932081

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE 1 INVESTIGATION

Griffon Park
Site No. 932081
City of Niagara Falls, Niagara County

Final-May, 1988

Prepared for :

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, Commissioner

Division of Hazardous Waste Remediation
Michael J. O'Toole, P. E., Director

by:

LeRoy Callender, P. C.

Subcontractor to :

Gibbs & Hill, Inc.

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GRIFFON PARK PHASE I REPORT

TABLE OF CONTENTS

* HRS = Hazard Ranking System Scoring

SECTION I

1. EXECUTIVE SUMMARY

Griffon Park Site (New York ID No. 932081) is a small municipal park, nearly 12.8 acres in area, at the eastern edge of the City of Niagara Falls, Niagara County, N.Y. (See Figures No. 1.1. and 1.2.) The site is bounded on the north by the Buffalo Ave.; on the east by the Occidental Chemical Corporation (OCC) 102nd Street Landfill Site; on the south by the Little Niagara River; and, on the west by several private residences.

The total area of the site is sub-divided into an asphalt parking area, approximately 1.5 acres, and a grassy area with some trees, 11.3 acres, and includes a boat launching ramp area next to the River. Formerly, the site housed three (3) baseball diamonds, which were closed off to the public in early 1980s. (See site photographs, App. A.1.1.)

The Griffon Park site was originally a wetland, which was an extension of the wetland now occupied by the OCC, Olin 102nd Street Landfills. According to an EPA SI Report (1980) this area was still undeveloped in 1938. The shoreline was reported to have been closer to Buffalo Avenue at this time. (See App. A.1.f.)

By 1951, major dumping of hazardous waste had occurred on the adjacent OCC (formerly Hooker) property. The EPA Report cited above indicates that a fine light colored material was dumped along the property line at this time. Some of the material may have extended beyond the OCC property. The entire area of Griffon Park was filled with municipal waste by 1958. The EPA report (SI, 1980) indicates that industrial wastes are probable.

Secondary dumping became noticeable by 1963. The City of Niagara Falls used this site for disposal of incinerator residue and non-combustible solids until about 1970. Open burning was practiced here on some occasions. General refuse, such as leaves and forestry materials could have been dumped at this time.

Throughout 1970s and early 1980s, the site was used as a City Park featuring three baseball diamonds and a boating dock. Between 1971 and 1974, the neighboring 102nd Street Landfill Site was also closed. A clay and topsoil cover was placed on the Occidential Corporation Co.'s portion in late 1970s.

In 1981, an inspection by the Niagara County Health Department (N.C.H.D.) observed no noticeable problems. However, leachate problems were noted on the river bank later, which were reported to DEC several times during 1982, '83, and '85. The Niagara County Health Department's report does not mention any chemical dumping at the Bank Site.

On December 30, 1982, in accordance with Section 105 of CERCLA, (the Comprehensive Environmental Response, Compensation, and Liability Act) the 102nd Street Landfill Site was proposed for listing on the National Priorities List of hazardous waste sites, and the listing of the site was finalized on September 8, 1983.

Nearby areas which could be potentially influenced by the 102nd Street Landfill include Griffon Park (12.8 acres) to the west.

In 1982, the United States Geological Survey drilled four test holes on the Park Site. (See App. A.1.i)

The water sample taken from Boring No. 2, which was located near the bank of Little Niagara River, Showed limited migration of contaminants towards the Little Niagara River.

In June 1984, a settlement was reached between the plaintiffs, i.e., United State of America, and State of New York, and the defendants, namely Hooker Chemicals & Plastics Corp.; Hooker Chemical Corp.; Occidental Petroleum Investment Corp.; Occidental Petroleum Corp.; Olin Corp.; and City of Niagara Falls New York, for developing an appropriate and permanent remedy for the 102nd Street Landfill Site. (See Appendix A.1.j.) It has to be emphasized that the Griffon Park grassy area was included in the purview of the above-described stipulation. At present, a RI/FS of the 102nd Street Landfill, including the green area of the Griffon Park site is going on under the supervision of NYSDEC, Region 9. (See App. A.1.g & App. A.1.j.)

At present, the eastern grassy and sparsely wooded portion of the Griffon Park Site is all but closed to the public, the three (3) baseball diamonds are partially fenced-off, with "Danger, Keep Out" signs on the fences. OCC and Olin are performing a Remedial Investigation/Feasibility Study on the 102nd Street Landfill Site, also encompassing the affected green areas of Griffon Park. Preliminary Hazardous Ranking System (HRS) score for this facility is as follows: Migration Score (Sm) = 14.85; Direct Contact Score (S_{DC}) = 62.50, and the Surface Water Score (S_{SW}) = 25.69. S_{gw} = 0; S_a = 0.

Since the ongoing RI/FS (Remedial Investigation and Feasibility Study) of the 102nd Street Landfill Site by OCC and Olin encompasses only those areas of Griffon Park which are situated in the vicinity of the eastern boundary fence, the RI study is not expected to include previously used dumping areas used by the City of Niagara Falls. Therefore, it is recommended that a similar remedial investigation of the old municipal dumping areas of Griffon Park be undertaken to supplement the OCC/Olin investigation.

GRIFFON PARK SITE

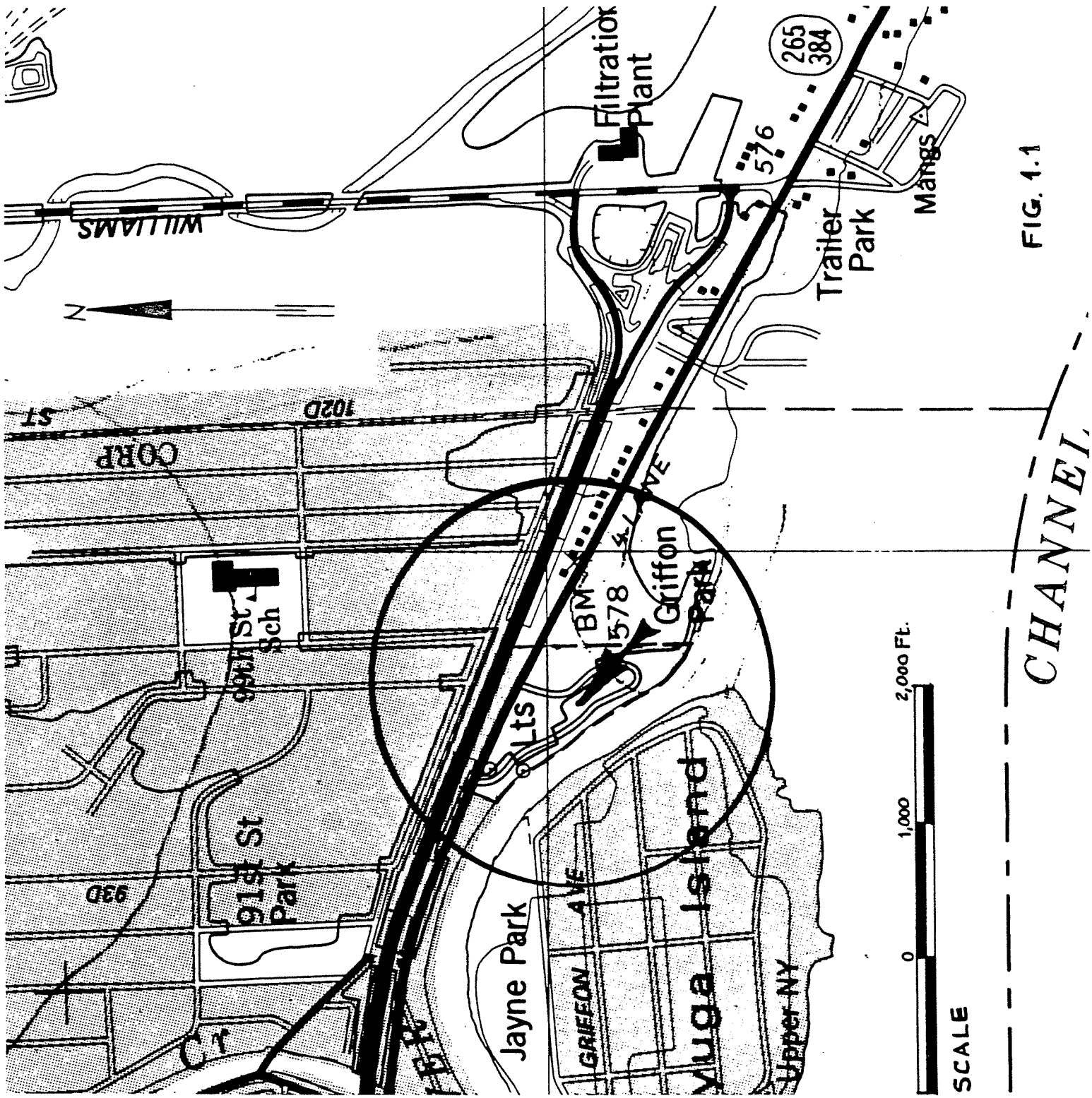
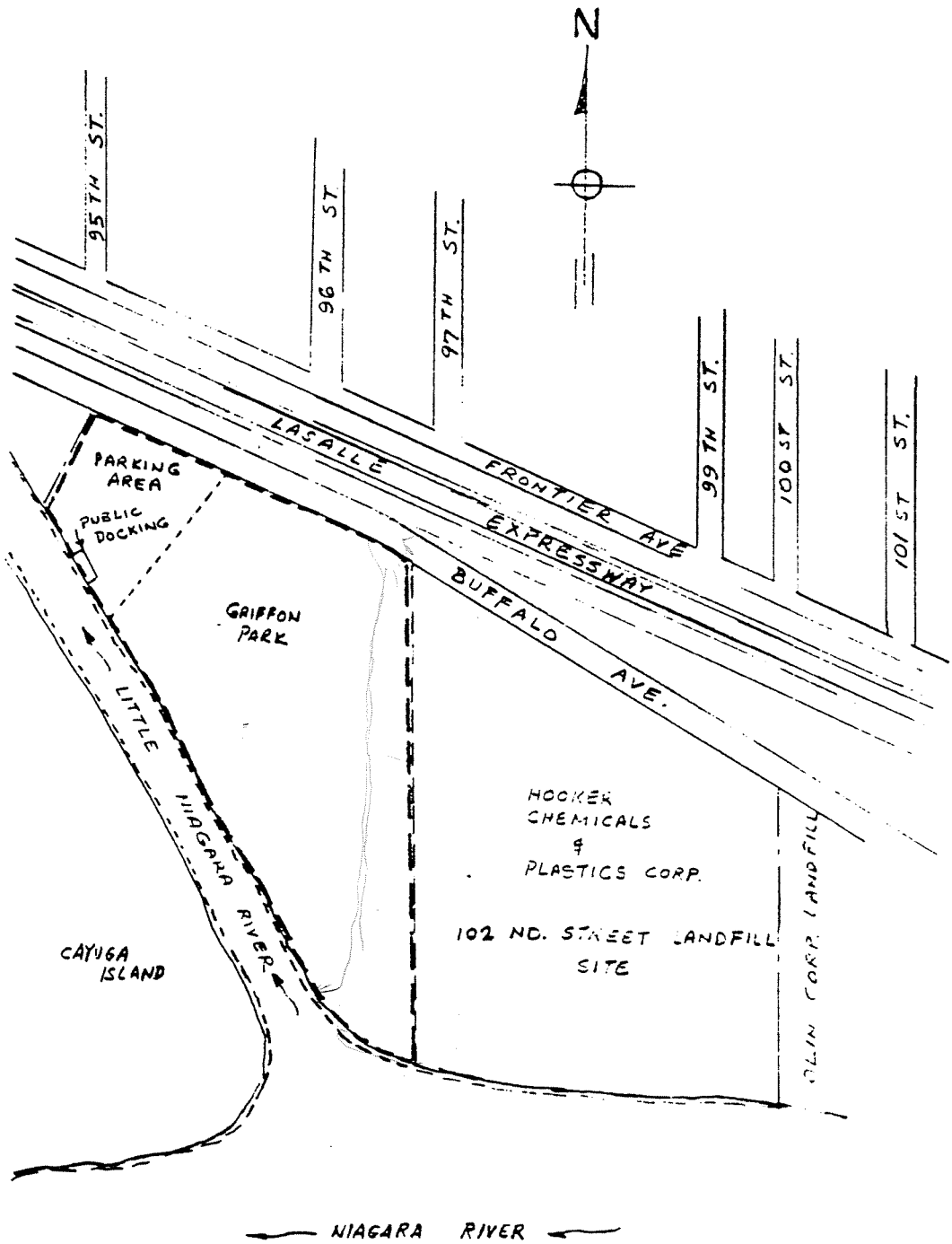


FIG. 1.1

SITE COORDINATE:
LATITUDE: 43° 04' 02"N
LONGITUDE: 78° 57' 08"W

SOURCE MAP: USGS
NIAGARA FALLS QUAD. (1980)
7.5 MIN. SERIES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99TH ST.
100 ST ST.
101 ST ST.
LASALLE
FRONTIER AVE
EXPRESSWAY
BUFFALO AVE.
PARKING AREA
PUBLIC DOCKING
GRIFFON PARK
LITTLE NIAGARA RIVER
CAYUGA ISLAND
HOOKER CHEMICALS & PLASTICS CORP.
102 ND. STREET LANDFILL SITE
OLIN CORP. LANDFILL
NIAGARA RIVER

FIG. 1.2

SECTION II

2. Purpose

The Griffon Park Site is a municipal park owned and operated by the City of Niagara Falls. The eastern grassy portion of the Park was used in the past by the City as a landfill for the disposal of forestry materials, leaves, incinerator residue, various construction waste, and possibly some domestic and/or industrial wastes. In 1970, the landfilling operations stopped, and the grassy portion of the park was covered with topsoil and other fill material, developing it into a municipal playground. Throughout 1970s the three baseball diamonds developed by the City were utilized by the public for recreation. In 1982, United States Geological Survey drilled four test wells on the grassy area of the Park, and the testing of the ground water and soil revealed limited contamination. The USGS Report dated March 1985 states: "The hydraulic connection with the Little River of Cayuga Island indicates a major potential for contaminant migration". Due to the proximity of the Griffon Park Site to the Occidental Petroleum's 102nd Street Landfill Site, the migration of hazardous wastes from the 102nd Street Landfill to the eastern grassy area of Griffon Park Site is also suspected.

The goal of the Phase 1 investigation of this site is to: (1) obtain available records on the site history from state, federal, county, and local agencies; (2) obtain information on site topography, geology, uses of local surface water and groundwater, previous assessements of contamination and local demographics; (3) interview site owners, operators, and other groups or individuals knowledgeable of site operations; (4) conduct an inspection of the site to observe and record current conditions; and, (5) prepare a Phase I report. The Phase I Report includes a preliminary Hazard Ranking Score (HRS), and an assessment of the available information.

SECTION III

3. Scope of Work

The Phase I Investigation of the Griffon Park Site involved a site inspection by LeRoy Callender/P.C. expert team, as well as record searches and two interviews.

The following agencies or individuals were contacted:

CONTACT	INFORMATION SOUGHT/RECEIVED
Mr. David Brooks Director, Department of Environmental Services, City of Niagara Falls, City Hall, Niagara Falls, N.Y. 14303 (716) 278-8018	Census Population Figures
Mr. Peter J. Buechi, P.E. Regional Engineer for Solid & Hazardous Waste New York State Department of Environmental Conservation 600 Delaware Avenue, Buffalo, New York 14202 (716) 847-4585	Held interview; provided Soil Survey data, and site history.
Mr. Michael Komoroske N.Y.S.D.E.C. Bureau of Hazardous Site Control 50 Wolf Road Albany, N.Y. 12233 (518) 457-0639	Provided copy of Stipulation, between USA/NYS & Hooker, Occidental, Olin and Niagara Falls (C); Provided copy of article in The Buffalo News, on Dioxin Found near Site.
Mr. Lawrence J. Alden Assistant Sanitary Engineer Eastern Investigation Sec. Bureau of Hazardous Site Control Division of Solid & Hazardous Waste NYSDEC 50 Wolf Road Albany, N.Y. 12233 (518) 457-0639	Provided Groundwater Sampling Data, on 102nd St. Landfill and Griffon Park Monitoring Wells

CONTACT	INFORMATION SOUGHT/RECEIVED
Mr. William M. Kappel Hydrologist USGS Water Resources Division 521 West Seneca Street Ithaca, New York 14850 (607) 272-8722	Provided Geological data on 102nd Street Landfill Site & Griffon Park Site.
Mr. Ed Oliver U.S. Dept. of Agriculture Soil Conservation Service 4487 Lake Avenue, Lockport, N.Y. 14094 (716) 434-4949	Soil Conservation data and Map
Mr. Lawrence P. Brown Supervising Wildlife Biologist NYSDEC Wildlife Resources Center Delmar, N.Y. 12054-9767	Assessment of Significant Habitat and Wildlife Resources at Site.
Mr. Donald MacDonald Record Access Officer NYS-Dept. of Health Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, N.Y. 12237 (518) 473-8879	Profile Report on Griffon Park by Niagara County Health Dept. (1982).
Mr. Allan A. Fuchs, P.E. Senior Sanitary Engineer Division of Solid & Hazardous Waste 50 Wolf Road Albany, N.Y. 12233 (518) 457-5636	FINAL Work Plan for the Remedial Investigation-102nd Street Landfill Site-Niagara Falls, New York
Niagara County Health Department Lockport, New York (Contacted by LC/PC letter dated 07/23/87)	Data on Chemical Contamination of the Griffon Park Site, or the Niagara River
Mr. V.J. Saulys, Chief Remedial Programs Staff U.S.E.P.A. Great Lakes National Program Office 230 South Dearborn Street Chicago, Illinois 60604 (312) 353-3544	Reports of funded activites relating to the Griffon Park Site

CONTACT	INFORMATION SOUGHT/RECEIVED
U.S.E.P.A. 26 Federal Plaza New York, N.Y. 10278 (Contacted by Mail)	Draft Report, by Interagency Task Force, dated March 1979
Ms. Olivia Blackwell, M.D. Regional Health Director N.Y.S Health Department 584 Delaware Avenue Buffalo, N.Y. 14202 (Contacted by Mail)	Data on Chemical Contamination of the Site or the Niagara River

SECTION IV

4.1 SITE HISTORY

The Griffon Park site is located adjacent to the Little Niagara River near the eastern edge of the City of Niagara Falls as shown in Figure 4-1.1. The site is bounded by Buffalo Avenue to the north, by the Little Niagara River to the south, by the Hooker Chemical 102nd Street Landfill Site to the east, and by private houses to the west. The entire site covers an area of 12.8 acres, of which approximately 1.5 acres is paved parking area and the remainder is grassed, with some trees and other vegetation, (See site photographs at the end of this report.)

Griffon Park is small municipal park, which used to have three (3) baseball diamonds, and a boat ramp. The baseball diamonds were closed by the City several years ago after disclosures of chemical dumping and the possibility of migration from the 102nd Street Land Site.

The Griffon Park site was originally a wetland, which was an extension of the wetland now occupied by the Hooker-Olin 102nd Street Landfills. According to an EPA Report (SI, 1980), this area was still undeveloped in 1938. The shoreline was reported to have been closer to Buffalo Avenue at that time. (See Figure 4.2.1) By 1951, major dumping had occurred on the adjacent Hooker property. The FPA Report cited above indicates that a fine-graded light-colored material was dumped along the property line at this time. Some of the material may have extended beyond the Hooker Property.

GRIFFON PARK SITE

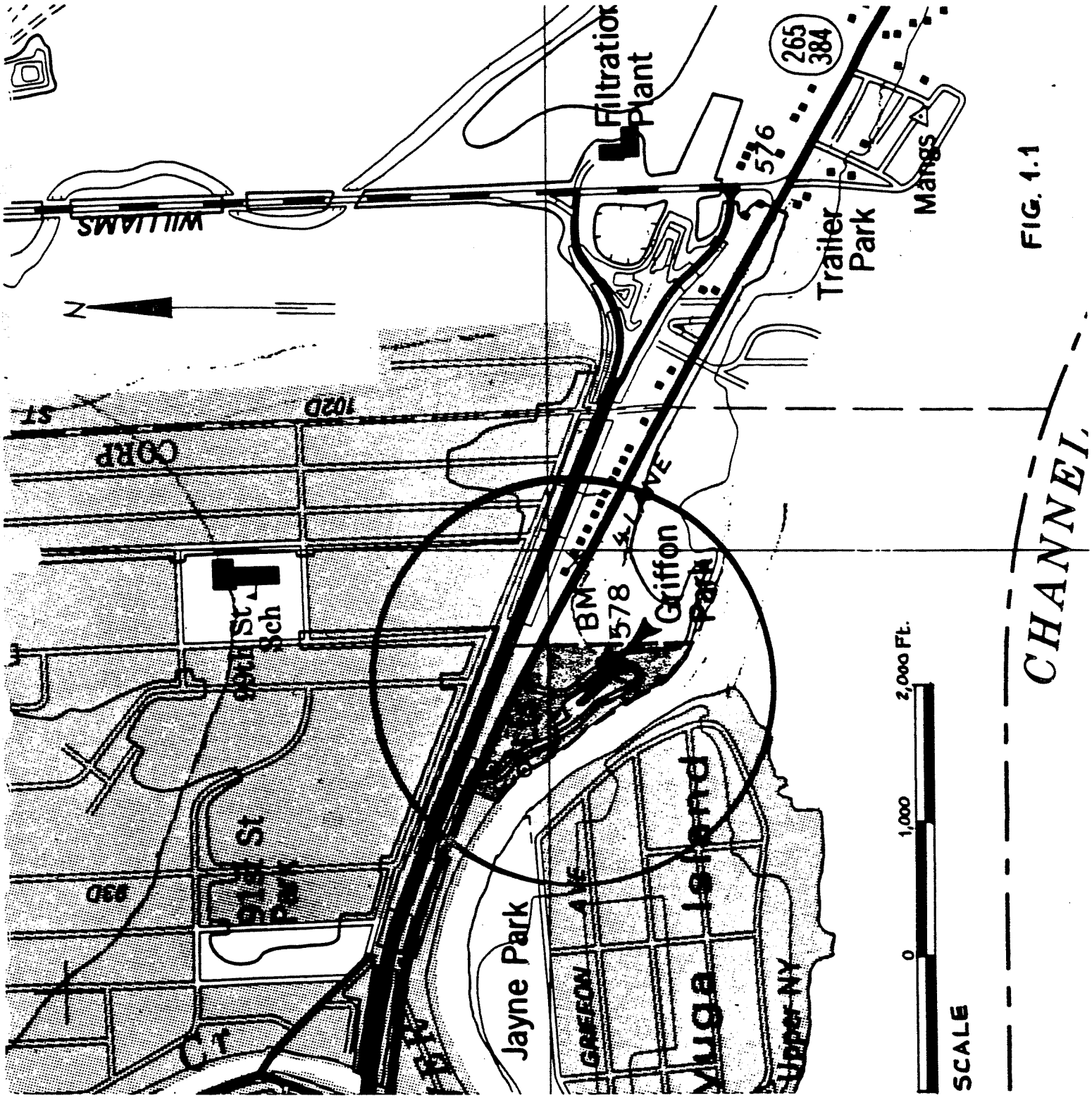

FIG. 1.1

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SOURCE MAP: USGS
NIAGARA FALLS QUAD. (1980)
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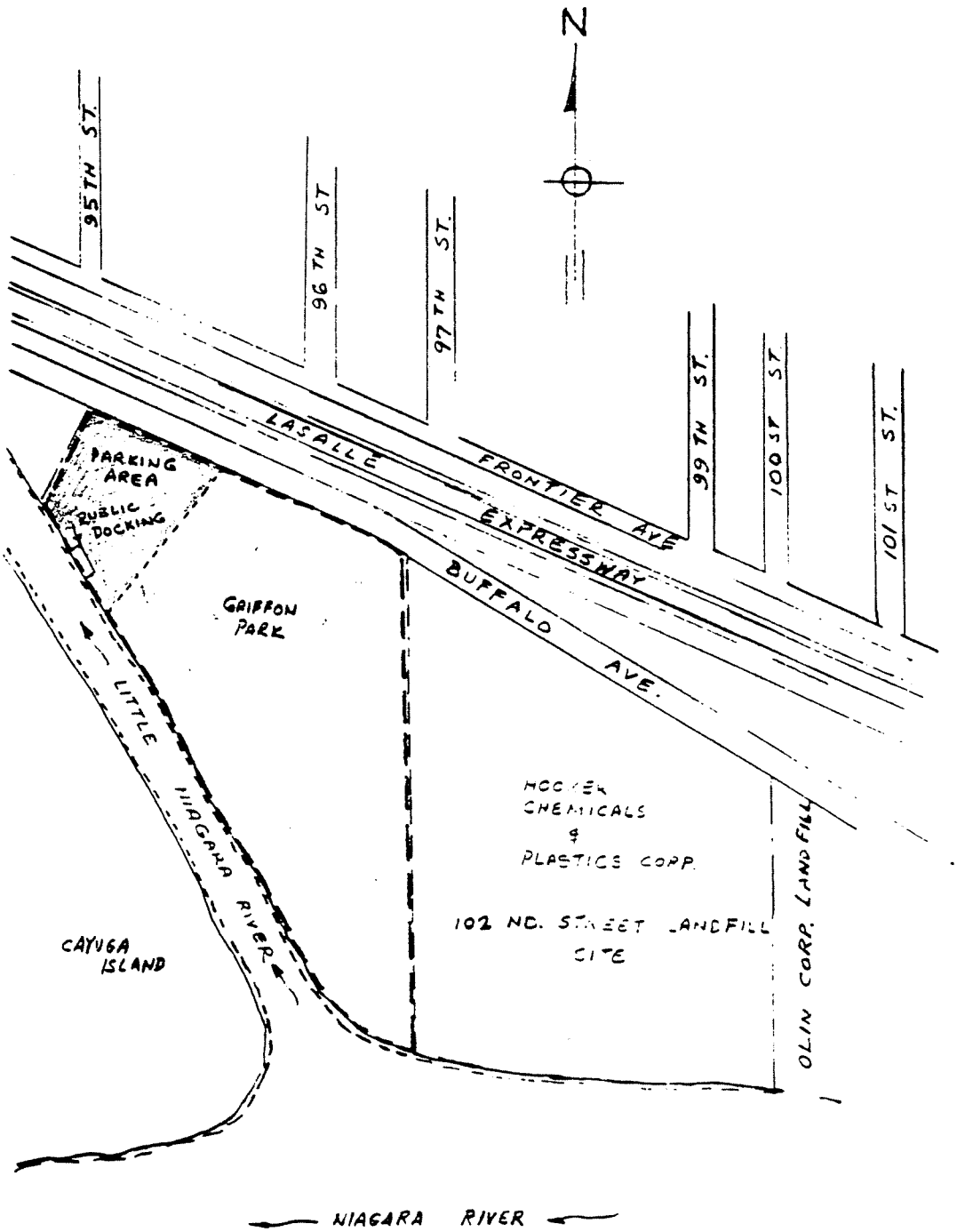
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HOOKER CHEMICALS & PLASTICS CORP.
102 ND. STREET LANDFILL SITE
OLIN CORP. LANDFILL
NIAGARA RIVER

FIG. 4-1.1

By 1958, the entire area of Griffon Park was filled by the City with various solid waste. The EPA report indicates that industrial wastes are probable. (See App. A.1.f.) Secondary dumping became noticeable by 1963. The City of Niagara Falls used the site for disposal of incinerator residue and non-combustibles until about 1970. Open burning was practiced here on some occasions. General refuse and other wastes may have dumped at that time.

During the 1970s, there was no landfilling on the unpaved portion of the site, and the City developed three baseball diamonds in that area for recreation. (See Maps & Photos in App. A.1.c.) An inspection made by Health Department of Niagara County in November of 1981 found no noticeable problems. However, leachate problems were later reported by N.C.H.D. Small quantities of incombustible materials (bottles, Cans, etc.) were also found, by N.C.H.D. inspectors, exposed along an access road south of the eastern ball diamond. (See Map dated 12/15/81 in App. A.1.f.)

In 1982, the United States Department of the Interior, Geological Survey (USGS) drilled four boreholes on the green area of Griffon Park in cooperation with the NYS-DEC. The results of the USGS Investigation was later published in March 1985 under the title, "Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites" See App. A.1.i for the portions of this report related to the Griffon Park Site.

As stated previously, the Griffon Park site is adjacent to the Hooker Chemical 102nd Street Landfill Site (940' of common boundary fence), and migration of contaminated groundwater to the Park site is suspected. (See App. A.1.h.)

Occidental Chemical Corporation (OCC), formerly Hooker Chemical and Plastic Company, operated its 15.6-acre portion of the site as a landfill from approximately 1943-1970. The reported quantity of chemical waste material deposited during that period was approximately 77,000 tons, including 23,800 tons of phosphorus compounds, chlorinated hydrocarbons, and miscellaneous chemicals, and 53,200 tons of brine sludge and gypsum.

Between 1971 and 1974, the 102nd Street Landfill Site was closed. A clay and topsoil cover was placed on the OCC portion, in 1983.

In 1981, in accordance with Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Occidental and Olin each filed a "Notification of Hazardous Waste Site" with EPA. As part of that notification, Occidental and Olin identified the categories of waste present at the 102nd Street Landfill Site and indicated that there are known releases from the landfill into the environment.

On December 30, 1982, in accordance with Section 105 of CERCLA, The 102nd Street Landfill Site was proposed for listing on the National Priorities List of hazardous waste sites. The listing of the site was finalized on September 8, 1983.

At present, the Griffon Park site is divided into two (2) distinctly separate areas: the paved parking lot and boat launching ramps, which are open to the public and used extensively for recreation, and the larger sparsely treed and green area of the park which has been partially fenced off, and closed off to the public because of strong possibility of contamination. This area is approximately 11.3 acres, and includes the closed baseball diamonds. (See Appendix A.1.1.- for site pictures.)

4.2 SITE TOPOGRAPHY

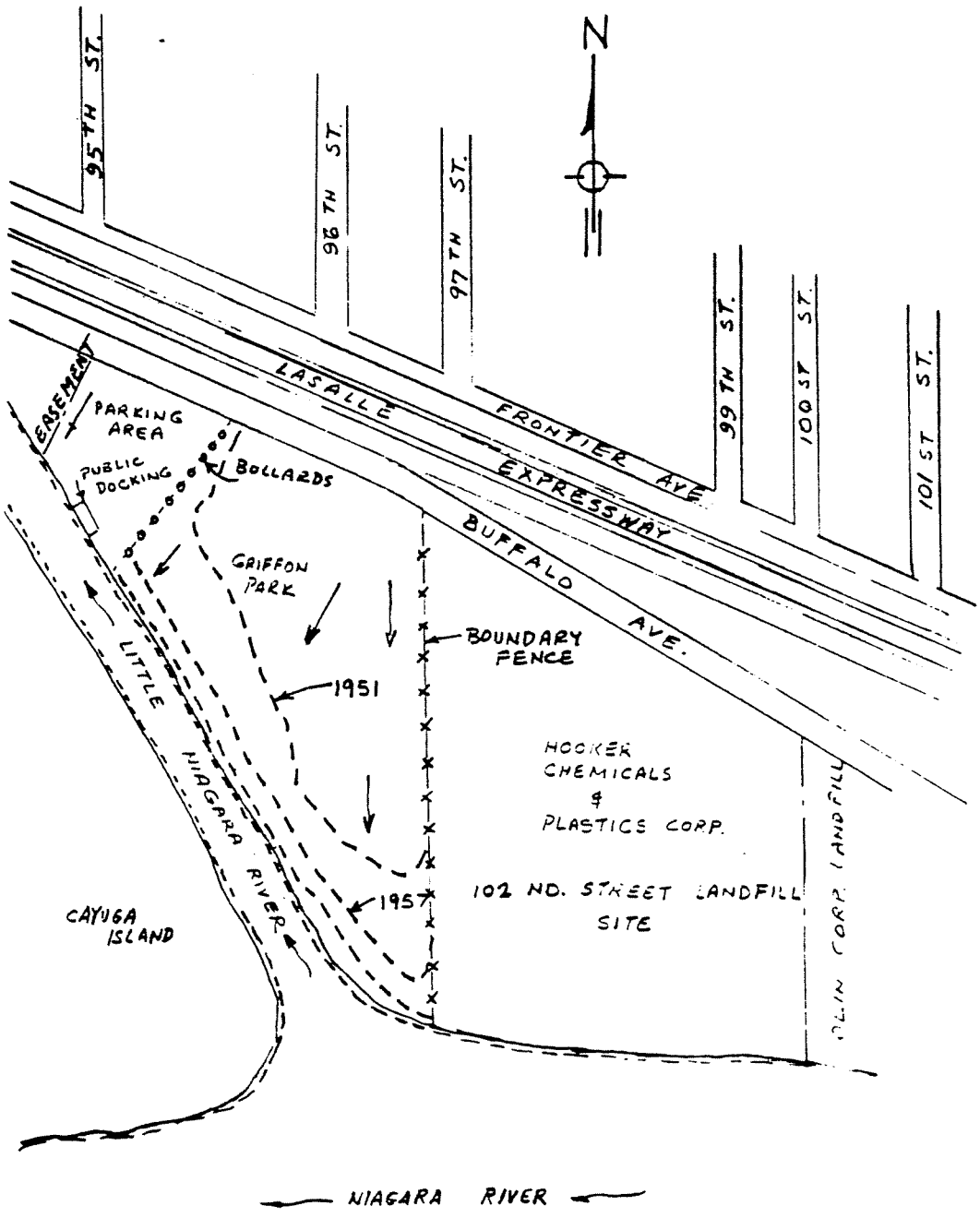
The site consists of a paved parking area of about 1.5 acres, and a grassed and sparely treed area, trapezoidal in shape, approximately 11.3 acres. (See Figure 4.2.1).

