932092

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATION

Town of Royalton Landfill — Site No. 932092

Town of Royalton — Niagara County

Date: January 1986

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste

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By:

ENGINEERING-SCIENCE

In Association With

DAMES & MOORE

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

TOWN OF ROYALTON LANDFILL
NYS SITE NUMBER 932092
TOWN OF ROYALTON
NIAGARA COUNTY
NEW YORK STATE

Prepared For

DIVISION OF SOLID AND HAZARDOUS WASTE
NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD
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DATE OF SUBMITTAL: JANUARY, 1986

TOWN OF ROYALTON LANDFILL

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SECTION I

EXECUTIVE SUMMARY
TOWN OF ROYALTON LANDFILL

This report, prepared for the New York State Department of Environmental Conservation (NYSDEC), presents the results of the Phase I investigation for the Town of Royalton Landfill (NYS Site Number 932092, EPA Site Number D000514430) located in the Town of Royalton, Niagara County, New York (see Figure I-1).

SITE BACKGROUND

The 5-acre site is owned by Douglas Ortman, who leased it to the Town of Royalton for use as a municipal landfill from 1958 to 1978 (see Figure I-2). The landfill was operated by the Royalton Highway Department while active. Prior to landfilling activities, the site was operated as a quarry pit (NCHD, Site Profile Report). Since closure, the site has had minor incidences of scavenger dumping of refuse. No hazardous wastes are known to have been disposed on-site.

Water samples collected by the NYSDEC in 1982 from a ditch that received leachate runoff from the landfill showed a large increase in iron and zinc at the point of leachate entry relative to the upgradient sample. Heavy metals, TOX, and TOC also increase, but to a lesser degree. There are no known health problems associated with the site.

ASSESSMENT

In an attempt to quantify the risk associated with this site, the Hazard Ranking Scoring system (HRS) was applied as currently being used by the New York State DEC to evaluate abandoned hazardous waste sites in New York State. This system takes into account the types of wastes at the site, receptors, and transport routes to apply a numerical ranking of the site. As stated in 40 CFR Subpart H Section 300.81, the HRS scoring system was developed to be used in evaluating the relative potential of uncontrolled hazardous substance facilities to cause health or safety problems or ecological or environmental damage. It is assumed by the EPA that a uniform application of the ranking system in each state will permit EPA to identify those releases of hazardous substances that pose the greatest hazard to humans or the environment.

Under the HRS, three numerical scores are computed for each site, to express the relative risk or danger from the site, taking into account the population at risk, the potential for contamination of drinking water supplies, for direct human contact, and for destruction of sensitive ecological systems and other appropriate factors. The three scores are:

- S_M reflects the potential for harm to humans or the environment from migration of a hazardous substance away from the facility by routes involving groundwater, surface water or air. It is a composite of separate scores for each of the three routes (S_{GW} = groundwater route score, S_{SW} = surface water route score, and S_A = air route score).

- S_{FE} reflects the potential for harm from substances that can explode or cause fires.

- S_{DC} reflects the potential for harm from direct contact with hazardous substances at the facility (i.e., no migration need be involved).

The preliminary HRS score was:

S_M	=	6.19	S_A	=	0
S_{GW}	=	7.16	S_{FE}	=	0
S_{SW}	=	7.96	S_{DC}	=	0

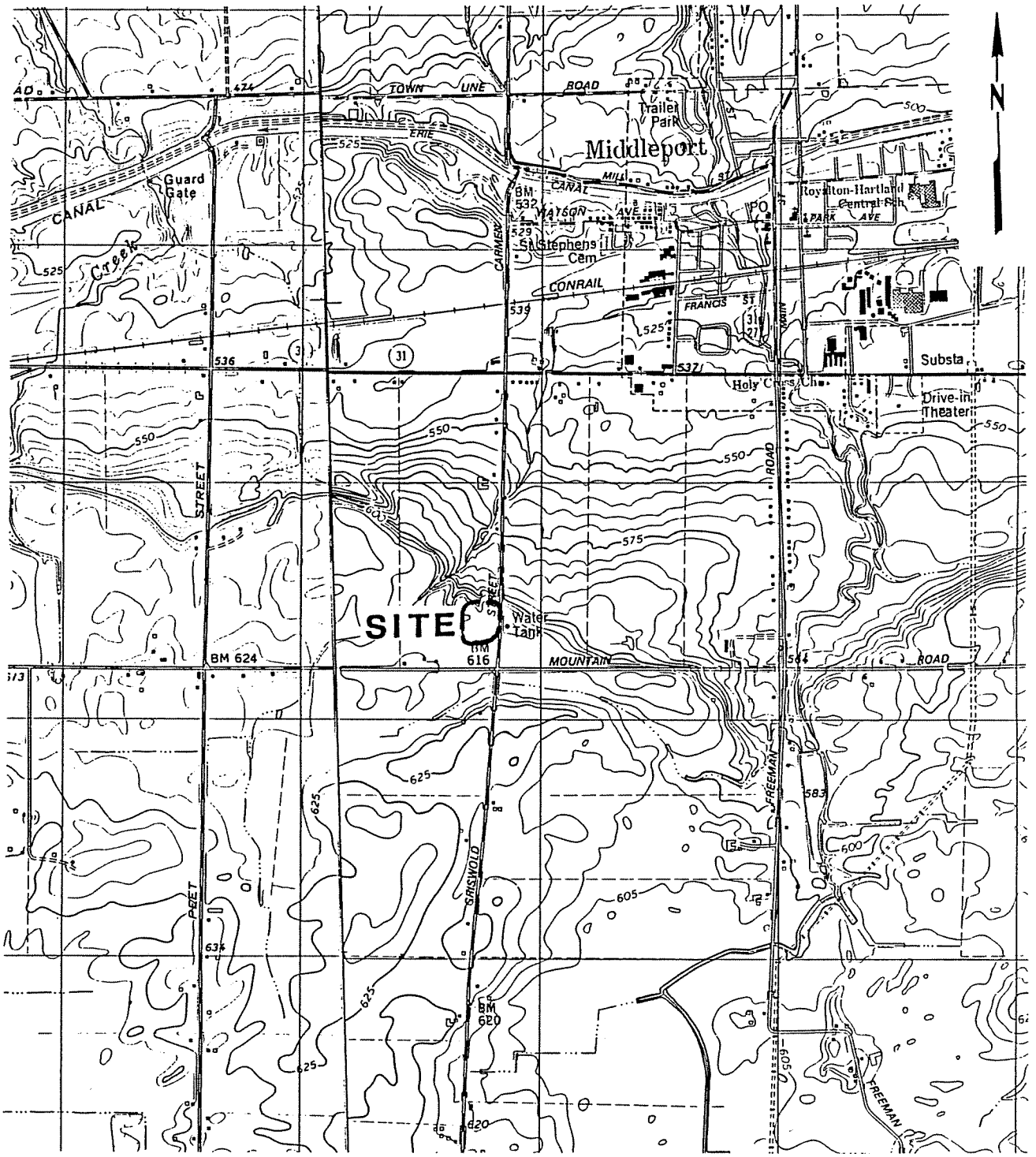
Although it is uncertain if hazardous waste is disposed of at the landfill, the use of groundwater for drinking and the occurrence of leachate seeps results in a high migration score.

RECOMMENDATIONS

The following recommendations are made for the completion of Phase II:

- Groundwater monitoring system consisting of one upgradient and two downgradient wells.
- Surface water and sediment monitoring system consisting of three monitoring stations.
- Sample analyses to include priority pollutants.

The estimated man-hours required to complete Phase II are 565, while the estimated cost is $44,972.



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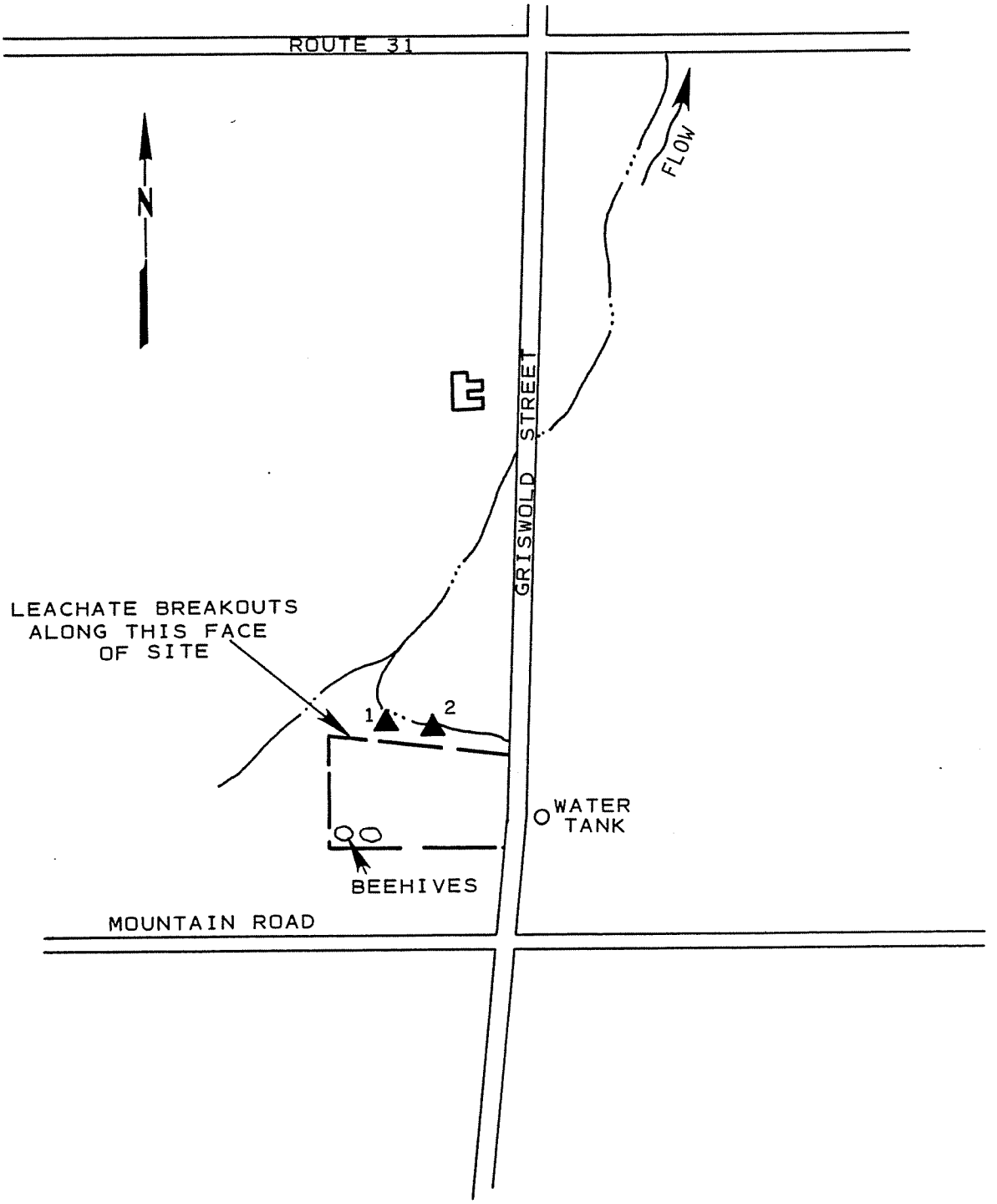
SITE LOCATION MAP
TOWN OF ROYALTON

FIGURE I-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Medina, NY (1980) and Gasport, NY
(1979) Quadrangles



EXPLANATION:

▲1 SAMPLE POINT

#1 SOIL AND WATER

#2 WATER ONLY

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PLOT PLAN

TOWN OF ROYALTON

FIGURE I-2

SECTION II

PURPOSE

The purpose of the Phase I investigation at the Town of Royalton Landfill site was to assess the hazard to the environment caused by the present condition of the site. This assessment is based on the Hazard Ranking System, which involves the compilation and rating of numerous geological, toxicological, environmental, chemical, and demographic factors and the calculation of an HRS score. Details of HRS implementation are included in Section V. During the initial portion of the investigation, available data and records, combined with information collected from a site inspection, were reviewed and evaluated. The investigation at this site focused on the potential for groundwater, soil, and surface water contamination resulting from the operation of a municipal landfill from 1958 to 1978. Based on this initial evaluation of the site, a Phase II Work Plan has been prepared for collecting any additional data needed to complete the HRS score. In addition, a cost estimate for the recommended Phase II work is provided.

SECTION III

SCOPE OF WORK

The scope of work for the New York State Inactive Site Investigation Program (Phase I) was to collect and review all available information necessary for the documentation and preparation of a Hazard Ranking System score and a Phase II work plan and cost estimate if required. The work activities performed included data collection and review, a site inspection, and interviews with knowledgeable individuals of past and present disposal activities at the site.

The sources contacted during this Phase I investigation included government agencies (federal, state and local), present site owners and operators, and any other individuals that may have knowledge of the site, as identified during the performance of the investigation. These sources are listed in Appendix A. The intent of the list is to identify all persons, departments, and/or agencies contacted during the third round of the Phase I investigations even though useful information may not have been collected from each source contacted.

SECTION IV

SECTION IV

SITE ASSESSMENT

SITE HISTORY

The Town of Royalton Landfill, situated on a 5-acre parcel of land was operated as a municipal landfill from 1958 to 1978. The site was used to dispose of municipal refuse collected by Bancroft and individual residents from the Town of Royalton and the Villages Gasport and Middleport. Since closure in 1978, a small amount of scavenger dumping of refuse has occurred on-site. In the past, most wastes were transported to the landfill by local residents since there was no centralized collection system in operation. While active, the landfill was maintained by the Royalton Highway Department; however, it was (and still is) owned by Douglas Ortman of Middleport, NY, who leased the property to the town. Prior to operation as a landfill, the site was a quarry pit (NCHD, Site Profile Report).

In 1973, the Niagara County Health Department (NCHD) and the NYSDEC ordered upgrading of facilities and operational practices at the site to bring it into compliance with existing sanitary codes for landfill operation. Items of concern were: unrestricted access to the site, lack of adequate daily cover, and improper drainage of water from the site (NYSDEC, Order of Consent, 1973). In 1978, the site was closed and capped with local soils brought in by the Royalton Highway Department.

SITE TOPOGRAPHY

The Town of Royalton Landfill is located in a rural area between the villages of Gasport and Middleport, Niagara County, New York State. The site is a closed landfill located on top of and to the south of the Niagara Escarpment. The original ground surface sloped steeply to the north, was later excavated as a quarry, and is now filled with refuse, resulting in a ground surface sloping more gently to the north.

Surface runoff collects along the northern perimeter of the rectangular site and drains via a small man-made ditch to the west into an unnamed stream. The stream in turn flows to Jeddo Creek which flows through a culvert under the Barge Canal (Hopkins, 1987). To the east of the site is Griswold Street, along which are rural homes, farms, and a water tower. To the north of the site across the drainage ditch is farmland owned by the landfill site owner. To the west of the site is a swamp. To the south of the site is farmland. There are private drinking water supply wells in use within 3 miles of the landfill site (Ontman, 1985). However, the bedrock aquifer, the aquifer of concern, is not the same aquifer that local residents and the Town of Middleport obtain drinking water. Middleport is on the Niagara County Municipal Water Supply System (Hopkins, 1987).

Local Sensitive Environments

There are no wetlands or critical habitats near this site.

SITE HYDROLOGY

This summary of the hydrology is based on information from USGS Topographic Maps, NYS Museum and Science Service Bedrock Geology Map and Quaternary Geology Map, Site Profiles by Niagara County Health Department and the NYSDEC.

Regional Geology and Hydrology

The site is located in the Erie-Ontario lowlands physiographic province. The bedrock of this region is predominantly limestone, dolostone, and shale.

