probably some phenol and cyanide. The settled material was then dredged and disposed of in a filled wetland area on-site and, once dry, levelled (Reference 11). Supernatant was discharged through one outfall to the Buffalo River at a rate of approximately nine (9) million gallons/day. The company claims that there were fewer solids in this discharge than were present in the incoming waters (Reference 18). However, sediment in this discharge did result in deposition and restricted flow, requiring the outfall to be dredged annually with subsequent landspreading of the dredged materials (Reference 16).

The grounds in the southern section of plant property were the scene of extensive fill activities over the years. This area was originally a large pond and wetland which was filled for use as a coke storage site. First evidence of fill activities was noted in 1951 aerial photographs. Additional activity at varying levels was noted in 1958, 1960, 1972 and 1975 photographs. The fill material is reported to consist mainly of construction and demolition

debris, slag, and the aforementioned earthen sediments which were derived from process waters. There has been no evidence of hazardous waste disposal in this fill area (Reference 8).

The company employs the service of no waste haulers other than Downing Container Service, which provides and exchanges containers for garbage such as paper, wood, etc. These materials had been incinerated at the plant prior to the prohibiting of open burning (Reference 17).

In November 1978, the Erie County Department of Environment and Planning requested Donner-Hanna Coke to submit a Part 360 permit application. The company, however, does not agree that they are operating a solid waste disposal facility (Reference 15). Review of subsequent correspondence between these parties and the New York State Department of Environmental Conservation (NYSDEC) leaves questions as to what was finally decided and whether a permit application was eventually submitted.

Inspections of the facility have been conducted periodically since 1980. A December 4, 1980 inspection conducted by U.S. EPA found no N/SPDES violations at the site (Reference 19). A June 9, 1981 inspection by the Erie County Department of Environment and Planning noted that there was no leachate nor signs of past leachate at the site and subsequently no visual basis for sampling (Reference 20). Sampling by NYSDEC in 1982 determined that the waste stream met stream standards and the landspread sludges passed the EP Toxicity Test (Reference 21). In early August 1982, a test boring and sampling program was conducted at the site by the U.S. Geological Survey and the NYSDEC. This

testing was apparently conducted in relation to a study on the impact waste disposal sites might have on the Niagara River. Four (4) shallow test borings were completed in the fill area for this study with one (1) boring located in each corner of the property. Approximate locations of these borings are illustrated in Figure 2. Samples from these borings were to be analyzed for PNA, Fe and Cn. Results of this analysis are not yet available (Reference 4).

5.0 Site Data

5.1 Site Area Surface Features

5.1.1 Topography and Drainage - The topography in the area of Donner-Hanna Coke can generally be characterized as flat. Surface features have been formed by glacial lakes ancestral to the present Lake Erie and urban/industrial development. Local slope, as determined from the U.S.G.S. Buffalo, S.E. topographic quadrangle, is close to 0% (Reference 4). The Buffalo River, a Class "D" water resource, is the nearest surface water located approximately 2,000 feet north of the site (Reference 7). Surface runoff is directed toward the River via drainage ditches. The Buffalo River discharges into Lake Erie approximately four (4) miles downstream.

5.1.2 Environmental Setting - Donner-Hanna Coke is located on the western edge of densely populated South Buffalo. Approximately 2,000 feet west of the site is the Tifft Farm Nature Preserve. This area contains a protected wetland as well as an abundance of wildlife. There are no critical habitats of endangered species in the vicinity of the site.

5.2 Site Hydrogeology

5.2.1 Geology - Bedrock beneath the site is the Marcellus Formation

of the Hamilton Group. In Erie County, this formation is represented by the Oatka Creek Shale Member. In the immediate site area Oatka Creek Shale is encountered fifty (50) to sixty (60) feet below the ground surface. This unit is characterized as a dense black fissile shale with a petroliferous odor and some interbedded grey shale. Overall thickness of the Oatka Creek Shale is thirty (30) to fifty-five (55) feet. Regional dip of the bedrock is to the south at approximately 0.5° (Reference 5).

