932016

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PRELIMINARY SITE ASSESSMENT

Great Lakes Carbon
City of Niagara Falls

Site No. 932016
Niagara County

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, Jr., *Director*

By:

E.C. JORDAN CO.

Portland, Maine

March 1991

NYSDEC CONTRACT NO. D002472

NYSDEC WORK ASSIGNMENT NO. D002472-6

E.C. JORDAN CO.

FINAL REPORT

TASK 1: DATA RECORDS SEARCH AND ASSESSMENT
PRELIMINARY SITE ASSESSMENT

GREAT LAKES CARBON
SITE NO. 932016
NIAGARA COUNTY

MARCH 1991

Submitted by:

Elizabeth A. Ryan
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Approved by:

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E.C. Jordan Co.

NOTICE

This Preliminary Site Assessment report about the Great Lakes Carbon Site (Site No. 932016), located in Niagara County, New York was prepared expressly for the New York State Department of Environmental Conservation (NYSDEC) under the Superfund Standby Contract (No. D002472, Work Assignment No. D002472-6). The purpose of this report is to provide information necessary for NYSDEC to reclassify the site according to the Classes 2, 3, and Delist categories described in Section 2.0 of this report. The conclusions and recommendations in this report represent E.C. Jordan's professional judgment and opinion based on present, generally accepted engineering practices for conducting preliminary site characterizations and assessments. Conclusions in this report are based on records reviews, interviews, and site walkover performed by Jordan personnel. The health-based regulatory standards discussed in this report may change in the future. Levels of environmental contamination that are "acceptable" by current standards may not be so in the future.

Information contained in this report may not be suitable for any other use without adaptation for the specific purpose intended. Any such reuse of or reliance on the information, assessments, or conclusions in this report without adaptation will be at the sole risk and liability of the party undertaking the reuse.

JHG/NYSDEC/70B

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1.0 EXECUTIVE SUMMARY

The Great Lakes Carbon (GLC) Site is a 7-acre landfill within the GLC manufacturing facility located at 6200 Niagara Falls Boulevard, City of Niagara Falls, New York. (Figure 1). GLC manufactures carbon and graphite products. The site is currently used to store scrap wood and metal, cracked carbon shapes, and finished products. GLC has owned the property since 1939 and from 1939 to 1966 disposed of industrial wastes on the site. Wastes generated since 1966 have been disposed off-site through Modern Disposal Services or recycled by GLC. Waste materials disposed in the landfill include construction debris, coal dust, carbon graphite, solid pitch mold stock wastes, electrodes, refractory sand, and wood. Most of the landfill is uncovered except for the southern slope which has been graded and vegetated with grass. There is no synthetic or clay liner under the landfill. There is an estimated 79,000 cubic yards of waste buried at the site (NUS Corporation, 1985). It is not known if coal tar, which is used as a binder, was disposed in the landfill prior to 1966.

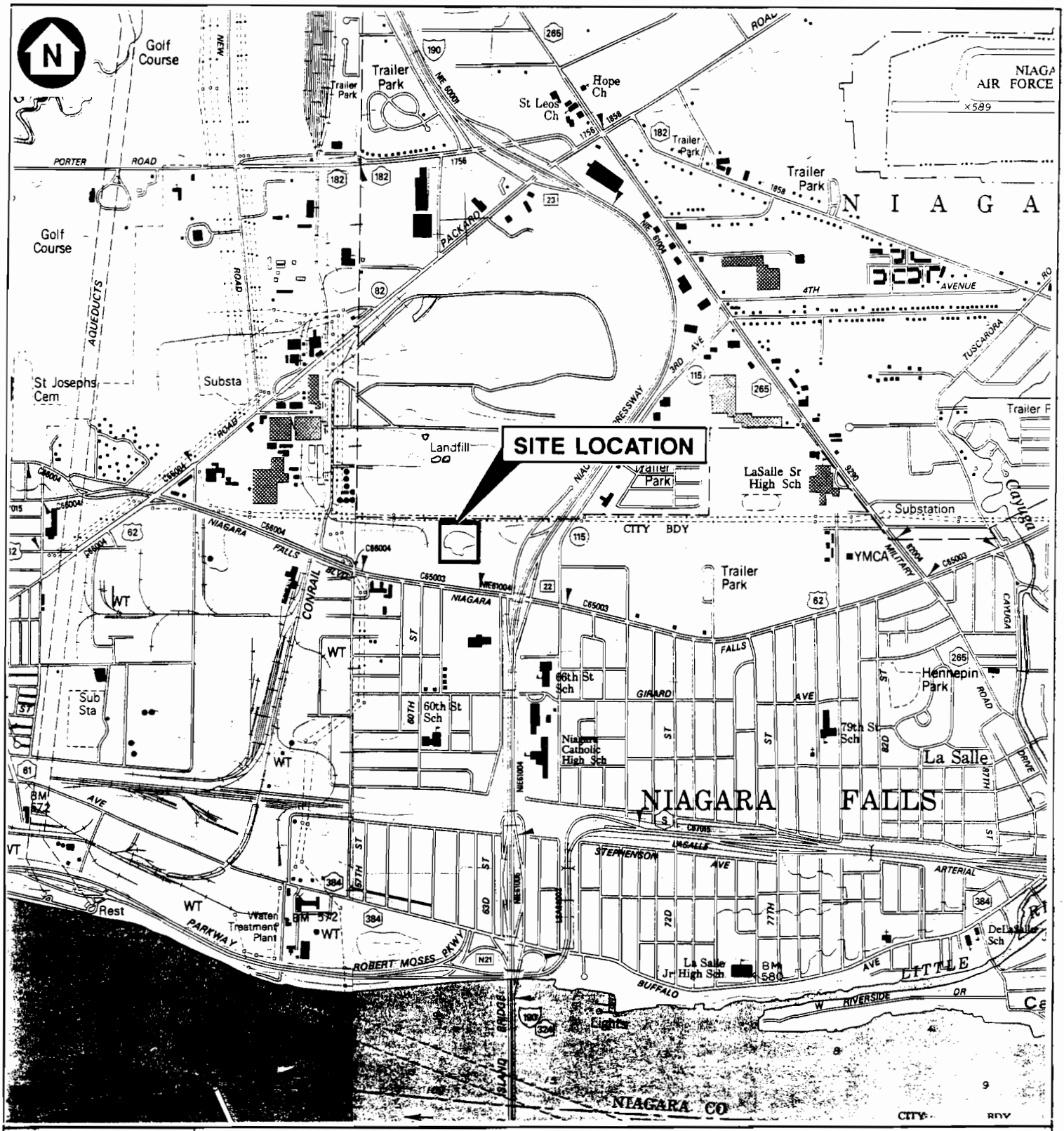
PCB capacitors and transformers were stored on-site. However, the liquids were drained, drummed, and shipped and disposed off-site by SCA Chemicals (Margolis, November 26, 1985). There are no capacitors currently on-site. Five transformers are stored on-site, however, three will be removed and the others will be used as spares.