The parking area is located between Buffalo Avenue to the north and the Little Niagara River to the south and southwest, with an approximate slope of 2.5 percent. The average grade elevation in Griffon Park is 572 feet, and the River water elevation at 563 feet.

At the eastern boundary fence between Griffon Park's grassy and sparsely treed area and the Occidental Chemical Corporation (formerly Hooker Chemical Corporation), 102nd Street Landfill Site, the natural ground slope is towards the River to the south with a maximum slope of 5%.

During LC/PC's site inspection trips of June 19, and August 29, 1987, fifteen (15) pictures were taken from the site, which give a clear illustration of the site topography (Appendix A.1.-). Specifically, pictures No. E2, E3, E4, E11, E13, and E14 show the paved parking area of Griffon Park, whereas pictures No. E1, E5, E6, E6a, & E8 show the grassy and wooded portion near the OCC Landfill Site.

The green area of Griffon Park was originally a wetland, which was an extension of the wetland now occupied by the OCC (Hooker) - Olin 102nd Street Landfills. According to an EPA Report (1980), this area was still undeveloped in 1938.



Source: Conestoga - Rovers 1983.

Fill and shore line locations in various years based on aerial photographs, 102nd St. Landfill Site, Niagara Falls, N.Y.

FIG. 4.2.1

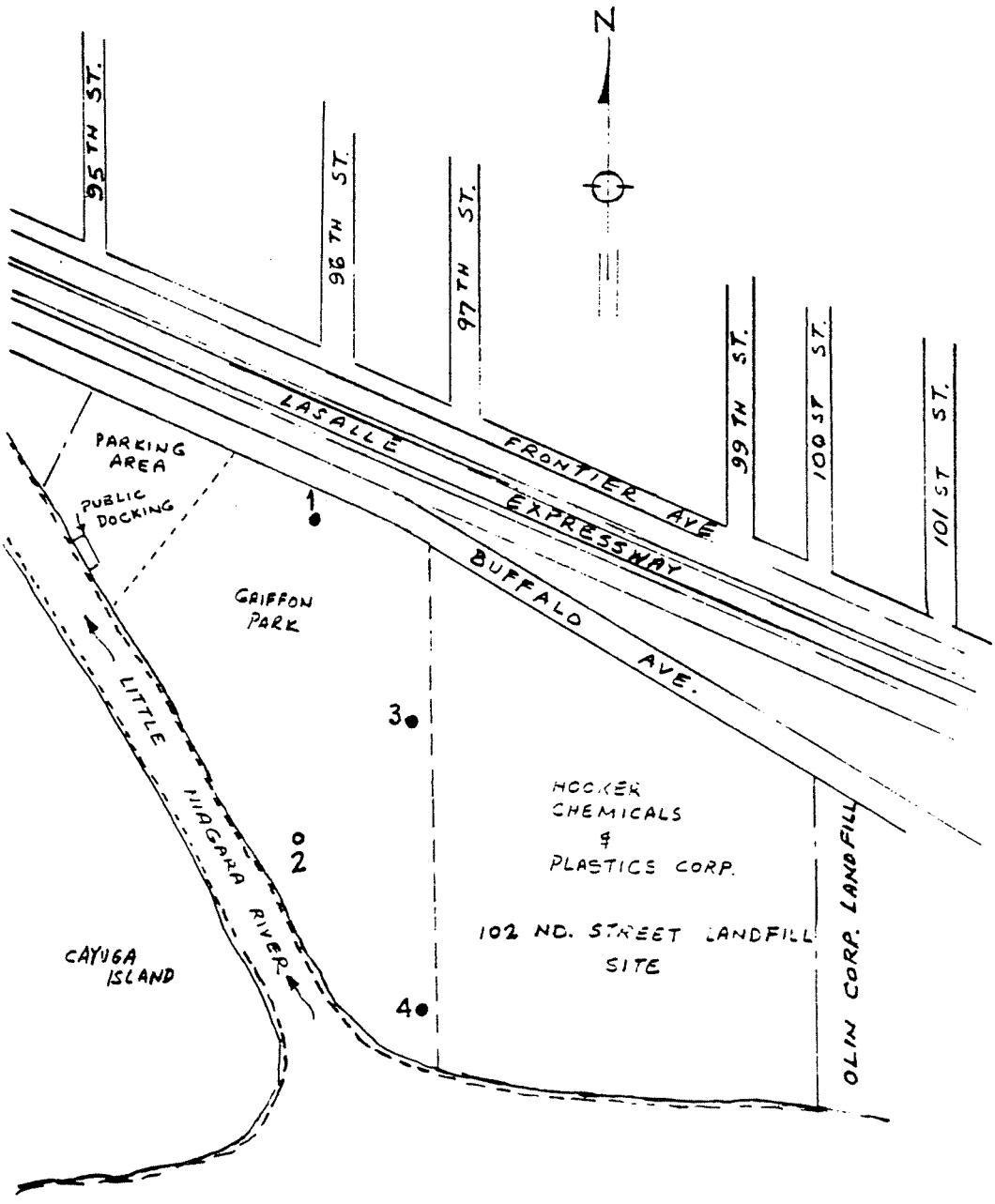
The Little Niagara River shore-line was reported to have been closer to Buffalo Avenue at this time. An investigation by Conestoga-Rovers, in 1983 indicates that the greater part of Griffon Park's green area was used as a municipal landfill before 1951, and that by 1977, the edge of that landfill had advanced southward almost to the bank of the River. (See Conestoga-Rovers and Assoc., Inc., September 1983. "Historical Review - Hydrogeologic Conditions", Report to Wald, Harkrader and Ross (for OCC).

As it was mentioned previously, the general ground slope across the Griffon Park Site is towards the River. The hydraulic connection with the River which was discovered by USGS test borings entails a major potential for contaminant migration. Thus, after every severe rainfall, the run-off from the surface of the paved parking area, and the contaminated ground water leachate from the shallow aquifer would tend to gravitate towards the River, and would thereby transport the chemically laden leachate into the waters of the Little Niagara River. The water supply intake for the City of Niagara Falls is situated nearly 3 miles downstream from Griffon Park Site.

4.3 SITE HYDROGEOLOGY

4.3.a SITE GEOLOGY

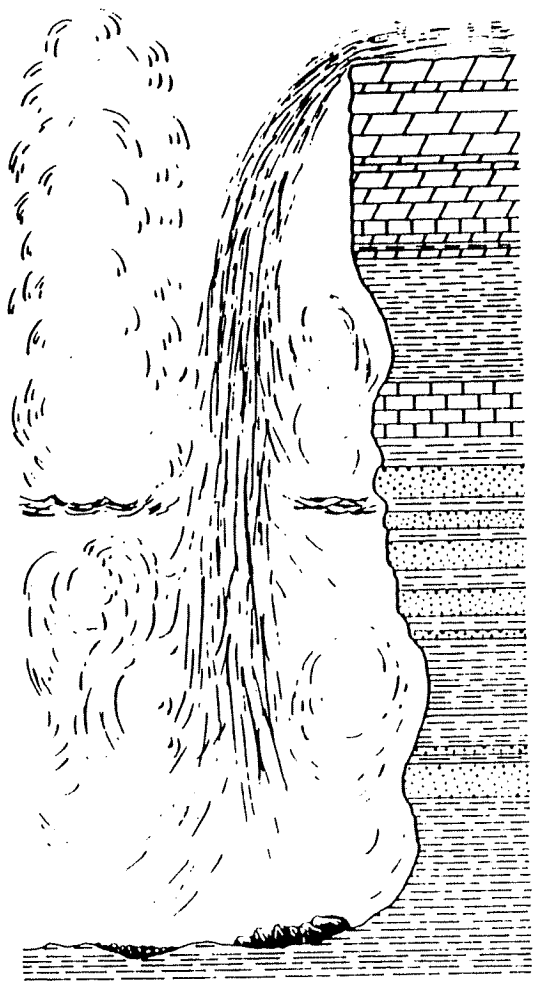
A thin cover of unconsolidated deposits overlies the bedrock throughout most of the Niagara Falls area, (between latitude 43° and 44° N. and between longitude 78° and 78° 30'W., with a total area of 550 square miles.) These unconsolidated deposits were laid down during the closing phases of the great ice age (Pleistocene Epoch). The unconsolidated deposits consist of three types: (1) glacial till (locally called "stony hardpan") which is an unsorted mixture of boulders, clay, and sand which was deposited by the ice sheet that covered the area about 10,000 years ago; (2) clay, silt, and fine sand which was deposited in lakes that formed during the melting of the ice sheet; and (3) sand and gravel which was either deposited by streams carrying melt water from the ice sheet or was produced by re-working of till and other deposits along the shore of glacial lake Iroquois (predecessor of the present Lake Ontario). The glacial till directly overlies the bedrock in most places (including Griffon Park). The lake-laid clay, silt, and sand overlie the till and are the materials found at the surface throughout a large part of the area. Sand and gravel occurs as isolated deposits and also composes a narrow "beach ridge" that extends in an east-west direction across the area.



LEGEND

- ● U.S.G.S. Test Boring (1982)
- o Monitoring well and water sample

FIG. 4.3.1



System		Group	Formation	Thickness 1/ (feet)	Description
Silurian	Middle		Lockport Dolomite	150	Dark-gray to brown, massive to thin-bedded dolomite, locally containing algal reefs and small, irregularly shaped masses of gypsum. At the base are light-gray, coarse-grained limestone (Gasport Limestone Member) and gray shaly dolomite (DeCew Limestone Member of Williams, 1919).
		Clinton	Rochester Shale	60	Dark-gray calcareous shale weathering light-gray to olive.
			Irondequoit Limestone	12	Light-gray to pinkish-white coarse-grained limestone.
			Reynales Limestone	10	White to yellowish-gray shaly limestone and dolomite.
			Neahga Shale of Sanford (1933)	5	Greenish-gray soft fissile shale.
	Lower	Albion	Thorold Sandstone	8	Greenish-gray shaly sandstone.
			Grimsby Sandstone of Williams (1914)	45	Reddish-brown to greenish-gray cross-bedded sandstone interbedded with red to greenish-gray shale.
			Unnamed unit	40	Gray to greenish-gray shale interbedded with light-gray sandstone.
			Whirlpool Sandstone	20	White, quartzitic sandstone.
Ordovician	Upper		Queenston Shale	1,200	Brick-red sandy to argillaceous shale.

1/ Average figure for area. Thickness at falls is not necessarily the same.

Fig. 4.3.2. --Bedrock formations in the Niagara Falls area as exposed at the Horseshoe Falls. (Drawing modified after Gilbert, 1895.)

The bedrock in the Niagara Falls area consists of nearly flat-lying (horizontal) sedimentary rocks. The distinguishing feature of sedimentary rocks is their natural layering. Each layer is termed a bed and is separated from the bed above and below by a plane of separation called a bedding plane. The occurence of sedimentary rocks in the Niagara Falls area can be described as " layer-cake geology" inasmuch as the various rock units crop out in "layer-cake" fashion at the brink of Niagara Falls as shown in Figure 4.3.2. These units consist of dolomite, shale, limestone, and sandstone. Although the bedrock appears to lie horizontal to the eye, the beds actually dip to the south at about 30 feet per mile. The area south of the Niagara escarpment (or bluff) is directly underlain by the Lockport Dolomite whereas the area north of the escarpment is underlain by the Queenston Shale. The intervening rocks of the Clinton and Albion Groups (Fig. 4.3.2.) crop out only along the escarpment and in the gorge of the Niagara River.

The bedrock surface is approximately parallel to the land surface throughout most of the Niagara Falls area. South of the Niagara escarpment, the top of the rock lies 5 to 15 feet below land surface. Local exceptions to this occur beneath isolated hills and ridges south of Medina where the depth to bedrock is about 30 to 40 feet. On the lake plain north of the escarpment, depth to the bedrock varies from 5 to 90 feet, but is commonly at depths of 30 to 40 feet.

The few irregularities in the surface of the bedrock appear to be due to minor features shaped by glacial or pre-glacial erosion. No major drainage channels of pre-glacial origin are known in the area.

The Griffon Park site contains approximately 34 feet of unconsolidated deposits of fill, Lacustrine clay, and Glacial till overlying bedrock, that is probably dolomitic. The dolomite bedrock is called (Lockport Dolomite), and is of the Silurian System and has a depth of approximately 150 ft. The unconsolidated deposits (excluding the demolition debris and other landfill material) belong to the Quaternary period. The alluvial deposits are those of the Niagara River. (See USGS, March 1985 Report, Excerpted in App. A.1.i).

The U.S. Geological Survey drilled four test holes on the site in 1982; their locations are shown in Fig. 4.3.1.

The geologic logs are as follows:

Boring No.	Depth(ft)	Description
1	0 - 3.0	Topsoil, brown.
	3.0 - 5.0	Soil, tan.
	5.0 - 6.0	Clay, sandy, tan, damp.
	6.0 - 6.5	Same, but less sand and less damp.
	6.5 - 11.5	Same, getting hard and brown, dry.
		SOIL SAMPLE: 5 - 6 FT.
2	0 - 1.5	Brown topsoil and fill.
	1.5 - 6.5	Same, fill material wet.
		WATER SAMPLE: 4.5 - 6.5 FT.
3	0 - 2.0	Demolition debris.
	2.0 - 6.5	Dark brown fill material.
	6.5 - 11.5	Same, pulled up bit; black oil liquid on bit stem starting 2 ft below joint.
	11.5-16.5	Black oily material.
		SOIL SAMPLE: 15 - 16 FT.
4	0 -6.5	Brown topsoil and fill.
	6.5 - 11.5	Same, turning black at about 8 ft.
	11.5-16.5	Same, black oily materials on stems.
		SOIL SAMPLE: 8 - 11.5 FT.

4.3.b HYDROGEOLOGY

The Lockport Dolomite is the only important aquifer in the Niagara Falls area. Ground Water occurs in it in three types of openings: (1) bedding joints which constitute at least seven important water-bearing zones, (2) vertical joints, and (3) small cavities from which gypsum has been dissolved. Of these, the bedding joints are the most important and transmit nearly all the water moving through the formation. The character of the three types of water-bearing openings results in two distinct sets of ground-water conditions: (1) a moderately permeable zone at the top of rock, generally 10 to 15 feet thick, characterized by both vertical joints and bedding joints that have been widened by solution of dolomite and by small cavities formed by solution of gypsum, and (2) the remainder of the formation consisting of seven permeable zones (composed of bedding joints) surrounded by essentially impermeable rock. In the upper part of rock, either artesian or water-table conditions may exist locally. However, in the lower part of rock, the seven water-bearing zones act as separate and distinct artesian aquifers. Recharge to the water-bearing zones apparently occurs directly at the outcrop of the bedding joints composing the zones rather than by downward movement of water through vertical joints.

Ground water in the Lockport, characteristically a calcium sulfate or calcium bicarbonte water, is very hard and moderately mineralized. A highly mineralized water, characterized by higher concentrations of sodium and chloride than those measured on typical lockport water, occurs in lowest two zones of the formation.

The chief use of ground water in the Niagara Falls area is for small domestic and farm supplies in the rural sections. Small to moderate supplies of ground water (5 to 150 gallons per minute) may be obtained throughout the area underlain by the Lockport Dolomite. Large supplies of ground water (exceeding 2,000 gallons per minute in some wells) have been obtained from the Lockport within a small area adjacent to the Niagara River where conditions are favorable for river infiltration. Throughout the remainder of the area, which is underlain mostly by the Queenston Shale, the developement of even the very small supplies needed for domestic and farm use if difficult.

The Geological Survey installed one well on the site; its location is marked No. 2 in Fig. 4.3.1 The direction of ground-water flow is probably southwestward toward the Little River. Pumping of the well during sampling caused little drawdown, indicating that the fill is highly permeable. (App. A.1.i).

The ground water table thoughout the Griffon Park site is at a depth between 4.5 to 6.5. ft. from the surface. Except for the paved parking area, which is relatively impermeable, the remainder of the Park area is overlain by topsoil and sandy clay layers which are permeable. Thus, the ground water in that area is constantly recharged, with the concurrent ground water flow towards the Little Niagara River.

The Griffon Park site is contiguous to two other inactive hazardous waste sites, namely the Occidental Chemical Company 102nd Street Landfill Site, and Olin Corporation 102nd Street Landfill Site.

The hydrogeological features of these three sites being similar in terms of groundwater table and depth of unconsolidated deposits, there is a potential for contaminant migration, specially from the OCC 102nd Street Landfill site into the ground water and soil layers of Griffon Park.

4.4 SITE CONTAMINATION

Waste Types and Quantities

The grassy and sparsely treed area of the Griffon Park site has been contaminated not only as a result of migrant contamination from the adjacent OCC (Hooker Chemical) 102nd Street Landfill Site, but also because the City of Niagara Falls used the site as a municipal landfill until 1970.

The migrant contaminants are being monitored by the N.Y.S.D.E.C. Region 9, and are reported as part of the Soil Survey being conducted at the OCC and Olin 102nd Street Landfill Site. (See letter dated August 31, 1987 by N.Y.S.D.E.C. Region 9, and the results of Soil Survey attached to it , in Appendix A.1.g).

Some of the hazardous chemical substances that have been found in the soil samples of the boundary area between the OCC 102nd Street Landfill site and the Park site are Hexachlorocyclohexane (1490 ug/kg in sampling Point A, dated 10/21/86), and Mercury (1760 ug/kg in sampling Point F, Dated 10/21/86 - App. A.1.g.) Other hazardous materials found in soil samples include 1,2,3,4-Tetrachlorobenzene and 2,4,5-Trichlorophenol.

The second type of contaminants at the Griffon Park Site are those that can be attributed to the municipal landfill, which was installed at the site before 1970. USGS has collected some data from a monitoring well which it has drilled in Griffon Park Site in 1982. (See letter dated August 5, 1987 by U.S.G.S. Water Resources Division in Ithaca, New York, and the results of analyses of ground-water and substrate samples from Griffon Park Site 85, Niagara Falls, N.Y. dated July 12, 1982 attached to it, in Apendix A.1.i).

As mentioned in this report, "Chromium, iron, and lead concentrations", found in ground water sample, "exceeded U.S.E.P.A. criteria for drinking water and the New York State ground-water standards; copper concentrations exceeded those in background soils".

Estimating the quantities of hazardous wastes which have been found to exist in the groundwater and soil layers of the Griffon Park Site, is very difficult at the present time. The amount of migrant hazardous waste at the Griffon Park Site (the area in the vicinity of the OCC 102nd Street Landfill Site) is estimated at 6,000 tons.

The quantity of indigenous hazardous wastes cannot be determined based on the data available up to date, and more intensive investigation is deemed to be necessary for quantification of the degree of contamination of both the groundwater and the soil at the Griffon Park Site. (See Section 6.0 Recommendations).

Ground Water

Both the USGS and the NYSDEC have monitored the ground water at the site, and the data obtained by them is presented in Appendix A.1.i. and A.1.h. USGS groundwater sampling data shows relatively high concentrations of some heavy metals (notably Copper, Chromium, Iron, and Lead) and light concentration of some priority pollutants (e.g. di-n-butyl phthalate) which indicate migration potential.

Surface Water

The Little Niagara River runs at the southern boundary of the site. Thus, it may be assumed that some of the contaminants present in the ground water and soil of the Griffon Park are being and have been leached to the waters of the Little Niagara River. Data obtained from sediment offshore of the OCS 102nd Street Landfill Site have shown that the sediments in the Niagara River close to the shore line contain chlorinated hydrocarbons. Since the topography of the Griffon Park Site is very similar to the OCC 102nd Street Landfill Site, there is a potential for contaminant migration from the Griffon Park Site into the sediments of the Little Niagara River.

Air

No data available. See Air Route, on Page 5.4.9.

SECTION V

Griffon Park
City of Niagara Falls, Niagara County

5.1 Narrative Summary

The Griffon Park Site is a municipal park, approximately 11.3 acres in size, located at the eastern flank of the City of Niagara Falls, Niagara County, New York.

The site is owned and operated by the City of Niagara Fall's Department of Environmental Services.

Until 1970, the City used the park site as a municipal landfill, disposing an unknown quantity of forestry materials and possibly municipal and domestic wastes. It has been reported that some industrial materials including sand, abrasives, broken concrete and similar material were also dumped (See App. A.1.a.)

Due to the proximity of the Park site to the OCC (formerly Hooker Chemical) Co.'s 102nd Street Landfill site, the eastern portion of the Park site near the boundary fence between it and the 102nd Street Landfill Site is suspected of being potentially influenced by the migrant contamination from the latter site.

In June 1984, as a result of litigation by USEPA & State of New York, a Stipulation was issued under Civil Action No. 79-987, by the U.S. District Court for the Western District of New York, which obligated Occidental Chemical Corporation and Olin Corporation to implement and

perform an RI/FS (i.e., a remedial investigation and feasibility study) for the 102nd Street Landfill Site, to include the green area of Griffon Park. A work plan for the Remedial Investigation -- 102nd Street Landfill Site, Niagara Falls, New York dated June 1984 was attached to the Stipulation. In July of 1987, Milestone Report No. 13, which included "Extended Groundwater Sampling Program -- 102nd Street Landfill -- Remedial Investigation" was published by Woodward - Clyde, Consultants to OCC. (See excerpts of this report in Appendix A.1.h).

LOCATION

GRIFFON PARK SITE

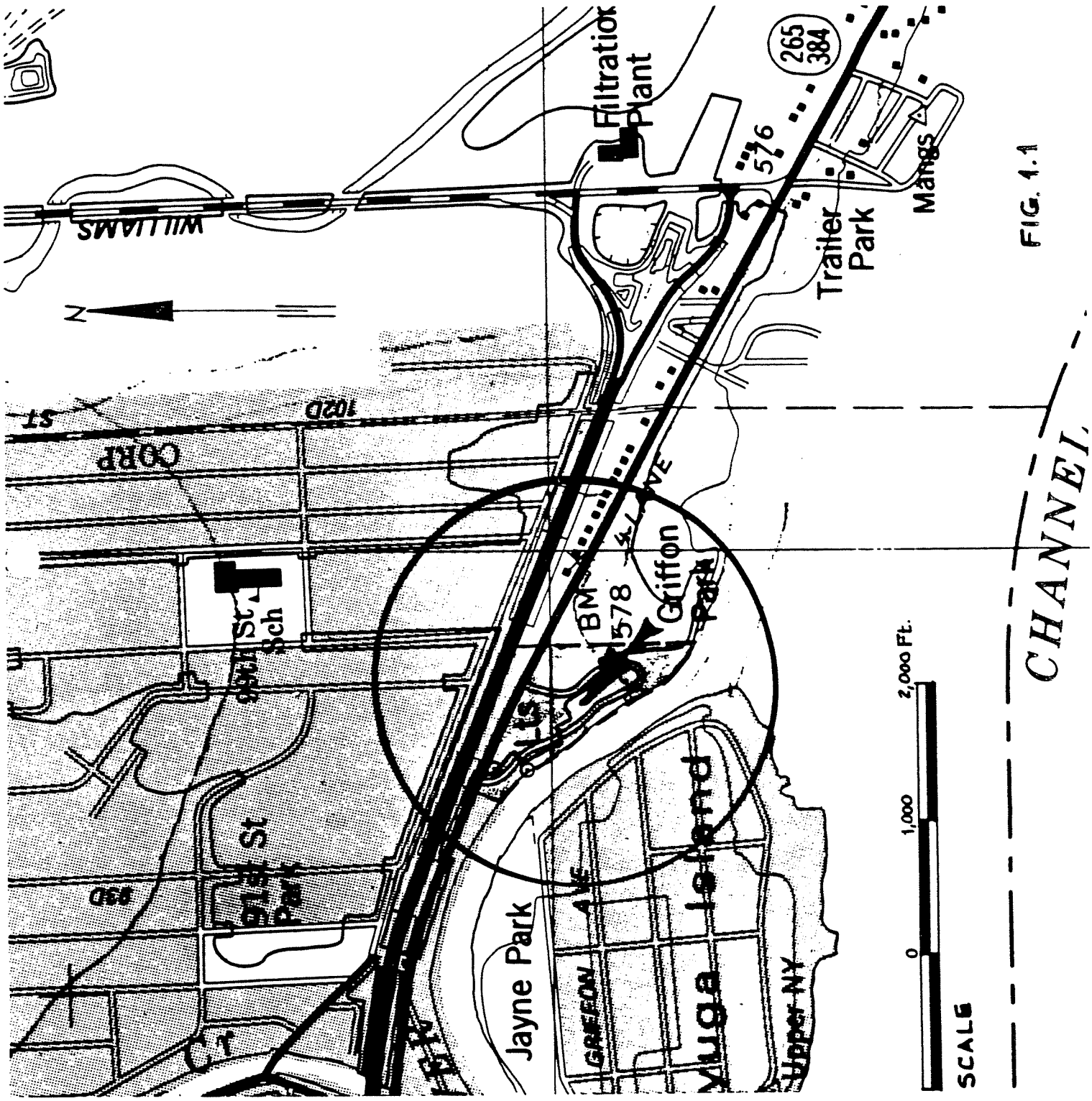
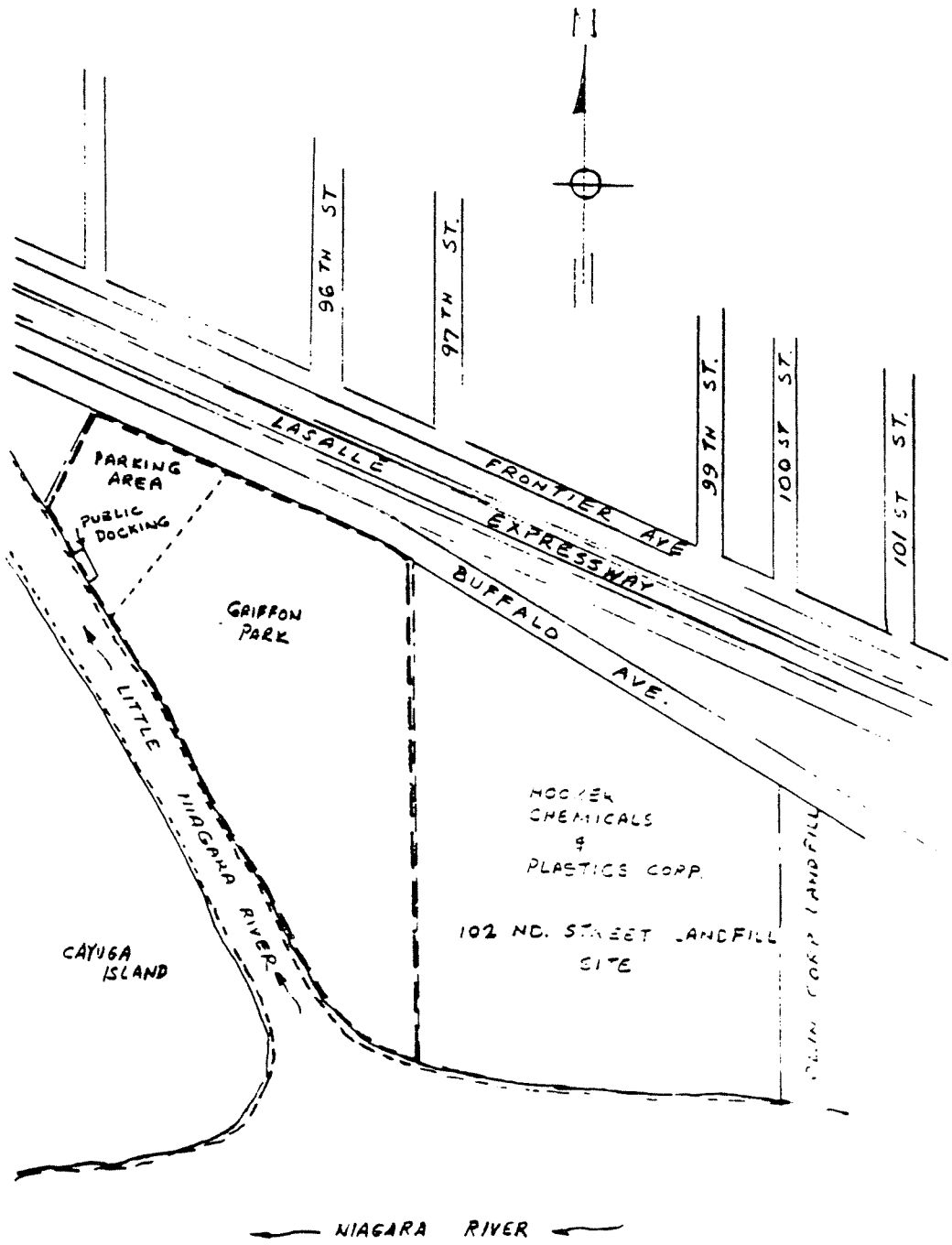


FIG. 1.1

SITE COORDINATE:
LATITUDE: 43° 04' 02"N
LONGITUDE: 78° 57' 08"W

SOURCE MAP: USGS
NIAGARA FALLS QUAD. (1980)
7.5 MIN. SERIES


96 TH ST
97 TH ST.
99 TH ST.
100 ST
101 ST ST.
LASALLE
FRONTIER AVE
EXPRESSWAY
BUFFALO AVE.
PARKING AREA
PUBLIC DOCKING
GRIFFON PARK
LITTLE NIAGARA RIVER
CAYUGA ISLAND
HOOKER CHEMICALS & PLASTICS CORP.
102 ND. STREET LANDFILL SITE
NIAGARA RIVER

5.2.1

HRS WORKSHEETS

Facility name: Griffon Park

Location: City of Niagara Falls, Niagara County, NY.

EPA Region: (II); EPA ID: NYS980506703; NYSDEC SITE CODE: 932081

Person(s) in charge of the facility: Mr. David Brooks, Director

Dept. of Environmental Services

City of Niagara Falls

Name of Reviewer: LC/PC Date: September 25, 1987

General description of the facility:

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

Griffon Park is a municipal park, approximately 12.8 acres in area, near the eastern edge of the City of Niagara Falls. The site is adjacent to the Hooker Chemical 102nd St. Landfill. The RI/FS of the 102nd St. Site, which was started by Occidental Chemical Corp., has provided some evidence of migrant contamination in ground water and soil samples across Griffon Park's unpaved area.

Scores: $S_M = {}^{14.85}(S_{gw} = 0 \quad S_{sw} = {}^{25.69} S_a = 0)$

$S_{FE} =$ *

$S_{DC} =$ 62.50

FIGURE 1
HRS COVER SHEET

* Not Scored. See Page 5.4.13. of the Report.

Ground Water Route Work Sheet							
Rating Factor		Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	Max. Sco
1	Observed Release	(0) 45	1	0	45	3.1	45
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		19
5	Targets					3.5	
	Ground Water Use	(0) 1 2 3	3	0	9		
	Distance to Nearest Well/Population Served	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
	Total Targets Score			0	49		0
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	57,330		0
7	Divide line 6 by 57,330 and multiply by 100		S_{gw} =	0			0

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet							Max. Score
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	(0)	45	1	0	45	4.1	45
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	1	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				10	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		19
5 Targets						4.5	
Surface Water Use	0 1 2 (3)		3	9	9		
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6		
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 (20) 24 30 32 35 40		1	20	40		
Total Targets Score				29	55		29
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				16530	64,350		
7 Divide line 6 by 64,350 and multiply by 100			S_{SW} = 25.69				38.53

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location: September 28, 1983; Griffon Park Site.					
Sampling Protocol: HNU					
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	3	
Toxicity	0 1 2 (3)	3	9	9	
Hazardous Waste Quantity	0 (1) 2 3 4 5 6 7 8	1	1	8	
	Total Waste Characteristics Score		13	20	
[3] Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 (21) 24 27 30	1	21	30	
Distance to Sensitive Environment	(0) 1 2 3	2	0	6	
Land Use	0 1 2 (3)	1	3	3	
	Total Targets Score		24	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		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	25.69	659.98
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		659.98
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		25.69
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} \,/\, 1.73 = S_M =$		14.85

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Containment	1 3	1	No Score	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			N/A	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			N/A	24		
4 Multiply 1 x 2 x 3			*	1,440		
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} = *			

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

* Fire & Explosion was not scored. See Page 5.4.13 hereafter for reasons.

