BELDEN SITE

NEW YORK STATE SUPERFUND
PHASE I SUMMARY REPORT

932055

September 6, 1983

Prepared By:

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For:

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50 Wolf Road
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1.0 Executive Summary

The Belden Site is a one (1) acre disposal area located on the Niagara River on the boundary of the City of Niagara Falls and the Town of Wheatfield. From 1955 to 1967, Goodyear used this site to dispose of unknown quantities of solid industrial fill, rubble and thiazole polymer blends (Reference 3). The site, now owned by Loretta Myers of Niagara Falls, was owned by Joseph Scalzo at the time of landfilling.

This area lies within a topographically flat region. Currently, the site is partially covered by bricks and concrete fragments with sparsely vegetated areas consisting of low grasses.

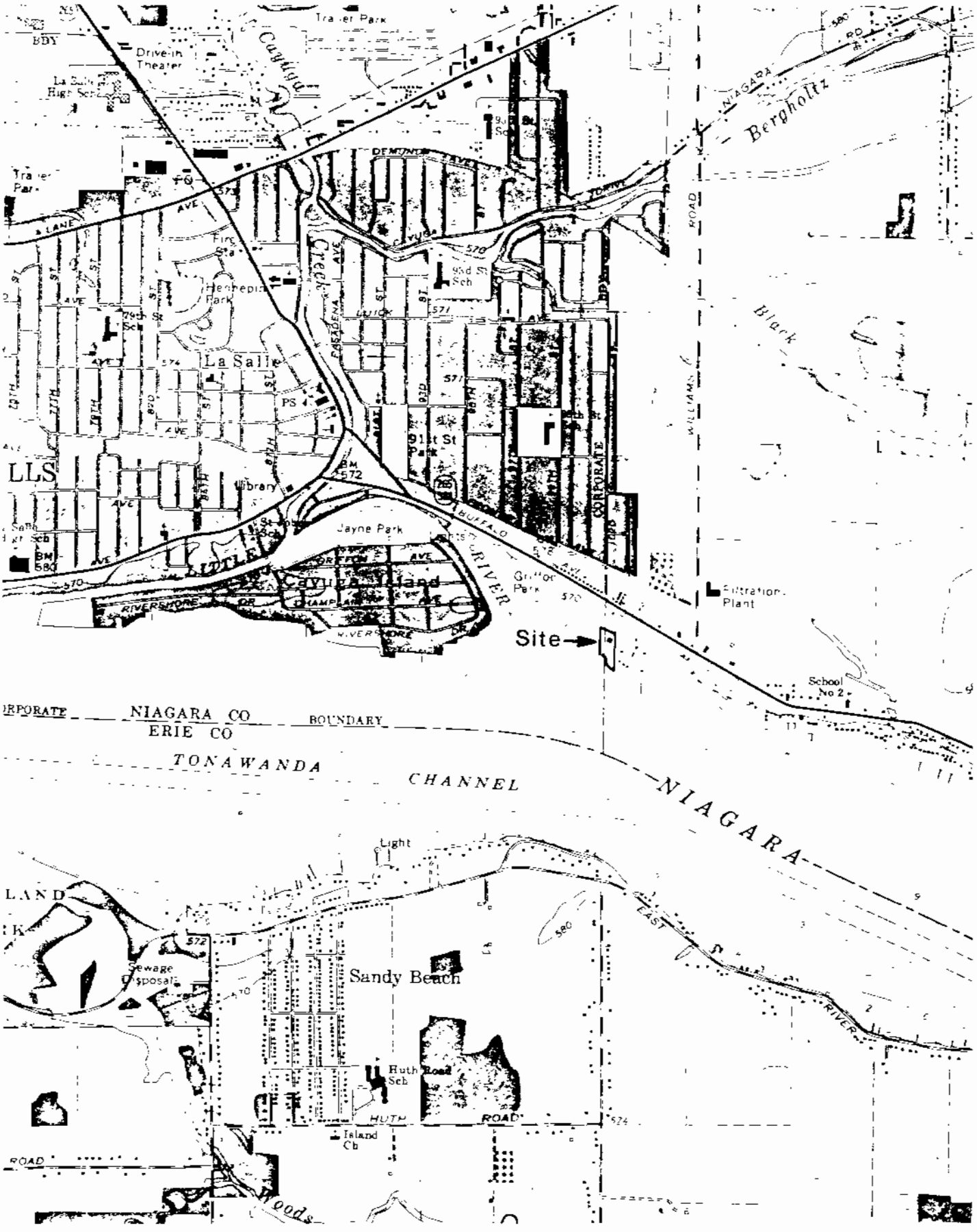
Groundwater samples were colleced by the U.S. Geological Survey in May of 1983. Analysis of these samples have indicated trace levels of organic pollutants.