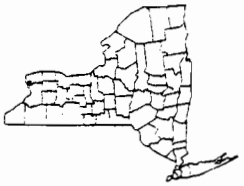
E.C. Jordan Co. (Jordan) did not identify records documenting hazardous waste disposal at the GLC landfill. Analysis of soil, sediment, and surface water samples collected by the U.S. Geologic Survey (USGS) and the NUS Corporation detected the presence of phenols, volatile organic compounds, polynuclear aromatic hydrocarbons (PAHs), iron, magnesium, chromium, and semi-volatile organic compounds. Since GLC is located in a heavily industrialized area, it is not known if these contaminants are attributable to the landfill and/or off-site sources. There is no background soil and sediment data available for the site.

Based on the available information, Jordan cannot recommend changing the 2a classification of the GLC Site on the New York State Registry of Inactive Hazardous Waste Disposal Sites. To develop data to confirm or deny hazardous waste disposal, Preliminary Site Assessment (PSA) Task 3 activities should be initiated. Jordan recommends the installation of a groundwater monitoring well immediately adjacent to the southern boundary of the landfill. Groundwater should be sampled from this well and analyzed for U.S. Environmental Protection Agency (USEPA) Target Compound List (TCL) of organic and inorganic compounds and polychlorinated biphenyls (PCBs). These data will identify hazardous constituents that may be present in the landfill. In

addition, these data can be compared to typical municipal landfill leachate composition to further assess the possibility of hazardous waste disposal.

If hazardous waste disposal is documented based on PSA Task 3 activities, Jordan recommends PSA Task 4 activities be initiated. Jordan recommends the installation of two upgradient monitoring wells along the northern border of the landfill and two additional downgradient monitoring wells immediately adjacent to the southern slope of the landfill. Since groundwater is expected to flow north to south, these wells will detect potential groundwater contamination from the GLC landfill. Groundwater data will be compared to New York State Ambient Groundwater Standards to determine if a contravention of standards exist. These data will also be used to determine if there is a significant threat to public health or the environment from past activities at this site.





SOURCE: N.Y.S. DEPARTMENT OF TRANSPORATION, NIAGARA FALLS AND TONAWANDA WEST QUADRANGLES DATED 1989, 7.5 MINUTE SERIES

SITE NO: 932016
LOCATION: CITY OF NIAGARA FALLS
NIAGARA COUNTY

SCALE IN FEET

0 2000 4000

FIGURE 1
SITE LOCATION MAP
GREAT LAKES CARBON SITE
PRELIMINARY SITE ASSESSMENT
NEW YORK STATE DEC

ECJORDANCO

6291-

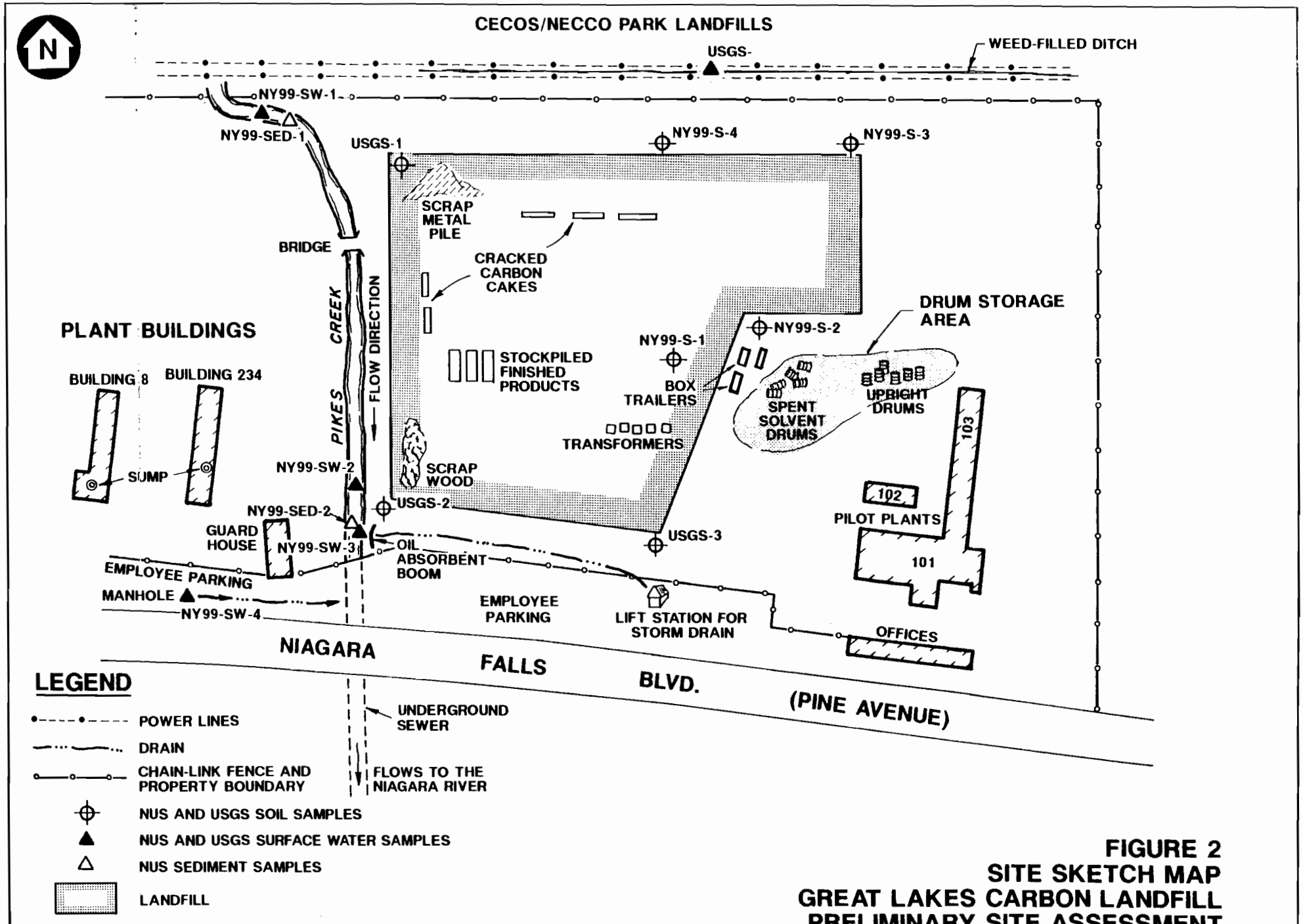


FIGURE 2
SITE SKETCH MAP
GREAT LAKES CARBON LANDFILL
PRELIMINARY SITE ASSESSMENT
NEW YORK STATE DEC

E.C.JORDAN CO.