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	15	8.3
4	Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5	Targets					8.5
	Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
	Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
	Total Targets Score			20	32	
6	If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			13,500	21,600	
7	Divide line 6 by 21,600 and multiply by 100		S_{DC} = 62.50			

FIGURE 12
DIRECT CONTACT WORK SHEET

HRS DOCUMENTATION
RECORDS

5.4 HRS Documentation

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

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

Facility Name: Griffon Park

location: City of Niagara Falls, Niagara County, New York

GROUND WATER ROUTE

1 OBSERVED RELEASE

Based on the available data on ground water contamination, no positive proof exists to demonstrate that an observed release of contaminants to ground water has occurred. There is no clean upgradient well on the Site.

Assigned value = 0

Reference: Milestone Report No. 13, dated July 28, 1987, App. A.1.h. Well #OW 48-86 & OW 54-86.

2 ROUTE CHARACTERISTICS

Depth to Aquifer of concern

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

The Geological Survey installed one well on the site near Little Niagara River bank. The depth to water surface in this well is approximately 4.5 feet.

Reference: Preliminary Evaluation of Chemical Migration To Groundwater and the Niagara River from Selected Waste-Disposal Sites, U.S. Environmental Protection Agency; Edward J. Koszalka, et al., 1985. (Appendix A.1.i. Page 385)

Assigned value = 3.

Net Precipitation

Mean annual or seasonal precipitation for Buffalo region: 32 inches.

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

Mean annual lake evaporation (obtained by interpolation from climatological map):

26.5 inches.

Reference: ibid.

Net Precipitation (subtract the above figures):

5.5 inches. Assigned value = 2.

Permeability of unsaturated Zone

Soil type in unsaturated zone:

The well installed by the U.S. Geological Survey in 1982 indicated that the till on Griffon Park site is highly permeable.

Assigned value = 3.

Reference: "Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites", 3/85, by U.S.G.S. - Edward J. Koszalka, et. al. (Appendix A.1.i. Page 385.)

Physical State

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

Solid: Municipal and construction wastes dumped at the site in the 1950's, 1960's & in 1970 were mostly in solid form. (There were some migratory liquid wastes, but they were not indigenous to the site.) Thus:

Assigned value = 1.

Reference: App. A.1.a. Page 9-447, & App. A.1.f. p. 2.

3 CONTAINMENT

Containment

Method (s) of waste or leachate containment evaluated:

No leachate collection system, no liner.

Reference: LC/PC site inspection dates: first inspection June 19, 1987; second site inspection August 29, 1987. (Appendix A.1.b).

Method with the highest score = 3.

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound (s) evaluated:

1,2,3,4 - Tetrachlorobenzene

Di-n-butyl Phthalate

Copper

The first two chemicals were found in the ground water at the Park site, and Copper in high concentrations was detected in soil samples taken by USGS in 1982.

Compound with the highest score:

1,2,3,4 - Tetrachlorobenzene

Assigned value = 18.

Reference: App. A.1.h: Milestone Report No. 13, Extended Survey Sampling, OW54-86 and OW48-86; sampling date: 2/09/87; and,
Appendix A.1.i: USGS, Prelim. Evaluation,....., 3/85, Table C-24, pp. 386-387.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0.

Unknown quantity of Mercury and Copper.

Assigned value = 1.

Reference: App. A.1.g. Page 2, and App. A.1.i. p. 386.

5 TARGETS

Ground Water Use

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

Ground water is contaminated, and not used for human or industrial purposes.

Assigned value = 0.

Reference: Niagara County Health Department, "Profile Report on Griffon Park", undated (ca.1983). App. A.1.f. Page 3.

distance to nearest well

there are no drinking water wells within a three mile radius of griffon park site. the city of niagara falls water supply system takes its water from niagara river.

assigned value = 0.

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

None.

Assigned value = 0.

References: USGS report, for FPA, op.cit., March 1985.

(Appendix A.1.1 Page 385-386).

Computation of land area irrigated by supply wells (s) drawing from aquifer (s) of concern within a 3-mile radius: 0.

Total population served by ground water within a 3-mile radius: None.

Assigned value = 0. Combined value = 0.

References: EPA Form 2070-13 completed for Griffon Park Site, in September 28, 1983 by NUS Corporation (EPA Contractor), Appendix A.1.c. part 5-09.

* * *

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it:

There is no evidence that the waters of the Little Niagara River have been contaminated as a result of the contamination in the ground water or soil at the Griffon Park site.

Assigned value = 0.

Reference: App. A.1.f. Page 3, and App. A.1.1. p. 385-386.

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope = 5% Assigned value = 1

References: EPA Form 2070-13, filled by NUS Corporation in October 3, 1983, for NYSDEC, Region 9, Buffalo.

Average slope of terrain between facility and Little Niagara River in percent:

Average slope = 5%

Intervening terrain is nill. Combined value = 1.

1-Year, 24-Hour Rainfall in inches

approximately 2.5 inches Assigned value = 2.

References: 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.

Distance to nearest downslope surface water:

Name/description of nearest downslope surface water: Little Niagara River is at the southern boundary of the site.

Assigned value = 3.

References: Edward J. Koszalka, et al., March 1985, "Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites". (Appendix A.1.1).

Physical State

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

Solid: Municipal and construction wastes dumped at the site in the 1950's, 1960's and in 1970 were mostly in solid form.

Assigned value = 1

Reference: App. A.1.a. Page 9-447, and App. A.1.f. p. 2.

* * *

3 CONTAINMENT

Containment

Method (s) of waste or leachate containment evaluated:

No leachate collection system, no liner.

RI/FS still going on at the Occidental Chemical Co.'s 102nd Street Landfill Site. No remedial action taken up to now.

Assigned value = 3.

Reference: App. A.1.f. Page 3, and App. A.1.j. p. 2.

5. TARGETS

Surface Water Use

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

The City of Niagara Falls water intakes are located nearly three miles downstream on the Niagara River. As many as 100,000 people draw water from this source. Industrial intakes are also located downstream.

Drinking water. Assigned value = 3.

Reference: Niagara County Health Dept. Profile Report, (Appendix A.1.f p. 3.)

Distance to a Sensitive Environment

There are no wetlands within one-mile radius of this site, although the site itself and most of the nearby area to the east was wetland at one time.

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

None. Assigned value = 0.

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

None. Assigned value = 0.

Distance to critial habitat, if 1 mile or less:

None. Assigned value = 0.

References: Niagara County Health Dept. Profile Report for Griffon Park, (ca. 1983). App.A.1.f.

App. A.1.n - letter from NYSDEC, Wildlife Resource Center.

Population Served by Surface Water

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

Intake for City of Niagara Falls is within 3-mile of the Griffon Park site on Niagara River.

Reference: ibid. Page 23. (App. A.1.f. p. 3.)

Population drawing their water supply from Niagara River = 100,000

Assigned value = 20.

Name/description of nearest surface water bodies:

Niagara River.

Reference: App. A.1.k. p. 2.

* * *

AIR ROUTE

1 OBSERVED RELEASE

Contaminants Detected:

During both site inspections by IC/PC team, on June 19th and August 29th, 1987, no evidence of air contamination was observed throughout the Griffon Park Site area. Previous environmental investigations of the site did not observe any air contaminants above background levels. Specifically, in October of 1983 an EPA Contractor, i.e., NUS Corporation, conducted a field measurement of air contaminants by using an HNU meter, which resulted in no readings above background levels. (App. A.1.c. p. III-01).

Assigned Value = 0.

* * *

Date and location of detection of contaminants:

None.

Methods used to detect the contaminants: HNU

Rationale for attributing the contaminants to the site:

Not applied.

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

More reactive compound:

Cyclohexane

Most incompatible pair of compounds:

Brine sludge and bentoic acid

Toxicity

Most toxic compound:

Lindane, and Mercury.

Assigned value = 3.

Reference: App. A.1.e. Page II-69, and A.1.g. p. 1.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Unknown quantity of hazardous substances, both indigenous and migration-based, have been evidenced at this site.

Assigned value = 1.

Reference: App. A.1.f. page 3, A.1.h Well #OW 54-86, & A.1.i. pp. 386-387.

* * *

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

>27,826** 8,405*

* Figure obtained from City of Niagara Falls, Dept. of Envir. Services.

** The figure of 27,826 was obtained from the same Department.

Population figure within 4-mile radius is definitely larger.

Assigned value = 21

Distance to a Sensitive Environment

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

None.

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

None.

Distance to critical habitat of an endangered species, if 1 mile or less: None.

Assigned value = 0.

Land Use

Distance to commercial/industrial area, if 1 mile or less: None.

Assigned value = 0.

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less: No.

Assigned value = 0.

Distance to residential area, if 2 miles or less:

The nearest homes are within 200 feet.

Assigned value = 3.

Distance to agricultural land in production within past 5 years, if 1 mile or less: None.

Assigned value = 0.

Distance to prime agricultural land in production within past 5 years, if 2 miles or less: None.

Assigned value = 0.

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within the view of the site? None.

Assigned value = 0.

Highest applicable assigned value = 3.

* * *

FIRE AND EXPLOSION

Since hazardous wastes from the Occidental Chemical Corporation Landfill Site may have migrated to the Griffon Park Site, ignitable substances are likely to be present in the vicinity of the boundary fence to the east of the site. However, during the LC/PC site inspecton trips of June 19th, and August 29, 1987, no demostrated threat of a fire or explosion was observed in the contaminated part of the site.

The Fire Department of the City of Niagara Falls, in response to a verbal inquiry, confirmed that no fire hazard has been recorded or evidenced on that site.

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

None reported. Assigned value = 0.

Reference: LC/PC team site inspection trips dated June 19, and August 29, 1987. (Appendix A.1.b).

* * *

2 ACCESSIBILITY

Describe type(s) of barrier (s):

Low-height chain link fences partially surround the contaminated baseball diamonds.

Bollards separate paved parking area from contaminated grassed areas.

Assigned value = 3.

Reference: Appendix A.1.b.

* * *

3 CONTAINMENT

Type of containment, if applicable:

Hazardous waste may have migrated from neighboring industrial Waste Landfill, and be present in the topsoil layer of the ground at this site.

Assigned value = 15

Reference: LC/PC team site inspections, June 19, and August 29, 1987. Also, see App. A.1.f.

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

1,2,3,4- Tetrachlorobenzene and Di-n-butyl phthalate

(See App. A.1.h., and App. A.1.i.).

Assigned value = 3.

* * *

5 TARGETS

Population Within 1 - Mile Radius

8,405 people;

Site is a municipal park for recreation.

Assigned value = 4.

Reference: N.C.H.D. - Profile Report (ca. 1983).

(Appendix A.1.f).

Distance to Critical Habitat (of Endangered Species)

None. Assigned value = 0.

App. A.1.n.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
GRIFFON PARK	BUFFALO AVE. & 95th STREET

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST.
Niagara Falls	NY	14302	Niagara	63	32

09 COORDINATES LATITUDE	LONGITUDE
43° 04' 02" N	78° 57' 08" W

10 DIRECTIONS TO SITE (Starting from nearest public road)

From Buffalo, Exit I-190 at Buffalo Avenue, turn right onto Buffalo Avenue, drive through town. The site on right (South) side, between River Road and Niagara River and between southern tip of 95th and 97th Street.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
City of Niagara Falls	City Hall, Main Street

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Niagara Falls	NY	14302	(716) 278-8018

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

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

13 TYPE OF OWNERSHIP (Check one)

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

☐ F OTHER _____ (Specify) ☐ G UNKNOWN

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

☐ A RCRA 3001 DATE RECEIVED _____ (MONTH DAY YEAR) ☐ B UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED _____ (MONTH DAY YEAR) ☒ C NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

15 ON SITE INSPECTION

☒ YES DATE 08 29 87 (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A EPA ☐ B EPA CONTRACTOR ☐ C STATE ☐ D OTHER CONTRACTOR
☐ E LOCAL HEALTH OFFICIAL ☒ F OTHER Le Roy Callender/P.C. (Specify)

CONTRACTOR NAME(S):

16 SITE STATUS (Check one)	17 YEARS OF OPERATION
☐ A ACTIVE ☒ B INACTIVE ☐ C UNKNOWN	_____ (BEGINNING YEAR) _____ (ENDING YEAR) ☒ UNKNOWN

18 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Mercury, Chromium, lead & iron; Dioxin; copper; di-n-butyl phthalate; 1,4-Dichlorobenzene, Hexachlorocyclohexane, etc.

19 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

hazardous chemicals, both organic and inorganic have been found in groundwater and soil samples. Little Niagara River joins Niagara River, which constitutes drinking water supply for 100,000 people.

V. PRIORITY ASSESSMENT

20 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 an as-time basis) ☐ D NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Mr. David Brooks	City of Niagara Falls, Envir. Manager	(716) 278-8018

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Sirous H. Nabavi	NYSDEC	LC/PC	(212) 989-2900	10/8/87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

02 WASTE QUANTITY AT SITE

(Measures of waste quantity must be independent)

TONS 6,000

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		Dichlorobenzene; Tetrachlorobenzene,
IOC	INORGANIC CHEMICALS			and other organic chemicals
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		Mercury, Lead & Chromium

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
	Dioxin		Landfill	4.1 ppb	p.p.b.
	Mercury		Landfill	615	p.p.b.
	Lead		Landfill	140	mg/l
	— —				

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not Applicable

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)

N.Y.S. DEC, Region 9, Buffalo, N.Y.
U.S.G.S. Ithaca, N.Y.

EPA FORM 2070-12 (7-81)

GRIFFON PARK

Exhibit 2

Site Inspection Report

EPA Form 2070-13

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

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II SITE NAME AND LOCATION

01 SITE NAME	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER				
Griffon Park	River Road between 95th & 97th Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG. DIST.**
Niagara Falls	N.Y.	14302	Niagara	63	32

09 COORDINATES LATITUDE 43° 04' 02" N | LONGITUDE 78° 57' 08" W

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

III INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
8 / 29 / 87 (MONTH / DAY / YEAR)	☐ ACTIVE ☒ INACTIVE	_____ (BEGINNING YEAR) _____ (ENDING YEAR) ☒ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A EPA ☐ B EPA CONTRACTOR _____ (Name of firm) ☐ C MUNICIPAL ☐ D MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E STATE ☐ F STATE CONTRACTOR _____ (Name of firm) ☐ G OTHER LeRoy Callender/P.C. (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Sirous H. Nabavi	Sanitary Engineer	LC/PC	(212) 989-2900
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Rosa McDaniel	Technician	LC/PC	(716) 886-2694
Doreen Forbes	Technician	LC/PC	(716) 886-2694
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
David Brooks	Envir. Mgr.	City of Niagara Falls	(716 278-8018
Peter Buechi	Regional Eng.	NYSDEC, Region 9	(716 847-4585
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	2:00 PM	Sunny, Warm

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Mr. David Brooks	City of Niagara Falls	(716) 278-8018
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	**05 AGENCY** / **06 ORGANIZATION** / **07 TELEPHONE NO.**	**08 DATE**
Sirous H. Nabavi	LC/PC / Gibbs & Hill / (212) 216-7216	10 / 8 / 87 (MONTH / DAY / YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

X A SOLID — E SLURRY
B POWDER, FINES — X F LIQUID
C SLUDGE — G GAS
D OTHER (Specify) _____

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

TONS Unknown
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		Dichlorobenzene; Tetrachlorobenzene
IOC	INORGANIC CHEMICALS			and other organic 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
	Tetrachlorobenzene		Landfill	22	p.p.b.
	Mercury		Landfill	615	p.p.b.
	Copper		Landfill	17,000	p.p.b.

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not Applicable

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)

N.Y.S.DEC, Region 9, Buffalo, NY
U.S.G.S. Ithaca, NY

EPA

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

I. IDENTIFICATION
01 STATE: N.Y. | 02 SITE NUMBER: D980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: None
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ B SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

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

No hazards of air contamination have been demonstrated

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

No potential is contemplated.

01 ☒ E DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE 8/29/87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Contaminated areas are open to public

01 ☐ F CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 4.3 (Acres)
02 ☐ OBSERVED (DATE 8/29/87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Past history and testing of ground-water and soil indicates contamination.

01 ☐ G DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Site adjacent to the Little and Niagara Rivers; surrounding communities draw their drinking water from the Niagara River

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

No potential exists.

01 ☐ I POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 8,400
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Population within 1-mile Radius may be exposed to hazardous waste contamination at the grassy area of the site.

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

No potential exists

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

No potential exists

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

The site is adjacent to the Little & Niagara Rivers.

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

Any hazardous waste contained in the site may leak into the Niagara River. The site was a wetland and no known precautions were taken when dumping occurred

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

No potential exists

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

No potential exists

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

The site is presently a city park, no security, and is open to the public.

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

The fence between Griffon Park and OCC 102nd Street Landfill Site does not separate groundwater aquifer, and contamination is likely to migrate.

III. TOTAL POPULATION POTENTIALLY AFFECTED 100,000

IV. COMMENTS

The ongoing remedial investigation by OCC, Olin, & by the NYSDEC, Region 9 is providing ample and valuable evidence regarding the contamination of the site.

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

N.Y. DEC Region 9, Buffalo, NY

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	D98056703

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	Unknown	
☐ G LANDFARM		
☐ H OPEN DUMP		
☐ I OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A INCINERATION
- ☐ B UNDERGROUND INJECTION
- ☐ C CHEMICAL/PHYSICAL
- ☐ D BIOLOGICAL
- ☐ E WASTE OIL PROCESSING
- ☐ F SOLVENT RECOVERY
- ☐ G OTHER RECYCLING/RECOVERY
- ☐ H OTHER (Specify) None

05 OTHER

☐ A BUILDINGS ON SITE

None

06 AREA OF SITE

12.8 (Acres)

07 COMMENTS

The Site is adjacent to the OCC (formerly Hooker) 102nd Street Landfill Site and the Little Niagara River. Sampling of soil and groundwater at both sites shows contamination. Tetrachlorobenzene & Mercury have been found in the soil samples at the eastern boundary fence.

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.

Cover is shallow; groundwater flow is towards Little Niagara River, and might be contaminated with hazardous wastes.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☒ NO

02 COMMENTS

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

N.Y.DEC Region 9, Buffalo, NY

EPA

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

I. IDENTIFICATION
01 STATE: NY
02 SITE NUMBER: D980506703

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as appropriate)

	SURFACE	WELL
COMMUNITY	A [X]	B [ ]
NON-COMMUNITY	C [ ]	D

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A [ ]	B [ ]	C [X]
D [ ]	E [ ]	F [ ]

03 DISTANCE TO SITE
A 3 (m)
B _____ (m)

III GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
[X] A ONLY SOURCE FOR DRINKING [ ] B DRINKING (Other sources available) COMMERCIAL INDUSTRIAL IRRIGATION (No other water sources available) [ ] C COMMERCIAL INDUSTRIAL IRRIGATION (Other sources available) [X] D NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUNDWATER: None

03 DISTANCE TO NEAREST DRINKING WATER WELL: _____ (m)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
4.5 - 5.5 (ft)	South	4.5 (ft)	Unknown (gpd)	[ ] YES [X] NO

09 DESCRIPTION OF WELLS (Include, usage, depth, and location relative to population and buildings)
No known drinking water wells are in this area. Groundwater monitoring wells are located both in the grassy area of the Site and, also, on the adjacent OCC 102nd Street Site.

10 RECHARGE AREA		11 DISCHARGE AREA	
[X] YES [ ] NO	COMMENTS: Variable permeability of fill on Site	[X] YES [ ] NO	COMMENTS: During Spring thaw, high groundwater levels may allow groundwater discharge to the Niagara Riv

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
[X] 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
Little Niagara River	X	Adjacent (mi)
Niagara River	X	Adjacent (mi)
Lake Ontario	X	12 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN
ONE (1) MILE OF SITE: A 8,405 (NO. OF PERSONS)
TWO (2) MILES OF SITE: B 18,000 (NO. OF PERSONS)
THREE (3) MILES OF SITE: C 27,826 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION: 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: Approx. 5,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING: 0.1 (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))
Over 10,000 people live within two miles of the site. Several thousand buildings are within 2 miles of the site. Nearest off-site building is 200 ft. west.

EPA

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

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D980506703

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	
140 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
3.5 (in)	2.5 (in)	5%	South	5%

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	OTHER
A 0.1 (mi)	B Not Appl. (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (ft)

ENDANGERED SPECIES: Not applicable

13 LAND USE IN VICINITY

DISTANCE TO

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL; STATE PARKS; FORESTS OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A 2 (mi)	B 0.1 (mi)	C N/A (mi)	D N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Site is a 12.8 acre parcel located between Buffalo Avenue and the Little Niagara River and extends from the western fence of the OCC 102nd Street Landfill to the southern projection of 95th Street. The site is wholly within the City limits of Niagara Falls, N.Y. Presently, the boat dock and the asphalted parking area of the Park is being used by the public, but the three (3) baseball diamonds have been fenced off.

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

N.Y. DEC Region 9, Buffalo, N.Y.
City of Niagara Falls, Environmental Services Dept.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II SAMPLES TAKEN (remedial investigations are ongoing)

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		NYSDEC, Region 9, Buffalo, N.Y.	Available Now
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL		NYSDEC, Albany, N.Y.	Available Now
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	No HNU readings were taken

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND AERIAL App.A.1.L

02 IN CUSTODY OF LeRoy Callender/P C , New York, N.Y.
(Name of organization or individual)

03 MAPS X YES NO

04 LOCATION OF MAPS Appendix A.1.p

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field notebooks
Office Interview Minutes

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

N.Y.S. DEC, Region 9, Buffalo
City of Niagara Falls, Environ. Division, Niagara Falls, City Hall

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D9805066703

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
City of Niagara Falls	Not Applicable	City Hall, Main Street	NY	Niagara Falls	NY	14302

PARENT COMPANY

08 NAME	09 D+B NUMBER	10 STREET ADDRESS	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
Not applicable						

III. PREVIOUS OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Not applicable						

IV. REALTY OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Not Applicable						

V. SOURCES OF INFORMATION

N.Y.S. DEC, Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Not Applicable	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
Not Applicable	

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)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Not Applicable		Not applicable	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

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

N.Y.S. DEC, Region 9, Buffalo, NY

EPA

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

I IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

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
None			
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
None			
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)

N.Y.S. DEC, Region 9, Buffalo, NY

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D980506703

II. PAST RESPONSE ACTIVITIES

01 ☐ A WATER SUPPLY CLOSED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ B TEMPORARY WATER SUPPLY PROVIDED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ C PERMANENT WATER SUPPLY PROVIDED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ D SPILLED MATERIAL REMOVED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ E CONTAMINATED SOIL REMOVED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ F WASTE REPACKAGED | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ G WASTE DISPOSED ELSEWHERE | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ H ON SITE BURIAL | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ I IN SITU CHEMICAL TREATMENT | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ J IN SITU BIOLOGICAL TREATMENT | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ K IN SITU PHYSICAL TREATMENT | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ L ENCAPSULATION | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ M EMERGENCY WASTE TREATMENT | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ N CUTOFF WALLS | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ O EMERGENCY DIKING SURFACE WATER DIVERSION | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ P CUTOFF TRENCHES SUMP | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ Q SUBSURFACE CUTOFF WALL | 02 DATE _____ | 03 AGENCY _____
04 DESCRIPTION
No previous history

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980506703

II. PAST RESPONSE ACTIVITIES

01 ☐ R BARRIER WALLS CONSTRUCTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ S CAPPING/COVERING | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ T BULK TANKAGE REPAIRED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ U GROUT CURTAIN CONSTRUCTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ V BOTTOM SEALED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ W GAS CONTROL | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ X FIRE CONTROL | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ Y LEACHATE TREATMENT | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ Z AREA EVACUATED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ 1 ACCESS TO SITE RESTRICTED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☐ 2 POPULATION RELOCATED | 02 DATE | 03 AGENCY
04 DESCRIPTION
No previous history

01 ☒ 3 OTHER REMEDIAL ACTIVITIES | 02 DATE June 1984 | 03 AGENCY OCC/Olin
04 DESCRIPTION
Ongoing remedial investigation at the neighboring OCC 102nd street Landfill Site started.

III. SOURCES OF INFORMATION

N.Y.S. DEC, Region 9, Buffalo, N.Y.
City of Niagara Falls, Environ. Division, Niagara Falls, N.Y.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION X YES _ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

In June 1984, stipulation issued by U.S. District Court for the western District of New York against OCC & Olin Corporation, and City of Niagara Falls obligated OCC & Olin to develop an appropriate and permanent remedy for the 102nd Street Landfill Site, which included Griffon Park's affected area in its purview. OCC & Olin started a RI/FS investigation in October of 1985.

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

N.Y.S. DEC, Region 9, Buffalo, N.Y.
City of Niagara Falls, Environ. Div., Niagara Falls, N.Y.

EPA FORM 2070-13 (7-81)

6. ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

6.1 ADEQUACY OF EXISTING DATA

Ongoing remedial investigation and feasibility study of the 102nd Street Landfill Site sheds a great light on the contamination of surface water, ground water, soil and sediments of the contiguous area of the Griffon Park Site, specially a 4.3-acre portion of this site, adjacent to its eastern boundary fence. However, based on available records for a period of almost twenty (20) years, from 1951 to 1970, the City of Niagara Falls used the site for the disposal of such wastes as leaves, forestry materials, incinerator residue, incombustible materials, and possibly industrial wastes. Information on the contamination of the ground water, surface water or soil on an area of approximately 11.3 - 4.3 = 7.0 acres in the grassy areas of the site is lacking. Thus, additional investigation in the above area seems mandatory in order to ascertain the extent of site contamination as well as the quantities of hazardous waste landfilled there in previous years.

6.2 RECOMMENDATIONS

The ongoing Remedial Investigation and Feasibility Study of the 102nd Street Landfill Site by OCC and Olin encompassess only those areas of Griffon Park which are situated in the vicinity of the eastern boundary fence; the RI study is not expected to include previously used dumping areas used by the City of Niagara Falls.

Therefore, it is recommended that a similar remedial investigation of the old municipal dumping areas of the Park be undertaken to supplement the OCC/Olin investigation. A work plan should be drawn up for this purpose, along the same lines as outlined in the "Work Plan for the Remedial Investigation of the 102nd Street Landfill Site" dated June 1984.

Appendix List

Appendix A.1.a	NYSDEC, Divison of Solid and Hazardous Waste Inactive Hazardous Waste Disposal Report
Appendix A.1.b	Inspection Reports, dated 6/19/87 & 8/29/87 by LC/PC.
Appendix A.1.c	EPA Form 2070-12, dated 10/3/83, filled out by NUS Corporation (EPA Contractor) Potential Hazardous Waste Site -- Executive Summary, and EPA Form 2070-13, dated 10/3/83, filled out by NUS Corporation (EPA Contractor)
Appendix A.1.d	The Buffalo News Article, dated July 17, 1987, on Dioxin Hot Spot found adjacent to Griffon Park
Appendix A.1.e	Interagency Task Force on Hazardous Wastes -- Draft Report, March 1979 (Excerpts)
Appendix A.1.f	Profile Report, on Griffon Park, by N.C.H.D. (ca. 1983)
Appendix A.1.g	NYSDEC, Region 9, letter dated Aug. 31, 1987, with Soil Survey data from 102nd Street Remedial Investigation (Excerpts)
Appendix A.1.h	NYSDEC, Bureau of Hazardous Site Control, Div. of Solid & Hazardous Waste, letter dated Aug. 10, 1987, with excerpts from Milestone Report No. 13-Extended Ground Water Sampling

Appendix List Cont'd.

Appendix A.1.i	USGS, Water Resources Division, Ithaca, N.Y., letter dated 8/5/87, with excerpts from EPA Report, March 1985, "Prelim. Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites"
Appendix A.1.j	Stipulation, USA & NYS vs. OCC, Olin, and City of Niagara Falls, dated June 26, 1984 - Civil Action no. 79-987 (JTC)
Appendix A.1.k	Map from Community Water Supply Atlas, Niagara County
Appendix A.1.l	Griffon Park Site Pictures
Appendix A.1.m	NYS-Dept. of Health-letter dated 08/19/87
Appendix A.1.n	NYSDEC-Wildlife Resources Center, letter dated 09/30/87, concerning Significant Habitat Program
Appendix A.1.o	USDA-Soil Conservation Service - letter dated 09/30/87, with Map & description of soil types
Appendix A.1.p	USGS 7.5 Minute Series, Tonawanda West & Niagara Falls Quandrangles (2)

APPENDIX

Appendix A.1.a

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

CLASSIFICATION CODE: 2a REGION: 9 SITE CODE: 932081
EPA ID: NYD980506703

NAME OF SITE : Griffon Park
STREET ADDRESS: Bet. River Rd. & Niagara R.95th St. NF NY 14305
TOWN/CITY: COUNTY: ZIP:
Niagara Falls (c) Niagara

SITE TYPE: Open Dump-X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 11.3 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: City of Niagara Falls
CURRENT OWNER ADDRESS.: City bldg. 745 Main St. NF NY 14305
OWNER(S) DURING USE...: City of Niagara Falls
OPERATOR DURING USE...: City of Niagara Falls
OPERATOR ADDRESS.....: City Bldg., 745 Main St. NF NY 14305
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1940's To 1970

SITE DESCRIPTION:
The site was used to dispose an unknown quantity of mostly leaves, forestry materials and possibly municipal and domestic wastes. It has been reported that some industrial material including sand, abrasives, broken concrete & similar materal had also been placed, but no drummed wastes or hazardous material is known to have been disposed of there. USGS took soil and groundwater samples in 1982. The results are still incomplete, but the groundwater samples did indicate the presence of organics, and iron was detected above groundwater standards.
The site is adjacent to the Hooker Chemical 102nd Street landfill. During remedial investigation of the 102 st landfill. potential migration of contaminants to Griffon Park has been demonstrated. The RI/FS for the 102nd St. Site was started by Occidental Chemical in 10/85, and is still going on.

HAZARDOUS WASTE DISPOSED: TYPE	Confirmed-	Suspected-X QUANTITY (units)
None Known		

SITE CODE: 932081

ANALYTICAL DATA AVAILABLE:
Air- Surface Water- Groundwater-X Soil-X Sediment- None-

CONTRAVENTION OF STANDARDS:
(undwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: None State- Federal-
STATUS: Negotiation in Progress- Order Signed-

REMEDIAL ACTION:

Proposed- Under design- In Progress- Completed-
NATURE OF ACTION: None

GEOTECHNICAL INFORMATION:
SOIL TYPE: Topsoil and fill overlying sandy clay.
GROUNDWATER DEPTH: App. 4 1/2'

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Limited data on soil and water samples does indicate the presence of organic parameters. More investigation is required to determine the presence of toxic substances, since the potential for contamination of the Niagara River exists.

ASSESSMENT OF HEALTH PROBLEMS:

Medium	Contaminants Available	Migration Potential	Potentially Exposed Population	Need for Investigation
Air	Likely	Highly Likely	Yes	High
Surface Soil	Likely	Highly Likely	Yes	High
Groundwater	Likely	Highly Likely	Yes	High
Surface Water	Likely	Highly Likely	Yes	High

Health Department Site Inspection Date : 6/85

MUNICIPAL WASTE ID: 32-S-79

ICS ID:

SPEDES ID:

Appendix A.1.b

App. A.1.b

LeROY CALLENDER / P.C. CONSULTING ENGINEERS
236 WEST 26th STREET • NEW YORK, N.Y. 10001
(212) 989-2900

INSPECTION REPORT

PROJECT:
Engineering Investigation of Inactive Hazardous Wastes Sites
New York State Department of Environmental Conservation

DATE OF INSPECTION: Friday June 19, 1987
WEATHER: Sunny, Warm
INSPECTOR: Si Nabavi
SITE CODE: 932081
EPA I.D.: NYD980506703
TOWN: City of Niagara Falls
COUNTY: Niagara

I met with Mr. Dave Brooks, Env. Mgr. of City of Niagara Falls in his office downtown Niagara City, & we drove out to the Griffon Park Site, p.m. 2:00 to 4:00. This is a relatively small Municipal Park site next door to 102nd Street Landfill belonging to Occidental Petroleum (Chemical) & Olin Corp. I took four (4) pictures facing North, East, South & West. The site is approximately 12 acres in area & is bounded by the highway to the North, Occidental Petroleum to the East, Niagara River to the south, & private houses to the west (separated by a narrow ~~dirt road~~ easement from G.P. site.)

