ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE I INVESTIGATION

Airco Speer Carbon
City of Niagara Falls

Site No. 932002
Niagara County

Date: January 1986

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233
Henry G. Williams, *Commissioner*

Division of Solid and Hazardous Waste
Norman H. Nosenchuck, P.E., *Director*

By:
ENGINEERING-SCIENCE
In Association With
DAMES & MOORE

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

AIRCO SPEER CARBON-GRAPHITE
4861 PACKARD ROAD
NYS SITE NUMBER 932002
CITY OF NIAGARA FALLS
NIAGARA COUNTY
NEW YORK STATE

Prepared For

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

AIRCO SPEER CARBON-GRAPHITE

TABLE OF CONTENTS

SECTION 1

EXECUTIVE SUMMARY
AIRCO SPEER CARBON-GRAPHITE

This report, prepared for the New York State Department of Environmental Conservation (NYSDEC), presents the results of the Phase I investigation of the Airco Speer Carbon-Graphite Site (NYS Site Number 932002, EPA Site Number D980201263) located in Niagara Falls, Niagara County, New York (see Figure I-1).

SITE BACKGROUND

The plant site, approximately 2-acres in size, is owned by the Airco Speer Carbon-Graphite Company (see Figure I-2). Prior to 1920, the site was owned by the International Graphite and Electrode (IGE) Company. In 1930, the Speer Carbon and Exelon Companies each purchased half ownership of the IGE Company. The Speer Carbon Company assumed full ownership of the graphite plant in 1932 (NCHD, 1981). Speer Carbon became a subsidiary of Airco in 1961 and a Division in 1962. In 1978, Airco became a subsidiary of BOC International.

Prior to 1920, the IGE Company disposed of wastes on-site from the graphitizing operations. No detailed records exist, but the wastes are presumed to be similar to those presently generated. From 1930 to 1954, under the ownership of the Airco Speer Company, industrial wastes including carbonaceous furnace insulation, spent refractories (brick, concrete block and sand) obsolete equipment, linseed oils, coal tar chemicals, and asbestos fibers were disposed on-site (NYSDEC, 1978). These materials were used as fill to bring the low lying areas of the plant to grade. Due to continued plant expansion since 1930, the fill

area has been covered by the construction of manufacturing buildings and paving of the site with either concrete or asphalt (NCHD, 1981). All portions of the former disposal area are presently covered.

The fill site reached capacity in 1954 and all wastes generated at the plant since that time have been contract hauled off-site to either the Union Carbide Dump (1954-1964), (presently operated by Newco), Modern Disposal's Model City Landfill (1964-1972), Newco Landfill (1972-1981) and Modern City Disposal Company (1981 to present).

Soil samples, collected by the USGS in 1983, detected organic priority and non-priority pollutants (USGS, 1983). Most of the contaminants detected were identified as polynuclear aromatic hydrocarbons (PAH's) which are known to be present in coal tars (Airco Speer Carbon-Graphite, 1985).

ASSESSMENT

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

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

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

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

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

The preliminary HRS score was:

S_M	=	4.82	S_A	=	0
S_{GW}	=	8.35	S_{FE}	=	0
S_{SW}	=	0	S_{DC}	=	0

The only score with a non-zero value is the groundwater migration score (and accompanying averaged migration score). This score reflects the high toxicity and persistence of one of the suspected contaminants and the unlined condition of the landfill.

RECOMMENDATIONS

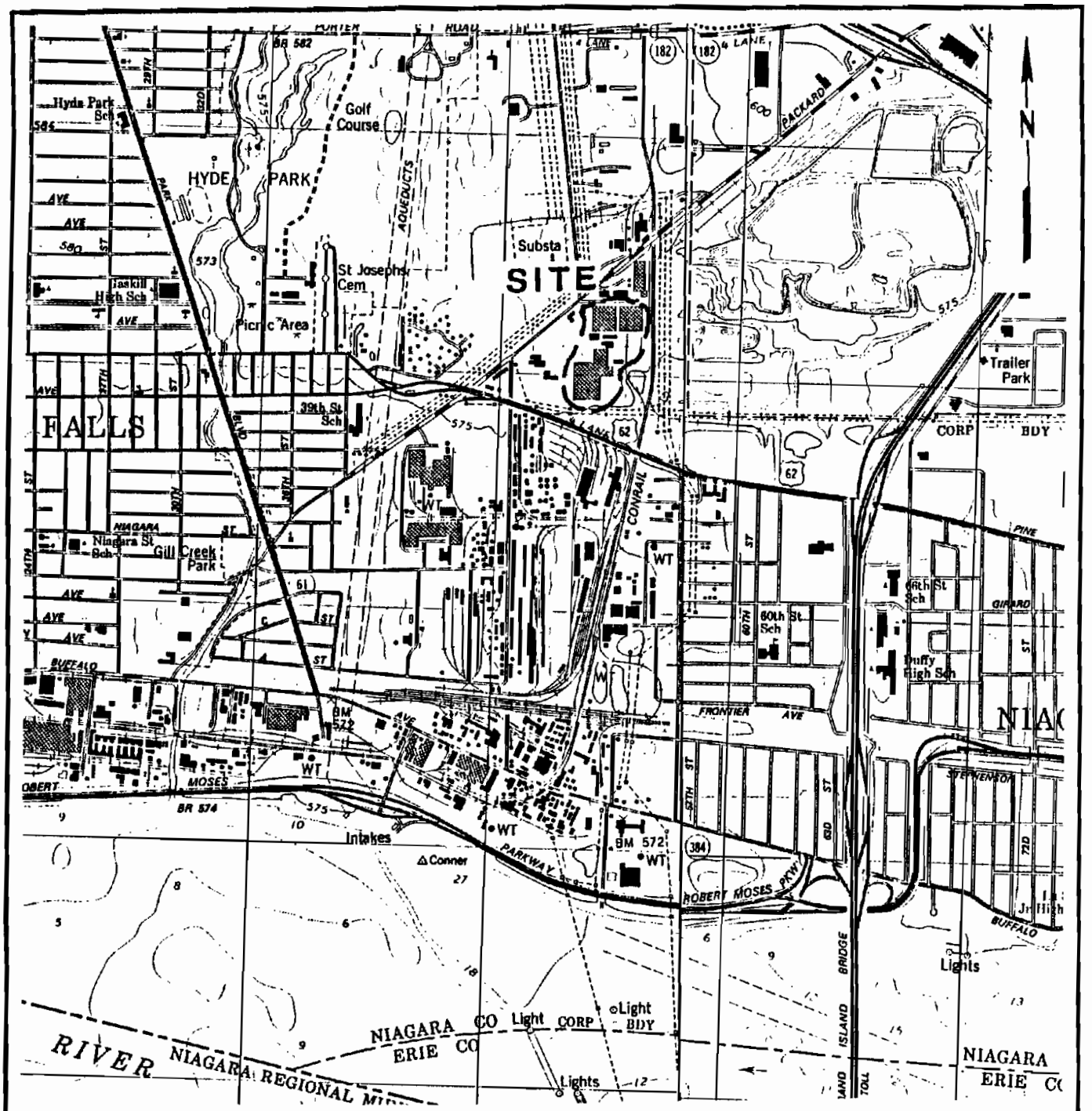
The following recommendations are made for the completion of Phase II:

- Ground water monitoring system consisting of one upgradient and three downgradient wells.

- Sample analyses to include priority pollutants (pesticides not included).

The estimated man-hour requirements to complete Phase II are 523, while the estimated cost is $35,875.

NOTE: Additional data may become available from an EPA study conducted during the summer of 1985 at the site. This information may be of use in revising or amending the Phase II recommendations.



LATITUDE: 43°05'44"
LONGITUDE: 79°00'08"

SCALE

0 1000 2000 3000 4000 FEET

REFERENCE: U.S.G.S. 7.5' Topographic Map
Niagara Falls, NY-ONT. (1980) and
Tonawanda West, NY (1980) Quadrangles

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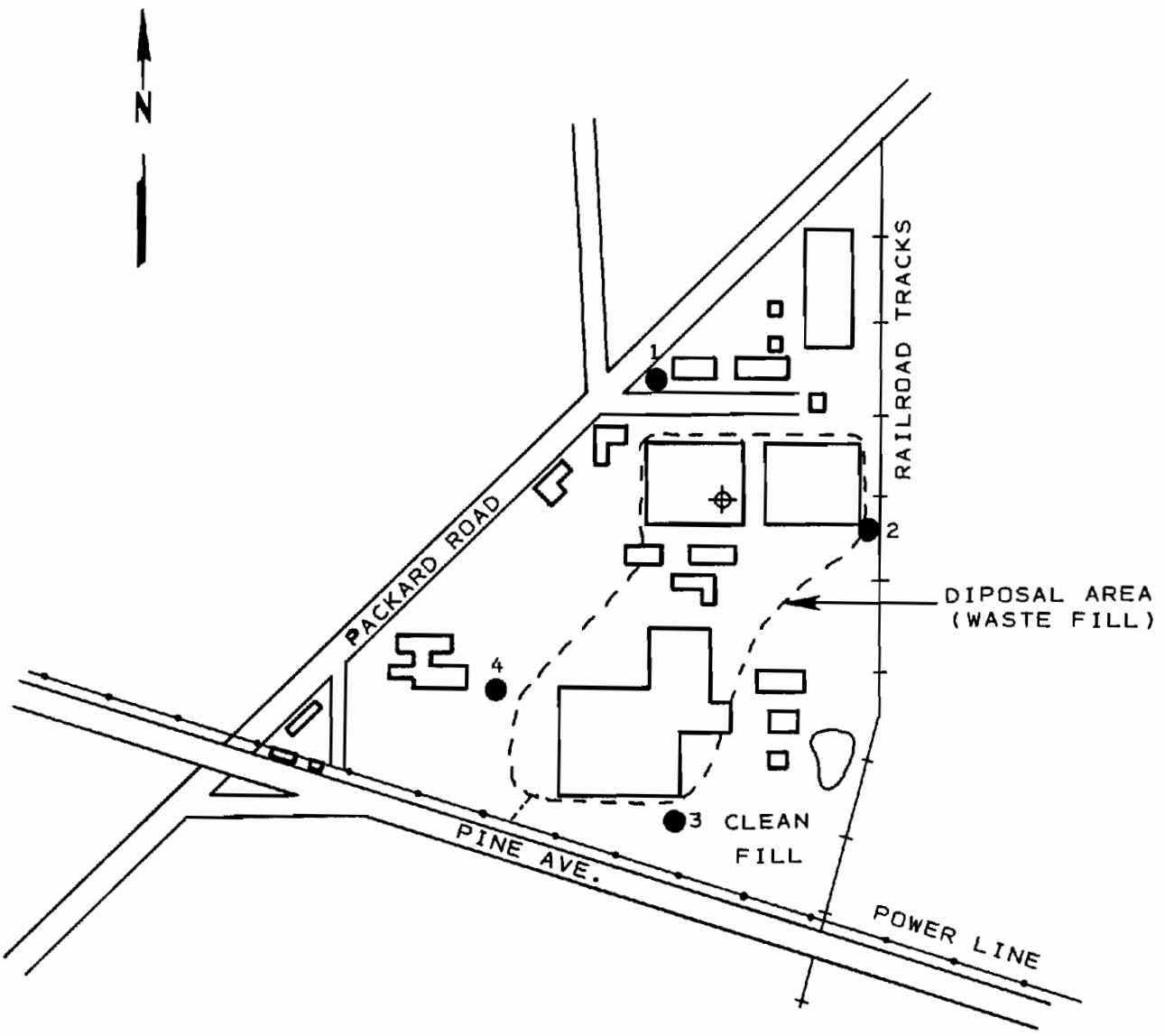
SITE LOCATION MAP
AIRCO SPEER CARBON GRAPHITE

FIGURE I-1



NOT TO SCALE

EXPLANATION:

● 1 U.S.G.S. TEST BORING

⌖ POSSIBLE FORMER SPRING

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PLOT PLAN
AIRCO SPEAR CARBON

FIGURE I-2

SECTION II

PURPOSE

The purpose of the Phase I program at the Airco Speer Carbon-Graphite site was to assess the hazard to the environment caused by the present condition of the site. This assessment is based on the Hazard Ranking System, which involves the compilation and rating of numerous geological, toxicological, environmental, chemical, and demographic factors and the calculation of an HRS score. Details of HRS implementation are included in Section V. During the initial portion of the investigation, available data and records, combined with information collected from a site inspection, were reviewed and evaluated. The investigation at this site focused on the on-site disposal of carbonaceous debris, asbestos and coal tars. Based on this initial evaluation of the Airco Speer Carbon-Graphite site, a Phase II Work Plan has been prepared for collecting any additional data needed to complete the HRS score. In addition, a cost estimate for the recommended Phase II work is provided.

SECTION III

SCOPE OF WORK

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

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

SECTION IV

SITE ASSESSMENT

SITE HISTORY

The present Airco Speer Carbon-Graphite Company plant site located, in Niagara Falls, Niagara County, New York State, was owned prior to 1920 by the International Graphite and Electrode (IGE) Company. The IGE Company disposed of wastes generated from the plant's graphitizing operations on-site, however, detailed records concerning the type and quantity of wastes do not exist. The wastes disposed on-site prior to 1930 would probably be similar in nature as the waste materials presently generated (NCHD, 1981).

In 1930, the Speer Carbon and Exelon Companies each purchased fifty (50) percent ownership of the IGE Company. The Speer Carbon Company subsequently assumed full ownership of the facility in 1932. In 1930 to 1954, the Speer Carbon Company was still engaged in producing graphite and added oil and pitch treatment facilities. During this time period, the company generated wastes including: carbonaceous furnace insulation, spent refractories (brick and concrete blocks) and sand, obsolete equipment, linseed oil, coal tar chemicals and asbestos fiber. All of these materials were disposed in a fill area on-site (NCHD, 1981 and NYSDEC, 1978).

The on-site landfill reached its capacity in 1954. Subsequently, the plant's generated wastes were contract hauled off-site to the Union Carbide dump located in the Town of Niagara (presently operated by Newco Waste Systems). These disposal practices continued until 1964, at which time Modern Disposal Services transported the generated wastes to its

Model City disposal facility. These disposal practices continued until 1972.

Speer Carbon became a subsidiary of Airco in 1961 and a division in 1962. In 1978, Airco became a subsidiary of BOC International. The wastes generated at Speer Carbon from 1972 to approximately 1981, were contract hauled by Cerrone and Niagara Sanitation to the Newco disposal facility. Presently, the wastes are disposed by Modern Disposal Company (NCHD, 1981).

A site inspection conducted by the Niagara County Department of Health (NCDOH) in June 1981, noted that almost all of the previous disposal site was paved with either asphalt or concrete. Furthermore, the plant's buildings, including several of the graphite and bake plants, were located over areas previously used for waste disposal.

SITE TOPOGRAPHY

The Airco Speer Carbon-Graphite site is located in the City of Niagara Falls, Niagara County, New York State. The original ground surface sloped to the south. However, due to past filling, the ground surface at the present time is relatively flat. The original ground surface can be seen sloping to the south from the roads which surround the site. There are no surface water bodies on the site. All surface runoff flows to the municipal sewer system.

The triangular site is located in an industrial section of Niagara Falls. South of the site is Pine Avenue, along which are located the industrial plants of Union Carbide and Niacet. Southwest of the site is Nitec Paper. West of the site is a Niagara Mohawk transformer station. Reichold Chemical/Frontier Foundries and Pyron Metals. Railroad tracks form the eastern boundary of the site, east of which is the CECOS Niagara Falls landfill operated by BFI. South of the CECOS landfill and southeast of the Airco Speer Carbon-Graphite site is Great Lakes Carbon plant. There are no known private wells in use near the site.

Local Sensitive Environments

There are no New York State recognized wetlands nor critical habitats for endangered species near the site.

SITE HYDROLOGY

This summary of site hydrogeology is based on information from USGS Topographic Maps, NYS Museum & Science Service Bedrock Geology Map and Quaternary Map, Johnston (1964), drilling information from USGS (1982) at Airco Speer Site, drilling information from Empire Soils Investigation Logs (1973) and Rochester Drilling Company Logs (1980), summaries by M. Hopkins of NCDOH, and Bergeron (1984).

Regional Geology and Hydrology

The site is located in the Erie-Ontario lowlands physiographic province. The bedrock of this region is predominantly limestone, dolostone, and shale. Most of the rocks are deep aquifers with regional flow to the south.

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

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

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

Site Hydrogeology

Bedrock beneath the site is expected to be Lockport Dolomite, occurring at depths of 2 to 8 feet across the site. The expected elevation of this surface is between 570' to 580' (MSL). The slope on the rock surface may be south-southwest, roughly parallel to the Gill Creek drainage pattern. An off-site well located on Lockport Road (approximately 2 miles from the site) (identified by Johnson as 307-900-6 and sampled as VO1 in previous Town of Niagara Landfill studies) taps groundwater in the upper part of the dolomite bedrock. This water was found to be salty.

Soils above the top of the bedrock are expected to be generally as follows based on USGS borings completed in 1982:

Unit	Depth of Range (ft.)
Topsoil	0 - 2
Reddish clay with varying amounts of sand	2 - 8
Top of rock	2 - 8

Due to the low permeability of most of these soils, (assumed to be 10^{-5} cm/sec to 10^{-7} cm/sec for HRS scoring) there is not expected to be a soil aquifer on-site. However, the soil/bedrock interface may yield some quantity of ground water.

SITE CONTAMINATION

Airco Speer Carbon-Graphite landfilled graphite plant waste on-site from 1930 to 1954. The type and quantity of waste disposed of on-site included 86,000 cubic yards of carbonaceous granules and dust, bricks, concrete and sand, 2,500 gallons of linseed oil and coal tar and 7 tons of asbestos. Miscellaneous plant refuse were also landfilled on-site. Presently, the former landfill area is covered by plant manufacturing facilities (NYSDEC, 1978).