In the recent past, most of New York State, including the site, has been repeatedly covered by a series of continental ice sheets. The activity of the glacier widened pre-existing valleys, and deposited widespread accumulations of till. The melting of ice, ending approximately 12,000 years ago, produced large volumes of meltwater; this water subsequently shaped channels and deposited thick accumulations of stratified, granular sediments.

As glacial ice retreated from the region, meltwater formed lakes in front of the ice margin. This region is covered by lake sediments, the most recent being from Lake Iroquois (a larger predecessor to Lake Ontario) and from Lake Tonawanda (an elongate lake which occupied an east-west valley and drained north into Lake Iroquois). The sediments consist of blanket sands and beach ridges which are occasionally underlain by lacustrine silts and clays (indicating quiet or deeper water deposition). Drainage channels carved into the Niagara Escarpment indicate positions of former outlets from Lake Tonawanda.

Granular deposits in this region frequently act as shallow aquifers, whereas lacustrine clays, as well as tills, often inhibit ground water movement. However, fine-grained, water-lain sediments, such as silts and clays, frequently contain horizontal laminations and sand seams. These internal features facilitate lateral ground water movement through otherwise low permeability materials.

Site Hydrogeology

The site is located on the Niagara Escarpment. Bedrock is expected to be the lower part of the Lockport Dolomite. Prior to its use as a landfill, this site was a stone quarry. This site now may even be

floored on the Rochester Shale. The Lockport Dolomite forms an aquifer of highly mineralized water. The Rochester shale at the top is almost impermeable and acts as a confining bed to the limestones and sandstones below (Johnson, 1964).

The top of bedrock is expected to be approximately 20 to 30 feet below the existing landfill surface. Overlying the bedrock is waste material from landfilling activities. No natural soils are expected to exist in the subsurface of this site.

Waste material has been leveled and covered. The ground surface is now vegetated.

SITE CONTAMINATION

The Town of Royalton Landfill was operated as a municipal refuse landfill and received refuse from the Town of Royalton and Villages of Gasport and Middleport from 1958 to 1978. No hazardous waste are known to be disposed in the landfill. Preliminary calculations based on the acreage and depth of the landfill indicate that on the order 97,000 cubic yards of refuse wastes were placed in the landfill (excluding 20% intermediate and final cover). Because of the site's previous use as a stone quarry, it is assumed that wastes were placed directly on bedrock (NCHD, Site Profile Report).

Numerous orange ground stains and leachate seeps were observed during the site visit (3/25/85). Past inspections conducted by NCHD and NYSDEC personnel have noted similar leachate seepages, which enter a surface drainage ditch adjacent to the landfill. On March 31, 1982, samples in the ditch at the point of leachate entry (Site 1) and a water sample at a point approximately 150 feet upstream from the point of entry (Site 2) were taken (NYSDEC, Site Profile Report). The exact locations where these samples were collected is not available. Table IV-1 presents the results of this sampling effort. Based on the data presented in Table IV-1, it is apparent that both iron and zinc concentrations, especially the former, were significantly increased in

ditch water at the point of leachate entry. Other parameters that were slightly elevated in the downstream sample include chromium, copper, and halogenated organics as Cl_2 (lindane standard). Additionally, total organic carbon exhibited a significant increase. In the soil, both iron and zinc concentrations were slightly elevated at the point of leachate entry, although no upgradient samples were analyzed for comparison.

In addition, an HNu meter was used during the ES and D&M site inspection to determine the presence of volatile organic compounds at the landfill. All measurements were below 1 ppm.

TABLE IV-1

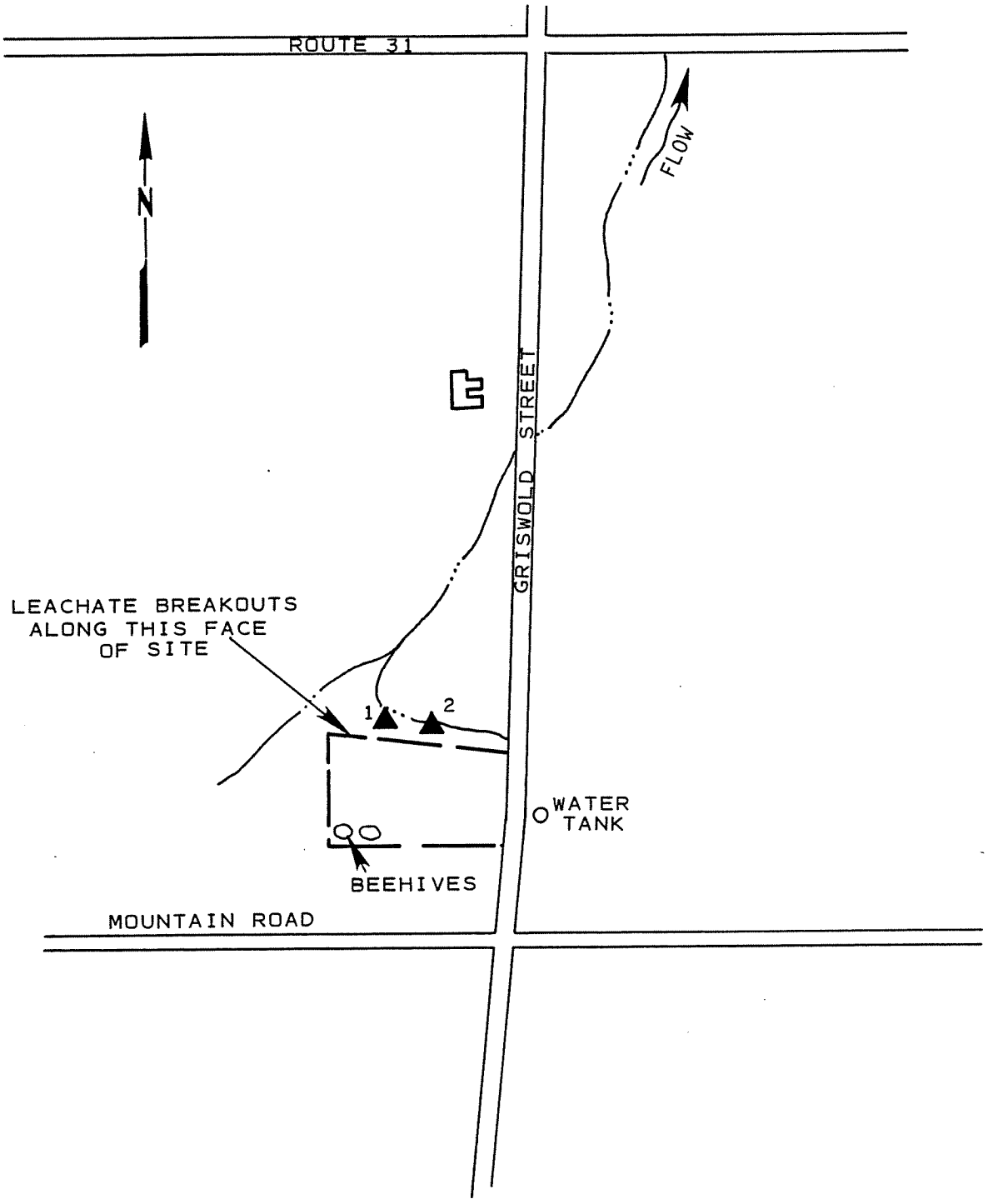
SOIL AND SURFACE WATER ANALYSES AT THE TOWN OF ROYALTON LANDFILL

Parameter	Water (ug/liter) Site 1	Water (ug/liter) Site 2	Soil (ug/g dry basis) Site 1
Antimony	< 200	< 200	< 5
Arsenic	< 5	< 5	1.1
Beryllium	< 10	< 10	< 0.3
Cadmium	< 4	< 4	0.29
Chromium	20	4	7.5
Copper	22	< 5	15
Iron	130,000	1,500	29,000
Lead	< 30	< 30	9.5
Mercury	< 1	< 1	< 0.06
Nickel	< 30	< 30	3.8
Selenium	< 5	< 5	< 0.3
Silver	< 10	< 10	< 0.3
Thallium	< 100	< 100	< 3
Zinc	701	63	160
Halogenated Organic Scan[a]	1.5	0.75	0.58
Total Organic Carbon	30,000	19,000	NA[b]

SOURCE: RECRA Research, 1982.

[a] Reported as Cl_2 (lindane standard).

[b] NA = not analyzed.



NOT TO SCALE

EXPLANATION:

▲1 SAMPLE POINT

#1 SOIL AND WATER

#2 WATER ONLY

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PLOT PLAN

TOWN OF ROYALTON

FIGURE IV-1

SECTION V

PRELIMINARY APPLICATION OF THE HAZARD RANKING SYSTEM

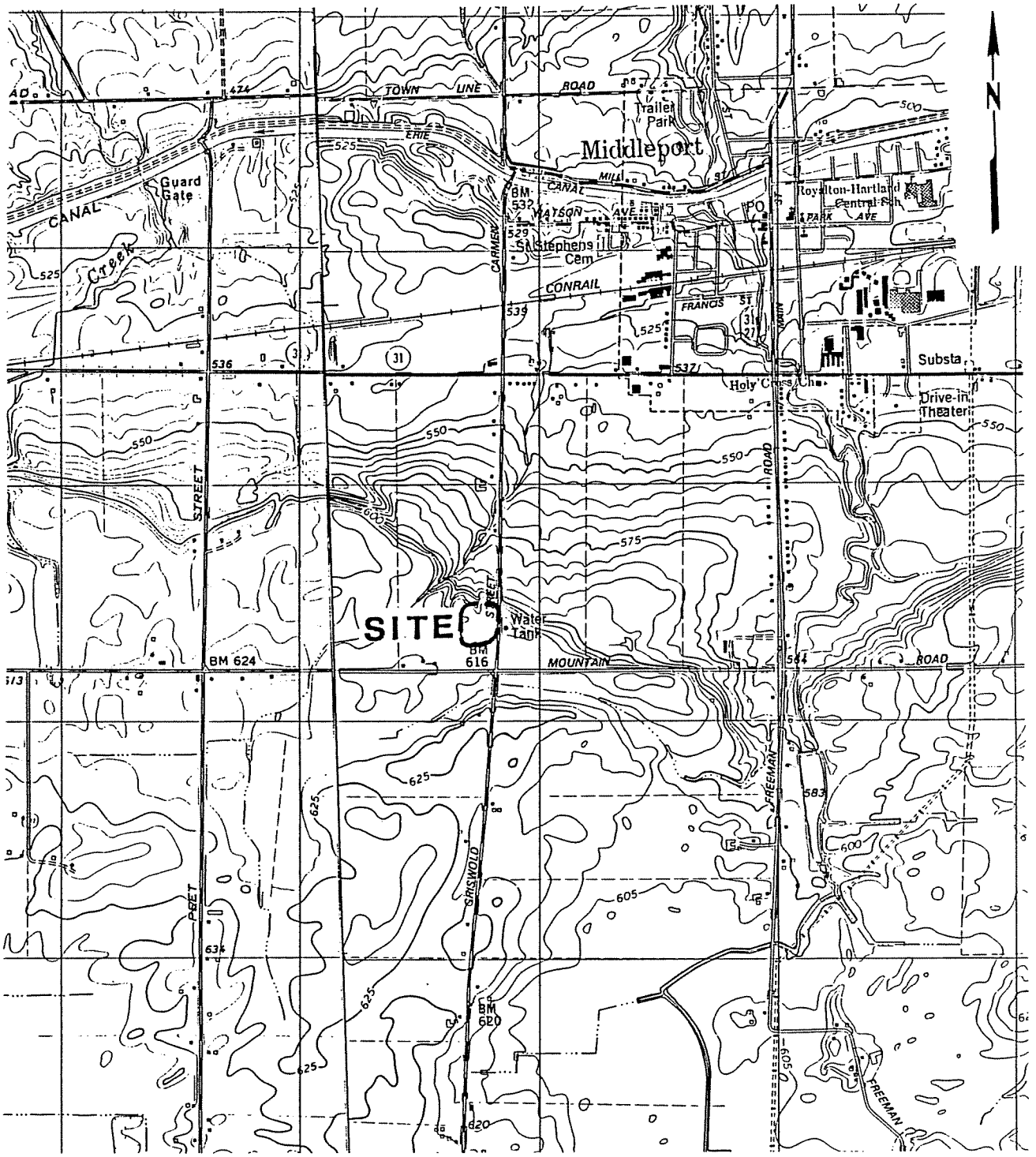
NARRATIVE SUMMARY

The 5-acre Town of Royalton landfill, owned by Douglas Ortman, is located in Royalton, Niagara County, New York. From 1958 to 1978, Mr. Ortman leased the property to the Royalton Highway Department for use as a municipal landfill. The site was formerly a rock quarry and is assumed to be unlined (NCHD, Site Profile Report).

It is estimated that approximately 97,000 cubic yards of municipal refuse, excluding intermediate fill and fill cover, were received at the site during its 20 years of operation. Leachate seeps from the north slope of the landfill have been a frequent problem entering a drainage ditch located north of the landfill. In March of 1982, water and soil samples from the ditch were collected by the NYSDEC at the point of leachate entry and a water sample was taken 150 feet upstream. Comparison of water quality parameters indicated significant increases in iron, zinc, and total organic carbon, and slight increases in other metals at the point of leachate entry. The soil sample taken at that point also showed slightly elevated levels of iron and zinc (NCHD, Site Profile Report).

The depth to bedrock in the vicinity of the site is approximately 20 to 30 feet below ground surface. The bedrock in this area forms aquifers of highly mineralized groundwater. There are private drinking water supply wells in use within 3 miles of the Town of Royalton Landfill site (Ontman, 1985). However, the bedrock aquifer, the aquifer of concern, is not the same aquifer that local residents and the Town of Middleport obtain their drinking water. Middleport is on the Niagara County Municipal Water Supply System (Hopkins, 1987).

In 1973, the NYSDEC and the Town of Royalton entered into a consent agreement requiring the improvement of landfill management practices (e.g., daily cover, security, proper drainage, etc.). No other legal action has been taken. The landfill is presently closed (NYSDEC, Order of Consent, 1973).



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SITE LOCATION MAP
TOWN OF ROYALTON

FIGURE ii-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Medina, NY (1980) and Gasport, NY
(1979) Quadrangles

Facility Name: Town of Royalton Landfill

Location: Griswold St., Royalton, NY

EPA Region: II

Person(s) in charge of the facility: Douglas Ortman, Owner

Name of Reviewer: S. J. Tiffany Date: 4/18/85

General Description of the facility:

Site was operated as a municipal landfill for 20 years. An estimated 97,000 cubic yards of refuse has been landfilled on-site. No hazardous wastes are known to have been disposed of in the municipal landfill. Leachate seeps have been a reocurring problem and heavy metals (i.e., iron, zinc) were detected in soil and water samples collected at the site. Significant concentrations of TOC were also found in the leachate sample collected.