The site's eastern flank is contaminated by leachate from underground seepage of hazardous chemicals coming from Hooker Chemical 102nd Street Landfill.

In 1983, a consent decree was signed between State D.E.C. & Occidental Petroleum, which required the latter to take remedial action to correct the contamination of ground water at Griffon Park site. The company retained a Canadian Firm to design the remedial actions and according to Mr. Dave Brooks, they are still working on it.

COPY TO:

LeROY CALLENDER / P.C. CONSULTING ENGINEERS
SIGNED: Sirous H. Nabavi (P.E.)

App. A.1.b

LeROY CALLENDER, P.C. CONSULTING ENGINEERS
236 WEST 26th STREET • NEW YORK, N.Y. 10001
(212) 989-2900

INSPECTION REPORT

PROJECT:

Engineering Investigation of Inactive Hazardous Wastes Sites

New York State Department of Environmental Conservation

DATE OF INSPECTION: August 29, 1987

WEATHER: Sunny, Mild, 68°F

INSPECTOR: Si Nabavi

SITE CODE: 932081

EPA I.D.: NYD980506703

TOWN: City of Niagara Falls COUNTY: Niagara

Results of interview held with Mr. Peter Buechi, head of NYSDEC Region 9, in Buffalo, on Griffon Park Site:

1 - It was agreed that the migrant contamination from 102nd Street Landfill into Griffon Park Site was more significant than other sources of Hazardous Waste Contamination in that Site.

2 - In Buffalo news issue dated July 17, 1987 entitled:

"TESTS FIND DIOXIN NEAR DUMP ALONG FALL'S BUFFALO AVENUE".

there is a reference to Griffon Park site as follows:

"----The dioxin was found about 300 feet east of a Griffon Park ball diamond closed by the City after disclosures on chemical dumping and the possibility of migration from the Occidental Site".

According to Mr. Buechi, the above statement is factual in basis, and Mr. Buechi is going to send results of some soil testing to LC/PC as proof of the above statement.

3 - If monitoring wells that are in place in the Griffon Park area adjacent to the boundary fence between Griffon Park and 102nd street landfill site are the only monitoring wells that have been sunk in the Park area, it might be advisable to recommend in Phase I Investigation Report to drill more monitoring wells across the Griffon Park site to ascertain the nature and extent of ground water contamination in other areas of Griffon Park Site.

4 - Population data in the vicinity of Griffon Park Site is available from Mr. Dave Brook's Office, in the City of Niagara Falls.

Continued

COPY TO:

LeROY CALLENDER, P.C. CONSULTING ENGINEERS

SIGNED Sirous A. Nabavi

LeROY CALLENDER, P.C. CONSULTING ENGINEERS

236 WEST 26th STREET • NEW YORK, N.Y. 10001
(212) 989-2900

INSPECTION REPORT

PROJECT:

Engineering Investigation of
Inactive Hazardous Wastes Sites

New York State Department of
Environmental Conservation

DATE OF INSPECTION: August 29, 1987

WEATHER: Sunny, Mild, 68°F

INSPECTOR: Si Nabavi

SITE CODE: 932081

EPA I.D.: NYD980506703

TOWN: City of Niagara Falls

COUNTY: Niagara

5 - In the light of findings in the 102nd Street Landfill Site and its effects on Griffon Park Site, it was felt that further investigations into the soil, ground water, and surface water resources of the site is fully warranted and should be recommended by LC/PC.

6 - LC/PC should take more photos from the Griffon Park Site, especially along the waterfront.

- END OF REPORT -

COPY TO:

LeROY CALLENDER, P.C. CONSULTING ENGINEERS

SIGNED Sious A. Nabavi

Appendix A.1.c

App. A.1.C

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980506703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Griffon Park

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: River Road and 95th Street

03 CITY: Niagara Falls

04 STATE: NY | 05 ZIP CODE: 14302 | 06 COUNTY: Niagara | 07 COUNTY CODE: 63 | 08 CONG DIST: 32

09 COORDINATES: LATITUDE 43° 04" 02"N | LONGITUDE 78°57' 08" W

10 DIRECTIONS TO SITE (Starting from nearest public road):
From Buffalo, Exit I-190 at Buffalo Avenue, turn right onto Buffalo Avenue, drive through town. The site on right (South) side, between River Road and Niagara River and between 95th and 97th Street.

III. RESPONSIBLE PARTIES

01 OWNER (If known): City of Niagara Falls

02 STREET (Business, mailing, residential): City Hall, Main Street

03 CITY: Niagara Falls

04 STATE: NY | 05 ZIP CODE: 14302 | 06 TELEPHONE NUMBER: (716) 278-8018

07 OPERATOR (If known and different from owner):

08 STREET (Business, mailing, residential):

09 CITY:

10 STATE: | 11 ZIP CODE: | 12 TELEPHONE NUMBER: ( )

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

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 9/28/83 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): NUS Corporation

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

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

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Unknown, some material from the Hooker 102nd Street site may have extended beyond the Hooker property line. Chemical dumping may have occurred here in the 1940's. However, these reports have not been confirmed.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
The site is adjacent to Hooker 102nd Street site. The site is used as a city park, with three baseball diamonds and a boat ramp. It borders on the Little and Niagara Rivers.

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
Mark Haulenbeek	EPA			(201) 321-6685
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Thomas Cosentino	EPA	NUS CORPORATION FIT II	(201) 225-6160	10 / 3 / 83 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

- TONS: Unknown
- CUBIC YARDS: Unknown
- NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply) Unknown

- ☐ 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 Unknown

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			The site was a municipal landfill used
OLW	OILY WASTE			by the city of Niagara Falls. It is
SOL	SOLVENTS			adjacent to the Hooker 102nd Street site
PSD	PESTICIDES			and may be contaminated from material
OCC	OTHER ORGANIC CHEMICALS			extending beyond the Hooker property
IOC	INORGANIC CHEMICALS			line.
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
	Unknown				

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not applicable

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)

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: 0980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

No potential exists.

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

No potential exists.

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

Site adjacent to the Little and the Niagara Rivers. People observed fishing in river.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,000
04 NARRATIVE DESCRIPTION

Any hazardous waste contained in the site may leak into the Niagara River. The site was a wetland and no known precautions were taken when dumping occurred.

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

No potential exists.

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

No potential exists.

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

The site is presently a city park with three baseball diamonds, no security, and is open to the public.

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

A fence between Griffon Park and Hooker 102nd Street site was cut and signs of trespassing into Hooker site were evident.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 100,000

IV. COMMENTS

The city of Niagara Falls Planning Department could not provide information on the site at a meeting held with Larry Krizar, Director of Planning, City of Niagara Falls, on September 30, 1983.

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: none
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No known drinking water wells near the site; the site is adjacent to the Hooker 102nd Street site.

01 ☒ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Could potentially contaminate the Little and the Niagara Rivers.

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

No potential exists.

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

No potential exists

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: 9/28/83) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Shallow ground cover with a small patch of tar waste and scattered patches of cement protruding.

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 13 (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Past history shows alleged spill over from Hooker 102nd Street site into Griffon Park site.

01 ☒ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Site adjacent to the Little and Niagara Rivers; surrounding communities draw their drinking water from the Niagara River.

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

No potential exists.

01 ☒ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 10,000
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Shallow ground cover with a small patch of tar waste protruding and scattered patches of cement.

Niagara Co
932081

NUS CORPORATION

POTENTIAL HAZARDOUS WASTE SITE

EXECUTIVE SUMMARY

Griffon Park Site Name	N.Y. D 980 506 703 EPA Site ID Number
Niagara Falls, N.Y. Address	02-8306-22 TDD Number

Date of Site Visit: September 28, 1983

SITE DESCRIPTION

The site is an inactive landfill with shallow cover. Griffon Park is used as a public park and has three baseball diamonds and a boat ramp on the premises. It is located adjacent to the Hooker 102nd Street site.

PRIORITY FOR FURTHER ACTION: High ___ Medium X Low ___

RECOMMENDATIONS

Additional data is needed to determine the presence or absence of toxic substances. Sample test results from a well on the Hooker 102nd Street site, located 20 feet East of Griffon Park would provide much information regarding ground water quality and potential contamination at this site.

Prepared by: Thomas J. Cosentino of NUS Corporation Date: 10/3/83

App. A.1.C

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

EPA

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER				
Griffon Park	River Road between 95th and 97th Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Niagara Falls	N.Y.	14302	Niagara	63	32

09 COORDINATES LATITUDE 43°04'02".N | LONGITUDE 78° 57'08"W

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

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
9 / 28 / 83 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	_____ BEGINNING YEAR _____ ENDING YEAR ☒ UNKNOWN

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

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Bill Neal	Environmental Scientist	NUS	(201)225-6160
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Trudi Fancher	Environmental Scientist	NUS	(201)225-6160
Thomas Cosentino	Toxicologist	NUS	(201)225-6160
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Larry Krizan	Director of Planning	City of Niagara Falls Niagara Falls, NY	(716)278-8018
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	2:30 PM	Clear, Mid 70's

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Mark Haulenbeek	EPA	(201)321-6685

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Thomas J. Cosentino	EPA	NUS Corporation FIT II	(201)225-6160	10 / 3 / 83 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS Unknown
CUBIC YARDS Unknown
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			The site was a municipal landfill used
OLW	OILY WASTE			by the city of Niagara Falls. It is
SOL	SOLVENTS			adjacent to the Hooker 102nd Street
PSD	PESTICIDES			site and may be contaminated from
OCC	OTHER ORGANIC CHEMICALS			materials extending beyond the Hooker
IOC	INORGANIC CHEMICALS.			property line.
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
	Unknown				

V. FEEDSTOCKS (See Appendix for CAS Numbers) Not applicable

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)

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY
02 SITE NUMBER: D980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: none
02 [ ] OBSERVED (DATE: ____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No known drinking water wells near the site; the site is adjacent to the Hooker 102nd Street site.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 [ ] OBSERVED (DATE: ____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Could potentially contaminate the Little and the Niagara Rivers.

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

No potential exists.

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

No potential exists

01 [X] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: ____
02 [ ] OBSERVED (DATE: 9/28/83) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Shallow ground cover with a small patch of tar waste and scattered patches of cement protruding.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 13 (Acres)
02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Past history shows alleged spill over from Hooker 102nd Street site into Griffon Park site.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 100,000
02 [ ] OBSERVED (DATE: ____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Site adjacent to the Little and Niagara Rivers; surrounding communities draw their drinking water from the Niagara River.

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

No potential exists.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 10,000
02 [ ] OBSERVED (DATE ____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Shallow ground cover with a small patch of tar waste protruding and scattered patches of cement.

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980506703

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

No potential exists.

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

No potential exists.

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

The site is adjacent to the Little and Niagara Rivers.

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

Any hazardous waste contained in the site may leak into the Niagara River. The site was a wetland and no known precautions were taken when dumping occurred.

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

No potential exists.

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

No potential exists.

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

The site is presently a city park with ball fields, no security, and is open to the public.

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

A fence between Griffon Park and Hooker 102nd Street site was cut and signs of trespassing into Hooker site were evident.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 100,000

IV. COMMENTS

The City of Niagara Falls could not supply information on the site during a meeting held on September 30, 1983, with Larry Krizan, Director of Planning, City of Niagara Falls.

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

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	Unknown	
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☒ H. OTHER (Specify) None

05 OTHER

- ☐ A. BUILDINGS ON SITE

None

06 AREA OF SITE

13 (Acres)

07 COMMENTS

The site is adjacent to the Hooker 102nd Street site and the Niagara River. A sampling well was observed on the Hooker site within 20 feet of Griffon Park. Due to its proximity, test results of sampling at the above mentioned well would indicate potential for contamination of the Niagara River and groundwater.

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.

Cover is shallow; a small patch of tar waste and some cement was observed protruding through cover.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

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. 3 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

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

02 POPULATION SERVED BY GROUND WATER None

03 DISTANCE TO NEAREST DRINKING WATER WELL > 10 (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
5-7 (ft)	South	30' (ft)	1500 (gpd)	☐ YES ☒ NO

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

No known drinking water wells are in this area. Groundwater monitoring wells are located on the adjacent Hooker 102nd Street site.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Variable permeability of Fill on site.	☒ YES ☐ NO	COMMENTS: During Spring thaw, high groundwater levels may allow groundwater discharge to the Niagara River.

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
Niagara River	☐	Adjacent (mi)
Lake Ontario	☐	12 (mi)
Little River	☐	Adjacent (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. 16,000 NO OF PERSONS	B. 30,000 NO OF PERSONS	C. 80,000 NO OF PERSONS

02 DISTANCE TO NEAREST POPULATION

0.1 (mi)

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

Approx. 5000

04 DISTANCE TO NEAREST OFF-SITE BUILDING

0.1 (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)

Over 10,000 people live within two miles of the site. Several thousand buildings are within 2 miles of the site. Nearest off-site building is 200 feet west.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

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	
140 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
32 (in)	2.5 (in)	5 %	South	2 %

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	OTHER
A. 0.1 (mi)	B. Not Applicable (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES. Not applicable

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS	
		PRIME AG LAND	AG LAND
A. 2 (mi)	B. 0.1 (mi)	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is a thirteen acre parcel located between Buffalo Avenue and the Little River and extends from the western fence line of the Hooker 102nd Street Landfill to the southern projection of 95th Street. The site is wholly within the city limits of Niagara Falls, NY. Presently, the site contains three baseball diamonds, several picnic benches, and a boat launch area.

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		No samples taken	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	No readings above background were observed.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL Exhibit A-1

02 IN CUSTODY OF NUS Corporation
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Appendix A, Figures A1, A2, and A3, N.U.S. Corporation, Edison, N.J.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

Field notebooks

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. CURRENT OWNER(S) / PARENT COMPANY (If applicable)

CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
01 NAME: City of Niagara Falls		02 D+B NUMBER: Not applicable	08 NAME: Not applicable		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.): City Hall, Main Street		04 SIC CODE: N/A	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY: Niagara Falls	06 STATE: NY	07 ZIP CODE: 14302	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
01 NAME		02 D+B NUMBER	08 NAME		09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first) / IV. REALTY OWNER(S) (If applicable, list most recent first)

III. PREVIOUS OWNER(S)			IV. REALTY OWNER(S)		
01 NAME: Not applicable		02 D+B NUMBER	01 NAME: Not applicable		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME		02 D+B NUMBER	01 NAME		02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
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)

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Not applicable	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
Not applicable	

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
Not applicable	

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
Not applicable	

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)

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

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
None			
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
None			
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)

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980506703

II. PAST RESPONSE ACTIVITIES

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

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

No previous history

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980506703

II PAST RESPONSE ACTIVITIES (Continued)

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

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No previous history

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No previous history

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

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

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

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

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
No previous history

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

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

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

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

N.Y. DEC Region 9, Buffalo, N.Y.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980506703

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ( ) YES (X) NO

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

None

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

N.Y. DEC Region 9, Buffalo, N.Y.

APPENDIX A.1.C

MAPS AND PHOTOS

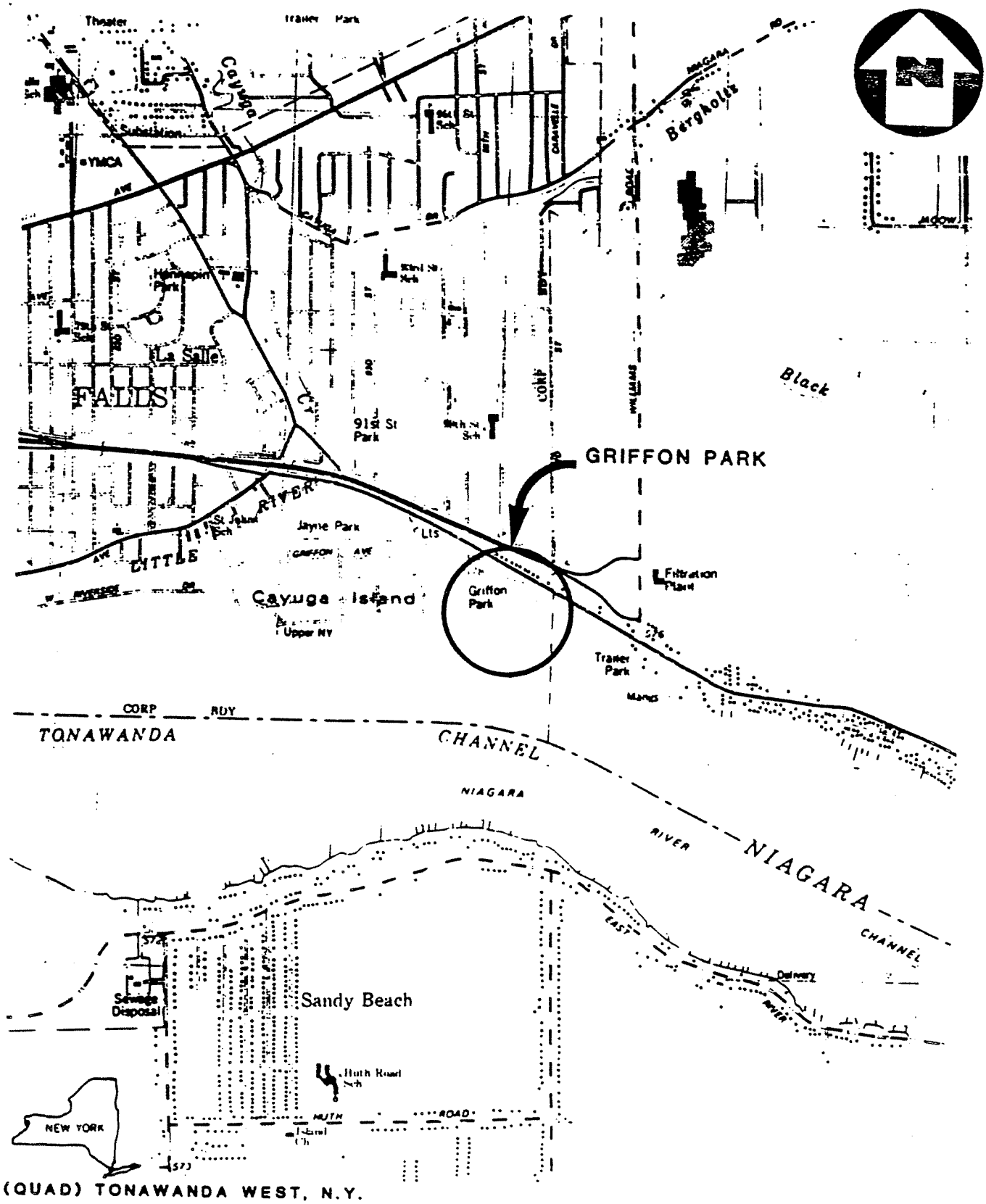
MAPS AND PHOTOS

Figure A-1 provides a Site Location Map.

Figure A-2 provides a Site Map.

Figure Å-3 provides a Photo Location Map.

Exhibit A-1 provides photographs of the site.



SITE LOCATION MAP

GRIFFON PARK, NIAGARA FALLS, N.Y.

SCALE 1" = 2000'

FIGURE A-1

NUS CORPORATION

A Halliburton Company

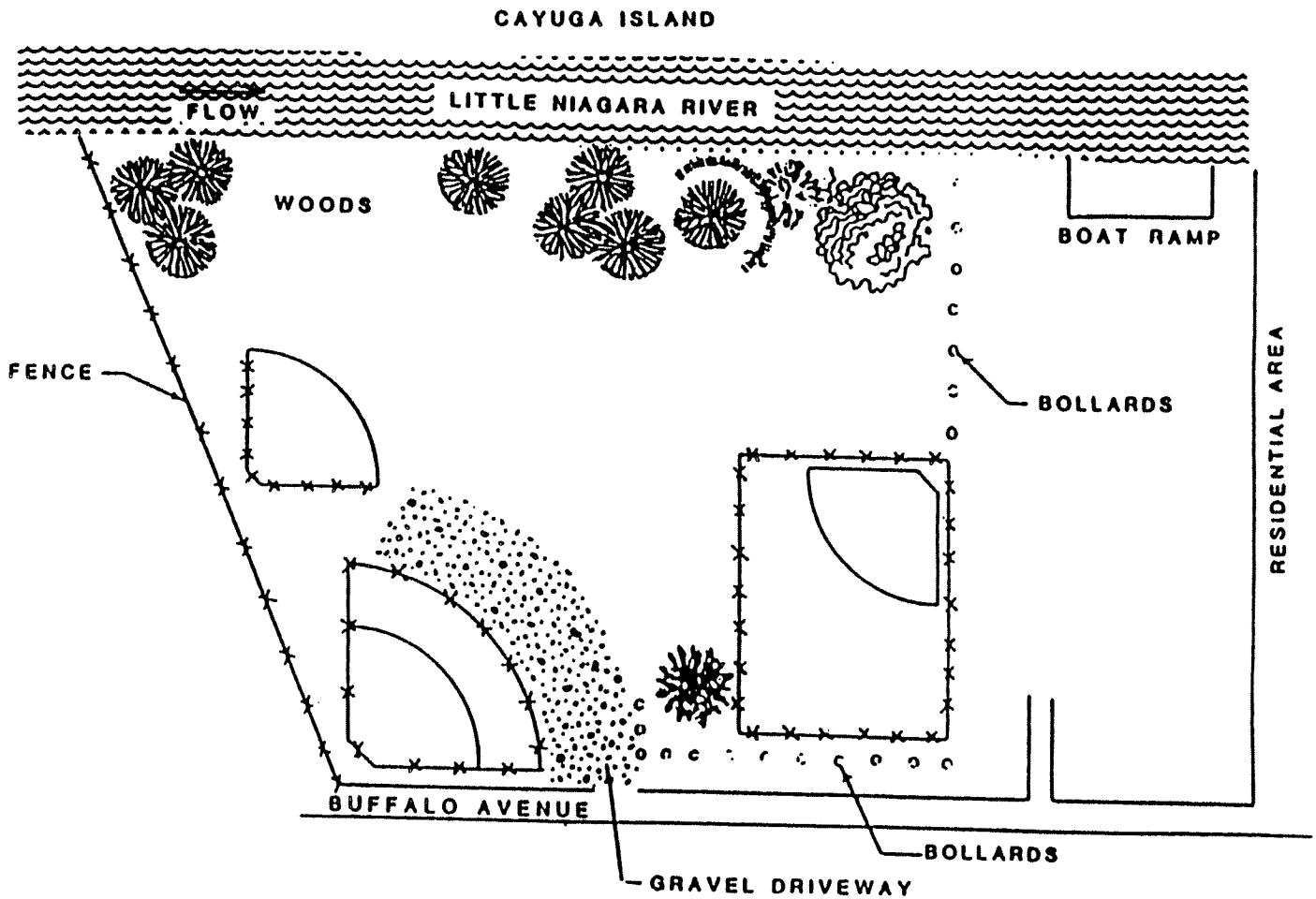


FIGURE A-2

SITE LOCATION MAP

GRIFFON PARK, NIAGARA FALLS, N.Y.

(NOT TO SCALE)

NUS CORPORATION
A Halliburton Company

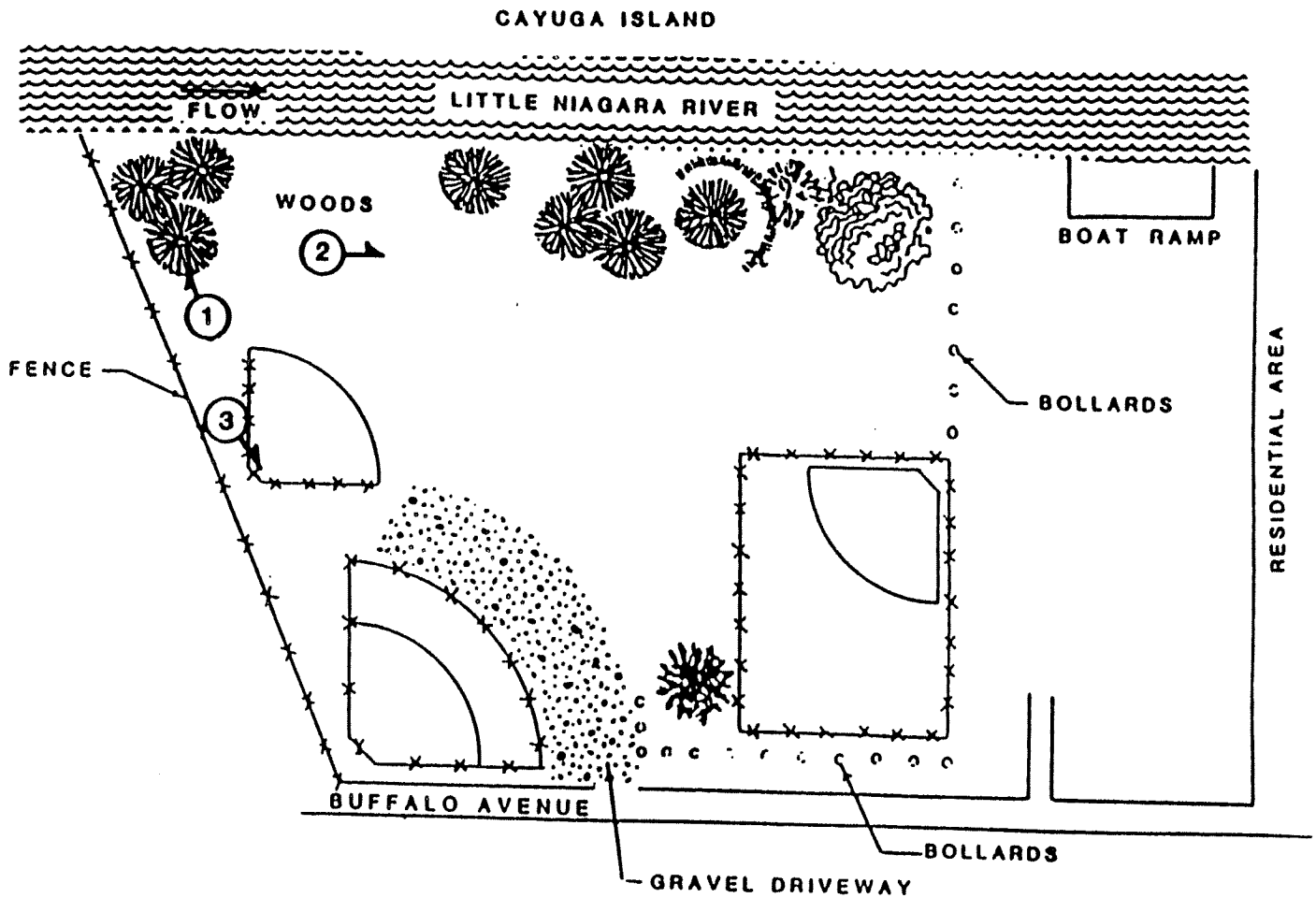


FIGURE A-3

PHOTO LOCATION MAP

GRIFFON PARK, NIAGARA FALLS, N.Y.

(NOT TO SCALE)

NUS CORPORATION

A Halliburton Company

GRIFFON PARK

Niagara Falls, NY

September 28, 1983

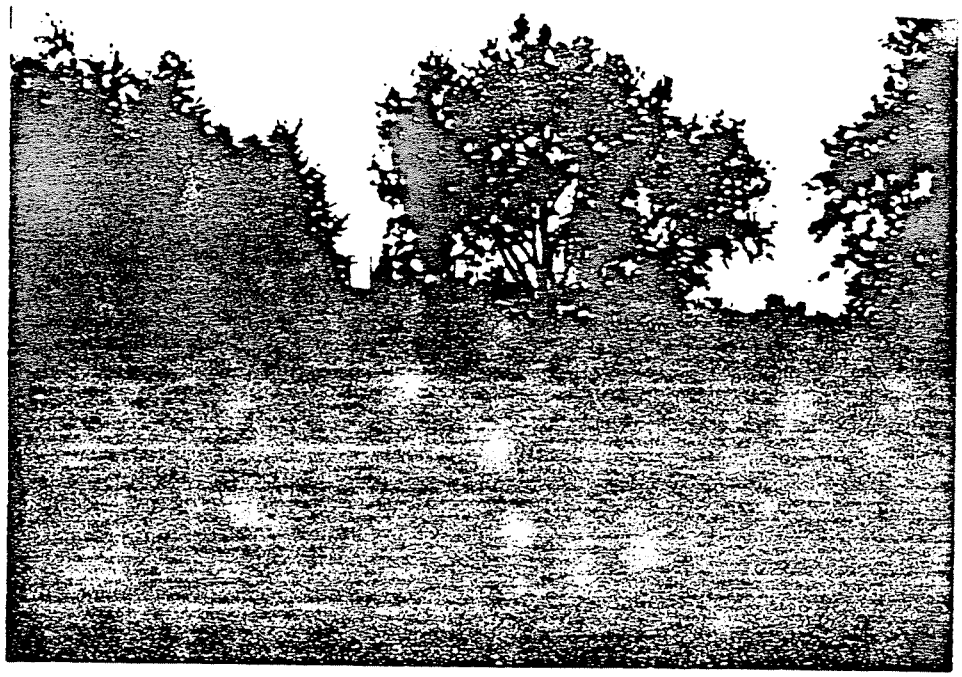
Exhibit A-1

Photo Log

1. View of Griffon Park from center facing south towards Niagara River. Fence separates Griffon Park and Hooker 102nd Street Landfill.

2. View of Griffon Park from south edge facing northwest. Parking lot and boat launch area can be seen.

3. View of Ball Diamonds on Griffon Park. Cement patch can be seen protruding ground cover.



1. View of Griffon Park from center facing south towards Niagara River. Fence separates Griffon Park and Hooker 102nd Street Landfill.

2. View of Griffon Park from south edge facing northwest. Parking lot and boat launch area can be seen.

GRIFFON PARK, Niagara Falls, NY, September 28, 1983

3. View of Ball Diamonds on Griffon Park. Cement patch can be seen protruding ground cover.

Appendix A.1.d

The Buffalo News/Friday, July 17, 1987

Tests Find Dioxin Near Dump Along Falls' Buffalo Ave.

By PAUL MacCLENNAN
News Environmental Reporter

Environmental engineers have pinpointed another dioxin hot spot, this one along heavily traveled Buffalo Avenue in Niagara Falls.

The hot spot is in a mixed residential-commercial area outside the fenced-off section of Occidental Chemical Corp.'s 102nd Street dump site at the eastern edge of the city. It's the latest of a dozen dioxin sites scattered around Niagara and Erie counties.

Spokeswoman Anita Gabalski of the state Department of Environmental Conservation said the company reported levels of 2.2 parts per billion and 5.2 parts per billion in two of 38 samples it took along a fence outside the 102nd Street dump. Federal officials have set one part per billion as the dioxin level at which action must be taken to limit human contact.

Occidental currently is carrying out a remedial project at the site along the Niagara River. She said the company has proposed a temporary solution that involves covering the area with gravel and erecting a fence to limit access.

Some scientists consider dioxin the most deadly chemical known to man. Others, however, claim there is little evidence that exposure to the chemical ever has resulted in death or serious illness.

Occidental already has extended its testing program along the 20-foot-wide city right of way and expects to have results of those tests "in 30 to 60 days." And the company has notified the city and requested permission to carry out the protective closure on the Buffalo Avenue right of way.

The U.S. Environmental Protection Agency currently is re-examining the whole issue but meanwhile prohibits its removal from sites where it is found because it says there is no facility licensed to destroy or bury it.

The latest dioxin find is on land that is between Occidental's 102nd Street dump and the Love Canal.

The 102nd Street remedial project is being carried out jointly by Occidental and Olin Corp. in side-by-side dumps on a 22-acre site bounded by Buffalo Avenue on the north and the Niagara River on the south. The dump site is just west of Williams Road, a major north-south arterial in Wheatfield. The dioxin was found about 300 feet east of a Griffon Park ball diamond closed by the city after disclosures on chemical dumping and the possibility of migration from the Occidental site.

Ms. Gabalski said the company reported the findings to the DEC last week. The dioxin was found in composite samples of soil, so it was not immediately known if the dioxin is on the surface or underground.

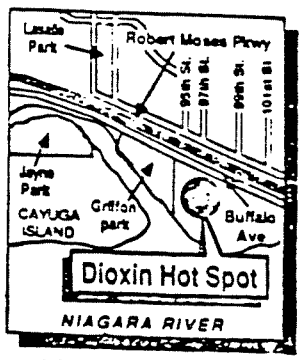
The dioxin was discovered near a point inside the fenced-off dump — at a point where the U.S. Environmental Protection Agency earlier found dioxin levels that hit 680 parts per billion. At the time, it was the highest dioxin level discovered in Western New York.

