915003b

Entered

ALLIED CHEMICAL CORPORATION

NEW YORK STATE SUPERFUND
PHASE I SUMMARY REPORT

915003-b

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

ALLIED CHEMICAL CORPORATION

NEW YORK STATE SUPERFUND

PHASE I SUMMARY REPORT

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1.0 Executive Summary

The Allied Chemical Corporation plant, located on River Road in Tonawanda, New York, was operational from 1920 to 1982 (Figure 1). During this period the majority of waste material generated on-site was disposed of at various off-site disposal or reclamation facilities. However, two (2) areas on the plant property were used as disposal sites. This report pertains to the area coded 915003-b by the Interagency Task Force. The disposal site, located near Plant Building No. 6, is approximately thirty (30) feet in diameter and 6 to 8 feet in depth. From 1955 to 1958, the site received scrap polyethylene, chlorinated polyethylene and spent catalyst (magnesium chromate and dichromate). These wastes were generated by a small on-site research and development laboratory.

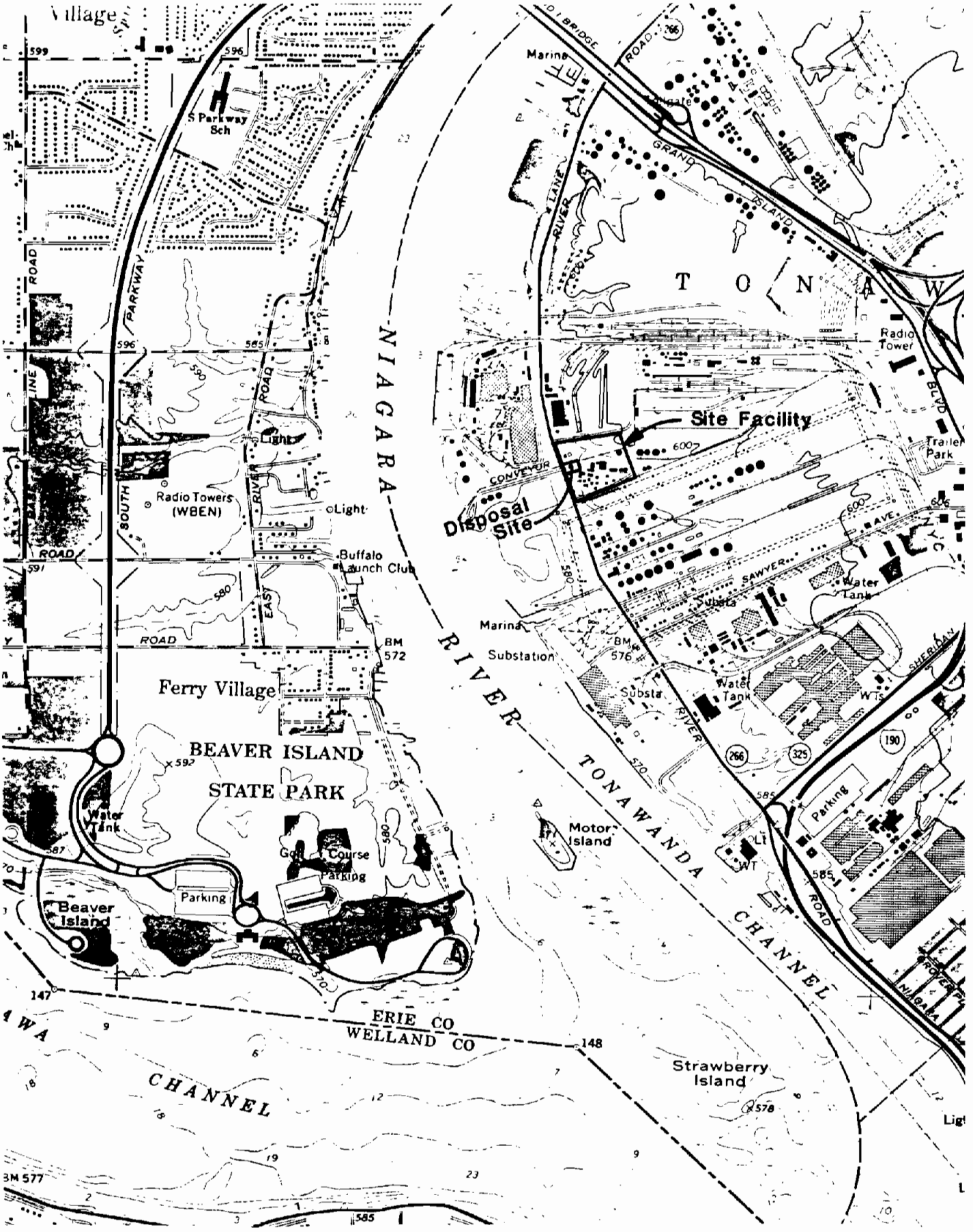
Analytical results for sampling programs conducted by the U.S. Geological Survey and Allied Chemical are not available. However, a report regarding the analytical testing for chromium performed by Allied Chemical indicated that no detectable amount of chromium was found.