6291-30

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION

Copy—REGION
Copy—DEE
Copy—DOH
Copy—PREPARER

ADDITIONS/CHANGES TO REGISTRY OF INACTIVE HAZARDOUS WASTE DISPOSAL SITES

1. SITE NAME	2. SITE NO.	3. TOWN	4. COUNTY
Great Lakes Carbon	932016	City of Niagara Falls	Niagara

5. REGION	6. CLASSIFICATION	7. ACTIVITY
9	Current ____ /Proposed XX	☐ Add ☐ Reclassify ☐ Delist ☒ Modify ____

8a. DESCRIBE LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location).

The site is located at 6200 Niagara Falls Boulevard in the City of Niagara Falls, New York

b. Quadrangle Townowanda West c. Site Latitude 43°05'30" Longitude 78°59'38" d. Tax Map Number ____

9a BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)

The site is located in an industrial area. The landfill is 5 to 7 feet above original topography. Surface topography is relatively flat and drains towards Pikes Creek on the western border of the landfill.

b. Area 7 acres c. EPA ID Number D000218248 d. PA/SI ☒ Yes ☐ No

e. Completed: ☒ Phase I ☐ Phase II ☐ PSA ☐ Sampling

10. BRIEFLY LIST THE TYPE AND QUANTITY OF THE HAZARDOUS WASTE AND THE DATES THAT IT WAS DISPOSED OF AT THIS SITE

No hazardous waste was documented as being disposed of at this site.

11a. SUMMARIZED SAMPLING DATA ATTACHED

☐ Air ☐ Groundwater ☐ Surface Water ☐ Soil ☐ Waste ☐ EP Tox ☐ TCLP.

b. List contravened parameters and values

No sampling was performed for this Preliminary Site Assessment Task 1.

12. SITE IMPACT DATA

a. Nearest surface water: Distance 10 ft. Direction west Classification ____

b. Nearest groundwater: Depth 3 ft. Flow Direction south ☐ Sole Source ☐ Primary ☐ Principal

c. Nearest water supply: Distance 2.5 miles Direction southeast Active ☒ Yes ☐ No

d. Nearest building: Distance 100 ft. Direction west Use Manufacture

e. Crops or livestock on site? ☐ Yes ☒ No

f. Exposed hazardous waste? ☐ Yes ☒ No

g. Controlled site access? ☒ Yes ☐ No

h. Documented fish or wildlife mortality? ☐ Yes ☒ No

i. Impact on special status fish or wildlife resource? ☐ Yes ☒ No

j. Within a State Economic Development Zone? ☐ Yes ☒ No

k. For Class 2a: Code ____, Health Model Score ____

l. For Class 2: Priority Category ____

m. HRS Score ____

n. Significant Threat ☐ Yes ____ ☒ No ☐ Unknown

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Great Lakes Carbon Corp.	6200 Niagara Falls Blvd.	(716) 236-2888

16. PREPARER

Roger Bondeson — Environmental Scientist, E.C. Jordan Co.
Name, Title and Organization

Date — Signature

17. APPROVED

Name, Title and Organization

Date — Signature

2.0 PURPOSE

The purpose of a PSA is to provide the information necessary for NYSDEC to reclassify the site according to the following classifications:

Class 2 - Hazardous waste sites presenting a significant threat to the public health or the environment.

Class 3 - Hazardous waste sites not presenting a significant threat to the public health or the environment.

Delist - Sites where hazardous waste disposal is not documented.

PSA Task 1, Data Records Search and Assessment, was conducted at the GLC Site, Site No. 932016, in Niagara Falls, New York by E.C. Jordan Co. (Jordan) under the NYSDEC Superfund Standby Contract (Contract No. D002472, Work Assignment No. D002472-6).

The GLC site is a suspected inactive hazardous waste site recognized by NYSDEC. This site is currently classified as Class 2a because there is insufficient information to document hazardous waste disposal and/or assess the significance of potential risks to public health or the environment.

3.0 SCOPE OF WORK

PSA Task 1 consists of two data gathering activities: a file review/records search and a site walkover. Specific activities performed for the GLC Site under these tasks are described in the following subsections.

3.1 File Reviews

The Jordan project team began collecting information on the GLC Site at the NYSDEC Central Office in Albany, New York during the week of June 25, 1990. In addition, Jordan personnel reviewed files and obtained site information at the New York State Department of Health (NYSDOH), the USGS, the New York State Geological Survey, U.S. Fish and Wildlife Service, and the New York State Department of Transportation.

On July 16, 1990 the Jordan team reviewed files at NYSDEC's Region 9 Office in Buffalo, New York. Files on the GLC Site were provided by Yavuz Erk, Environmental Engineer II, for NYSDEC Region 9. On July 17, 1990, Jordan personnel reviewed files at the Buffalo office of NYSDOH. On July 20, 1990, the Jordan team reviewed files at the Niagara County Health Department (NCHD) and conducted an interview with Paul Dicky, Public Health Engineer. Jordan personnel visited the Niagara County Soil and Water Conservation District on July 24, 1990 to obtain copies of aerial photographs. On July 25, 1990 the Jordan team visited the NYSDEC Region 9 Bureau of Wildlife to identify wetlands and critical habitat areas in the vicinity of the site.

The following individuals were interviewed:

Paul Dicky
Public Health Engineer
Niagara County Health Department
10th and East Falls Street
Niagara Falls, New York
(716) 284-3128

Yavuz Erk
Environmental Engineer II
New York State Department of
Environmental Conservation
Region 9
600 Delaware Avenue
Buffalo, New York 14414
(716) 847-4585

3.2 Site Walkover

On July 24, 1990 a site walkover was conducted at the GLC Site. The following individuals attended the visit:

Name	Title	Affiliation
Roger Bondeson	Environmental Scientist	E.C. Jordan Co.
Cathy Lanois	Environmental Scientist	E.C. Jordan Co.
Sri Maddineni	Environmental Engineer II	NYSDEC Central Office
Yavuz Erk	Environmental Engineer II	NYSDEC Region 9
Mike Reele, P.E.	Plant Engineer	Great Lakes Carbon Corporation

The site walkover began at 8:00 a.m. Before entering the site the field team calibrated a photoionization detector (PID) and explosimeter/oxygen meter to monitor ambient air quality during the inspection. The resulting data were used to confirm that worker health was protected and safety procedures could be instituted if concentrations were detected above background levels. No readings above background were detected in the ambient air.

A sketch of the site landfill is illustrated in Figure 2. The Jordan team walked along Pikes Creek that flows along the western edge of the landfill area. An oil absorbent boom, in front of a stormwater outfall, was observed in the creek. This boom reportedly is used to trap oils from surface run-off during storm events and in the event of an oil spill (Figure 2). The water in Pikes Creek had a milky appearance.

The Jordan team entered the landfill area from the small bridge located on the northwestern edge of the site. A pile of scrap metal containing metal molds, equipment parts, and empty 55-gallon containers was observed. The empty containers reportedly held raw product materials such as carbon fines. East and south of the metal pile were numerous pieces of carbon/graphite material that was cracked or defective. These items are reportedly reused and recycled by GLC. Much of the surface area of the landfill was graded and compacted but uncovered. Residual carbon/graphite fines were evident on the ground surface in many areas of the site. Jordan did not observe leachate outbreaks along the slopes of the landfill.