5.2.2 Soil - The unconsolidated material overlying bedrock in the site area is a thin mantle of glacial till composed of non-sorted rock material in a silty clay matrix (Reference 2). This material is overlain by interbedded clay, silt and fine sand sediments deposited in glacial lakes ancestral to the present Lake Erie (Reference 5). Permeabilities of these materials range from approximately 10^{-5} to 10^{-7} cm/sec (Reference 6). Test borings completed nearby penetrated layers of silty clay to refusal at a total boring depth of 62.5 feet. Surficial soils consist of fill and disturbed or altered original soils resulting from urban development (Reference 9).

5.2.3 Groundwater - Groundwater wells are not used in the area around Donner-Hanna Coke, with the exception of industrial withdrawal wells. Well depths average approximately 130 feet and draw from the Onandaga Limestone and Camillus Shale aquifers. Yield

of wells in these units range from 30 to 300 gpm; however, high hydrogen sulfide content limits the use of this groundwater. Groundwater flow is assumed to be in a northerly direction toward the Buffalo River. The seasonal high groundwater table is reported to be approximately three (3) feet below ground surface. This water table fluctuates with the influence of the water level in adjacent surface waters.

5.3 Previous Sampling and Analysis

5.3.1 Groundwater Quality Data - There is no available groundwater quality data for the site.

5.3.2 Surface Water Quality Data - There is no available surface water quality data for the site.

5.3.3 Air Quality Data - There is no available air quality data for the site.

5.3.4 Other Analytical Data - Sampling by NYSDEC in 1982 determined that the landspread sludges passed the EP Toxicity Test. Results are presented on the following pages.

Characterization of Samples for

EP Toxicity and EP Metals

Report Prepared For

DONNER-HANNA COKE

by

ADVANCED ENVIRONMENTAL SYSTEMS, INC.

Prepared by Robert C. Wojcik

Robert C. Wojcik
Operations Manager

November 7, 1980

LABORATORY REPORT

SCOPE OF WORK

Analysis for characteristics of "EP Toxicity" on two (2) sludge samples and analysis of three (3) liquid samples for EP metals.

METHODOLOGY

Extraction of the sludge samples was performed in accordance with Federal Register, Vol. 45, No. 98, May 19, 1980; Section 261.30, Appendix II.

Analysis of the two extracts and three liquid samples for arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium were performed in accordance with "Methods for the Analysis of Water and Wastes," Environmental Monitoring and Support Laboratory, Office of Research and Development, U.S. EPA, Cincinnati, Ohio; EPA 600/4-79-020, March 1979.

Analysis for endrin, lindane, methoxychlor, toxaphene, 2,4-D, and 2,4,5-TP Silvex was performed in accordance with "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol, and Pesticides in Water and Wastewater," September, 1978, U.S. EPA, Monitoring and Support Laboratory, Cincinnati, Ohio.

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

RESULTS

Table 1. Characteristics of EP Toxicity on Two Sludge Samples

Expressed in micrograms per liter or parts per billion

Contaminant	Sample 4TW5 (concrete ww cinders)	Sample 5RP (railroad ends)	Maximum Allowable
Arsenic	25.	30.	5,000.
Barium	<500.	<500.	100,000.
Cadmium	<30.	<30.	1,000.
Chromium	<100.	<100.	5,000.
Lead	<400.	<400.	5,000.
Mercury	<0.5	<0.5	200.
Selenium	<10.	<10.	1,000.
Silver	<100.	<100.	5,000.
Endrin	ND[1]	ND	20.
Lindane	ND	ND	400.
Methoxychlor	0.5	0.3	10,000.
Toxaphene	ND	ND	500.
2,4-D	0.2	1.7	10,000.
2,4,5-TP Silvex	ND	ND	1,000.

According to the extraction process [illegible]
The material is not toxic

[1] ND - Not Detected

6.0 Adequacy of Available Data

In compiling the Hazard Ranking Score, Donner-Hanna Coke was found to have a score for migration potential (S_m) equal to 0.3. However, due to data inadequacies, a certain degree of subjectivity was involved in scoring; and therefore, a range for S_m was developed. For Donner-Hanna Coke this range was found to be 0.3 to 15.0. Data inadequacies are as follows:

- No analytical results from most recent soil sampling period.
- Lack of data regarding groundwater quality.
- Lack of accurate records regarding specific on-site geology.
- Lack of information regarding hydraulic characteristics of the unconsolidated overburden material.
- No surface water quality data.
- Lack of records on exact nature and quantity of fill material.
- No air quality data.