2.0 Site Description

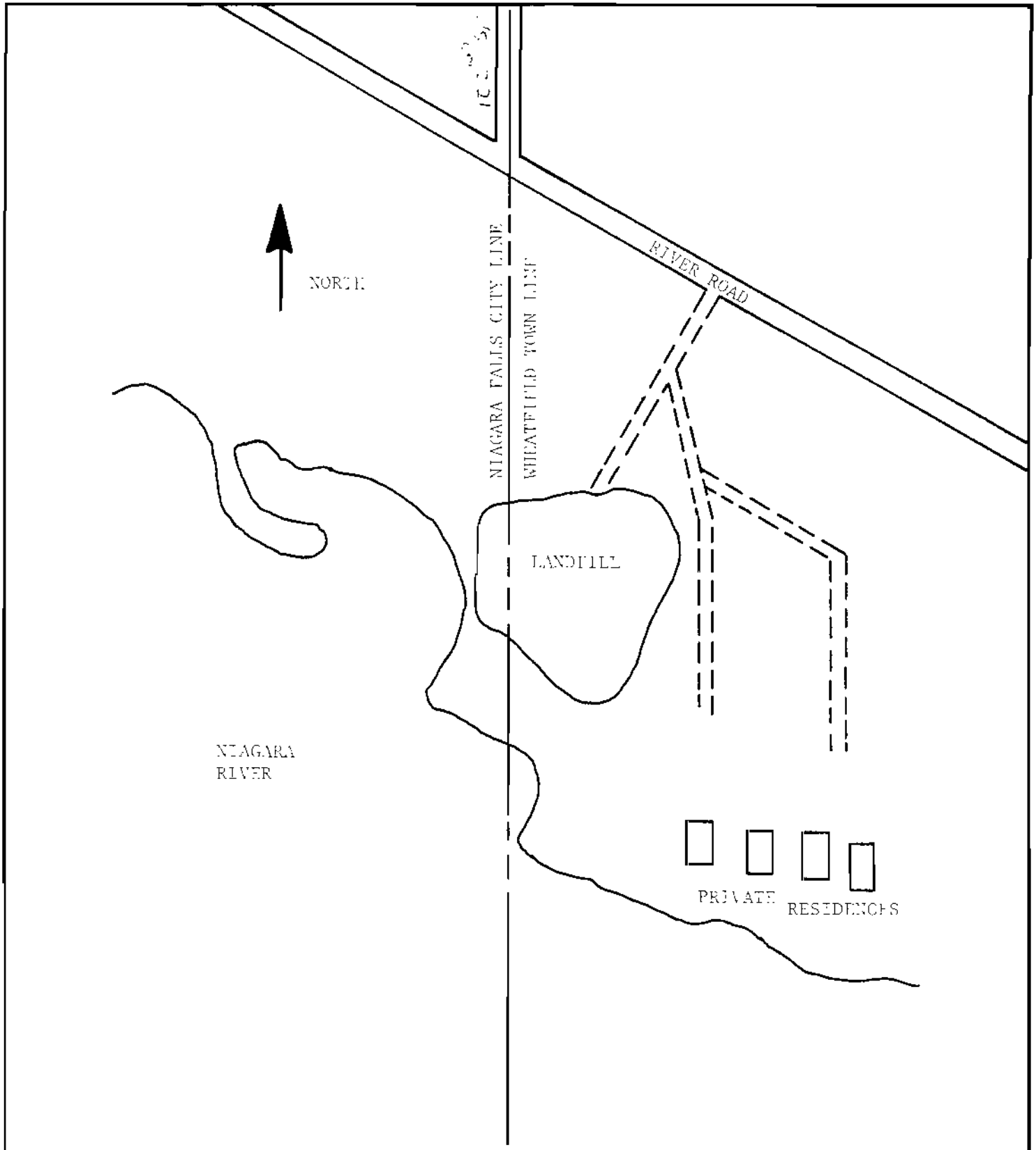
The Belden Site is located in a moderately populated area along the Niagara River on the boundary of the City of Niagara Falls and the Town of Wheatfield. It is bounded on the north by River Road, on the south by the Niagara River, on the east by property owned by the Olin Chemical Group and on the west by private residents.

