New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
Bureau of Hazardous Site Control

ADDITIONS/CHANGES TO REGISTRY: SUMMARY OF APPROVALS

SITE NAME: AIRCO SPEAR CARBON GRAPHITE **DEC I.D. NUMBER** 932002

Current Classification 2a

Activity: ☐ Add as Class ___ ☑ Reclassify to 3 ☐ Delist Category ___ ☐ Modify ___

Approvals:

Regional Hazardous Waste Engineer	Yes	☑	No	☐	
NYSDOH	Yes	☑	No	☐	
DEE	Yes	☑	No	☐	
Construction Services	Yes	N/A	No	☐	
BHSC: a. Investigation Section	Yes	☑	No	☐	
b. Site Control Section	Robert J. Marino		Date	11/14/94	
c. Director	[signature]		Date	11/14/94	
DHWR Assistant Director	[signature]		Date	11/17/94	

Completion Checklist

		Completed By: Initials	Date
OWNER NOTIFICATION LETTER?	☑		12/22/94
ADJACENT PROPERTY OWNER NOTIFICATION LETTER?	☐		1/9/95
ENB/LEGAL NOTICE SENT? (For Deletion Only)	☐		
COMMENTS SUMMARIZED/PLACE IN REPOSITORY	☐		
FINAL NOTIFICATION SENT TO OWNER? (For Deletion Only)			

(For proposed Class 2a sites only) Planned investigative activities & dates: ___

Original-BHSC
Copy-REGION
Copy-DEE
Copy DOH
Copy-PREPARER

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

10/23/91

REGISTRY SITE CLASSIFICATION DECISION

1. SITE NAME	2. SITE NO	3. TOWN/CITY/VILLAGE	4. COUNTY
Airco Speer Carbon Graphite	932002	Niagara Falls	Niagara

5. REGION	6. CLASSIFICATION
9	Current 2a Proposed 3 Modify

7. LOCATION OF SITE (Attach U.S.G.S Topographic Map showing site location)

a. Quadrangle	b. Site Latitude	Longitude	c. Tax Map Number
Niagara Falls/Tonawanda W.	43 05' 44"	79 00' 08"	145.18-1-6

8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)
The site is an active carbon electrode manufacturing facility located in a highly industrialized area of Niagara Falls. Close neighbors include an Oxy-Durez site and CECOS/ Necco Park. Approximately 30 active transformers located on site are used to manage distribution of electricity to plant furnaces. The manufacturing process results in a large amount of carbon dust accumulating on site. The dust is not readily suppressed in all areas and tends to migrate throughout the site.

a. Area __29__ acres b. EPA ID Number NYD980201263____

c. Completed (x)Phase I ( )Phase II (x)PSA ( )RI/FS (x)PA/SI ( )Other

9. HAZARDOUS WASTES DISPOSED
At least 5 spill incidents involving PCB bearing transformer oils have been reported to NYSDEC since 1987; PCBs were found in site soils at levels up to 270 ppm in 1985. Records documenting the use of acetone at the site indicate that the compound was used in the form of a commercial chemical product; acetone was detected in 12 subsurface samples. Lead was detected in a liquid sump sample at a concentration of 18,900 ug/l, exceeding the regulatory limit of 5,000 ug/l specified by 6NYCRR Part 371.3(e).

10. ANALYTICAL DATA AVAILABLE
a. ( )Air ( )Groundwater (x)Surface Water (x)Soil ( )Waste ( )EPTox ( )TCLP
b. Contravention of Standards or Guidance Values
PCBs were found on site at 270 ppm in 1985. The presence of PCB contaminated soil was confirmed in 1993 with levels up to 59 ppm. Reported concentrations of acetone found in soils 2-4 ft. bgs ranged from 0.023 mg/kg to 0.13 mg/kg. Twelve VOA target compounds 22 BNA target compounds, and 16 pesticides were found in soils, sediment, surface water, and liquid wastes on site.

11. JUSTIFICATION FOR CLASSIFICATION DECISION
Hazardous waste is present on site in the form of PCBs in excess of 50 ppm, acetone that has been documented to have been disposed as the pure chemical product, and lead in liquid wastes that exceeds EP Tox levels. Significant threat is not present at the site due to the following factors:
although acetone was detected in surface water and sediment samples, the amounts present were well below USEPA health based guidance values; the same was true for PCBs detected in sediments, and lead found in surface water and sediments. The site itself is fenced with access controlled by security guards. The area the site is located in is an industrial area heavily populated with other hazardous waste sites, many of which have active and ongoing moitoring programs.

12. SITE IMPACT DATA
a. Nearest surface water: Distance ____2000_ft. Direction __W____ Classification A-SPECIAL
b. Nearest Groundwater: Depth __1/2___ft. Flow Direction __SSW___ ( )Sole Source ( )Primary ( )Principal
c. Nearest water supply: Distance _1.2 mi. Direction ___S____ Active (x)Yes ( )No
d. Nearest building: Distance ___0__ft. Direction ___E_____ Use __industrial_____

e. In State Economic Development Zone?	( )Y (X)N	i. Controlled site access?	(X)Y ( )N
f. Crops or livestock on site?	( )Y (x)N	j. Exposed hazardous waste?	( )Y (x)N
g. Documented fish or wildlife mortality?	( )Y (x)N	k. HRS Score _____	
h. Impact on special status fish or wildlife resource?	( )Y (x)N	l. For Class 2: Priority Category	_ ___

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
The Carbon/Graphite Group	4861 Packard Rd. Niagara Falls, N.Y. 14304	716-285-9281

16. PREPARER	17. APPROVED
Signature Date 1/7/94	Signature Date 11/17/94
Cynthia A. Whitfield, EEI BHSC, DHWR, NYSDEC	Asst Dir
Name, Title, Organization	Name, Title, Organization

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Center for Environmental Health 2 University Place Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., M.P.H.
Commissioner

Paula Wilson
Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Lloyd F. Novick, M.D., M.P.H.
Director

Diana Jones Ritter
Executive Deputy Director

William N. Stasiuk, P.E., Ph.D.
Center Director

February 9, 1994

FEB

Mr. Earl Barcomb, P.E., Director
Bureau of Hazardous Site Control
NYS Dept. of Environmental Conservation
50 Wolf Road, Room 218
Albany, New York 12233

RE: **Registry Site Classification Decision**
Airco Speer Carbon-Graphite
Niagara Falls, Niagara County
Site ID #932002

Dear Mr. Barcomb:

My staff have reviewed the Registry Site Classification Decision for the Airco Speer Carbon-Graphite site. Based on that review, I understand that the site contains hazardous waste, but that the site is fenced and secure and that there is no public exposure to on-site wastes. With this information, I conclude that there are no significant public health threat at this site and I concur with classifying this site as a Class 3. The statement: "There is no public exposure to on-site wastes." should be added to the "Justification for Classification Decision", block 11.

If the use of this facility changes, the potential for public exposures might change and this classification should be reviewed. If you have any questions, please feel free to call me or Mr. Allison C. Wakeman at 458-6310.

Sincerely,

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure
Investigation

tjl/94034PRO0105

cc: Dr. N. Kim
Mr. A. Wakeman/Ms. D. Hettrick
Dr. O. Smith-Blackwell, WRO
Mr. J. Devald, NCHD
Mr. T. Reamon/Ms. C. Whitfield, DEC

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

10/23/91

Original-BHSC
Copy-REGION
Copy-DEE
Copy DOH
Copy-PREPARER

REGISTRY SITE CLASSIFICATION DECISION

1. SITE NAME	2. SITE NO	3. TOWN/CITY/VILLAGE	4. COUNTY
Airco Speer Carbon Graphite	932002	Niagara Falls	Niagara

5. REGION: 9

6. CLASSIFICATION: Current 2a Proposed 3 Modify

7. LOCATION OF SITE (Attach U.S.G.S Topographic Map showing site location)

a. Quadrangle	b. Site Latitude	Longitude	c. Tax Map Number
Niagara Falls/Tonawanda W.	43 05' 44"	79 00' 08"	145.18-1-6

8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)
The site is an active carbon electrode manufacturing facility located in a highly industrialized area of Niagara Falls. Close neighbors include an Oxy-Durez site and CECOS/ Necco Park. Approximately 30 active transformers located on site are used to manage distribution of electricity to plant furnaces. The manufacturing process results in a large amount of carbon dust accumulating on site. The dust is not readily suppressed in all areas and tends to migrate throughout the site.

a. Area __29__ acres b. EPA ID Number NYD980201263____

c. Completed (x)Phase I ( )Phase II (x)PSA ( )RI/FS (x)PA/SI ( )Other

9. HAZARDOUS WASTES DISPOSED
At least 5 spill incidents involving PCB bearing transformer oils have been reported to NYSDEC since 1987; PCBs were found in site soils at levels up to 270 ppm in 1985. Records documenting the use of acetone at the site indicate that the compound was used in the form of a commercial chemical product; acetone was detected in 12 subsurface samples. Lead was detected in a liquid sump sample at a concentration of 18,900 ug/l, exceeding the regulatory limit of 5,000 ug/l specified by 6NYCRR Part 371.3(e).

10. ANALYTICAL DATA AVAILABLE
a. ( )Air ( )Groundwater (x)Surface Water (x)Soil ( )Waste ( )EPTox ( )TCLP
b. Contravention of Standards or Guidance Values
PCBs were found on site at 270 ppm in 1985. The presence of PCB contaminated soil was confirmed in 1993 with levels up to 59 ppm. Reported concentrations of acetone found in soils 2-4 ft. bgs ranged from 0.023 mg/kg to 0.13 mg/kg. Twelve VOA target compounds 22 BNA target compounds, and 16 pesticides were found in soils, sediment, surface water, and liquid wastes on site.

11. JUSTIFICATION FOR CLASSIFICATION DECISION
Hazardous waste is present on site in the form of PCBs in excess of 50 ppm, acetone that has been documented to have been disposed as the pure chemical product, and lead in liquid wastes that exceeds EP Tox levels. Significant threat is not present at the site due to the following factors: groundwater is not used as a source of drinking water in the area; although acetone was detected in surface water and sediment samples, the amounts present were well below USEPA health based guidance values; the same was true for PCBs detected in sediments, and lead found in surface water and sediments. The site itself is fenced with access controlled by security guards. The area the site is located in is an industrial area heavily populated with other hazardous waste sites, many of which have active and ongoing moitoring programs.