The site is located approximately 0.5 miles from the Niagara River and 1.0 miles from a New York State Protected Wetland BW-6.

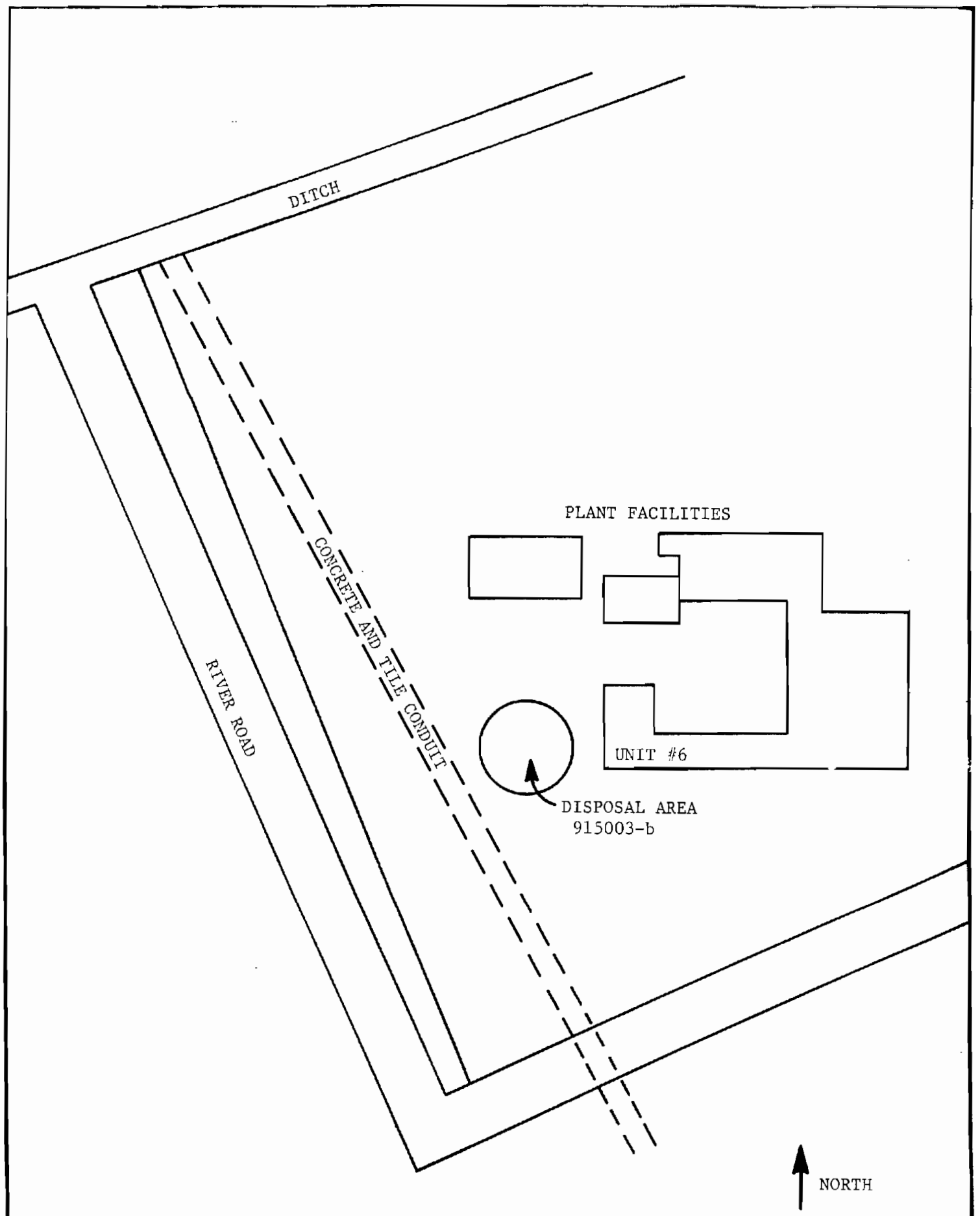
2.0 Site Description

The disposal area 915003-b is situated on the plant property adjacent to Unit No. 6 (Figure 2). The disposal area boundaries, which are identified by surveying stakes, indicates the area is approximately 30 feet in diameter. The depth of the waste disposal cell is estimated to be 6 to 8 feet (Reference 9). The general terrain of the plant facility is sparsely vegetated with low grasses and weeds. The actual disposal area, which was capped in 1958 with clean excavation fill, is barren. The area topography is flat and gently slopes toward the Niagara River, which is located 0.5 miles to the west.

The chemical plant is completely surrounded by a six (6) foot chain link fence with access monitored by an on-site guard.



USGS Topographic Map Buffalo NW Quad. 1965	Vicinity Map Allied Chemical Site 915003b	Figure 1



NOT TO SCALE	SITE MAP ALLIED CHEMICAL	FIGURE 2

3.0 Preliminary Hazardous Ranking Systems Score

Facility name: Allied Chemical Specialty Chemical Div.

Location: 3821 River Rd., Tonawanda, NY

EPA Region: 2

Person(s) in charge of the facility: Mr. Alan T. Roy, Supervisor Environmental Services
Allied Corporation
Fibers & Plastics Company
P.O. Box 831
Hopewell, Va. 23860

Name of Reviewer: Recra Research 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.)

Allied Chemical used an area 30 ft.diameter located on the plant property as a disposal site for a spent catalysts (Magnesium Chromate & Dichromate) and Scrap Polyethylene & Chlorinated Polyethylene. The wastes were generated on-site by a small R & D Laboratory. The site was filled from 1955 to 1958. Estimated quantity 15 cubic yards.

Scores: $S_M = 6.1$ ($S_{gw} = 2.5$ $S_{sw} = 10.3$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 0$

Range = 6.1-15.0

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	[0] 45	1	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	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 (12) 15 (18)	1	18 12	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]			1440	57,330	
[7] Divide line [6] by 57,330 and multiply by 100			$S_{gw} = 2.5$		

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	6	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	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	6	9	
Distance to a Sensitive Environment	0 1 (2) 3	2	4	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			10	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			6600	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 10.3		

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})	2.5	6.3
Surface Water Route Score (S_{sw})	10.3	106.1
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		112.4
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		10.6
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		6.1

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} = O				

