907001

NUS CORPORATION
A Halliburton Company

COMPLETED

02-8703-25-PA

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

Carborundum/Monofrax Plant Site Name	NYD046763777 EPA Site ID Number
501 New York Avenue Falconer, New York Address	02-8703-25 TDD Number

Date of Site Visit: March 18, 1987

SITE DESCRIPTION

The Carborundum/Monofrax Plant on New York Avenue is an active plant which manufactures glass. Many by-products including chromium mold sand, calcined alumina, graphite, wood, metal and scrap materials, were dumped into the Carborundum/Monofrax landfill, across New York Avenue, opposite the plant. The landfill is an open area subject to rainfall and strong winds. The only barriers are two roads, a parking lot and a swamp. The landfill is closed, according to New York State Department of Environmental Conservation. Ten groundwater monitoring wells were installed under NYSDEC supervision.

PRIORITY FOR FURTHER ACTION: High___ Medium X Low___

RECOMMENDATIONS

A site investigation is recommended due to the alleged hazardous materials found on the site by NYSDEC. There are wells located along the Cassadaga Creek which are the main drinking water source for Falconer Village. Air monitoring, soil samples, surface water and groundwater samples should be taken to check for any potential and alleged hazardous materials.

Prepared by: Randy Rice of NUS Corporation **Date:** April 21, 1987

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

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D0467E3777

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)
Carborundum/Monofrax

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
501 New York Avenue

03 CITY
Falconer

04 STATE | 05 ZIP CODE | 06 COUNTY | 07 COUNTY CODE | 08 CONG DIST.
NY | 14733 | Chautauqua | 013 | 34

09 COORDINATES
LATITUDE: 42° 07' 02". N
LONGITUDE: 079° 10' 52. W

10 DIRECTIONS TO SITE (Starting from nearest public road)

Route 17 West - Exit 13 - Take 394 West to Jamestown. Turn left on Work Street. Travel down over RR Tracks Make left onto New York Avenue. Plant down on left.

III. RESPONSIBLE PARTIES

01 OWNER (if known)
Carborundum Company

02 STREET (Business, mailing, residential)
P.O. Box 156

03 CITY
Niagara Falls

04 STATE | 05 ZIP CODE | 06 TELEPHONE NUMBER
NY | 14302 | (716) 278-2000

07 OPERATOR (if known and different from owner)
Wm Miller, Manager Special Projects

08 STREET (Business, mailing, residential)

09 CITY

10 STATE | 11 ZIP CODE | 12 TELEPHONE NUMBER
(716) 483-7200

13 TYPE OF OWNERSHIP (Check one)
X 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)

X A. RCRA 3001 DATE RECEIVED: 08 / 19/ 80 ___ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /
___ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
X YES DATE: 06 / 02/ 83
___ NO

BY (Check all that apply)
___ A. EPA ___ B. EPA CONTRACTOR X C. STATE ___ D. OTHER CONTRACTOR
___ E. LOCAL HEALTH OFFICIAL ___ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): NYSDEC

02 SITE STATUS (Check one)
___ A. ACTIVE X B. INACTIVE ___ C. UNKNOWN

03 YEARS OF OPERATION
_____ BEGINNING _____ ENDING X UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Concentrations of Lead (Pb), exceeding 0.05 mg/l.
Chromium containing dust, exceeding 0.05 mg/l.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Potential hazard of groundwater and drinking water contamination due to Lead (Pb) exceeding those standards.
Potential of air contamination due to dusts.

IV. 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) X B. MEDIUM (Inspection required) ___ C. LOW (Inspection 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
Diana Messina	U.S. EPA Region 2, Edison, NJ	(201) 321-6776

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Randy Rice	U.S. EPA	NUS Corp.	(201) 225-6160	04 / 21 / 87

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY D046762777

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS 32
CUBIC YARDS
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	32	Tons	Zinc Oxide Hydrate
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
IOC	Chromium (6+)	15930946	Open Fill	75	ug/l
MES	Lead	7439921	Open Fill	1.42	mg/l

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 (See specific references. e.g., state files, sample analysis, reports)

U.S. EPA Drinking Water Standards and Criteria.
Dangerous Properties of Industrial Materials, SAX, 1979.
Advanced Environmental Systems Report, March 16, 1981.
Trautman Associates Report, September, 1980.