12. SITE IMPACT DATA
a. Nearest surface water: Distance ____2000_ft. Direction __W___ Classification _____

b. Nearest Groundwater: Depth __1/2___ft. Flow Direction __SSW___ ( )Sole Source ( )Primary ( )Principal

c. Nearest water supply: Distance _1.2 mi. Direction ___S____ Active (x)Yes ( )No

d. Nearest building: Distance ___0__ft. Direction ___E_____ Use __industrial_____

e. In State Economic Development Zone?	( )Y (X)N	i. Controlled site access?	(X)Y ( )N
f. Crops or livestock on site?	( )Y (x)N	j. Exposed hazardous waste?	( )Y (x)N
g. Documented fish or wildlife mortality?	( )Y (x)N	k. HRS Score _____	
h. Impact on special status fish or wildlife resource?	( )Y (x)N	l. For Class 2: Priority Category	_ ___

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
The Carbon/Graphite Group	4861 Packard Rd. Niagara Falls, N.Y. 14304	716-285-9281

16. PREPARER	17. APPROVED
Cynthia A Whitfield 1/7/94	G.A. Carlson 2/9/94
Signature Date	Signature Date
Cynthia A. Whitfield, EE1 BHSC, DHWR, NYSDEC	G.A. Carlson, Director, BEEI
Name, Title, Organization	Name, Title, Organization

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York 14203-2999

MAY 2 1 1994

Langdon Marsh
Acting Commissioner

M E M O R A N D U M

TO: Robert Marino, Director BHSC
FROM: Peter Buechi, Regional Engineer Region 9
SUBJECT: Airco Speer Carbon Graphite #932002

DATE: May 24, 1994

As indicated in the PSA Report, high levels of lead and PCB's were found in the groundwater in basement sump of Building 1.

To confirm the presence of these contaminants, Region 9 staff collected samples from this sump on 2/28/94. The results of this sampling indicated only background levels of heavy metals, and PCB's were not detected.

Based on this additional data we have no objection to reclassify this site to a Class 3.

However, we are requesting that Block 11 on the reclassification form be rewritten to eliminate the phrase "groundwater is not used as a source of drinking water". This phrase conflicts with other program guidance and Part 375 in which we strive to achieve SCG's and predisposal conditions, even for aquifers that are not known to be drinking water supplies. Therefore, there is an inconsistency issue raised by this statement.

ad

cc: Ms. Cynthia Whitfield, BHSC
Mr. Michael Hinton, HWR

CLASSIFICATION WORKSHEET

Site: Airco Speer Carbon Graphite County: 932002 Region: 9

1. Hazardous waste disposed X Y (to 2) _ N (Stop) _ U (Stop)

2. Consequential amount of hazardous waste? X Y (to 3) _ N (Stop) _ U (to 3)

3. Part 375-1.4(a)(1) applies? X N (to 4) _ U (to 4)

_ Y (as checked below; Class 2; to 5)

_ a. endangered or threatened species
_ b. streams, wetlands or coastal zone
_ c. bioaccumulation
_ d. fish, shellfish, crustacea or wildlife
_ e. fire, spill, explosion or toxic reaction
_ f. proximity to people or water supplies

4. Part 375-1.4(a)(2) applies? X N (Cl 3; Stop) _ U (Cl 2a: Stop)

_ Y (Class 2; to 5)

5. Factor(s) considered in making this determination:

SUMMARY

Consequential Hazardous Waste X Yes _ No _Unknown

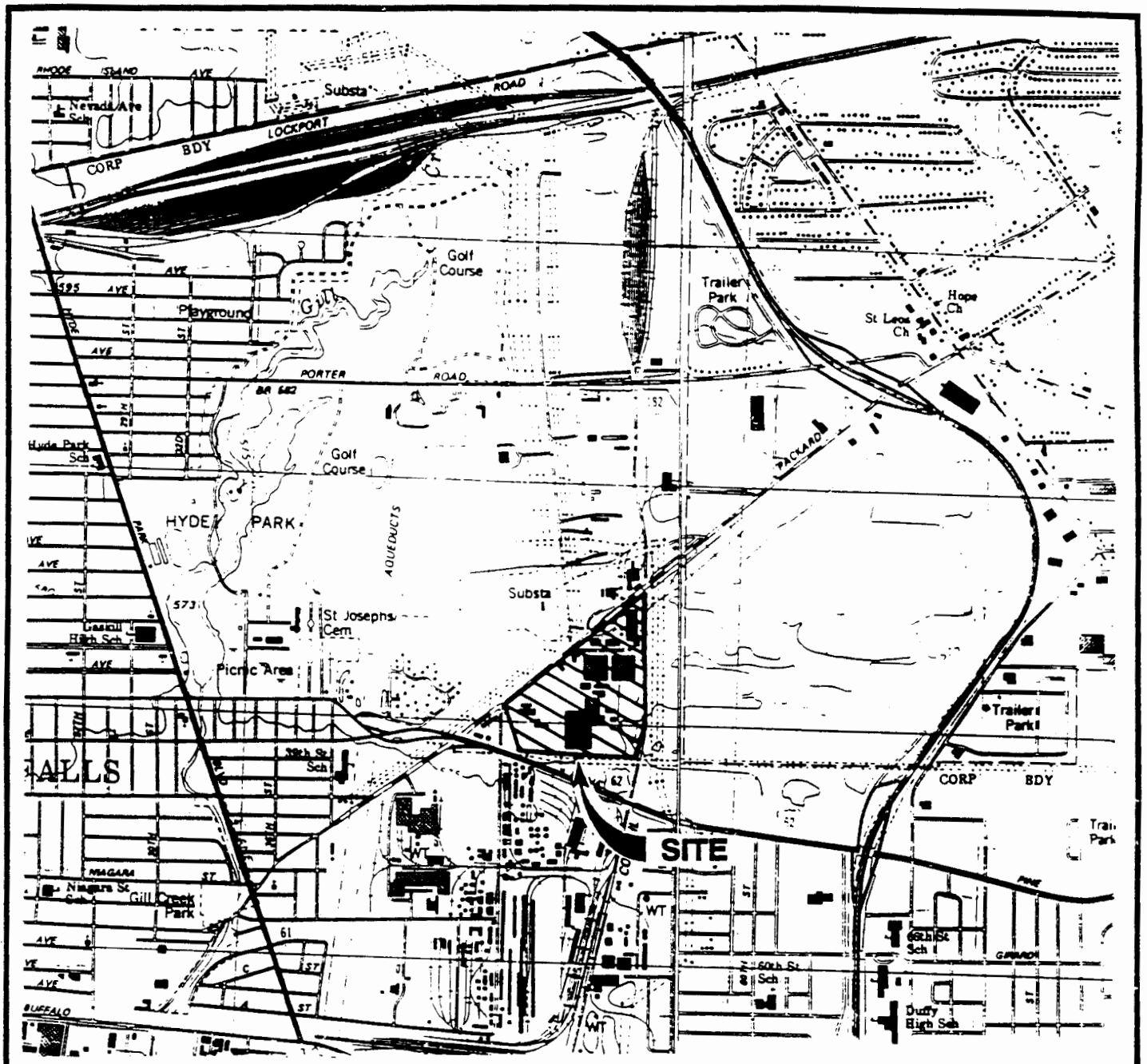
Significant Threat _ Yes X No _Unknown

Proposed Classification 3 Site Number 932002

November 21, 1994
Date

Cynthia L Whitfield Envir. Eng. I
Signature and Title

FIGURE 1.2



BASE MAP : U.S.G.S. 7.5 TOPOGRAPHIC MAP
NIAGARA FALLS, N.Y. - ONT. (1960) AND
TOWAWANDA WEST, N.Y. (1960) QUADRANGLES

QUADRANGLE LOCATION

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

SCALE
0 2000 4000 FT.
2000 FT.

ENGINEERING-SCIENCE

NEW YORK STATE DEPARTMENT
OF ENVIRONMENTAL CONSERVATION
PRELIMINARY SITE ASSESSMENT

SITE LOCATION

AIRCO SPEER CARBON GRAPHITE

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

CLASSIFICATION CODE: ~~2a~~ 3 REGION: 9 SITE CODE: 932002
EPA ID: NYD980201263

NAME OF SITE : Airco Speer Carbon-Graphite
STREET ADDRESS: Packard Road at 47th Street
TOWN/CITY: COUNTY: ZIP: 14304
Niagara Falls Niagara

SITE TYPE: Open Dump- X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: ~~2~~ 29 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: The Carbide / Graphite Group Inc.
CURRENT OWNER ADDRESS.: 800 Teresia St., St. Marys, Pa.
OWNER(S) DURING USE...: International Graphite and Elec./Airco
OPERATOR DURING USE...: Airco Speer Carbon Graphite
OPERATOR ADDRESS.....: 4861 Packard Rd., Niagara Falls, NY
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1930 To 1954

SITE DESCRIPTION:
This site is mainly land built up by clean fill. The fill consisted of: 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 WWTP. 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 again collected in May 1983. Fourteen organic priority pollutants were found in soil samples, some as high as 61 ppm. A State Superfund Phase I Investigation was completed in 1987. A Site Investigation with sampling was conducted by EPA in 1985. The presence of polynuclear aromatic hydrocarbons (PAH's) was confirmed. Low levels of purgeable hydrocarbons were also detected. One soil sample contained Aroclor 1248 (PCB) at 270 ppm. Analytical data from a PSA conducted in 1993 confirmed the presence of PCBs in excess of 50 ppm. The site is also contaminated by 12 volatile organics, 22 semivolatiles, and 16 pesticides. These substances are present at low levels and are not expected to cause a significant threat to the environment.

TYPE	QUANTITY (units)
Furnace insulation, Carbon materials	28,800 to 144,000 cu yds
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- X Groundwater- Soil-X Sediment- X

CONTRAVENTION OF STANDARDS:
Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

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

REMEDIAL ACTION:

Proposed- Under design- In Progress- Completed-
NATURE OF ACTION: N/A

GEOTECHNICAL INFORMATION:
SOIL TYPE: Topsoil, red clay 7 bedrock at 4-6 feet
GROUNDWATER DEPTH: Unknown

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:
The site is not expected to cause any immediate environmental problems.