The USGS collected soil samples from four test boring sites in July 1982. The samples were recollected in May 1983 since the holding time for the previously collected samples was exceeded. The soil samples were analyzed for organic priority and non-priority pollutants. Fourteen priority pollutants and five non-priority pollutants were identified. (USGS, 1983). Most of the pollutants are identified as polynuclear aromatic hydrocarbons (PAHs). The analytical results for the pollutants identified are presented in Table IV-1. A plot plant depicting the soil sampling locations is provided in Figure IV-1.

According to Airco Speer, the coal tar pitch is a binding agent used in the graphitizing process and contains several PAHs. Some waste coal tar was disposed in the landfill and it is possible that this landfill constituent is the source of the PAH contamination found in the USGS well boring samples. However, other by-products from the production of graphite products could also generate PAH's. In addition to PAHs, the coal tar contains benzene, toluene, xylene, phenol, pyridine, thiophene, and ammonia (Airco Speer Carbon-Graphite, 1985).

The PAHs and other suspected landfill pollutants pose a potential source of contamination to the ground water. A perched water table may attain seasonal high levels of less than 6 inches below the pre-fill surface (NCHD, 1981). The presence of PAHs in well borings adjacent to the site suggests ground water migration of pollutants from the unlined landfill (USGS, 1983). However, no direct evidence of ground water contamination is available.

In the period 1939 to 1956, graphite plant and bake plant buildings were built over the landfill (NCDOH, 1981). More recently, the remainder of the landfill site has been paved with concrete and asphalt and a surface runoff diversion system has been installed. The surface runoff is channeled into the city sanitary sewer and treated at a local wastewater treatment plant. Therefore, the potential for contamination of surface waters is limited.

HNU meter readings were taken during a recent site inspection (ES and D&M, 3/27/85) and all measurements were less than 1 ppm.

The site is enclosed by a fence and a 24-hour security system continuously monitors entry to the facility.

TABLE IV-1
SUMMARY OF SOIL ANALYSIS FOR AIRCO SPEER CARBON-GRAPHITE

Parameter (mg/kg)	Sample Collection Sites 2A	3A	4A
INORGANIC COMPOUND			
Molecular Sulfur	3.0	--	--
ORGANIC COMPOUNDS			
Priority Pollutants			
Pyrene	8.0	LT	32.0
Acenaphthene	--	--	LT
Fluoranthene	9.1	--	34.0
Benzo(a)anthracene	7.1	--	24.0
Benzo(a)pyrene	7.9	--	49.0
3,4-benzofluoranthene	13.0	--	43.0
Chrysene	5.6	--	23.0
Acenaphthylene	LT	--	LT
Anthracene	LT	--	2.0
Benzo(ghi)perylene	4.6	--	13.0
Fluorene	LT	--	LT
Phenanthrene	4.0	--	19.0
Dibenzo(a,h)anthracene	--	--	12.0
Indeno(1,2,3-cd)pyrene	30.0	--	61.0
Non-Priority Pollutants			
Dibenzofuran	LT	--	LT
Carbonsulfide	LT	--	--
Methylphenanthrene[a]	--	--	2.0
Benzo(b)napthothiophene[a]	--	--	2.0
Methylbenzo(a)anthracene[a]	--	--	2.0

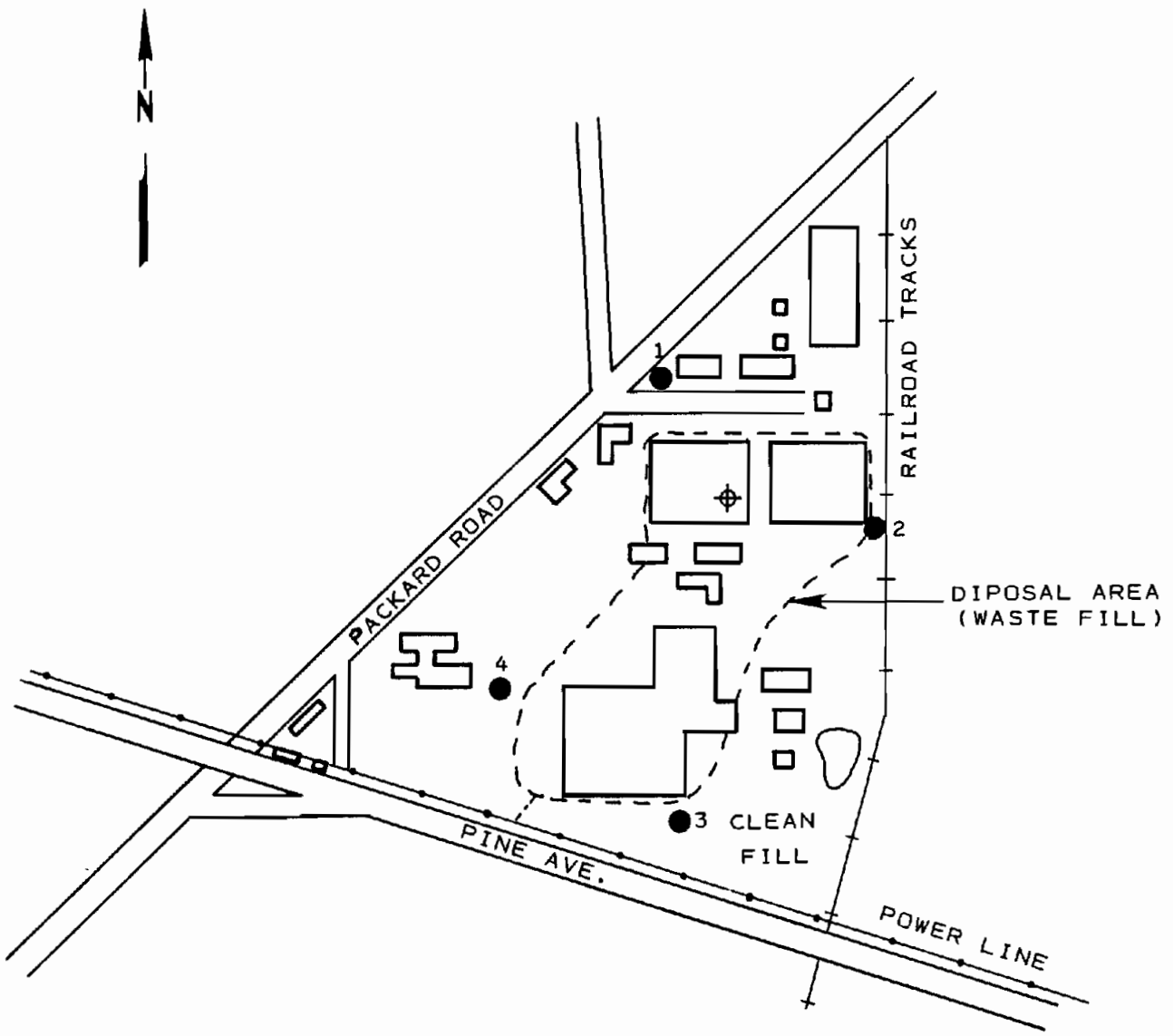
SOURCE: USGS Study Draft Report, 1983.

[a] Samples collected 5/27/83.

[b] Tentative identification based on comparison with National Bureau of Standards (NBS) Library. No external standards available. Concentration reported is semiquantitative and is based only on an internal standard. GC/MS spectra examined and interpreted by GC/MS analysts.

LT Constituent found but below the quantifiable detection limit.

-- Indicates not detectable.



NOT TO SCALE

EXPLANATION:

● 1 U.S.G.S. TEST BORING

⌖ POSSIBLE FORMER SPRING

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PLOT PLAN
AIRCO SPEAR CARBON

FIGURE IV-1

PRELIMINARY APPLICATION OF HAZARD RANKING SYSTEM

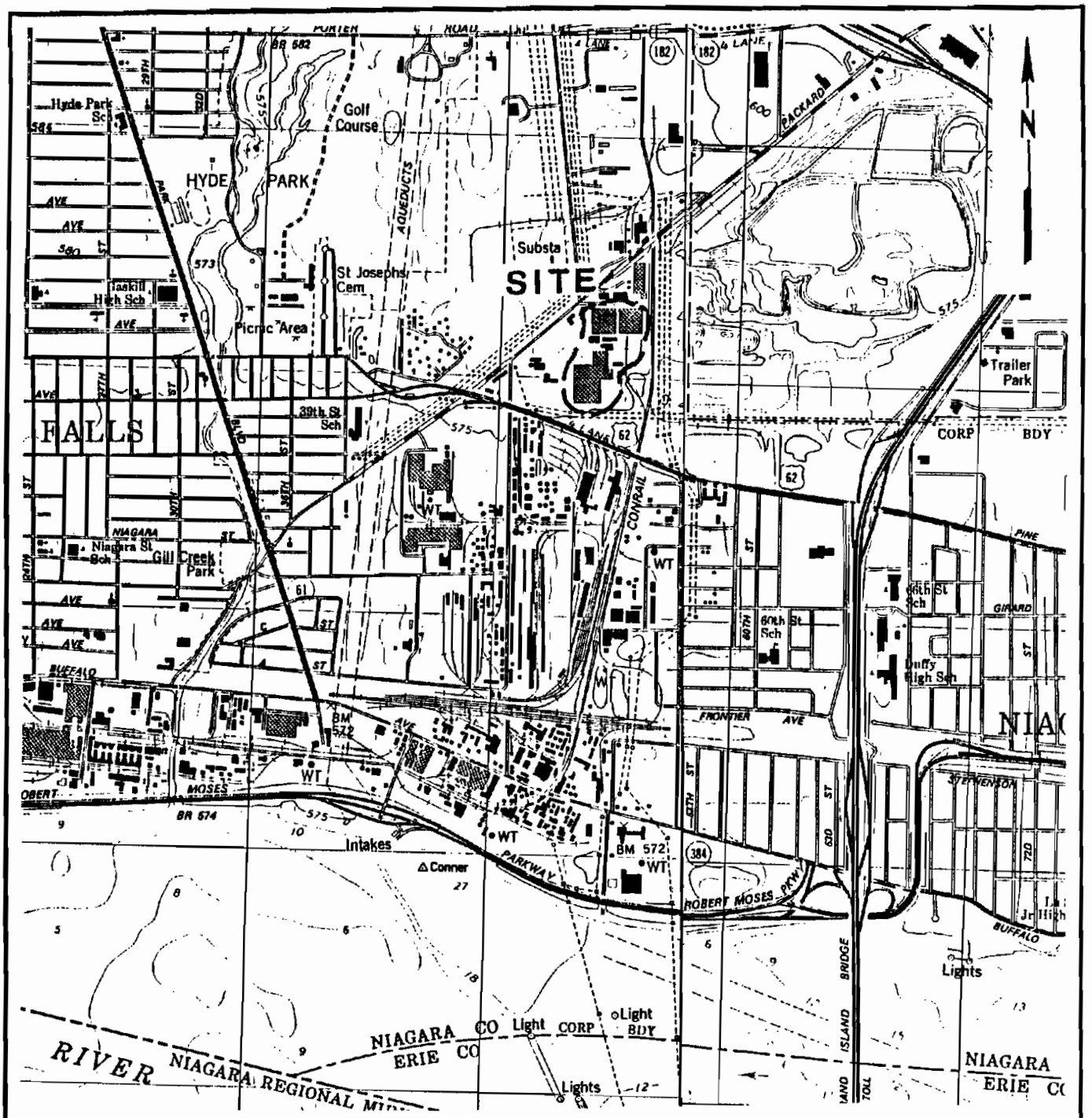
NARRATIVE SUMMARY

The approximately 2-acre Airco Speer Carbon-Graphite landfill site is located under the Speer Carbon manufacturing facility within the City of Niagara Falls, Niagara County, New York. Speer Carbon has owned the site from 1930 to present.

From 1930 to 1954, Speer Carbon disposed of approximately 86,000 cubic yards of carbonaceous granules and dust, bricks, concrete, and sand, 2500 gallons of linseed oil and coal tar, and 7 tons of asbestos in an on-site landfill (NYSDEC, 1978 and Airco Speer Carbon-Graphite, 1985). Samples collected from soil borings adjacent to the landfill contained fourteen priority pollutants and five non-priority pollutants (USGS, 1983). Most of the pollutants are polynuclear aromatic hydrocarbons (PAHs). The coal tars disposed of in the landfill, could be the source of PAH contamination detected in the USGS soil boring samples; however, other by-products from the production of graphite products could also generate PAH's (Airco Speer Carbon-Graphite, 1985).

From 1939 to 1956, manufacturing buildings were constructed over the landfill (NCHD, 1981). Recently, the remainder of the landfill has been paved with concrete and asphalt and a surface runoff system channels runoff into a sanitary sewer system.

HNu meter readings were less than 1 ppm over the landfill area, indicating a lack of air contamination (ES and D&M site inspection, 1985).



LATITUDE: 43°05'44"
LONGITUDE: 79°00'08"

SCALE

0 1000 2000 3000 4000 FEET

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SITE LOCATION MAP
AIRCO SPEER CARBON GRAPHITE

FIGURE ii-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Niagara Falls, NY-ONT. (1980) and
Tonawanda West, NY (1980) Quadrangles

HRS COVER SHEET

Facility Name: Airco Speer Carbon-Graphite

Location: Niagara Falls, Niagara County, New York

EPA Region: II

Person(s) in charge of facility: Ron Spears, Director of Environmental Control Department

Name of Reviewer: John A. Botts Date: 4/15/85

General description of facility:

From 1930 to 1954, Speer Carbon generated wastes from graphitizing, oil, pitch treatment, baking, mixing, and extrusion operations to produce graphite electrodes. Approximately 86,000 cubic yards of carbonaceous granules and dust, bricks, concrete, and sand, 2,500 gallons of linseed and coal tar, and 7 tons of asbestos were disposed in the on-site landfill. The landfill has subsequently been covered the construction of facility buildings, concrete and asphalt. Surface runoff is diverted to a sewer system serving a local wastewater treatment plant. Soil samples collected adjacent to the disposal site contained concentrations of PAH's.

Scores:

S_M = 4.82 (S_{gw} = 8.35 S_{sw} = 0 S_a = 0)

S_{FE} = 0

S_{DC} = 0

Facility Name: AIRCO SPEER CARBON-GRAPHITE Date: 4-15-85

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	0 1 2 (3)	2	6	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	0 (1) 2 3	1	1	3	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			12	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 [18]	1	18	18	
Hazardous Waste Quantity	0 [1] 2 3 4 5 6 7 8	1	1	8	
Total Waste Characteristics Score			19	26	
5 Targets					3.5
Ground Water Use	0 (1) 2 3	3	3	9	
Distance to Nearest Well/Population Served	0 (4) 6 8 10 12 16 18 20 24 30 32 35 40	1	4	40	
Total Targets Score			7	49	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			4788	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 8.35		

GROUND WATER ROUTE WORK SHEET

Facility Name: Airco Speer Carbon-Graphite Date: 4-15-85

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 (1) 2 3	2	2	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			7	15	
3 Containment	(0) 1 2 3	1	0	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	(0) 3 6 9 12 15 18	1	0	18	
Hazardous Waste Quantity	(0) 1 2 3 4 5 6 7 8	1	0	8	
Total Waste Characteristics Score			0	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	(0) 1 2 3	2	0	6	
Population Served/ Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			6	55	
6 If line 1 is 45, multiply 1 x 4 x 5. If line 1 is 0, multiply 2 x 3 x 4 x 5			0	64,350	
7 Divide line 6 by 64,350 and multiply by 100			S_{sw} = 0		

SURFACE WATER ROUTE WORK SHEET

Facility Name: AIRCO SPEER CARBON-GRAPHITE Date: 4-15-85

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
[1] Observed Release	(0) 45	1	0	45	5.1
Date and Location:	3/85				
Sampling Protocol:	HNO Survey				
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	0	3	
Toxicity	(0) 1 2 3	3	0	9	
Hazardous Waste	(0) 1 2 3 4 5 6 7 8	1	0	8	
	Total Waste Characteristics Score		0	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		

AIR ROUTE WORK SHEET

Facility Name: AIRCO SPEER CARBON-GRAPHITE Date: 4-15-85

Worksheet for Computing S_M

	S	S^2
Groundwater Route Score (S_{gw})	8.35	69.72
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		69.72
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		8.35
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		4.82

WORK SHEET FOR COMPUTING S_M

Facility Name: AIRCO SPEER CARBON-GRAPHITE Date: 4-15-85

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} = 0		

FIRE AND EXPLOSION WORK SHEET

Facility Name AIRCO SPEER CARBON-GRAPHITE Date 4-15-85

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 2 3	1	0	3	8.2
3 Containment	(0) 15	1	0		8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within 1-Mile Radius	0 1 2 3 (4) 5	4	16	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			16	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 0		

DIRECT CONTACT WORK SHEET

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

FACILITY NAME: Airco Speer Carbon-Graphite

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

GROUNDWATER ROUTE

1. OBSERVED RELEASE

Contaminants detected (5 maximum):

No ground water samples analyzed for contamination (NYSDEC Registry Sheet, 12/83).

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2. ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) in concern:

Bedrock aquifer.

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

Approximately 6" (NCHD Site Profile, 1981.)

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

Approximately 6' (USGS, 1982 and ES and D&M site inspection, 3/21/85).

Net Precipitation

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

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

Mean annual precipitation is 36".

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

Mean annual lake evaporation is 27".

Net precipitation (subtract the above figures):

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

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

1. Miscellaneous fill of unknown composition, appearing to contain large (up to 6 feet thick) amounts of carbon particles and fines. (NCDOH Site Profile, 1981).

2. Canandaigua or Odessa series lake-laid silt clay present at a depth of > 6'. Soils of these series exhibit a profile of silty clay loam over clay.