According to state officials, evidence indicates dioxin in sediment offshore in the Niagara River. The sediment, according to officials, is from a sewer pipe that runs from Love Canal through the 102nd Street dump. Studies are under way to determine if the dioxin came from Love Canal or the 102 Street dump — both of which were used by Occidental or its predecessors.

Olin and Occidental are two years into a five-year study of the site, which targets a plan to remove or contain the toxic chemicals dumped at the site and to prevent further migration of chemicals into the Niagara River.

While the levels of the new dioxin findings are far below those found inside the site, the new find is potentially more serious because of the

App. A.1.d



possibility of human contact. Ms. Gabalski described the site as an open area about 20 feet wide between Buffalo Avenue and the fence that closes off the 102nd Street dump.

Other dioxin hot spots reported by government agencies include:

✔ Evergreen (previously Creekside) Golf Course, north Amherst — Barrels trucked from Occidental's Durez Division in North Tonawanda were found partially buried along the Erie Barge Canal and Tonawanda Creek. Levels were below 1 part per billion. State and company officials carried out an emergency operation to remove the barrels, and the company now is conducting a more extensive survey of the site.

✔ Durez Division — Dioxin leaking out of 14 dump sites on the property resulted in dioxin levels of 55 parts per billion in sediment taken from North Tonawanda sewers and 15 parts per billion in a marshy area where the storm sewer empties into the Niagara River. Company and state officials are negotiating a cleanup program. But it is stalled by a dispute over whether the contaminated material should be stored on the property. Mayor Elizabeth Hoffmann wants it taken out of the city, but current federal regulations prohibit such action.

✔ Love Canal — Dioxin levels include 32 parts per billion in sewer sediment; 46 parts per billion in sludge at the bottom of Black and Bergholtz creeks, 1.2 parts per billion in Cayuga Creek and 1.6 parts per billion in the playground at the 93rd Street School.

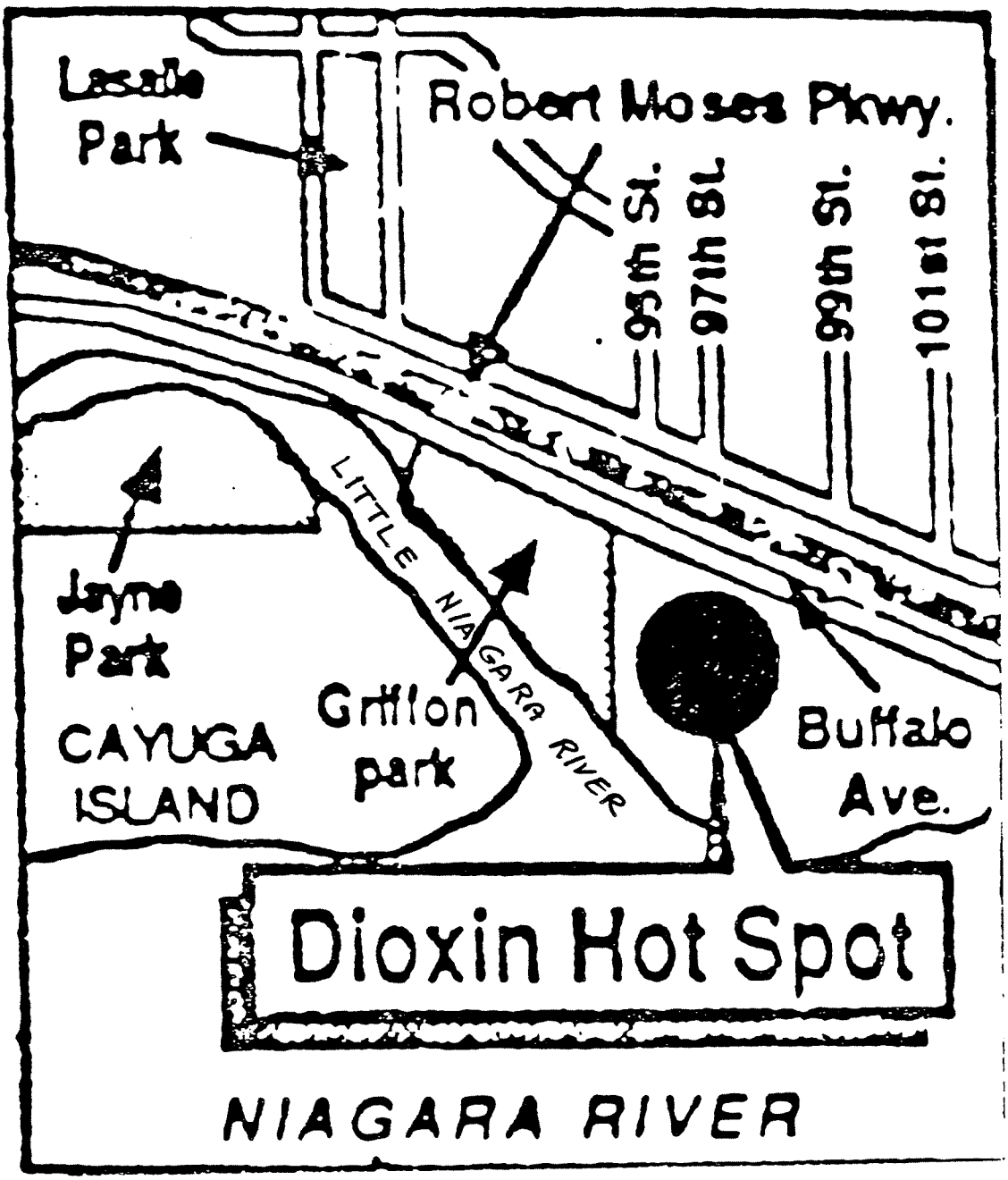
✔ S-Area — Federal officials say they have evidence of dioxin in the S-Area dump that is on Occidental's Buffalo Avenue plant site alongside the Niagara Falls water-treatment plant. The site is undergoing a court-ordered remedial program.

✔ Hyde Park — Dioxin has been found in sediments of Bloody Run Creek, a small stream that runs through the Occidental dump nearby. The levels are 330 parts per trillion.

✔ Lake Ontario — Scientists found dioxin levels at 10 parts per trillion at the mouth of the Niagara River near Youngstown, but a follow-up study last year identified levels 50 times that amount. The sediments carrying 649 parts per trillion are believed to have been swept down the river and dumped where it flows into the lake.

Other researchers have found dioxin levels in some fish ranging from 10 to 41 parts per trillion. As part of the Hyde Park dump settlement, the EPA now is conducting a study to determine what proportion of the contamination has come from Hyde Park. The study is a means of determining how extensive an effort will be needed to control the migration of the chemical from the dump.

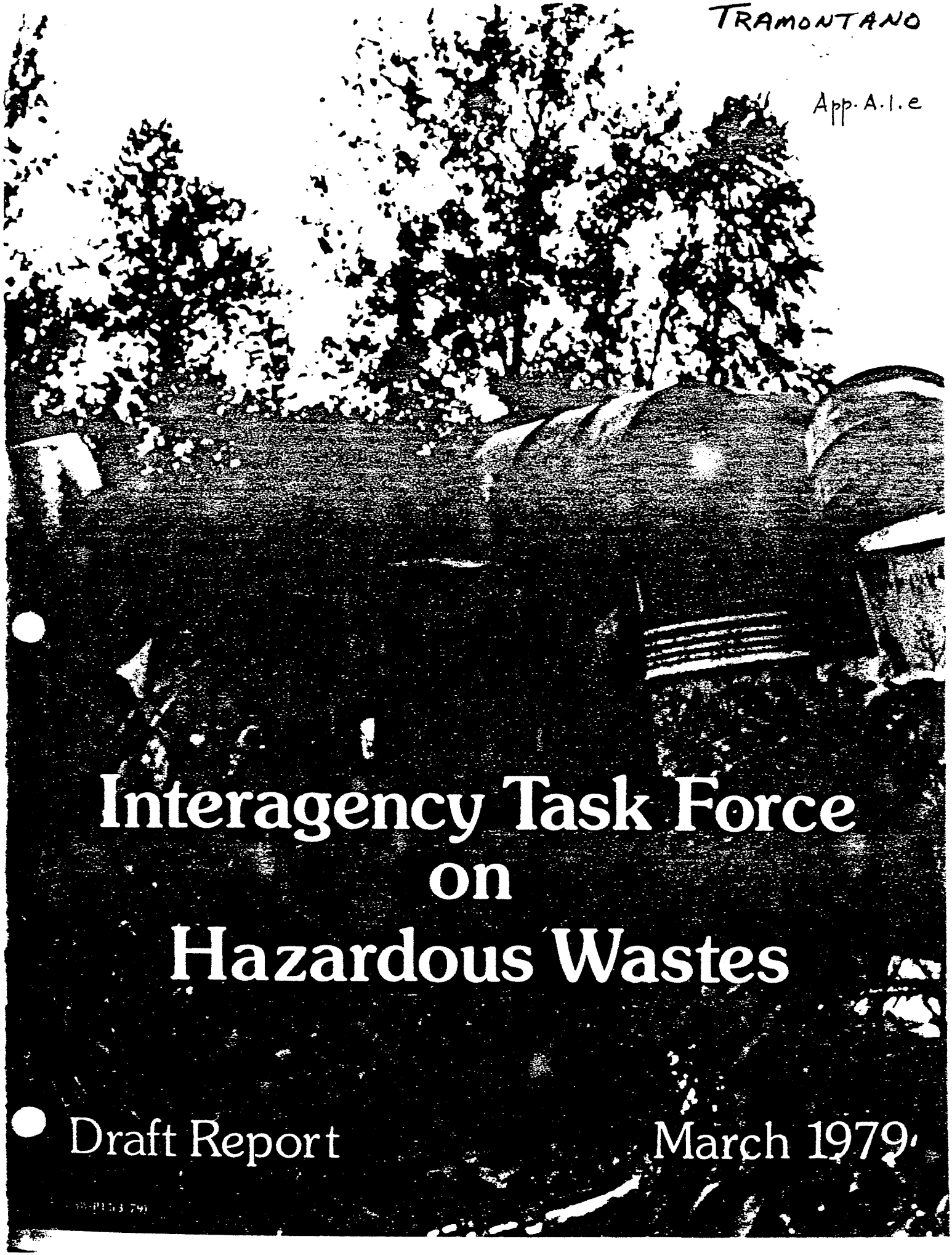
Some government attorneys say that once that is determined, they may assign tougher control measures to other dumps as a step in reducing discharges to the lake. It's part of a program to restore the fish habitat in the lake. Ultimately, they hope, this will lead to the removal of health advisories on eating lake fish.


Lasalle Park
Robert Moses Pkwy.
95th St.
97th St.
99th St.
101st St.
Joyce Park
CAYUGA ISLAND
Griffon park
LITTLE NIAGARA RIVER
Buffalo Ave.
Dioxin Hot Spot
NIAGARA RIVER

Appendix A.1.e

TRAMONTANO

App. A.1.e



Interagency Task Force on Hazardous Wastes

Draft Report

March 1979

PB83-791

INTERAGENCY TASK FORCE ON HAZARDOUS WASTES

DRAFT REPORT

ON

HAZARDOUS WASTE DISPOSAL

IN

ERIE AND NIAGARA COUNTIES, NEW YORK

March 1979

HOOKER CHEMICALS AND PLASTICS CORPORATION
102nd Street Site

The 102nd Street disposal site (also referred to by Hooker as the River Road or LaSalle site) is located on Buffalo Avenue in Niagara Falls. It is bounded on the west by Griffon Park, on the east by a disposal site owned by the Olin Corporation and on the south by the Niagara River. The site drains to the Niagara River. The depth to bedrock near the site is approximately 27 feet below natural grade. The nearest homes are located about 100 yards to the northeast.

Hooker used this site from prior to 1943 until 1971. The site comprises approximately 20 acres and consists of two parcels which were owned by Oldbury Electrochemical, one parcel owned by Niagara Alkali and one parcel owned by Hooker. Hooker acquired the Oldbury and Niagara Alkali parcels when it acquired those companies in 1956 and 1955 respectively.

Hooker has indicated to the Task Force that the following wastes were disposed of at the 102nd Street site.

Waste Category	Physical State	Total Estimated Quantity - Tons	Container
Organic phosphites	L	100	D
Sodium hypophosphite	S	20,000	B
Inorganic phosphates	L,S	900	D
BHC cake (including Lindane)	S	300	D
Chlorobenzenes	S	100	B
Misc. 10% including other chlorinated organics	L,S	2,100	D,B
	Total	23,500	

L = Liquid
S = Solid or semi-solid
D= Drummed
B = Bulk

In addition, brine sludge, fly ash, cell parts and cell equipment in unknown quantities were dumped at this site.

Wastes were dumped in pits or trenches which were later covered.

A Hooker document indicates that the Hooker parcel of the 102nd Street site was used prior to the Love Canal for disposal of solid and drummed residues consisting of benzoyl-chloride, thionyl chloride, chlorinated waxes, antimony chloride, bentoic acid, benzoate of soda and caprylyl chloride. Hooker, however, has indicated to the Task Force that this site was not used prior to Love Canal.

The site has had a history of health and environmental problems: Prior to the placing of additional soil cover at the site, children were known to handle BHC cake. Fires and explosions were caused by the mixture of phosphorus and chlorate wastes at the site.

Serious problems relate to the leaching of wastes from the site into the Niagara River and the potential consequent contamination of drinking waters taken from the River. In addition, the overall integrity of the site has been questioned In 1970, the Army Corps of Engineers issued an order to Hooker to cease operations, cover the site with clay soil and erect a bulkhead. This closure design was directed in part to control leachate, but the primary thrust of the design was to prevent the wastes from being washed away by the River.

Hooker conducted a hydrogeological and water quality investigation of the site in 1977. A report was then submitted to DEC in early 1978. After review, DEC requested additional data and information. Monitoring wells have been placed at the site and analysis of samples taken from these wells show contamination. Additional remedial work is needed at the site in order to insure the protection of the Niagara River from migrating chemicals. In addition, any such program must involve long term monitoring and maintenance in order to establish the effectiveness and integrity of such a control program.

3. 102nd Street (Buffalo Avenue, Niagara Falls)

Hooker used the 102nd Street site to dispose of industrial wastes from prior to 1943 until approximately 1971. They still own the site today. The site is approximately 20 acres in size and is comprised of two parcels which were owned by Oldbury Electrochemical, one parcel owned by Niagara Alkali, and one parcel owned by Hooker. In addition, this site is bordered on the west by Griffon Park and on the east by a dump site owned by the Olin Corporation. The following types of industrial waste disposed of at this site:

Type of Waste	Estimated Total Tonnage
Organic phosphites (24)	100 tons
Sodium hypophosphite (26)	20,000 tons
Inorganic phosphates (25)	900 tons
BHC cake (including Lindane) (5)	300 tons
Chlorobenzenes (6)	100 tons
Misc. 10% including other chlorinated organics	2,100 tons
Total	23,500 tons

Cell parts and equipment, brine sludge, fly ash and garbage were also dumped at this site.

Wastes were dumped in bulk or in drums as solids, semi-solids or liquids. A Hooker document indicates that the Hooker parcel of the 102nd Street site was used prior to the Love Canal for the disposal of solid and drummed residues. Among the wastes dumped were benzoyl chloride, thionyl chloride, chlorinated waxes, polychlorinated napthalenes, hydrochloric acid, antimony chloride, benzoic acid, benzoate of soda and caprylyl chloride. Hooker, however, maintains that this site was not used prior to Love Canal. Furthermore, no firms, other than Hooker and its affiliates, used this site for waste disposal.

4. River Site (S and N Areas) (Buffalo Avenue, Niagara Falls)

This site is located on the Niagara Falls plant west of the Niagara Falls water treatment plant and north of the Robert Moses Parkway. The size of the site is approximately 16 acres. Hooker used this site for industrial waste disposal from approximately 1947 to 1975. Major disposal operations were phased out about 1961 although disposal of sulfur/chlorine residues (waste class 17) continued up to about 1967 and equipment cleaning operations continued up to 1975.

Hooker disposed of the following types of wastes at the River site:

From 1969 to the present, NRD has used powder metallurgy to manufacture sealed foil radioactive sources for use in devices such as smoke detectors.

Both liquid and solid radioactive waste result from the above process. From 1969 through 1976, an evaporator was used for some of the liquid waste. Normally, liquid waste is released to the sanitary sewer following analysis for radioactive levels. Solid wastes include Americium-241, Nickel-63, Lead-210, Radium-226, Thallium-203, Cesium-137, Strontium-90, Krypton-85 and Carbon-14. All solid wastes (including filter particulates from water treatment) is packaged into steel drums and shipped to the nearest available disposal site. Three sites have been used for waste generated at NRD: Four shipments were sent to Nuclear Fuel Services in West Valley, New York from 1970 to 1972. Since 1972, three shipments have gone to the Nuclear Engineering Company in Morehead, Kentucky and 14 shipments were sent to Chem-Nuclear Systems, Inc. in Barnwell, South Carolina. The average shipment consists of approximately 94 steel drums and five wooden and/or cardboard boxes. Solid waste is generated at the rate of 28 tons per year. Waste haulers include:

1. McCormack Highway Transportation, Inc., Campbell Road, Schenectady, New York
2. Tristate Motor Transit Company
3. Pacific Intermountain Express
4. Rented Ryder Trucks (by NRD for West Valley deliveries)

OLIN CORPORATION
Buffalo Avenue
Niagara Falls

Olin began operations at the Buffalo Avenue facility in 1897 under the name of Castner Electrolytic Company. Since that time, the company has also been known as Mathieson Chemical Company, Olin Mathieson Chemical Corporation and Olin Corporation.

Olin has produced the following products:

Ammonia	(No data)
Chlorine	(Since 1930)
HTH (calcium hypochlorite)	(Since 1927)
Hydrochloric acid	(1953 to 1956)
Hexachlorocyclohexane (C-66)	(1950 to 1956)
Sodium chlorite	(Since 1941)
Sodium hydroxide	(Since 1930)
Sodium methylate	(Since 1941)
Trichlorobenzene	(1952 to 1956)
Trichlorophenol	(1953 to 1957)

Numerous productions processes have been used since 1930. These are generally the standard unit operations and processes used by the chemical process industries. Among the processes used are brine electrolysis, triple salt process, sodium amalgam process, reduction of chlorine dioxide, chlorinations and other chemical reactions.

Olin has generated the following types of industrial wastes:

Black cake (sodium chloride, sodium chlorite, sodium chlorate carbon, calcium carbonate and calcium hydroxide)
Graphite
Fly ash
Benzene hexachloride
Trichlorophenol
Trichlorobenzene
Alpha or Beta BHC cake
v-Tetrachlorobenzene
Carbon dust
Hexachlorobenzene
Pentachloronitrobenzene
Lime sludge
Brine sludge containing mercury
Retort ash
Trichloroanisole
Miscellaneous industrial wastes (concrete, old insulation and empty containers)

Many disposal sites were used for disposal of industrial wastes. These sites are described below. Also, Olin is in the process of obtaining additional information about the company owned sites. This material is to be submitted to the Task Force shortly.

A. Company Owned Sites

1. 102nd Street (Buffalo Avenue, Niagara Falls)

The 102nd Street landfill was purchased in 1948 and used for disposal of various industrial wastes until 1970. The site, comprising about seven acres, is still owned by Olin today. The following types of industrial wastes were disposed of at this site:

Waste	Estimated Total Tonnage
"Black cake"	20,000
Graphite	692
Benzene hexachloride and trichlorophenol mixture	65
Trichlorobenzene	150
Alpha and Beta BHC cake	1,250

v-Tetrachlorobenzene	1,100
Lime sludge	23,900
Brine sludge	20,000
Hexachlorobenzene	60
Trichloroanisole	No data
TOTAL Approximately	66,000 tons

In addition, over 16,000 tons of concrete, empty containers, fly ash, boiler ash, and trash were disposed of at this site.

Wastes were dumped in bulk or in drums as solids, semi-solids or liquids. The material was placed in pits which were eventually covered or deposited directly onto the ground.

2. Buffalo Avenue Parking Lot

This site was used from approximately 1947 to 1956 to dispose of about 175 tons of brine sludge containing mercury.

3. Industrial Welding Company Site

Olin previously owned this site and used it from 1947 to approximately 1956 to dispose of about 175 tons of brine sludge containing mercury.

4. Miscellaneous On-Plant Disposal Sites

At least one other plant site was used from about 1957 to 1960 to dispose of about 275 tons of brine sludge containing mercury.

B. Off-Plant Waste Disposal Sites

1. Niagara County Refuse Disposal District (Wheatfield)

Olin used this site from about 1961 to 1976 to dispose of approximately 32 tons of graphite, about 1000 tons of lime sludge (1970 to 1972) and 4964 tons of brine sludge containing mercury (1971 only). J. Vitullo Trucking Company of Niagara Falls transported these materials in bulk quantity to this site.

2. Newco Waste Systems (Niagara Falls)

This site has been used since 1972 to dispose of graphite, lime sludge and brine sludge containing mercury. 1.8 tons of graphite (1977 only); 3,444 tons of lime sludge (since 1972); and 21,900 tons of brine sludge (1972 to 1977) were hauled by J. Vitullo in bulk quantity to the Niagara Recycling operation for disposal. In addition, since 1978, J. Vitullo has hauled 3,348 tons of brine sludge to Newco for disposal in their secure landfill. Furthermore, in 1978, several other haulers were used to transport industrial wastes to Newco.

Appendix A.1.f

GRIFFON PARK

NCHD - PROFILE REPORT

GRIFFON PARK

DEC No. 932081

The Niagara County Health Department has been involved with this site as follows:

1. Performed preliminary investigation and wrote profile report (1982).
2. Investigated complaints regarding leachate along shoreline (1982). Monitored quarterly thereafter.
3. Assisted USGS field personnel during boring/sampling phase of Niagara River Study (1982).
4. Reviewed USGS Draft Report (1983).

The Niagara County Health Department has the following concerns regarding this site:

1. This site is a public park. Public exposure is possible.
2. Leachate is exposed along the shoreline. Public exposure is again possible. The effect on Niagara River Quality is unknown. The site is upstream of Niagara Falls Water intakes.
3. Additional study is recommended at this site.

App. A.1.f

NOTE: A profile report is attached.

NAME

GRIFFON PARK (DEC #932081)

LOCATION

This site is a thirteen acre parcel located between Buffalo Avenue and the Little Niagara River from the western fence line of the Hooker 102nd Street Landfill to the southern projection of 95th Street. The site is wholly within the city limits of Niagara Falls, NY. A sketch is attached.

OWNERSHIP

The site is owned by the City of Niagara Falls and operated as a public park.

HISTORY

This area was originally a wetland, which was an extension of the wetland now occupied by the Hooker-Olin 102nd Street Landfills. According to an EPA Report (1980), this area was still undeveloped in 1938. The shoreline was reported to have been closer to Buffalo Avenue at this time.

By 1951, major dumping had occurred on the adjacent Hooker property. The EPA Report indicates that a fine light colored material was dumped along the property line at this time. Some of the material may have extended beyond the Hooker Property. The entire area of Griffon Park was filled by 1958. The EPA indicates that industrial wastes are probable.

Secondary dumping became noticeable by 1963. The City of Niagara Falls used this site for disposal of incinerator residue and non-combustibles until about 1970. Open burning was practiced here on some occasions. General refuse and other wastes could have been dumped at this time.

Currently, the site is used as a City Park featuring ball diamonds and a boat launch ramp. An inspection was made by Health Department personnel in November, 1981. No noticeable problems were found. Small quantities of incombustible materials (bottles, cans, etc.) were found exposed along an access road south of the eastern ball diamond. The cover is suspected to be shallow. Parks Department employees have said that similiar materials were found when excavating to install back-stop uprights and fence posts.

Several people have indicated that they believe that chemical dumping occurred here in the 1940's, however, these reports have not been confirmed.

RESULTS OF PREVIOUS SAMPLING

There is no record of any previous sampling at this location.

EXAMINATION OF AERIAL PHOTOGRAPHY

USDA aerial photographs ARE-2V-33 (1958) and ARE-2GC-16 (1966) were examined. The 1958 photo showed the park area as being rough graded and apparently without substantial vegatative cover. The extent of the Hooker Landfill was at or very near the property line. It appeared possible that the Hooker Landfill could possibly extend slightly onto the Park Property.

The 1966 photo showed secondary dumping in the park area. Considerable dumping had occurred since 1958 in the adjacent Hooker Property including an extension of the shoreline into the River.

SOILS/GEOLOGY

A detailed soil survey for this area is not available. Boring data obtained on the adjacent Hooker Property show that the natural soils are encountered at an elevation of 566 feet, which is roughly 6 feet below grade in Griffon Park. River level is taken as 563 feet. The soils encountered consist of five feet of loose silt, sand and clay over ten feet of silty sand with some clay.

Bedrock is Lockport Dolomite to a depth of 140 feet or more below the overburden. Lockport Dolomite generally contains several water bearing zones although these zones are almost certainly well below river level.

GROUNDWATER

Although no data was found indicating the direction of flow of groundwater, the flow is expected to be toward the River. The depth to ground water is unknown but it is expected to be effected by the river level. Due to its proximity to the Niagara River, any contamination of the ground water is likely to have a direct effect on the river quality.

There are no known wells near this site. Since ground water is expected to flow toward the river there is no population in the anticipated direction of flow.

SURFACE WATER

The Niagara River is adjacent to this site. It is possible that some wastes were placed directly into the river.

The City of Niagara Falls water intakes are located three miles downstream. As many as 100,000 people draw water from this source. Industrial intakes are also located downstream.

This site is within a 100 year flood plain. The actual frequency of flooding is unknown.

There are no wetlands within one mile of this site, although the site itself and most of the nearby area to the east was wetland at one time.

AIR

There is no record of air quality problems from this site. The nearest homes are within 200 feet. 3,000 to 10,000 people live within one mile. Land use within two miles is predominately residential with small commercial areas inter-laced. The nearest industrial zone is 2½ miles west. Much of the area north of the site was evacuated in 1978 due to its proximity to the Love Canal.

FIRE/EXPLOSION

If chemical wastes from the Hooker Landfill extend onto the park, reactive substances could be present. Since the nature of the wastes, if any, used to fill the park site is unknown, the potential for fire and/or explosion cannot be assessed.

Over 10,000 people live within two miles. Several thousand buildings are within two miles. However, all but 8 homes are separated from the site by the Little Niagara River, the LaSalle Expressway or the Hooker-Olin Landfills. The nearest off-site building is 200 feet west.

DIRECT CONTACT

This site is public park and therefore, access is unrestricted. Some wastes were found exposed, but these are suspected to be non-hazardous materials dumped by the City. The cover may be shallow in spots. Excavations or shoreline erosion could expose waste materials.

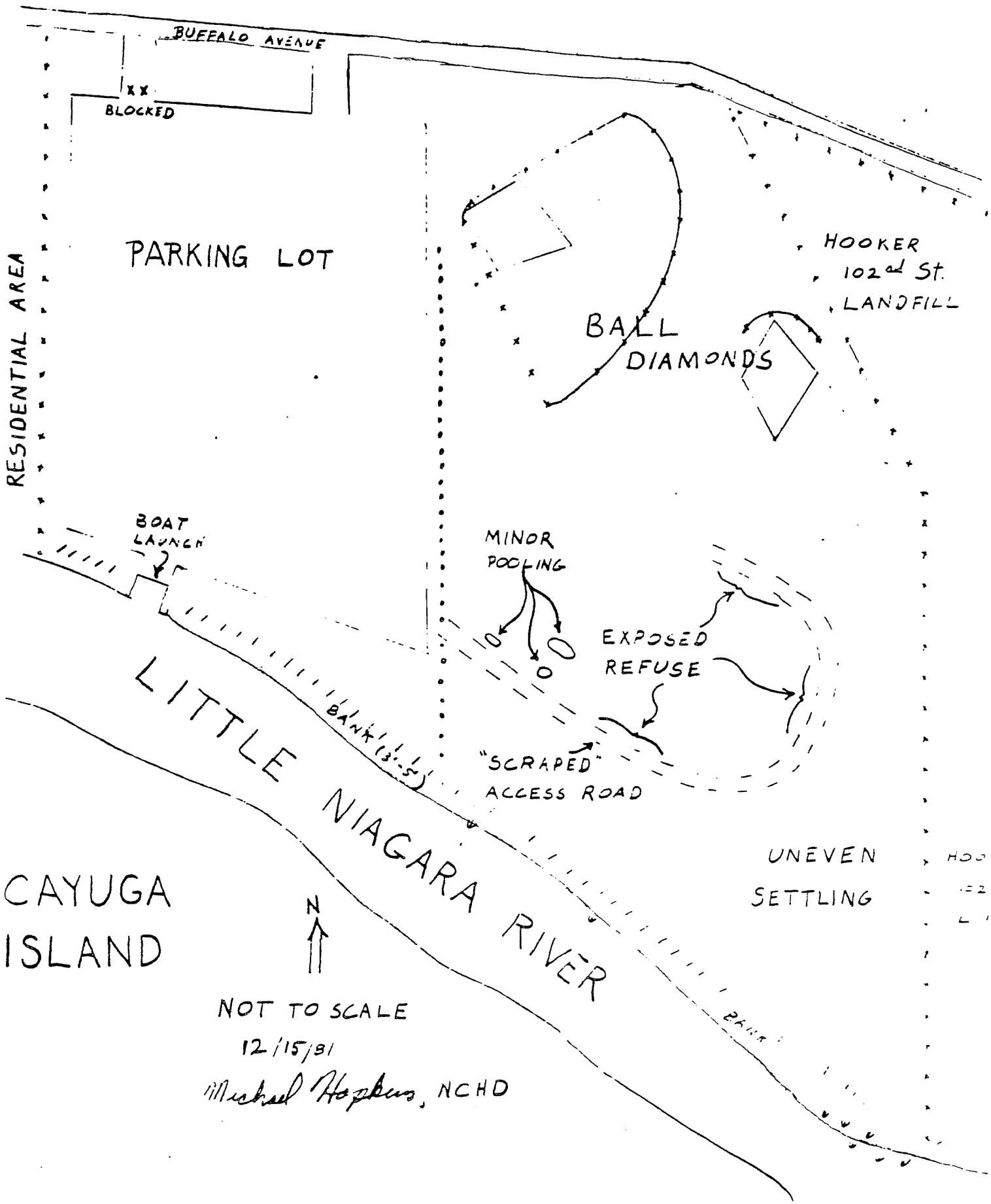
CONCLUSIONS

Additional data is needed to verify the presence or absence of toxic materials. If toxic substances are found the potential for contamination of the Niagara River is high.

Wells or observation holes are needed. The area near the Hooker fence line should be explored as should areas near the rivershore. Access for equipment is available throughout the site. If industrial wastes are found, additional test holes could be used to determine its extent.

Periodic inspections are recommended. Any excavation made on this site should be examined by DEC or Niagara County Health Department personnel.

GRIFFON PARK (DEC #932081)



Appendix A.1.g

App. A.1.g

New York State Department of Environmental Conservation
600 Delaware Avenue, Buffalo, New York 14202-1073

Thomas C. Jorling
Commissioner

August 31, 1987

Mr. Andres Huerta
LeRoy Callender, P.C.
675 Delaware Avenue
Buffalo, New York 14202

Dear Mr. Huerta:

Griffon Park Site #932081

On August 28, 1987, a meeting was held with Mr. Sirous Nabavi of your firm to discuss the subject site. During that meeting, I agreed to provide Mr. Nabavi with certain information from the ongoing investigation of the 102nd Street site that pertains to Griffon Park.

Enclosed find the data available from the Soil Survey being conducted at the 102nd Street Site. A number of soil samples were collected on the Park site under this program.