ASSESSMENT OF HEALTH PROBLEMS:
Access to the site is restricted by fences and guards. Most contaminants were found 0-4 ft bgs. Workers on site are not expected to come into contact with wastes on a regular basis.

SECTION 1

EXECUTIVE SUMMARY

1.1 BACKGROUND SUMMARY

This document presents the results of the Task 3 investigation for the Preliminary Site Assessment (PSA) of the Airco Speer Carbon-Graphite, Inc. Site, located in the City of Niagara Falls, Niagara County, New York (Figure 1.1). The site is a Class 2a site listed on the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites (NYSDEC Site No. 932002), and is owned by the Carbide/Graphite Group, Inc. The site is under investigation because previous investigations indicate that hazardous wastes consisting of polychlorinated biphenyls (PCBs) and organic solvents have been disposed on-site.

The Airco Speer Carbon-Graphite, Inc. Site is an active manufacturing plant, and is located on a 62-acre parcel of land (Figure 1.2). The principal products manufactured at the site are graphite electrodes that are used in electric arc furnaces to manufacture steel. Electrodes have been manufactured at the site since the 1930s (ES, 1930). Most of the site is covered by manufacturing buildings, including six buildings containing electric electrode-baking furnaces (Graphite Plant Nos. 1 through 6) and four buildings containing gas-fired electrode-baking ovens (Bake Plants Nos. 1 through 4). Much of the open area on-site is covered by paved parking lots and is nearly flat. Unpaved surfaces are present in the open areas located in the southwest corner of the site. These areas are used for equipment and materials storage, and include a hazardous materials storage building, a drum storage area, and several above-ground storage tanks.

Approximately 20 acres of the site is underlain by a landfill that was used in the past to dispose of manufacturing wastes generated on-site. Wastes disposed in the landfill include approximately 86,000 cubic yards of carbonaceous granules and dust, spent refractories (bricks, concrete, and sand), 2,500 gallons of linseed oil and coal tar, and 7 tons of asbestos fibers (ITFHW, 1978). None of these wastes are hazardous wastes under NYSDEC regulations (Title 6 of the New York Codes, Rules and Regulations (6NYCRR), Part 371; NYSDEC, 1992c).

An on-site electric network consisting of approximately 30 transformers and numerous capacitors is used to manage the distribution of electricity to the electric furnaces. The cooling oils in the transformers and dielectric fluids used in the capacitors contain PCBs. These fluids have been actively managed by on-site personnel. Management has included on-site transport and storage, and filtering to remove water (AS, 1982). At least five documented spill incidents involving PCB-containing transformer oils have been reported to NYSDEC since 1987 (NYSDEC, 1992d). Operations at the site have also involved the use of other hazardous substances, and the generation of hazardous wastes. In 1982, Airco Speer reported the generation of 36 gallons per year of waste solvents including acetone, benzene, dimethlyformamide, methanol, and toluene (AS, 1982).

At least three previous environmental investigations of the site have occurred. In 1983, the U.S. Geological Survey collected three subsurface soil samples from borings (Borings 1, 2,

and 4 in Figure 1.2) advanced near the perimeter of the on-site landfill (USGS, 1984). The samples were analyzed for semivolatile organic compounds (SVOCs). The sample results revealed the presence of polynuclear aromatic hydrocarbons (PAHs) and related compounds in subsurface soils on-site. The maximum total concentration of PAHs revealed by the samples was 318 milligrams per kilogram (mg/kg) reported in the sample recovered from Boring 4.

In 1985, nine near-surface soil samples were collected from the site (samples NYA2-S1 through NYA2-S9 in Figure 1.2) for the U.S. Environmental Protection Agency (USEPA), and analyzed for organic compounds and metals (NUS, 1985). Aroclor 1248 was reported in sample NYA2-S9, collected from the open area in the southwest corner of the site, with a concentration of 270 mg/kg. Several volatile organic compounds were also detected in the sample, including tetrachloroethene, trichloroethene, and trans-1,2-dichloroethene. Concentrations of these compounds did not exceed 1 mg/kg.

In 1985, NYSDEC conducted a Phase I investigation of the site (ES, 1986). The primary purpose of the investigation was to evaluate the site using the Hazard Ranking System (HRS). Only one non-zero HRS route score was obtained; the preliminary groundwater migration score, Sgw, was 8.35. The resulting preliminary site migration score, Sm, was 4.82. NYSDEC subsequently listed the site as a Class 2a site on the Registry of Inactive Hazardous Waste Disposal Sites.

1.2 PRESENCE OF HAZARDOUS WASTE

Hazardous waste sites are identified and assessed by NYSDEC following regulations contained in 6NYCRR, Part 375 (NYSDEC, 1992b). Under these regulations, sites are classified based on the presence of hazardous waste, as defined by 6NYCRR, Part 371 (NYSDEC, 1992c), and the presence of a significant threat to the environment, as defined by 6NYCRR, Part 375. The presence of hazardous waste and significant threat at the Airco Speer Carbon-Graphite, Inc. Site was assessed based on the analytical results from 31 subsurface soil samples, three sump liquid samples, one surface water sample, and three sediment samples. In addition, 127 subsurface soil samples were collected and screened on-site for the presence of one or more of the following groups of analytes: PCBs, volatile organic compounds (VOCs), and inorganics to aid with selection of samples submitted for laboratory analysis. PCBs were screened using an immunoassay-based test manufactured by the Millipore Corporation. The laboratory and screening samples were collected during the weeks of September 20 and 27, 1993.

Two categories of hazardous wastes are defined by 6NYCRR, Part 371: (1) listed hazardous wastes, and (2) characteristic hazardous wastes. Listed hazardous wastes are generated by certain industrial processes, or are judged to have an acute hazard or toxicity associated with exposure to them. Listed hazardous wastes are assigned USEPA hazardous waste numbers with "F", "K", "P", "U", or "B" prefixes. Characteristic hazardous wastes are identified using analytical methods specified in 6NYCRR, Part 371, and are assigned "D" prefixes. The hazardous waste characteristics include EP toxicity, reactivity, corrosivity, and ignitability. The Extraction Procedure (EP Tox) method is used to identify hazardous wastes having the characteristic of EP Toxicity. Solid waste samples (samples with at least 0.5 percent solids) are first extracted by the EP Tox extraction procedure to generate a "leachate" that is analyzed for the EP Tox parameters of interest using specified methods. Liquid samples are directly analyzed without extraction.

1.2.1 Subsurface Soil Samples

Thirty-one subsurface samples were collected from the site at depths ranging from 0 to 6 feet. Sample locations are shown in Figures 1.2 and 1.3. Eighteen samples were analyzed for PCBs, sixteen samples were analyzed for VOCs, three samples were analyzed for Target Analyte List (TAL) metals and cyanide, and one sample was analyzed for SVOCs and pesticides. The analytical results from the subsurface soil samples and background information developed during the investigation establish the presence of two hazardous wastes disposed on-site: acetone and PCBs.

Under 6NYCRR, Part 371.4(d)(6), acetone is a listed hazardous waste if discarded as a commercial chemical product. Records documenting the use of acetone at the site indicate that the compound was used in the from of a commercial chemical product (AS, 1982). Acetone was detected in 12 of the subsurface soil samples collected during the investigation. Results from five of the samples: SB-70 (collected from a depth range of 2 to 4 feet below the ground surface), SB-71(2-4), SB-74(2-4), SB-75(2-4), and SB-86(2-4), indicate that acetone was disposed on-site. Reported concentrations in these samples ranged from 0.023 mg/kg to 0.13 mg/kg. Four of the samples were collected near the hazardous materials storage building, One of the samples: SB-75(2-4), was collected near the south fence. Results from the other seven samples reported to contain acetone are questionable because acetone was also detected in an associated blank.

Under 6NYCRR, Part 371.4(e)(1), PCB-contaminated soils are hazardous wastes if concentrations of PCBs in the soil exceed 50 ppm. Aroclor 1248 was reported in sample SB-63(0-2), collected near several storage buildings, with a concentration of 59 mg/kg, indicating that the sample contained hazardous waste. As previously noted, sample NYA2-S9, collected in the same area for the USEPA in 1985, contained PCBs with a reported concentration of 270 mg/kg. These two results establish the presence of hazardous waste consisting of PCB-contaminated soil on-site for the purpose of classifying the site because, under current NYSDEC policy, a minimum of two such samples are required (NYSDEC, 1990a).

1.2.2 Sump Liquid Samples

Three sump liquid samples were collected from the interior sumps located on-site as shown in Figure 1.2. The samples were analyzed for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide. The analytical results indicate that one of the sump samples, LS-03, was hazardous waste having the characteristic of EP Toxicity because of lead content. Sample LS-03 was collected from a 1.5-foot-diameter former oil treatment sump located in the basement of graphite Plant No. 1. Lead was detected in the sample with a concentration of 18,900 micrograms per liter (ug/l), exceeding the regulatory limit of 5,000 ug/l specified by 6NYCRR, Part 371.3(e). The source of the liquid in the sump was not apparent.

1.3 PRESENCE OF SIGNIFICANT THREAT

Under 6NYCRR, Part 375 regulations, a "significant threat" to the environment may be established by analytical data showing that hazardous substances: (1) have been released to environmental media from on-site hazardous waste, as defined under 6NYCRR, Part 371, and (2) are present in concentrations exceeding accepted health or environmental standards or guidance values. During this investigation, surface water and sediment samples were collected from the marsh area located near the southeast corner of the site to assess the presence of a significant threat to the environment.

Releases were generally established when the concentration of an analyte detected on-site and in an environmental sample collected from the marsh area exceeded the background concentration for that analyte by greater than a factor of three, consistent with USEPA criteria used for similar investigations (USEPA, 1990). Background concentrations of organic compounds were assumed to be below the laboratory method detection limit for the surface water and sediment samples. Background concentrations for inorganic analytes were assumed to be NYSDEC Class GA groundwater standards for the surface water sample, and the maximum natural concentration in soils for the sediment samples. Releases were assessed using human health-based standards or guidance values, mainly because environmental standards have not been established by NYSDEC for settings such as the sampled marsh.