The one (1) acre site is a former location of a restaurant which was destroyed by fire in the 1950's (Reference 5). The foundation of the restaurant was subsequently filled in with unknown materials. However, records indicate that Goodyear used the site for the disposal of such wastes as; solid industrial fill, rubble and thiazole polymer blends (Reference 3). Currently this area is covered with bricks, broken concrete fragments and glass. Several rusted drums were observed on-site. A raise in surface topography occurs in the southeastern section of the site and is composed of surface piled demolition debris. Evidence of recent dumping of household refuse was observed on-site.

Preliminary sampling and analytical testing of groundwater have indicated trace levels of organic pollutants (Reference 6).



USGS Topographic Map	Vicinity Map Belden	Figure 1



NOT TO SCALE	SITE MAP BELDON	FIGURE 2

3.0 PRELIMINARY HAZARD RANKING SYSTEM SCORE

Facility name: Belden Site

Location: River Road

EPA Region: 9

Person(s) in charge of the facility: Loretta Myers
2780 Niagara St.
Niagara Falls, NY

Name of Reviewer: Recra Research, Inc. Date: 9/6/83

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.)

The one (1) acre dispose site is inactive. From 1955 to 1967, Goodyear used this site to dispose of wastes such as solid industrial fill, rubble and thiazole polymer blends. Analysis of on-site groundwater wells have indicated trace levels of organic pollutants.

Scores: $S_M = 11.33$ $S_{gw} = 2.3$ $S_{sw} = 19.47$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 41.7$ Range: 2.7 to 20

Ground Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	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	6	6	
Net Precipitation	0 (1) 2 3	1	1	3	
Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	3	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			9	15	
[3] Containment	0 1 2 (3)	1	3	3	3.3
[4] Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 [15] 18	1	15	18	
Hazardous Waste Quantity	0 [1] 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			16	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]			1296	57,330	
[7] Divide line [6] by 57,330 and multiply by 100		S_{gw} =	2.3		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One	Multiplier	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	1	3	
Total Route Characteristics Score			9	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 [15] 18	1	15	18	
Hazardous Waste Quantity	0 [1] 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			16	26	
5 Targets					4.5
Surface Water Use	0 1 2 (3)	3	9	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 / 12 16 18 (20) / 24 30 32 35 40	1	20	40	
Total Targets Score			29	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			12528	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	19.47		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet

Rating Factor	Assigned Value (Circle One	Multiplier	Score	Max. Score	Ref (Section)
1 Observed Release	(0) 45	1		45	5.1
Date and Location					
Sampling Protocol					

If line 1 is 0, the S_a = 0. Enter on line 5.
If line 1 is 45, then proceed to line 2.

2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
Total Targets Score				39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100			S_a = (0)		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	2.3	5.1
Surface Water Route Score (S_{sw})	19.47	379.6
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		384.1
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		19.6
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		11.33

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	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} = 0			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	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	3	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 (2) 3	5	10	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			20	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			9000	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 41.7		

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: Belden Site

LOCATION: River Road, Niagara Falls, NY

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

DIMETHYL PHTHALATE (LEVELS FOUND BELOW STANDARDS)

(Ref 6)

Rationale for attributing the contaminants to the facility:

ANALYSIS OF GROUNDWATER SAMPLES

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

LOCKPORT DOLOSTONE

(REF 3)

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

< 3FEET (Ref 6)

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

Net Precipitation

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

32 INCHES (REF 9)

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

27 INCHES (REF9)

Net precipitation (subtract the above figures):

5 inches

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

GLACIAL TILL, SILT AND CLAY (REF. 2)

Permeability associated with soil type:

$< 10^{-5} \geq 10^{-7}$ cm/sec (REF 9)

Physical State

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

SOLID (Ref 3)

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NONE

Method with highest score:

3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

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):

UNKNOWN

Basis of estimating and/or computing waste quantity:

NA

* * *

5 TARGETS

Ground Water Use

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

INDUSTRIAL PURPOSES ONLY (REF 1)

Distance to Nearest Well

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

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:

> 2½ MILES

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):

NO SAMPLING OF THIS NATURE PERFORMED

Rationale for attributing the contaminants to the facility:

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

< 1% (REF 6)

Name/description of nearest downslope surface water:

NIAGARA RIVER CLASS 'A' SPECIAL INTERNATIONAL BOUNDARY WATER, SUITABLE FOR DRINKING (REF 4)

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

0% (REF 6)

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 (REF 9)

Distance to Nearest Downslope Surface Water

< 10 FEET

Physical State of Waste

SOLID

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

NONE
No containment of waste

Method with highest score:

No containment of waste

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

DIMETHYL PHTHALATE

Compound with highest score:

DIMETHYL PHTHALATE

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):

UNKNOWN

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:

CLASS 'B' - SUITABLE FOR PRIMARY CONTACT RECREATION (REF 4)

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:

NA

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:

CITY OF NIAGARA FALLS WATER INTAKES LOCATED APPROXIMATELY 2.9 MILES UPSTREAM OF SITE

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

Total population served:

Name/description of nearest of above water bodies:

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

< 3 MILES

1 OBSERVED RELEASE

Contaminants detected:

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 ed:

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 ss:

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

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

Land Use

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

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

Distance to residential area, if 2 miles or less:

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

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

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

3.2 EPA Preliminary Assessment (Form 2070-12)

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: BELDEN SITE
02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER: RIVER ROAD
03 CITY: NIAGARA FALLS
04 STATE: NY
05 ZIP CODE:
06 COUNTY: NIAGARA
07 COUNTY CODE:
08 CONG. DIST:
09 COORDINATES: LATITUDE 43° 04' 10.0" | LONGITUDE 78 57 01.0
10 DIRECTIONS TO SITE: RIVER RD. (RT 265) NORTH, ¼ MILE PAST WILLIAMS RD., LEFT ON DIRT RD.

III. RESPONSIBLE PARTIES

01 OWNER: LORETTA MYERS
02 STREET: 2780 NIAGARA ST
03 CITY: NIAGARA FALLS NY
04 STATE: NY
05 ZIP CODE: 14301
06 TELEPHONE NUMBER: ( )
07 OPERATOR: GOODYEAR TIRE
08 STREET:
09 CITY:
10 STATE:
11 ZIP CODE:
12 TELEPHONE NUMBER: ( )

13 TYPE OF OWNERSHIP: ☒ A PRIVATE ☐ B FEDERAL ☐ C STATE ☐ D COUNTY ☐ E MUNICIPAL ☐ F OTHER ☐ G UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE: ☐ A RCRA 3001 DATE RECEIVED / / ☐ B UNCONTROLLED WASTE SITE DATE RECEIVED / / ☐ C NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION: ☐ YES DATE / / ☐ NO
BY: ☐ A EPA ☐ B EPA CONTRACTOR ☐ C STATE ☐ D OTHER CONTRACTOR ☐ E LOCAL HEALTH OFFICIAL ☐ F OTHER
CONTRACTOR NAME(S):

02 SITE STATUS: ☐ A ACTIVE ☒ B INACTIVE ☐ C UNKNOWN
03 YEARS OF OPERATION: 1955 | 1967 ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED
DIMETHYL PHTHALATE
DIETHYL PHTHALATE

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND OR POPULATION
- CHEMICALS HAVE POTEDIAL FOR LEACHING INTO NIAGARA RIVER AND GROUNDWATER

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION: ☐ A HIGH ☒ B MEDIUM ☐ C LOW ☐ D NONE

VI. INFORMATION AVAILABLE FROM

01 CONTACT: RICHARD L. CROUCH
02 OF (AGENCY OR ORGANIZATION): RECRA RESEARCH, INC
03 TELEPHONE NUMBER: (716) 838-6200
04 PERSON RESPONSIBLE FOR ASSESSMENT: DIANE M. WERNEWSKI
05 AGENCY: Recra
06 ORGANIZATION:
07 TELEPHONE NUMBER: (716) 838-6200
08 DATE: 08 / 31 / 83

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
- [ ] D OTHER
- [ ] 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 QUANTITY	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
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 ___) | X POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED | 04 NARRATIVE DESCRIPTION

POTENTIAL for GROUNDWATER CONTAMINATION. HOWEVER, ALL AREA RESIDENTS ARE SERVICED BY MUNICIPAL WATER.