Scores: $S_M = 6.19$ ($S_{gw} = 7.16$ $S_{sw} = 7.96$ $S_a = 0$)

$S_{FE} = 0$

$S_{DC} = 0$

Facility Name: Town of Royalton Landfill Date: 5/21/85

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	2	3	
Permeability of the Unsaturated Zone	0 1 2 (3)	1	3	3	
Physical State	0 (1) 2 3	1	1	3	
Total Route Characteristics Score			12	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					3.5
Ground Water Use	0 1 (2) 3	3	6	9	
Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1		40	
Total Targets Score			6	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			4,104	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 7.16		

GROUND WATER ROUTE WORK SHEET

Facility Name: Tn of Royalton Landfill Date: 5/21/85

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	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	2	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			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	1	8	
Total Waste Characteristics Score			19	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	0	6	
Population Served/ Distance to Water	(0) 4 6 8 10 12 16 18 20	1	0	40	
Intake Downstream	24 30 32 35 40				
Total Targets Score			6	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			5130	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 7.96		

SURFACE WATER ROUTE WORK SHEET

Facility Name: Tn of Royalton Landfill Date: 5/21/85

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: Town of Royalton Landfill - 3/25/85					
Sampling Protocol: HNU Meter					
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	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]			0	35,100	
[5] Divide line [4] by 35,100 and multiply by 100			S_a = (0)		

AIR ROUTE WORK SHEET

Facility Name: Town of Royalton Landfill Date: 5/21/85

Worksheet for Computing S_M

	S	S^2
Groundwater Route Score (S_{gw})	7.16	51.27
Surface Water Route Score (S_{sw})	7.96	63.52
Air Route Score (S_a)	0.00	0.00
$S_{gw}^2 + S_{sw}^2 + S_a^2$		114.79
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		10.71
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		6.19

WORK SHEET FOR COMPUTING S_M

Facility Name: In of Royalton Landfill Date: 5/21/85

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1	0	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		

FIRE AND EXPLOSION WORK SHEET

Facility Name: Tn of Royalton Landfill Date: 5/21/85

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	3	3	8.2
3 Containment	0 (15)	1	15		8.3
4 Waste Characteristics Toxicity	(0) 1 2 3	5	0	15	8.4
5 Targets					8.5
Population Within 1-Mile Radius	0 1 (2) 3 4 5	4	8	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			8	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		

DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

FACILITY NAME: Town of Royalton Landfill

LOCATION: Griswold St., Royalton, NY

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

Groundwater not analyzed for contamination (NYSDEC Registry Sheet, 12/83).

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2. ROUTE CHARACTERISTICS

(Niagara County Health Department, Site Profile Report)

Depth to Aquifer of Concern

Name/description of aquifer(s) in concern:

Bedrock aquifer in either limestone or shale.

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

Unknown, possibly approximately 20 to 30 feet (ES and D&M Site visit, 3/25/85).

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

Unknown, possibly 20' (Site Visit, 1985, and estimated based on quarry history).

Net Precipitation

(U.S. Dept. of Commerce, National Climatic Center, Climatic Atlas of the United States, 1979).

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

Mean annual precipitation is 36".

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

Mean annual lake evaporation is 27".

Net precipitation (subtract the above figures):

9" (36" - 27" = 9").

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

None, waste is directly on top of bedrock.

Permeability associated with soil type

Waste material probably very permeable (10^{-1} to 10^{-3} cm/sec) (estimated based on Site Visit, 1985).

Physical State

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

Solid (municipal refuse) (NCHD Site Profile Report).

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Unlined landfill, no run-on control (Niagara County Health Department, Site Profile Report).

Method with highest score:

Unlined landfill, no run-on control - 3.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Heavy metals (iron, zinc, chromium, and copper).

Compound with highest score:

Heavy metals (toxicity = 3; persistence = 3) - 18.

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):

Approximately 10^6 cubic ft = 97,000 cubic yards (excluding 20% fill and intermediate and final cover) = 48,500 tons of municipal waste (it is not known what portion of wastes, if any, is hazardous). (Site Inspection conducted by ES and D&M, 3/25/85).

Basis of estimating and/or computing waste quantity:

Assume a square 5 acre site with a right triangle cross section, 30 feet in depth. Calculate using formula of (1/2) (base) (height) for cross section and multiply by the square root of 5 acres. Subtract 20% for fill (shape of landfill is based on site visit, 3/25/85). Also assume 1,000 lbs/cubic yards for in place disposal weight for municipal solid waste. (Estimates based on site dimensions and ES and D&M site inspection, 3/25/85). For purposes of rating the site, 1 to 10 cubic yards of hazardous wastes were assumed to be disposed on-site because contaminants have been detected.

5. TARGETS

Groundwater Use

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

There are private drinking water supply wells in use within 3 miles of the site (Ontman, 1985). However, the bedrock aquifer, the aquifer of concern, is not the same aquifer that local residences and the Town of Middleport use. Middleport is on the Niagara County Municipal Water Supply System (Hopkins, 1987).

Distance to Nearest Well

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

Not applicable. The wells within 3 miles of the site do not withdraw water from the bedrock aquifer (Hopkins, 1987).

Distance to above well or building:

Not applicable.

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:

No municipal wells within 3 miles, numerous private wells, however, these wells do not obtain water from the bedrock aquifer (NYS Atlas of Community Water System Sources, 1982 and Site Visit, 1985).

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):

None.

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

None (Hopkins, 1987).

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

Iron, zinc, chromium, and copper detected in downstream sample (NCHD, Site Profile Report, samples collected by NYSDEC, 1982).

Rationale for attributing the contaminants to the facility:

Samples were collected in the ditch at the point of entry and at a point approximately 150 feet upstream from the point of entry (NYSDEC Site Profile Report).

2. ROUTE CHARACTERISTICS

(USGS Topographic Maps: Lockport and Medina Quadrangles)

Facility Slope and Intervening Terrain

Average slope of facility in percent:

3.8%.

Name/description of nearest downslope surface water:

Man-made drainage ditch which flows to an unnamed stream. The stream in turn flows to Jeddo Creek which flows through a culvert under the Barge Canal (Hopkins, 1987).

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

10%.

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

No.

Is the facility completely surrounded by areas of higher elevation?

No.

1-Year 24-Hour Rainfall in Inches

2.1" (U.S. Department of Commerce Technical Paper No. 40).

Distance to Nearest Downslope Surface Water

0.08 mile to the drainage ditch which connects to an unnamed stream. This stream flows to Jeddo Creek (Hopkins, 1987).

Physical State of Waste

Solid (municipal refuse and possibly industrial waste).
Note: No records exist which indicate that industrial/hazardous wastes were disposed of in the Town of Royalton Landfill.

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Unlined landfill; diversion system and cover unsound (ES and D&M Site Inspection, 3/25/85).

Method with highest score:

Unlined landfill; diversion system and cover unsound.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Heavy metals (i.e., iron, zinc, chromium, and copper) (NCHD Site Profile Report).

Compound with highest score:

Heavy metals (toxicity = 3, persistence = 3) - 18.

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):

Approximately 10^6 cubic ft = 97,000 cubic yards (excluding 20% fill, intermediate cover and final cover) = 48,500 tons of municipal waste (it is not known what portion of wastes, if any, are hazardous). (Estimated, based on site dimensions and ES and D&M site inspection, 3/25/85.) For purposes of rating the site, 1 to 10 cubic yards of hazardous waste were assumed to be disposed on-site because contaminants have been detected.

Basis of estimating and/or computing waste quantity:

Assume a square 5 acre site with a right triangle cross section, 30 feet in depth. Calculate using formula of (1/2) (base) (height) for cross section and multiply by the square root of 5 acres. Subtract 20% for fill. Assume 1,000 lbs/cubic yards for in place disposal weight for municipal solid waste. (Shape of landfill is based on site visit, 3/25/85.)

* * *

5. TARGETS

Surface Water Use

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

Recreation.

Is there tidal influence?

No.

Distance to a Sensitive Environment

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

None within 2 miles (western NYS not a coastal area).

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

None within 1 mile (NYS Wetlands Maps).

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

None within 1 mile (NYSDEC Region 9, Division of Fish & Wildlife Files).

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:

None within specified distances (NYS Atlas of Community Water System Sources, 1982).

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

Not applicable.

Total population served:

Not applicable.

Name/description of nearest of above water bodies:

Not applicable.

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

Not applicable.

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

None.

Date and location of detection of contaminants:

ES and D&M site visit, 3/25/85.

Methods used to detect the contaminants:

HNu meter readings were taken and all readings were less than 1 ppm, indicating no air releases

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

No reactive compounds are known to exist on-site.

Most incompatible pair of compounds:

No incompatible compounds are known to exist on-site.

Toxicity

Most toxic compound:

No known toxic compounds accessible to the air pathway are known to exist on-site.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Unknown, no records are known to exist which indicate that hazardous wastes were disposed on-site.

Basis of estimating and/or computing waste quantity:

Not applicable.

* * *

3. TARGETS

Population Within 4-Mile Radius

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

(0 to 4 mi) 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

5,478 people (Compiled from 1980 US Bureau of the Census Data).

Distance to a Sensitive Environment

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

None within 2 miles (western NYS not a coastal area).

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

None within 1 mile (NYS Wetlands Maps).

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

None within 1 mile (NYSDEC Region 9, Division of Fish & Wildlife Files).

Land Use

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

Approximately 1 mile.

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

More than 2 miles (USGS Topographic Map: Medina, NY Quadrangle).

Distance to residential area, if 2 miles or less:

Approximately 1 mile to Village of Middleport, NY (USGS Topographic Map: Medina, NY Quadrangle).

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

Approximately 100', adjacent to site (ES and D&M Site Inspection, 3/25/85).

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

Unknown.

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

No.

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

No information was discovered during the Phase I study which indicates that a fire and explosion situation existed or presently exists at the site.

Type of containment, if applicable:

Not applicable, see above comment.

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No measurements to determine the fire and explosion potential were taken on-site.

Ignitability

Compound used:

No ignitable compounds are known to exist on-site.

Reactivity

Most reactive compound:

No reactive compounds are known to exist on-site.

Incompatibility

Most incompatible pair of compounds:

No incompatible compounds are known to exist on-site.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

No hazardous waste are known to be disposed on-site that create a potential fire and explosion situation.

Basis of estimating and/or computing waste quantity:

No applicable, see above comment

* * *

3. TARGETS

Distance to Nearest Population

Approximately 1 mile to the Village of Middleport, NY (USGS Topographic Map: Medina, NY Quadrangle).

Distance to Nearest Building

0.2 mile (ES and D&M Site Inspection, 3/25/85).

Distance to Sensitive Environment

Distance to wetlands:

None within 1 mile of the site (NYS Wetlands Maps).

Distance to critical habitat:

None within 1 mile (NYSDEC, Region 9, Department of Fish and Wildlife, 1985).

Land Use

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

Approximately 1 mile to the Village of Middleport, NY (USGS Topographic Map: Medina, NY Quadrangle).

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

More than 2 miles (USGS Topographic Map: Medina, NY Quadrangle).

Distance to residential area, if 2 miles or less:

Approximately 1 mile to the Village of Middleport, NY (ES and D&M Site Inspection, 3/25/85).

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

Approximately 100 feet, adjacent to site (ES and D&M Site Inspection, 3/25/85).

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

Unknown.

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

No.

Population with 2-Mile Radius

926 people (US Census Data, 1980).

Buildings Within 2-Mile Radius

244 buildings (USGS Topographic Map: Medina, NY Quadrangle).

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

There is no confirmed instance in which contact with hazardous substances at this site has caused injury, illness or death to humans or domestic or wild animals.

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Barriers do not completely surround the site (ES and D&M Site Inspection, 3/25/85).

* * *

3. CONTAINMENT

Type of containment, if applicable:

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

There are no hazardous wastes known to be disposed on-site that pose a direct contact threat.

Compound with highest score:

Not applicable.

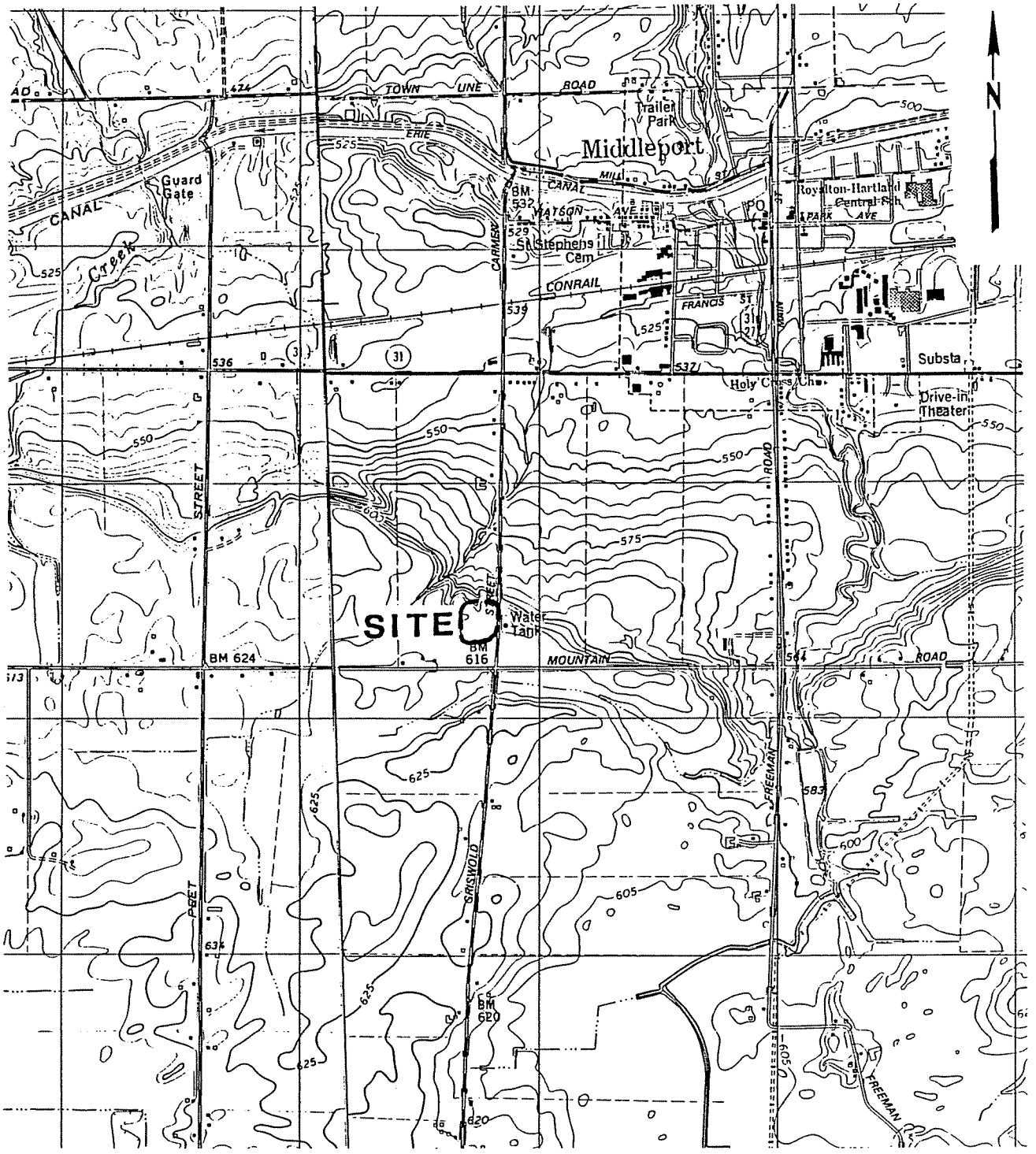
5. TARGETS

Population within one-mile radius

265 people (US Census Data, 1980).

Distance to critical habitat (of endangered species)

None within 1 mile (NYSDEC Region 9, Division of Fish and Wildlife, 1985).