1.3.1 Surface Water and Sediment Samples

One surface water sample and three sediment samples were collected from the locations shown in Figure 1.2. The samples were analyzed for VOCs, SVOCs, pesticides, PCBs, TAL metals, and cyanide. Analytical results from the surface water and sediment samples collected during the investigation did not establish the presence of a significant threat to the environment attributable to the site. In particular, results for the two hazardous wastes identified in the subsurface soil samples: acetone and PCBs, and the one hazardous waste detected in a sump liquid sample, lead, did not establish that these wastes pose a significant threat to the environment as defined by 6NYCRR, Part 375. However, the results indicate that acetone and PCBs have been released from the site.

Acetone was detected in the surface water sample and in two of the sediment samples: SD-02 and SD-03. The concentration of acetone in the surface water sample was 45 ug/l; however, the result could not be assessed to determine whether acetone poses a significant threat to the environment, as defined by 6NYCRR, Part 375, because a Class GA standard has not been established for the compound. The maximum concentration in the sediment samples was 0.1 mg/kg in sample SD-03. The result was well below the USEPA health-based guidance value of 8,000 mg/kg. The PCB Aroclor 1254 was detected in two of the sediment samples: SD-02 and SD-03. Concentrations in both samples, an estimated concentration of 0.099 mg/kg in SD-02 and an estimated concentration of 0.5 mg/kg in SD-03, did not exceed the USEPA guidance value of 1.0 mg/kg. PCBs were not detected in the surface water sample. Lead was detected in the surface water sample; however, the reported concentration did not exceed the Class GA standard. Similarly, lead was detected in each of the sediment samples at concentrations well below the maximum natural concentration.

1.4 RECOMMENDED CLASSIFICATION AND ACTION

The data gathered during the PSA Task 3 investigation indicate that hazardous waste consisting of acetone and PCBs is present in soils at the Airco Speer Carbon-Graphite, Inc. Site; however, the results do not establish that the hazardous waste poses a significant threat to the environment. Consequently, ES recommends that the site be listed as a Class 3 site on the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites. ES also recommends that the PSA investigation be concluded without additional work because the data gathered during the investigation are sufficient to classify the site.

TABLE 4.1
DETECTED ORGANIC COMPOUNDS (MG/KG)
SUBSURFACE SOIL SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	USEPA Health–Based Guid. Val. (2)	Sample (3) SB–21 (2–4)	SB–25 (2–4)	SB–26 (0–2)	SB–86 (4) (0–2)	SB–26 (2–4)	SB–27 (0–2)	SB–27 (2–4)	SB–90 (5) (2–4)	SB–30 (0–2)	SB–83 (6) (0–2)
VOCs											
Methylene Chloride (u080)	93	NA	0.002 J	0.004 J	–	0.011 J	0.002 J	0.002 J	0.017 B	NA	NA
Acetone (u002)	8,000	NA	0.059 B	0.057 B	0.095	0.093 B	0.042 B	0.027 B	0.038 B	NA	NA
Carbon Disulfide (P002)	8,000	NA	–	–	–	–	–	–	–	NA	NA
1,2–Dichloroethene (u079)	2,000	NA	–	–	–	–	–	–	–	NA	NA
2–Butanone (u159)	4,000	NA	0.011 J	0.013	0.050 J	0.029 J	0.009 J	0.007 J	–	NA	NA
1,1,1–Trichloroethane (u226)	7,000	NA	–	–	–	–	–	–	–	NA	NA
Trichloroethene (u228)	64	NA	–	–	–	–	–	–	–	NA	NA
Tetrachloroethene (u210)	14	NA	–	–	–	–	–	–	–	NA	NA
Toluene (u220)	20,000	NA	0.003 J	–	0.006 J	0.008 J	–	0.001 J	–	NA	NA
Ethylbenzene (F003)	8,000	NA	0.003 J	0.005 J	–	0.055 J	–	–	–	NA	NA
Xylene (total) (u239)	200,000	NA	–	0.013	–	0.082	–	–	–	NA	NA
SVOCs											
2–Methylnaphthalene	NV	NA	NA	NA	NA	NA	NA	NA	0.360 J	NA	NA
Acenaphthene	5,000	NA	NA	NA	NA	NA	NA	NA	0.170 J	NA	NA
N–Nitrosodiphenylamine	NV	NA	NA	NA	NA	NA	NA	NA	0.110 J	NA	NA
Phenanthrene	NV	NA	NA	NA	NA	NA	NA	NA	0.870	NA	NA
Anthracene	20,000	NA	NA	NA	NA	NA	NA	NA	0.820	NA	NA
Di–n–butylphthalate	8,000	NA	NA	NA	NA	NA	NA	NA	0.090 J	NA	NA
Fluoranthene	3,000	NA	NA	NA	NA	NA	NA	NA	0.180 J	NA	NA
Pyrene	2,000	NA	NA	NA	NA	NA	NA	NA	0.340 J	NA	NA
Benzo(a)anthracene	0.220	NA	NA	NA	NA	NA	NA	NA	0.190 J	NA	NA
Chrysene (u050)	NV	NA	NA	NA	NA	NA	NA	NA	0.260 J	NA	NA
Benzo(b)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	0.280 J	NA	NA
Benzo(k)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	0.160 J	NA	NA
Benzo(a)pyrene (u022)	0.061	NA	NA	NA	NA	NA	NA	NA	0.190 J	NA	NA
Indeno(1,2,3–cd)Pyrene (u137)	NV	NA	NA	NA	NA	NA	NA	NA	0.060 J	NA	NA
Benzo(g,h,i)Perylene	NV	NA	NA	NA	NA	NA	NA	NA	0.049 J	NA	NA
Pesticides and PCBs											
Alpha–BHC	0.110	NA	NA	NA	NA	NA	NA	NA	0.0012 J	NA	NA
Beta–BHC	3.9	NA	NA	NA	NA	NA	NA	NA	0.0018 JP	NA	NA
4,4'–DDE	2.9	NA	NA	NA	NA	NA	NA	NA	0.0022 JP	NA	NA
Endrin (P051)	20	NA	NA	NA	NA	NA	NA	NA	0.0068	NA	NA
4,4'–DDD (u060)	2.1	NA	NA	NA	NA	NA	NA	NA	0.0041 P	NA	NA
4,4'–DDT (u061)	2.1	NA	NA	NA	NA	NA	NA	NA	0.011 P	NA	NA
Endrin Ketone	NV	NA	NA	NA	NA	NA	NA	NA	0.011 P	NA	NA
Endrin Aldehyde	NV	NA	NA	NA	NA	NA	NA	NA	0.0054 P	NA	NA
Alpha–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	0.0004 JP	NA	NA
Gamma–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	0.0018 J	NA	NA
Aroclor–1248 (B007)	1 (a)	–	–	NA	NA	NA	NA	–	–	0.620 P	0.210 P
Aroclor–1254 (B007)	1 (a)	0.096	–	NA	NA	NA	NA	–	0.036 J	–	0.210
Aroclor–1260 (B007)	1 (a)	–	–	NA	NA	NA	NA	–	–	–	0.045

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC TAGM HWR–92–4046.
3. Sample depth in feet below ground surface.
4. Duplicate of sample SB–26 (0–2).
5. Duplicate of SB–27 (2–4).
6. Duplicate of sample SB–30 (0–2).
7. DL = Sample reanalyzed with secondary dilution factor.
8. RE = Sample reanalyzed.
9. Field blank. Concentrations in ug/l.

NV: No value in cited reference.

a. Regulatory limit for hazardous waste is 50 mg/kg (6NYCRR Part 371.4(e)).

–: Compound not detected.
NA: Not analyzed.
J: Estimated value.
B: Analyte also detected in associated blank.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported.
E: Analyte concentration exceeded instrument calibration range.
D: Analyte identified at secondary dilution factor.

TABLE 4.1 (CONTINUED)
DETECTED ORGANIC COMPOUNDS (MG/KG)
SUBSURFACE SOIL SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	USEPA Health–Based Guid. Val. (2)	Sample (3) SB–30 (2–4)	SB–33 (2–4)	SB–44 (2–4)	SB–45 (2–4)	SB–46 (0–2)	SB–49 (0–4)	SB–50 (0–4)	SB–51 (0–2)	SB–52 (0–2)	SB–62 (0–2)
VOCs											
Methylene Chloride (u080)	93	–	–	NA	NA	NA	NA	NA	NA	NA	–
Acetone (u002)	8,000	–	0.036 B	NA	NA	NA	NA	NA	NA	NA	–
Carbon Disulfide (P002)	8,000	–	–	NA	NA	NA	NA	NA	NA	NA	–
1,2–Dichloroethene (u079)	2,000	–	–	NA	NA	NA	NA	NA	NA	NA	0.015 J
2–Butanone (u159)	4,000	–	0.009 J	NA	NA	NA	NA	NA	NA	NA	–
1,1,1–Trichloroethane (u226)	7,000	–	–	NA	NA	NA	NA	NA	NA	NA	–
Trichloroethene (u228)	64	–	–	NA	NA	NA	NA	NA	NA	NA	0.088
Tetrachloroethene (u210)	14	–	–	NA	NA	NA	NA	NA	NA	NA	0.520
Toluene (u220)	20,000	–	–	NA	NA	NA	NA	NA	NA	NA	–
Ethylbenzene (F003)	8,000	–	–	NA	NA	NA	NA	NA	NA	NA	–
Xylene (total) (u239)	200,000	–	–	NA	NA	NA	NA	NA	NA	NA	–
SVOCs											
2–Methylnaphthalene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N–Nitrosodiphenylamine	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di–n–butylphthalate	8,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	0.220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene (u050)	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (u022)	0.061	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3–cd)Pyrene (u137)	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides and PCBs											
Alpha–BHC	0.110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta–BHC	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDE	2.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin (P051)	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDD (u060)	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDT (u061)	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor–1248 (B007)	1 (a)	NA	NA	–	–	–	–	–	–	–	NA
Aroclor–1254 (B007)	1 (a)	NA	NA	0.320	–	0.150	0.014 J	0.048	0.070	0.013 J	NA
Aroclor–1260 (B007)	1 (a)	NA	NA	–	–	–	–	–	–	–	NA

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts
2. NYSDEC TAGM HWR–92–4046.
3. Sample depth in feet below ground surface.
4. Duplicate of sample SB–26 (0–2).
5. Duplicate of SB–27 (2–4).
6. Duplicate of sample SB–30 (0–2).
7. DL = Sample reanalyzed with secondary dilution factor.
8. RE = Sample reanalyzed.
9. Field blank. Concentrations in ug/l.