01 ☐ B. SURFACE WATER CONTAMINATION | 02 ☐ OBSERVED (DATE ___) | X POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED >10,000 | 04 NARRATIVE DESCRIPTION

POTENTIAL FOR CHEMICALS TO LEACH INTO NIAGARA RIVER

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 ___) | X POTENTIAL | ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED (Acres) | 04 NARRATIVE DESCRIPTION

POTENTIAL FOR SOIL CONTAMINATION EXISTS. NO CONTAINMENT USED FOR WASTES AT TIME OF DISPOSAL

01 ☐ G. CONTAMINATION OF WATER (SURFACE, GROUNDWATER) | 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 (See next)

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 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 containers, etc.)
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 8-26-83) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

EVIDENCE OF RECENT DUMPING OF HOUSEHOLD REFUSE (RUGS, FURNITURE) OBSERVED ON-SITE.

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)

4.0 Site History

The one (1) acre Belden Site, currently owned by Loretta Myers of Niagara Falls, is the former location of a restaurant which was destroyed by fire in the 1950's (Reference 5). From 1955 to 1967, Goodyear used this site to dispose of an undetermined quantity of solid industrial fill, rubble and thiazole polymer blends (Reference 3). Joseph Scalzo, owner of the property at the time of the landfilling, is reported to have permitted the dumping of various materials on the property and into the Niagara River along the edge of the property creating a bulkhead (Reference 7).

The U.S. Geological Survey installed two (2) groundwater wells on-site in June of 1982. Analysis of these samples have indicated trace levels of organic compounds to be present (Reference 6).

Currently, the site is vacant. Recent inspection has found the site to contain several piles of industrial fill and rubble. Evidence of recent dumping of household refuse was also observed.

5.0 Site Data

5.1 Site Area Surface Features

5.1.1 Topography and Drainage - The Belden Site lies within a topographically flat region. The only surface feature on-site is a "hill" approximately 15 feet high in the southeast corner of the property. This hill was constructed as a result of accumulated bricks and concrete fragments. Surface drainage in the area is thought to be in a southerly direction towards the Niagara River.

5.1.2 Environmental Setting - The area of concern is located in a moderately populated area along the Niagara River on the boundary between the City of Niagara Falls and the Town of Wheatfield. There are no designated wetlands, critical habitats of endangered species or wildlife refuges in the vicinity. The site is located on the Niagara River which is a Class "A" special international boundary water (Reference 4). A Class "A" designation specifies that the water source is suitable for drinking. As a result, several towns have water intakes located in this water source.

5.2 Site Hydrogeology

5.2.1 Geology - Bedrock beneath the Belden Site is the Camillus Shale of the Salina Group and is encountered approximately 40 feet below the ground surface. This unit consists mainly of gray shale; however, considerable amounts of gray limestone and dolostone are found interbedded in the unit. Gypsum and anhydrite are present within the beds of shale and many occurrences are found to be up to five (5) feet thick. Overall thickness of the Camillus shale is approximately 400 feet. Regional dip of the bedrock is to the south at approximately 0.5° (Reference 8). However, Recra's previous geological investigations in the Niagara Falls area have indicated that the underlying bedrock is the Lockport Dolostone Formation.

5.2.2 Soil - Unconsolidated Pleistocene deposits consisting of glacial till, silt and clay form the general surficial geology in the site area (Reference 1). The U.S. Department of Agricultural Soil Conservation Service classifies these soils as Canandaigua Silt Loam which are generally deep, level and poorly to very poorly drained. The subsoils have a high clay content. Seasonal ponding is common unless these soils are artificially drained (Reference 2).

5.2.3 Groundwater - Groundwater wells are not frequently used in the area around the Belden site and those that are used are thought to be for industrial purposes only. Groundwater flow is assumed to be to the south towards the Niagara River (Reference 1). Due to the proximity of the site to the river, groundwater

levels are likely to be affected by fluctuations in river level (Reference 3).

5.3 Previous Sampling and Analyses

5.3.1 Groundwater Quality Data - The U.S. Geological Survey collected two (2) groundwater samples in June of 1982. Analysis of these samples indicate trace levels of organic pollutants to be present. Results are shown in the following colored page .