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	0	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	4	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			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 0		

FIGURE 12
DIRECT CONTACT WORK SHEET

3.1 Documentation Records for 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: Allied Chemical Specialty Chemical Div.

LOCATION: 3821 River Rd., Tonawanda, NY

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

ANALYTICAL RESULTS PENDING.

Rationale for attributing the contaminants to the facility:

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

CAMILLUS SHALE - DEPTH TO AQUIFER IS FROM 101' TO 375'. (REF. 1)

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

101' TO 375'

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

UNKNOWN

Net Precipitation

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

32"

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

27"

Net precipitation (subtract the above figures):

5"

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

ALLUVIAL DEPOSITS UNDERLAIN BY GLACIAL LAKE SEDIMENTS

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):

SOLIDS (REF 2)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NO METHOD OF CONTAINMENT USED

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

CHROMIUM

Compound with highest score:

CHROMIUM

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):

15 CUBIC YARDS

Basis of estimating and/or computing waste quantity:

REF. 9

* * *

5 TARGETS

Ground Water Use

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

INDUSTRIAL USE

Distance to Nearest Well

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

NEAREST WELL IS LOCATED 2 MILES TO THE SOUTH OF THE SITE. (REF 1-MAP)

Distance to above well or building:

APPROXIMATELY 2 MILES (REF-1-MAP)

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:

WATER SUPPLY FROM WELLS IS NOT USED AS DRINKING.

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):

—

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):

NONE DETECTED (REF. 2)

Rationale for attributing the contaminants to the facility:

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

0% (REF 3)

Name/description of nearest downslope surface water:

NIAGARA RIVER.

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

0% (REF. 3)

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

0.10 MILES

Physical State of Waste

SOLIDS

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NO CONTAINMENT USED

Method with highest score:

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

CHROMIUM

Compound with highest score:

CHROMIUM

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):

15 CUBIC YARDS

Basis of estimating and/or computing waste quantity:

(REF. 9)

* * *

5 TARGETS

Surface Water Use

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

THE NIAGARA RIVER - IS USE AS A SOURCE FOR DRINKING WATER, CULINARY OR FOOD PROCESSING THE NIAG. RIVER IS ALSO AN INTERNATIONAL WATER BOUNDARY (REF 4)

Is there tidal influence?