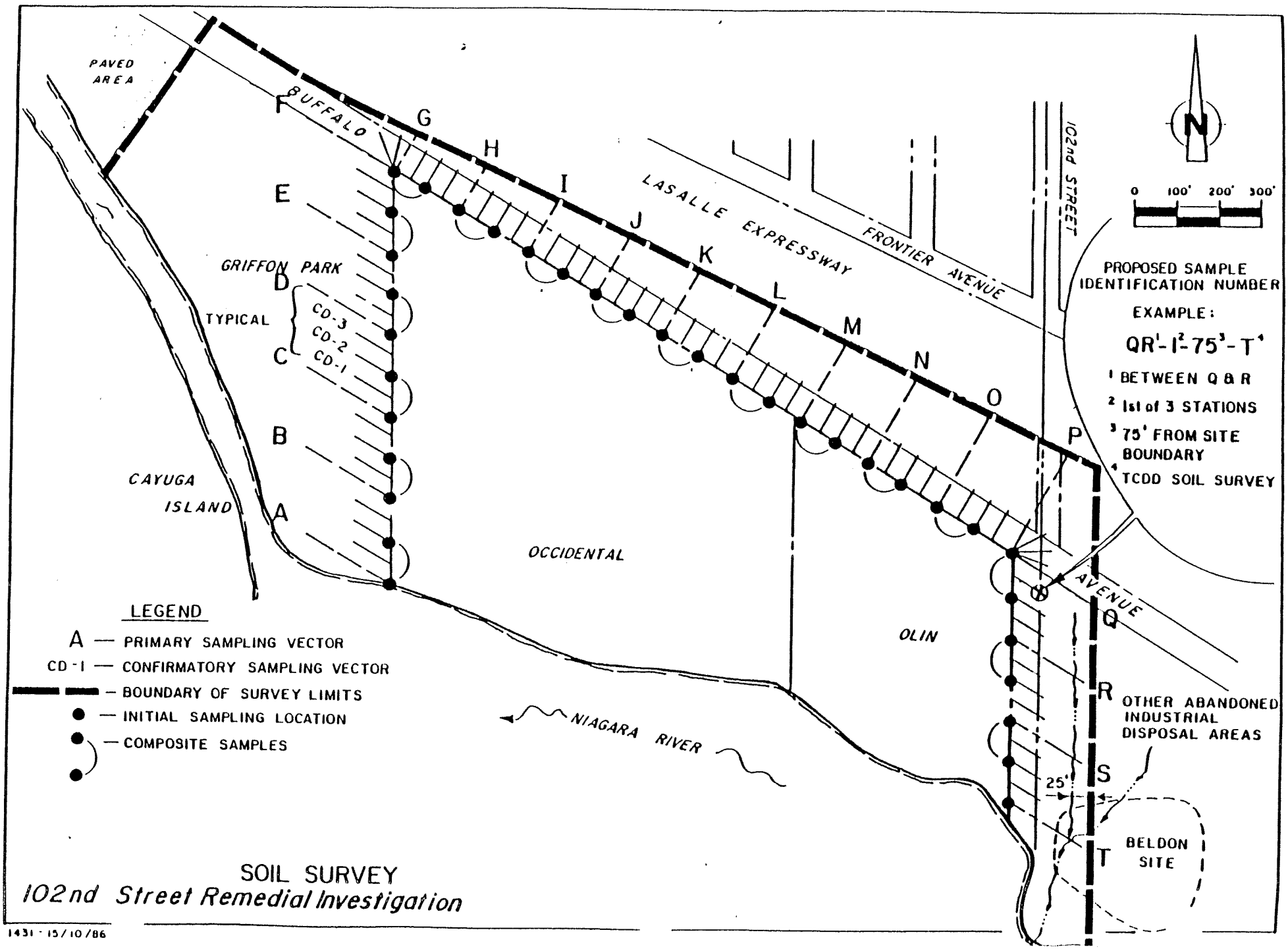
I trust that this information will be of use to your firm in conducting the Phase I study on Griffon Park. Should you have questions regarding this data or other data available from the 102nd Street investigation, please contact Mr. Abul Barkat of my staff at 716/847-4585.

Yours truly,

Peter J. Buechi, P.E.
Regional Engineer for
Solid & Hazardous Waste

PJB:vam

cc: Mr. Abul Barkat
Mr. Alan Fuchs



SOIL SURVEY

102nd Street Remedial Investigation

1431 - 15/10/86

TABLE 2 - SITE SPECIFIC PARAMETERS, SOIL AND SEDIMENT

Parameter	SURVEY LEVEL (ug/Kg)	Sample Matrix	Analytical Method Reference	Sample Preservation	Holding Time	Container
2-Monochlorotoluene	100 *	Soil/Sediment	High Boiler	Cool 4°C	7 days extraction 30 days analysis	Glass
4-Monochlorotoluene	100 *	"	"	"	"	"
1,2-Dichlorobenzene	100	"	"	"	"	"
1,4-Dichlorobenzene	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	"	"	"	"	"
1,2,4-Trichlorobenzene	"	"	"	"	"	"
1,2,3,4-Tetrachlorobenzene	"	"	"	"	"	"
1,2,4,5-Tetrachlorobenzene	"	"	"	"	"	"
Pentachlorobenzene	"	"	"	"	"	"
Hexachlorobenzene	"	"	"	"	"	"
alpha Hexachlorocyclohexane	"	"	"	"	"	"
beta Hexachlorocyclohexane	"	"	"	"	"	"
gamma Hexachlorocyclohexane	"	"	"	"	"	"
delta Hexachlorocyclohexane	"	"	"	"	"	"
2,4- Dichlorophenol	100 *	"	"	"	"	"
2,5- Dichlorophenol	100 *	"	"	"	"	"
2,4,5-Trichlorophenol	100	"	"	"	"	"
2,4,6-Trichlorophenol	100	"	"	"	"	"
Mercury	100	"	EPA 7471	"	28 days	"

* Survey Level to be determined by the method validation with a goal of 100 ug/Kg

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

ND - Not Detected above survey limit

102ND STREET
SOILS

Special Codes: C - Confirmed by GC/MS; D - Field Duplicate; 1 - 1st Replicate; GP - General Parameters only
S - Second Phase Organic; F - Found; F1 - Found & 1st Repl.; M or AM - Analyzed for Hg only
Z - Unsuitable Sample; FS - Found on Split; S1 - Found on Split & 1st Repl.

			[SC]	2MCT	4MCT	12DCB	14DCB	123TCB	124TCB	1234TECB	1245TECB	pentaCB	HCB	HCCH	24DCP	LAB CODES
Units:				ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	
Survey Limits:				100	100	100	100	100	100	100	100	100	100	100	100	
10/21/86	A	50														
12/19/86	A	100												1490		R
04/08/87	A	180	M													R
																R
10/21/86	B	50	F													
04/08/87	B	415	M													R
																R
10/21/86	C	20				137	113									
04/07/87	C	50														R
04/08/87	C	456	M													R
																R
10/21/86	D	11								128						
04/07/87	D	30														R
04/08/87	D	757	M													R
																R
10/21/86	E	50														
04/08/87	E	631	M													R
																R
10/21/86	F	50					103									
04/07/87	F	75	F1											266		R
04/10/87	F	500	M													R
																R

Report Date: 07/07/87

OCCIDENTAL CHEMICAL CORPORATION
ENVIRONMENTAL DATABASE SYSTEM

| ND - Not Detected above survey limit |

102ND STREET
SOILS

Special Codes: C - Confirmed by GC/MS; D - Field Duplicate; 1 - 1st Replicate; GP - General Parameters only
S - Second Phase Organic; F - Found; F1 - Found & 1st Repl.; M or AM - Analyzed for Hg only
Z - Unsuitable Sample; FS - Found on Split; S1 - Found on Split & 1st Repl.

			[SC]	25DCP	245TCP	246TCP	Hg	WATER	LAB CODES
Units:				ug/Kg	ug/Kg	ug/Kg	ug/Kg	%	
Survey Limits:				100	100	100	100		
10/21/86	A	50			253		220		
12/19/86	A	100					676		R
04/08/87	A	180	M				518		R
									R
10/21/86	B	50	F				177		
04/08/87	B	415	M				440		R
									R
10/21/86	C	20					1110		
04/07/87	C	50					1610		R
04/08/87	C	456	M				821		R
									R
10/21/86	D	11					686		
04/07/87	D	30					1200		R
04/08/87	D	757	M				518		R
									R
10/21/86	E	50					562		
04/08/87	E	631	M				684		R
									R
10/21/86	F	50					1760		
04/07/87	F	75	F1				1520		R
04/10/87	F	500	M				709		R
									R

TCDD ANALYSIS OF SOIL

TCDD SURVEY SUMMARY SHEET

Sample Number	Total TCDD ppb	2378 TCDD ppb	DL 2378 TCDD ppb	% ISTD Recovery
A/AB-2			0.14	103
B/BC-2			0.06	73
C/CD-2			0.04	79
D/DE-2	4.1		0.14	69
E/EF-2			0.32	61
F/GH-2			0.27	78
H/HI-2			0.15	76
I/IJ-2	30	5.2	0.40	53
J/JK-2	12	2.2	0.40	62
K/KL-2			0.34	81
L/LM-2			0.33	73
M/MN-1			0.10	71
N/NO-1			0.26	80
O/OP-1	0.16	0.16	-	30
P/QR-1			0.11	70
R/RS-1			0.15	80
S/ST-1			0.18	76
T-1-1			0.11	71

Appendix A.1.h

App. A.1.h

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

Thomas C. Jorling
Commissioner

August 10, 1987

Mr. Thomas P. Propersi
Gibbs and Hill, Inc.
11 Penn Plaza
New York, NY 10001

Dear Mr. Propersi:

Re: Griffon Park (932081) Data
Phase I, Fifth Round

Enclosed are original analytical results pertaining to Griffon Park Phase I, which I mentioned in our August 7 phone call. I understand that the Region 9 office and the Bureau of Western Remedial Action both have the same files on the site and that between your data collection here and Callender's collection in Region 9, all data has been collected at least once. The Region does not want to duplicate any efforts that have been made already at Central Office.

Sincerely,

Lawrence Alden

Lawrence J. Alden
Assistant Sanitary Engineer
Eastern Investigation Section
Bureau of Hazardous Site Control
Division of Solid and Hazardous Waste

Enclosure

15 (12-75)

New York State Department of Environmental Conservation

LA
P/s handle
for G & H Ph.
— MC
8/7/87

MEMORANDUM

TO: Marsden Chen, Supervisor, Eastern Investigation Section
FROM: Murray E. Sharkey, Supervisor, Technical Support Section
SUBJECT: 102nd Street Landfill Data (Site #932033 & 932022)

DATE: August 7, 1987

Attached are the most recent set of analytical results from the 102nd Street Landfill Remedial Investigation. These include:

A. Milestone Report #13, dated July 28, 1987 (Groundwater)
B. Sediment Data, dated July 7, 1987
C. Soils Data, dated July 7, 1987

The three programs; groundwater, sediment, and soil, are near completion. Once completed, the final data sets will be sent to you. This probably will not occur until the end of the year. This transmittal provides all the current 102nd Street data which could impact your studies on Griffon Park.

If there are any questions regarding this topic, please contact Mr. Alan A. Fuchs, P.E., at 7-5636.

AAF:dm
Attachment
cc: w/o att:
J. Willson
A. Fuchs

1981

Occidental Chemical Corporation

Industrial & Specialty Chemicals

Olin

CHEMICALS GROUP

Milestone Report No. 13
Extended Groundwater Sampling Program
102nd Street Landfill
Remedial Investigation
Niagara Falls, New York
July 28, 1987

CRA

Olin CHEMICALS
P.O. BOX 248. CHARLESTON, TN 37310. (615) 336-4000

July 21, 1987

Alan A. Fuchs
Bureau of Remedial Actions
New York State Department of Environmental Conservation
50 Wolf Road
Room 414
Albany, New York 12233

Kevin J. Lynch
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

Re: Milestone Report No. 13 - Extended Groundwater Sampling Program

Dear Messrs Fuchs and Lynch:

Enclosed are five copies of Milestone Report No. 13 (Extended Groundwater Sampling Program) for your internal distribution.

We look forward to your review and approval. We believe the report to be clear and complete. However, should any questions arise, please call us directly (OCC 716/286-3503, Olin 615/336-4549.

Sincerely,

OLIN CORPORATION

David L. Cummings

OCCIDENTAL CHEMICAL CORPORATION

Jay A. Cull

ds
Enc.

Occidental Chemical Corporation

Industrial & Specialty Chemicals

Olin CHEMICALS GROUP

MILESTONE REPORT NO. 13
EXTENDED GROUNDWATER SAMPLING PROGRAM
102ND STREET LANDFILL REMEDIAL INVESTIGATION
NIAGARA FALLS, NEW YORK

JULY 28, 1987

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APPENDICES

1.0 INTRODUCTION

In accordance with Task 14 of the Work Plan (WP) for the Remedial Investigation (RI), an extended survey of the long-term variability of groundwater quality has been conducted at the 102nd Street Landfill Site. This survey was conducted over the six month period from January through June 1987 and allows comparison of monthly analytical results in order to detect any seasonal or other possible fluctuations in groundwater quality. As required by Section 24.2.9 of the 102nd Street Landfill RI Site Operations Plan (SOP), this report summarizes the results of the extended groundwater survey for the first four months.

2.0 MONTHLY EXTENDED GROUNDWATER SAMPLING PROGRAM

The extended groundwater sampling program has been conducted at the site on a monthly or bi-monthly basis since January 1987. By agreement with the governments, groundwater sampling was not conducted in May 1987. Therefore, four consecutive sampling events were conducted at approximately 30-day intervals; the fifth event occurring, by agreement with USEPA/NYSDEC, approximately 60-days later in June. The data collected during the June sampling event were not required by the SOP for this report, therefore they are not included.

2.1 SAMPLING METHODOLOGY

2.1.1 PROCEDURES AND EQUIPMENT

Groundwater sampling was conducted according to the protocols outlined in the SOP or in USEPA/NYSDEC approved protocol modifications. Protocol modifications, or procedures followed which were not specified by the SOP, are summarized in the following paragraphs.

- Wells were purged and sampling was performed using a bladder type sampling pump constructed of inert material.

Tables

TABLE 1

SAMPLING REQUIREMENTS
102ND STREET LANDFILL SITE
EXTENDED SURVEY

Analysis	Sample Container and Volume	Preservation Required	Laboratory for Analysis	Holding Time	Comments	EPA/State Requirements
GENERAL PARAMETERS						
TOX	1 liter cleaned* Amber Glass	Headspace free Cool to 4° C	O'Brien & Gere	28 days	Ship to Lab once per week	1 liter
TKN + TOC (1 bottle)	1 liter cleaned* Amber Glass	pH 2 with Sulfuric Acid Cool to 4° C	O'Brien & Gere	28 days	Ship to Lab once per week	1 liter
Mercury	1 liter cleaned* Plastic	pH 2 with Nitric Acid Cool to 4° C	O'Brien & Gere	28 days	Ship to Lab once per week	1 liter
Dissolved Phosphorous	250 ml cleaned* Plastic	pH 2 with Sulfuric Acid Field filtered Cool to 4° C	O'Brien & Gere	28 days	Ship to Lab once per week	250 ml
SITE SPECIFIC PARAMETERS						
Arsenic (1)	1 liter cleaned* Plastic	pH 2 with Nitric Acid Cool to 4° C	O'Brien & Gere	6 mos	Ship to Lab once per week	1 liter

(1) Bedrock wells - DO NOT FILTER

Overburden Wells - A) if no sediment is observed, DO NOT FILTER
B) if sediment is observed take two samples one filtered, one unfiltered

TABLE 1 (Continued)

Site Specific Parameters	Container and Volume	Preservation Required	Laboratory for Analysis	Holding Time	Comments	EPA/State Requirements
Volatiles (modified 624)	3 x 40 ml cleaned* Glass Vials	Cool 4° C	Weston	7 days	Every 5th environmental sample should be 6 x 40 ML plus a field blank	2 x 40 ml
Semi-Volatiles (modified 625)	3 x 1 Liter cleaned* Amber Glass	Cool 4° C	Weston	7 day Extraction 30 day Analysis	Every 5th environmental sample should be 6 x 1 liter plus a field blank - Samples to Weston Lab should be shipped the day after taken at the latest	2 x 1 liter
Chlorobenzoic Acid	1 Liter cleaned* Amber Glass	Cool 4° C	OCC Central Science	30 days	Consultant to deliver to Grand Island once per week	1 liter

* - Cleaned at Occidental Central Science, or pre-cleaned bottles supplied by I-Chem or Pierce Chemical Company (40 ML vials).

TABLE 2

EXTENDED SURVEY WELLS
OLIN CORPORATION
102ND STREET LANDFILL REMEDIAL INVESTIGATION
NIAGARA FALLS, NEW YORK

BOUNDARY WELLS	OFF-SITE WELLS	REQUIRED BEDROCK WELLS
MW3	MW12 (Transect)	MW7 (Shallow)
MW9	MW13	MW8 (Deep)
MW17	MW14	B2
MW18	MW15	
MW19	MW16	
MW20		
MW1*		
MW22		
B34I		
B1 (owner's option)		
B35*		
B4 (Bedrock)		

* For general parameters only

TABLE 2 (Continued)

EXTENDED SURVEY WELLS
OCCIDENTAL CHEMICAL CORPORATION
102ND STREET LANDFILL REMEDIAL INVESTIGATION
NIAGARA FALLS, NEW YORK

BOUNDARY WELLS	OFF-SITE WELLS	REQUIRED BEDROCK WELLS
OW9	OW48	OW41 (Shallow)
OW31	OW49	OW45 (Shallow)
OW33	OW50	OW46 (Shallow)
OW25	OW51	OW42 (Deep)
OW35	OW52	OW44 (Deep)
OW36	OW53 (Bedrock)	
OW37	OW54	
OW34	OW55	
OW40	OW56	
OW43	OW57	
OW47	OW58 (Transect)	
OW1*	OW60 (Transect)	
OW30		
OW26*		

* For general parameters only

TABLE 3

MONTHLY EXTENDED SURVEY AGENDA
102ND STREET LANDFILL
NIAGARA FALLS, NEW YORK

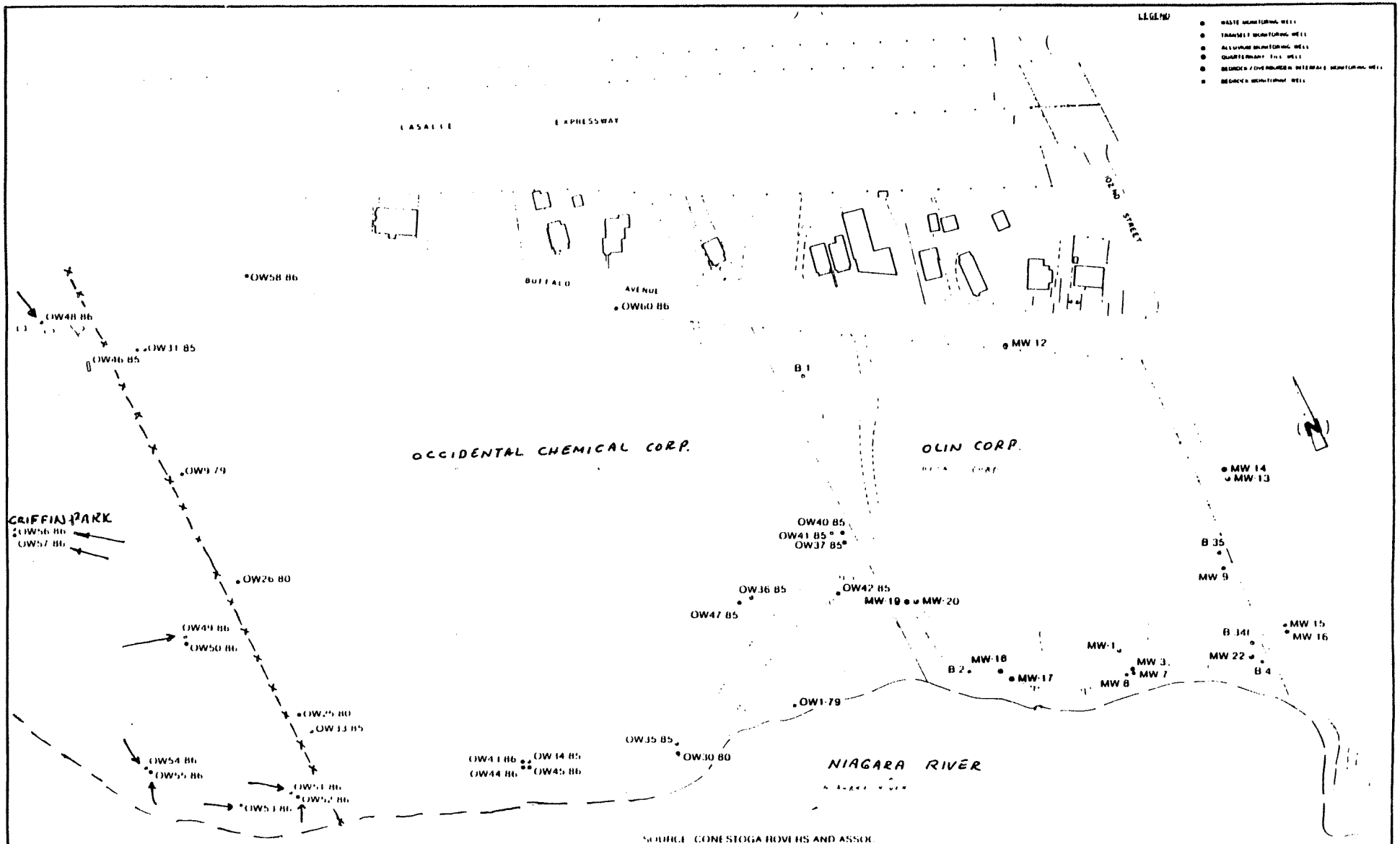
	January	Februray	March	April	June
			Analysis		
BOUNDARY WELLS:					
OLIN					
MW-3	SS, GP	GP	SS, GP	GP	GP
MW-9	SS, GP	GP	SS, GP	GP	GP
MW-17	SS, GP	GP	SS, GP	GP	GP
MW-18	SS, GP	GP	SS, GP	GP	GP
MW-19	SS, GP	GP	SS, GP	GP	GP
MW-20	SS, GP	GP	GP	GP	GP
MW-1	GP	GP	SS, GP	GP	GP
MW-22	SS, GP	GP	SS, GP	GP	GP
B-34I	GP	GP	GP	GP	GP
B-1 (optional)	SS, GP	GP	SS, GP	GP	GP
B-35	GP	GP	GP	GP	GP
B-4 (bedrock)	SS, GP	GP	SS, GP	GP	GP
CC					
OW-9	SS, GP	GP	SS, GP	GP	GP
OW-31	SS, GP	GP	SS, GP	GP	GP
OW-33	SS, GP	GP	SS, GP	GP	GP
OW-25	SS, GP	GP	SS, GP	GP	GP
OW-35	SS, GP	GP	SS, GP	GP	GP
OW-36	SS, GP	GP	SS, GP	GP	GP
OW-37	SS, GP	GP	SS, GP	GP	GP
OW-34	SS, GP	GP	SS, GP	GP	GP
OW-40	SS, GP	GP	SS, GP	GP	GP
OW-43	SS, GP	GP	SS, GP	GP	GP
OW-47	SS, GP	GP	SS, GP	GP	GP
OW-1	GP	GP	GP	GP	GP
OW-30	SS, GP	GP	SS, GP	GP	GP
OW-26	GP	GP	GP	GP	GP
OW-62			SS, GP	GP	GP
OW-63			SS, GP	GP	GP

TABLE 3 (Continued)

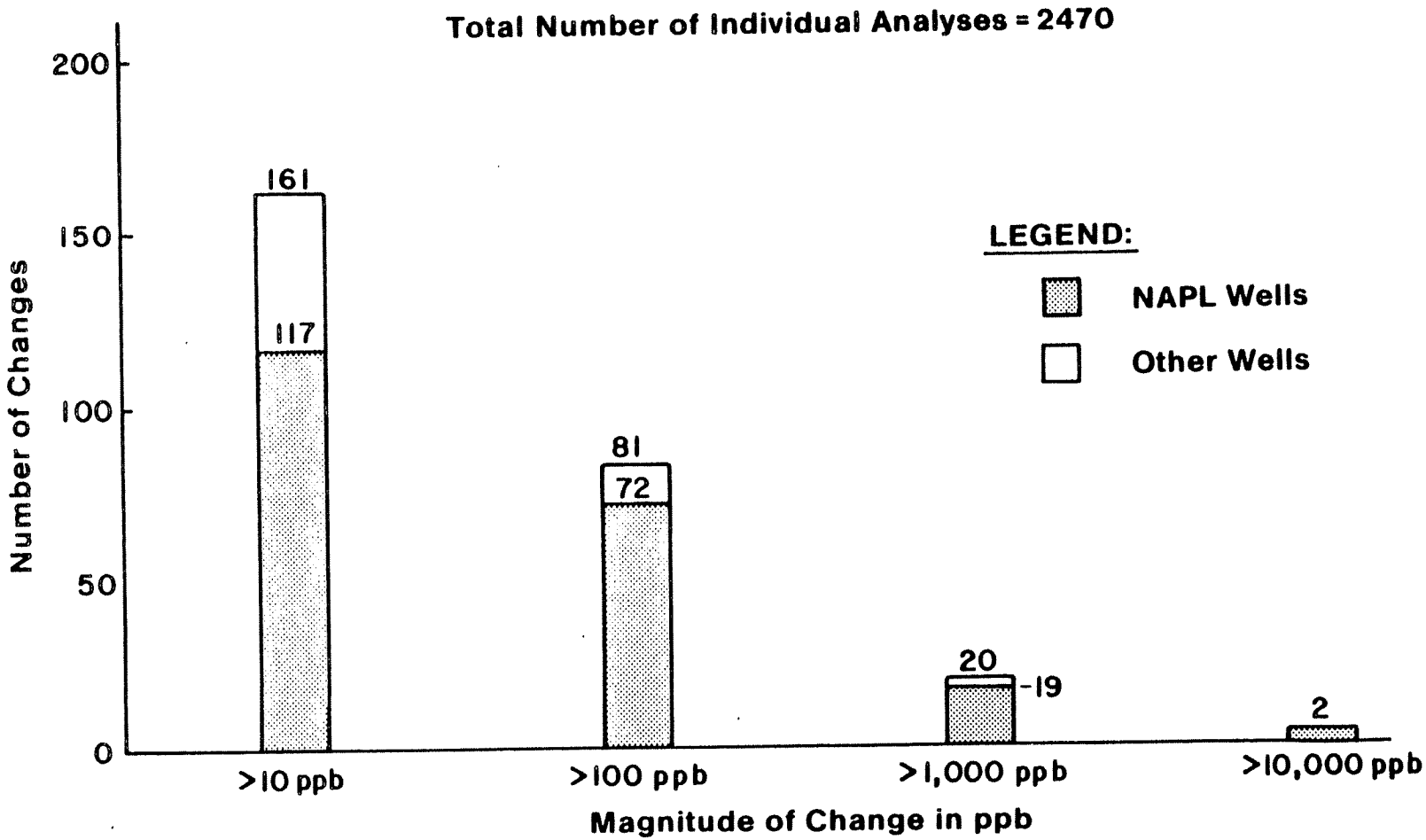
	January	Februray	March	April	June
			Analysis		
OFF-SITE WELLS:					
OLIN					
MW-12	SS, GP		SS, GP		
MW-13	SS, GP		SS, GP		
MW-14	SS, GP		SS, GP		
MW-15	SS, GP		SS, GP		
MW-16	SS, GP		SS, GP		
OCC					
OW-48	SS, GP		SS, GP		
OW-49	SS, GP		SS, GP		
OW-50	SS, GP		SS, GP		
OW-51	SS, GP		SS, GP		
OW-52	SS, GP		SS, GP		
OW-53 (bedrock)	SS, GP		SS, GP		
OW-54	SS, GP		SS, GP		
OW-55	SS, GP		SS, GP		
OW-56	SS, GP		SS, GP		
OW-57	SS, GP		SS, GP		
OW-58 (transect)	SS, GP		SS, GP		
OW-59 (transect)	SS, GP		SS, GP		
REQUIRED BEDROCK:					
OLIN					
MW-7	SS, GP		SS, GP		
B-2	SS, GP		SS, GP		
OCC					
OW-41	SS, GP		SS, GP		
OW-45	SS, GP		SS, GP		
OW-46	SS, GP		SS, GP		

GP = General Parameters
SS = Site Specific Parameters

Figures



		OCCIDENTAL CHEMICAL CORPORATION OLIN CHEMICALS GROUP	WOODWARD-CLYDE CONSULTANTS Consulting Engineers, Geologists and Environmental Scientists
		102nd STREET LANDFILL	
		FOUR MONTH EXTENDED SURVEY	
		MONITORING WELL LOCATION PLAN	FIGURE 1



DISTRIBUTION OF CHANGES IN THE VALUE OF
SITE SPECIFIC INDICATOR CONCENTRATIONS
EXTENDED GROUNDWATER SURVEY
102nd STREET LANDFILL
REMEDIAL INVESTIGATION
NIAGARA FALLS, NEW YORK

FIGURE 2

WATER QUALITY DATA - EXTENDED SURVEY SAMPLING
ROUND #1
102ND STREET LANDFILL
OCCIDENTAL CHEMICAL CORPORATION

Well No.	Date	Total Well Volumes Purged	Total Volume Pumped (Gallons)	pH	Conductivity (umhos)	Temperature (° C)
OW41-85*	2/18/87	0.5	20	12.10	9580	10.2
		1.25	50	10.54	5110	9.5
		1.75	65	9.05	5390	9.9
		2.0	80	8.77	5230	10.9
		2.5	100	8.10	5210	10.3
		3	120	8.07	5480	9.7
OW43-85	2/12/87	1	3	6.50	3380	10.9
		2	6	6.53	3370	11.0
		3	9	6.61	3430	10.5
OW45-86	2/17/87	0.5	20	6.84	3120	10.5
		1.0	45	6.81	3280	10.5
		1.5	60	6.85	3370	10.7
		2	80	6.85	3540	10.7
OW46-86	2/16/87	0.5	15	6.68	9300	9.4
		1	30	6.75	9960	9.7
		1.5	45	6.72	9880	9.4
		2.0	60	6.81	9830	9.3
OW47-86*	2/04/87	1	3.8	6.54	1340	9.7
		2	7.6	6.73	1470	9.5
		3	11.4	6.86	1450	9.2
		4	15.2	6.81	1440	9.5
OW48-86	2/09/87	1	0.5	7.24	3040	6.9
		2	1.0	6.90	3000	7.5
		3	1.5	6.74	3030	7.8
OW49-86	2/10/87	1	0.5	7.12	3860	9.2
		2	1.0	7.08	3790	9.2
		3	1.5	7.10	3770	9.2
OW50-86	2/10/87	1	2.5	7.40	>20000	10.5
		2	5.0	7.06	>20000	10.9
		3	7.5	6.96	>20000	10.5

* Purging extended to obtain owner acceptable water.

WATER QUALITY DATA - EXTENDED SURVEY SAMPLING
ROUND #1
102ND STREET LANDFILL
OCCIDENTAL CHEMICAL CORPORATION

	Well No.	Date	Total Well Volumes Purged	Total Volume Pumped (Gallons)	pH	Conductivity (umhos)	Temperature (° C)
x	OW51-86	2/10/87	1	0.5	6.66	2960	9.6
			2	1.0	6.80	2980	10.3
			3	1.5	6.88	3050	10.5
x	OW52-86	2/12/87	1	2.2	7.66	2710	10.3
			2	4.4	7.10	3310	9.6
			3	6.6	7.15	3650	9.0
			4	8.8	7.13	3770	9.9
x	OW53-86	2/10/87	0.5	22	6.49	3540	10.5
			1	44	7.71	3740	10.0
			1.5	66	7.48	4060	9.4
			2	88	7.64	4420	9.8
x	OW54-86	2/09/87	1	0.75	6.73	2170	6.4
			2	1.50	6.67	2160	6.4
			3	2.25	6.57	2120	6.9
x	OW55-86	2/09/87	1.2	3.1	6.70	2470	8.1
			2.2	5.7	6.50	2530	8.6
			3.2	8.3	6.37	2550	8.8
			4.0	10.4	6.42	2680	8.9
x	OW56-86	2/12/87	1	0.4	7.25	1790	8.1
			2	0.8	7.15	1720	9.0
			3	1.2	7.06	1750	9.0
x	OW57-86	2/06/87	1	3	5.95	3270	10.9
			2	6	5.76	3440	10.9
			3	9	5.10	3660	11.1
			4	12	3.99**	3430	10.6
	OW58-86	2/13/87	1	0.9	5.85	3680	4.2
			2	1.8	5.98	3930	5.0
			3	2.7	6.21	4000	5.2
	OW60-86	2/13/87	1	1.1	7.42	3400	3.8
			2	2.2	7.20	3150	3.6
			3	3.3	6.93	3160	3.7

** Conductivity meter malfunctioning.

WATER QUALITY DATA - EXTENDED SURVEY SAMPLING
ROUND #3
102ND STREET LANDFILL
OCCIDENTAL CHEMICAL CORPORATION

	Well No.	Date	Total Well Volumes Purged	Total Volume Pumped (Gallons)	pH	Conductivity (umhos)	Temperature (° C)
	OW46-86	4/01/87	0.5	18	6.83	5500	8.7
			1.0	30	6.90	5500	10.1
			1.5	45	6.64	5400	9.5
			2.0	70	6.64	5100	9.9
	OW47-86	3/24/87	1	3.8	6.31	4100	11.5
			2	7.6	6.27	4200	11.2
			3	11.4	6.18	4100	11.0
X	OW48-86	3/30/87	1	0.5	6.76	2400	7.7
			2	1.0	6.75	2400	7.5
			3	1.5	6.77	2400	7.3
X	OW49-86*	3/30/87	1	0.5	6.54	3500	9.1
			2	1.0	6.57	3400	8.9
			3	1.5	6.57	3300	9.0
			4	2.0	6.81	3300	9.0
			5	2.5	6.78	3400	9.2
			7	3.5	6.61	3400	9.0
X	OW50-86	3/30/87	1	2.5	6.69	13000	10.6
			2	5.0	6.38	16500	11.2
			3	7.5	6.31	16800	11.1
			4	10.0	6.30	16000	11.2
X	OW51-86*	3/27/87	1	0.5	6.82	1220	10.2
			2	1.0	6.53	3100	10.0
			3	1.5	6.53	3200	9.9
			4	2.0	6.54	3300	10.0
			7	3.5	6.57	3300	10.0
			9	4.5	6.60	3400	10.0
			12	6.0	6.60	3400	10.0
			15	7.5	6.74	3300	10.0
X	OW52-86	3/27/87	1	2.1	6.57	1330	11.1
			2	4.2	6.80	1850	11.2
			3	6.3	6.87	2000	11.4
			4	8.4	7.03	2100	11.4

* Purging extended to obtain owner acceptable water.