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

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

6.0 Adequacy of Available Data

In compiling the Hazardous Ranking System score, the Belden Site was found to have a migration potential (S_m) of 2.7. However, due to the data inadequacies, a certain degree of subjectivity was involved in scoring; therefore, a range for migration potential was developed. For the Belden Site this range was found to be 2.7 to 20. The data inadequacies are as follows:

- Lack of analytical data regarding surface water quality.
- Lack of records regarding quantity of waste disposed.
- Insufficient data regarding the lateral and vertical extent of the fill material.
- Insufficient data regarding geological and hydrogeological features for the site area.
- Due to the degree of subjectivity involved in previous analyses, the analytical results are considered questionable.
- 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 to determine the nature of the in-situ soil. Permeability tests will be performed on the base soil at this time. This boring will be located in the northeast of the site, which is assumed to be upgradient of groundwater flow, and will be extended to bedrock to determine the specific on-site geology.

B. One (1) exploratory boring between the Bank of the Niagara River and the fill area as shown in Figure 3. This boring will be located south of the fill area which is assumed to be downgradient of groundwater flow.

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

C. Two (2) auger borings in the fill cover material. These

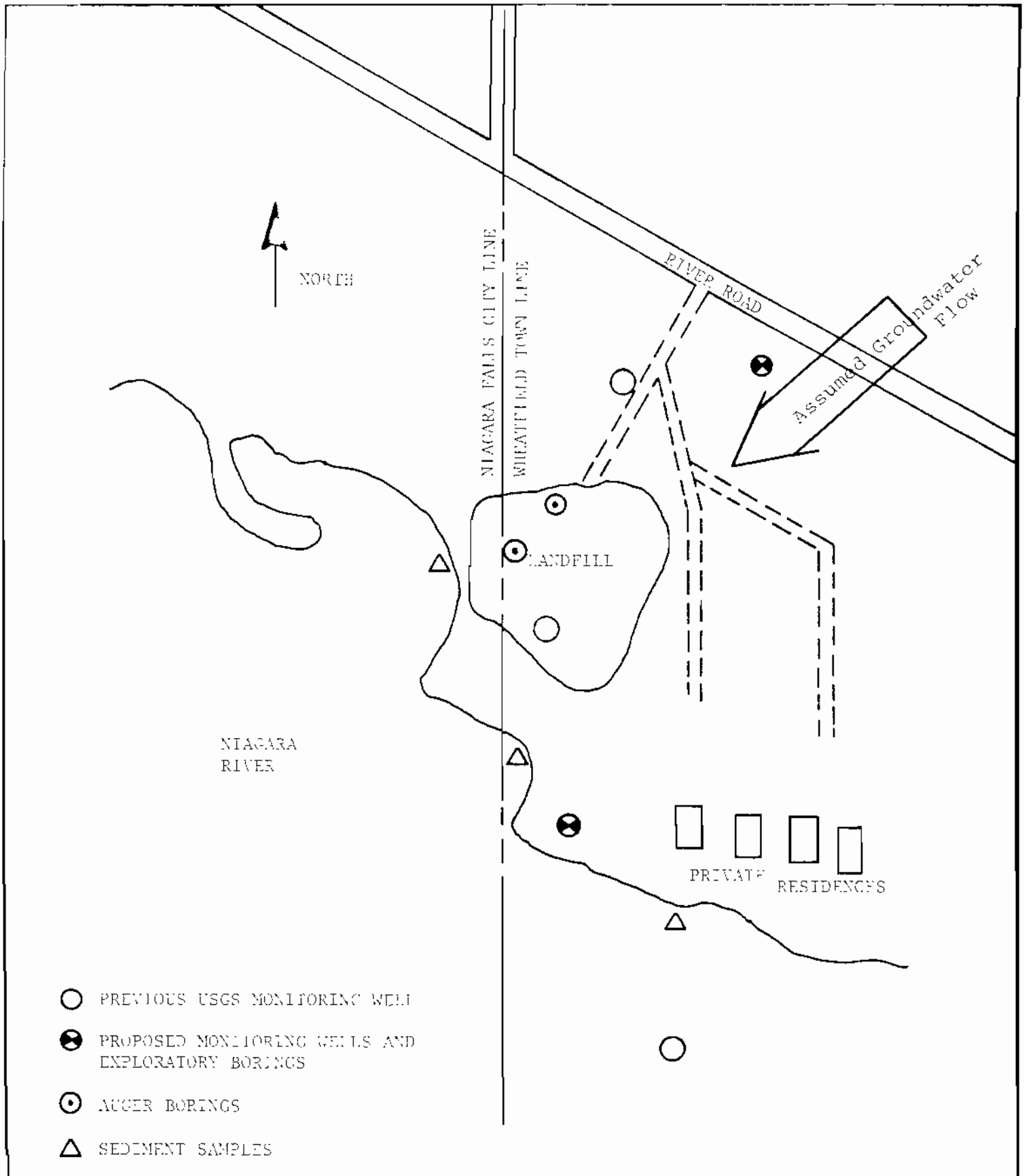
borings will be used to determine the nature and extent of the cover soils and fill.