NO

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:

1.0 MILE, BW-6 REF.

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

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:

THE TONAWANADA WATER INTAKES ARE LOCATED 4.5 STREAM MILES DOWNSTREAM FROM THE SITE. (REF 1-MAP)

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

Total population served:

>10,000

Name/description of nearest of above water bodies:

NIAGARA RIVER - CLASS "A" WATER BODY.

(REF 4)

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

≈ 4.5 STREAM MILES

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

NO ANALYTICAL DATA OF THIS NATURE AVAILABLE

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 ied:

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:

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
ALLIED CHEMICAL SPECIALTY CHEM. DIV.	3821 RIVER RD				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
TONAWANDA	NY	14	ERIE		
09 COORDINATES LATITUDE: 42° 58′ 55″	LONGITUDE: 78° 55′ 35″				

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
ALLIED CHEMICAL			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
			( )
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 ☐ NO DATE 8 / 8,83 (MONTH DAY YEAR)

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
1956 (BEGINNING YEAR) | 1960 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
SUBSTANCES DISPOSED OF ARE: SCRAP POLY ETHYLENE, CHLORINATED POLYETHYLENE & SPENT CATALYSTS (MAGNESIUM CHROMATE & DICHROMATE)

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
RICK CROUCH	REERA RESEARCH, INC	(716) 838-6200

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
PATRICIA M. PERRY	REERA RESEARCH		(716) 838-6200	8 / 8, 83 (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)

- [x] A SOLID
- [ ] B POWDER, FINES
- [ ] C SLUDGE
- [ ] E SLURRY
- [ ] F LIQUID
- [ ] G GAS
- [ ] O OTHER _____ (Specify)

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

TONS UNKNOWN

CUBIC YARDS _____

NO OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

- [x] A TOXIC
- [ ] B CORROSIVE
- [ ] C RADIOACTIVE
- [x] 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
THE SURROUNDING AREAS ARE NOT SERVICED BY GROUNDWATER WELLS FOR DRINKING WATER.

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 (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 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
ALLIED CHEMICAL SPECIALTY CHEM. DIV.	3821 RIVER RD

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
TONAWANDA	NY	14	ERIE		

09 COORDINATES	10 TYPE OF OWNERSHIP (Check one)
42° LATITUDE 58' 55" | 78° LONGITUDE 55' 35"	☑ 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
8, 8, 83 (MONTH DAY YEAR)	☐ ACTIVE ☑ INACTIVE	1956 (BEGINNING YEAR) | 1960 (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) 838-6200
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
JAMES STACHOWSKI	STAFF GEOLOGIST	"	( ) "
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
JAMES HARRIS	MKT'G MANAGER	P.O. B#2332R, MORRISTOWN N.J. 07960	(201) 455-5583
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☑ PERMISSION ☐ WARRANT	4:00 PM	FAIR & SUNNY

IV. INFORMATION AVAILABLE FROM

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

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
PATRICIA M PERRY	RECRA RESEARCH		716-8386200	8, 8, 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 15
- 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

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
A P

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
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				
☐ 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		
☐ 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.

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

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)			02 STATUS			03 DISTANCE TO SITE
	SURFACE	WELL	ENDANGERED	AFFECTED	MONITORED	
COMMUNITY	A. ☐	B. ☐	A. ☐	B. ☐	C. ☐	A. _____ (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 _____		03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (mi)		
04 DEPTH TO GROUNDWATER _____ (ft)	05 DIRECTION OF GROUNDWATER FLOW _____	06 DEPTH TO AQUIFER OF CONCERN _____ (ft)	07 POTENTIAL YIELD OF AQUIFER _____ (gpd)	08 SOLE SOURCE AQUIFER ☐ 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			02 DISTANCE TO NEAREST POPULATION
ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	
A. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS	_____ (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
_____ (in)	_____ (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. _____ (mi)	C. _____ (mi)	D. _____ (mi)	

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

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)

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

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
08 NAME		09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
12 CITY	13 STATE	14 ZIP CODE
08 NAME		09 D+B NUMBER
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
12 CITY	13 STATE	14 ZIP CODE
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
01 NAME		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 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

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

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

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

The Allied Chemical Corporation on River Road in the Town of Tonawanda, New York began operations in 1920. The plant operated as part of the Semet-Solvay Petrochemicals Division until 1961, the Plastics Division until 1975, and most recently the Specialty Chemicals Division. This division manufactured various types of polyethylene products utilizing polymerization and copolymerization processes.