Finished graphite products, a scrap wood pile, and five transformers were on the southern portion of the landfill. Three of these transformers are reportedly to be removed off-site and the others kept on-site as spares (Reele, 1990).

A drum storage area is east of the landfill. Several containers, located next to parked box trailers, are stored directly on the ground. Most of the containers appeared to be empty, although some contained rainwater or residual liquids. Some of these containers

were labeled "State Chemical". According to Mr. Reele, these containers originally held cleaning solvents used in the machine shop (located in the Pilot Plant). PID meter readings inside one of these containers exceeded 1,000 parts per million (ppm) indicating the presence of volatile organic compounds. The cleaning solvents are reportedly used several times before being disposed of by the Frontier Chemical Company (Reele, 1990). Other solvents used in the main manufacturing complex are reportedly collected and removed by Safety Kleen.

Several upright 55-gallon containers were also in the container storage area. These containers were uncovered and were observed to contain dust from dust collectors and lathe turnings from pilot plant operations. These materials are reportedly dumped into trash hoppers and removed by Modern Disposal Services.

The Jordan team toured portions of Buildings 234 and 8 located in the main manufacturing complex to observe sumps that collect and divert water from furnaces. The sumps and connecting drains are used to divert moisture and water away from the furnaces to prevent moisture damage in the carbon manufacturing process. Sump water is reportedly discharged to Pikes Creek. The sump in Building 234 is approximately 20 feet deep and reportedly contains groundwater from bedrock. PID meter reading over this sump were less than 1 ppm. The sump in Building 8 is shallow and contains groundwater from the soils. The PID meter reading from the sump in this building was 15 ppm.

Photographs of the landfill site were taken to be included in the site file. The site inspection was completed at 10:30 a.m.

4.0 SITE ASSESSMENT

The following subsections describe the information gained through the records search, interviews, and site walkover of the GLC Site.

4.1 Site History

The Great Lakes Carbon Corporation has owned and operated the GLC plant and landfill site since 1939. The GLC plant manufactures carbon based products such as carbon cathodes, graphite electrodes, granular carbon, and carbon graphite shapes for use as metal alloys.

Industrial wastes generated from the plant were disposed of in the 7-acre landfill area from 1939 to 1966. These wastes include coal dust, wood, refractory sand, carbon graphite, concrete, electrodes, and solid pitch mold stock wastes. It is estimated that 79,000 cubic yards of material was disposed at the site (NUS Corporation, 1985). The site is currently used to store defective carbon shapes, scrap metal and wood, five transformers, feed stock materials and finished products. The landfill is not capped and the surface has been graded and compacted. The southern slope of the landfill has been graded and is vegetated with grass.

The 7-acre landfill was also used to store PCB capacitors, however, these capacitors have been removed from the landfill site (E.C. Jordan site visit, July 24, 1990). The PCB contaminated liquids were reportedly drained from the capacitors, drummed and transported by SCA Chemicals to the Chem-trol Site in Lewiston, New York (Engineering Science, 1989) (Rosene, 1978).

From 1966 to the present, wastes have either been recycled by GLC or transported off-site to the Modern Landfill. Cracked carbon shapes, carbon dusts, and carbon sweepings are recycled by GLC and baghouse dusts, crushed stone, refractory brick, garbage, and solid pitch are disposed of in the Modern Landfill.

The USGS and the NUS Corporation have conducted field investigations at the site. In 1982 the USGS collected soil and surface water samples at the site, and in 1985 the NUS Corporation collected soil, surface water, and sediment samples at the site. The results of these sampling activities are discussed in the Contamination Assessment, subsection 4.4.

4.2 Site Topography

The GLC property consists of a 36-acre carbon/graphite manufacturing plant located at 6200 Niagara Falls Boulevard, Niagara Falls, New York. There is a 7-acre inactive landfill located between Buildings 103 and 234. The landfill is five to seven feet above the natural surface of the site. A small creek, referred to as Pikes Creek, flows north to south across the GLC

property and abuts the western edge of the landfill area. The creek receives runoff from the GLC landfill and from the CECOS landfill located north of the GLC property. The creek also receives cooling water, boiler blowdown water, sump water and storm water from the manufacturing process. These discharges are regulated through a NYSDEC State Pollutant Discharge Elimination System (SPDES) Permit, Number NY0000906.

The GLC property is bordered on the north by a Niagara Mohawk Power Corporation right-of-way and the CECOS Landfill. The southern property line is bordered by Niagara Falls Boulevard and other industrial commercial properties. Industrial/commercial properties also abut the eastern and western borders of the GLC property. Surface drainage generally flows south towards the Niagara River or is directed to storm drains. These storm drains discharge to Pikes Creek which is connected to the city storm water sewer lines which also drains into the Niagara River.

4.3 Site Hydrology

The following paragraphs describe what is known about the hydrologic setting at the GLC landfill site.

The landfill contains carbon particles refractory sand and construction debris to an approximate depth of 5 to 7 feet. The soils on the GLC Site consist of Canadaigua silt loam (Soil Conservation Service, 1973). The soil profile based on borings drilled by the USGS in 1982 is as follows:

0 to 4ft	- Topsoil and Carbon Dust
4 to 6.5ft	- Clay
6.5 to 11.5 ft	- Clay

Bedrock beneath the site is expected to be Lockport Dolomite and is estimated to be 25 to 40 feet below surface (Engineering Science, 1989). The bedrock is expected to be overlain with glacial till and clay materials. Permeability of the soils is expected to be between 10^{-5} to 10^{-7} centimeters per second (Engineering Science, 1989). Seasonal perched water tables exist at depths of 2 to 4 feet (USEPA, 1985). Groundwater flow direction is unknown but expected to be north to south.

The nearest drinking water well is greater than three miles from the site. Drinking water for the properties surrounding the GLC site is provided by the City of Niagara Falls public water supply. The intakes for the public water system are located two miles downstream of the GLC Site. Olin Chemical, located on Buffalo Avenue and southwest of the GLC Site, uses groundwater for non-contact cooling water (Engineering Science, 1989 and Hopkins, May 8, 1986).

4.4 Contamination Assessment

The 7-acre landfill site is not capped, lined, and does not have leachate or runoff collection systems. The landfill was used for the disposal of coal dust, carbon fines, wood, refractory sands, concrete, solid pitch mold stock, electrodes, and carbon/graphite shapes. The site was also used to store PCB capacitors. Oils from these capacitors were drained, drummed, and shipped off-site by SCA Chemicals (Rosene, 1978). It is estimated that 79,000 cubic yards of material were disposed of in the landfill (NUS Corporation, 1985).