Permeability associated with soil type

Fill - granular - 10^{-3} cm/sec.
Soil, clay - 10^{-5} cm/sec to 10^{-7} cm/sec
(Freeze, R.A., and J.A. Cherry, Ground Water, 1979 and ES and D&M site inspection, 3/21/85).

Physical State

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

Furnace insulation, refractories, sand, carbon materials, obsolete equipment, linseed oil, coal tar, and asbestos fiber.

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Plant wastes disposed in unlined fill area on-site (ES and D&M site inspection, 3/21/85).

Method with highest score:

Unlined landfill.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Asbestos
Polynuclear aromatic hydrocarbons
Benzene
Phenol] suspected in landfill due to presence of coal tar pitch
Toluene
(NYSDEC, 1978 and USGS, 1983)

Compound with highest score:

Benzo(a)pyrene - 18 (toxicity = 3, persistence = 3).

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Quantity unknown - coal tar chemicals known to be disposed on-site. However, for purposes of rating the site, 1 to 10 cubic yards of hazardous waste were assumed to be disposed of on-site.

Basis of estimating and/or computing waste quantity:

NYSDEC Registry Sheet, 12/83.

5. TARGETS

Groundwater Use

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

Industrial well supplies a Buffalo Avenue industry, 2 miles south of site.

Distance to Nearest Well

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

2400 Buffalo Avenue.

Distance to above well or building:

2.25 miles.

Population Service by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

An industrial well, 2.25 miles southwest of site. Water used for cooling processes (Hopkins, 8/85).

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

No irrigation wells within 3 miles of site (ES and D&M site inspection, 3/21/85).

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

Estimate 10 factory workers are exposed to industrial well water (ES and D&M site inspection, 3/21/85, M. Hopkins, 8/85).

SURFACE WATER ROUTE

1. OBSERVED RELEASE

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

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

Rationale for attributing the contaminants to the facility:

Not applicable.

2. ROUTE CHARACTERISTICS

(USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles)

Facility Slope and Intervening Terrain

Average slope of facility in percent:

1.0%.

Name/description of nearest downslope surface water:

Niagara River.

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

< 1.0%.

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

No.

Is the facility completely surrounded by areas of higher elevation?

No.

1-Year 24-Hour Rainfall in Inches

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

Distance to Nearest Downslope Surface Water

1.2 miles to the Niagara River (USGS Topographic Maps).

Physical State of Waste

Solid and liquids (NYSDEC Registry Sheet, 12/83).

3. CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Landfill surface (buildings, concrete and asphalt) precludes runoff and the runoff is diverted to a sewer system serving a wastewater treatment plant. (ES and D&M site inspection, 3/21/85).

Method with highest score:

Impervious surface with runoff diversion system.

4. WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Waste constituents including PAH, benzene, phenol, toluene are suspected in landfill due to presence of coal tar pitch (USGS, 1983). However, the landfill site is presently covered thereby preventing the introduction of the waste constituents to the surface water pathway.

Compound with highest score:

Not applicable. For purposes of rating the site, waste constituents identified in the groundwater would not be scored.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Quantity unknown - coal tar chemicals known to be on-site. However, the landfilled material cannot impact the surface water route because of the impervious cover over the site (score = 0).

Basis of estimating and/or computing waste quantity:

NYSDEC Registry Sheet, 12/83.

* * *

5. TARGETS

Surface Water Use

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

1. Conduit intakes for power generation
2. Recreational green space - Buckhorn Island State Park
3. Recreational boating
4. Industrial/commerical shipping
5. Orchards on Navy Island, Ontario, Canada

Is there tidal influence?

No.

Distance to a Sensitive Environment

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

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

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

None within 1 mile. Closest wetland is 1.1 mile (Buckhorn Island, best wetland in Upper Niagara) (NYS Wetlands Maps).

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

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

Population Served by Surface Water

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

Intakes for Robert Moses Power Plant Reservoir

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

Water intakes used only for power generation.

Total population served:

Water intakes used only for power generation.

Name/description of nearest of above water bodies:

Water intakes used only for power generation.

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

Water intakes used only for power generation.

AIR ROUTE

1. OBSERVED RELEASE

Contaminants detected:

HNU meter readings for volatile organics were less than 1 ppm.

Date and location of detection of contaminants:

Site inspection conducted by ES and D&M, 3/21/85.

Methods used to detect the contaminants:

HNU meter readings were taken up and downwind of the site and readings did not indicate an air release.

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2. WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

No known reactive compounds.

Most incompatible pair of compounds:

No known incompatible compounds.

Toxicity

Most toxic compound:

Not applicable. No suspected wastes were evaluated since no air release was indicated by HNu meter.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable. The quantity of hazardous waste disposed of on-site is unknown. For purposes of rating the site, none of the wastes on-site have the potential to enter the air pathway because of the asphalt cover over the site.

Basis of estimating and/or computing waste quantity:

Not applicable. Asphalt cover prevents potential air pollutants from entering the air pathway.

* * *

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

84,383 people (Complied from 1980 US Bureau of the Census Data).

Distance to a Sensitive Environment

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

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

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

None within 1 mile (NYS Wetlands Maps).

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

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

Land Use

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

0.0 mi., site is located in industrial area (ES and D&M Site Inspection, 3/21/85).

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

1.8 miles to Buckhorn Island State Park (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

Distance to residential area, if 2 miles or less:

0.2 miles (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

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

More than 1 mile (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

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

More than 2 miles (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

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

No.

FIRE AND EXPLOSION

1. CONTAINMENT

Hazardous substances present:

No information was discovered during the Phase I study which indicates that a fire and explosion situation existed or presently exists at the site. Note that the site is covered with asphalt which prevents the release of any materials.

Type of containment, if applicable:

Not applicable, see above comment.

* * *

2. WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

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

Ignitability

Compound used:

No ignitable compounds are known to exist on-site.

Reactivity

Most reactive compound:

No reactive compounds are known to exist on-site.

Incompatibility

Most incompatible pair of compounds:

No incompatible compounds are known to exist on-site.

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

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

Basis of estimating and/or computing waste quantity:

No applicable, see above comment

* * *

3. TARGETS

Distance to Nearest Population

0.2 mile to residential area (ES and D&M Site Inspection, 3/21/85).

Distance to Nearest Building

0.0 mile, Airco Speer Carbon buildings are located on-site (ES and D&M Site Inspection, 3/21/85).

Distance to Sensitive Environment

Distance to wetlands:

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

Distance to critical habitat:

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

Land Use

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

0.0 mile, site is located in an industrial area (ES and D&M Site Inspection, 3/21/85).

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

1.8 miles to Buckhorn Island State Park (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

Distance to residential area, if 2 miles or less:

0.2 mile (ES and D&M Site Inspection, 3/21/85).

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

More than 1 mile (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

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

More than 2 miles (USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles).

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

No.

Population with 2-Mile Radius

36,756 people (US Census Data, 1980).

Buildings Within 2-Mile Radius

Unknown.

DIRECT CONTACT

1. OBSERVED INCIDENT

Date, location, and pertinent details of incident:

Information collected during the Phase I investigation did not indicate that a direct contact incident occured at this site.

* * *

2. ACCESSIBILITY

Describe type of barrier(s):

Site completely fenced, locked gate and guard = 0 (ES/D&M Site Inspection).

* * *

3. CONTAINMENT

Tyep of containment, if applicable:

Landfill is covered with an impervious asphalt surface which will prevent direct contact with landfilled wastes.

* * *

4. WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

PAH, benzene, phenol, and toluene are suspected in landfill due to presence of coal tar pitch (USGS, 1983). However, the impervious asphalt cover system over the landfill prevents these wastes from posing a direct contact threat.

Compound with highest score:

Not applicable. See above comment.

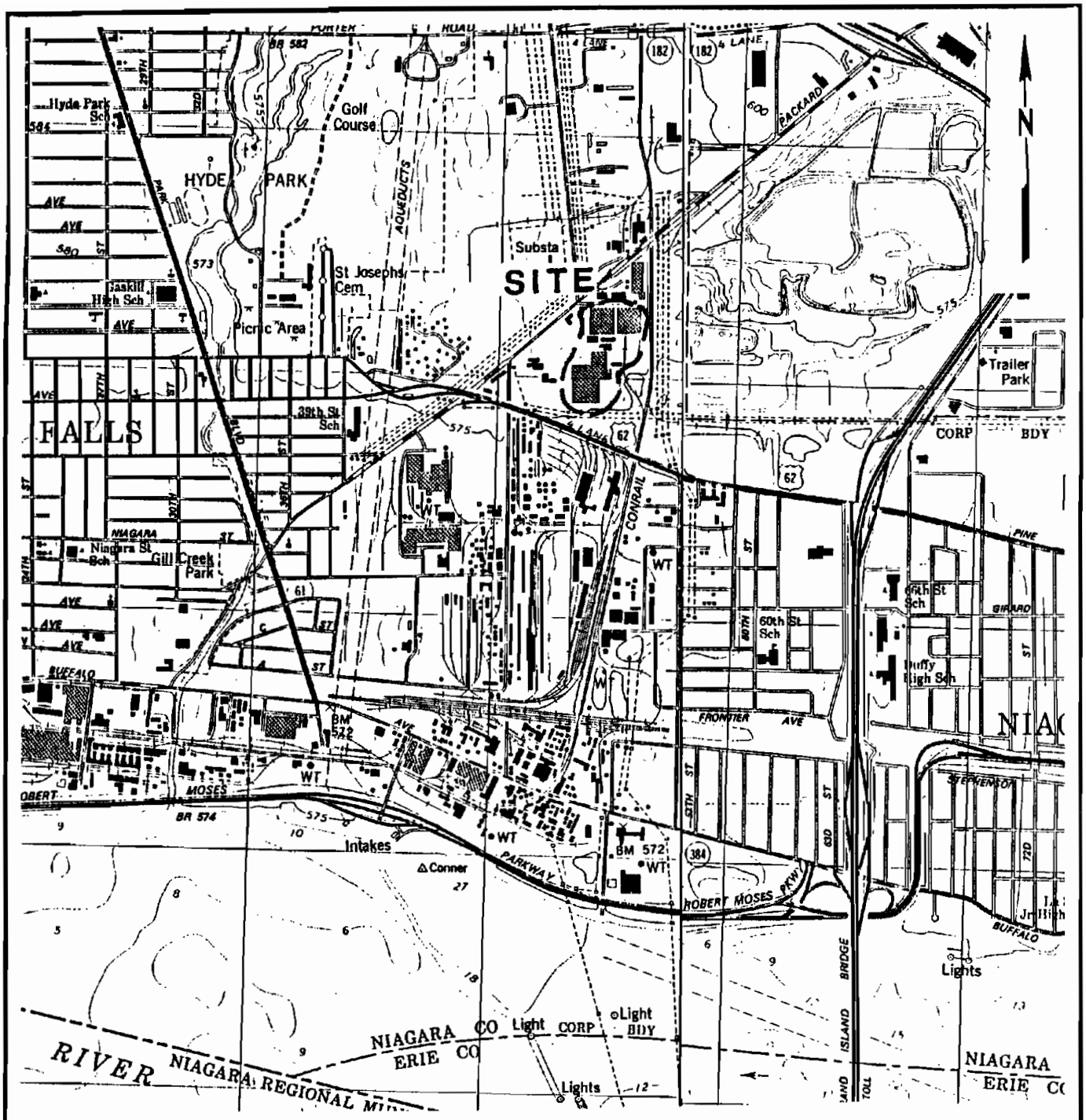
5. TARGETS

Population within one-mile radius

5,902 (US Census Data, 1980). Note that the Airco Speer property is fenced and well guarded to prevent entry and these people are not at risk because the landfill has an asphalt cover system.

Distance to critical habitate (of endangered species)

None within 1 mile (NYSDEC, Region 9).



LATITUDE: 43°05'44"
LONGITUDE: 79°00'08"

SCALE

0 1000 2000 3000 4000 FEET

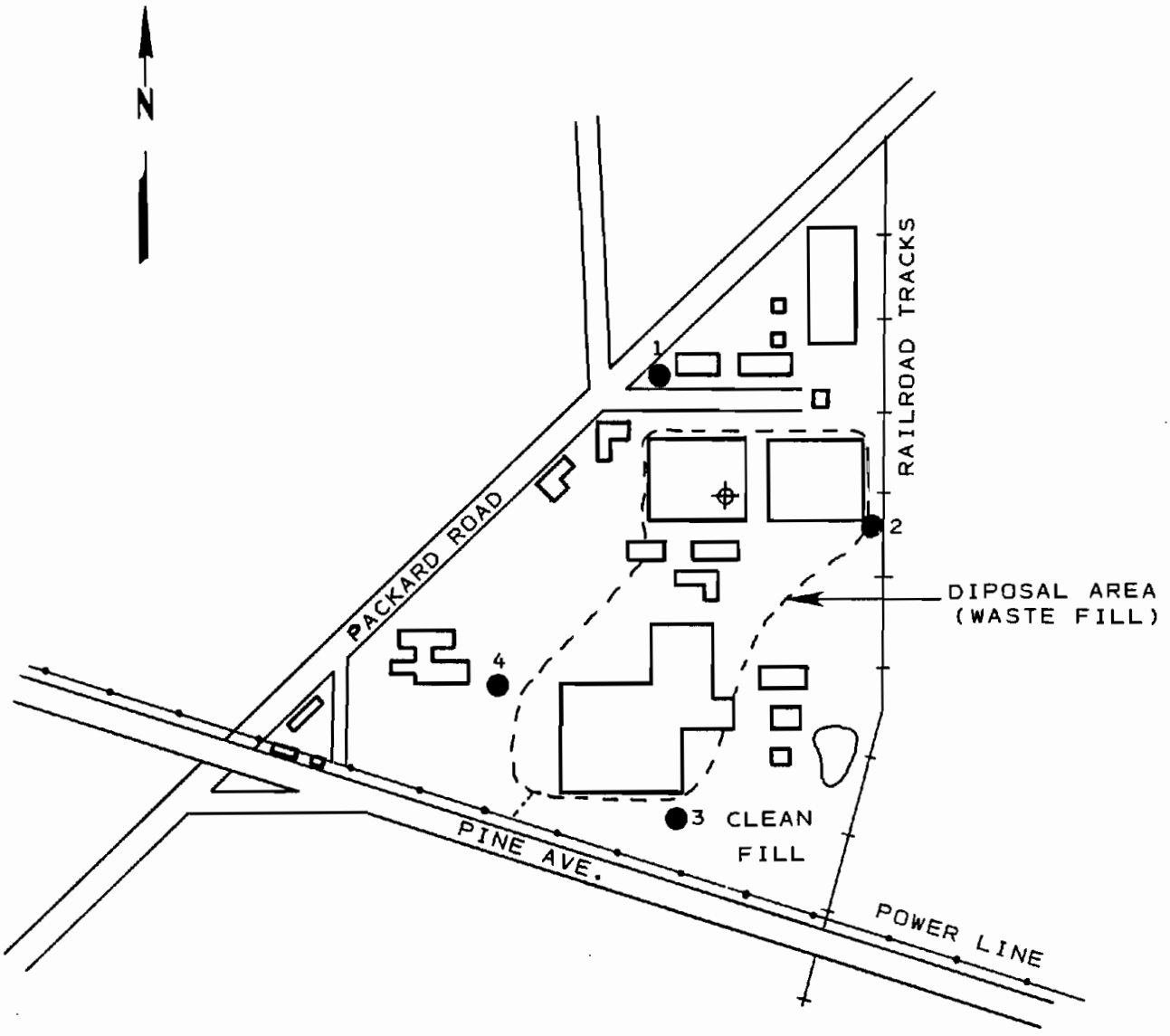
ENGINEERING-SCIENCE, INC.
IN ASSOCIATION WITH
DAMES & MOORE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
AIRCO SPEER CARBON GRAPHITE

FIGURE iv-1

REFERENCE: U.S.G.S. 7.5' Topographic Map
Niagara Falls, NY-ONT. (1980) and
Tonawanda West, NY (1980) Quadrangles



NOT TO SCALE

EXPLANATION:

● 1 U.S.G.S. TEST BORING

⌖ POSSIBLE FORMER SPRING

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

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

PLOT PLAN
AIRCO SPEAR CARBON

FIGURE iv-2

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

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980201263

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Airco Speer Carbon-Graphite	4861 Packard Road

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

09 COORDINATES LATITUDE	LONGITUDE
43° 05' 44"	79° 00' 28"

10 DIRECTIONS TO SITE (Starting from nearest public road)
The Airco Speer Carbon-Graphite site is located at the intersection of Packard and Pine St. in Niagara Falls, New York

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
International Graphite and Electrode	

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
			( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Airco Speer Carbon-Graphite	4861 Packard St.

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Niagara Falls	NY	14302	(716) 285-[illegible]

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 DATE 11 / 17 / 81 (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: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION		
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	1930 (BEGINNING YEAR)	1954 (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Approximately 56,000 cubic yards of carbonaceous granules and dust, bricks, concrete and sand, 2500 gal of linseed and coal tar [illegible] of asbestos were disposed in an onsite landfill

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Impervious landfill cover (buildings, concrete, asphalt) precludes surface water contamination. There is evidence of soil contamination. There is no direct evidence of groundwater contamination although the water table of the underlying perched aquifer is high.