From 1955 to 1958, an area approximately thrity (30) feet in diameter and six (6) to eight (8) feet in depth received waste generated from a small on-site research and development laboratory. The disposal area is located directly in front of Unit 6, which housed the R&D pilot facility (Figure 2). The types of wastes disposed of included scrap polyethylene, chlorinated polyethylene and spent catalysts (magnesium chromate and dichromate) impregnated on potassium aluminum silicate (Reference 2). The quantity of waste material landfilled is estimated to be 15 cubic yards (Reference 9).

Soil sampling was performed by the U.S. Geological Survey in 1982. These analytical results are not yet available. Allied Chemical reports occasional sampling of discharge water from an underground conduit for analysis of chromium contamination (Reference 9). The conduit, as indicated on plant engineering drawings, lies adjacent to the disposal area. The data for these sampling events were not readily available; however, previous reports have stated no detectable level of chromium contamination has been found (Reference 2).

Allied Chemical Corporation closed and "moth-balled" the River Road plant in June of 1982.

5.0 Site Data

5.1 Site Area Surface Features

5.1.1 Topography and Drainage - The topography of the disposal site is flat and gently slopes toward the Niagara River (Reference 3). Surface runoff is thought to be toward a ditch which runs east-west along the northern limit of the plant facility to subsequently discharge into the Niagara River. Surface drainage is further facilitated by an underground conduit which drains a swale area in the south section of the facility. This conduit runs parallel to River Road and passes within close proximity of the disposal site and subsequently, discharges into the north area ditch.

5.1.2 Environmental Setting - The land surrounding Allied Chemical is industrial with no residential communities located within three miles of the site. The Niagara River, a Class "A" water resource, lies 0.5 miles from the disposal area (Reference 3). A Class "A" designation specifies that the water is suitable for use as a drinking water supply source. As a result, the Towns of Tonawanda and Lockport have surface water intakes located on this potable water source (Reference 3). In relation to the disposal area, the intakes are located four (4) to five (5) miles downstream. A New York State protected wetland (BW-6) is located approximately one-quarter mile to the

northeast of the disposal area (Reference 5). There are no critical habitats of endangered species or wildlife refuges within the vicinity of the site.

5.2 Site Hydrogeology

5.2.1 Geology - The Bedrock underlying the Allied Chemical disposal site is the Camillus Shale of the Salina Group. This formation is encountered at a depth of approximately seventy (70) feet below ground surface. This unit is mainly composed of gray shales with considerable amounts of interbedded gray limestone and dolomite. Gypsum and anhydrite are present within the shale beds with many occurrences found to be up to five (5) feet thick. Overall thickness of the Camillus Shale formation is approximately 400 feet. Regional dip is approximately 0.5° to the South (Reference 11).

5.2.2 Soil - The unconsolidated material overlying bedrock in the site area is glacial till consisting of non-sorted rock material in a silty clay matrix. A thin mantle of glacial lake sediments overlies the glacial till (Reference 6). Permeabilities of these materials range from approximately 10^{-5} to 10^{-7} cm/sec (Reference 7). Surficial soils are classifed by the U.S.D.A. as urban land. These soils consist of fill and disturbed or altered original soils resulting from urban development (Reference 8).

5.2.3 Groundwater - Groundwater wells in the Allied Chemical vicinity are thought to be used for industrial purposes only. These wells range from 101 feet to 375 deep feet and draw from the Camillus Shale aquifer. Well yields in this unit are extremely high due to the large storage capacity created by the dissolving of interbedded gypsum. However, the quality of water drawn from this aquifer is poor due to high hydrogen sulfide content (Reference 1). Groundwater flow is reported to be in a westerly direction toward the Niagara River.

5.3 Previous Sampling and Analysis

5.3.1 Groundwater Quality Data - The discharge point of the underground conduit has, on occasion, been tested for chromium contamination by Allied Chemical. Results have indicated no detectable amount of contamination. Analytical results are not presented in this report.

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

5.3.3 Air Quality Data - No sampling of this nature performed.

5.3.4 Other Analytical Data - As mentioned earlier, soil samples were collected at the Allied Chemical plant by the U.S. Geological Survey; however, the analytical results are not yet available.