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:

- Potential environmental effects of the landfill.
- The extent and magnitude of contamination, based on site specific hydrogeologic conditions.
- 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 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, the depth of the fill material and any possible contaminant plume on the site.

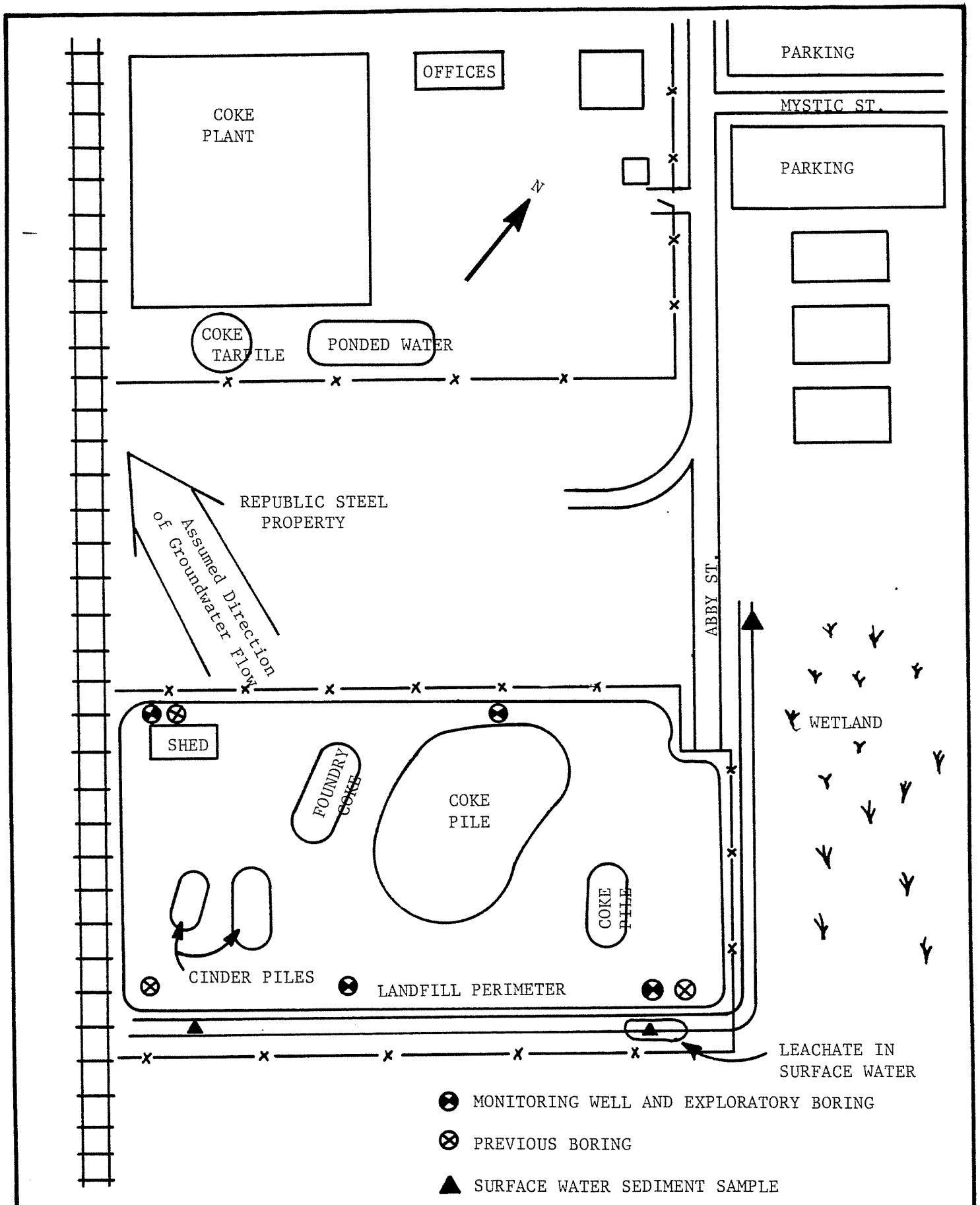
The VLF-EM Terrain Conductivity survey will be performed by recording continuous conductivity measurements on an EM-31

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. One (1) exploratory boring through the fill to determine the depth of fill material and the nature of the base in-situ soil. Permeability tests will be performed on the base soil at this time. This boring will be located in the southeast section of the site and will be extended to bedrock to determine the specific on-site geology.