D. Three (3) sediment samples from the Bank of the Niagara River on the southern 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



NOT TO SCALE	SAMPLING AND WELL LOCATION BELDON	FIGURE 3

return to Recra Research, Inc.'s Tonawanda, New York laboratory.

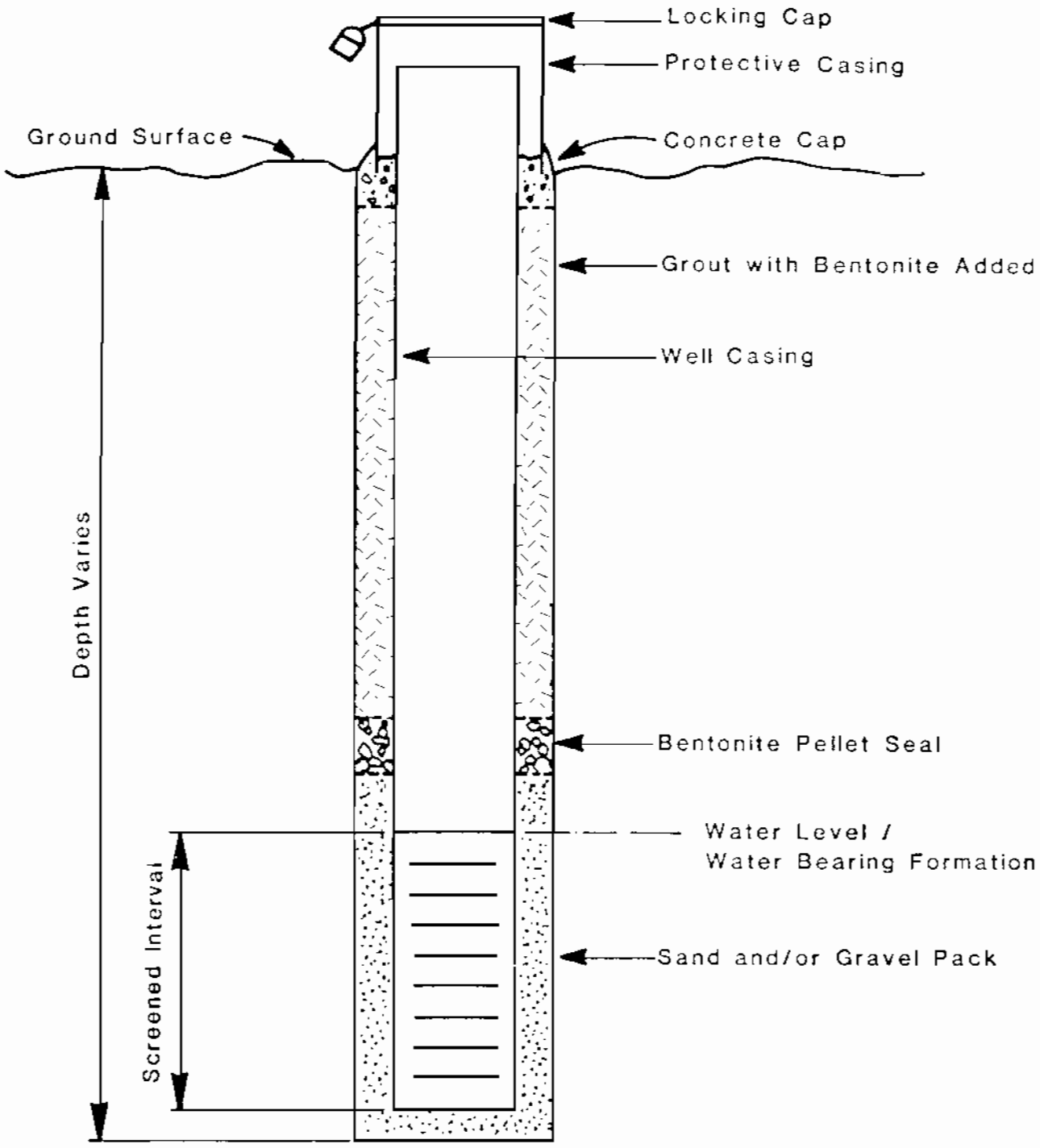
In order to avoid possible cross-contamination during construction of the exploratory borings, the apparent upgradient borings will be completed first; then the downgradient hole will be drilled. Between each boring, the augers will be cleaned with water obtained from a known non-contaminated source.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