6.0 Adequacy of Data

In compiling the Hazard Ranking Score, the Allied Chemical disposal area 915003-b was found to have a migration potential (S_m) equal to 6.1. However, due to data inadequacies, a certain degree of subjectivity was involved in developing a score. Therefore, a range for S_m has been developed and is found to be 6.1 to 15.0 for this site. Data inadequacies are as follows:

- Unavailability of analytical results on samples collected by the U.S.G.S. and Allied Chemical.
- Unavailability of the U.S.G.S. Report, which may have provided a subsurface profile and water table level.
- Lack of data regarding hydrogeological and geological features of the site.
- Exact location and vertical and lateral extent of the fill area.
- No Air quality data.
- No surface water 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 list.

- o Potential environmental effects of the landfills.
- 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.

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. At this time a VLF-EM Terrain Conductivity survey is proposed. This method is considered sufficient to determine the extent of the landfill as well as define the possible plume of contamination and the bedrock surface.

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 upgradient of groundwater flow (assumed east) of the site. This boring will be extended to bedrock and will be used to determine the specific on-site geology.

B. Two (2) exploratory borings downgradient of groundwater flow (assumed west) of the site.

These borings will be completed as groundwater monitoring wells constructed with a five (5) foot screened interval within the uppermost seasonal groundwater table.

C. Two (2) hand auger borings at locations in the fill area. These borings will be used to determine the nature, integrity and extent of the waste fill, cover materials, and underlying naturally occurring soil deposits.

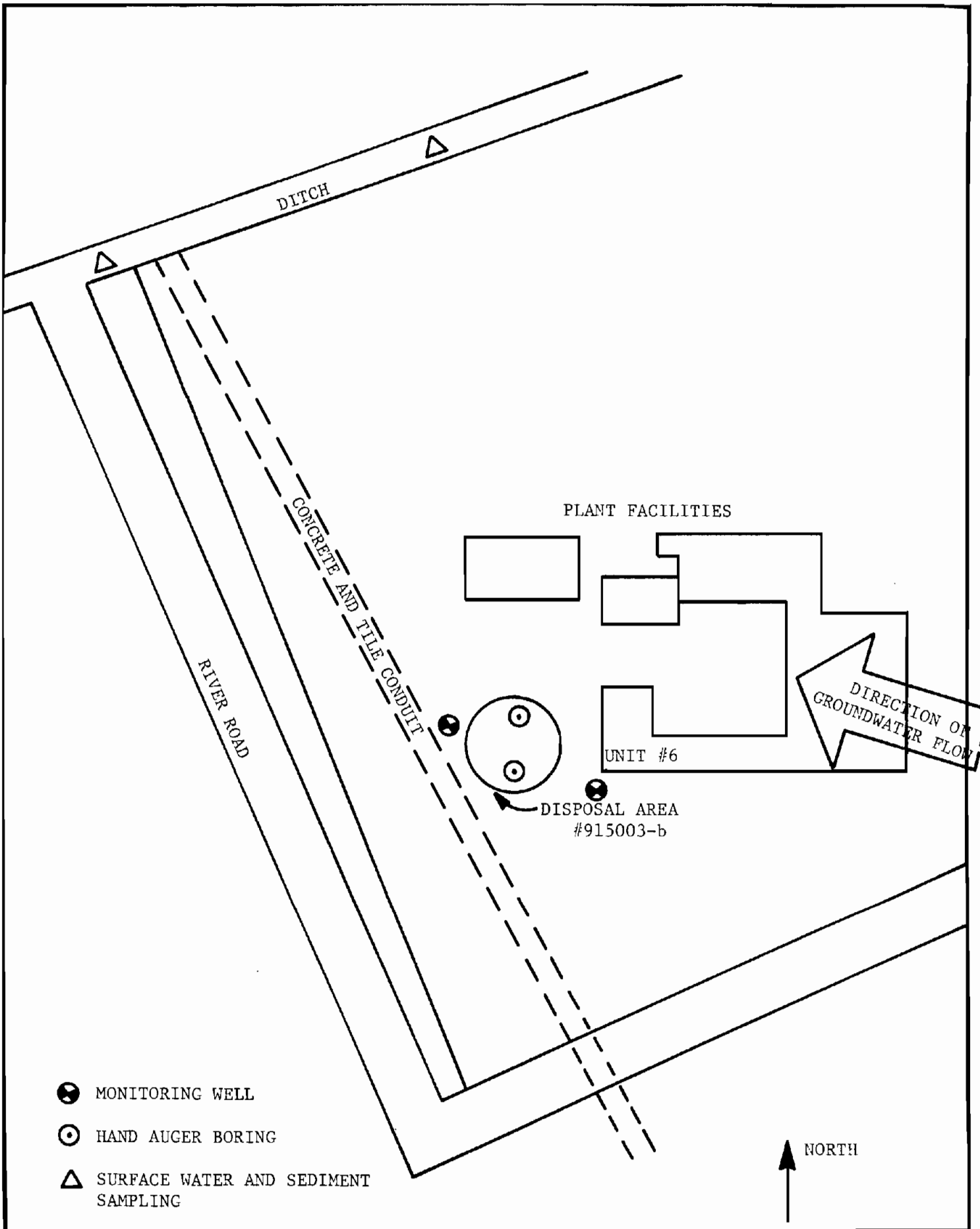
Well and sampling locations for this site are illustrated in