In 1982 the USGS collected 3 soil samples and one surface water sample. The samples were analyzed for the four priority pollutants; naphthalene, anthracene, fluoranthene and pyrene and several non-priority pollutants. Naphthalene was the only priority pollutant detected above analytical detection levels and was found at a concentrations of 252 microgram per kilogram (µg/kg) (USEPA, 1985). Non-priority pollutants such as p-1,1-dimethylethyl-phenol and benzoic acid were also detected at 5 µg/kg and 21 µg/kg, respectively. Contaminant concentrations in the surface water were not above USEPA criterion for maximum permissible concentrations in drinking water (USEPA, 1985).

In June 1985, NUS Corporation collected four soil, two sediment, and four surface water samples from the site. Sample locations are shown in Figure 2. All samples were analyzed for priority pollutants.

Surface water samples NY99-SW1 and NY99-SW2 contained phenols at 9 micrograms per liter (µg/L) and 61 µg/L, barium at 1,800 µg/L and 298 µg/L, and chromium at 53 µg/L and 33 µg/L (NUS Corporation, 1985). Table 1 summarizes surface water sample analysis results.

Surface water samples collected from the furnace sumps did not detect PAHs at levels above the analytical laboratory quantitation limits (sample site NY99-SW5). Sample analysis of NY99-SW4 did not detect hazardous organic compounds (NUS Corporation, 1985).

Analysis of sediment samples detected a number of volatile organic compounds (VOCs), PAHs, and inorganics (see Table 2). Those compounds detected at higher concentrations in the downstream sample, as compared to the upstream sample, included iron, magnesium and fluoranthene. Fluoranthene, the compound with the highest concentration of all constituents analyzed for, was detected at 60,000 µg/kg. Compounds detected at higher concentrations in the upstream sample, as compared to the downstream sample, included barium, chromium, lead, manganese mercury and zinc.

Soil samples were collected from four locations at the GLC Site. Analysis of these samples revealed the presence of several semi-volatile compounds (SVOC) with concentrations as high as 180,000 µg/kg. Depth of these soil samples ranged from 1 to 8 inches. Metals including lead, magnesium, manganese, mercury, nickel and zinc were also detected at elevated concentrations. These data are summarized in Table 3.

Summary sampling results for SPDES regulated discharges into Pikes Creek revealed that no contaminants were detected above quantifiable limits. These samples were analyzed for methylene chloride and volatile priority pollutants. SPDES regulated discharges includes waters from storm drains, boiler blow down, non-contact cooling water and sump waters from the main plant (NYSDEC, Division of Water, 1988, 1989).

TABLE 1
SUMMARY OF SELECTED SURFACE WATER SAMPLING RESULTS
GREAT LAKES CARBON SITE
PRELIMINARY SITE ASSESSMENT

Monitoring Parameter	Monitoring Locations SW-1 (upstream)	SW-2 (downstream)	SW-3	SW-4	NYS Surface Water Standards
Phenol	9	61	---	---	1.0
Barium	1,800	298	---	---	1,000
Calcium	390,000	223,000	62,200	37,700	---
Chromium	53	33	---	---	50
Iron	1,040	522	103	273	300
Magnesium	12,200	10,900	16,700	8,630	35,000
Manganese	128	51	105	26	300
Mercury	1.4	0.33	---	---	2.0
Zinc	30	23	26	201	300

Source: NUS Corporation, Presentation of Analytical Data from Great Lakes Carbon Corporation, Niagara Falls, New York, 9/27/85.

Analytical results presented in micrograms/liter (ug/l).

TABLE 2
SUMMARY OF SELECTIVE STREAM SEDIMENT SAMPLING RESULTS
GREAT LAKES CARBON SITE
PRELIMINARY SITE ASSESSMENT

Monitoring Parameter	Monitoring Locations SED-1 (upstream)	SED-2 (downstream)
Acetone (ppb)	130*	210*
Carbondisulfide (ppb)	23	8.3
Phenanthrene (ppb)	1	39,000
Flouranthene (ppb)	1	60,000
Pyrene (ppb)	1	51,000
benzo(a) anthracene (ppb)	1	33,000
chrysene (ppb)	1	38,000
benzo(b) fluoranthene (ppb)	1	38,000
benzo(k) fluoranthene (ppb)	1	29,000
benzo(a) pyrene (ppb)	1	35,000
Barium (ppm)	6,160	---
Chromium (ppm)	161	47
Iron (ppm)	11,700	13,500
Lead (ppm)	57	35
Magnesium (ppm)	8,150	10,600
Manganese (ppm)	473	447
Mercury (ppm)	7.2	0.41
Zinc (ppm)	201	171

Source: NUS Corporation, Presentation of Analytical Data from Great Lakes Carbon Corporation, Niagara Falls, New York, 9/27/85.

Analytical results for organics are presented in ug/kg (ppb).

*Constituent detected in the laboratory blank as well as the sample.

1Compound present below specified detection limit.

Analytical results for metals are presented in mg/kg (ppm).

TABLE 3
SUMMARY OF SELECTIVE SOIL SAMPLING RESULTS
GREAT LAKES CARBON SITE
PRELIMINARY SITE ASSESSMENT

Monitoring Parameters	S1	S2	S3	S4
Methylene Chloride	---*	428	488	438
1,1,1-Trichloroethane	---	7.9	---	---
Acenaphthene			1,600	
Phenanthrene	81,000	100,000	7,300	45,000
Anthracene	27,000	34,400	2,300	---
Fluoranthene	150,000	170,000	18,000	73,000
Pyrene	140,000	140,000	14,000	65,000
Benzo(a) Anthracene	100,000	110,000	11,000	42,000
Chrysene	120,000	140,000	14,000	46,000
Benzo(b) Fluoranthene	110,000	180,000	24,000	44,000
Benzo(k) Fluoranthene	80,000	110,000	20,000	38,000
Benzo(a) Pyrene	95,000	140,000	15,000	47,000
Indeno (1,2,3-cd)pyrene	41,000	44,000	8,700	---
Benzo (ghi) Pyrene	43,000	45,000	9,000	25,000
Delta - BHC	5,200	---	---	---
Arsenic	6.1	---	---	6.6
Chromium	51	87	19	51
Iron	11,800	11,600	6,560	20,400
Lead	83	108	22	102
Magnesium	34,400	10,600	---	---
Manganese	3,130	1,730	227	370
Mercury	2	0.54	---	0.57
Nickel	32	57	30	30
Zinc	856	286	86	219

Source: NUS Corporation, Presentation of Analytical Data from Great Lakes Carbon Corporation, Niagara Falls, New York, 9/27/85.

*Analysis did not pass QA/QC requirements.

Analytical results for organic compounds are presented in ug/kg (ppb) and results for metals are presented in mg/kg (ppm).