SCALE

0 1000 2000 3000 4000 FEET

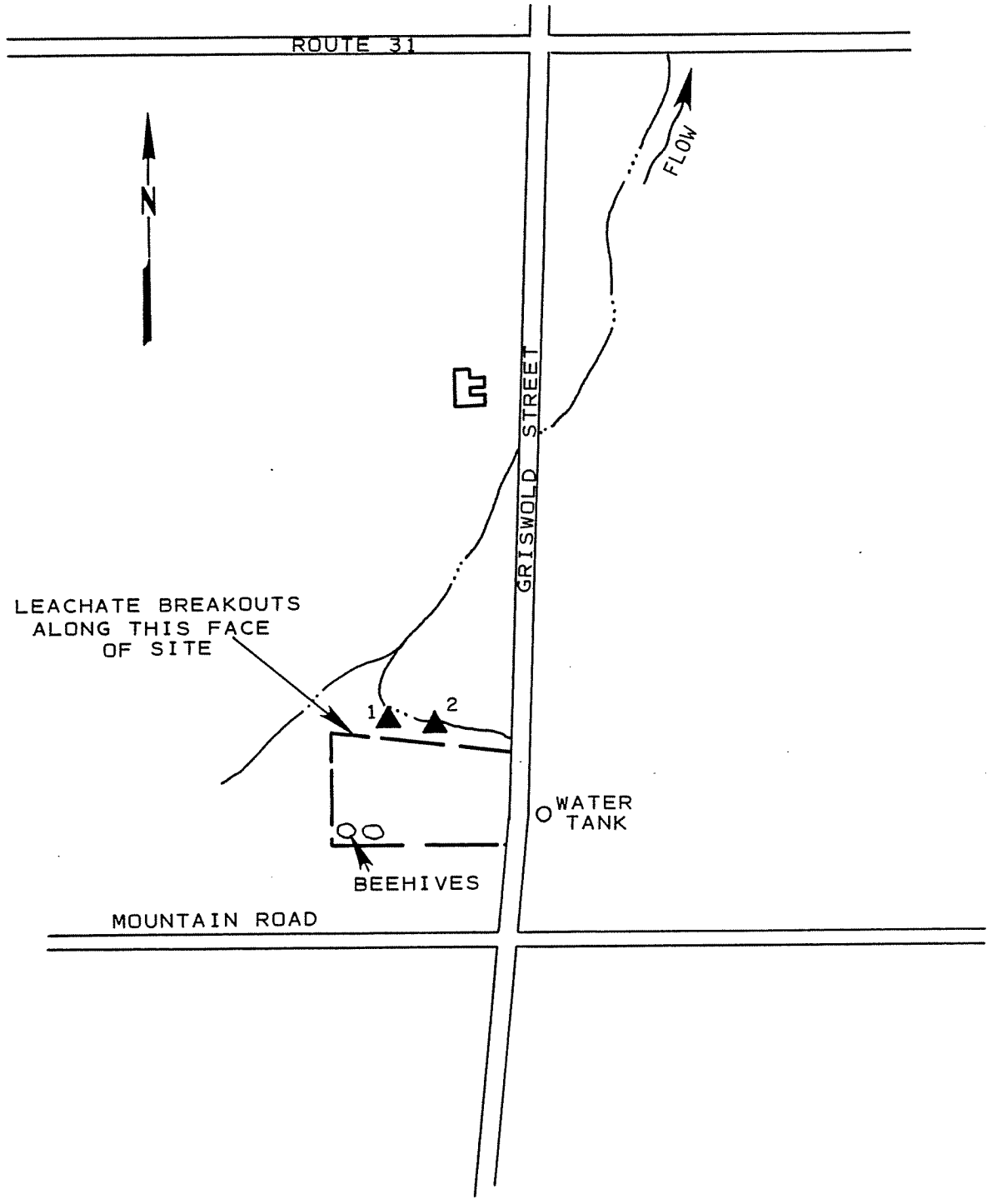
ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
TOWN OF ROYALTON

FIGURE iv-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Medina, NY (1980) and Gasport, NY
(1979) Quadrangles



EXPLANATION:

▲1 SAMPLE POINT

#1 SOIL AND WATER

#2 WATER ONLY

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DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

PLOT PLAN

TOWN OF ROYALTON

FIGURE iv-2

HRS REFERENCES

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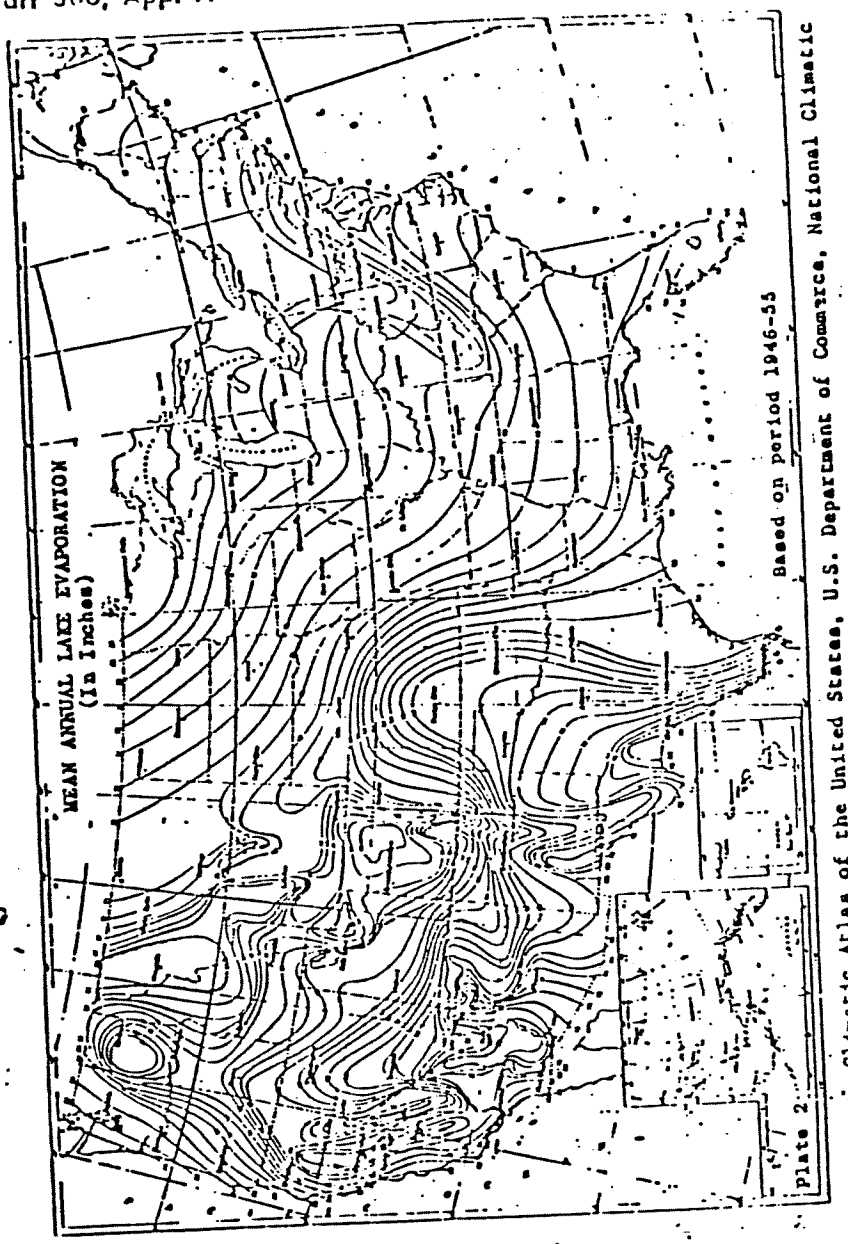
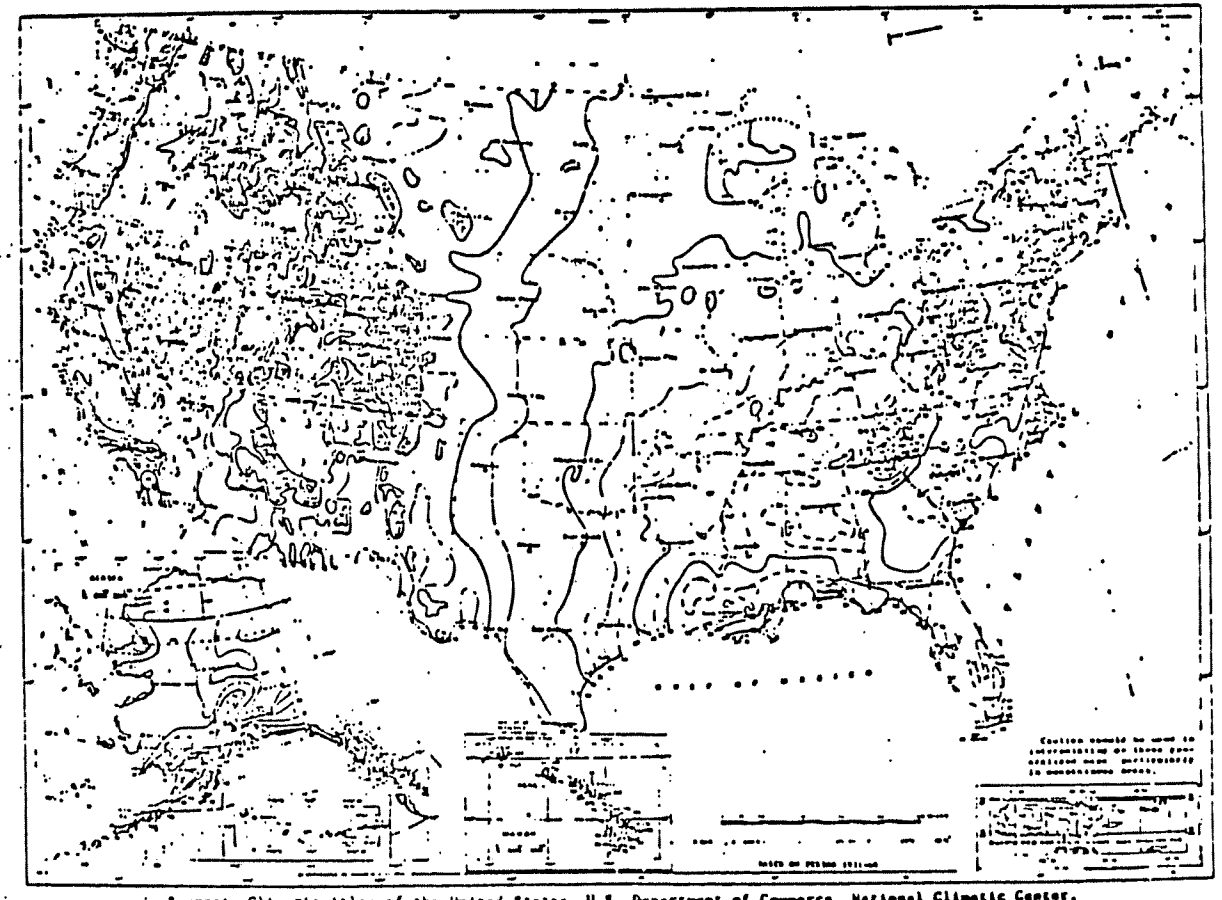


Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Ashville, N.C., 1979.

Figure 4

Mean Annual Lake Evaporation (In Inches)

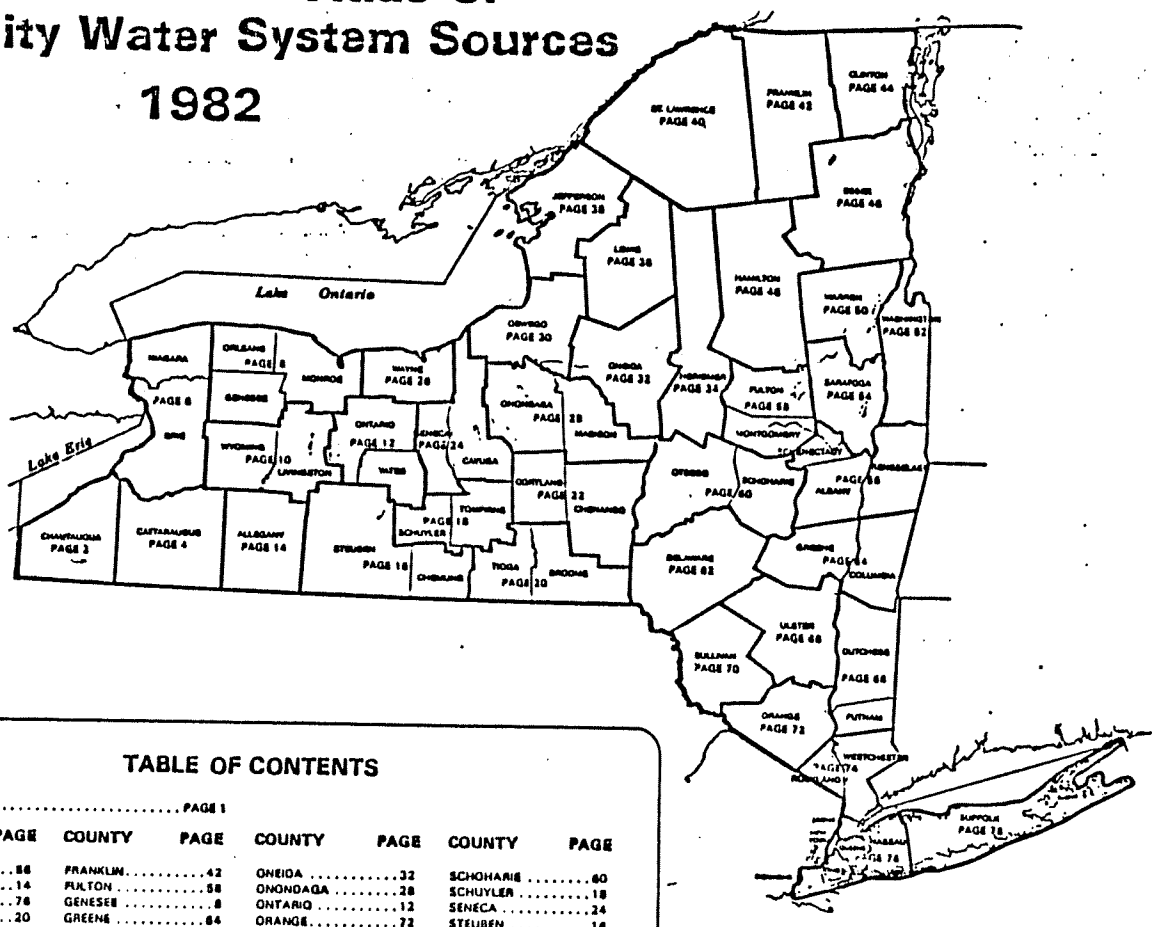


Source: Climatic Atlas of the United States, U.S. Department of Commerce, National Climatic Center, Asheville, N.C., 1979.

Figure 5
Normal Annual Total Precipitation (inches)

New York State Atlas of Community Water System Sources 1982

NEW YORK STATE
DEPARTMENT OF HEALTH



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LEGEND

BOUNDARIES AND PLACES

International
State
County
Town
Indian Reservation
City
Village
Unincorporated Place
Federal Reservation
Built-up Area (Over 25,000 population including any contiguous city or village)

CLASSIFICATION OF POPULATED PLACES

100,000 or more ..... YONKERS
50,000 to 100,000 ..... Levittown
12,500 to 50,000 ..... Poughkeepsie
2,500 to 12,500 ..... Hampton Bays
250 to 2,500 .....
250 or less .....