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
John A. Botts	Engineering-Science (ES)	(703) 57[illegible]

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
John A. Botts		ES	(703) [illegible]	4 / 14 / 82 (MONTH DAY YEAR)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980201263

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS: 86000
CUBIC YARDS:
NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	2500	gal.	linseed oil and coal tar
SOL	SOLVENTS			
PSD	PESTICIDES			~86,000 cubic yards of
OCC	OTHER ORGANIC CHEMICALS			carbonaceous granules and
IOC	INORGANIC CHEMICALS			dust, bricks, concrete blocks,
ACD	ACIDS			and sand
BAS	BASES			7 tons asbestos
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
OCC	Benzene	71-43-2	Unknown	unknown	
OCC	Pyrene	129-0-00		8-32.0	mg/l
OCC	Fluoranthene	206-44-0		9.1-34.0	
OCC	Benzo(a)anthracene	56-55-3		7.1-24.0	in soil
OCC	Benzo(a) pyrene	50-32-8		7.9-99.0	samples
OCC	3,4-Benzofluoranthene	205-99-2		13-43.0	adjacent
OCC	Chrysene	218-01-9		5.6-23.0	to landfill
OCC	Toluene	108-88-3		unknown	
OCC	Anthracene	120-12-7		2.0	
OCC	Benzo(ghi) perylene	191-24-2		4.6-13.0	
OCC	Naphthalene	91-20-3		unknown	
OCC	Phenanthrene	85-01-8		4.0-19.0	
OCC	Dibenzo(a,h)anthracene	53-70-3		12.0	
OCC	Indeno(1,2,3-cd) pyrene	193-39-5		30.0-61.0	
OCC	cresol	1319-77-3		unknown	
OCC	phenol	108-95-2		unknown	

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)

1. USGS Study Draft Report, 1983
2. Interview with Ron Spears, Environmental Control for Arco, 3/21/85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980201263

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

Potential source of groundwater contamination from PAH-contaminated soils. Also, landfill contains coal tar which contains priority pollutants.

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

Unknown

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

Unknown

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

Unknown

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

Unknown

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: 1982) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 2 (Acres) — 04 NARRATIVE DESCRIPTION

USGS survey found PAHs in ~~wells~~ soil samples.

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

Unknown

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

Unknown

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

Unknown

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	0980201263

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

1. USGS Study Draft Report, 1983
2. ES and D&M Site Inspection 3/21/85

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980 [illegible]

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
AIRCO Speer Carbon - Graphite	4861 PACKARD Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
NIAGARA FAlls	NY	14302	NIAGARA	063	36

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
43° 05' 44"	79° 00' 28"	☒ A. PRIVATE ☐ B. FEDERAL ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION	
3 / 21 / 85	☐ ACTIVE ☒ INACTIVE	1930 (BEGINNING YEAR) / 1954 (ENDING YEAR)	___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR Engineering - Science (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ______ (Name of firm)

☐ E. STATE ☒ F. STATE CONTRACTOR Dames & Moore (Name of firm) ☐ G. OTHER ______ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
S. Robert Steele, II	Environmental Scientist	ES	(703) [illegible]
09 OTHER INSPECTORS	**10 TITLE**	**11 ORGANIZATION**	**12 TELEPHONE NO.**
Eileen Gilligan	Geologist	D&M	(515) [illegible]
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Ron Spears	Director, Environmental Control	4861 Packard Rd. Niagara, NY 14302	(716) 27[illegible]
			( )
Herbert Feder	mnger Process & QC	"	( ) "
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	1:30 PM	Cold, Clear

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
John A. Botts	Engineering - Science (ES)	([illegible])

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (MONTH DAY YEAR)
S. Robert Steele, II		ES	703-591-7575	4 / 15 / 85

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0980201263

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS 86,000
CUBIC YARDS
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	2500	gal.	linseed oil and coal tar
SOL	SOLVENTS			
PSD	PESTICIDES			~86,000 cubic yards of carbonaceous granules and dust, bricks, concrete block and sand
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			7 tons asbestos
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
OCC	Benzene	71-43-2	Unknown	unknown	
OCC	Pyrene	129-0-00		8-32.0	mg/l
OCC	Fluoranthene	206-44-0		9.1-34.0	
OCC	Benzo(a)anthracene	56-55-3		7.1-24.0	in soil
OCC	Benzo(a) pyrene	50-32-8		7.9-49.0	Samples
OCC	3,4-Benzofluoranthene	205-99-2		13-43.0	dissolved
OCC	Chrysene	218-01-9		5.6-23.0	in water
OCC	Toluene	108-88-3		unknown	
OCC	Anthracene	120-12-7		2.0	
OCC	Benzo(ghi) perylene	191-24-2		4.6-13.0	
OCC	Naphthalene	91-20-3		Unknown	
OCC	Phenanthrene	85-01-8		4.0-19.0	
OCC	Dibenzo(a,h)anthracene	53-70-3		12.0	
OCC	Indeno(1,2,3-cd) pyrene	193-39-5		30.0-61.0	
OCC	cresol	1319-77-3		Unknown	
OCC	phenol	108-95-2		unknown	

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 analyses, reports)

1. USGS Study Draft Report, 1985
2. Interview with Ron Spears, Environmental Control for Airco, 3/21/85

EPA

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

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER: D[illegible]

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION | 02 ☐ OBSERVED (DATE: _____) | ☑ POTENTIAL | ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Potential source of groundwater contamination from PAH-contaminated soils. Also, landfill contains coal tar which contains priority pollutants.

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

Unknown

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

Unknown

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

Unknown

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

Unknown

01 ☑ F. CONTAMINATION OF SOIL | 02 ☑ OBSERVED (DATE: [illegible]) | ☐ POTENTIAL | ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 2 (Acres) | 04 NARRATIVE DESCRIPTION

USGS survey found PAHs in soil samples.

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

Unknown

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

Unknown

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

Unknown

EPA

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

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER: 0[illegible]1753

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

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

UNKNOWN

III. TOTAL POPULATION POTENTIALLY AFFECTED:

IV. COMMENTS

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

1. USGS Study, Fact Report, 1983
2. [illegible] 1/85

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0980501262

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		2/7/84	2/7/87	Facility air pollution control
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL		
☐ G. LANDFARM		
☒ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. 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

- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE

2 (Acres)

07 COMMENTS

Carbonaceous material, linseed oil, coal tar, asbestos and construction debris were disposed in an open graded landfill. Later, the landfill was covered by newly constructed buildings and asphalt.

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.

The fill was disposed in an unlined area. Newly constructed buildings and asphalt cover acts as an impervious barrier to surface runoff and infiltration.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Landfill is covered by buildings and asphalt.

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

1. ES and D&M site inspection, 3/1/85
2. NYSDEC Hazardous Waste Questionnaire, 1978
3. Letter from Arco Spar to NYSDEC, 9/28/84

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D980201263

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. Upgradient (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 1000

03 DISTANCE TO NEAREST DRINKING WATER WELL N/A (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
~10 (ft)	unknown	~100 (ft)	unknown (gpd)	☐ YES ☒ NO

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

several industrial wells 1½ miles south of site

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

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Gill Creek	☐	1.1 (mi)
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. 5902 NO. OF PERSONS	B. 36,756 NO. OF PERSONS	C. 72,452 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION 0.2 (mi)

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

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.01 (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)

Residential area of multi-family dwellings (100 units) near site - Otherwise industrial area

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0980201263

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one) clay

X 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) LOCKPORT DOLOMITE

☐ 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 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	1.0 %	S	1.0 %

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. >2 (mi)	B. >1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

MIGRATORY BIRDS >1 (mi)

ENDANGERED SPECIES: AQUILA CHRYSAETOS, HALIAEETUS LEUCOCEPH, FALCO PEREGRINES

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. 0.0 (mi)	B. 0.2 (mi)	C. >2 (mi)	D. >1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is in area of completely modified - by man topography adjacent to large CECOS landfill and otherwise surrounded by highway

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

ES and O&M site inspection, 3/21/85
USGS topo sheets
NYSDEC files

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D98[illegible]1263

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	HNU meter readings were taken during the site inspection and all measurements were less than 1 ppm

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☑ GROUND ☐ AERIAL

02 IN CUSTODY OF Engineering-Science (ES)
(Name of organization or individual)

03 MAPS ☑ YES ☐ NO

04 LOCATION OF MAPS ES

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

ES and D&M, site inspection, 3/21/85

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	D980201265

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER		
Airco Speer Carbon-Graphite			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
4861 Packard Rd			
05 CITY	06 STATE	07 ZIP CODE	
Niagara Falls	NY	14302	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE	

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER		
BOC International			
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
Unknown			
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
12 CITY	13 STATE	14 ZIP CODE	

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

01 NAME	02 D+B NUMBER		
Speer Carbon Co.			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
Same as above			
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
Exelon Company			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
Same as above			
05 CITY	06 STATE	07 ZIP CODE	
01 NAME	02 D+B NUMBER		
International Graphite & Electrode Co.			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
Same as above			
05 CITY	06 STATE	07 ZIP CODE	

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

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

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

Interagency task Force on Hazardous Waste Survey, 1978

Niagara County Health Department, Site Profile Report, 1981

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	0980251263

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Airco Speer Carbon-Graphite	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4861 Packard Road	

05 CITY	06 STATE	07 ZIP CODE
Niagara Falls	NY	14302

08 YEARS OF OPERATION	09 NAME OF OWNER
1978-present	

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
BOC International	

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

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
Speer Carbon Company	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1930-1978	

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER
Exelon Company	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1930-1932	

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
International Graphite & Electrode Co.	

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

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1920-1930 (Est)	

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)

Interagency Task Force on Hazardous Wastes Survey, 1978

Niagara County Health Department, Site Profile Report, 1981

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D98SE01263

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

Since 1954, all wastes generated at the Airco-Spear Carbon-Graphite plant are contract hauler off-site for disposal.

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)

Interagency TASK Force ON Hazardous WASTES Survey, 1978
Interview of Airco Spear Carbon Graphite employees, 3/21/85

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: 098020263

II. PAST RESPONSE ACTIVITIES

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

EPA

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

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D980204263

II PAST RESPONSE ACTIVITIES (Continued)

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

01 ☒ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
fill area now has numerous factory bldgs on it.

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

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

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

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

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

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

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

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE 1982 — 03 AGENCY _____
04 DESCRIPTION
Completely fenced, locked gate & guard

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

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
NONE

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

ES and DEM site inspection, 3/21/85

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NY	080201263

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☑ 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)

NYS DEC, Environmental Enforcement Division

NYS Attorney General Office

SECTION VI

ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

ASSESSMENT OF DATA ADEQUACY

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

PHASE II WORK PLAN

Objectives

The objectives of the Phase II activities are:

- To collect additional field data necessary to identify the occurrence and extent of contamination and to determine if any imminent health hazard exists.
- To perform a conceptual evaluation of remedial alternatives and estimate budgetary costs for the most likely alternative.
- To prepare a site investigation report including final HRS score.

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

Groundwater - A groundwater monitoring system consisting of 4 wells is recommended. Borings will be drilled to a maximum depth of 25 feet; soil samples will be taken every 5 feet or more frequently if a change in soil lithology is encountered. The wells will be placed in the aquifer of concern and constructed of 2" PVC pipe. The groundwater samples will be analyzed for priority pollutants. In addition, sieve and hydrometer analyses will be performed on representative samples of the subsurface soils. Finally, an in-situ permeability test will be performed on each well.

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

TASK DESCRIPTION

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

COST ESTIMATE

The estimated man-hours required for the Phase II project are presented in Table VI-3 and the estimated project costs by tasks are presented in Table VI-4. The estimate total cost for this project is $38,875.

TABLE VI-1

ASSESSMENT OF DATA ADEQUACY

HRS Data Requirement	Comments on Data
Observed Release	
Groundwater	Insufficient data for HRS score
Surface Water	Insufficient data for HRS score
Air	Adequate data for HRS score
Route Characteristics	
Groundwater	Adequate data for HRS score
Surface Water	Adequate data for HRS score
Air	Not applicable, no observed release
Containment	Adequate data for HRS score
Waste Characteristics	Insufficient data for HRS score, incomplete information on hazardous waste quantity
Targets	Adequate data for HRS score
Observed Incident	Adequate data for HRS score
Accessibility	Adequate data for HRS score

TABLE VI-2

PHASE II WORK PLAN - TASK DESCRIPTION

Tasks		Description of Task
II-A	Update Work Plan	Review the information in the Phase I report, conduct a site visit, and revise the Phase II work plan.
II-B	Conduct Geophysical Studies	No further studies necessary.
II-C	Conduct Boring/Install Monitoring Wells	Install 2 upgradient and 2 downgradient wells. The borings will be drilled to a depth of 10 to 25 feet as determined during drilling. Wells will be constructed of 2" PVC pipe.
II-D	Construct Test Pits/Auger Holes	No further construction of test pits/auger holes necessary.
II-E	Perform Sampling & Analysis	
	Soil samples from borings	Soil samples collected at 5 ft. intervals during drilling and at changes in subsurface lithologies. Perform one grain size analysis and permeability test per subsurface lithology change.
	Soil samples from surface soils	No further studies necessary.
	Soil samples from auger holes/test pits	No further studies necessary.
	Sediment samples from surface water	No further studies necessary
	Groundwater samples	4 groundwater samples are to be collected and analyzed for priority pollutants (pesticides not included).
	Surface water samples	No further studies necessary.

TABLE VI-2 (Continued)

PHASE II WORK PLAN - TASK DESCRIPTION

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

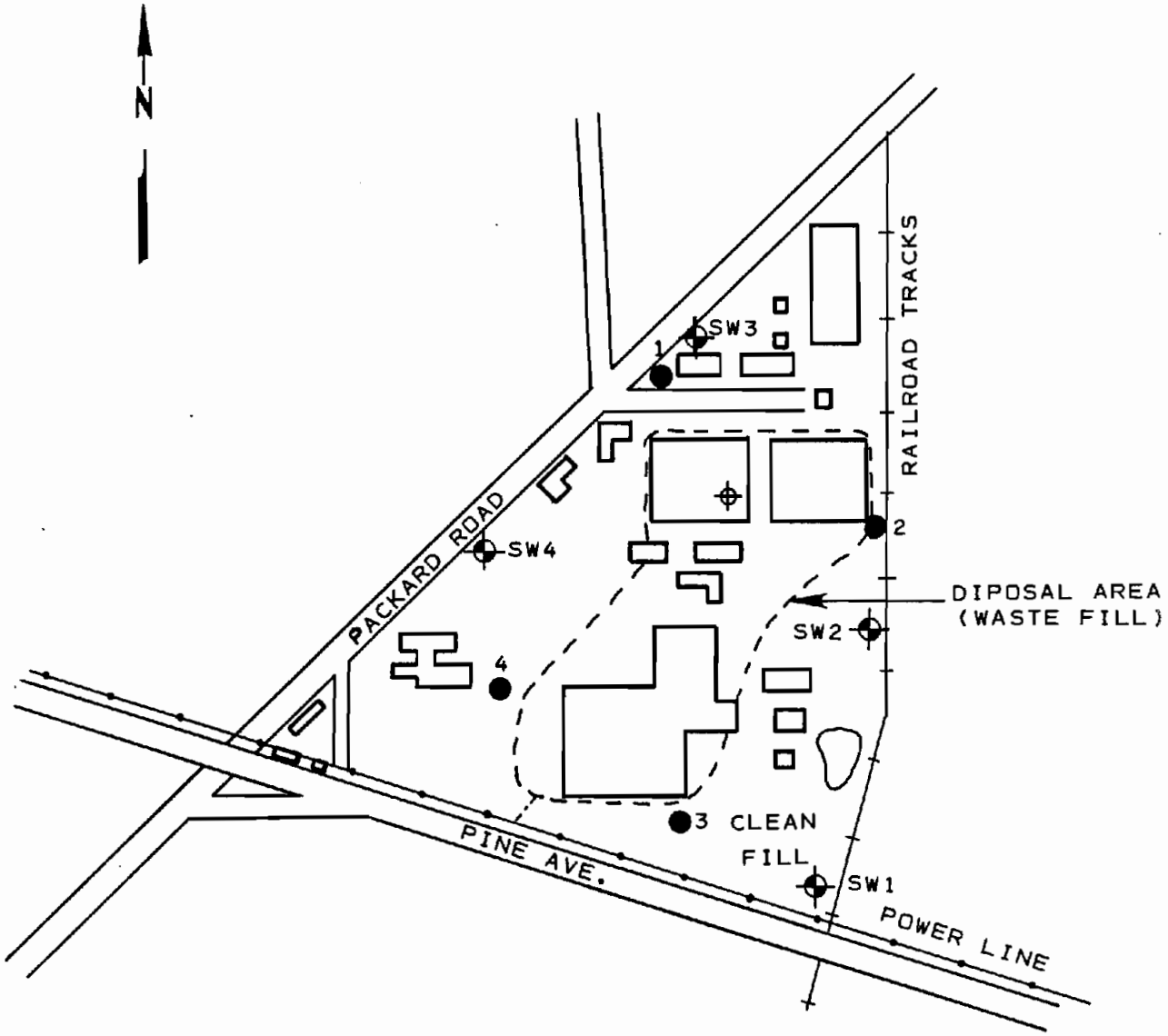
TABLE VI-3
PERSONNEL RESOURCES BY TASK
PHASE II HRS SITE INVESTIGATION (SITE: AIRCO SPEER)

TASK DESCRIPTION	TEAM MEMBERS, MANHOURS													
	PIC	TRB	PM	DPM	PCM	GRM	HSM	FTL	FT	RAIL	RMAT	SS	TOTAL HOURS	TOTAL $
II-A UPDATE WORK PLAN	1	1	8	4		4	4	16		8		28	74	1144.1
II-B CONDUCT GEOPHYSICAL STUDIES													0	0
II-C CONDUCT BORING/INSTALL MONITORING WELLS			8	16		4	4	12	60			24	128	1746.12
II-D CONSTRUCT TEST PITS/AUGER HOLES													0	0
II-E PERFORM SAMPLING AND ANALYSIS														
SOIL SAMPLES FROM BORINGS			4	4		2	2	8	16			8	44	636.42
SOIL SAMPLES FROM SURFACE SOILS													0	0
SOIL SAMPLES FROM TEST PITS AND AUGER HOLES													0	0
SEDIMENT SAMPLES FROM SURFACE WATER													0	0
GROUND-WATER SAMPLES			4	2		1	1	10	28			8	46	629.61
SURFACE WATER SAMPLES													0	0
AIR SAMPLES									4				4	37.2
WASTE SAMPLES													0	0
II-F CALCULATE FINAL HRS			4	4				4	4	2		4	22	394.56
II-G CONDUCT SITE ASSESSMENT	2	2	8	2				24	32	12	40	50	172	2217.92
II-H PROJECT MANAGEMENT	2		6	2	3	4	4					12	33	529.86
TOTALS	5	3	42	34	3	15	15	74	136	22	40	134	523	7334.91