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW49-86 X
Well Type: Fill

Parameter	Survey Level	Sample Date 5/86	2/10/87	3/30/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.680	0.430	0.57
Total Kjeldahl Nitrogen (TKN)	0.10	7.50	4.9	2.3
Total Organic Carbon (TOC)	1.00	230	1200	120
Phosphorous (Dissolved)	0.01	1.8	0.41	ND
Mercury	0.0005	0.0175	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	5	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	ND	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW51-86 X
Well Type: Fill

Parameter	Survey Level	Sample Date 5/86	2/10/87	3/27/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.240	0.160	0.16
Total Kjeldahl Nitrogen (TKN)	0.10	10.0	6.6	4.8
Total Organic Carbon (TOC)	1.00	220	50	110
Phosphorous (Dissolved)	0.01	0.07	0.64	0.73
Mercury	0.0005	ND	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	ND	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW54-86 X
Well Type: Fill

Parameter	Survey Level	Sample Date 5/86	2/09/87	3/26/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.078	0.100	.061
Total Kjeldahl Nitrogen (TKN)	0.10	11.0	6.3	3.8
Total Organic Carbon (TOC)	1.00	220	130	190
Phosphorous (Dissolved)	0.01	0.07	0.28	ND
Mercury	0.0005	0.0005	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	22	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW56-86 X
Well Type: Fill

Parameter	Survey Level	Sample Date 5/86	2/12/87	3/26/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.027	0.034	0.020
Total Kjeldahl Nitrogen (TKN)	0.10	5.3	3.9	3.8
Total Organic Carbon (TOC)	1.00	220	150	190
Phosphorous (Dissolved)	0.01	3.2	0.14	ND
Mercury	0.0005	0.0034	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	ND	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

l Number: OW52-86 X
Well Type: Alluvium

Parameter	Survey Level	Sample Date 5/86	2/12/87	3/27/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.150	0.150	0.093
Total Kjeldahl Nitrogen (TKN)	0.10	16.7	9.9	8.2
Total Organic Carbon (TOC)	1.00	270	ND	120
Phosphorous (Dissolved)	0.01	ND	1.4	1.6
Mercury	0.0005	ND	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	ND	ND
,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- ÷ = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

l Number: OW55-86 ×
Well Type: Alluvium

Parameter	Survey Level	Sample Date 5/86	2/09/87	2/09/87 (Dup.)	3/26/87	3/26/87 Dup.
GENERAL: (mg/L)						
Total Organic Halide (TOX)	0.01	0.069	0.100	--	0.097	0.090
Total Kjeldahl Nitrogen (TKN)	0.10	16.0	12	--	9.8	12
Total Organic Carbon (TOC)	1.00	200	40	--	260	210
Phosphorous (Dissolved)	0.01	ND	0.76	--	0.17	0.21
Mercury	0.0005	0.0030	ND	--	ND	ND
Arsenic	0.05	--	ND	--	ND	ND
VOLATILES: (ug/L)						
Benzene	5	--	ND	NA	ND	ND
Toluene	5	--	ND	NA	ND	ND
Monochlorobenzene	5	--	ND	NA	ND	ND
2-Monochlorotoluene	5	--	ND	NA	ND	ND
4-Monochlorotoluene	5	--	ND	NA	ND	ND
SEMI-VOLATILES: (ug/L)						
1,2-Dichlorobenzene	10	--	ND	ND	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND	ND	ND
',2,3,4-Tetrachlorobenzene	10	--	ND	ND	ND	ND
,2,4,5-Tetrachlorobenzene	10	--	ND	ND	ND	ND
Hexachlorobenzene	10	--	ND	ND	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND	ND	ND
2,5-Dichloroaniline	10	--	ND	ND	ND	ND
3,4-Dichloroaniline	10	--	ND	ND	ND	ND
Phenol	10	--	ND	ND	ND	ND
2-Chlorophenol	10	--	ND	ND	ND	ND
4-Chlorophenol	10	--	ND	ND	ND	ND
2,4-Dichlorophenol	10	--	ND	ND	ND	ND
2,5-Dichlorophenol	10	--	ND	ND	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND	ND	ND
2-Chlorobenzoic Acid	100	--	ND	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
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- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW57-86 X
Well Type: Alluvium

Parameter	Survey Level	Sample Date 5/86	2/06/87	3/26/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.145	0.087	0.094
Total Kjeldahl Nitrogen (TKN)	0.10	11.0	8.8	6.8
Total Organic Carbon (TOC)	1.00	160	90	230
Phosphorous (Dissolved)	0.01	0.12	0.99	0.69
Mercury	0.0005	ND	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	ND	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW50-86
Well Type: Alluvium

Parameter	Survey Level	Sample Date 5/86	2/10/87	3/30/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	1.400u	0.600	0.69
Total Kjeldahl Nitrogen (TKN)	0.10	32.4	33	24
Total Organic Carbon (TOC)	1.00	240	200	190
Phosphorous (Dissolved)	0.01	ND	1.5	0.34
Mercury	0.0005	ND	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
',2,3,4-Tetrachlorobenzene	10	--	ND	ND
.,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
- -- = Not Sampled
- + = Sample not sent to lab
- Dup. = Field Duplicate
- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

ANALYTICAL DATA
EXTENDED SURVEY SAMPLING
102ND STREET LANDFILL

Well Number: OW48-86 *
Well Type: Fill

Parameter	Survey Level	Sample Date 5/86	2/09/87	3/30/87
GENERAL: (mg/L)				
Total Organic Halide (TOX)	0.01	0.448	0.250	0.30
Total Kjeldahl Nitrogen (TKN)	0.10	4.3	2.5	0.77
Total Organic Carbon (TOC)	1.00	50	600	100
Phosphorous (Dissolved)	0.01	1.4	0.28	ND
Mercury	0.0005	ND	ND	ND
Arsenic	0.05	--	ND	ND
VOLATILES: (ug/L)				
Benzene	5	--	ND	ND
Toluene	5	--	ND	ND
Monochlorobenzene	5	--	ND	ND
2-Monochlorotoluene	5	--	ND	ND
4-Monochlorotoluene	5	--	ND	ND
SEMI-VOLATILES: (ug/L)				
1,2-Dichlorobenzene	10	--	ND	ND
1,4-Dichlorobenzene	10	--	ND	ND
1,2,3-Trichlorobenzene	10	--	ND	ND
1,2,4-Trichlorobenzene	10	--	ND	ND
1,2,3,4-Tetrachlorobenzene	10	--	22	ND
1,2,4,5-Tetrachlorobenzene	10	--	ND	ND
Hexachlorobenzene	10	--	ND	ND
Alpha Hexachlorocyclohexane	10	--	ND	ND
Beta Hexachlorocyclohexane	10	--	ND	ND
Gamma Hexachlorocyclohexane	10	--	ND	ND
Delta Hexachlorocyclohexane	10	--	ND	ND
2,5-Dichloroaniline	10	--	ND	ND
3,4-Dichloroaniline	10	--	ND	ND
Phenol	10	--	ND	ND
2-Chlorophenol	10	--	ND	ND
4-Chlorophenol	10	--	ND	ND
2,4-Dichlorophenol	10	--	ND	ND
2,5-Dichlorophenol	10	--	ND	ND
2,4,5-Trichlorophenol	50	--	ND	ND
2,4,6-Trichlorophenol	10	--	ND	ND
2-Chlorobenzoic Acid	100	--	ND	ND
3-Chlorobenzoic Acid	100	--	ND	ND
4-Chlorobenzoic Acid	100	--	ND	ND

Notes:
- ND = Not Detected
- NA = Not Analyzed
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- (Dup.) = Sampled for volatiles and semi-volatiles only
- LD = Lab Duplicate

Appendix A.1.i

United States Department of the Interior

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION
521 WEST SENECA STREET
ITHACA, NEW YORK 14850

August 5, 1987

Ms. Rosa V. McDaniel
LeRoy Callender, PC
675 Delaware Avenue
Buffalo, New York 14202

Dear Ms. McDaniel:

As per your request I have enclosed copies of the only data that the U.S. Geological Survey has collected for the 102nd St. landfill--site codes 932022 and 932031, and the Griffon Park landfill--site code 932081. Please note that there are three contiguous units within the 102nd St.-Griffon Park area. This information came from our report "Preliminary evaluation of chemical migration to ground water and the Niagara River from selected waste-disposal sites, which was prepared for the U.S. Environmental Protection Agency in 1985. Copies can be obtained through the NTIS system, or possibly through USEPA - Great Lakes office.

The best source for other information on these sites would be through Mr. Peter Buechi at: New York State Department of Environmental Conservation, 600 Delaware Ave., Buffalo, New York, 14202-1073. That office maintains an extensive library of information on all sites under their jurisdiction.

If you should have any further questions please let me know.

Sincerely,

William M. Kappel
Hydrologist

Enclosure
WMK/amw

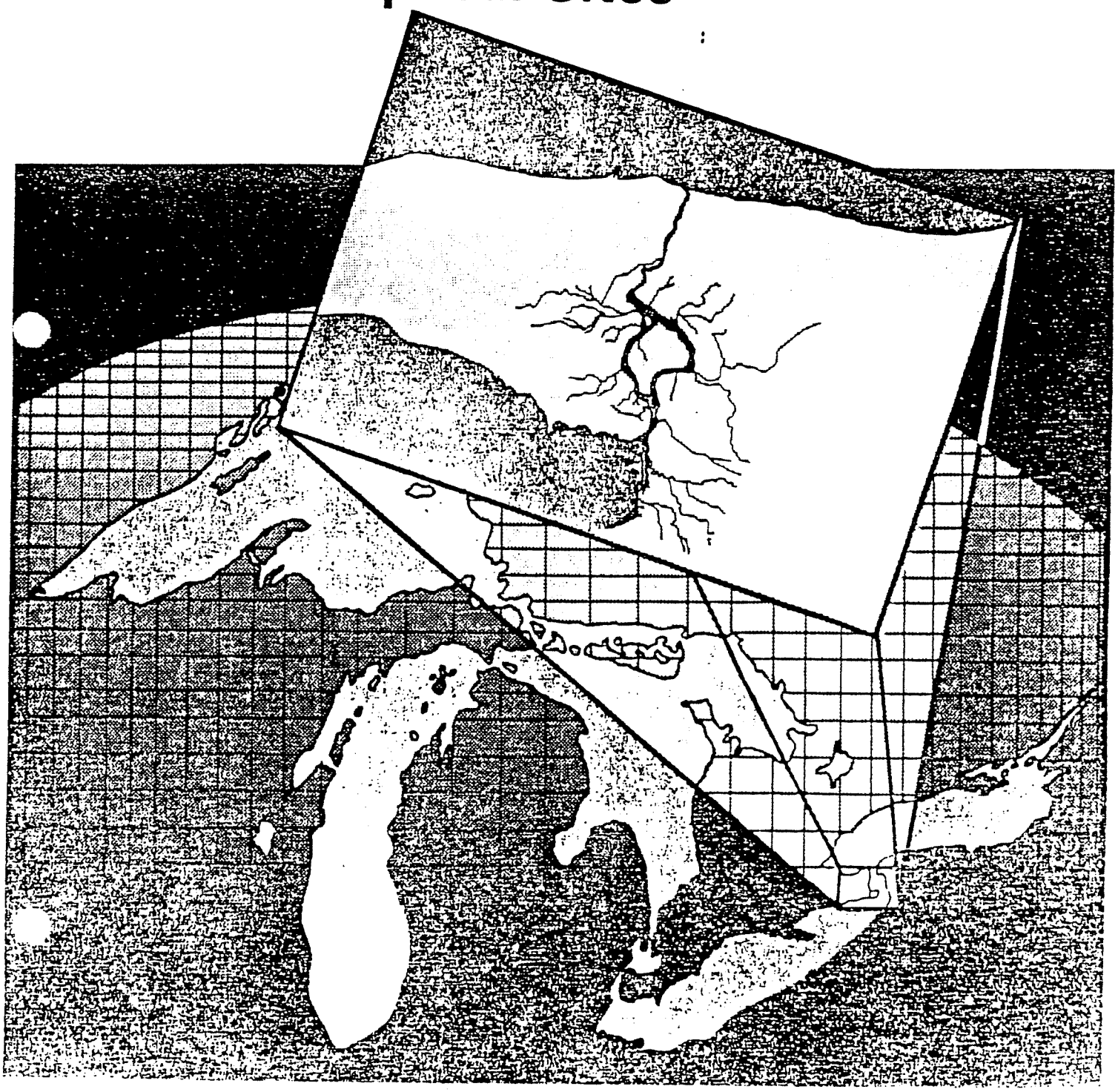
cc: Sharon A. Edmons, Reston, VA
L. A. Martens, District Chief,
Albany, NY

Agency
Program Office
536 South Clark Street
Chicago, Illinois 60605

March 1985

EPA

Preliminary Evaluation Of Chemical Migration To Groundwater and The Niagara River from Selected Waste-Disposal Sites



"Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste-Disposal Sites"

By

Edward J. Koszalka, James E. Paschal, Jr.,

Todd S. Miller and Philip B. Duran

Prepared by the U.S. Geological Survey

in cooperation with the

New York State Department of Environmental Conservation

for the

U.S. ENVIRONMENTAL PROTECTION AGENCY

85. GRIFFON PARK (USGS field reconnaissance) NYSDEC 932081

General information and chemical-migration potential.--Griffon Park, in the city of Niagara Falls at the mouth of the Cayuga Island Little River, was used to dispose mostly of leaves and forestry materials of unknown quantity. Some domestic wastes may have been included.

The hydraulic connection with the Little River of Cayuga Island indicates a major potential for contaminant migration. Chemical analyses of soil samples indicate contamination; but analyses of a ground-water sample indicate limited migration. Additional testing would be needed to delineate the extent of contaminant migration.

Geologic information.--The site contains approximately 34 ft of unconsolidated deposits of lacustrine clay and till overlying bedrock that is probably dolomitic. The U.S. Geological Survey drilled four test holes on the site in 1982; their locations are shown in fig. C-46. The geologic logs are as follows:

Boring no.	Depth (ft)	Description
1	0 - 3.0	Topsoil, brown.
	3.0 - 5.0	Soil, tan.
	5.0 - 6.0	Clay, sandy, tan, damp.
	6.0 - 6.5	Same, but less sand and less damp.
	6.5 -11.5	Same, getting hard and brown, dry.
		SOIL SAMPLE: 5 - 6 ft.
2	0 - 1.5	Brown topsoil and fill.
	1.5 - 6.5	Same, fill material wet.
		WATER SAMPLE: 4.5 - 6.5 ft.
3	0 - 2.0	Demolition debris.
	2.0 - 6.5	Dark brown fill material.
	6.5 -11.5	Same, pulled up bit; black oil liquid on bit stem starting 2 ft below joint.
	11.5 -16.5	Black oily material.
		SOIL SAMPLE: 15 - 16 ft.
4	0 - 6.5	Brown topsoil and fill.
	6.5 - 11.5	Same, turning black at about 8 ft.
	11.5 - 16.5	Same, black oily materials on stems.
		SOIL SAMPLE: 8 - 11.5 ft.

Hydrologic information.--The Geological Survey installed one well on the site; its location is shown in fig. C-44. The direction of ground-water flow is probably southwestward toward the Little River. Pumping of the well during sampling caused little drawdown, indicating that the fill is highly permeable.

Chemical information.--The Geological Survey collected a water sample from the well and three soil samples for heavy-metals and organic-compound analyses; results are given in table C-24. Chromium, iron, and lead concentrations exceeded USEPA criteria for drinking water and the New York State ground-water

standards; copper concentrations exceeded those in background soils. The only organic priority pollutant found was di-n-butyl phthalate, and that was at a concentration less than the quantifiable detection limit. Three organic nonpriority pollutants were found.

Table C-24.--Analyses of ground-water and substrate samples from Griffon Park, site 85, Niagara Falls, N.Y., July 12, 1982.
[Locations shown in fig. C-44. Concentrations are in µg/L and µg/kg; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit, blanks indicate inorganic constituent was not analyzed.]

	Sample number and depth below land surface (ft)				
	Substrate	Ground water	Substrates		
	1	2	3	3A	4
	(6.0)	(5.5)	(11.0)*	(split)	(10.0)
pH		6.8			
Specific conductance (µmho/cm)		2,350			
Temperature (°C)		13.0			
Inorganic constituents					
Aluminum		781			
Antimony		--			
Arsenic		--			
Barium		1,220†			
Beryllium		—			
Cadmium		6			
Chromium		59†			
Cobalt		--			
Copper	8,000†	--	49,000††	(63,000)††	17,000
Iron	11,000,000†	48,500†	13,000,000	(21,000,000)	83,000,000
Lead		140†			
Manganese		730			
Mercury	--	1.3†	40	(40)	--
Nickel		62			
Selenium		—			
Silver		--			
Tellurium		—			
Vanadium		—			
Zinc		3,920			

[1] Tentative identification based on comparison with the National Bureau of Standards (NBS) library. No external standard was available. Concentration is semiquantitative and based only on an internal standard. GC/MS spectra were examined and interpreted by GC/MS analysts.
† Exceeds USEPA criterion for maximum permissible concentration in drinking water and New York State standard for maximum concentration in ground water.
†† Exceeds concentrations in samples taken from undisturbed soils in the Niagara Fall area. Undisturbed soils not analyzed for iron.
***Analyzed at detection limit above that required by this study. No compounds detected.

Table C-24.--Analyses of ground-water and substrate samples from Griffon Park, site 85, Niagara Falls, N.Y., July 12, 1982 (continued)
[Locations shown in fig. C-45. Concentrations are in µg/L and µg/kg; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit, blanks indicate inorganic constituent was not analyzed.]

	Sample number				
	Substrate	Ground water	Substrates		
	1	2	3	(Split)	4
Organic compounds	***		***	***	***
Priority pollutant					
Di-n-butyl phthalate		LT			
Nonpriority pollutants					
2-(2-Butoxyethoxy)-ethanol[1]		220			
4-(1,1-Dimethylethyl)-phenol[1]		36			
4-Nitrophenol		LT			

Electromagnetic survey.--The Geological Survey ran an electromagnetic survey of the site with three lines in November 1982. Their locations are shown in fig. C-45; the values are plotted in fig. C-45 (p. 388).

Line 1.--This line, along the bank of the Little River (fig. C-45) showed mostly background conductivity until 400 ft from the northern end of the line. From there southward, however, a considerable deviation is seen. The values become most erratic at the southern end of the line, near an adjacent hazardous-waste landfill (site 40).

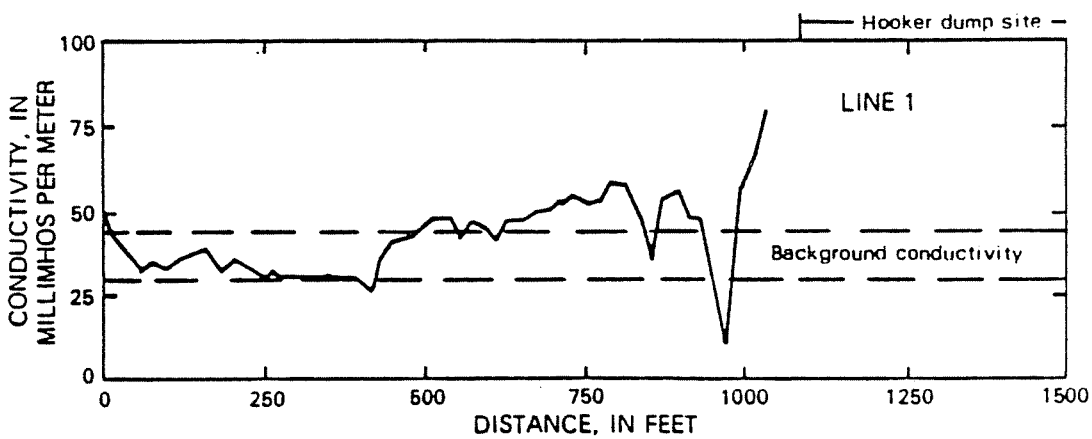


Figure C-44. Results of electromagnetic-conductivity survey at Griffon Park, site 85, Niagara Falls, line 1. (Locations of lines are shown in fig. 45.)

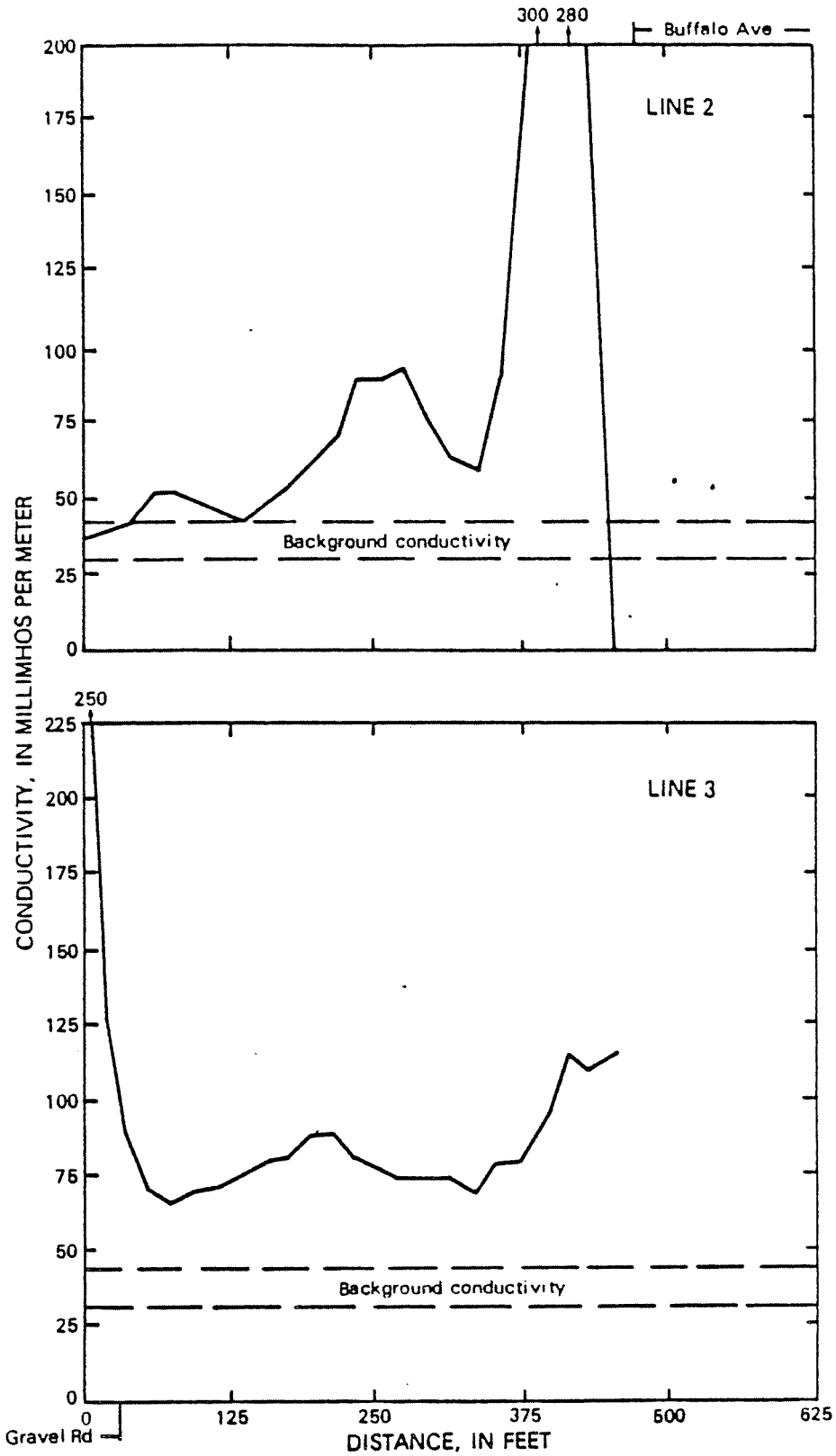


Figure C-44 (continued). Results of electromagnetic-conductivity survey at Griffon Park, site 85, Niagara Falls, lines 2 and 3.

Lines 2 and 3.--These lines show unnatural conductivity values throughout their length. The large conductivity rise and subsequent drop at the northern end of line 2 (fig. C-51) can probably be attributed to a large pipe below Buffalo Avenue. The width of the high-conductance area on line 2, however, indicates that the material below the gravel road is more conductive than the surrounding fill. The higher conductivity of material below the gravel road is also clearly shown in line 3 which parallels Buffalo Avenue.

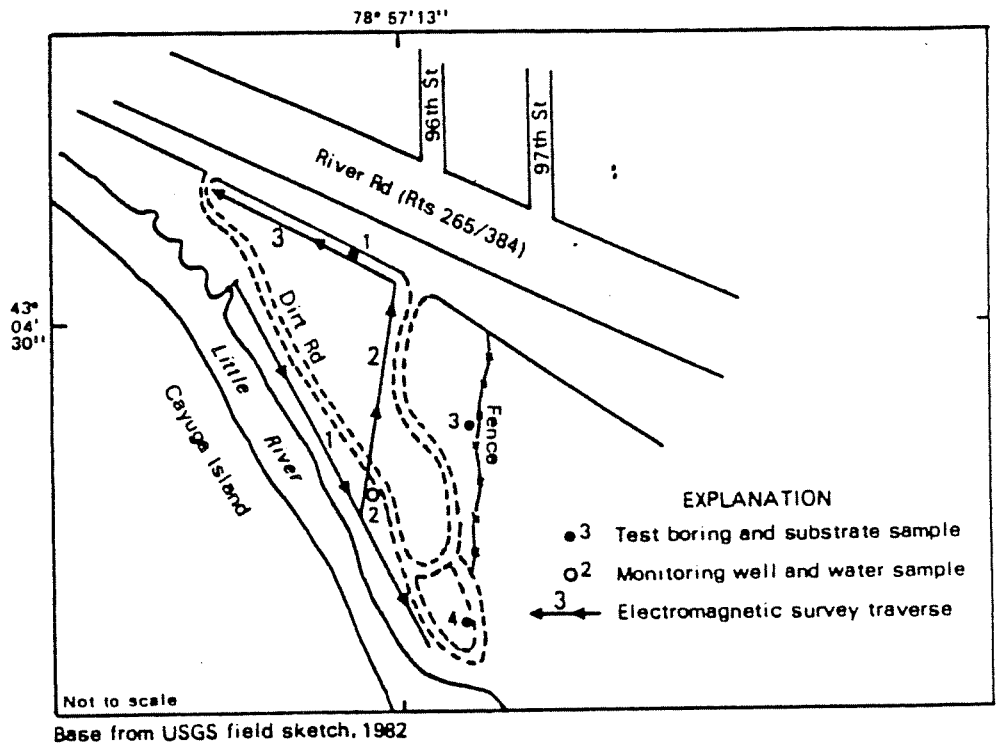


Figure C-45. Location of monitoring well, sampling holes, and electromagnetic-conductivity survey lines at Griffon Park, site 85, Niagara Falls.

Appendix A.1.j

#29

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA, AND STATE OF NEW YORK, Plaintiffs, v. HOOKER CHEMICALS & PLASTICS CORP.; HOOKER CHEMICAL CORP.; OCCIDENTAL PETROLEUM INVESTMENT CORP.; OCCIDENTAL PETROLEUM CORP.; OLIN CORP.; AND CITY OF NIAGARA FALLS NEW YORK (102ND STREET LANDFILL), Defendants.	Civil Action No. 79-987 (JTC)

STIPULATION

The parties to this Stipulation are: the United States of America, for the Administrator of the United States Environmental Protection Agency (hereafter the "United States" or "EPA") and the State of New York (hereafter "the State"), plaintiffs, and Hooker Chemicals & Plastics Corp., now known as Occidental Chemical Corporation, (hereafter "Occidental"), Olin Corporation (hereafter "Olin"), and the City of Niagara Falls, New York, defendants.

The plaintiffs having determined that additional data are required in order to develop an appropriate and permanent remedy for the 102nd Street Landfill site which is the subject of this action and Occidental and Olin having agreed to undertake the investigations necessary to gather and develop such data with a view toward developing, evaluating, selecting and implementing an appropriate and permanent remedy at the site, hereby stipulate as follows:

1. Occidental and Olin shall implement and perform the Remedial Investigation for the 102nd Street Landfill site as specified in the attached "Work Plan for the Remedial Investigation--102nd Street Landfill Site, Niagara Falls, New York" ("Work Plan") dated June 1984. The purpose of the Work Plan is to characterize the nature and extent of chemicals at and migrating from the 102nd Street Landfill site and to collect sufficient data on the hydrogeologic and other physical characteristics of the site and affected off-site areas for the engineering conceptualization and assessment of remedial courses of action.

2. Occidental and Olin will undertake a Feasibility Study for the 102nd Street Landfill site, wherein the data and conclusions of the Remedial Investigation will be utilized to develop and evaluate alternative remedial actions for the site as provided for under Section 300.68 of the National Contingency Plan, 40 C.F.R. 300.68; provided however, that such Feasibility Study may not be necessary if the parties reach an agreement providing for the permanent remediation of the site in settlement of the above-captioned matter. In that event, the parties shall agree upon such a remediation plan and shall embody it in a stipulation and judgment.

3. The parties agree that the tasks in the Remedial Investigation will produce valuable data for the purpose of assessing remedies for the 102nd Street Landfill site. Therefore, the parties hereby waive any evidentiary objection to the admissibility of the results of data gathered, generated, or evaluated pursuant to this Remedial Investigation, that has been

verified by the quality control/quality assurance procedures established pursuant to the Work Plan and either (a) reported to EPA and the State or (b) reported by EPA or the State to any other party hereto. However, a party may object to a specific item of evidence if the objecting party demonstrates that such item of evidence was not gathered or generated in accordance with the sampling and analytical procedures established pursuant to the Work Plan.

4. Nothing herein shall constitute a waiver of past and/or future rights, claims or defenses of any kind under the laws, statutes or regulations of the United States, the State of New York or the common law by any party hereto.

5. Nothing contained in this Stipulation shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties. Furthermore, this Stipulation shall not create or affect the rights of persons or entities who are not parties to this Stipulation.

6. All information and documents submitted by Occidental and Olin to EPA and the State pursuant to this Stipulation shall be subject to public inspection unless identified as confidential by Occidental or Olin in conformance with 40 C.F.R. Part 2 or applicable New York State law. The information and documents so identified as confidential will be disclosed, respectively, only in accordance with EPA regulations or applicable New York State law.

7. The parties agree that this Stipulation as well as the Work Plan may be enforced by Order of the Court. Accordingly, if any party hereto considers that any other party has failed to comply with any term or condition of this Stipulation or the Work Plan, such party may seek appropriate relief from the Court.