5.0 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

5.1 Hazardous Waste Deposition

Information collected by Jordan did not confirm hazardous waste deposition at the GLC Landfill. Soil and water sample analyses by the USGS and the NUS Corporation indicate that hazardous materials such as PAHs, SVOC, and heavy metals are present in the soils and surface water near the landfill site. These samples were not analyzed for characteristics of Extraction Procedure toxicity, ignitability, corrosivity, or reactivity. The source or sources of these hazardous materials are not known and may be attributable to the site and/or off-site sources. Wastes reportedly disposed of at the site include coal dust, carbon fines, wood, refractory sands, concrete, solid pitch mold stock, electrodes, and carbon/graphite shapes.

5.2 Significant Threat Determination

The threat to human health and the environment from the GLC landfill appears to be minimal. The landfill is secured by a chain-link fence and guarded. The nearest drinking water well is greater than 3 miles from the site (Engineering Science, 1989). The nearest wetland is 1.1 miles northeast of the site. Although surface and groundwater flow is towards the Niagara River and the GLC Site is upgradient from public water intakes, the threat of contamination to public water from the sewer outfall or potentially contaminated groundwater is very unlikely. The public water intakes are located 3,000 feet offshore. The strong river current in this area makes it unlikely that contaminants would travel 3,000 feet across the river to the intakes (Hopkins, 1986).

Soil data collected by the USGS in 1982 detected the presence of naphthalene (252 μg/kg). The significance of these findings is unknown because there are no standards or guidelines for soil composition to which they could be compared. Furthermore, no background soil samples were collected.

A surface water sample collected by the USGS did not detect contaminants in concentrations above USEPA maximum permissible concentrations in drinking water (USEPA, 1985)

In June 1985, the NUS Corporation collected four soil, two sediment, and four surface water samples from the site. All samples were analyzed for priority pollutant compounds. Analysis of the samples revealed the presences of phenols, VOCs, SVOCs, PAHs, iron, magnesium, and chromium in elevated concentrations. It is not know if these contaminants are attributable to the GLC Landfill and/or off-site sources. Background soil samples were not collected and therefore it is not certain if sample analysis reveals background levels for industrial areas or if contaminants are significantly higher than background levels.

Summary sampling results for SPDES regulated discharges into Pikes Creek in 1988 and 1989 revealed that no contaminants were detected above quantifiable limits. These samples were analyzed for methylene chloride and volatile organic priority pollutant compounds. SPDES regulated discharges include waters from storm drains, boiler blow down, non contact cooling water and sump waters from the main plant (NYSDEC, Division of Water, 1988, 1989).

From 1939 to 1966, GLC disposed of wastes such as construction debris, coal dust, carbon graphite, solid pitch mold stock, electrodes, refractory sands, and wood. Since 1966 generated wastes have been disposed off-site or recycled by GLC. Currently the site is used to store scrap metal, wood, finished products, and cracked carbon cakes. The landfill is unlined, uncapped and does not have a leachate or runoff collection system. It is not known if coal tar, which is used as a binder in the manufacture of carbon products, was disposed of in the landfill prior to 1966.

5.3 Recommendations

Information collected by Jordan did not confirm or deny the presence of hazardous wastes at the GLC Site. The information reviewed by Jordan was also insufficient to recommend delisting or reclassification of the site. The threat to human health and the environment appears to be minimal due to the distance and location of private drinking water wells, public water intakes, and wetlands.

To develop data to confirm or deny hazardous waste disposal, PSA Task 3 activities should be initiated. Jordan recommends the installation of a groundwater monitoring well immediately adjacent to the southern boundary of the landfill. Groundwater sampled from this well would be analyzed for USEPA TCL for organic and inorganic compounds and PCBs. These data would also be compared to analytical results of typical municipal landfill leachate compositions to determine if hazardous disposal has occurred.

If hazardous waste disposal is indicated by PSA Task 3 activities, Task 4 activities should be initiated. Jordan recommends installing two upgradient monitoring wells along the northern border of the landfill and two additional monitoring wells immediately adjacent to the southern slope of the landfill. Since groundwater flow is expected to be from north to south, these wells should detect potential groundwater contamination from the GLC landfill.

Jordan believes the threat to human health and the environment from the GLC Landfill is minimal. The nearest wetland is 1.1 miles northeast of the site and the nearest drinking water well is greater than three miles from the site. Public water intakes are located 3,000 feet offshore on the Niagara River.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

GLC	Great Lakes Carbon
NCHD	Niagara County Health Department
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppm	parts per million
PSA	Preliminary Site Assessment
SPDES	State Pollution Discharge Elimination System
SVOC	semivolatile organic compounds
TCL	Target Compound List
µg/kg	microgram per kilogram
µg/L	microgram per liter
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geologic Survey
VOC	Volatile Organic Compounds

APPENDIX A

REFERENCES

REFERENCES

Engineering-Science, 1989. "Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation, Great Lakes Carbon, site Number 932016", Prepared for New York State Department of Environmental Conservation, Division of Solid and Hazardous Waste, January, 1989.

Hopkins, M., May 8, 1986. Niagara County Health Department, Interview with Engineering-Science for Phase I Investigation, May 8, 1986.

Hopkins, M., June 11, 1986. Niagara County Health Department, "Memorandum to Larry Clare", June 11, 1986.

Margolis, S., November 26, 1985. Department of Health and Human Services, Office of Health Assessment, Letter to W. Nelson, EPA Superfund Office, November 26, 1985.

New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Central Office, Albany, New York, Contact: Sri Maddineni.

New York State Department of Environmental Conservation, Region 9, Division of Solid and Hazardous Waste, 584 Delaware Avenue, Buffalo, New York, Contact: Yavuz Erk, P.E.

New York State Department of Environmental Conservation, Region 9, Bureau of Wildlife, 600 Delaware Avenue, Buffalo, New York.

New York State Department of Environmental Conservation, "SPDES Permit No. NY00009066", Division of Water, Region 9, 600 Delaware Avenue, Buffalo, New York.

New York State Department of Environmental Conservation, "SPDES Permit No. NY000 0906", Region 9, Division of Water, 600 Delaware Avenue, Buffalo, New York.

New York State Department of Health, Corning Tower, The Governor Nelson A. Rockefeller Empire State Plaza, Albany, New York.

New York State Department of Health, Regional Office, 584 Delaware Avenue, Buffalo, New York, Contact: Cameron O'Connor.

New York State Department of Transportation, 1989, Topographic Map, Tonawanda West Quadrangle.

Niagara County Health Department, 10th and East Falls Street, Niagara Falls, New York, Contact: Paul Dicky.

REFERENCES
(Continued)

Niagara County Soil and Water Conservation District, Farm and Home Center, 4487 Lake Avenue, Lockport, New York 14095, Contact: Richard Tillman.

Niagara Falls, Tax Assessor's Office, City Hall, Niagara Falls, New York.

NUS, 1985. NUS Corporation, "Presentation of Analytical Data From Great Lakes Carbon Corporation", Prepared for Environmental Services Division, U.S. Environmental Protection Agency, September 27, 1985.

Reele, Mike, Great Lakes Carbon Corporation, 6200 Niagara Falls Blvd, Niagara Falls, New York 14302, "E.C. Jordan Site Visit and Personal Interview", July 24, 1990.