B. Three (3) exploratory borings around the periphery of the site as shown in Figure 3. The first boring will be located in the southern section of the fill area which is assumed to be upgradient of groundwater flow. The remaining two (2) borings will be located north of the fill which is assumed to be downgradient of groundwater flow. These borings will be extended to twenty feet below the base of the fill materials.



NOT TO SCALE	SAMPLING AND WELL LOCATIONS DONNER HANNA COKE	FIGURE 3

All borings will be completed as groundwater monitoring wells and will be constructed within the first encountered water bearing zone.

C. Three (3) surface water/sediment samples from the drainage ditch on the southern and eastern side of the site.

Well and sampling locations are illustrated in Figure 3.

All exploratory borings will be drilled with a truck, trailer, and/or all-terrain-mounted auger rig using hollow stem augers. During construction of the borings, split spoon samples will be continuously obtained in the one (1) boring extended to bedrock. In the other borings, split spoon samples will be obtained at five (5) foot intervals and/or when noticeable changes in lithology or drilling characteristics occur. If the unconsolidated material is found to be extremely heterogeneous, all borings will be continuously sampled. Also, if a confining layer is encountered, Shelby tube samples will be obtained to determine its undisturbed 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 borings 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. Upon completion of the boring to bedrock, the boring will be backfilled with cement bentonite grout to the base of the first encountered water level. This procedure will prevent the vertical migration of possible contaminated groundwater from the first encountered water-bearing zone to bedrock. 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 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, the analysis of selected soil samples from the exploratory borings, as well as the sampling and analysis of surficial waters and sediments. If 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.

TABLE 1: ANALYTICAL PARAMETERS

Parameters	Surface Water	Groundwater
pH	.	.
Specific Conductance	.	.
Chloride	.	.
Sulfate	.	.
Cyanide (Total)	.	.
Total Organic Carbon	.	.
Cadmium	.	.
Chromium (Total)	*	o
Chromium (Hexavalent)	*	o
Copper	*	o
Iron	*	o
Lead	*	o
Mercury	*	o
Nickel	*	o
Silver	*	o
Zinc	*	o
Total Recoverable Phenolics	.	.
Oils & Greases	.	.
Toluene	.	.
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.

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 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 due to the distance between the site and

Recra's laboratory, 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.

7.2.5.3 Surface Water - The sampling of surface water will entail

collecting water and sediments from the ditches located south and east of the fill area. Three (3) surface water and three (3) sediment samples will be taken. General locations of sampling are illustrated in Figure 3. The water samples will be obtained using a pond sampler with separate sampling bottles designated for each sampling location. Sediment samples will be taken using a two (2) foot gravity type sampler. All sediment samples will be placed in precleaned, teflon-lined, screw capped glass jars, labelled, chilled and returned to Recra for analysis. The same procedures as determined for groundwater will be followed after acquisition of the surface water samples. All samples will be analyzed for the previously listed parameters.

7.2.6 Chemical Analytical Methods - The procedures to be utilized for analysis of water, stream 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 costs per individual element of the preceding scope of work are listed as follows:

o	Preliminary Field Investigation	$ 10,409
o	Sampling and Analysis	9,316
o	Engineering Evaluation	4,030
	Total	$ 23,755

APPENDIX A

DATA SOURCES AND REFERENCES

1.) NYSDEC Hazardous Waste Disposal Sites Report. W. G. Hartenstein, April 15, 1980.

2.) USEPA Overview of Environmental Pollution in the Niagara Frontier, New York. March 1982.

3.) N.Y.S. Water Resources Commission. Erie-Niagara Basin Ground-Water Resources. ENB-3. 1968.

4.) U.S. Geologic Survey, Topographic Map, Buffalo S.E. quadrangle, 1965.

5.) Geology of Erie County, New York, Edward J. Buehler and Irving H. Tesmer, Buffalo Society of Natural Sciences Bulletin, Vol. 21, No. 3, Buffalo, 1963.