TRANSPORTATION

Highways
Divided Highways
Full Control of Access
Partial or No Control of Access
Undivided Highway
Interchange
Touring Route (State, U.S., Interstate or State Parkway)
Touring Route Markers
State U.S.; Interstate
Railroads
Operating Line
Service Discontinued
Operator
Owner (If Other than Operator)
Company Having Trackage Rights
Airports (Open to the Public, Military)
Runway under 4000'
Runway over 4000'
Rest Areas
Food, Gas, Rest Rooms
Rest Rooms
Gas, Rest Rooms
Parkway Only

RECREATION FACILITIES

State or National Recreation Area
State Campground
State Boat Launching Site
State Canal Park
State Fish Hatchery
Other State Recreation Site

REF-2

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

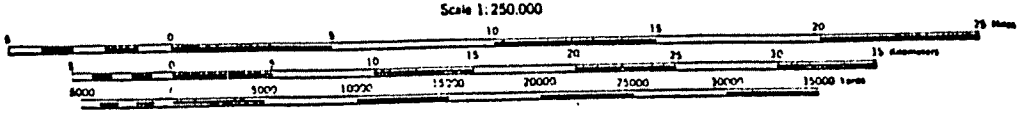
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

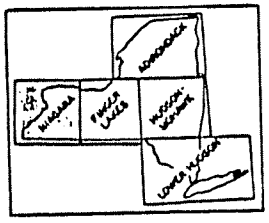
ERIE and NIAGARA COUNTIES

QUATERNARY GEOLOGY OF NEW YORK, NIAGARA SHEET

by Ernest H. Muller

Muller, Ernest H. (1977)
New York State Museum and Science Service
Map and Chart Series Number 28





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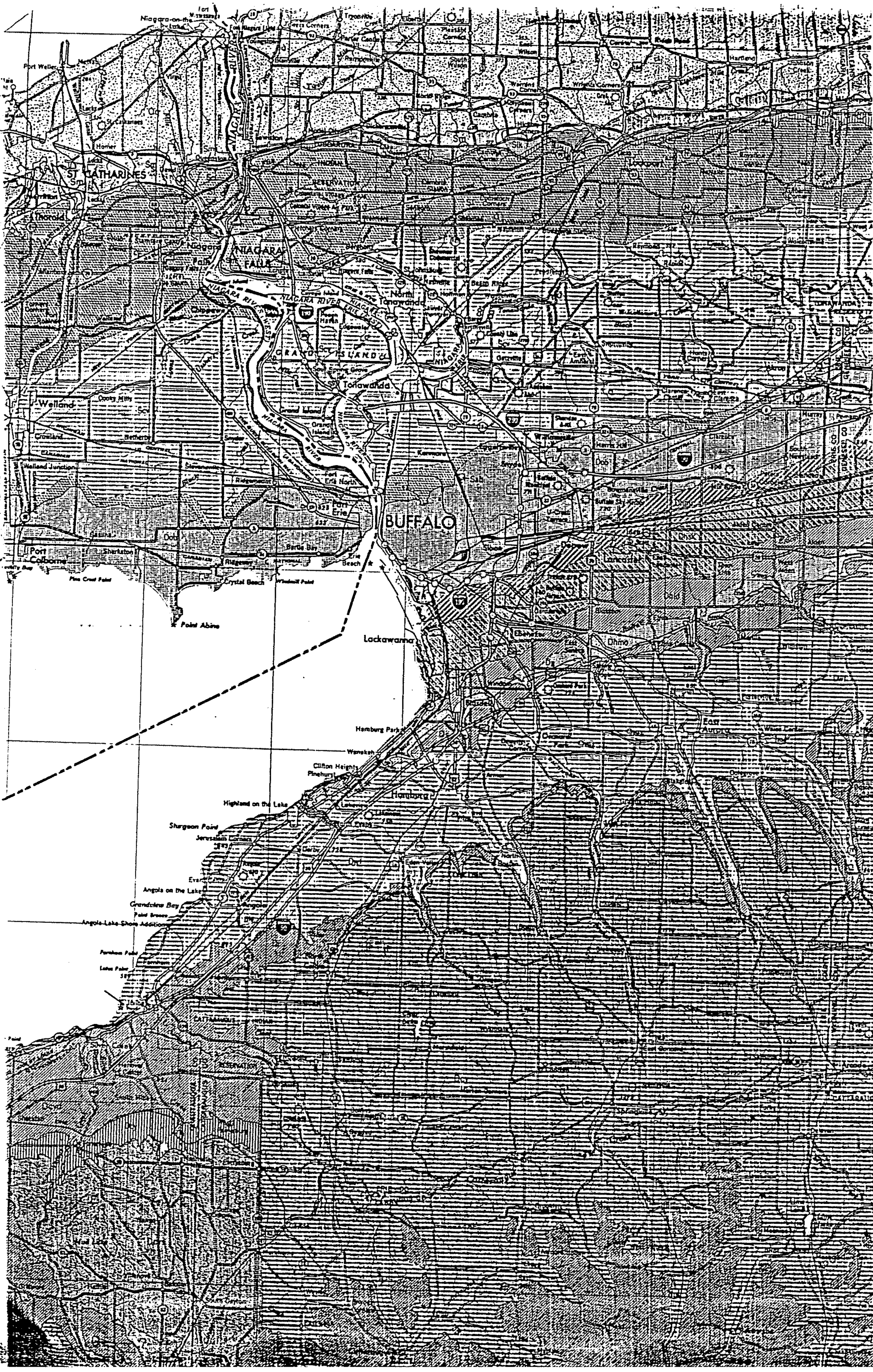
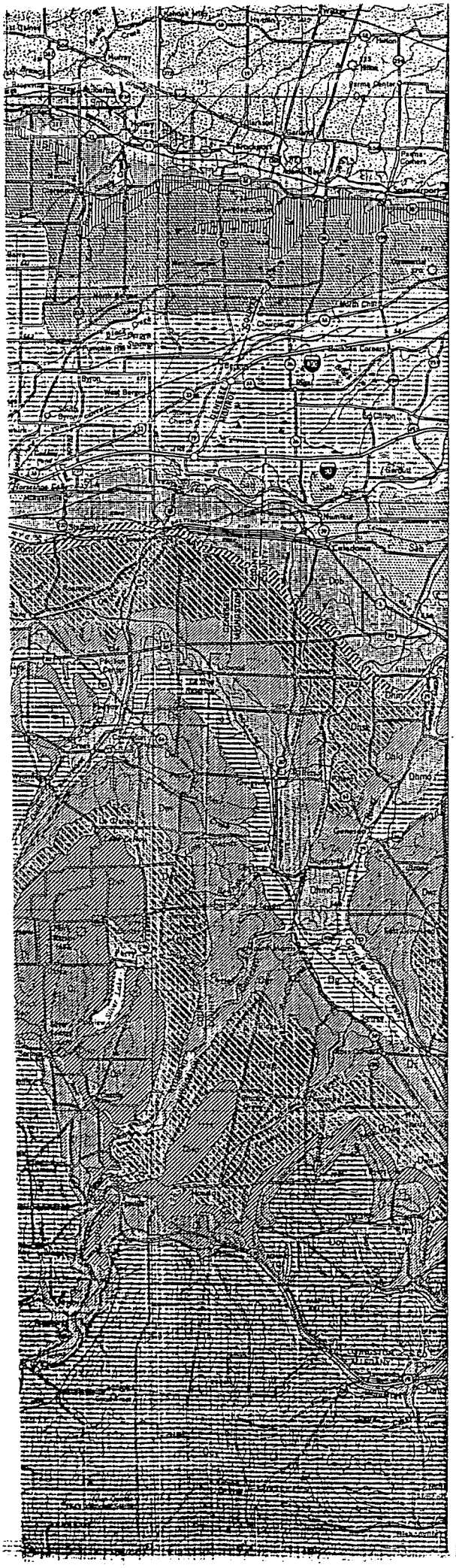


Niagara-on-the-Lake
Youngstown
Port Weller
ST. CATHARINES
Thorold
NIAGARA FALLS
Lockport
North Tonawanda
GRAND ISLAND
Tonawanda
Welland
Crowland
Welland Junction
Port Colborne
Sherkston
Crystal Beach
Point Abino
Ridgeway
Fort Erie
BUFFALO
Kenmore
Lancaster
Lackawanna
East Aurora
Hamburg Park
Wanakah
Clifton Heights
Pinehurst
Hamburg
Highland on the Lake
Sturgeon Point
Jerusalem Corners
Angola on the Lake
Grandview Bay
Angola-Lake Shore Addition



PALEOZOIC

Upper Devonian

POTTSVILLE GROUP — Lower Pennsylvanian

Pp — Connoquenessing Formation—sandstone, shale; Sharon Formation—shale, sandstone, conglomerate; Olean Conglomerate 50-100 ft. (15-30 m.)

POCONO GROUP — Lower Mississippian

Mp — Cuyahoga Formation—shale, sandstone; Corry Sandstone; Knapp Formation 60-100 ft. (20-30 m.)—shale, conglomerate.

CONEWANGO GROUP
450-650 ft. (140-200 m.)

Dco — Oswayo and Venango Formations—shale, siltstone, sandstone; replaced eastwardly by Cattaraugus Formation—shale, sandstone, conglomerate.

CONNEAUT GROUP
250-600 ft. (75-200 m.)

Dct — In west: Ellicott and Dexterville Formations—shale, siltstone.
In east: Germania Formation—shale, sandstone; Whitesville Formation—shale, sandstone; Hinsdale Sandstone; Wellsville Formation—shale, sandstone; Cuba Sandstone.

CANADAWAY GROUP
700-1200 ft. (210-370 m.)

Dcys — Northeast Shale; Shumla Siltstone.
Dcyl — Westfield Shale; Laona Siltstone.
Dcyd — Gowanda, South Wales, and Dunkirk Shales.
Dcy — Machias Formation—shale, siltstone; Rushford Sandstone; Caneadea, Canisteo, and Hume Shales; Canaseraga Sandstone; South Wales and Dunkirk Shales.

JAVA GROUP
100-200 ft. (30-60 m.)

Dj — Hanover Shale; Wiscoy Formation—sandstone, shale; Pipe Creek Shale.

WEST FALLS GROUP
400-950 ft. (120-290 m.)

Dwf — Angola and Rhinestreet Shales.
Dwn — Nunda Formation—sandstone, shale.
Dwg — West Hill and Gardeau Formations—shale, siltstone; Roricks Glen Shale; upper Beers Hill Shale; Grimes Siltstone.
Dwr — lower Beers Hill Shale; Dunn Hill, Millport, and Moreland Shales.

SONYEA GROUP
50-200 ft. (15-60 m.)

Ds — Cashaqua and Middlesex Shales.

GENESEE GROUP
10-150 ft. (3-45 m.)

Dg — West River Shale; Genundewa Limestone; Penn Yan and Geneseo Shales; North Evans Limestone.

Middle Devonian

HAMILTON GROUP
200-500 ft. (60-150 m.)

Dhmo — Moscow Formation—Windom and Kashong Shales, Menteth Limestone Members.
Dhld — Ludlowville Formation—Deep Run Shale, Tichenor Limestone, Wanakah and Ledyard Shales, Centerfield Limestone Members.
Dhsk — Skaneateles Formation—Levanna Shale, Stafford Limestone Members.
Dhmr — Marcellus Formation—Oatka Creek Shale Member.

Lower Devonian

ONONDAGA AND BOIS BLANC LIMESTONES
150 ft. (45 m.)

Dob — In New York: Onondaga Limestone—Seneca, Morehouse (cherty), and Clarence Limestone Members, Edgecliff cherty Limestone Member, local coral bioherms; Bois Blanc Limestone—sandy, thin, discontinuous.
In Ontario: Dundee Limestone; Lucas Formation—dolostone, limestone (Anderdon); Amherstburg Formation—limestone, dolostone, sandstone (Sylvania); Bois Blanc Formation—dolostone, limestone, sandstone (Springvale).
Do — Oriskany Sandstone.

Upper Silurian

AKRON DOLOSTONE AND SALINA GROUP
400-700 ft. (120-210 m.)

Sab — Akron Dolostone; Bertie Formation—dolostone, shale.
Scv — Camillus, Syracuse, and Vernon Formations—shale, dolostone, salt, and gypsum.

LOCKPORT GROUP
150-200 ft. (45-60 m.)

Sl — Guelph, Oak Orchard, Eramosa, and Goat Island Dolostones; Gasport Limestone—local bioherms.

Lower Silurian

CLINTON GROUP
100-150 ft. (30-45 m.)

Scl — Decew Dolostone; Rochester Shale; Irondequoit and Merriton Limestones.
Sr — Decew Dolostone; Rochester Shale.
Sik — Irondequoit Limestone; Rockway Dolostone; Hickory Corners Limestone; Neahga Shale; Kodak Sandstone.

MEDINA GROUP AND QUEENSTON FORMATION
800 ft. (250 m.)

Sm — Thorold Sandstone; Grimsby Formation—sandstone, shale; Power Glen and Cabot Head Shales; Whirlpool Sandstone.
Oq — Queenston Shale.

Upper Ordovician

REF-4

NYS WETLANDS MAPS

NYS Wetlands Maps were reviewed during the Phase I investigation. Individual maps for each site were not obtained and are, therefore, not included in the Phase I reports. Site specific information collected concerning the location of a wetland within 1 mile of a given site is recorded in the documentation section of each report.

(47-15-11 (10/83)

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

PRIORITY CODE: 2a SITE CODE: 932092

NAME OF SITE: Town of Royalton REGION: 9

STREET ADDRESS: Griswald Road, 1/2 Mi. S. of Rochester Rd.

TOWN/CITY: Royalton COUNTY: Niagara

NAME OF CURRENT OWNER OF SITE: Town of Royalton

ADDRESS OF CURRENT OWNER OF SITE: 5316 Royalton Ctr. Rd., Middleport, NY

TYPE OF SITE: OPEN DUMP ☐ STRUCTURE ☐ LAGOON ☐
LANDFILL ☒ TREATMENT POND ☐

ESTIMATED SIZE: 8 ACRES

SITE DESCRIPTION:

This site was used for the disposal of municipal/residential wastes. The site closed in 1979, but has experienced problems with midnight dumping and leachate following closure.
Soil and water samples were collected from the site in 1982. The soil sample showed elevated concentrations of iron and zinc. The concentration of iron was elevated in the water samples. Leachate was observed leaving the site during the sample collection.

HAZARDOUS WASTE DISPOSED: CONFIRMED ☐ SUSPECTED ☒

TYPE AND QUANTITY OF HAZARDOUS WASTES DISPOSED:

TYPE	QUANTITY (POUNDS, DRUMS, TONS, GALLONS)
None known	

TIME PERIOD SITE WAS USED FOR HAZARDOUS WASTE DISPOSAL:

Unknown, 19 ___ TO _____, 19 73

OWNER(S) DURING PERIOD OF USE: Town of Royalton

SITE OPERATOR DURING PERIOD OF USE: Same

ADDRESS OF SITE OPERATOR: Same as above

ANALYTICAL DATA AVAILABLE: AIR ☐ SURFACE WATER ☒ GROUNDWATER ☐
SOIL ☒ SEDIMENT ☐ NONE ☐

CONTRAVENTION OF STANDARDS: GROUNDWATER ☐ DRINKING WATER ☐
SURFACE WATER ☐ AIR ☐

SOIL TYPE: Silt loam

DEPTH TO GROUNDWATER TABLE: Unknown

LEGAL ACTION: TYPE: None STATE ☐ FEDERAL ☐
STATUS: IN PROGRESS ☐ COMPLETED ☐
REMEDIAL ACTION: PROPOSED ☐ UNDER DESIGN ☐
IN PROGRESS ☐ COMPLETED ☐

NATURE OF ACTION: None

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Leachate appears to be characteristic of municipal refuse disposal sites. Extent of problem is unknown, but leachate is reaching surface water and may be impacting groundwater.