TABLE VI-4
COST ESTIMATE BREAKDOWN BY TASK
PHASE II HRS SITE INVESTIGATION (SITE: AIRCO SPEER)

TASK DESCRIPTION	DIRECT LABOR HOURS	DIRECT LABOR COST	OTHER DIRECT COSTS (ODC), $ LAB ANALYSIS	TRAVEL AND SUBSISTANCE	SUPPLIES	EQUIP. CHARGES	SUBCON-TRACTORS	MISC.	SUBTOTAL ODC	TOTAL ($)
II-A UPDATE WORK PLAN	74	$1,144.10		$200.00	$50.00	$50.00		$50.00	$350.00	$1,494.10
II-B CONDUCT GEOPHYSICAL STUDIES	0	$0.00							$0.00	$0.00
II-C CONDUCT BORING/INSTALL MONITORING WELLS	128	$1,746.12		$350.00	$350.00	$900.00	$5,320.00		$7,720.00	$9,466.12
II-D CONSTRUCT TEST PITS/AUGER HOLES	0	$0.00							$0.00	$0.00
II-E PERFORM SAMPLING AND ANALYSIS										
SOIL SAMPLES FROM BORINGS	44	$636.42			$100.00	$100.00			$200.00	$836.42
SOIL SAMPLES FROM SURFACE SOILS	0	$0.00							$0.00	$0.00
SOIL SAMPLES FROM TEST PITS AND AUGER HOLES	0	$0.00							$0.00	$0.00
SEDIMENT SAMPLES FROM SURFACE WATER	0	$0.00							$0.00	$0.00
GROUND-WATER SAMPLES	46	$629.61	$4,800.00	$300.00	$50.00	$150.00		$50.00	$5,350.00	$5,979.61
SURFACE WATER SAMPLES	0	$0.00							$0.00	$0.00
AIR SAMPLES	4	$37.20				$200.00			$200.00	$237.20
WASTE SAMPLES	0	$0.00							$0.00	$0.00
II-F CALCULATE FINAL HRS	22	$394.56				$150.00			$150.00	$544.56
II-G CONDUCT SITE ASSESSMENT	172	$2,217.02			$750.00	$300.00		$75.00	$1,125.00	$3,342.02
II-H PROJECT MANAGEMENT	33	$529.88	$375.00	$300.00	$150.00	$50.00		$50.00	$925.00	$1,454.88
TOTALS	523	$7,334.91	$5,175.00	$1,350.00	$1,450.00	$1,900.00	$5,320.00	$225.00	$16,020.00	$23,354.91

OVERHEAD=	$10,474.25
SUBTOTAL=	$33,829.16
FEE=	$2,045.91
TOTAL PROJECT COST=	$35,875.07



NOT TO SCALE

EXPLANATION:

- ● 1 — U.S.G.S. TEST BORING
- ⊕ — POSSIBLE FORMER SPRING
- ⊕ SW1 — PROPOSED WELL LOCATION

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

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

PROPOSED SAMPLING LOCATIONS
AIRCO SPEAR CARBON

FIGURE VI-1

APPENDIX A

REFERENCES

Sources Contacted

Documentation

SOURCES CONTACTED FOR

AIRCO SPEER CARBON-GRAPHITE INVESTIGATION

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

SOURCES CONTACTED FOR
AIRCO SPEER CARBON-GRAPHITE INVESTIGATION

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

SOURCES CONTACTED FOR

AIRCO SPEER CARBON-GRAPHITE INVESTIGATION

CONTACT	DATE CONTACTED	PERSON CONTACTED	TELEPHONE NUMBER	LOCATION	INFORMATION COLLECTED
NYSDEC - Regional Attorney	1/10/85	Peter J. Burke	(716) 847-4551	600 Delaware Ave. Buffalo, NY 14202	Reviewed list of sites to determine if legal action has occurred in the past, is in progress, and/or is scheduled in the near future.
NYS Dept. of Health, Buffalo Region, Public Health Engineering	1/8/85	Lou Violanti	(716) 847-4500	584 Delaware Ave. Buffalo, NY 14202	Collected information from site files.
NYSDEC - Region 9 Division of Fish and Wildlife	1/10/85 & 1/11/85	Mike Wilkinson Jim Sneider	(716) 847-4600 (716) 847-4600	600 Delaware Ave. Buffalo, NY 14202	Collected information from site files
Niagara County Dept. of Health	1/9/85	Mike Hopkins	(716) 284-3124	Tenth & East Falls Street Niagara Falls, NY 14302	Collected information from Niagara County site files. Obtained additional information through interview.
Niagara County Dept. of Planning and Industrial Development	2/22/85	Dave Urso	(716) 439-6033	59 Park Ave. Lockport, NY 14094	Obtained 1980 U.S. Census Data.
Airco Speer Carbon-Graphite	3/21/85	Herbert Feder	(716) 285-9381	4861 Packard Rd. Niagara Falls, NY 14302	Conducted site inspection and reviewed past waste management practices.
Airco Speer Carbon-Graphite	4/16/85	Ron Spears	(716) 285-9381	4861 Packard Rd. Niagara Falls, NY 14302	Interview regarding on-site disposal of wastes

REFERENCES

1. Airco Speer Carbon-Graphite, S. Danskin, Letter to NYSDEC, March 27, 1981.

2. Empire Soils Investigation Logs, 1977.

3. ES and D&M Site Inspection, Observations Recorded on USEPA Forms, March/April, 1985.

4. Freeze, R. A., and Cherry, J. A., Groundwater, 1985.

5. Hopkins, M., Niagara County Health Department, Comments in Phase I Report, 8/85 (included in report).

6. Johnston, Richard, H., Groundwater in the Niagara Falls Area of New York, 1964.

7. NYS Atlas of Community Water System Sources, NYS Department of Health, 1982.

8. NYS Museum and Science Service Bedrock Geology Map, Map and Chart Series, No. 15 (Compiled by Richard, L. V., and Fisher, D. W.).

9. NYS Wetlands Maps (Not Provided in Appendix).

10. NYSDEC, Hazardous Waste Questionnaire, Interagency Task Force On Hazardous Waste, 1978.

11. NYSDEC, Registry Sheet, 12/83.

12. NYSDEC, Region 9, Division of Fish and Wildlife Files.

13. NCHD Site Profile, 1981.

14. Rochester Drilling Company Logs, 1977.

15. US Census Data, 1980.

16. US Department of Commerce. "Climatic Atlas of the United States", 1979.

17. US Department of Commerce Technical Paper No. 40. "Rainfall Frequency Atlas of the United States", 19863.

18. USGS Topographic Maps: Niagara Falls, NY-ONT and Tonawanda West, NY Quadrangles (Provided in Report).

19. USGS, Draft and Final Reports, Preliminary Evaluation of Chemical Migration to Groundwater and the Niagara River from Selected Waste Disposal Sites, 1983, 1985.

REF-1

4861 PACKARD ROAD, NIAGARA FALLS, NEW YORK 14302 • TELEPHONE. 716-285 9381

March 27, 1981

Mr. John Taggert
New York State Department of Environmental
Conservation
584 Delaware Avenue
Buffalo, N. Y. 14202

Subject: Disposal of Sedimentation Basin Sludge on Airco Carbon Property

Dear Mr. Taggert:

Enclosed please find two analyses of a sludge sample taken from a sedimentation basin located on Airco Carbon property. The source of the sludge is primarily cooling water used in the graphitization process, with some flow contribution from roof drainage.

It is proposed that the sludge, after removal from the sedimentation basin, be disposed of at a low spot on Airco Carbon property. Any water draining from the proposed disposal site will enter the city sewer system. At a later date the sludge will be used to fill voids in a ramp to be constructed behind bake plants 3 and 4. The proposed disposal site and ramp location are shown on the enclosed map. This disposal method is thought to be safe and adequate based on the non-toxic and non-corrosive nature of the sludge.

If you have any questions or comments related to this disposal procedure please contact me.

Sincerely,

Scott C Danskin

Scott C. Danskin
Pollution Control Engineer

SCD:la

Enclosures: -3

cc.

DIVISION
R&D

FROM:

H. Feder
Niagara Falls

A. Silwanowicz
Murray Hill

Date March 17, 1981

SUBJECT: Niagara Falls Pond Sludge

Reference to your letter dated

The submitted pond sludge sample was subjected to the EPA extraction procedure and corrosivity test. The results below indicate that the sludge is neither toxic nor corrosive.

Contaminants	Concentration (mg/l)	EPA Maximum Permissible Concentration (mg/l)
Arsenic	<0.01	5.0
Barium	<0.1	100.0
Cadmium	<0.1	1.0
Chromium	<0.1	5.0
Lead	0.12	5.0
Mercury	<0.001	0.2
Selenium	<0.01	1.0
Silver	<0.1	5.0
Corrosivity rate	0.0547 inches/yr	0.25 inches/yr

A. Silwanowicz

A. Silwanowicz

AS:ma

cc: J. A. DeHuff
P. Krueger
S. Majumdar
C. Bussert

AIRCO TEST NUMBER: 081585
MATERIAL: Sludge from Sedimentation Basin
DATE RECEIVED: 9/26/80

TEST	WHOLE SAMPLE BASIS	ASH BASIS
% Ash	36.9	
% Carbon	63.1	
% Minerals (Soluble in HCl)	10.8	2.92
% Sand (Soluble in HF)	12.8	
(Insoluble in HF)	13.3	
% Sawdust	NIL	
% Sulphur	0.37	0.6
% H_2O	66.2	
% Solids (After Evaporation)	33.8	
Bulk Density (Wet; lbs/ft^3)	67.8	

SCREEN ANALYSIS

SIEVE	%
8	0.1
10	0.1
20	1.6
35	0.6
65	0.8
115	4.8
200	20.0
325	25.4
PAN	46.6
	100.0%

REF-2

EMPIRE SOILS INVESTIGATION LOGS, 1977

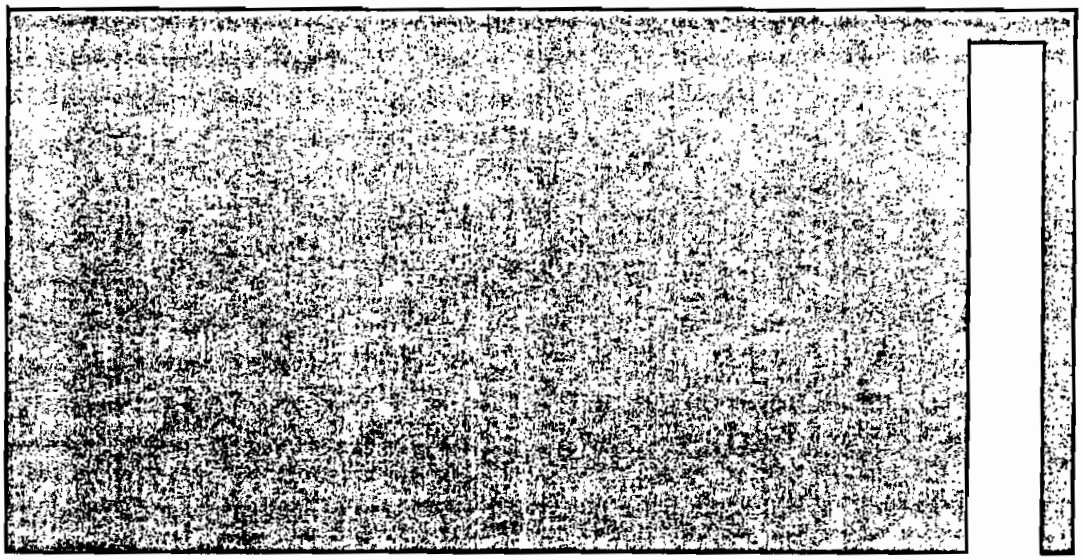
This data source was used during the Phase I study and was obtained from reference material used by Dames & Moore's geology staff. A thorough review of Phase I records has not found this information and, therefore, it can not be submitted herein. Missing information will need to be found or replaced with other relevant information during the Phase II effort.

REF-3

ES AND D&M SITE INSPECTION

Observations made during the ES and D&M Site Inspections are provided on US EPA Forms 2070-12 and 2070-13. Field notes were used to complete these EPA Forms, and are not included herein.

REF – 4



R. Allan Freeze

Department of Geological Sciences
University of British Columbia
Vancouver, British Columbia

John A. Cherry

Department of Earth Sciences
University of Waterloo
Waterloo, Ontario

GROUNDWATER

Prentice-Hall, Inc.
Englewood Cliffs, New Jersey 07632

Table 2.2 Range of Values of Hydraulic Conductivity and Permeability

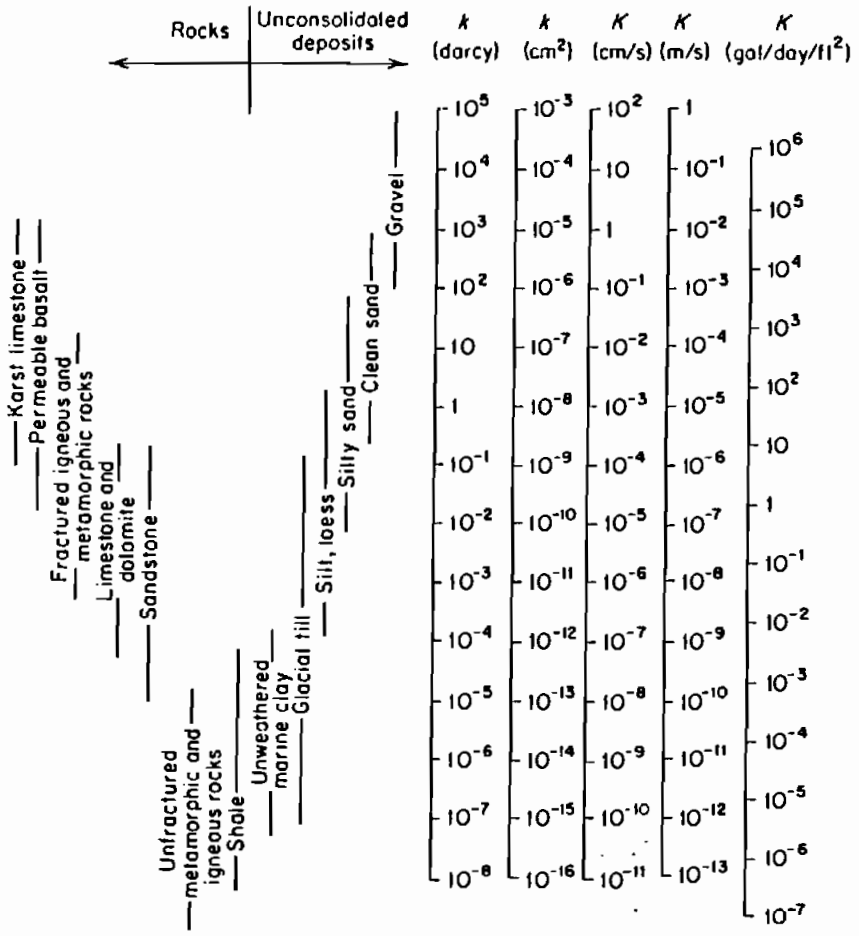


Table 2.3 Conversion Factors for Permeability and Hydraulic Conductivity Units

	Permeability, k*			Hydraulic conductivity, K		
	cm^2	ft^2	darcy	m/s	ft/s	gal/day/ft^2
cm^2	1	1.08×10^{-3}	1.01×10^{8}	9.80×10^{2}	3.22×10^{3}	1.85×10^{9}
ft^2	9.29×10^{2}	1	9.42×10^{10}	9.11×10^{5}	2.99×10^{6}	1.71×10^{12}
darcy	9.87×10^{-9}	1.06×10^{-11}	1	9.66×10^{-6}	3.17×10^{-5}	1.82×10^{1}
m/s	1.02×10^{-3}	1.10×10^{-6}	1.04×10^{5}	1	3.28	2.12×10^{6}
ft/s	3.11×10^{-4}	3.35×10^{-7}	3.15×10^{4}	3.05×10^{-1}	1	5.74×10^{5}
gal/day/ft^2	5.42×10^{-10}	5.83×10^{-13}	5.49×10^{-2}	4.72×10^{-7}	1.74×10^{-6}	1

*To obtain k in ft^2, multiply k in cm^2 by 1.08×10^{-3}.