NV: No value in cited reference.

a Regulatory limit for hazardous waste is 50 mg/kg (6NYCRR Part 371.4(e)).

–: Compound not detected.
NA: Not analyzed.
J: Estimated value.
B: Analyte also detected in associated blank.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported.
E: Analyte concentration exceeded instrument calibration range.
D: Analyte identified at secondary dilution factor.

TABLE 4.1 (CONTINUED)
DETECTED ORGANIC COMPOUNDS (MG/KG)
SUBSURFACE SOIL SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	USEPA Health–Based Guid. Val. (2)	Sample (3) SB–62 (2–4)	SB–63 (0–2)	SB–63DL (7) (0–2)	SB–67 (4–6)	SB–70 (0–2)	SB–70 (2–4)	SB–71 (2–4)	SB–71 RE (8) (2–4)	SB–72 (0–2)	SB–72 (2–4)
VOCs											
Methylene Chloride (u080)	93	–	NA	NA	NA	NA	–	–	0.011 BJ	NA	–
Acetone (u002)	8,000	–	NA	NA	NA	NA	0.096	0.130	0.090 B	NA	0.024
Carbon Disulfide (P002)	8,000	–	NA	NA	NA	NA	–	–	–	NA	–
1,2–Dichloroethene (u079)	2,000	–	NA	NA	NA	NA	–	–	–	NA	–
2–Butanone (u159)	4,000	–	NA	NA	NA	NA	0.020	0.022	0.012 J	NA	0.004 J
1,1,1–Trichloroethane (u226)	7,000	–	NA	NA	NA	NA	–	–	–	NA	–
Trichloroethene (u228)	64	0.002 J	NA	NA	NA	NA	–	–	–	NA	–
Tetrachloroethene (u210)	14	0.022	NA	NA	NA	NA	0.004 J	0.001 J	–	NA	–
Toluene (u220)	20,000	–	NA	NA	NA	NA	–	–	–	NA	0.003 J
Ethylbenzene (F003)	8,000	–	NA	NA	NA	NA	–	–	–	NA	–
Xylene (total) (u239)	200,000	–	NA	NA	NA	NA	–	–	–	NA	–
SVOCs											
2–Methylnaphthalene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	5,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N–Nitrosodiphenylamine	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di–n–butylphthalate	8,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	0.220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene (u050)	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (u022)	0.061	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3–cd)Pyrene (u137)	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides and PCBs											
Alpha–BHC	0.110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beta–BHC	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDE	2.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin (P051)	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDD (u060)	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'–DDT (u061)	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	NV	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alpha–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor–1248 (B007)	1 (a)	NA	59.000 E	59.000 DP	–	–	NA	NA	NA	0.180 JP	NA
Aroclor–1254 (B007)	1 (a)	NA	–	–	0.069	0.070	NA	NA	NA	–	NA
Aroclor–1260 (B007)	1 (a)	NA	–	–	–	0.074 P	NA	NA	NA	0.750 P	NA

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC TAGM HWR–92–4046.
3. Sample depth in feet below ground surface.
4. Duplicate of sample SB–26 (0–2).
5. Duplicate of SB–27 (2–4).
6. Duplicate of sample SB–30 (0–2).
7. DL = Sample reanalyzed with secondary dilution factor.
8. RE = Sample reanalyzed.
9. Field blank. Concentrations in ug/l.

NV: No value in cited reference.

a. Regulatory limit for hazardous waste is 50 mg/kg (40 CFR 268 Part 371.4(e)).

–: Compound not detected.
NA: Not analyzed.
J: Estimated value.
B: Analyte also detected in associated blank.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported.
E: Analyte concentration exceeded instrument calibration range.
D: Analyte identified at secondary dilution factor.

TABLE 4.1 (CONTINUED)
DETECTED ORGANIC COMPOUNDS (MG/KG)
SUBSURFACE SOIL SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	USEPA Health–Based Guid. Val. (2)	Sample (3) SB–72 RE (8) (2–4)	SB–73 (2–4)	SB–73 RE (8) (2–4)	SB–75 (2–4)	SB–75 RE (8) (2–4)	SB–78 (0–2)	FB–01 (9)
VOCs								
Methylene Chloride (u080)	93	0.010 BJ	–	0.011 BJ	–	0.014 B	NA	0.006 BJ
Acetone (u002)	8,000	–	–	0.010 BJ	0.023	0.017 B	NA	–
Carbon Disulfide (P002)	8,000	–	–	–	0.007 J	0.003 J	NA	–
1,2–Dichloroethene (u079)	2,000	–	–	–	–	–	NA	–
2–Butanone (u159)	4,000	–	–	–	–	–	NA	–
1,1,1–Trichloroethane (u226)	7,000	–	–	–	–	0.001 J	NA	–
Trichloroethene (u228)	64	–	0.003 J	0.002 J	–	–	NA	–
Tetrachloroethene (u210)	14	–	–	–	–	–	NA	–
Toluene (u220)	20,000	–	0.001 J	–	0.002 J	0.002 J	NA	–
Ethylbenzene (F003)	8,000	–	–	–	–	–	NA	–
Xylene (total) (u239)	200,000	–	–	–	0.018	–	NA	–
SVOCs								
2–Methylnaphthalene	NV	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	5,000	NA	NA	NA	NA	NA	NA	NA
N–Nitrosodiphenylamine	NV	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NV	NA	NA	NA	NA	NA	NA	NA
Anthracene	20,000	NA	NA	NA	NA	NA	NA	NA
Di–n–butylphthalate	8,000	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	3,000	NA	NA	NA	NA	NA	NA	NA
Pyrene	2,000	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	0.220	NA	NA	NA	NA	NA	NA	NA
Chrysene (u050)	NV	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	NV	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene (u022)	0.061	NA	NA	NA	NA	NA	NA	NA
Indeno(1,2,3–cd)Pyrene (u137)	NV	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)Perylene	NV	NA	NA	NA	NA	NA	NA	NA
Pesticides and PCBs								
Alpha–BHC	0.110	NA	NA	NA	NA	NA	NA	NA
Beta–BHC	3.9	NA	NA	NA	NA	NA	NA	NA
4,4'–DDE	2.9	NA	NA	NA	NA	NA	NA	NA
Endrin (P051)	20	NA	NA	NA	NA	NA	NA	NA
4,4'–DDD (u060)	2.1	NA	NA	NA	NA	NA	NA	NA
4,4'–DDT (u061)	2.1	NA	NA	NA	NA	NA	NA	NA
Endrin Ketone	NV	NA	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	NV	NA	NA	NA	NA	NA	NA	NA
Alpha–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA
Gamma–Chlordane (u036)	0.54	NA	NA	NA	NA	NA	NA	NA
Aroclor–1248 (B007)	1 (a)	NA	NA	NA	NA	NA	–	–
Aroclor–1254 (B007)	1 (a)	NA	NA	NA	NA	NA	0.037	–
Aroclor–1260 (B007)	1 (a)	NA	NA	NA	NA	NA	0.046	–

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC TAGM HWR–92–4046.
3. Sample depth in feet below ground surface.
4. Duplicate of sample SB–26 (0–2).
5. Duplicate of SB–27 (2–4).
6. Duplicate of sample SB–30 (0–2).
7. DL = Sample reanalyzed with secondary dilution factor.
8. RE = Sample reanalyzed.
9. Field blank. Concentrations in ug/l.

NV: No value in cited reference.

a. Regulatory limit for hazardous waste is 50 mg/kg (6NYCRR, Part 371.4(e)).

–: Compound not detected.
NA: Not analyzed.
J: Estimated value.
B: Analyte also detected in associated blank.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported.
E: Analyte concentration exceeded instrument calibration range.
D: Analyte identified at secondary dilution factor.

TABLE 4.2
INORGANICS ANALYSIS (MG/KG)
SUBSURFACE SOIL SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	Natural Range in Soils (2)	Sample (3) SB–43 (0–4)	SB–74 (0–2)	SB–89 (0–2) (4)	SB–90 (2–4)
Aluminum	700–100,000	6,610.00	2,470.00	2,550.00	14,500.00
Antimony	<1–10	–	–	–	–
Arsenic (D004)	0.1–100	13.80 N	9.60 N	9.90 N	5.40 N
Barium (D005)	10–500	41.80	34.80 B	25.30 B	84.80
Beryllium	<1–15	0.26 B	0.20 B	0.18 B	1.10
Cadmium (D006)	0.01–7 (a)	1.50 N*	1.50 N*	9.90 N*	1.20 N*
Calcium	130–330,000	88,300.00 *	50,300.00 *	75,900.00 *	78,300.00 *
Chromium (D007)	1–2,000	35.50	20.80	20.00	42.40
Cobalt	<3–70	6.70 B	6.70 B	6.90 B	7.30 B
Copper	1–700	60.10 N*	101.00 N*	195.00 N*	28.10 N*
Cyanide (P030)	NV	–	–	–	–
Iron	100–100,000	19,200.00	10,200.00	11,000.00	19,200.00
Lead (D008)	<10–700	80.60 *	72.40 *	61.10 *	25.90 *
Magnesium	50–50,000	24,300.00 *	15,700.00 *	28,800.00 *	32,200.00 *
Manganese	<2–7,000	431.00 *	222.00 *	442.00 *	767.00 *
Mercury (D009)	0.02–0.5	1.10 N*	0.12 N*	–	1.80 N*
Nickel	<5–7,000	169.00	45.30	45.20	14.80
Potassium	2,200–65,000	600.00 B	231.00 B	420.00 B	1,620.00
Selenium (D010)	<0.1–5	0.48 BNW	0.65 BNW	0.51 BNW	–
Silver (D011)	0.01–5 (b)	–	–	–	–
Sodium	<500–100,000	207.00 B	134.00 B	145.00 B	192.00 B
Thallium	NV	–			
Vanadium	20–500	34.50	44.10	45.30	25.30
Zinc	<5–3,500	120.00 *	111.00 *	4,730.00 *	156.00 *

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. Schacklette and Boerngen, 1984.
3. Sample depth in feet below ground surface in parentheses.
4. Duplicate of sample SB–74 (0–2).
(a) Booz, Allen and Hamilton, 1983.
(b) USEPA, 1983.
NV: No value in cited references.
B: Value greater than instrument detection limit but less than contract required detection limit.
–: Analyte not detected.
N: Spike sample recovery not within control limits.
W: Post digestion spike for Furnace AA analysis out of control limits, while sample absorbance is less than 50% of spike absorbance.
*: Duplicate analysis not within control limits.