UNITED STATES OF AMERICA

F. Henry Habicht, II
Assistant Attorney General
U.S. Department of Justice
Washington, D.C. 20530

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U.S. DEPARTMENT OF JUSTICE

Dated: June 26, 1984

Courtney M. Price
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Douglas R. Blazey
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James C. Woods
Attorney, Region II

John Wheeler
Attorney, Office of Enforcement and Compliance Monitoring
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Dated: 2/26/54

STATE OF NEW YORK
Robert Abrams, Attorney General

Edith Holleman
Assistant Attorney General

Ann Goldweber
Assistant Attorney General

Dated: 6/24/94

CITY OF NIAGARA FALLS

Earl W. Brydges, Jr.
Joel E. Schweitzer
GELLMAN, BRYDGES, SCHOFF & SCHWEITZER

Carl E. Mooradian
CORPORATION COUNSEL

Dated: June 26, 1984

OCCIDENTAL CHEMICAL CORPORATION

By: _____

Louis Nizer
George Berger
Martin B. Wasser
PHILLIPS, NIZER, BENJAMIN,
KRIM & BALLON

Thomas H. Truitt
Anthony L. Young
WALD, HARKRADER & ROSS

David K. Floyd
PHILLIPS, LYTLE, HITCHCOCK,
BLAINE & HUBER

Dated: 6/26/84

OLIN CORPORATION

Myron B. Sokolowski
Regulatory Counsel
OLIN CORPORATION

John R. Quarles
Kenneth A. Rubin
MORGAN, LEWIS & BOCKIUS

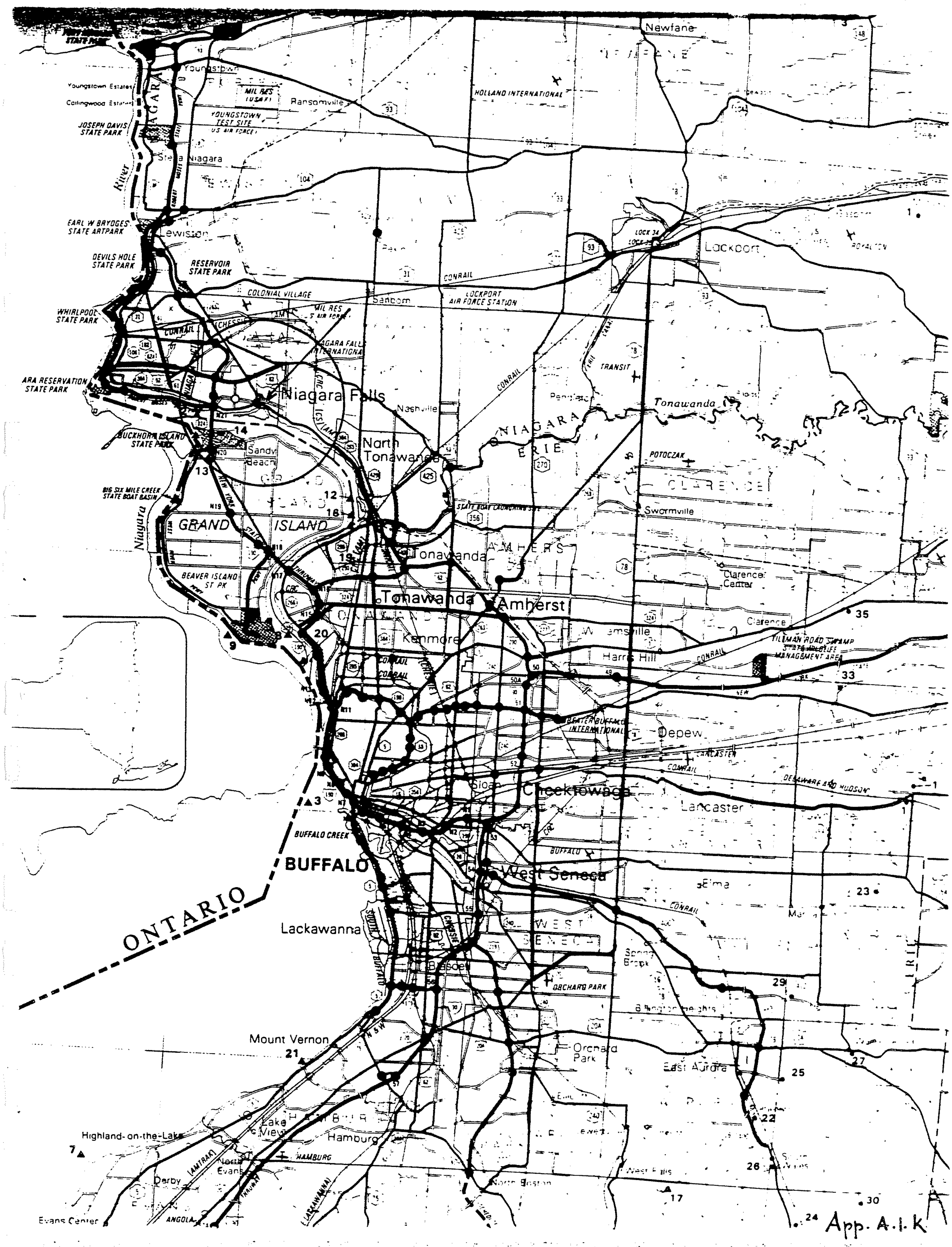
Dated: June 26, 1984

ADOPTED AND APPROVED.

Dated: June 26, 1984

JOHN T. CURTIN
United States District Court Judge

Appendix A.1. k


Newfane
Youngstown
Youngstown Estates
Collingwood Estates
MIL RES (USAF)
Ransomville
YOUNGSTOWN TEST SITE US AIR FORCE
JOSEPH DAVIS STATE PARK
HOLLAND INTERNATIONAL
Stella Niagara
River
EARL W BRYDGES STATE ARTPARK
Lewiston
DEVILS HOLE STATE PARK
RESERVOIR STATE PARK
LOCK 34
LOCK 35
Lockport
ROYALTON
CONRAIL
LOCKPORT AIR FORCE STATION
COLONIAL VILLAGE
Sanborn
WHIRLPOOL STATE PARK
NIAGARA FALLS INTERNATIONAL
TRANSIT
ARA RESERVATION STATE PARK
Niagara Falls
Nashville
Pendleton
Tonawanda
NIAGARA
ERIE
BUCKHORN ISLAND STATE PARK
Sandy Beach
North Tonawanda
POTOCZAK
CLARENCE
BIG SIX MILE CREEK STATE BOAT BASIN
STATE BOAT LAUNCHING SITE
Swormville
Niagara
GRAND ISLAND
AMHERST
Tonawanda
BEAVER ISLAND ST PK
Clarence Center
Tonawanda
Amherst
Williamsville
Clarence
Kenmore
TILLMAN ROAD SWAMP STATE WILDLIFE MANAGEMENT AREA
Harris Hill
GREATER BUFFALO INTERNATIONAL
Depew
LANCASTER
DELAWARE AND HUDSON
Sloan
Cheektowaga
Lancaster
BUFFALO CREEK
BUFFALO
West Seneca
Elma
ONTARIO
CONRAIL
Lackawanna
WEST SENECA
Spring Brook
ORCHARD PARK
Billington Heights
Mount Vernon
Orchard Park
East Aurora
HAMBURG
Highland-on-the-Lake
Lake View
Hamburg
HAMBURG
North Evans
Derby
(AMTRAK)
West Falls
North Boston
Evans Center
ANGOLA
App. A.I.K

NIAGARA COUNTY

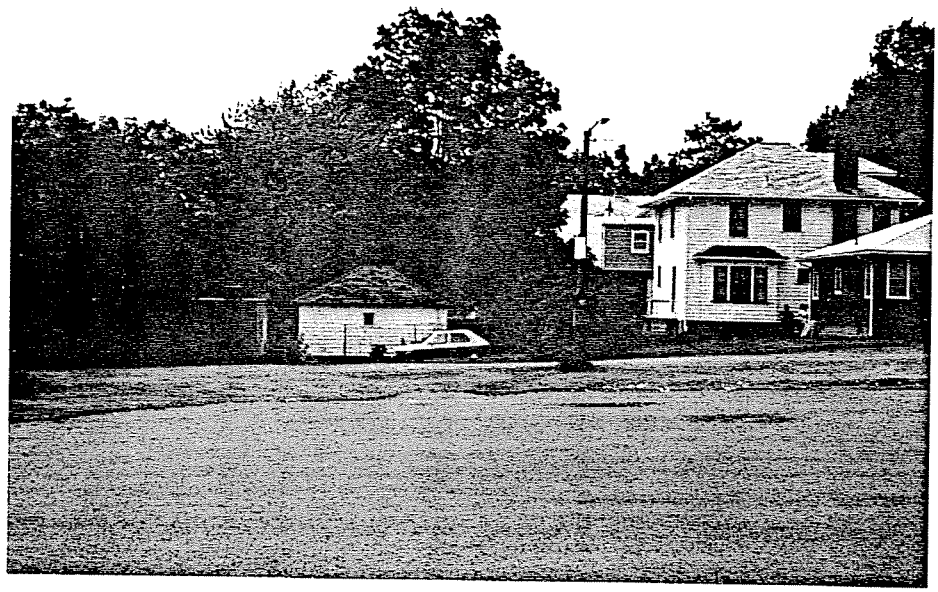
ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
	Lockport City (See No 12, Erie Co).	25000	
1	Middleport Village.	.2000. .	.Wells (Springs)
	Niagara County Water District (See No 13, Erie Co).	.48	
2	Niagara Falls City (See also No 14 Erie Co).	77384. .	.Niagara River - East Branch
	North Tonawanda City (See No 16 Erie Co).	36000	
Non-Municipal Community			
3	Country Estates Mobile Village.	.28. .	.Wells

Appendix A.1.1

GRIFFON PARK

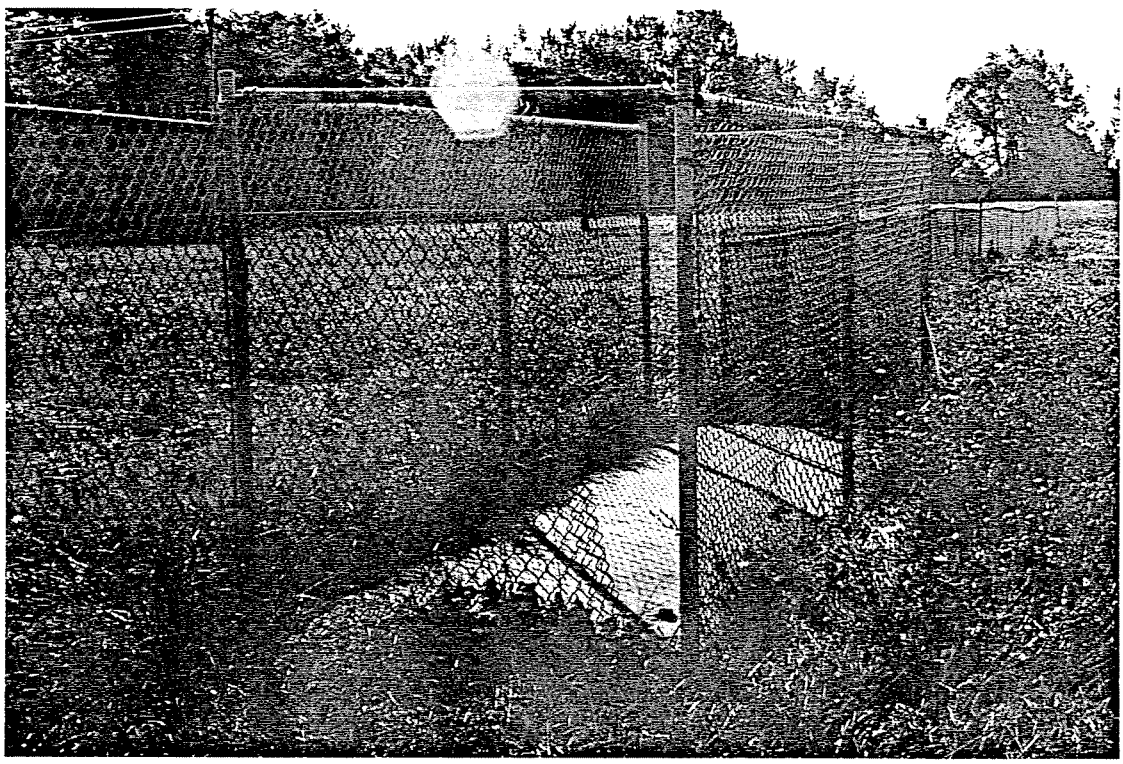
E1. NORTH-EAST FENCED-OFF AREA

E2. BOAT PIERS, SOUTH-WEST OF THE PAVED AREA, ON LITTLE NIAGARA RIVER



E3. WEST SIDE EASEMENT OF SITE.

E4. NORTH & NORTH-EAST BOUNDARIES, NEXT TO HIGHWAY.

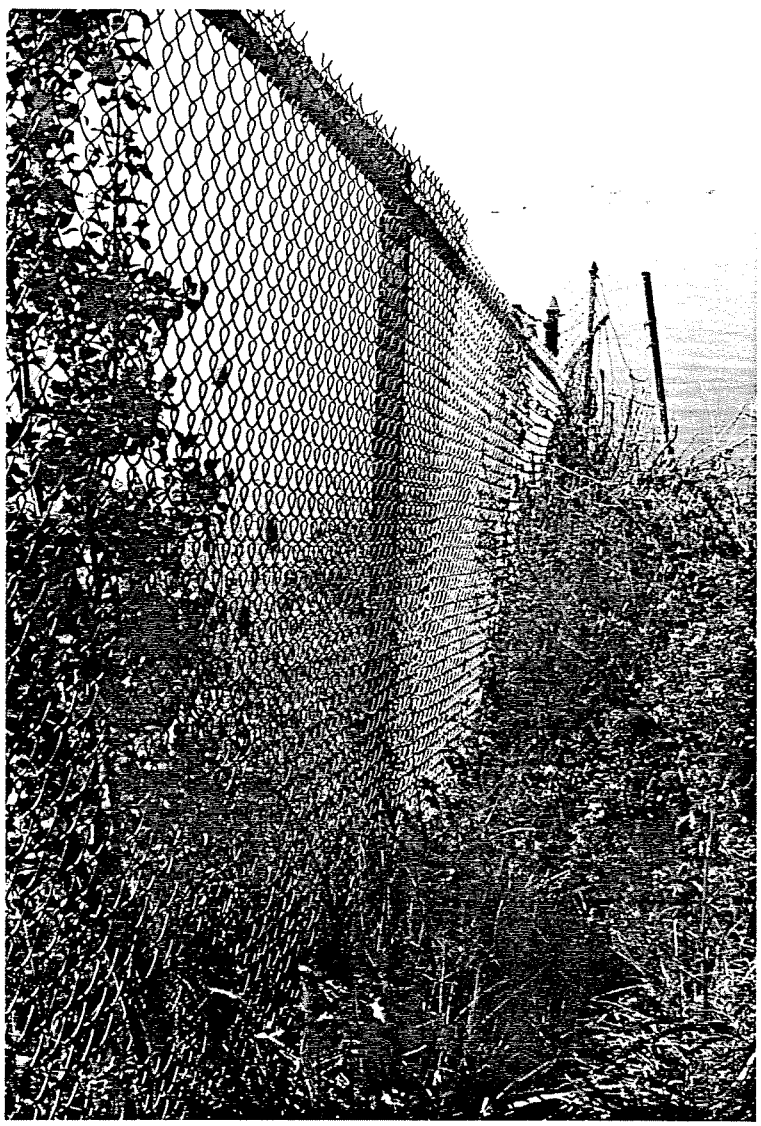


E 5. THE FENCED-OFF BASEBALL DIAMOND, N-E OF SITE, NOW ABANDONED.

E 6. LOOKING ON CLOSED BASEBALL DIAMOND, FROM HIGHWAY.

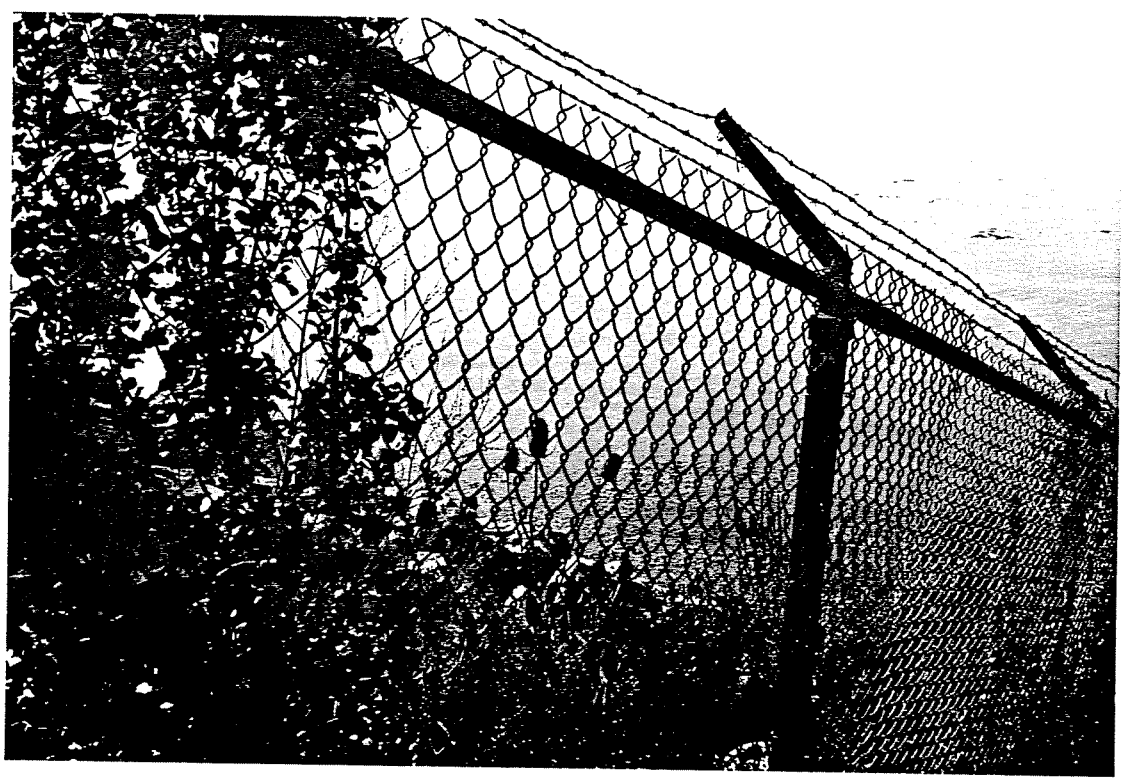
E6a. RESTRICTED AREA, N-E OF SITE.

E7. EASTERN BOUNDARY FENCE, LOOKING ON 102ND ST. LANDFILL SITE.

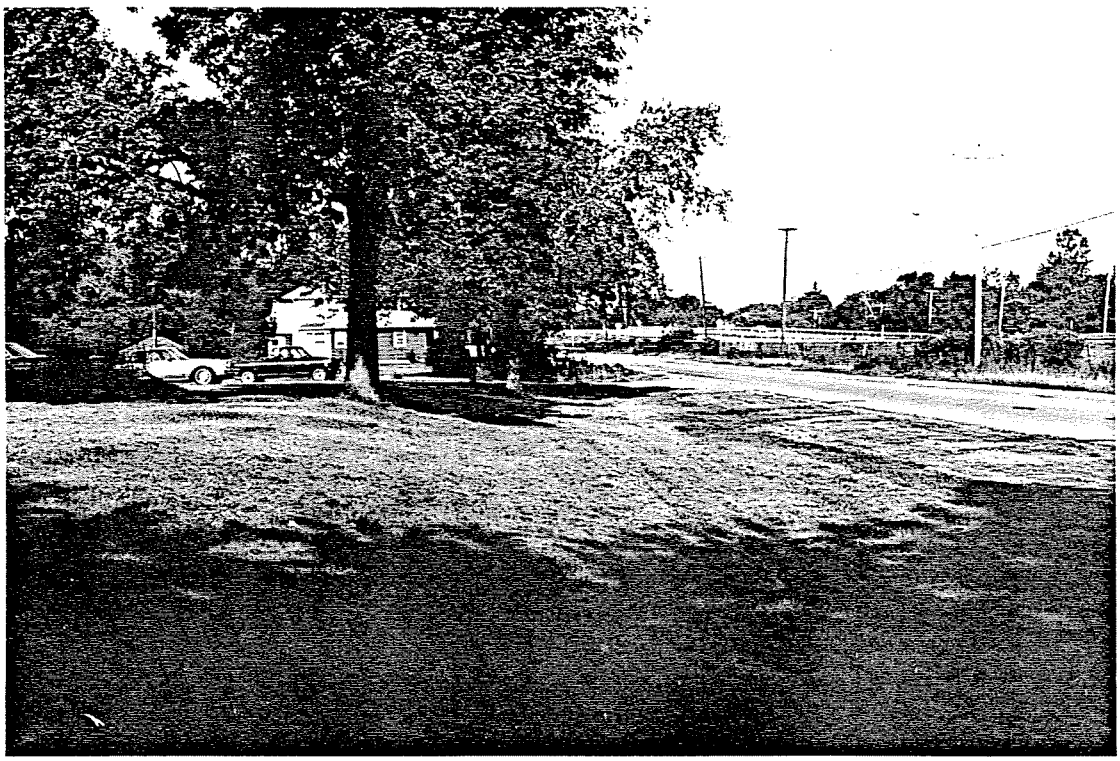


E 8. RIVER'S EDGE ON EASTERN BOUNDARY FENCE.

E 9. RIVER BANK ON 102 ND STREET LANDFILL SITE.



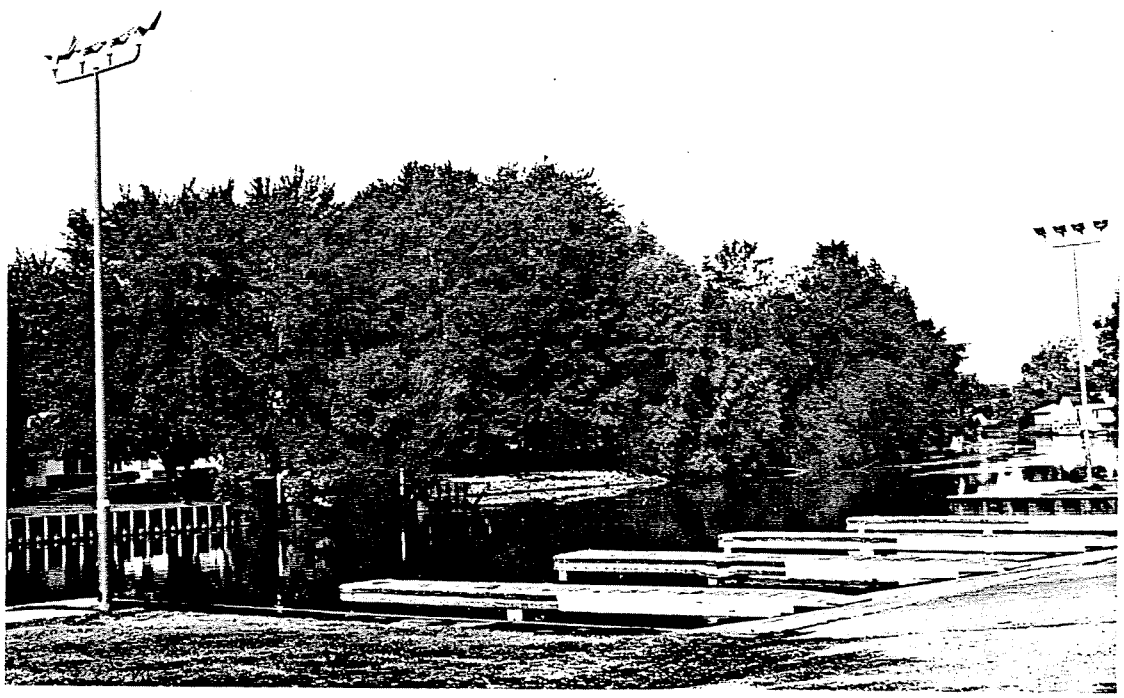
E 10. ALGAL GROWTH ON NIAGARA RIVER, ADJACENT TO S-E CORNER OF SITE.



E 11. LOOKING ON BUFFALO AVE., HIGHWAY RUNNING NORTH OF SITE.

E 12. LOOKING ON LITTLE NIAGARA RIVER, FROM N-W CORNER OF SITE.

E 13. BOAT PIERS ON LITTLE NIAGARA RIVER.



E 14. FLOOD-LIGHTS ON ABOVE BOAT PIERS.

Appendix A.1.m

App. A.1.m.

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, New York 12237

David Axelrod, M.D.
Commissioner

August 19, 1987

Rosa McDaniel
LeRoy Callender, P.C.
675 Delaware Avenue
Buffalo, NY 14202

Dear Ms. McDaniel:

RE: 87-897

Your request of July 22, 1987 to Dr. Blackwell, Health Director of the Buffalo Regional Office concerning the 102nd Street landfill in Niagara Falls has been reviewed by Department staff to determine if we have any responsive documents. Staff also discussed the request with Mr. Fuchs, the DEC project engineer in charge of the 102nd Street remedial investigation.

DEC is the lead State agency for the 102nd Street program and as a result all documents and data on file in the Health Department have been received from DEC.

Mr. Fuchs has advised that copies of the requested documents have been sent to Mr. Marsden Chen, DEC, Albany. Mr. Chen is in charge of the program for which the FOIL request was initiated. There are no documents in the Department not duplicative of those provided by Mr. Fuchs.

Sincerely,

Donald Macdonald
Records Access Officer

DM/rc/3619K

Appendix A.1.n

App.A.I.n

New York State Department of Environmental Conservation
Wildlife Resources Center
Delmar, NY 12054-9767

Thomas C. Jorling
Commissioner

September 30, 1987

Mr. Sirous H. Nabavi
Le Roy Callender, PC
236 West 26th Street
New York, NY 10001

Dear Mr. Nabavi:

We have reviewed the Significant Habitat Program and the Natural Heritage Program files with respect to the inactive hazardous waste sites at Griffon Park, Niagara Falls, NY.

We did not identify any potential impacts on endangered, threatened, or special concern wildlife species, rare plant, animal or natural community occurrences, or other significant habitats.

The absence of data does not necessarily mean that rare or endangered elements, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates the presence of these. Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of species, habitats or communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

If this proposed project is still active one year from now we recommend that you contact us again so that we can update this response.

If we can be of further assistance please do not hesitate to contact us.

Sincerely,

Lawrence Brown

Lawrence P. Brown
Supervising Wildlife Biologist
Significant Habitat Unit

cc: J. Snider

New York Natural Heritage Program is supported in part by The Nature Conservancy

Appendix A.1.o

United States
Department of
Agriculture

Soil
Conservation
Service , 4487 Lake Avenue, Lockport, NY 14094

September 30, 1987

LeRoy Callender PC
Mr. Sirous H. Nabavi, P.E.
675 Delaware Avenue
Buffalo, NY 14202

Dear Mr. Nabavi:

This letter is in response to your inquiry of September 25, 1987, requesting soil conservation information in and surrounding Griffon Park.

To my knowledge there are no soil conservation activities in the area save those consistant with park management.

As you can see the detailed soil survey ends east of Griffon Park. However, from looking at the soil survey one could assume that the soil in the Griffon Park and land pit site is Canandaiguia silt loam IIIw-3. Other possibilities are: Canandaiguia silty clay laom IIIw-3 and Madalin silt loam IVw-1.

Enclosed are maps and a description of Canandaiguia silt loam. Also provided for you is a Niagara County Soil Survey.

If I can be of help please telephone or write.

Sincerely,

Ed Oliver
District Conservationist

Enclosures

EO:sb

ACTION/ROUTING
ATTENTION
1. Sr
2.
3.
4.
5. 86-279

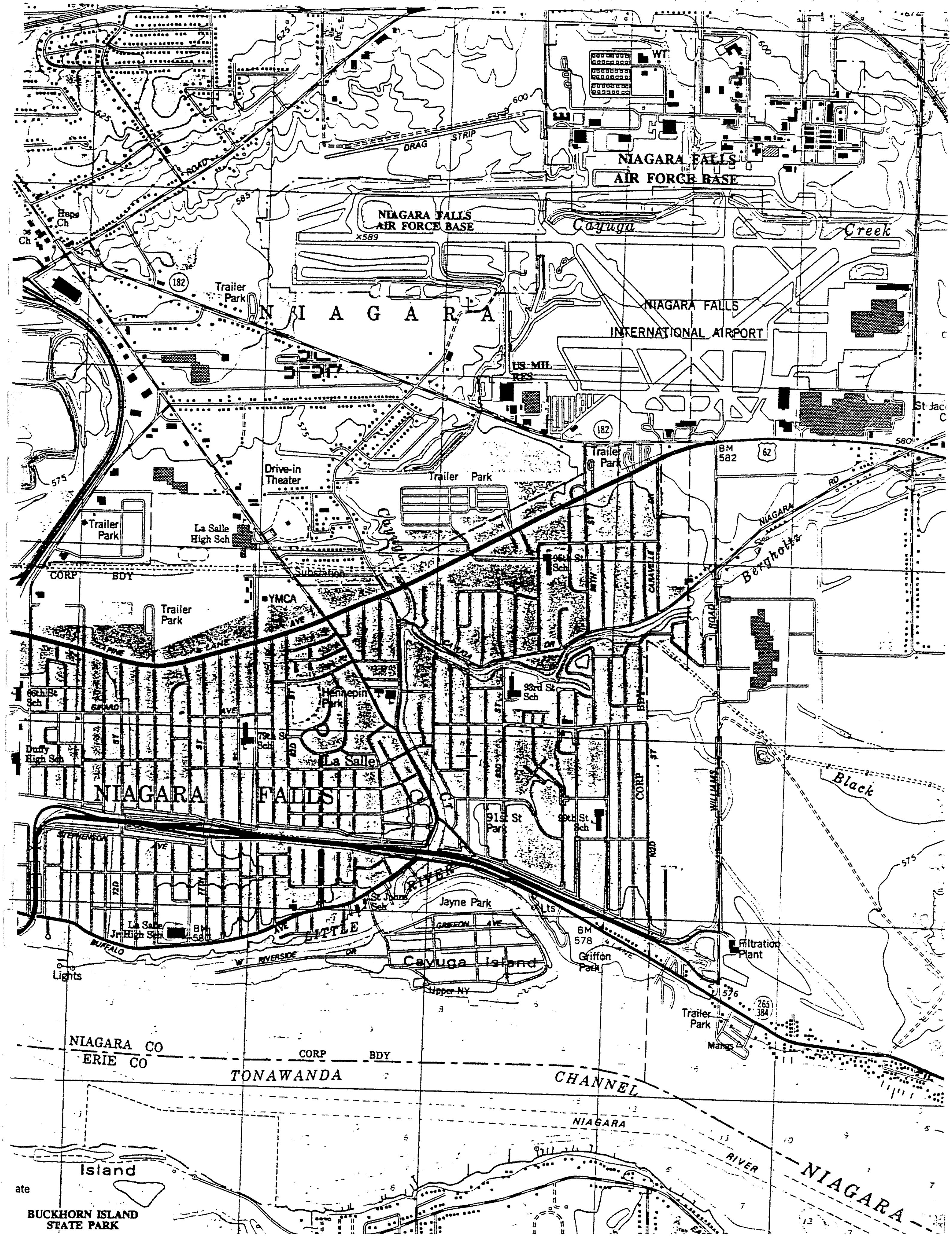
RECEIVED
OCT 1987
LEROY CALLENDER/P.C.

Ca - Canandaigua silt loam - IIIw-3
A deep, nearly level, poorly to very poorly drained, medium to high lime soil formed in lake sediments dominated by silt. Unless drained, the available water capacity is moderate to low. Permeability is moderate.

Cb - Canandaigua silt clay loam - IIIw-3
A deep, nearly level, poorly to very poorly drained, medium to high lime soil formed in fine silty lake sediments and underlaid by sandy lake deposits. Unless drained, the available water capacity is moderate to low. Permeability is moderate or moderately slow to about 35 inches and variable below 35 inches.

Ma - Madalin silt loam - IVw-1
A deep, nearly level, poorly to very poorly drained, high lime soil formed in grayish or olive colored, clayey lake sediments. The available water capacity is moderate. Permeability is moderate to about 6 inches and generally slow or very slow below 6 inches.

Appendix A.1.p


NIAGARA FALLS
AIR FORCE BASE
NIAGARA FALLS
AIR FORCE BASE
Cayuga
Creek
DRAG STRIP
ROAD
Hope Ch
Trailer Park
N I A G A R A
NIAGARA FALLS
INTERNATIONAL AIRPORT
US MIL RES
Drive-in Theater
Trailer Park
La Salle High Sch
Trailer Park
CORP BDY
Substation
YMCA
Trailer Park
PINE
AVE
Bergholtz
NIAGARA
RD
66th St Sch
Duffy High Sch
79th St Sch
Hennepin Park
La Salle
NIAGARA FALLS
91st St Park
93rd St Sch
96th St Sch
99th St Sch
CORP
ROAD
WILLIAMS
Black
STEPHENSON AVE
St Johns Sch
RIVER
Jayne Park
LITTLE
La Salle Jr High Sch
BUFFALO
W RIVERSIDE DR
Cayuga Island
GRIFFON AVE
Griffon Park
Lights
Upper NY
Filtration Plant
Trailer Park
NIAGARA CO
ERIE CO
CORP BDY
TONAWANDA
CHANNEL
NIAGARA
RIVER
NIAGARA
Island
BUCKHORN ISLAND STATE PARK