REF-5

INTERVIEW FORM

INTERVIEWEE/CODE Mike Hopkins /

TITLE - POSITION Niagara County Health Department

ADDRESS

CITY STATE ZIP

PHONE ( ) RESIDENCE PERIOD TO

LOCATION INTERVIEWER

DATE/TIME 1985 Report Review

SUBJECT: Airco Speer Carbon Site

REMARKS: Corrections made in report during NCHD review - Summarized below:

- Industrial water supply well located (SW) 2.25 miles from Airco Speer Carbon site

- Industrial well water is used for cooling water only

- Estimated population with contact to groundwater is 10 workers (maximum

I agree with the above interview summary:

Signature/Title:

Comments:

GROUND WATER IN THE NIAGARA FALLS AREA, NEW YORK

With Emphasis on the Water-Bearing Characteristics of the Bedrock

BY
RICHARD H. JOHNSTON
GEOLOGIST
U.S. GEOLOGICAL SURVEY

STATE OF NEW YORK
CONSERVATION DEPARTMENT
WATER RESOURCES COMMISSION

BULLETIN GW-53
1964

New York State Atlas of Community Water System Sources 1982

NEW YORK STATE DEPARTMENT OF HEALTH

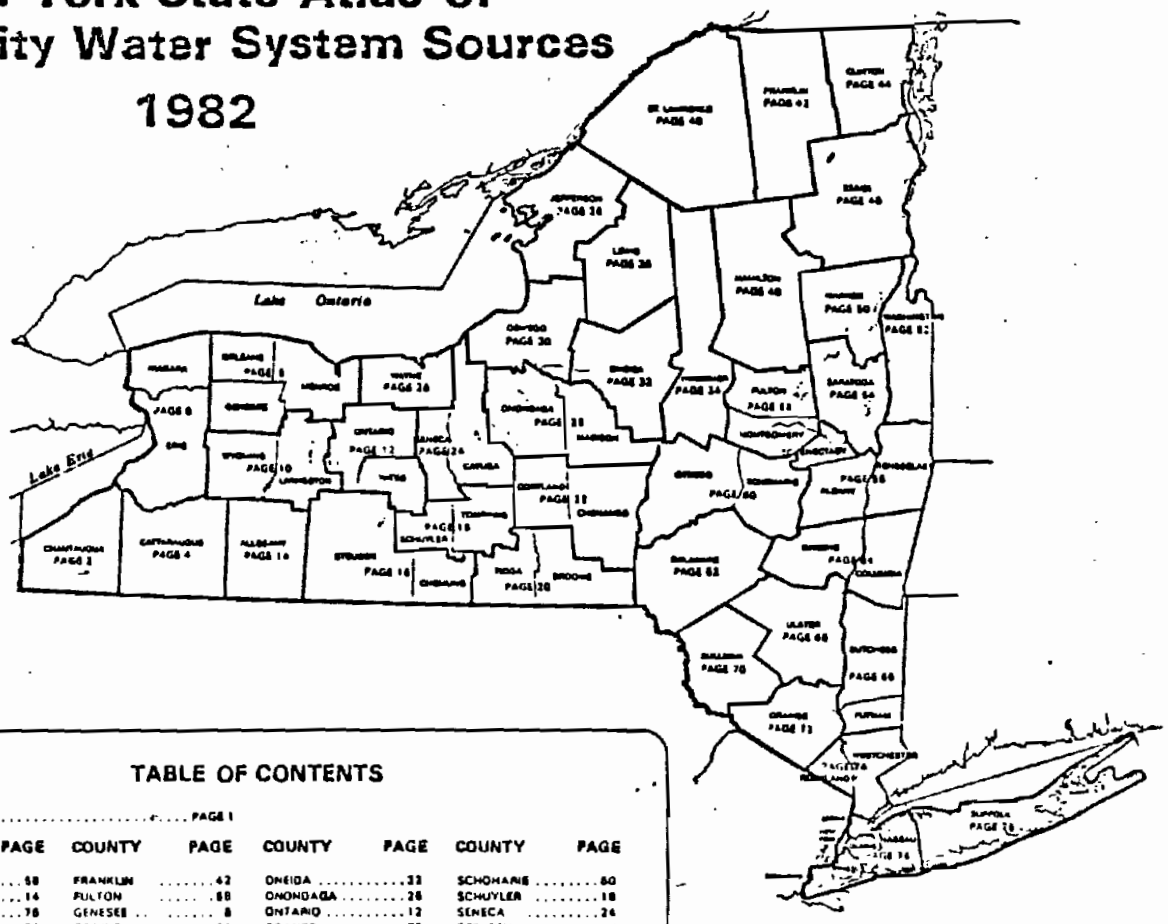


TABLE OF CONTENTS

LEGEND

BOUNDARIES AND PLACES

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

CLASSIFICATION OF POPULATED PLACES

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

TRANSPORTATION

Highways
Divided Highways
Full Control of Access
Partial or No Control of Access
Undivided Highway
Interchange
Touring Route (State U.S., Interstate or State Parkway)
Touring Route Markers
State U.S. Interstate

Railroads
Operating Line
Service Discontinued
Operator
Owner (If Other than Operator)
Company Having Trackage Rights

Airports (Open to the Public, Military)
Runway under 4000'
Runway over 4000'

Rest Areas
Food Gas Rest Rooms
Rest Rooms
Gas Rest Rooms
Parking Only

RECREATION FACILITIES

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

REF-7

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

BUREAU OF PUBLIC WATER SUPPLY PROTECTION

ERIE and NIAGARA COUNTIES

GEOLOGIC MAP OF NEW YORK

1970

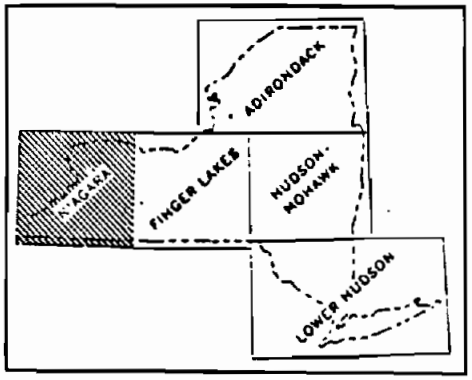
Niagara Sheet

Scale 1:250,000

5 0 5 10 15 Statute Miles 20

5 0 5 10 15 20 25 Kilometers 30

CONTOUR INTERVAL 100 FEET



Topographic Base from AMS Quadrangles 1:250,000 scale.

NEW YORK STATE MUSEUM AND SCIENCE SERVICE

MAP AND CHART SERIES NO. 15

COMPILED AND EDITED BY

Lawrence V. Rickard

Donald W. Fisher

March, 1970

REF-9

NYS WETLANDS MAPS

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

REF-10

INTERAGENCY TASK FORCE ON HAZARDOUS WASTES
M.P.O. Box 561
Niagara Falls, New York 14302
(716) 285-3057

I. General Information

* 1. Company Name: Airco Speer Carbon-Graphite

Mailing Address: 4861 Packard Road, Niagara Falls, NY 14302
Street / City / State / Zip

Present Plant Location: [x] Same as Above

Street / City / State / Zip

2. If Subsidiary or Division, Name of Parent Company: Airco, Inc., Subsidiary of BOC

3. Person Responsible for Present Plant Operations: Joseph J. Stefanelli
Name

Plant Manager — 716-285-9381
Title / Telephone

4. Person Answering this Questionnaire: Above
Name

Title / Telephone

II. Company History

* 1. Date Company Founded: May 29, 1899 (Speer Carbon Co.)

Date and State of Incorporation: Delaware

Date Company Began Operations in Erie or Niagara County: 1930

* 2. Other Company Names since 1930 (specify time periods): International Graphite & Electrode Corp. (IGE)

3. Other Plant Locations in Erie or Niagara County since 1930 (specify locations and time periods): None

*NOTE4. Names of Companies Acquired which have Operated Plants in Erie or Niagara County since 1930 (specify name of company, date of acquisition, location of plant, and periods of operation): Local plant (IGE) purchased 1930 and owned 50% by Speer Carbon, 50% by Exelon. Speer Carbon became 100% owner 1932. Speer Carbon became subsidiary of Airco 8-31-61 and a division 4-30-62. Airco became a subsidiary of BOC Int., a Delaware Corp., 5-9-78.

III. Company Personnel

1. Plant Managers, 1930 to present

a. 1930 to 1942, A. Robinson, Superintendent, was the top official. Deceased

b. 1942 to 1951, W. Harvey. Resigned. Whereabouts unknown.

c. 1951 to 1968, F. Stauffer, Retired. 223 83rd Street, Niagara Falls, NY 716-283-3555

d. 1968 to September, 1974, R. L. O'Connor. Resigned. Torrington, Connecticut 203-489-9254

e. September, 1974 to August, 1977, H. A. Ridgway. Transferred. 800 Theresia Street, St. Marys, Pennsylvania 15857 814-781-2375

JAN 14Y

f. August, 1977 to ~~present~~, J. J. Stefanelli. See 1.1 and 3.

g. Feb 1980 to present R.N. Clawson

2. Purchasing Agents

a. 1930 to 1943, None

b. 1943 to 1953, Ray Greiner. Deceased

c. 1953 to 1970, Frank Walker. Retired. 1353 Garrett Avenue Niagara Falls, NY 716-285-8556

d. 1970 to 1972, Gil Williams. 4861 Packard Road, Niagara Falls, New York 14302 716-285-9551

e. 1972 to 2/83 ~~present~~. Oren Benner, See "d" above.

f. 3/83 - present Gilda Tomei

3. Supervisory personnel directing waste disposal activities.

a. 1930 to 1950, Unknown

b. 1950 to 1971, R. R. Spencer. Retired. 220 Secena Street, Lewiston, NY 14092 716-754-7732

c. 1971 to 1972, O. Lambert. Terminated. Whereabouts unknown.

d 1972 to December, 1977, William K. Hepburn. Retired. 230 North 7th Street, Lewiston, NY 14092 716-754-4001

e. December, 1977 to ~~present~~, Walter Schaal. 4861 Packard Road, Niagara Falls, NY 14302 716-285-9381.

- 6/82(03) A. Glover - Grand Is.

6/82/03 - present E. P. Feigenbaum - Wilson, N. Y.

III. Company Personnel

1. Identify all plant managers from 1930 to present. Indicate years of service in that position, last known address and telephone number.

2. Identify all plant purchasing agents from 1930 to present. Indicate years of service in that position, last known address and telephone number.

3. Identify all plant personnel with supervisory responsibility for treatment or disposal of industrial wastes from 1930 to present. Indicate years of service, last known address and telephone number.

IV. Industrial Waste Production, Treatment and Disposal

1. Processes Used at Plant (1930-1975)

	Dates
a. Graphitizing	a. 1930 to present
b. Oil Treating	b. 1942 to present
c. Pitch Treating	c. 1936 to present
d. Baking	d. 1952 to present
e. Mixing and Extrusion	e. 1968 to present

2. Products (1930-1975)

a. Graphite	a. 1930 to present
b.	b.
c.	c.
d.	d.
e.	e.

3. On Site Waste Treatment (1930-1975)

a. None	a.
b.	b.
c.	c.
d.	d.
e.	e.

4. List all Waste Haulers since 1930 including Your Company

Name See IV. 5. g.

Address _____
Street City State

Telephone _____

Name _____

Address _____
Street City State

Telephone _____

5A Identify all Treatment or Disposal Sites in Erie or Niagara County used since 1939 (use separate sheet for each site).

a. Name of Site International Graphite & Electrodes

b. Location 4861 Packard Road, Niagara Falls, NY

c. Owner or Operator Airco Speer Carbon-Graphite

d. Time Period Site was Used 1930 to 1954

e. Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of Container If Any
(1) Carbonaceous Furnace insulation.	Dry granules, chunks & dust.	Estimate 100 yd^3/mo growing to 500/mo	None
(2) Spent refractories	Bricks & concrete blocks.		None
(3) Obsolete or non-repairable mechanical & electrical equip.		Small	None
(4) Linseed Oil	Liquid	Est. under 500 gal/yr after 1942	Drums
(5)			

f. Wastes Were [x] land disposed [ ] incinerated [ ] reclaimed [ ] treated [ ] other (specify)

g. Names of waste haulers including your company transporting such wastes to this site, if a disposal site.

International Graphite & Electrodes
Name Telephone

See above
Street City State

Time Periods such Hauler Transported to this Site 1930 – 1954

Name Telephone

Street City State

Time Periods such Hauler Transported to this Site

h. List Names and Addresses of other Companies using this Site, if a disposal site.

None
Name of Company

Street City State

Time Periods such Other Company Used this Site

5B Identify all Treatment or Disposal Sites in Erie or Niagara County used since 193 (use separate sheet for each site).

a. Name of Site We believe it was the Union Carbide Dump.

b. Location At the site of present Niagara Recycling Land Fill

c. Owner or Operator Union Carbide at that time

d. Time Period Site was Used 1954 to 1964

e. Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of C If An
(1) Carbonaceous furnace	Dry granules,	Estimate	None
insulation	chunks & dust,	500 yd.^{3}/mo	
(2) Spent refractories	Bricks & con-	growing to	None
	crete blocks.	1000/mo	
(3) Sand	Dry particles		None
(4) Obsolete or non-repairable		Small	None
mechanical & electrical equip.			
(5) Linseed Oil	Liquid	Est. under 500 gal/yr.	Drum

f. Wastes Were [x] land disposed [ ] incinerated [ ] reclaimed [ ] treated [ ] other (specify)

g. Names of waste haulers including your company transporting such wastes to th. site, if a disposal site.

Reback & Co.
Name Telephone

out of business
Street City State

Time Periods such Hauler Transported to this Site 1954 to 1964

Name Telephone

Street City State

Time Periods such Hauler Transported to this Site

h. List Names and Addresses of other Companies using this Site, if a disposal si

Unknown
Name of Company

Street City State

Time Periods such Other Company Used this Site

5C Identify all Treatment or Disposal Sites in Erie or Niagara County used since 1930 (use separate sheet for each site).

a. Name of Site S. Washuta/Modern Disposal Land Fill

b. Location Model City, New York

c. Owner or Operator S. Washuta/Modern Disposal

d. Time Period Site was Used 1964 to 1972

e. Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of Conta- If Any
(1) Carbonaceous furnace	Dry granules,		None
Insulation	chunks & dust		
(2) Spent refractories	Bricks & con-	Estimate	None
	crete blocks.	1000 yd.^{3}/mo	
(3) Sand	Dry particles	growing to	None
		2500 yd.^{3}/mo	
(4) Scrap extruded & baked car-	Chunks, broken		None
bon materials	rods, shavings		
(5) Obsolete or non-repairable mechanical & electrical equipment		Small	None
(6) Linseed Oil	Liquid	Est. under 500 gal/yr	Drums ✓

f. Wastes Were [x] land disposed [ ] incinerated [ ] reclaimed [ ] treated [ ] other (specify)

g. Names of waste haulers including your company transporting such wastes to this site, if a disposal site.

Modern Disposal Services, Inc. 716-754-8226
Name Telephone

Model City Road, Lewiston, New York 14092
Street City State

Time Periods such Hauler Transported to this Site 1964-1972

Name Telephone

Street City State

Time Periods such Hauler Transported to this Site

h. List Names and Addresses of other Companies using this Site, if a disposal site

Unknown
Name of Company

Street City State

Time Periods such Other Company Used this Site

5D Identify all Treatment or Disposal Sites in Erie or Niagara County used since 1930 (use separate sheet for each site).

a. Name of Site Niagara Recycling Land Fill

b. Location Pine-Packard- Rte. 190, Niagara Falls, NY

c. Owner or Operator Niagara Recycling

d. Time Period Site was Used 1972 to present

e. Describe Waste Types Treated or Disposed at this Site	Physical State	Total Quantity	Type of Contai If Any
(1) Carbonaceous furnace insulation	Dry granules, chunks & dust,		None
(2) Spent refractories	Bricks & con- crete blocks,	Estimate 2500 yds^3/mo	None
(3) Sand	Dry particles	growing to current	None
(4) Scrap extruded & baked carbon materials	Chunks, broken rods, shavings	4,000/mo	None
(5) Obsolete or non-repairable mechanical & electrical equipment			None
(6) Tar & Linseed Oil	Liquid	Est. under 1500 gal/yr.	Drums

f. Wastes Were [x] land disposed [ ] incinerated [ ] reclaimed [ ] treated [x] other (specify) Linseed oil per EPA regulat

g. Names of waste haulers including your company transporting such wastes to this site, if a disposal site.

Regional Waste, A. Cerrone Inc. 716-282-1218
Name Telephone

4625 Witmer Road, NiagaraFalls, NY
Street City State

Time Periods such Hauler Transported to this Site 1972 to 1975

Niagara Sanitation Co. Inc. 716-693-5185
Name Telephone

262 Pullman Avenue, Niagara Falls, NY
Street City State

Time Periods such Hauler Transported to this Site 1975 to present

h. List Names and Addresses of other Companies using this Site, if a disposal site

Hooker Chemical, Carborundum Co.
Name of Company

Niagara Falls, NY
Street City State

Time Periods such Other Company Used this Site Unknown

Current Waste Hauler is Modern Disposal see in 5C

(7/-15-11 (10/83)

REF-11

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF SOLID AND HAZARDOUS WASTE

INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

PRIORITY CODE: 2a SITE CODE: 932002

NAME OF SITE: Airco Speer Carbon-Graphite REGION: 9

STREET ADDRESS: Packard Road at 47th Street

TOWN/CITY: Niagara Falls COUNTY: Niagara

NAME OF CURRENT OWNER OF SITE: Airco, Inc., Subsidiary of BOC Int.

ADDRESS OF CURRENT OWNER OF SITE: 4861 Packard Road, Niagara Falls, NY

TYPE OF SITE: OPEN DUMP [X] STRUCTURE [ ] LAGOON [ ]
LANDFILL [ ] TREATMENT POND [ ]

ESTIMATED SIZE: 2 ACRES

SITE DESCRIPTION:

This site is mainly land built up by clean fill. Material such as carbonaceous furnace insulation, spent refractories and non-repairable equipment. An insulation mixture containing asbestos was also used for fill. New plant buildings were built on much of the same area formerly used as disposal sites. Most of the area is paved to facilitate control and cleanup of dust. All drainage is caught and directed to the Niagara Falls WWRP. This same area was used as a disposal site by International Graphite and Electrode before 1930 when Airco Speer assumed half and then full ownership. Quantities of wastes shown below are given for 1930 to 1954. The USGS sampled this site in 1982 by taking three soil borings. the samples were recollected in May 1983 with results of the analysis pending.