Figure 3.

The 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 from the initial boring. 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. Borings which are not completed as groundwater monitoring wells will be grouted with cement/bentonite mixture.

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 precleaned, 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 borings, the apparent upgradient



NOT TO SCALE	SAMPLING AND WELL LOCATIONS ALLIED CHEMICAL	FIGURE 3

Proposed for Ph II

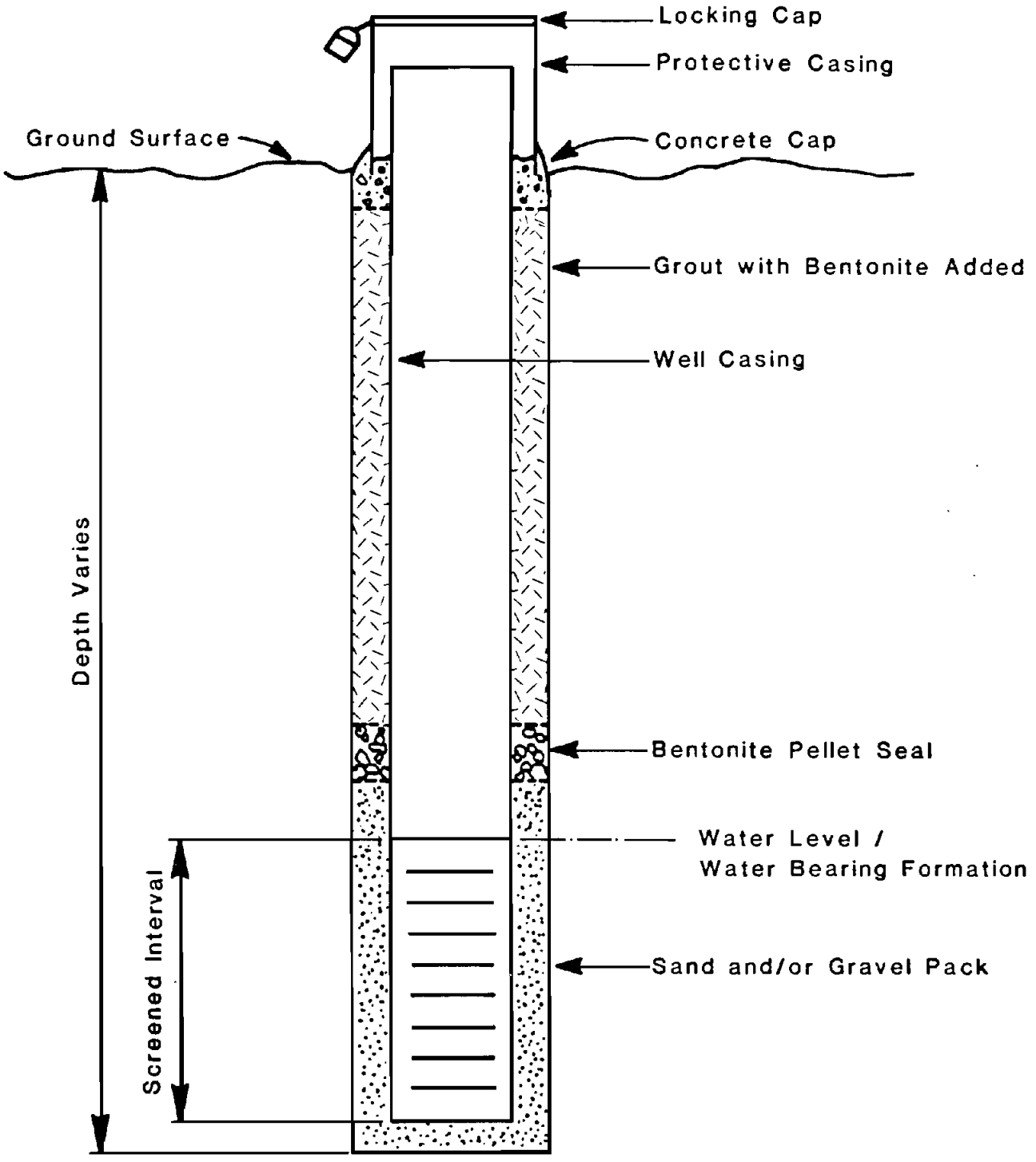
boring will be completed first; then the downgradient hole will be drilled. Between these borings, the augers will be cleaned with water obtained from a known non-contaminated source. Also, between each split spoon sample, the split spoon will be cleaned with water, acetone and distilled water. All spent 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. The screen will be placed within 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. If the site specific hydrogeologic conditions dictate the design of monitoring wells such that the well screen invert depths occur above their respective boring completion depths (i.e. an open borehole from base of well to completion depth), this interval will be sealed with a bentonite and/or cement bentonite grout mixture. A typical monitoring well is illustrated in Figure 4.