Rosene, R.W., November 2, 1978. Great Lakes Carbon Corporation, Letter to P.J. Millock, Interagency Task Force on Hazardous Waste, November 2, 1978.

USEPA, 1985. "Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste Disposal Sites, 1985.

APPENDIX B

SITE INSPECTION REPORT
(USEPA FORM 2070-13)

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

EPA

I. IDENTIFICATION	
01 STATE: New York	01 SITE NUMBER: D000218248

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Great Lakes Carbon	5600 Niagara Falls Blvd.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST
Niagara Falls	New York	14302	Niagara	063	33

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
43° 05′ 30"._	078° 59′ 38"._	X A. PRIVATE _ B. FEDERAL _____ _ C. STATE _ D. COUNTY _ E. MUNICIPAL _ F. OTHER _____ _ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
7 / 24 / 90 (MONTH DAY YEAR)	_ ACTIVE X INACTIVE	1939 (BEGINNING YEAR) 1966 (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 X F. STATE CONTRACTOR E.C. Jordan Co. (Name of firm) _ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Roger L. Bondeson	Environmental Scientist	E.C. Jordan Co.	(207) 775-5401
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Cathy Lanois	Environmental Scientist	E.C. Jordan Co.	(207) 775-5401
Sri Maddineni	Environmental Engineer II	NYSDEC	(518) 457-0638
Yavuz Erk	Environmental Engineer II	NYSDEC-Region 9	(716) 847-4585
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Mike Reele	Plant Engineer	Great Lakes Carbon, P.O. Box 667 6200 Niagara Falls Blvd. Niagara Falls, New York 14302	(716) 236-2888
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
X PERMISSION ☐ WARRANT	8:30 am	

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Sri Maddineni	NYSDEC	(518) 457-0638

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	03 DATE
Roger L. Bondeson		E.C. Jordan Co.	(207) 775-5401	7 /24/ 90 (MONTH DAY YEAR)

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

EPA

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D000218248

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____
CUBIC YARDS 79,000
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			unknown
IOC	INORGANIC CHEMICALS			unknown
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
PSD	Phenanthrene	85-01-8	OD	39,000-100,000	ug/kg-soil
PSD	Fluoranthene	206-44-6	OD	60,000-170,000	ug/kg-soil
OCC	Phenol	108-95-2	OD	61	ppb-soil
PSD	Naphthalene	11-20-3	OD	252	ug/kg-soil
MES	Aluminum	999	OD	3490-6690	ug/kg-soil
MES	Aluminum	999	OD	278	ppb-soil
MES	Barium	999		143-6160	ug/kg-soil
MES	Barium	999		298-1800	ppb-surface water
MES	Iron	999		103-1040	ppb-surface water
MES	Mercury	7439-97-6		0.41-7.2	ug/kg-soil
MES	Zinc	999	OD	171-856	ug/kg-soil
MES	Mercury	7439-97-6	OD	0.33-1.4	ppb-surface water
MES	Iron	999	OD	6560-20,400	ppm-soil

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D000218248

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

Contaminants from unlined landfill could migrate to groundwater. No groundwater users in the area except non-contact industrial cooling water.

01 X B. SURFACE WATER CONTAMINATION — 02 X OBSERVED (DATE: 7/90) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 80,000 — 04 NARRATIVE DESCRIPTION

No surface water runoff or leachate containment systems.

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

Airborne particles and dust; hazard only to workers at the facility.

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

Low potential.

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

Unlikely due to strict access control. Workers at the factory could potentially be affected, however, site is under surveillance.

01 X F. CONTAMINATION OF SOIL — 02 _ OBSERVED (DATE: 12/85) _ POTENTIAL X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Soil samples taken on site by NUS (1985) indicated significantly high concentrations of iron and mercury.

01 X G. DRINKING WATER CONTAMINATION — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 80,000 — 04 NARRATIVE DESCRIPTION

Drinking water intakes from Niagara River are located 2.5 miles from site. Drinking water contamination however, is not likely because intakes are located 3,000 feet off-shore and potential migrating contamination is not likely to flow 3,000 feet across a strong river current.

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

No record of incidence.

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

No record of incidence.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: New York	01 SITE NUMBER: D000218248

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None observed.

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

None observed.

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

Not likely.

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

None observed.

01 _ N. DAMAGE TO OFFSITE PROPERTY — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None observed.

01 X O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Potential from surface water runoff which can enter sewer and storm drains. Plant operators have SPDES permit which requires monitoring of discharge (60th and 61st sewers).

01 _ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None observed. Restricted access to site.

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

Unknown

III. TOTAL POPULATION POTENTIALLY AFFECTED: Unknown

IV. COMMENTS

There is no documentation of hazardous waste disposal. Soil, sediment, and surface water sampling indicates the presence of hazardous substances which may be attributable to the site.

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

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

EPA

I. IDENTIFICATION	
01 STATE: New York	01 SITE NUMBER: D000218248

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)				
X I. OTHER (specify) SPDES	NY0000906			For outfalls none for the site.
X J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
_ A. SURFACE IMPOUNDMENT		
X B. PILES		
_ C. DRUMS, ABOVE GROUND		
_ D. TANK, ABOVE GROUND		
_ E. TANK, BELOW GROUND		
_ F. LANDFILL		
_ G. LANDFARM		
X H. OPEN DUMP	79,000	cubic yards
_ 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)

05 OTHER
- X A. BUILDINGS ONSITE

06 AREA OF SITE: 7 (acres)

07 COMMENTS

Volume of waste on-site is approximately 79,000 cubic yards, however, actual quantity of each waste material is unknown. Since 1966, wastes have been hauled off-site by Modern Disposal, Inc. to the Model City Landfill.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (check one)

_ A. ADEQUATE, SECURE _ B. MODERATE X C. INADEQUATE, POOR _ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

The landfill is unlined, uncovered, and has no leachate collection systems.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: _ YES X NO

02 COMMENTS

Plant facility is fenced and guarded.

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D000218248

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (check as applicable)	SURFACE	WELL
COMMUNITY	A. X	A. _
NON-COMMUNITY	B. _	B. _

02 STATUS		
ENDANGERED	AFFECTED	MONITORED
A. _	B. _	C. _
D. _	E. _	F. _

03 DISTANCE TO SITE
A. 2.5 (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)
X C. COMMERCIAL INDUSTRIAL IRRIGATION (Limited other sources available)
_ D. NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUNDWATER 0

03 DISTANCE TO NEAREST DRINKING WATER WELL > 3 (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
2 - 3 (ft)	south - southwest	> 40 (ft)	unknown (gpd)	_ YES X NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

No known users of groundwater within 3 miles of site except non-contact industrial cooling water on Buffalo Avenue.