TABLE 4.3
DETECTED ORGANIC COMPOUNDS (UG/L)
SUMP LIQUID SAMPLES -- SEPTEMBER 1993
AIRCO SPEER CARBON-GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	Class GA Groundwater Standards (2)	Sample (3)						
		LS-01	LS-02	LS-04 (3)	LS-04RE (4)	LS-03	FB-02 (5)	TB-02 (6)
VOCs								
Methylene Chloride (u080)	5	–	–	–	–	–	6.0 J	6.0 J
Chloroform (u044)	7	–	4.0 J	4.0 J	4.0 J	–	–	–
Toluene (u220)	5	4.0 J	–	–	–	–	–	–
Xylene (total) (u239)	NS	3.0 J	–	–	–	–	–	–
SVOCs								
Naphthalene (u165)	10 G	7.0 J	–	NA	NA	–	NA	NA
2-Methylnaphthalene	NS	2.0 J	–	NA	NA	–	NA	NA
Acenaphthene	20 G	–	–	NA	NA	6.0 J	NA	NA
Dibenzofuran	NS	7.0 J	–	NA	NA	2.0 J	NA	NA
Fluorene	50 G	–	–	NA	NA	3.0 J	NA	NA
Hexachlorobenzene (u127)	0.35	–	21.0	NA	NA	–	NA	NA
Phenanthrene	50 G	26.0	–	NA	NA	3.0 J	NA	NA
Anthracene	50 G	1.0 J	–	NA	NA	3.0 J	NA	NA
Carbazole	NS	2.0 J	–	NA	NA	3.0 J	NA	NA
Fluoranthene (u120)	50 G	40.0	–	NA	NA	15.0	NA	NA
Pyrene	50 G	23.0	–	NA	NA	15.0	NA	NA
Benzo(a)anthracene	0.002 G	14.0	–	NA	NA	7.0 J	NA	NA
Chrysene (u050)	0.002 G	23.0	–	NA	NA	9.0 J	NA	NA
Bis(2-Ethylhexyl)phthalate (u028)	50	4.0 J	–	NA	NA	2.0 J	NA	NA
Benzo(b)fluoranthene	0.002 G	16.0	–	NA	NA	5.0 J	NA	NA
Benzo(k)fluoranthene	0.002 G	13.0	–	NA	NA	3.0 J	NA	NA
Benzo(a)pyrene (u022)	ND	15.0	–	NA	NA	2.0 J	NA	NA
Indeno(1,2,3-cd)Pyrene (u137)	0.002 G	3.0 J	–	NA	NA	1.0 J	NA	NA
Dibenzo(a,h)anthracene (u063)	NS	1.0 J	–	NA	NA	–	NA	NA
Benzo(g,h,i)Perylene	NS	2.0 J	–	NA	NA	–	NA	NA
Pesticides and PCBs								
Alpha-BHC	NS	–	–	–	NA	0.008 JP	–	NA
Gamma-BHC	NS	–	–	–	NA	0.049 JP	–	NA
Dieldrin (P037)	ND	–	–	–	NA	0.390 P	–	NA
4,4'-DDE	ND	–	–	–	NA	0.069 JP	–	NA
4,4'-DDD (u060)	ND	–	–	0.027 JP	NA	–	–	NA
Endosulfan Sulfate	NS	–	0.018 JP	–	NA	–	0.013 JP	NA
4,4'-DDT (u061)	ND	–	–	–	NA	0.130 P	–	NA
Endrin Aldehyde	5	–	–	–	NA	0.260 P	–	NA
Alpha-Chlordane (u036)	0.1	–	–	–	NA	0.140 P	–	NA
Aroclor-1260 (B007)	0.1	–	–	–	NA	6.000	–	NA

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC, 1991.
3. Duplicate of sample LS-02.
4. RE = Sample reanalyzed.
5. Wash blank.
6. Trip blank.

NS: No standard published in cited reference.
G: Guidance value.
ND: Not detectable
-: Analyte not detected.
NA: Not analyzed.
J: Estimated value.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported

TABLE 4.4
INORGANICS ANALYSIS (UG/L)
SUMP LIQUID SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	EPTOX Regulatory Limit (2)	Class GA Groundwater Standards (3)	LS–01	LS–02	Sample LS–04 (4)	LS–03	FB–02 (5)
Aluminum	NL	NS	3,530.00	1,590.00	807.00	61,000.00	–
Antimony	NL	[illegible]	–	–	–	123.00	–
Arsenic (D004)	5,000	25	6.60 BW	26.10	15.10	69.90	–
Barium (D005)	100,000	1,000	153.00 B	39.00 B	22.00 B	1,900.00	–
Beryllium	NL	[illegible]	–	–	–	4.70 B	–
Cadmium (D006)	1,000	10	4.90 B	7.60	–	404.00	–
Calcium	NL	NS	175,000.00	27,300.00	19,100.00	340,000.00	48.00 B
Chromium (D007)	5,000	50	31.70	33.30	7.70 B	4,160.00	–
Cobalt	NL	[illegible]	–	–	–	78,100.00	–
Copper	NL	200	125.00	38.50	14.60 B	104,000.00	–
Cyanide (P030)	NL	100	–	–	–	–	–
Iron	NL	300	13,900.00	13,000.00	5,730.00	2,624,000.00	–
Lead (D008)	5,000	25	221.00	287.00	114.00	18,900.00	1.90 B
Magnesium	NL	35,000	24,500.00	7,690.00	6,980.00	42,200.00	77.00 B
Manganese	NL	300	1,310.00	145.00	62.00	18,200.00	–
Mercury (D009)	200	[illegible]	8.50 N*	0.42 N*	0.34 N*	–	–
Nickel	NL	NS	75.50	148.00	57.00	4,110.00	–
Potassium	NL	NS	7,810.00	2,710.00 B	2,430.00 B	9,580.00	–
Selenium (D010)	1,000	[illegible]	2.90 BNW	–	9.10 BN	35.80 BN	2.60 BNW
Silver (D011)	5,000	50	–	–	–	6.70 B	–
Sodium	NL	20,000	23,100.00 E	1,264,000.00 E	1,175,000.00 E	59,000.00 E	229.00 BE
Thallium	NL	[illegible]	–	4.00 B	–	32.80 B	–
Vanadium	NL	NS	34.90 B	246.00	90.50	1,790.00	–
Zinc	NL	300	1,220.00	396.00	314.00	244,000.00	–

Analysis by Energy and Environmental E[illegible]g Inc., Somerville, Massachusetts.
6NYCRR, Part 371.3 (e)(2).
NYSDEC, 1991.
Duplicate of sample LS–02.
Wash blank.
NL, NS: No regulatory limit or standard estab[illegible] cited publication.
Guidance value.
Analyte not detected.
Value greater than instrument detection l[illegible] ess than contract required detection limit.
Spike sample recovery not within control [illegible]
Post digestion spike for Furnace AA analys[illegible] of control limits, while sample absorbance is less than 50% of spike absorbance.
Value estimated due to interference.
Duplicate analysis not within control limits

TABLE 4.5
DETECTED ORGANIC COMPOUNDS AND INORGANICS ANALYSIS (UG/L)
SURFACE WATER SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	Class GA Groundwater Standards (2)	Sample SW–01	SW–01RE (3)	TB–02 (5)
VOCs				
Methylene Chloride (u080)	5	–	NA	6.0 J
Acetone (u002)	NS	45.0	NA	–
2–Butanone (u159)	NS	11.0	NA	–
SVOCs				
Phenanthrene	50 G	2.0 J	2.0 J	NA
Anthracene	50 G	1.0 J	1.0 J	NA
Benzo(a)anthracene	0.002 G	3.0 J	4.0 J	NA
Chrysene (u050)	0.002 G	7.0 J	6.0 J	NA
Benzo(b)fluoranthene	0.002 G	2.0 J	1.0 J	NA
Benzo(k)fluoranthene	0.002 G	2.0 J	2.0 J	NA
Benzo(a)pyrene (u022)	ND	1.0 J	–	NA
Benzo(g,h,i)Perylene	NS	1.0 J	1.0 J	NA
Pesticides and PCBs				
Endosulfan I (P050)	NS	0.014 JP	NA	NA
Dieldrin (P037)	NS	0.042 JP	NA	NA
Endrin (P051)	ND	0.140 P	NA	NA
Endosulfan II (P050)	NS	0.360	NA	NA
4,4'–DDD (u060)	ND	0.086 JP	NA	NA
Endosulfan Sulfate	NS	–	NA	NA
4,4'–DDT (u061)	NS	0.160 P	NA	NA
Endrin Ketone	NS	0.460 P	NA	NA
Gamma–Chlordane (u036)	0.1	0.025 JP	NA	NA
Inorganics				
Aluminum	NS	261.0	NA	NA
Antimony	3 G	–	NA	NA
Arsenic (D004)	25	7.4 B	NA	NA
Barium (D005)	1,000	211.0	NA	NA
Beryllium	3 G	–	NA	NA
Cadmium (D006)	10	–	NA	NA
Calcium	NS	55,000.0	NA	NA
Chromium (D007)	50	5.2 B	NA	NA
Cobalt	NS	22.1 B	NA	NA
Copper	200	279.0	NA	NA
Cyanide (P030)	100	–	NA	NA
Iron	300	8,310.0	NA	NA
Lead (D008)	25	8.7	NA	NA
Magnesium	35,000	13,200.0	NA	NA
Manganese	300	8,450.0	NA	NA
Mercury (D009)	2	0.3 N*	NA	NA
Nickel	NS	15.2 B	NA	NA
Potassium	NS	20,100.0	NA	NA
Selenium (D010)	10	–	NA	NA
Silver (D011)	50	–	NA	NA
Sodium	20,000	7,120.0 E	NA	NA
Thallium	4 G	–	NA	NA
Vanadium	NS	17.4 B	NA	NA
Zinc	300	63.2	NA	NA

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC, 1991.
3. RE = Sample reanalyzed.
4. Trip blank.
G: Guidance value.
ND: Not detectable.
NS: No standard established in cited publication.
–: Analyte not detected.
J: Estimated value
NA: Not analyzed.
P: Concentrations detected by the two GC columns differed by greater than 25 percent. The lower of the two values is reported.
B: Value greater than instrument detection limit but less than contract required detection limit.
N: Spike sample recovery not within control limits.
E: Value estimated due to interference.
*: Duplicate analysis not within control limits.