Figure 4

MONITORING WELL DETAIL

In Unconsolidated Formation



Upon completion of well construction, the monitoring wells will be properly developed, and the top of the 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 at 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 and analysis of the newly installed wells, sampling and analysis of the samples obtained during air monitoring, sampling and analysis of surficial waters and sediments, and analysis of selected samples from the boring program. 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.

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 times the well

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
Total Recoverable Phenolics	.	.
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.

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 analysis 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 waste landfill. The results from these tests, in conjunction with Standard Penetration Test results, will aid in the design and evaluation of remedial programs.

Chemical analysis 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 exploratory boring.

7.2.5.2 Surface Water - The sampling of surface water will entail collecting water and sediments from the ditch located north of the plant facility and the swale area in the south section of the facility. 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, 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 site 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 site.

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

o	Preliminary Field Investigation	$13,504
o	Sampling and Analysis	4,969
o	Engineering Evaluation	4,030
	Total Cost	$22,503

APPENDIX A

REFERENCES

1.) NYS Water Resources Commission, Erie-Niagara Basin, Groundwater Resources ENB-3, 1968.

2.) Summary Report prepared by the Department of Environmental Planning, November 2nd.

3.) U.S.Geologic Survey Topographic Map, 7.5' Quadrangle

4.) Codes, Rules and Regulations of the State of New York. Water Resources, Vol 6(C), Article 8, Section 837.4, Item No. 2; 1965.

5.) Telephone conversation with Kyle Williams regarding Wetlands information, August 8, 1983.

6.) U.S. EPA Overview of Environmental Pollution in the Niagara Frontier, New York; March 1982.

7.) HRS Mitre Model guide; July 16, 1982.

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

9.) Personal interview with James Harris, former plant manager for Allied Chemical; August 8, 1983.

10.) Federal Emergency Management Agency; "Flood Insurance Study, Town of Tonawanda, Erie County, New York". 1980.

APPENDIX B

HAZARDOUS WASTE DISPOSAL SITE REPORT

REVISED

Code: A

Site Code: 915003-b

Name of Site: Allied Chemical Specialty Chemical Division

Region: 9

County: Erie

Town/City: Tonawanda (T)

Street Address: River Road, Tonawanda, New York

Status of Site:

- o Inactive disposal site.
- o Area is less than an acre in size.
- o Area has been paved into a parking lot.
- o Wastes disposed are scrap chlorinated polyethylene, scrap ethylene and spent catalysts.
- o Quantity is unknown.
- o Industrial area.
- o Water supply is municipal.
- o Urban Land type which has been altered or disturbed through urban development.

Estimated Size: less than one acre.

Type of Site: Landfill

Hazardous Waste Disposed? suspected

Type and Quantity of Hazardous Waste:

- Chlorinated polyethylene
- Spent catalysts; such as magnesium chromate and magnesium dichromate.

Present Owner: Allied Chemical Corporation

Time Period Site Was Used: 1950 - 1960

Type of Samples: Soil

Remedial Action: None

Status of Legal Action: None

Permits Issued: None

Assessment of Environmental Problems: None known. However, surface runoff is channelled to the Niagara River via ditches. This runoff may possibly carry contaminants to this widely used water source.

Assessment of Health Problems: None known.

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

Date: September 6, 1982