HAZARDOUS WASTE DISPOSED: CONFIRMED [X] SUSPECTED [ ]

TYPE AND QUANTITY OF HAZARDOUS WASTES DISPOSED:

TYPE	QUANTITY (POUNDS, DRUMS, TONS, GALLONS)
Furnace insulation, refractories & sand	28,800 to 144,000 cu. yds.
Carbon materials	
Obsolete equipment	small
Linseed Oil (after 1942)	2,500 gallons
Coal tar chemicals	
Asbestos fiber and tape	7 Tons

TIME PERIOD SITE WAS USED FOR HAZARDOUS WASTE DISPOSAL:

_____, 19 30 TO _____, 19 54

OWNER(S) DURING PERIOD OF USE: Before 1930 Inter. Graphite & Electrode, 1930-54 Airco Speer

SITE OPERATOR DURING PERIOD OF USE: Airco Speer

ADDRESS OF SITE OPERATOR: 4861 Packard Road, Niagara Falls, NY 14302

ANALYTICAL DATA AVAILABLE: AIR ☐ SURFACE WATER ☐ GROUNDWATER ☐
SOIL [X] SEDIMENT ☐ NONE ☐

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

SOIL TYPE: Topsoil, red clay 7 bedrock at 4-6 feet

DEPTH TO GROUNDWATER TABLE: Unknown

LEGAL ACTION: TYPE: None STATE ☐ FEDERAL ☐
STATUS: IN PROGRESS ☐ COMPLETED ☐

REMEDIAL ACTION: PROPOSED ☐ UNDER DESIGN ☐
IN PROGRESS ☐ COMPLETED ☐

NATURE OF ACTION: N/A

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

No known environemntal problems at this site. Final assessment must await results from USGS sampling

ASSESSMENT OF HEALTH PROBLEMS:

[redacted]

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME Robert Senior
TITLE Senior Sanitary Engineer
NAME Peter Buechi
TITLE Associate Sanitary Engineer
DATE: November 21, 1983

NEW YORK STATE DEPARTMENT OF HEALTH

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

REF-12

INTERVIEW FORM

INTERVIEWEE/CODE Jim Sneider Mike Wilkenson 1

TITLE - POSITION NYSDEC, Div of Fish & Wildlife

ADDRESS Delaware Ave

CITY Buffalo STATE NY ZIP

PHONE ( ) RESIDENCE PERIOD TO

LOCATION in DEC office INTERVIEWER Eileen Gilligan

DATE/TIME 1/10/85 1/11/85 1

SUBJECT: Phase I site information

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

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

Airco Speer Carbon Site
- There are no critical habitats of endangered species within 1 mile of the site

I AGREE WITH THE ABOVE SUMMARY OF THE INTERVIEW:

SIGNATURE: James R. Snider - Sr. Wildlife Biologist
Michael A. Wilkinson - Conservation Biologist (Aquatic)

COMMENTS: No discussion of wetlands/wildlife regarding Mina Landfill site - referred to Olean Office

Airco

1.

REF - 13

NAME OF LANDFILL

AIRCO SPEER CARBON - GRAPHITE (DEC #932002)

LOCATION

4861 Packard Road at 47th Street
Niagara Falls, New York 14302

OWNERSHIP

The site is currently owned by Airco Speer Carbon - Graphite.

PREVIOUS OWNERSHIP

The site was owned prior to 1930 by the International Graphite and Electrode Company. In 1930, the Speer Carbon Company purchased a 50 percent interest in the facility and assumed full ownership in 1932. Speer Carbon became a subsidiary of Airco in 1961 and a division in 1962. Airco became a subsidiary of BOC International in 1978.

HISTORY

Prior to 1930, International Graphite and Electrode disposed of its own wastes on this site. No information has been found to identify the type or quantity of wastes disposed of during this period. It appears likely that the wastes generated prior to 1930 would be similar to the wastes generated after 1930 by the Speer Carbon Company.

From 1930 to 1954, the Speer Carbon Company generated the following wastes: furnace insulation, refractories and sand (28,000 to 144,000 cubic yards), carbon materials, obsolete equipment, linseed oil, coal tar chemicals, and asbestos fiber (7 tons).

These materials were disposed of on site. The exact limits of the disposal area are not known. Wastes may be buried in the area beneath Graphite Plants 2, 3 and 4 and Bake Plants 1, 3 and 4. Other areas may also contain wastes. The site was filled to capacity by 1954.

From 1954 to 1964, the same wastes were hauled to the Union Carbide dump in Niagara Falls now operated by Newco Waste Systems. From 1964 to 1972, Modern Disposal Services hauled wastes and tar to its Model City site. From 1972, A. Cerrone and Niagara Sanitation have hauled all wastes to Newco. Currently, wastes are removed by Modern Disposal.

INVESTIGATION

Historical information was extracted from DEC Hazardous Waste Disposal Site Directory and interviews with company personnel.

INVESTIGATION (continued)

A site visit was made by Mr. H. Hopkins of the Niagara County Health Department on June 16, 1981. From this visit it was noted that nearly the entire surface of the site was either paved with asphalt concrete, had plant buildings on it or appeared otherwise impervious. All runoff is channelled through roof drains or by the pavement to the city sewer system. A large portion of the site is built on filled areas to a depth of about 8 feet above the surrounding topography. An interview with Mr. Scott Danskin, Pollution Control Engineer for Airco Speer Carbon - Graphite, neither confirmed the exact location of the disposal sites, nor their contents.

Examination of USDA aerial photographs (1958) showed Graphite Plants 2, 3, 4 and 5 and Bake Plants 1, 2 and 3 in place at that time. Further investigation showed that these buildings were built from 1939 to 1956 in respective order given above. This being the case, it would seem likely that the disposal area was filled roughly from north to south. It was also noted from the USDA photograph that a pond occupied much of the area beneath what is now Graphite Plant No. 6. Mr. Scott Danskin has stated that Plant No. 6 was said to be built on clean fill.

SOIL

The site is built on a filled area of unknown composition although it appeared to contain large amounts of carbon particles and fines. Much of the site is said to be built on clean fill.

From information extrapolated from surrounding areas, it appears likely that the soil beneath the fill is either a Canandaigua or Odessa series lake-laid silt-clay. Both these soils are poorly drained and deep (>6 feet). Both exhibit a profile of silty clay loam over clay. The permeability of the surface layer ranges from 0.2 to 0.63 in/hr while the subsurface is relatively impervious at <0.2 in/hr. In addition, the soil beneath the fill is likely to have been consolidated by the additional surcharge load of the fill and structures.

GEOLOGICAL GROUNDWATER INFORMATION

Bedrock consists of Lockport Dolomite to a depth of about 140 feet. A layer of glacial till may be found above the Dolomite. Lockport Dolomite characteristically contains several water bearing zones; however, these may be 30 feet to 40 feet or more below the surface. A perched water table may exist above the clay layer of either Canandaigua or Odessa soils, accounting for a possible seasonal high water table of less than 6 inches below the surface. This water may disappear completely in the summer. However, the site is built on filled material and most of the wastes are likely to be above this level.

CONCLUSIONS

The potential for migration of hazardous substances from the site is small. This is evidenced by the small amount of hazardous material suspected to be present, the suspected location of most of the

CONCLUSIONS (continued)

wastes above the normal seasonal high water table and that runoff is channelled to the sewer system by the impervious surface. In addition, there are no residences or bodies of surface water adjacent to this site.

There is no possibility of asbestos becoming airborne at this time as the surface is paved and built upon.

SAMPLING

Samples were not taken from this site. Sampling was not recommended at this site on the grounds that the potential for migration of toxins from the site is small. If future samples are to be taken, they should be obtained from low areas around perimeter of site, preferably around all sides of the site as the direction of groundwater flow is not precisely known. Parameters for such analysis should include coal tar chemicals.

RECOMMENDATIONS

Periodic inspection of the side slopes of filled areas is recommended for signs of leachate. Care should be exercised in excavating any of the filled material not to expose asbestos material or allow water to enter the fill.

REF-14

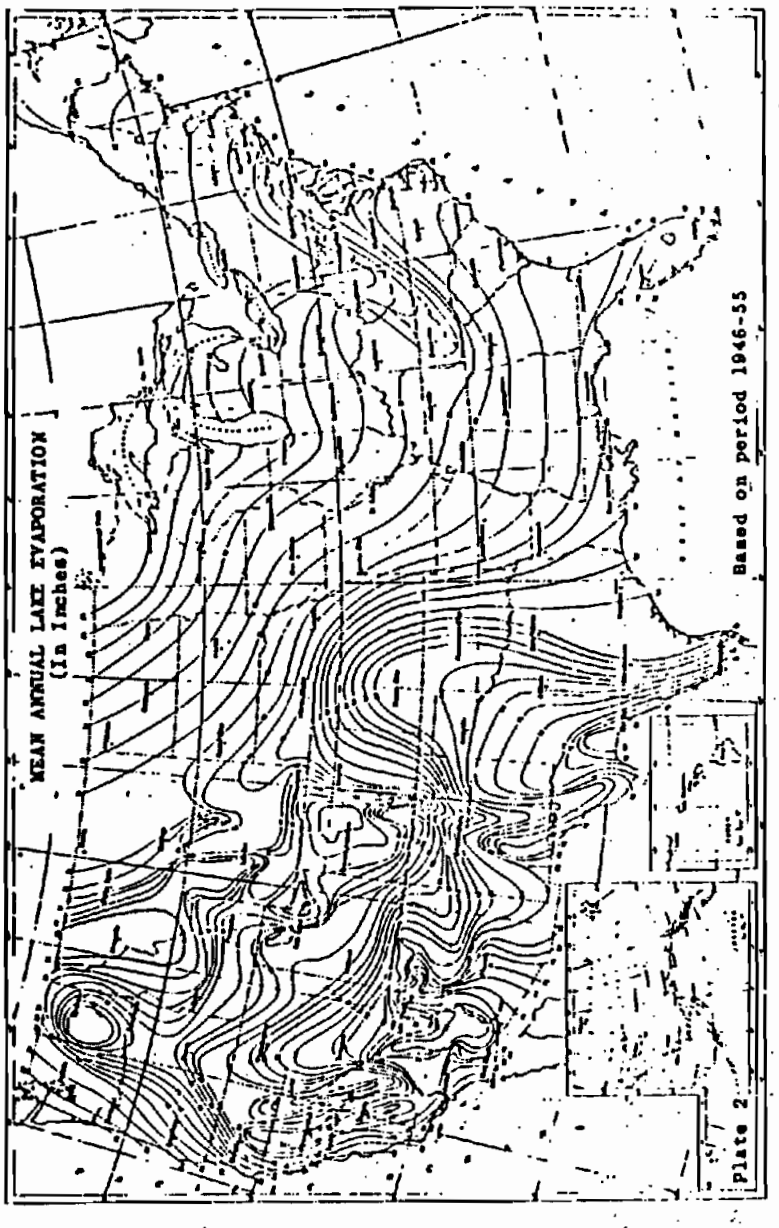
ROCHESTER DRILLING COMPANY LOGS, 1977

This data source was used during the Phase I study and was obtained from reference material used by Dames & Moore's geology staff. A thorough review of Phase I records has not found this information and, therefore, it can not be submitted herein. Missing information will need to be found or replaced with other relevant information during the Phase II effort.

US CENSUS DATA, 1980

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

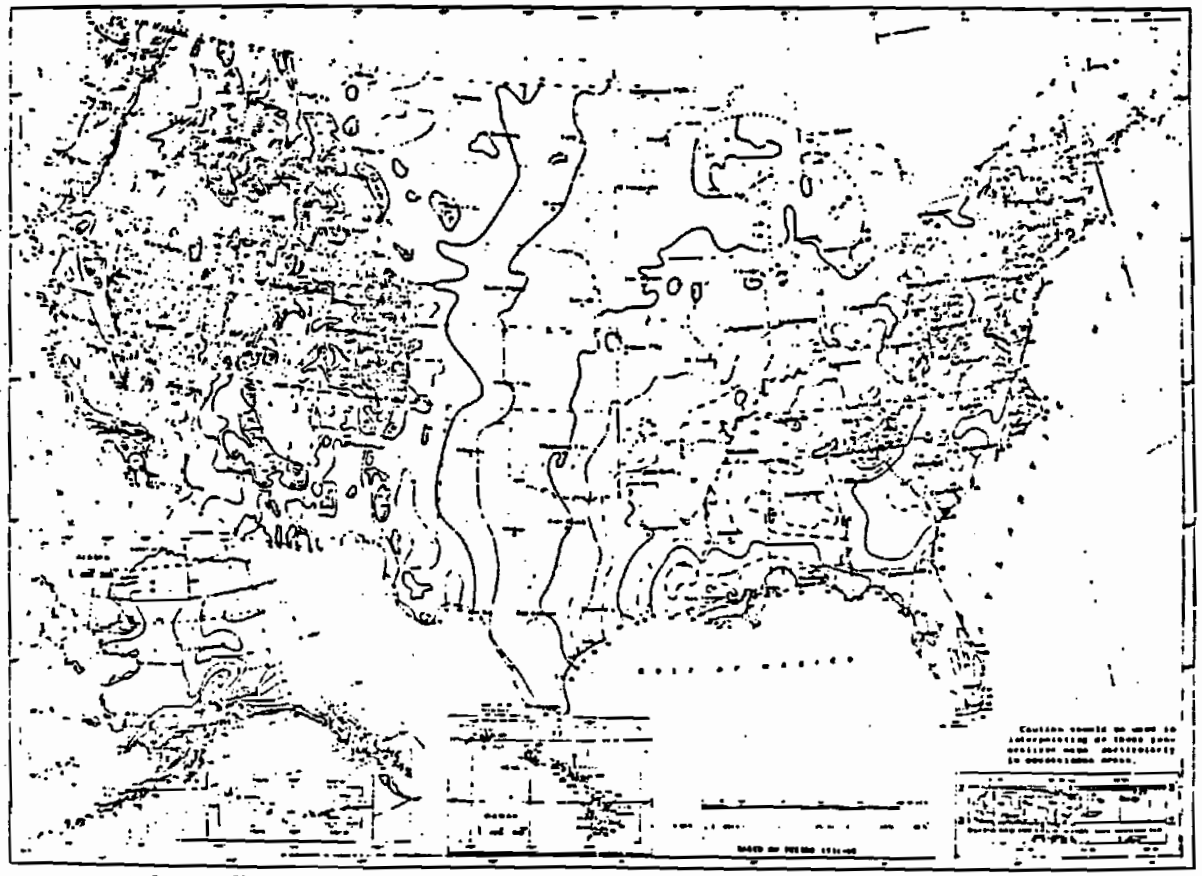
REF-16



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

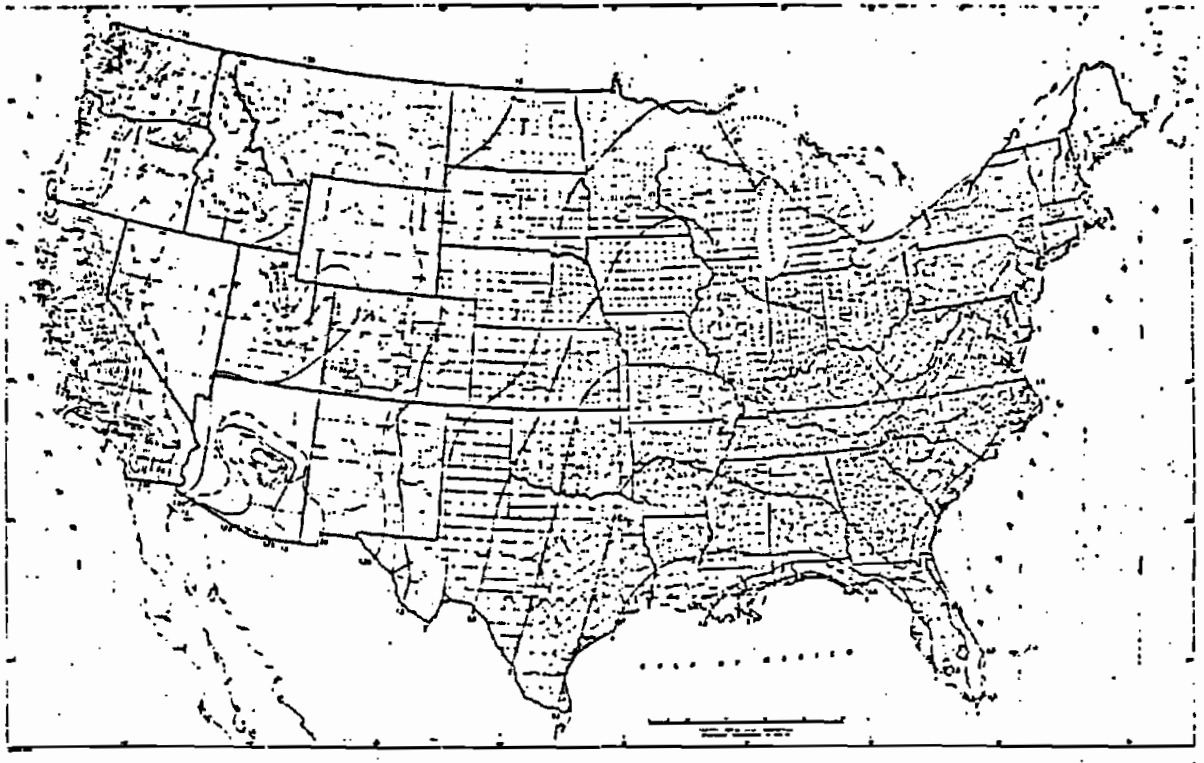
Figure 4

Mean Annual Lake Evaporation (In Inches)



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

Figure 5
Normal Annual Total Precipitation (inches)