TABLE 4.6
DETECTED ORGANIC COMOUNDS (MG/KG)
SEDIMENT SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	USEPA Health–Based Guid. Val. (2)	Sample (3) SD–01	SD–01RE (3)	SD–01DL (4)	SD–02	SD–02RE (3)	SD–02AC (5)	SD–03	SD–03DL (4)	FB–01 (6)
VOCs										
Methylene Chloride (u080)	93	–	–	NA	–	–	NA	–	NA	0.006 BJ
Acetone (u002)	8,000	–	–	NA	0.021	0.027 B	NA	0.100	NA	–
Chloroform (u044)	114	0.001 J	0.002 J	NA	0.003 J	0.004 J	NA	–	NA	–
2–Butanone (u159)	4,000	–	–	NA	–	0.016 J	NA	–	NA	–
Toluene (u220)	20,000	–	0.002 J	NA	–	–	NA	–	NA	–
SVOCs										
Acenaphthene	5,000	2.1 J	2.1 J	3.5 JD	–	–	NA	3.4 J	7.0 J	NA
Fluorene	3,000	–	–	–	–	–	NA	–	2.8 J	NA
Phenanthrene	NV	25.0	26.0	34.0 D	18.0	16.0	NA	36.0	36.0	NA
Anthracene	20,000	2.4 J	2.8 J	29.0 D	–	–	NA	–	4.8 J	NA
Carbazole	NV	–	1.8 J	2.9 JD	–	–	NA	–	5.4 J	NA
Fluoranthene (u220)	3,000	32.0	33.0	46.0 D	8.9 J	8.8 J	NA	33.0	62.0	NA
Pyrene	2,000	77.0	87.0	98.0 D	59.0	59.0	NA	95.0	96.0	NA
Benzo(a)anthracene	0.22	51.0	45.0	52.0 D	48.0	49.0	NA	72.0	79.0	NA
Chrysene (u050)	NV	90.0	93.0	100.0 D	59.0	73.0	NA	130.0	9.4	NA
Benzo(b)fluoranthene	NV	51.0	61.0	57.0 D	21.0	39.0	NA	52.0	84.0	NA
Benzo(k)fluoranthene	NV	48.0	33.0	42.0 D	14.0	23.0	NA	41.0	67.0	NA
Benzo(a)pyrene (u022)	0.061	83.0	71.0	64.0 D	2.8	49.0	NA	63.0	84.0	NA
Indeno(1,2,3–cd)Pyrene (u137)	NV	14.0 J	7.5 J	7.9 JD	3.3 J	5.2 J	NA	14.0 J	10.0 J	NA
Dibenzo(a,h)Anthracene (u063)	0.014	8.4 J	6.3 J	4.8 JD	3.0 J	4.7 J	NA	10.0 J	7.7 J	NA
Benzo(g,h,i)Perylene	NV	27.0	15.0 J	15.0 JD	10.0 J	16.0	NA	21.0 J	7.6 J	NA
Pesticides and PCBs										
Beta–BHC	3.9	–	NA	NA	0.019 JP	NA	–	–	–	NA
Heptachlor Epoxide	0.077	0.077 JP	NA	NA	0.005 JP	NA	–	0.019 JP	–	NA
Endosulfan I	NV	0.055 JP	NA	NA	0.006 JP	NA	–	0.032 JP	–	NA
Dieldrin (P037)	0.044	–	NA	NA	0.009 JP	NA	–	–	–	NA
Endosulfan II	NV	0.780 P	NA	NA	0.160 P	NA	–	1.200	–	NA
4,4'–DDE	2.9	0.180 JP	NA	NA	–	NA	–	–	–	NA
4,4'–DDD (u060)	2.1	–	NA	NA	0.017 JP	NA	–	0.091 JP	–	NA
Endrin Ketone	NV	2.100 P	NA	NA	0.410 P	NA	–	2.600 P	–	NA
Gamma–Chlordane (u036)	0.54	–	NA	NA	0.005 JP	NA	–	0.035 JP	–	NA
Aroclor–1254 (B007)	1	–	NA	NA	0.099 J	NA	0.031 J	0.500 JP	0.220 J	–

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. NYSDEC TAGM HWR–92–4046.
3. Sample reanalyzed.
4. DL = Sample reanalyzed with secondary dilution factor.
5. AC = Sample reanalyzed with secondary dilution factor.

NV: No value in cited reference.
D: Analyte identified at secondary dilution factor.
P: Concentrations detected by the two GC columns differed by greater than 25 percent The lower of the two values is reported.

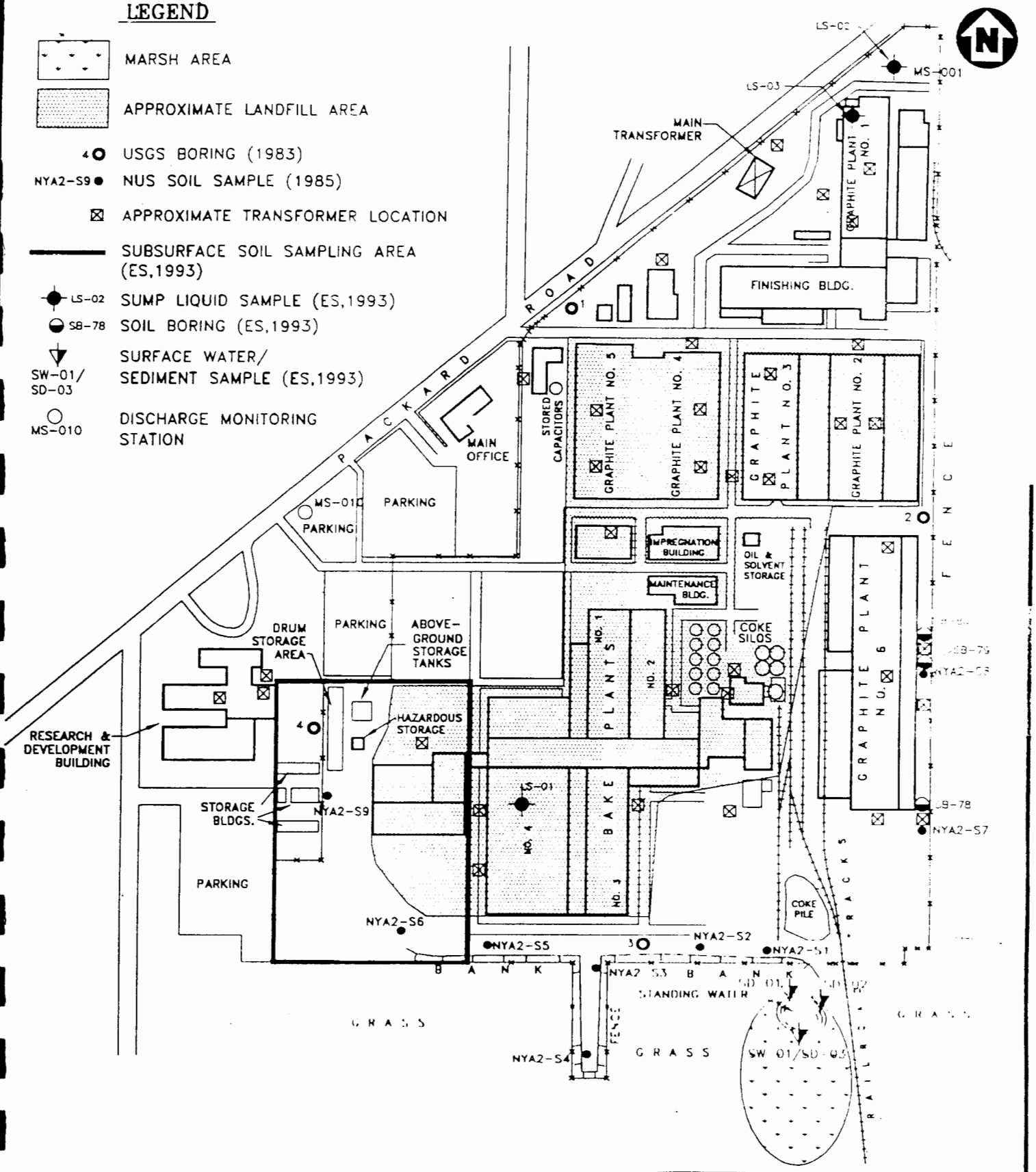
–: Compound not detected.
NA: Not analyzed.
J: Estimated value.
B: Analyte also detected in associated blank.

TABLE 4.7
INORGANICS ANALYSIS (MG/KG)
SEDIMENT SAMPLES – SEPTEMBER 1993
AIRCO SPEER CARBON–GRAPHITE, INC. SITE
NIAGARA COUNTY, NEW YORK

Analyte (1)	Natural Range in Soils (2)	Sample SD–01	SD–02	SD–03
Aluminum	700–100,000	773.00	345.00	8,980.00
Antimony	<1–10	–	–	–
Arsenic (D004)	0.1–100	5.30 N	2.90 N	10.50 N
Barium (D005)	10–500	14.90 B	12.30 B	202.00
Beryllium	<1–15	–	–	0.45 B
Cadmium (D006)	0.01–7 (a)	1.20 BN*	1.10 BN*	1.70 N*
Calcium	130–330,000	1,630.00 *	2,760.00 *	35,900.00 *
Chromium (D007)	1–2,000	12.40	4.20	166.00
Cobalt	<3–70	–	–	27.50
Copper	1–700	696.00 N*	83.70 N*	237.00 N*
Cyanide (P030)	NV	–	–	–
Iron	100–100,000	13,900.00 *	9,390.00	14,800.00
Lead (D008)	<10–700	33.10 *	17.70 *	78.40 *
Magnesium	50–50,000	386.00 B*	237.00 B*	9,680.00 *
Manganese	<2–7,000	140.00 *	184.00 *	3,990.00 *
Mercury (D009)	0.02–0.5	0.36 N*	0.35 N*	1.00 N*
Nickel	<5–7,000	8.40 B	6.10 B	62.20
Potassium	2,200–65,000	–	–	1,310.00 B
Selenium (D010)	<0.1–5	–	–	0.54 BNW
Silver (D011)	0.01–5 (b)	–	–	–
Sodium	<500–100,000	–	–	81.70 B
Thallium	NV	–	–	–
Vanadium	20–500	14.10	6.90 B	87.30
Zinc	<5–3,500	61.50 *	30.80 *	645.00 *

1. Analysis by Energy and Environmental Engineering, Inc., Somerville, Massachusetts.
2. Schacklette and Boerngen, 1984.

a: Booz, Allen and Hamilton, 1983.
b: USEPA, 1983.
NV: No value in cited references.
B: Value greater than instrument detection limit but less than contract required detection limit.
–: Analyte not detected.
N: Spike sample recovery not within control limits.
W: Post digestion spike for Furnace AA analysis out of control limits, while sample absorbance is less than 50% of spike absorbance.
*: Duplicate analysis not within control limits.