10 RECHARGE AREA		11 DISCHARGE AREA	
YES / X NO	COMMENTS	_ YES / _ NO	COMMENTS - Unknown

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
Pikes Creek (unconfirmed name)	X	< 100 feet
Niagara River	_	1.1 (mi)
	_	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5,902 NO. OF PERSONS	B. 36,756 NO. OF PERSONS	C. 72,452 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION
¼ - ½ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE
9,673

04 DISTANCE TO NEAREST OFF-SITE BUILDING
< ¼ (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within written vicinity of site, e.g., rural, village, densely populated urban area)

Commercial and industrial area. Population consists of workers. Residential area ≈ ¼ to ½ mile from site.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE: New York	01 SITE NUMBER: D000218248

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

_ A. 10^{-6} - 10^{-8} cm/sec X 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) X 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	
10 - 20 (ft)	Soil samples taken less than 1 (ft)	unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	0 - 10 %	Towards Pikes Creek	30 - 45 %

09 FLOOD POTENTIAL

SITE IS IN > 500 YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTAURINE: A. > 3 (mi) OTHER: B. 1.1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 3 (mi)

ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AGRICULTURAL LANDS AG LAND
A. 0 - ¼ (mi)	B. ¼ - ½ (mi)	C. > 3 (mi)	D. > 3 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The disposal site is a 7-acre area existing on the Great Lakes Carbon property. Previous landfilling consisted of graphite carbon and sand placed above ground surface to a height of 5-7 feet. Area is graded, flat, and uncovered with no cap. Site is currently used as a stockpile area for product, feedstock, equipment parts, and temporary storage of wastes.

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D000218248

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		None	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	No volatile organics were detected above 1 ppm.

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND _ AERIAL

02 IN CUSTODY OF E.C. Jordan Co.
(Name of organization or individual)

03 MAPS
X YES
_ NO

04 LOCATION OF MAPS
Sri Maddineni, NYSDEC, Albany, New York

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

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

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D000218248

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Great Lakes Carbon Corp.		6200 Niagara Falls Blvd.		Niagara Falls	New York	14302

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
Great Lakes Carbon Corp.		320 Old Briarcliff Manor		Briarcliff Manor	New York	10510

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

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

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

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

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

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

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D00021824

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Great Lakes Carbon Corp.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6200 Niagara Falls Blvd.	

05 CITY	06 STATE	07 ZIP CODE
Niagara Falls	New York	14302

08 YEARS OF OPERATION	09 NAME OF OWNER
1939 - Present	Mike Reele - Plant Engineer

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
Great Lakes Carbon Corp.	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
320 Briarcliff Road	

14 CITY	15 STATE	16 ZIP CODE
Briarcliff Manor	New York	10510

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Great Lakes Coal and Coke	

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
19??-1939	Unknown

PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

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

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)

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D000218248

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER	
Great Lakes Carbon Corp.		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	
6200 Niagara Falls Blvd.		
05 CITY	06 STATE	07 ZIP CODE
Niagara Falls	New York	14302

III. OFF-SITE GENERATOR(s)

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

IV. TRANSPORTER(S)

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

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D000218248

II. PAST RESPONSE ACTIVITIES

01 _ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

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

01 _ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D000218248

II. PAST RESPONSE ACTIVITIES (Continued)

01 _ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 _ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION	I. IDENTIFICATION	
		01 STATE New York	01 SITE NUMBER D000218248

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION X YES _ NO

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

Phase I Investigation Engineering-Science, 1989 for New York State Department of Environmental Conservation.

Phase I Investigation NUS Corporation, 1985 for USEPA.

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

Preliminary Site Assessment Report, March 1991, E.C. Jordan Co., and references cited therein.

APPENDIX C

INTERVIEW DOCUMENTATION FORMS

E.C. Jordan Co.
Work Assignment No. D002472-6

New York State Department of Environmental Conservation
Preliminary Site Assessments

INFORMATIONAL INTERVIEW

Job No:	6291-20	Date:	7/19/90
Site:	Great Lakes Carbon Landfill	Telephone:	____ In-Person X
Between:	Roger Bondeson E.C. Jordan Co.	and:	Mike Reele, P.E.
		Affiliation:	Great Lakes Carbon Corporation
Signature:	Roger Bondeson	Signature:	M. Reele

Great Lakes Carbon Corporation (GLC) manufactures carbon and graphite products.

GLC has owned the 7-acre disposal site since 1939.

Wastes were disposed of in this landfill from 1939 to 1966. Wastes disposed of include carbon, graphite, coal dust, construction rubble, electrodes, and solid pitch mold stock wastes. Since 1966, no disposal has occured at the landfill.

Current wastes generated that are reused or recycled include baghouse dust, cracked carbon ~~cakes~~ shapes, and carbon dust sweepings.

Other generated wastes such as mixed dusts, crushed stone, refractory brick, solid pitch, and garbage are collected and disposed of by Modern Disposal.

It is not known if coal tar has been disposed of in the landfill, prior to 1966.

Spent cleaning solvents used in the main production buildings are collected and removed by Safely Kleen.

The landfill site is currently used to store scrap wood, metal, recyclable scrap carbon shapes, and spare transformers.

Great Lakes Carbon has a SPDES permit to discharge cooling water, boiler blow down water, and stormwater into Pikes Creek.

Sump pump water from the main production buildings is discharged to the Pikes Creek. The sump located in Building 234 is anchored into bedrock and is approximately 20 feet deep. The sump in Building 8 contains shallow groundwater.

Sumps are used to collect moisture and water from the drains around furnaces. Moisture can hinder the production of carbon. There are approximately 20 sumps located throughout the main production buildings.

The landfill site was used to store PCB capacitors spares. These capacitors have been removed from the site as part of a company program to replace PCB capacitors with non PCB capacitors.

Of the 5 transformers stored on the landfill site, 3 will be removed and 2 will be kept for spares.

E.C. Jordan Co.
Work Assignment No. D002472-6

New York State Department of Environmental Conservation
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INFORMATIONAL INTERVIEW

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Site:	Great Lakes Carbon Landfill	Telephone:	____ In-Person X
Between:	Roger Bondeson E.C. Jordan Co.	and:	Mike Reele, P.E.
		Affiliation:	Great Lakes Carbon Corporation
Signature:	Roger Bondeson	Signature:	M. Reele

Sampling for the SPDES permit occurs at the lift station located to the southwest of Building #101 and at the manhole located to the southwest of the guardhouse and at the outfall located northeast of the guardhouse.

Many of the 55-gallon drums located in the drum storage area located to the east of the landfill site, contain dusts from dust collectors and lathe turnings. These materials are disposed of in the Modern Landfill.

Other empty drums located in the drum storage area used to contain cleaning solvents used in the pilot plant operations.

Spent solvent from pilot plant operations is disposed of via the Frontier Chemical Company.

Mike Reele has been employed by GLC for 23 years, and to his knowledge no solvents or hazardous wastes have been disposed of in the landfill during his employment.

Oil absorbent booms placed around storm drain outfalls in Pikes Creek are used to serve as back-up in the event of a spill and to trap oils that may be washed from paved areas of the GLC property.