7.2.4 Monitoring Well Installation - The monitoring wells will be constructed of two-inch I.D. cast iron riser pipe with a five-foot long galvanized, wire-wound-wrapped steel screen. Although the use of PVC casing and screens would be less expensive, the possible presence of solvents suggests the use of galvanized steel screens and risers. The screen will be placed just below the 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.

Figure 4

MONITORING WELL DETAIL

In Unconsolidated Formation



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 previously installed U.S.G.S. wells and 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 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.

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

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	.	.
Priority Pollutant	.	.
pH thalates Esters	.	.
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.

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, 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-243). 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 Sediment - This sampling will entail collecting sediments from the bank of the Niagara River located south of the fill area. Three (3) sediment samples will be taken in this area. General locations of sampling are illustrated in Figure 3. These 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 soils

will be followed after acquisition of the sediment 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	$ 7,724
o	Sampling and Analysis	7,368
o	Engineering Evaluation	3,402
	Total	$18,494

APPENDIX A

DATA SOURCES AND REFERENCES

1.) Groundwater Resources in Niagara Falls, New York and the Potential Impacts of Hazardous Waste Contamination; by Kevin Owen, Recra Research, Inc.

2.) Soil Survey of Niagara County, New York; U.S. Department of Agriculture Soil Conservation Service; 1972.

3.) Preliminary Investigation and Profile reports for 26 suspected Industrial Disposal Sites in Niagara County, New York; Niagara County Health Department; March 1982.

4.) Codes, Rules and Regulations of the State of New York; Vol 5(C), Section 837.4, pg. 1605; 1966.

5.) Telephone conversation with Mike Hopkins, Niagara County Department of Health; August 31, 1983.

6.) U.S. Geological Survey Sampling Report; Belden Site; June 26, 1982.

7.) Letter from Rick William Kennedy, Attorney to Peter Beuchi; April 26, 1983.

8.) 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.

9.) HRS Mitre; July 16, 1983.

APPENDIX B

HAZARDOUS WASTE DISPOSAL SITE REPORT

REVISED

Code: B

Site Code: 932055

Name of Site: Belden Site

Region: 9

County: Niagara

Town/City: Niagara Falls

Street Address: River Road

Status of Site:

- Inactive disposal site operated from 1955 to 1967.
- Located in moderately populated residential area.
- Wastes disposed of: solid industrial fill, rubble, and thiazole polymer blends.
- Surface water intakes located approximately three miles.
- Soils are unconsolidated Pleistocene deposits of glacial till overlain by clay, silt and fine sand.

Type of Site: Landfill

Hazardous Waste Disposed? Undetermined

Type and Quantity of Hazardous Waste: Undetermined

Present Owner: Loretta Myers; 2780 Niagara Street, Niagara Falls, NY

Time Period Site Was Used: 1955 to 1967

Type of Samples: Groundwater

Remedial Action: None

Status of Legal Action: None

Permits Issued: None

Assessment of Environmental Problems:

- No environmental problems have been directly attributed to this site; however, since the site is located along the Niagara River and waste materials have been disposed of along the River bed, the potential for environmental impact exists.

Assessment of Health Problems: None known

Person Completing this Form: Diane M. Werneiwski, Recra Research, Inc.

Date: September 6, 1983.

USGS Sampling