4-22

APPROXIMATE SCALE

300 0 300 FT.

300'

REVISED: 12/13/93
16310:\SY230\SY230001.DWG

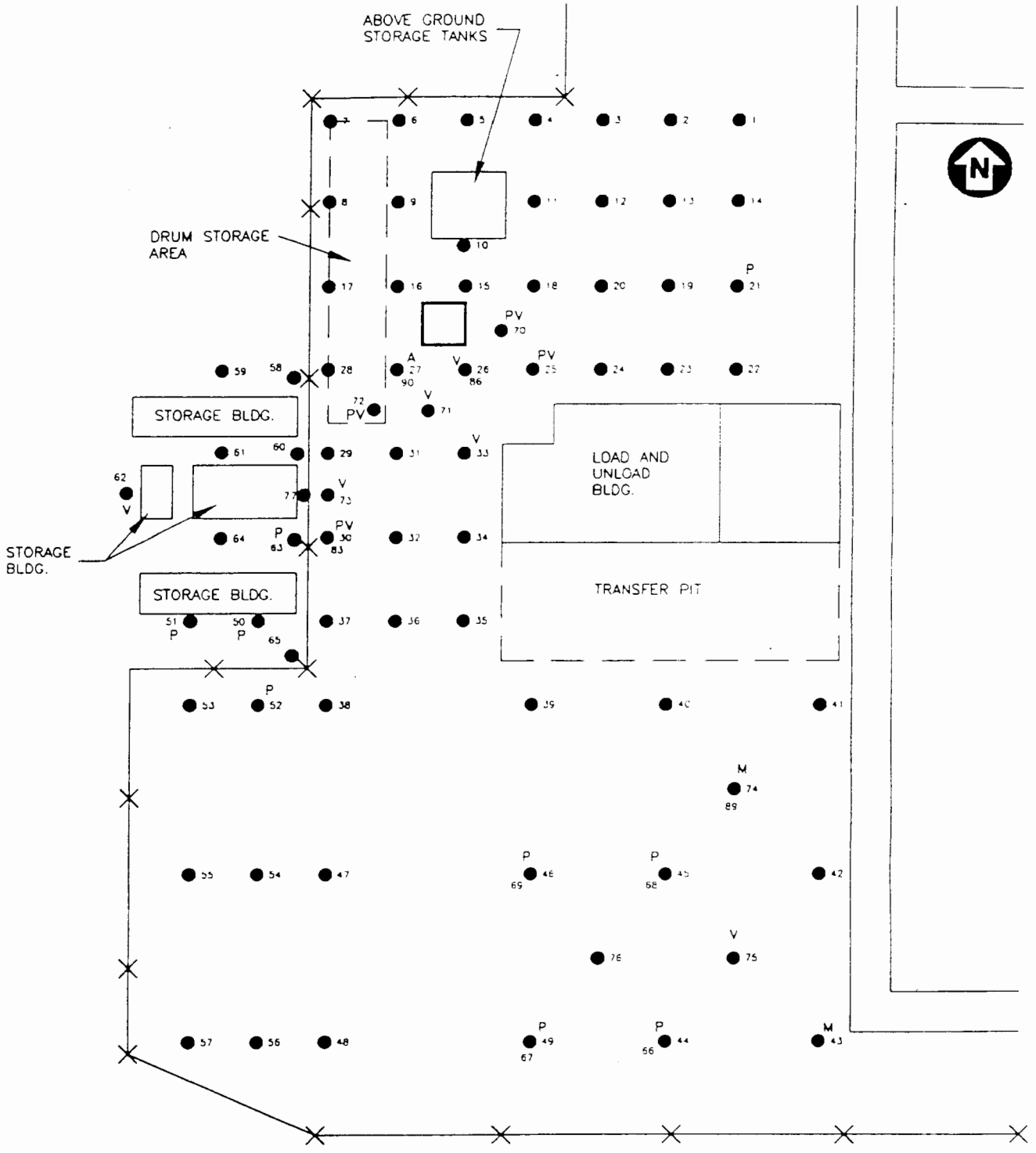
ES ENGINEERING-SCIENCE

PSA SITE INVESTIGATION NYSDEC

AIRCO SPEER CARBON-GRAPHITE

SITE PLAN

Figure 4.1



LEGEND

● 38	BORING (SB-38)
P	SAMPLE SUBMITTED FOR ANALYSIS OF PCBs
V	SAMPLE SUBMITTED FOR ANALYSIS OF VOCs
PV	SAMPLE SUBMITTED FOR ANALYSIS OF PCBs AND VOCs
M	SAMPLE SUBMITTED FOR ANALYSIS OF TAL METALS AND CYANIDE
A	SAMPLE SUBMITTED FOR ANALYSIS OF PCBs, VOCs, TAL METALS, CYANIDE, SVOCs, AND PESTICIDES

ENGINEERING – SCIENCE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PRELIMINARY SITE ASSESSMENT

SUBSURFACE SOIL SAMPLE LOCATIONS
AIRCO SPEER CARBON – GRAPHITE, INC. SITE

DRAWN: 12/14/93
001250I D:\SY230\AIRCOSAMPLE.DWG

A. Sylvester

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 - 7010

Langdon Marsh
Commissioner

JAN - 9 1995

This letter was sent to the people on the attached list.

Dear :

The Department of Environmental Conservation (DEC) maintains a Registry of sites where hazardous waste disposal has occurred. Property located at Packard Road at 47th Street in the City of Niagara Falls and County of Niagara and designated as Tax Map Number 145.18-1-6 was recently reclassified as a Class 3 in the Registry. The name and site I.D. number of this property as listed in the Registry is Airco Speer Carbon-Graphite, Site #932002.

The Classification Code 3 means that the site does not present a significant threat to the environment or public health -- action may be deferred.

We are sending this letter to you and others who own property near the site listed above, as well as the county and town clerks. We are notifying you about these activities at this site because we believe it is important to keep you informed.

If you currently are renting or leasing your property to someone else, please share this information with them. If you no longer own the property to which this letter was sent, please provide this information to the new owner and provide this office with the name and address of the new owner so that we can correct our records.

The reason for this recent classification decision is as follows:

- Hazardous waste is present on site in the form of PCBs in excess of 50 parts per million, acetone that has been documented to have been disposed as the pure chemical product, and lead in liquid wastes that exceeds hazardous waste levels. Significant threat is not present at the site due to the following factors: groundwater is not used as a source of drinking water in the area; although acetone was detected in surface water and sediment samples, the amounts present were well below USEPA health based guidance values; the same was true for PCBs detected in sediments, and lead found in surface water and sediments. The site itself is fenced with access controlled by security guards. The area the site is located in is an industrial area heavily populated with other hazardous waste sites, many of which have active and ongoing monitoring programs.

If you would like additional information about this site or the inactive hazardous waste site remedial program, call:

DEC's Inactive Hazardous Waste Site Toll-Free Information Number **1-800-342-9296** or
New York State Health Department's Health Liaison Program (HeLP) **1-800-458-1158, ext. 402**

Sincerely,

Robert L. Marino
Chief
Site Control Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

bcc: R. Marino
T. Reamon
M. Podd
A. Sylvester
A. Carlson
L. Ennist

AS/srh

A. Sylvester

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 - 7010

DEC 2[illegible] 1994

Langdon Marsh
Commissioner

The Carbon/Graphite Group
800 Teresia Street
St. Marys, PA 15857

Dear Sir:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), the New York State Department of Environmental Conservation (NYSDEC) must maintain a Registry of all inactive disposal sites suspected or known to contain hazardous waste. The ECL also mandates that this Department notify the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites as to changes in site classification.

Our records indicate that you are the owner or part owner of the site listed below. Therefore, this letter constitutes notification of change in the classification of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

DEC Site No.: 932002
Site Name: Airco Speer Carbon-Graphite
Site Address: Packard Road at 47th Street, Niagara Falls, New York 14304

Classification Change from 2a to 3

The reason for the change is as follows:

- Hazardous waste is present on site in the form of PCBs in excess of 50 parts per million, acetone that has been documented to have been disposed as the pure chemical product, and lead in liquid wastes that exceeds hazardous waste levels. Significant threat is not present at the site due to the following factors: groundwater is not used as a source of drinking water in the area; although acetone was detected in surface water and sediment samples, the amounts present were well below USEPA health based guidance values; the same was true for PCBs detected in sediments, and lead found in surface water and sediments. The site itself is fenced with access controlled by security guards. The area the site is located in is an industrial area heavily populated with other hazardous waste sites, many of which have active and ongoing monitoring programs.

Enclosed is a copy of the New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Inactive Hazardous Waste Disposal Site Report form as it appears in the Registry and Annual Report, and an explanation of the site classifications. The

Law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition. Such petition may be addressed to:

Langdon Marsh
Commissioner
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

For additional information, please contact me at (518) 457-0747.

Sincerely,

Robert L. Marino
Chief
Site Control Section
Bureau of Hazardous Site Control
Division of Hazardous Waste Remediation

Enclosures

bcc: w/o Enc.
E. Barcomb
R. Marino
T. Reamon
A. Sylvester

w/Enc. (Copy of Site Report form only)
R. Dana
G. Anders Carlson, NYSDOH
L. Concra
A. Snyder
P. Buechi, R/9
E. Belmore

AS/srh