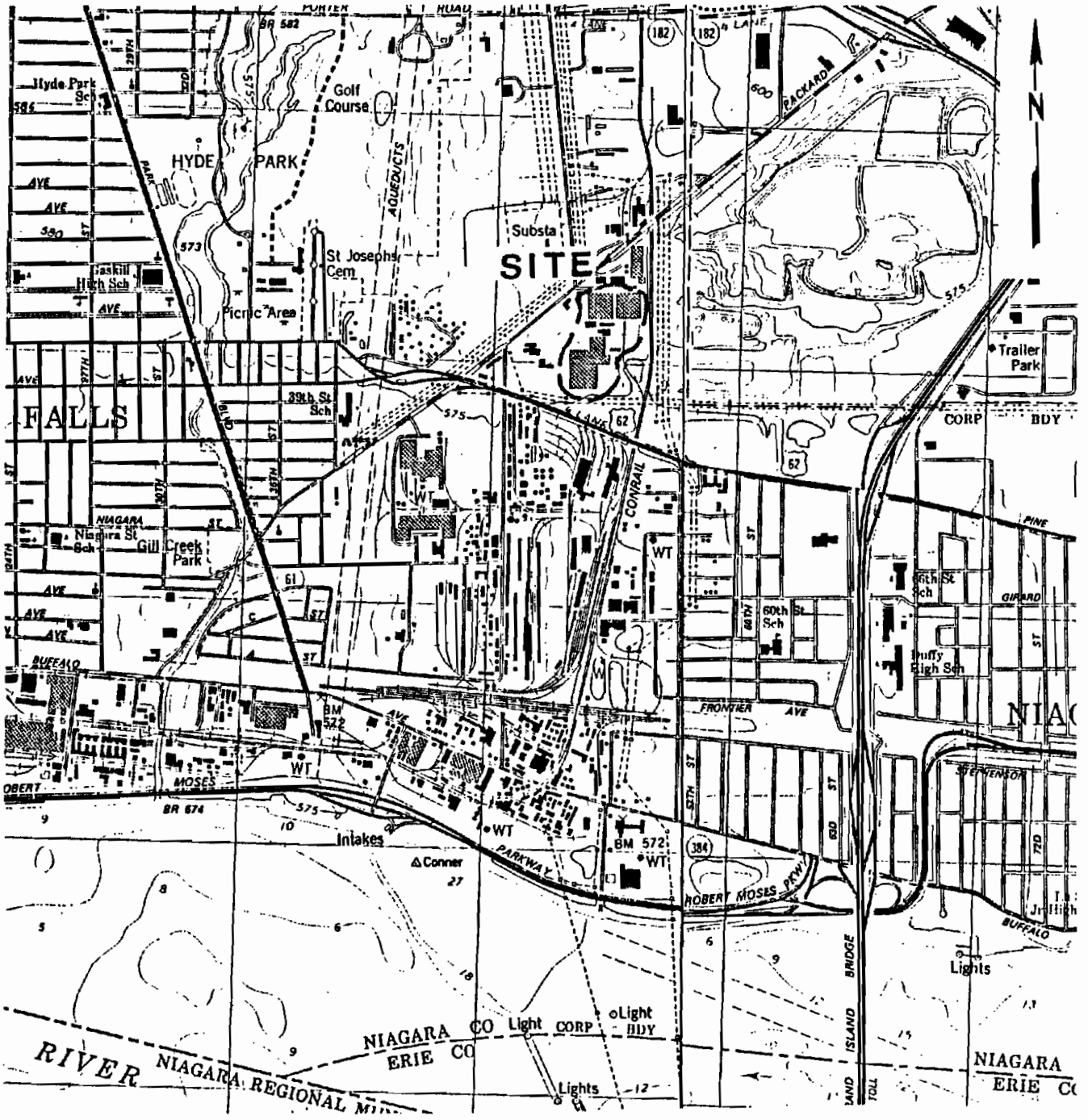
Source: Rainfall Frequency Atlas of the United States, Technical Paper No. 40, U.S. Department of Commerce, U.S. Government Printing Office, Washington, D.C., 1963.

Figure 8

1-Year 24-Hour Rainfall (Inches)

REF - 17.

REF-18



LATITUDE: 43°05'44"
LONGITUDE: 79°00'08"

SCALE

0 1000 2000 3000 4000 FEET

REFERENCE: U.S.G.S. 7.5' Topographic Map
Niagara Falls, NY-ONT. (1980) and
Tonawanda West, NY (1980) Quadrangles

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

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PHASE I REPORT

SITE LOCATION MAP
AIRCO SPEER CARBON GRAPHITE

FIGURE I-1

REF-19

General information and chemical migration potential

The site is located in the city of Niagara Falls, and is shown on plate 3.

The site was used during 1943-45 for the disposal of 28,800 to 144,000 yd^3 of furnace insulation, refractories, and sand as well as 2,500 gal of linseed oil and 7 tons of asbestos fiber and tape.

Most of the area is paved to facilitate control and cleanup of process dust. From 1972 to 1981, wastes have been ~~contained and~~ transported to a permitted disposal site.

The geology and disposal practices indicate the potential for contaminant migration to be minimal. Results of the soil sample analyses indicate migration is occurring.

Figure Belongs near here

Geologic information

The site was built on a filled area of unknown composition overlying a lacustrine silty clay. Beneath the clay is Lockport Dolomite. The U.S. Geological Survey drilled four test boring on the site in 1982 and locations are shown in figure ____. The geologic logs are as follows:

Figure Belongs near here

Borehole No.	Depth (ft)	Description
	0 - 2.0	Top soil.
1	2.0 - 6.2	Clay, reddish, some sand, fairly dry. Sample: 6.2 ft.
2	0 - 4.0	Topsoil, black, gravel fill. Hit bedrock at 4.0 ft. Red clay mixed in. SAMPLE: 4.0 ft.
3	0 - 2.1	Red top soil. Hit bedrock at 2.0 ft.
4	0 - 1.5	Top soil, black.
	1.5 - 4.2	Clay, sandy, red, dry. Hit bedrock at 4.2 ft. SAMPLE: 4.0 ft.

Hydrologic information

Ground water appears to be contained in the fractures within the bedrock and was not encountered during the 1982 drilling.

Chemical information

Four soil samples were collected at each test boring for organic compound analyses; the samples exceeded holding time and had to be resampled. The samples were recollected in May 1983. The results are given in table _____. There were 14 organic priority pollutants found, some in concentrations as high as 61,000 ug/Kg. There were five organic nonpriority pollutants found.

Table _____ belongs near here

Table .--Analyses of sub-strate samples from Airco Speer Carbo-Graphite, Niagara Falls, N.Y. (Locations shown in fig. . Concentrations are in µg/kg; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit.)

	Sample number and depth below land surface (ft)			
	1	2	3	4
First sampling (07-14-82)	6.0	4.0	2.0	4.0
Organic compounds	**	**	**	**

	Sample number and depth below land surface (ft)		
	2A	3A	4A
Second sampling (05-27-83)	4.0	2.0	4.0
Inorganic compound			
Molecular sulfur	3,000	--	--
Organic compounds			
Priority pollutants			
Pyrene	8,000	LT	32,000
Acenaphthene	--	--	LT
Fluoranthene	9,100	--	34,000
Benzo(a)anthracene	7,100	--	24,000
Benzo(a)pyrene	7,900	--	49,000
3,4-Benzofluoranthene	13,000	--	43,000
Chrysene	5,600	--	23,000
Acenaphthylene	LT	--	LT
Anthracene	LT	--	2,000
Benzo(ghi)perylene	4,600	--	13,000
Fluorene	LT	--	LT
Phenanthrene	4,000	--	19,000
Dibenzo(a,h)anthracene	--	--	12,000
Indeno(1,2,3-cd)pyrene	30,000	--	61,000
Nonpriority pollutants			
Dibenzofuran	LT	--	LT
Carbonsulfide	LT	--	--
Methylphenanthrene[1]		--	2,000
Benzo(b)naphthothiophene[1]		--	2,000
Methylbenzo(a)anthracene[1]		--	2,000

[1] Tentative identification based on comparison with the National Bureau of Standards (NBS) library. No external standard was available. Concentration reported is semiquantitative and is based only on an internal standard. GC/MS spectra were examined and interpreted by GC/MS analysts.

** Analyzed at detection limit above that required by this study. No other compounds detected.

2. AIRCO SPEER CARBON-GRAPHITE (USGS field reconnaissance) NYSDEC 932002

General information and chemical-migration potential.--The Airco Speer Carbon-Graphite site, in the city of Wheatfield, was used during 1930-45 for the disposal of 28,800 to 144,000 yd^3 of furnace insulation, refractories, and sand as well as 2,500 gal/min of linseed oil and 7 tons of asbestos fiber and tape. Most of the area is paved to facilitate control and cleanup of process dust.

The overburden at several points on the site is only 4 to 6 ft deep, and the chemical analyses indicated high concentrations of organic priority pollutants. The potential for contaminant migration is indeterminable.

Geologic information.--The site was built on a filled area of unknown composition overlying a lacustrine silty clay. Beneath the clay is Lockport Dolomite. The U.S. Geological Survey drilled four test boring on the site in 1982; locations are shown in figure C-1. The geologic logs are on page 291.

Hydrologic information.--Ground water appears to be contained in the fractures within the bedrock and was not encountered during the 1982 drilling.

Boring no.	Depth (ft)	Description
	0 - 2.0	Topsoil.
1	2.0 - 6.2	Clay, reddish, some sand, fairly dry. Sample: 6.2 ft.
2	0 - 4.0	Topsoil, black, gravel fill. Hit bedrock at 4.0 ft. Red clay mixed in. SAMPLE: 4.0 ft.
3	0 - 2.1	Red top soil. Hit bedrock at 2.0 ft. sample: 2.0 ft.
4	0 - 1.5	Top soil, black.
	1.5 - 4.2	Clay, sandy, red, dry. Hit bedrock at 4.2 ft. SAMPLE: 4.0 ft.

Chemical information.--The U.S. Geological Survey collected four soil samples at each test boring for organic compound analyses, but the samples exceeded holding time and were recollected in May 1983. Results are given in table C-1. The samples contained 14 organic priority pollutants, some in concentrations as high as 61,000 ug/kg, and five organic nonpriority pollutants.

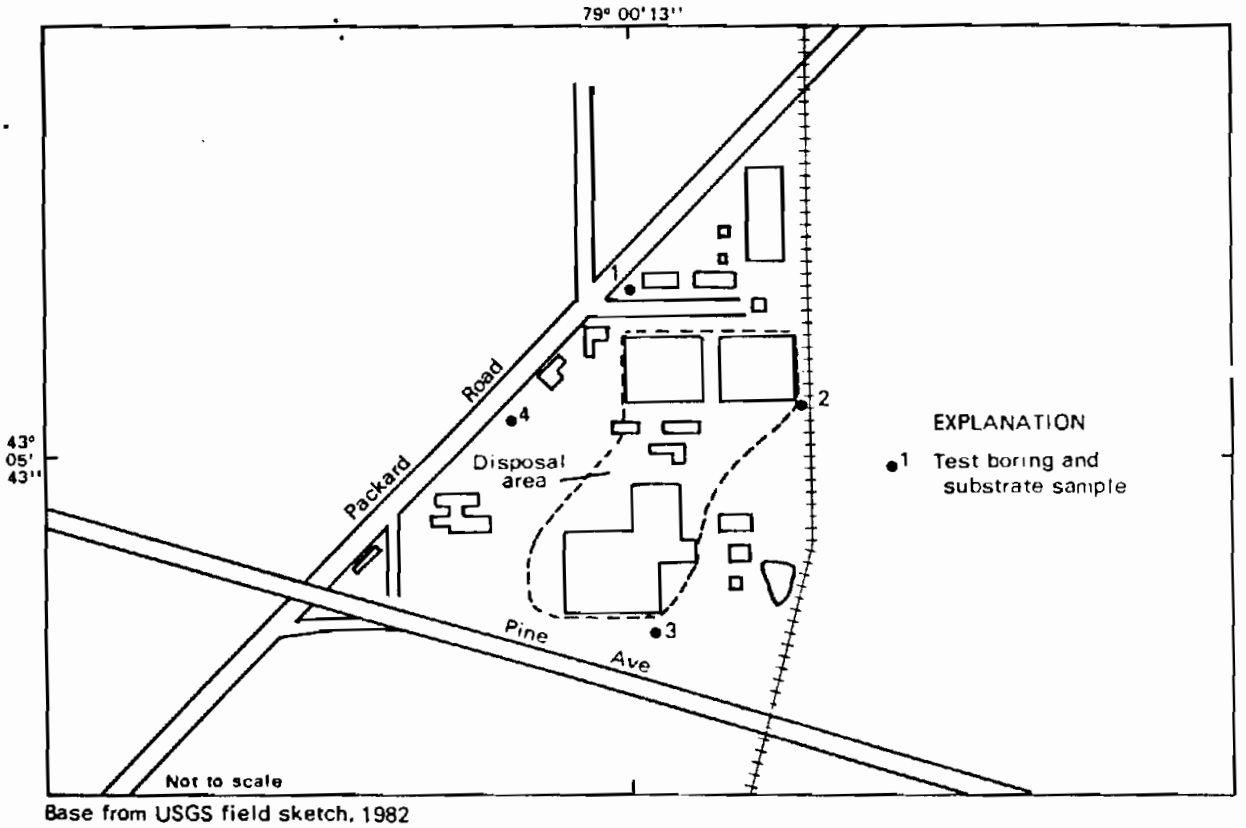


Figure C-1. Location of sampling holes at Airco Speer Carbon-Graphite, site 2, Wheatfield.

Table C-1.--Analyses of substrate samples from Airco Speer Carbon-Graphite, site 2, Wheatfield, N.Y.
[Locations shown in fig. C-1. Concentrations are in µg/kg; dashes indicate that constituent or compound was not found, LT indicates it was found but below the quantifiable detection limit.]

	Sample number and depth below land surface (ft)			
	1	2	3	4
First sampling (07-14-82)	(6.0)	(4.0)	(2.0)	(4.0)
Organic compounds	***	***	***	***
	Sample number and depth below land surface (ft)			
		2A	3A	4A
Second sampling (05-27-83)		(4.0)	(2.0)	(4.0)
Inorganic compound				
Molecular sulfur		3,000	--	--
Organic compounds				
Priority pollutants				
Pyrene		8,000	LT	32,000
Acenaphthene		--	--	LT
Fluoranthene		9,100	--	34,000
Benzo(a)anthracene		7,100	--	24,000
Benzo(a)pyrene		7,900	--	49,000
3,4-Benzofluoranthene		13,000	--	43,000
Chrysene		5,600	--	23,000
Acenaphthalene		LT	--	LT
Anthracene		LT	--	2,000
Benzo(ghi)perylene		4,600	--	13,000
Fluorene		LT	--	LT
Phenanthrene		4,000	--	19,000
Dibenzo(a,h)anthracene		--	--	12,000
Indeno(1,2,3-cd)pyrene		30,000	--	61,000
Nonpriority pollutants				
Dibenzofuran		LT	--	LT
Carbon disulfide		LT	--	--
Methylphenanthrene[1]			--	2,000
Benzo(b)naphthothiophene[1]			--	2,000
Methylbenzo(a)anthracene[1]			--	2,000

[1] Tentative identification based on comparison with the National Bureau of Standards (NBS) library. No external standard was available. Concentration reported is semiquantitative and is based only on an internal standard. GC/MS spectra were examined and interpreted by GC/MS analysts.

***Analyzed at detection limit above that required by this study. No other compounds detected.

APPENDIX B

PROPOSED UPDATED NYS REGISTRY SHEET

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

CLASSIFICATION CODE: 2a REGION: 9 SITE CODE: 932002

NAME OF SITE : Airco Speer Carbon-Graphite
STREET ADDRESS: Packard Road at 47th Street
TOWN/CITY: Niagara Falls COUNTY: Niagara ZIP:

SITE TYPE: Open Dump- Structure- Lagoon- Landfill-X Treatment Pond-
ESTIMATED SIZE: 2 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Airco, Inc., Subsidiary of BOC Int.
CURRENT OWNER ADDRESS.: 4861 Packard Road, Niagara Falls, NY
OWNER(S) DURING USE...: Before '30,Int. Graph&Elec,1930-54AircoS
OPERATOR DURING USE...: Airco Speer
OPERATOR ADDRESS.....: 4861 Packard Rd, Niagara Falls, NY 14302
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1930 To 1954

SITE DESCRIPTION:
This site is mainly land built up by clean fill. Material such as carbonaceous furnace insulation, spent refractories and non-repairable equipment. An insulation mixture containing asbestos was also used for fill. New plant buildings were built on much of the same area formerly used as disposal sites. Most of the area is paved to facilitate control and cleanup of dust. All drainage is caught and directed to the Niagara Falls WWRP. This same area was used as a disposal site by International Graphite and Electrode before 1930 when Airco Speer assumed half and then full ownership. Quantities of wastes shown below are given for 1930 to 1954. The USGS sampled this site in 1982 by taking four soil borings. The samples were recollected in May 1983. Fourteen organic priority pollutants were found in soil samples, some as high as 61 PPM.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected -

TYPE	QUANTITY (units)
Furnace insulation, refractories & sand	28,800 to 144,000 cu yds
Carbon materials	
Obsolete equipment	small
Linseed Oil (after 1942)	2,500 gallons
Coal tar chemicals	
Asbestos fiber and tape	7 Tons

SITE CODE: 932002

ANALYTICAL DATA AVAILABLE:

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

CONTRAVENTION OF STANDARDS:

Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

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

REMEDIAL ACTION:

Proposed- Under Design- In Progress- Completed-
NATURE OF ACTION:

GEOTECHNICAL INFORMATION:
SOIL TYPE: Red silt/clay
GROUNDWATER DEPTH: Unknown

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Insufficient information.

ASSESSMENT OF HEALTH PROBLEMS:

Insufficient information.

PERSON(S) COMPLETING THIS FORM:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NAME.: Peter Buechi
TITLE: Associate Sanitary Engineer

NAME.: Ahmad Tayyebi
TITLE: Asst. Sanitary Engineer

DATE.: 01/24/85

NEW YORK STATE DEPARTMENT OF HEALTH

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

NAME.:
TITLE:

5/15/85

DATE.: 01/24/85