ASSESSMENT OF HEALTH PROBLEMS:

[illegible]

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME Peter Buechi
TITLE Assoc. Sanitary Engr.
NAME Roberto A. Olazagasti
TITLE Solid Waste Management Spec.
DATE: Nov. 18, 1983

NEW YORK STATE DEPARTMENT OF HEALTH

NAME R. Tramontano
TITLE Bur. Tox. Subst. Assess.
NAME
TITLE
DATE: 12/83

REF-6

INTERVIEW FORM

INTERVIEWEE/CODE Jim Snyder Mike Wilkenson /
TITLE - POSITION NYSDEC, Div of Fish & Wildlife
ADDRESS Delaware Ave
CITY Buffalo STATE NY ZIP
PHONE ( ) RESIDENCE PERIOD TO
LOCATION In DEC office INTERVIEWER Eileen Milligan
DATE/TIME 1/10/85 & 1/11/85 /
SUBJECT: Phase I site information

REMARKS: The above-named interviewees provided us with the following information regarding our Phase I site. (See attached list)

1) Wetlands in Niagara Co. & proximity to sites
2) Types of fish & wildlife in Erie/Niagara area
3) Use by fish & wildlife of Niagara River & tributaries
4) Sensitive environments & proposed wetlands in the Erie/Niagara area

Town of Royalton Landfill - There is not critical habitat of an endangered species within one mile of the landfill site.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: James R. Snyder - Jr. Wildlife Biologist
Michael A. Williams - Conservation Biologist (Aq Biol)

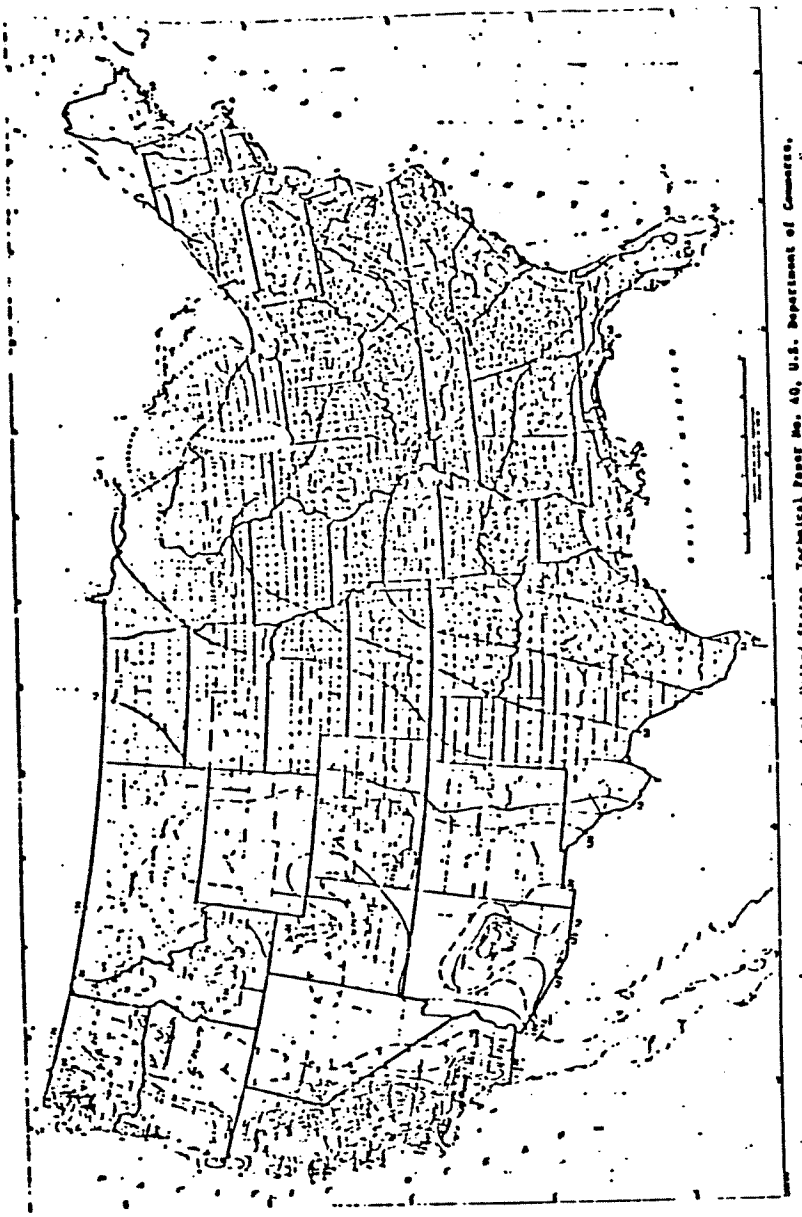
COMMENTS: No discussion of wetlands / wildlife regarding Mid Landfill site - referred to Olson Office

REF-7

US CENSUS DATA, 1980

US Census Data used in the HRS scoring was obtained from various County Planning Offices. This data was not obtained from a report. The raw census data combined with County Planning Maps was used to estimate the population within 1, 2, 3, and 4 miles of the Phase I site being investigated. Because of the voluminous amount of data used, the data is not provided in this Appendix.

REF-8

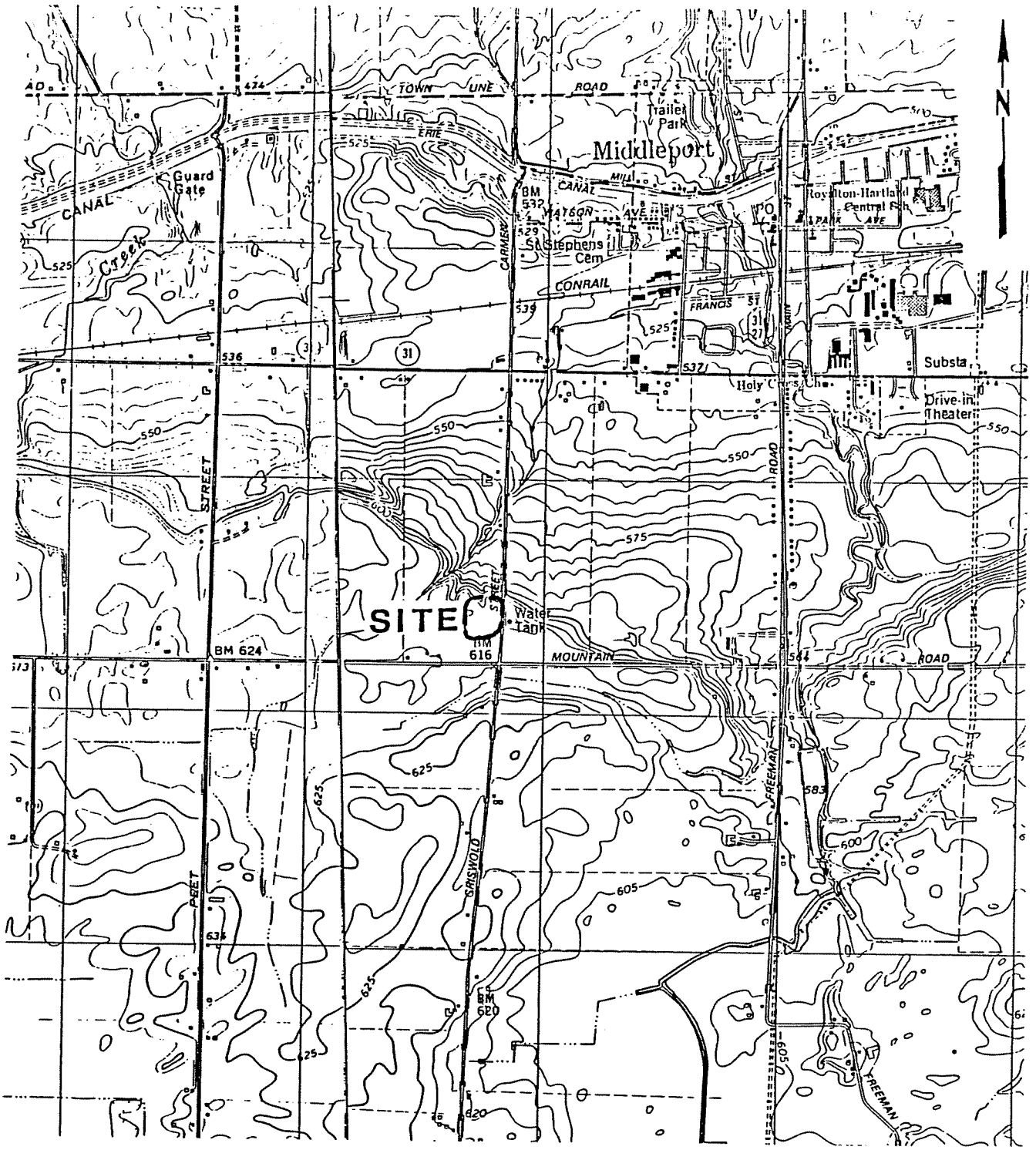


Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963.

Figure 8

1-Year 24-Hour Rainfall (Inches)

REF-9



SCALE

0 1000 2000 3000 4000 FEET

ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
TOWN OF ROYALTON

FIGURE I-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Medina, NY (1980) and Gasport, NY
(1979) Quadrangles

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000514430

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Town of Royalton Landfill	Griswold Rd, 1/2 mi S of Rochester Rd

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Royalton	NY		Niagara	063	36

09 COORDINATES LATITUDE	LONGITUDE
43 11 30.	078 34 42.

10 DIRECTIONS TO SITE (Starting from nearest public road)
1/2 mile south from intersection of Griswold & Rochester Rds, Middleport
Turn right onto access rd.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Douglas Ortman	4240 Griswold Rd

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Middleport	NY		(716) 735-7414

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Town of Royalton Highway Dept	5016 Royalton Center Rd

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Middleport	NY	14105	(716) 772-7926

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 3 31 82 (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)	03 YEARS OF OPERATION	
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	1958 (BEGINNING YEAR)	1978 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Municipal wastes

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Leachate breakouts enter drainage ditch on north side of landfill. Ditch enters stream which enters the Barge Canal at Middleport

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
S. Robert STEELE, II	Engineering-Science (ES	(703) 471-7575

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
(SAME)			( )	___/___/___ (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000514430

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

- TONS: ____
- CUBIC YARDS: 97,000
- 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			The Landfill was used to
OLW	OILY WASTE			dispose of municipal wase
SOL	SOLVENTS			An estimate of 97,000
PSD	PESTICIDES			cubic yards of solid waste
OCC	OTHER ORGANIC CHEMICALS			were disposed at the site
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
	The quantities and type of		hazardous wastes, if any,		
	disposed in the landfill		is unknown. The Landfill		
	was used to dispose of		municipal waste		

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)

Waste volume estimate based on site dimensions

NCHD and NYSDEC Site Profile Reports

EPA

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

I. IDENTIFICATION	
01 STATE: NY	02 SITE NUMBER: D 000 514430

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

unknown

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

Due to leachate migration

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

No

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

No

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

No

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

Due to leachate from site via surface water

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

Due to unlined landfilling on top of bedrock

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

No

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

Unknown

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D000514430

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

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

unknown

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

unknown

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

unlined landfill

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

NO

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No

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

No

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

No

III. TOTAL POPULATION POTENTIALLY AFFECTED: unknown

IV. COMMENTS

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

SI USL 1985

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

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000514430

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Town of Royalton landfill	Griswold Rd, ½ mi. S. of Rochester Rd

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Royalton	NY		Niagara	063	36

09 COORDINATES: LATITUDE 43 11 30.__ | LONGITUDE 078 24 32.__

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

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
3 25 85 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1958 (BEGINNING YEAR) 1978 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR Engineering-Science (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR Dames & Moore (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
S Robert Steele, II	Environmental Scientist	Engineering-Science	(703) 591-7575
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Eileen Gilligan	Geologist	Dames & Moore	(615) 638-2572
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Douglas Ortman	owner	4240 Griswold St. Middleport NY	(716) 735-7414
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10 15 AM	Windy, cold, clear

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
S. Robert STEELE, II	Engineering-Science (ES)	(703) 591-7575

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
SAME		SAME		3 26 85 (MONTH DAY YEAR)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	000574430

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			The landfill was used to dispose
OLW	OILY WASTE			of municipal waste. An estimated
SOL	SOLVENTS			97,000 cubic yards of
PSD	PESTICIDES			waste were disposed at the
OCC	OTHER ORGANIC CHEMICALS			site
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
	The quantity & type of hazardous wastes, if any, disposed in the				
	landfill is unknown. The landfill was used to dispose				
	of municipal waste.				

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)

Interview of Mr Ontman during ES and O&M Site Inspection

NCHD, Site Profile Report

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D 000 514430

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

unknown

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

Due to leachate migration

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

No

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

No

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

No

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

Due to leachate [illegible] on site [illegible]

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

Due to unlined landfilling on top of bedrock

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

No

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

Unknown

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000514430

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

unknown

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

unknown

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

unknown

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

unlined landfill

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

NO

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No

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

No

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

No

III. TOTAL POPULATION POTENTIALLY AFFECTED: unknown

IV. COMMENTS

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

SI list 1985

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	000514430

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	97,000	cy
☐ 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

5 (Acres)

07 COMMENTS

An estimated 97,000 cy of municipal solid waste were disposed of in the Town of Royalton landfill during its 20 years of operation. No hazardous/industrial wastes have been reportedly disposed of on-site

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.

Site was not compacted adequately during landfilling resulting in settlement areas on-site. Leachate outbreaks frequently occur at the west side of the site

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Site has soil cap and establish vegatative cover system

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

NCHD Site Profile Report

Site inspection by ES & and O&M, 3/25/85

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D000514430

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

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

02 STATUS

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

03 DISTANCE TO SITE
A. _____ (mi)
B. 0.2 (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 ~1000 people

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.2 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
~20' (ft)	North	20' (ft)	unknown (gpd)	☐ YES ☐ NO unknown

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)
Numerous private wells in area

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

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
unnamed stream	☒	0.0 (mi)
Cedar Lake pond ~1 mile from site	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 265 NO. OF PERSONS	B. 926 NO. OF PERSONS	C. 2842 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.2 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 244

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.2 (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)
Sparse rural population - 1 mile NE of site is Village of Middleport (small rural village)

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 0000514430

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)
☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)
☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
~~20 to 200~~ (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	3.8 %	N	10 %

09 FLOOD POTENTIAL
SITE IS IN >100 YEAR FLOODPLAIN

10
☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A. >2 (mi) OTHER: B. >1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
MIGRATORY BIRDS 7 1 (mi)
AQVILA CHRYSAETOS
ENDANGERED SPECIES: HALIAEETUS LEUCOCEPH
FALCO PEREGRENES

13 LAND USE IN VICINITY
DISTANCE TO:
COMMERCIAL/INDUSTRIAL: A. ~1 (mi)
RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES: B. 0.08 (mi)
AGRICULTURAL LANDS: PRIME AG LAND: C. unknown (mi) AG LAND: D. 0.02 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site grade is now approximately the same as the original ground surface prior to quarrying and landfilling. Site + surrounding area slope N.

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

Site visit 1985
NYSDEC files.
Niagara County Health Dept. files

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	0000514430

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
HNu	HNu meter readings were taken during the site inspection - all measurements were less than 1 ppm

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)

Site inspection conducted by ES+D E, M, 3/29/85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	04051 4430

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
Douglas Ortman		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE
4240 Griswold St	Middleport	NY	

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	12 CITY	13 STATE	14 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	05 CITY	06 STATE	07 ZIP CODE

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

ES and D&M site Inspection, 3/25/85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000574435

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Town of Royalton Highway Dept	

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
- 1979	Douglas Ortman

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)

ES and O&M Site Inspection, 3/25/85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000574430

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
NONE	
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
UNKNOWN			
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
UNKNOWN			
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
NY	D000514430

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION No	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION ND	02 DATE	03 AGENCY

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000514430

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
Site is covered + vegetated

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NO

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No

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

Site visit 1985

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NV	8000514430

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

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

In 1973, NYSDEC & the Town of Royalton entered into a consent agreement designed to improve landfill management practices (e.g. daily cover, security, proper drainage, etc.)