6.) Mitre, Inc. Hazard Ranking System; July 16, 1982.

7.) Codes, Rules and Regulations of the State of New York, Vol. 6(C), Sec. 837.4, pg. 1627, 1966.

8.) Hazardous Waste Inactive Site Survey Phase I - Report, County of Erie Department of Environment and Planning.

9.) U.S. Department of Agriculture Soil Conservation Service, General Soil Map and Interpretations, Erie County, New York. May 1979.

10.) NYSDEC Industrial Waste Survey, November 3, 1976.

11.) Memorandum, County of Erie Department of Environment and Planning, Division of Environmental Control, from Ronald D. Koczaja, to Donald Tamol, August 25, 1978.

12.) Donner-Hanna Coke - phone conversations and file information; October 13, 1978 to November 9, 1978.

13.) Information provided to Inspector Ronald D. Koczaja on August 25, 1978. Observation at Donner-Hanna Coke Corp.

14.) Inactive Industrial Waste Disposal or Storage Site Questionnaire, August 9, 1978.

15.) Letter to Donner-Hanna Mr. K. Mahar from Department of Environment and Planning, Ronald D. Koczaja.

16.) Letter from Donner-Hanna Coke Corporation, Kevin D. Mahar, to Interagency Task Force on Hazardous Wastes, Mr. Peter J. Millock, November 6, 1978.

17.) Letter from Donner-Hanna Coke Corporation, Kevin D. Mahar to Mr. David A. Dooley, Interagency Task Force on Hazardous Wastes, December 6, 1978.

18.) Letter from Donner-Hanna Coke Corporation, Kevin D. Mahar, to Mr. John McMahon, P.E. NYSDEC, Region 9, January 9, 1979.

19.) Letter from US EPA Region II, Jonathan Josephs, Chemical Engineer, to Donner-Hanna, Mr. Kevin D. Mahar, January 12, 1981.

20.) Memorandum, County of Erie Department of Environment and Planning, Division of Environmental Control, from Don Campbell, P.E., to Laurence G. Clark, P.E.; February 18, 1982.

21.) NYSDEC Memorandum to file from D. McKenzie, February 18, 1982.

22.) NYSDEC letter from Peter J. Buechi, P.E. to Donner-Hanna Coke Corporation, Mr. Kevin Mahar, May 14, 1982.

23.) NYSDEC letter from Ahmad Tayyebi, Assistant Sanitary Engineer, to Donner-Hanna Coke, Mr. A. D. Shattuck, July 26, 1982.

24.) NYSDEC Interagency Task Force on Hazardous Wastes, Draft Report on Hazardous Waste Disposal in Erie and Niagara Counties, New York; March, 1979.

APPENDIX B

HAZARDOUS WASTE DISPOSAL SITE REPORT

REVISED

Code: A

Site Code: 915017

Name of Site: Donner-Hanna Coke Joint Venture

Region: 9

County: Erie

Town/City: Buffalo

Street Address: Abby and Mystic Streets

Status of Site:

- Inactive fill area (former wetland). Primarily received demolition debris, slag and earthen sediment from process wastewaters. Wastewater may contain phenol and cyanide. Site drains northward through ditches to the Buffalo River. Site now used for coke storage.
- Urban/industrial highly populated area.
- Nearest dwelling approximately 1,000 feet.
- Nearest body of water is Buffalo River, approxiamtely 0.5 miles north.
- Nearest water supply: Entire area is serviced by municipal water drawn from Lake Erie.
- High groundwater table within 10 feet of surface.
- Soil type: fill.

Estimated Size: 20 acres.

Type of Site: Fill covered with coke fragments.

Hazardous Waste Disposed? Suspected

Type and Quantity of Hazardous Waste: Unknown

Present Owner: 50% National Steel; 50% Republic Steel

Time Period Site Was Used: 1951 to 1975 (possibly to 1983)

Type of Samples: Soils

Remedial Action: None

Status of Legal Action: None

Permits Issued: N/SPDES #NY0003310

Assessment of Environmental Problems: None known

Person Completing this Form: Andre J. LaPres, Recra Research, Inc.

Date: September 6, 1983.