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

NYSDEC, Order on Consent, September 1973 (File No. 73-40)

EPA FORM 2070-13 (7-81)

SECTION VI

ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

ASSESSMENT OF DATA ADEQUACY

A summary assessment of the adequacy of existing data for completion of the HRS score is presented in Table VI-1. Based on this assessment, the following Phase II work plan and cost estimate has been prepared.

PHASE II WORK PLAN

Objectives

The objectives of the Phase II activities are:

- To collect additional field data necessary to identify the occurrence and extent of contamination and to determine if any imminent health hazard exists.

- To perform a conceptual evaluation of remedial alternatives and estimate budgetary costs for the most likely alternative.

- To prepare a site investigation report including final HRS score.

The additional field data required to complete this investigation are described as follows:

Groundwater - A groundwater monitoring system consisting of 3 wells is recommended. Borings will be drilled to a maximum depth of 25 feet; soil samples will be taken every 5 feet or more frequently if a change in soil lithology is encountered. The wells will be placed in the aquifer of concern and constructed of 2" PVC pipe. The groundwater samples will be analyzed for priority pollutants. Sampling of the downgradient private well should also be conducted. In addition, sieve and hydrometer analyses will be performed on representative samples of the subsurface soils. Finally, an in-situ permeability test will be performed on each well.

Surface Water and Sediment - A surface water and sediment monitoring system consisting of 3 monitoring stations is recommended. One station (S-1) will be upgradient of the site in an unnamed tributary of Eighteen-Mile Creek. Station S-2 will be located in the ditch adjacent to the landfill which drains to the unnamed tributary. Finally, Station S-3 will be located downgradient of the site in the unnamed tributary. The surface water and sediment samples will be analyzed for priority pollutants.

Air - An air monitoring survey with an HNU meter is recommended to test the air quality during site activities.

TASK DESCRIPTION

The proposed Phase II tasks are described in Table VI-2 as required under the site specific health and safety plan and quality assurance plan which must be submitted prior to initiation of field activities. The proposed monitoring well and sampling location are presented in Figure VI-1.

COST ESTIMATE

The estimated man-hours required for the Phase II project are presented in Table VI-3 and the estimated project costs by tasks are presented in Table VI-4. The estimated total cost for this project is $44,972.

TABLE VI-1

ASSESSMENT OF DATA ADEQUACY

HRS Data Requirement	Comments on Data
Observed Release	
Groundwater	Data inadequate to score an observed release
Surface Water	Observed release, adequate for HRS score
Air	Data adequate, no observed release
Route Characteristics	
Groundwater	Inadequate data, additional information concerning depth of aquifer of concern is needed.
Surface Water	Data adequate for HRS score
Air	Not applicable, no observed release
Containment	Data adequate for HRS score
Waste Characteristics	Data inadequate for HRS score
Targets	Data adequate for HRS score
Observed Incident	Data adequate for HRS score
Accessibility	Data adequate for HRS score

TABLE VI-2

PHASE II WORK PLAN - TASK DESCRIPTION

Tasks		Description of Task
II-A	Update Work Plan	Review the information in the Phase I report, conduct a site visit, and revise the Phase II work plan.
II-B	Conduct Geophysical Studies	No further studies necessary.
II-C	Conduct Boring/Install Monitoring Wells	Install 1 upgradient and 2 downgradient wells. The borings will be drilled to a depth of approximately 25 feet. Wells will be constructed of 2" PVC pipe.
II-D	Construct Test Pits/Auger Holes	No further construction of test pits/auger holes necessary.
II-E	Perform Sampling & Analysis	
	Soil samples from borings	Soil samples collected at 5 ft. intervals during drilling and at changes in subsurface lithologies. Perform one grain size analysis and permeability test per subsurface lithology change.
	Soil samples from surface soils	No further studies necessary.
	Soil samples from auger holes/test pits	No further studies necessary.
	Sediment samples from surface water	3 sediment samples are to be collected and analyzed for priority pollutants.
	Groundwater samples	4 groundwater samples are to be collected and analyzed for priority pollutants.
	Surface water samples	No further studies necessary.

TABLE VI-2 (Continued)

PHASE II WORK PLAN - TASK DESCRIPTION

Tasks		Description of Task
	Air samples	Using the HNu determine the presence of organics.
	Waste samples	No further sampling necessary.
II-F	Calculate Final HRS	Based on the field data collected in Tasks II-B - II-E, complete the HRS form.
II-G	Conduct Site Assessment	Prepare final report containing significant Phase I information, additional field data, final HRS and HRS documentation records, and site assessments. The site assessment will consist of a conceptual evaluation of alternatives and a preliminary cost estimate of the most probable alternative.
II-H	Project Management	Project coordination, administration and reporting.

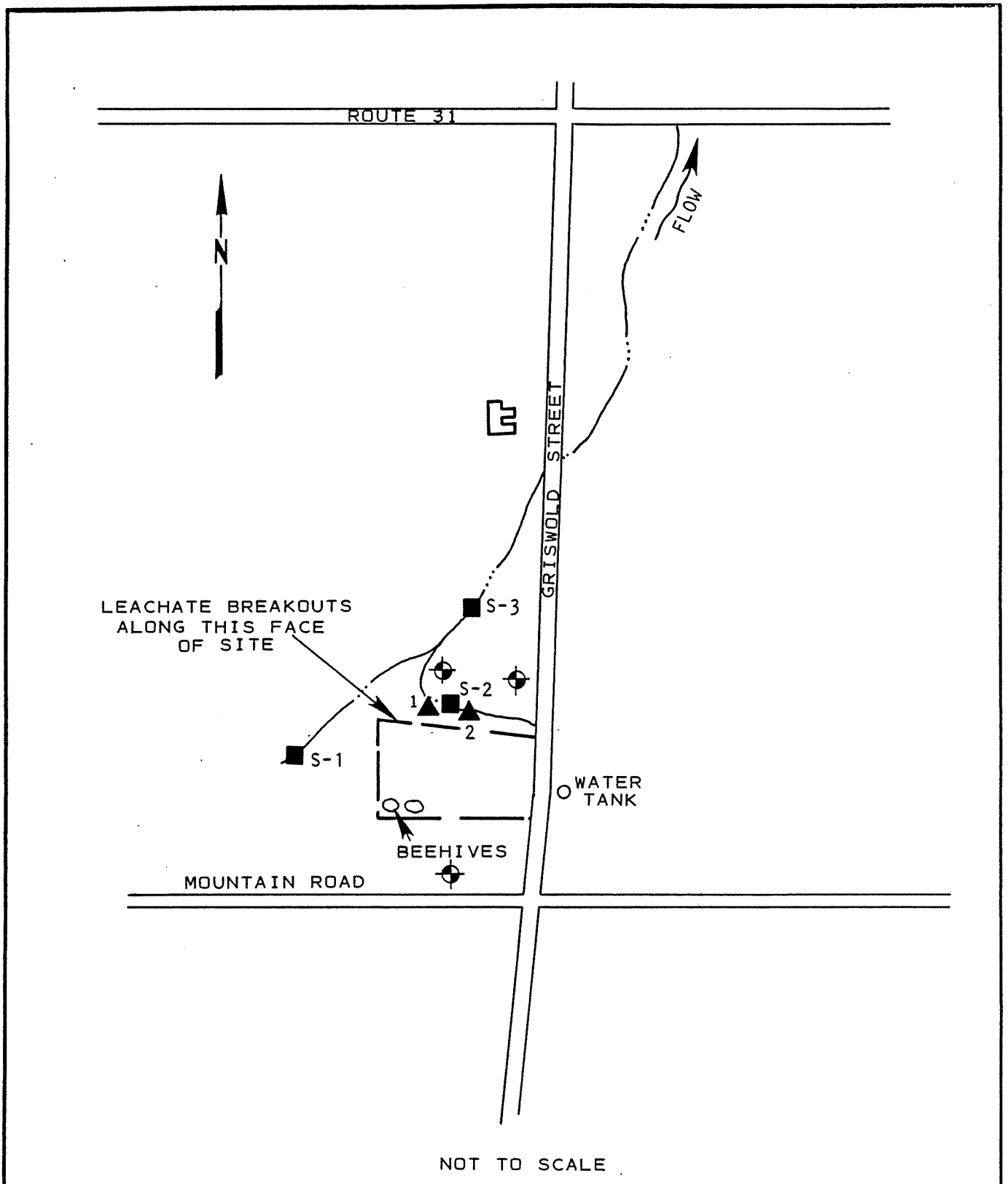
TABLE VI-3
PERSONNEL RESOURCES BY TASK
PHASE II HRS SITE INVESTIGATION (SITE: TOWN OF ROYALTON LANDFILL)

TASK DESCRIPTION	TEAM MEMBERS, MANHOURS												TOTAL HOURS	TOTAL $
	PIC	TRB	PM	DPM	PCM	QAM	HSM	FTL	FT	RAAL	RAAT	SS		
II-A UPDATE WORK PLAN	1	1	8	4		4	4	16		8		28	74	1144.1
II-B CONDUCT GEOPHYSICAL STUDIES													0	0
II-C CONDUCT BORING/INSTALL MONITORING WELLS			8	16		4	4	10	40			24	106	1519.48
II-D CONSTRUCT TEST PITS/AUGER HOLES													0	0
II-E PERFORM SAMPLING AND ANALYSIS														
SOIL SAMPLES FROM BORINGS			4	4		2	2	4	16			8	40	535.14
SOIL SAMPLES FROM SURFACE SOILS													0	0
SOIL SAMPLES FROM TEST PITS AND AUGER HOLES													0	0
SEDIMENT SAMPLES FROM SURFACE WATER			1	1		1	1	1	4			4	13	166.6
GROUND-WATER SAMPLES			4	4		1	1	10	48			16	84	1008.07
SURFACE WATER SAMPLES			1	1		1	1	1	4				9	136.92
AIR SAMPLES			1	1			1	1	4			4	12	155.68
WASTE SAMPLES													0	0
II-F CALCULATE FINAL HRS			4	4				4	4	2		4	22	394.56
II-G CONDUCT SITE ASSESSMENT	2	2	8	2				24	32	12	40	50	172	2217.02
II-H PROJECT MANAGEMENT	2		6	2	3	4	4					12	33	529.88
TOTALS	5	3	45	39	3	17	18	71	152	22	40	150	565	7827.45

TABLE VI-4
COST ESTIMATE BREAKDOWN BY TASK
PHASE II HRS SITE INVESTIGATION (SITE: TOWN OF ROYALTON LANDFILL)

TASK DESCRIPTION	DIRECT LABOR HOURS	DIRECT LABOR COST	OTHER DIRECT COSTS (ODC), $ LAB ANALYSIS	TRAVEL AND SUBSISTANCE	SUPPLIES	EQUIP. CHARGES	SUBCONTRACTORS	MISC.	SUBTOTAL ODC	TOTAL ($)
II-A UPDATE WORK PLAN	74	$1,144.10		$200.00	$50.00	$50.00		$50.00	$350.00	$1,494.10
II-B CONDUCT GEOPHYSICAL STUDIES	0	$0.00							$0.00	$0.00
II-C CONDUCT BORING/INSTALL MONITORING WELLS	106	$1,519.48		$350.00	$250.00	$900.00	$5,420.00		$6,920.00	$8,439.48
II-D CONSTRUCT TEST PITS/AUGER HOLES	0	$0.00							$0.00	$0.00
II-E PERFORM SAMPLING AND ANALYSIS										
SOIL SAMPLES FROM BORINGS	40	$555.14			$100.00	$100.00			$200.00	$755.14
SOIL SAMPLES FROM SURFACE SOILS	0	$0.00							$0.00	$0.00
SOIL SAMPLES FROM TEST PITS AND AUGER HOLES	0	$0.00							$0.00	$0.00
SEDIMENT SAMPLES FROM SURFACE WATER	13	$166.68	$4,000.00	$50.00	$20.00	$75.00		$20.00	$4,965.00	$5,131.68
GROUND-WATER SAMPLES	84	$1,008.07	$3,600.00	$420.00	$50.00	$150.00		$50.00	$4,270.00	$5,278.07
SURFACE WATER SAMPLES	9	$136.92	$3,600.00	$50.00	$20.00	$75.00		$20.00	$3,765.00	$3,901.92
AIR SAMPLES	12	$155.68				$200.00			$200.00	$355.68
WASTE SAMPLES	0	$0.00							$0.00	$0.00
II-F CALCULATE FINAL HRS	22	$394.56				$150.00			$150.00	$544.56
II-G CONDUCT SITE ASSESSMENT	172	$2,217.82			$750.00	$300.00		$75.00	$1,125.00	$3,342.82
II-H PROJECT MANAGEMENT	33	$529.88	$900.00	$300.00	$150.00	$50.00		$50.00	$1,450.00	$1,979.88
TOTALS	565	$7,827.45	$12,900.00	$1,370.00	$1,390.00	$2,050.00	$5,420.00	$265.00	$23,395.00	$31,222.45

OVERHEAD=	$11,177.60
SUBTOTAL=	$42,400.05
FEE=	$2,572.09
TOTAL PROJECT COST=	$44,972.14



EXPLANATION:

- ▲ SAMPLE POINT
  - #1 - SOIL AND WATER
  - #2 - WATER ONLY
- ■ PROPOSED SURFACE WATER AND SEDIMENT SAMPLE
- ⊕ PROPOSED GROUNDWATER MONITORING WELL

ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

PROPOSED SAMPLING LOCATIONS
TOWN OF ROYALTON

FIGURE VI-1

APPENDIX A

REFERENCES

SOURCES CONTACTED

DOCUMENTATION

SOURCES CONTACTED FOR
TOWN OF ROYALTON LANDFILL

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
USEPA Headquarters, Superfund Office	4/2/85	Hamid Saebfed	(202) 382-4839	401 M Street, NW Washington, D.C. 20460	Reviewed list of sites to determine if additional information was available.
USEPA - Region II, OERR	3/22/85	Mel Hauptman	(212) 264-7681	Room 402 26 Federal Plaza NY, NY 10278	General information from site files.
NYSDEC - Division of Solid and Hazardous	12/19/84	Marsden Chen	(518) 457-0639	50 Wolf Road Albany, NY 12233	General information from site files.
NYSDEC - Division of Water	12/19/84	Sal Pagano	(518) 457-6675	50 Wolf Road Albany, NY 12233	Mr. Pagano set up meetings with three bureaus within Division of Water.
NYSDEC - Division of Water SPDES Files	12/20/84	Bob Hannaford	(518) 457-6716	50 Wolf Road Albany, NY 12233	Reviewed SPDES Files for permit numbers and conditions.
NYSDEC - Division of Water DMR Files	12/21/84	George Hansen	(518) 457-2010	50 Wolf Road Albany, NY 12233	Reviewed DMR files for discharge violations.
NYSDEC - Division of Air Toxics	12/21/84	Art Fossa	(518) 457-7454	50 Wolf Road Albany, NY 12233	Reviewed site list to identify sites with potential air emissions.
NYSDEC - Division of Monitoring and Assessment	12/21/84	Bill Berner Frank Estabrooks Fred Van Alstyne	(518) 457-7363 (518) 457-7363 (518) 457-7363	50 Wolf Road Albany, NY 12233	Reviewed geology and monitoring information for specific sites.

SOURCES CONTACTED FOR
TOWN OF ROYALTON LANDFILL

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
NYSDEC - Division of Environmental Enforcement	12/20/84	Kevin Walter	(518) 457-4346	50 Wolf Road Albany, NY 12233	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS - Attorney General's Office, Dept. of Law	1/7/85	Val Washington	(518) 473-3105	Empire State Plaza Justice Building Albany, NY 12233	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS - Attorney's Office	1/3/85	Albert Bronson	(716) 847-7196	Buffalo State Office Bldg. Buffalo, NY 14202	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYSDEC - Division of Solid and Hazardous Waste	1/7/85	Ahmad Tayyebi Larry Clare Peter Buechi Jack Tygert	(716) 847-4615 (716) 847-4615 (716) 847-4590 (716) 847-4585	600 Delaware Ave. Buffalo, NY 14202	Collected information from site files.
NYSDEC - Region 9 Division of Air	1/8/85	Henry Sandonato Robert Armbrust	(716) 847-4565	600 Delaware Ave. Buffalo, NY 14202	Collected information concerning previous air emissions from inactive disposal sites.

SOURCES CONTACTED FOR
TOWN OF ROYALTON LANDFILL

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
NYSDEC - Regional Attorney	1/10/85	Peter J. Burke	(716) 847-4551	600 Delaware Ave. Buffalo, NY 14202	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS Dept. of Health, Buffalo Region, Public Health Engineering	1/8/85	Lou Violanti	(716) 847-4500	584 Delaware Ave. Buffalo, NY 14202	Collected information from site files.
NYSDEC - Region 9 Division of Fish and Wildlife	1/10/85 & 1/11/85	Mike Wilkinson Jim Sneider	(716) 847-4600 (716) 847-4600	600 Delaware Ave. Buffalo, NY 14202	Collected information from site files
Niagara County Dept. of Health	1/9/85	Mike Hopkins	(716) 284-3124	Tenth & East Falls Street Niagara Falls, NY 14302	Collected information from Niagara County site files. Obtained additional information through interview.
Niagara County Dept. of Planning and Industrial Development	2/22/85	Dave Urso	(716) 439-6033	59 Park Ave. Lockport, NY 14094	Obtained 1980 U.S. Census Data.
Owner of Landfill Site	3/25/85	Douglas Ortman	(716) 735-7415	4240 Griswold Rd. Middleport, NY	Conducted site inspection and reviewed site ownership history and past waste disposal practices on-site.

REFERENCES

10. Hopkins, Mike, Personal Communication, 1/21/87.

11. Niagara County Health Department, Site Profile Report.

12. NYSDEC Region 9, Site Profile Report.

13. NYSDEC, Order of Consent, September, 1973.

REF 10

INTERVIEW FORM

INTERVIEWEE/CODE Mike Hopkins /

TITLE - POSITION Niagara County Health Department

ADDRESS Tenth & East Falls Street

CITY Niagara Falls STATE NY ZIP 14302

PHONE (716) 284-3124 RESIDENCE PERIOD ____ TO ____

LOCATION Telephone conversation INTERVIEWER S. R Steele

DATE/TIME 1/21/87 1:30 PM

SUBJECT: Town of Royalton Landfill

REMARKS: Surface water drainage from the site flows to a man made drainage ditch and then to a unnamed stream. This stream flows to Jeddo Creek which flow through a culvert under the Barge Canal. There are no ~~#~~ drinking water intakes on Jeddo creek and the creek may be used for recreational purposes. (fishing) MSH

Groundwater at the landfill site occurs in the bedrock aquifer. The Town of Middleport water withdrawal (spring) system probably is located in a different aquifer. Presently, the water supply well is not being used and municipal water is provided by the Niagara County Water District. In the past, the supply well was used as a supplemental water source only. This system is not used, but is usable.

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: Michael E Hopkins 1/23/86

COMMENTS:

Royalton

REF-11

NAME:

Town of Royalton (DEC #932092)

LOCATION:

This site is a five acre parcel located west of Griswold Street and 0.5 mile south of Rochester Road in Royalton, NY.

A site sketch is attached.

OWNERSHIP:

The property is owned by Mr. Douglas Ortman, 4240 Griswold Street, Middleport, NY. The site was operated by the Town of Royalton Highway Department.

HISTORY:

This site was used to dispose of municipal refuse collected by Bancroft and individual residents from the Town of Royalton and the Villages of Gasport and Middleport. The site was in use in the early 1960's and was officially open until 1978. No disposal of hazardous materials is known.

A 1964 NCHD inspection report states that open burning was being practiced and that cover was applied monthly at that time. From 1964 to 1972, numerous operating problems were reported. A hearing held in July 1973 ordered corrections and upgrading of the operation. From 1973 to 1978, reports indicate that the operation was essentially in compliance with existing codes. The site was closed in 1978.

Recent inspections show that the site is now inactive. Minor scavenger dumping of refuse has occurred since closure. Minor leachate problems ahve been noted. Except for these problems, the site is adequately closed.

PREVIOUS SAMPLING:

Soil and water samples were taken by DEC in 1982. The results of the analyses are attached. The water samples were taken from the drainage ditch; Sample No. 1 from the point of leachate entry and Sample No. 2 150 feet upstream. The results show an increase in each of the detectable parameters in the downstream sample (No. 1) although all concentrations except iron are within effluent standards. The iron concentration increases from 1.5 mg/l upstream to 130 mg/l downstream.

SOILS/GEOLOGY:

This site was originally a stone quarry prior to landfilling. It is expected that wastes were placed directly on bedrock. Surrounding areas have shallow soils (Farmington and Ontario/Limestone series) which are 20" to 40" deep over limestone substratum. Some of the limestone has probably been removed during the quarrying operation. The depth of waste burial is not known.

The site is on the Clinton outcropping forming part of the Niagara Escarpment. Bedrock is the portion of the Clinton Group which is typically below the Rochester Shale. Limestone, sandstone and shale stratum are present.

GROUNDWATER:

Little information is available on groundwater within the Clinton Group. According to Johnston (1964) this formation is physically capable of transmitting substantial volumes of groundwater, particularly within the limestone and sandstone members. However, this formation is overlain everywhere except along the Excarpment outcropping by the impervious Rochester Shale. Therefore, recharge of aquifers is severely limited. Reportedly, wells in this formation generally have low yields (often inadequate yields) and water quality is poor due to hardness and salinity.

Several wells are located south of the site; however, these tap the Lockport Dolomite which outcrops above the site. Therefore, this site poses no threat of contamination of these wells.

SURFACE WATER:

The ditch adjacent to the north side of the site enters a stream which flows into the Barge Canal at Middleport. There are no major users of water from the creek. The Barge Canal is an emergency source of water for the City of Lockport.

The site is not in a 100 year flood plain. There are no significant wetlands near this site.

AIR/FIRE/EXPLOSION:

No air emissions or odor problems have been noted since the site was closed. The potential of fire occurring is minimal.

The surrounding area is agricultural. The Village of Middleport is over one mile northeast. Population within one mile is estimated as under 100.

SECURITY/DIRECT CONTACT:

No toxic materials are known to be present. All wastes are covered. Small amount of leachate are exposed. Vehicular traffic ts prevented by a cable across the access road. The site may eventually be used as pastureland.

CONCLUSIONS:

This site is an inactive municipal landfill which served about 7000 people for about 15 years. No hazardous materials are known to be present. The site is covered and grassed. Minor leachate problems have been noted.

RECOMMENDATIONS:

Periodic monitoring of leachate along the drainage ditch should continue. If the extent of the problems increases, remedial action should be considered. No other actions are considered necessary.

TOWN OF ROYALTON - Soil Analyses

COMPOUND	UNITS	SITE LOCATION #1
Antimony	ug/g dry	<5
Arsenic	ug/g dry	1.1
Beryllium	ug/g dry	<0.3
Cadmium	ug/g dry	0.29
Chromium	ug/g dry	7.5
Copper	ug/g dry	15
Iron	ug/g dry	29,000
Lead	ug/g dry	9.5
Mercury	ug/g dry	<0.06
Nickel	ug/g dry	3.8
Selenium	ug/g dry	<0.3
Silver	ug/g dry	<0.3
Thallium	ug/g dry	<3
Zinc	ug/g dry	160
Halogenated Organic Scan	ug/g dry as Cl_2 Lindane Standard	0.58
Dry Weight	%	51

TOWN OF ROYALTON LANDFILL - Water Analysos

COMPOUND	UNITS	SITE LOCATION (1)	(2)	EFFLUENT STANDARD
Antimony	mg/l	<0.2	<0.2	
Arsenic	ug/l	<5	<5	.05 mg/l
Beryllium	mg/l	<0.01	<0.01	
Cadmium	mg/l	<0.004	<0.004	.02 mg/l
Chromium	mg/l	0.020	0.004	.10 mg/l
Copper	mg/l	0.022	<0.005	1.0 mg/l
Iron	mg/l	130	1.5	0.6 mg/l
Lead	mg/l	<0.03	<0.03	0.05 mg/l
Mercury	ug/l	<1	<1	0.004 mg/l
Nickel	mg/l	<0.03	<0.03	2.0 mg/l
Selenium	ug/l	<5	<5	0.04 mg/'
Silver	mg/l	<0.01	<0.01	0.1 mg/l
Thallium	mg/l	<0.1	<0.1	
Zinc	mg/l	0.701	0.063	5.0 mg/l
Halogenated Organic Scan	ug/l as Cl_2 Lindane Standard	1.5	0.75	
Total Organic Carbon	mg/l	30	19	

Royalton

REF-12

NAME OF SITE: Town of Royalton Landfill

LOCATION: Griswold Road, Royalton (T), Niagara County

CURRENT OWNER: Town of Royalton

HISTORY

This site was used by the Town of Royalton for the disposal of municipal wastes until 1979. For most of the time it was operating the site was plagued with operational problems. In 1979, landfilling operations at this site ceased and the site was supposed to be properly closed. However, since landfilling operations ceased, problems with leachate and midnight dumping have been reported by the Niagara County Health Department.

INVESTIGATION

This site was inspected on March 31, 1982 by Messrs. Senior and Christorfel of DEC - Region 9. Samples were taken from two locations. Soil and water samples were taken from the shore of a drainage ditch adjacent to the landfill, at the point where leachate was leaking into the ditch. The second location was in the drainage ditch, approximately 150 feet upstream from the first location.

SOILS & GEOLOGICAL INFORMATION

This site is located on Hilton Silt Loam and Ontario Loam. The Hilton series consists of deep, moderately well drained, medium textured soils. These soils are formed in calcareous glacial till, containing sandstone and limestone fragments. The Ontario series consists of deep, well-drained, medium textured soils that were formed in calcareous, loamy, glacial till deposits. The glacial material contains semi-rounded and angular rock fragments that are mostly sandstone and limestone.

The bedrock in this area is of the Lockport group. It is dolomite and dolomitic limestone, locally cherty. The Gasport Limestone at the base is locally reefy.

SAMPLE ANALYSES

The samples taken at the leachate breakout contained high concentrations of iron in both the water and soil samples. There was a noticeable difference between samples taken at the breakout and upstream for chromium, copper, iron, zinc, halogenated organics and total organic carbon. Detectable concentrations of halogenated organics were found in both the soil and water samples.

CUSSION OF RESULTS

n the day of this investigation a sizable leachate breakout was observed in the thwest corner of the landfill. The leachate and the soil around it were discolored i, nnd this discoloration extended into the drainage ditch adjacent to the landfill. lso, garbage and various debris were observed in this section of the landfill eft by so-called "midnight dumpers". Erosion channels were evident in the area the breakout.

This site is approximately 1 mile southwest of the Village of Middleport, and is a fairly rural area. However, access to the site is not restricted, as is idenced by the presence of garbage on the site. The leachate drained into a ditch wiich drained into a stream which flowed into Middleport. The possibility xists that the stream could be contaminated by the leachate. This site is not ithin the 100 year flood level of any streams in the area.

ECOMMENDATIONS

The fact that leachate, contaminated with iron, zinc, and other compounds, is etting into a drainage ditch that flows into an open body of water is unacceptable. t is recommended that the Town of Royalton cover the area of the breakout, grade it, and seed it to discourage erosion. Further, the steel cable rope that is suppose to be across the access road on the site should be repaired so as to limit access to the site and discourage illegal dumping.

REF-13

Water
Air
Gen.
Fire.
File

Malcolm A. Coutant, Compliance Counsel
C. David Van Epps, Regional Attorney
Town of Royalton Refuse Disposal Site
Our File No. 73-0
September 11, 1973

Attached is a duly executed Order on Consent regarding the above matter and a certified copy of the resolution of the Town Board authorizing the execution of the Order.

A. This matter was referred to us by the Niagara County Health Department after a series of attempts, unsatisfactory to them, to achieve voluntary compliance. The violation consists primarily of failure to adequately cover and certain drainage problems.

B. The bond required in this Order is less than the normal bond required in this region for similar matters. It has been made contingent upon the failure of the Town to comply with the terms of the Order. This arrangement is due to our understanding at the time of negotiation that the Town had been attempting to comply with Part 19 and had made considerable progress. Their progress was not sufficient, however.

C. Respondent's cooperation with the state was satisfactory. Apparently the Town had not cooperated to the satisfaction of the Niagara County Health Department, although this was not brought out by the Health Department representative attending the initial conference.

D. Because of the confusion during the course of these negotiations as to the issue of "cooperativeness" with the County Health Department, I have requested our solid waste engineer to review each case by telephone with the County engineer to obtain their "feeling" for the particular case. I believe this will eliminate any further problems in this regard.

APPENDIX B

PROPOSED UPDATED NYS REGISTRY SHEET

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

CLASSIFICATION CODE: 2a REGION: 9 SITE CODE: 932092

NAME OF SITE : Town of Royalton
STREET ADDRESS: Griswald Rd, 1/2 mi., S. of Rochester Rd.
TOWN/CITY: COUNTY: ZIP:
Royalton Niagara

SITE TYPE: Open Dump- Structure- Lagoon- Landfill-X Treatment Pond-
ESTIMATED SIZE: 8 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Town of Royalton
CURRENT OWNER ADDRESS.: 5316 Royalton Ctr., Rd. Middleport NY
OWNER(S) DURING USE...: Town of Royalton
OPERATOR DURING USE...: Town of Royalton
OPERATOR ADDRESS.....: Town of Royalton
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From unknown To 1979

SITE DESCRIPTION:
This site was used for the disposal of municipal/residential wastes. The site closed in 1979, but has experienced problems with midnight dumping and leachate following closure.

Soil and water samples were collected from the site in 1982. The soil sample showed elevated concentrations of iron and zinc. The concentration of iron was evaluated in the water samples. Leachate was observed leaving the site during the sample collected.

HAZARDOUS WASTE DISPOSED: Confirmed- Suspected -X

TYPE	QUANTITY (units)
None Known	

SITE CODE: 932092

ANALYTICAL DATA AVAILABLE:

Air- Surface Water-X Groundwater- Soil-X Sediment- None-

CONTRAVENTION OF STANDARDS:

Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: None State- Federal-
STATUS: In Progress- Completed-

REMEDIAL ACTION:

Proposed- Under Design- In Progress- Completed-
NATURE OF ACTION: Landfill is covered and closed

GEOTECHNICAL INFORMATION:
SOIL TYPE: None - waste disposed on bedrock
GROUNDWATER DEPTH: Not Known

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Leachate appears to be characteristic of municipal refuse disposal sites. Extent of problem is unknown, but leachate reaching surface water may be impacting groundwater.

ASSESSMENT OF HEALTH PROBLEMS:

Insufficient Information

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME.: Roberto Olazagasti
TITLE: Solid Waste Management Spec.

NAME.: P. Buechi
TITLE: Assoc. Sanitary Eng.

DATE.: 01/24/85

NEW YORK STATE DEPARTMENT OF HEALTH

NAME.: R. Tramontano
TITLE: Bur. Tox. Sub. Assess.

NAME.:
TITLE:

DATE.: 01/24/85