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION — 02 X OBSERVED (DATE: 02/86) — _ POTENTIAL — X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 16,500+ — 04 NARRATIVE DESCRIPTION

Concentrations of lead (Pb) have exceeded groundwater standards in the monitoring wells. Lead concentrations in the lower aquifer slightly exceed drinking water standards. Public wells located one mile east of plant along the Cassadaga Creek are the main drinking water sources for the towns of Falconer and Ellicott.

01 X B. SURFACE WATER CONTAMINATION — 02 _ OBSERVED (DATE:) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 16,500+ — 04 NARRATIVE DESCRIPTION

There is potential for surface water contamination. A large marshland area borders the dumpsite on the east. This marsh grades down to the east into the Cassadaga Creek. This creek flows north to the Chadakoin River into the Chautaugua Lake.

01 X C. CONTAMINATION OF AIR — 02 _ OBSERVED (DATE:) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 34,000+ — 04 NARRATIVE DESCRIPTION

There is potential for air contamination in the immediate area and to the surrounding residential area due to the 500 tons of dust in the dump site.

01 X D. FIRE/EXPLOSIVE CONDITIONS — 02 X OBSERVED (DATE: 6/83) — _ POTENTIAL — X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 34,000+ — 04 NARRATIVE DESCRIPTION

There is some potential for explosion, fire and flammability. There is evidence of chromium dusts, which if there is enough concentration, the powder will explode spontaneously in air.

01 X E. DIRECT CONTACT — 02 _ OBSERVED (DATE:) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 380 — 04 NARRATIVE DESCRIPTION

There is potential for direct contact. There are no fences around the dumpsite or gates at any of the access roads. New York

01 X F. CONTAMINATION OF SOIL — 02 X OBSERVED (DATE: 9/80-6/83) — _ POTENTIAL — X ALLEGED
03 AREA POTENTIALLY AFFECTED: 320 (ACRES) — 04 NARRATIVE DESCRIPTION

Approximately 32 tons of chromium dust, 51,000 tons of mold sand and 15,000 tons of calcined alumina can be traced from the original dumpsite of 240 sq. ft to the surrounding borders.

01 X G. DRINKING WATER CONTAMINATION — 02 X OBSERVED (DATE: 04/86) — _ POTENTIAL — X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 16,500+ — 04 NARRATIVE DESCRIPTION

Lead (Pb) concentrations in the lower aquifer slightly exceed drinking water standards. Groundwater concentrations of Pb have exceeded groundwater standards in the monitoring wells located on site.

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

There is potentially dangerous mold casting, graphite dust, wood, metal and tramp material about the grounds. There is dust around the dumpsite and along the access roads.

01 X I. POPULATION EXPOSURE/INJURY — 02 _ OBSERVED (DATE:) — X POTENTIAL — _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 34,000+ — 04 NARRATIVE DESCRIPTION

There is a potential for exposure of fine dusts coming off the dumpsite. Both inhalation and settling of dust onto residential property has high potential due to the open geography of the immediate area.

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

There is potential damage to flora in the adjacent marshland due to potential rainfall runoff of materials from the dumpsite.

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

There is potential damage to certain ground-burrowing animals such as field mice, rabbits, chipmunks, etc., due to the materials buried on site.

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

There is potential for contamination to biota and flora in the marshland which are food sources for the bird and reptile populations.

01 X M. UNSTABLE CONTAINMENT OF WASTES (Spills/runoff/standing liquids/leaking drums) — 02 X OBSERVED (DATE: 02/86) _ POTENTIAL X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 380 — 04 NARRATIVE DESCRIPTION

The concentrations of lead (Pb) which exceed drinking water standards are traced down in the lower aquifer.

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

There is potential for damage to the adjacent marshland, the Cassadaga Creek, and to the public drinking wells located along this creek.

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

There is no potential for sewer contamination. No storm drain system exists in the immediate area.

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

There is potential for illegal or unauthorized dumping because of easy accessibility to the site.

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

There are no other known, potential or alleged hazards other than those previously noted.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 34,000+

IV. COMMENTS

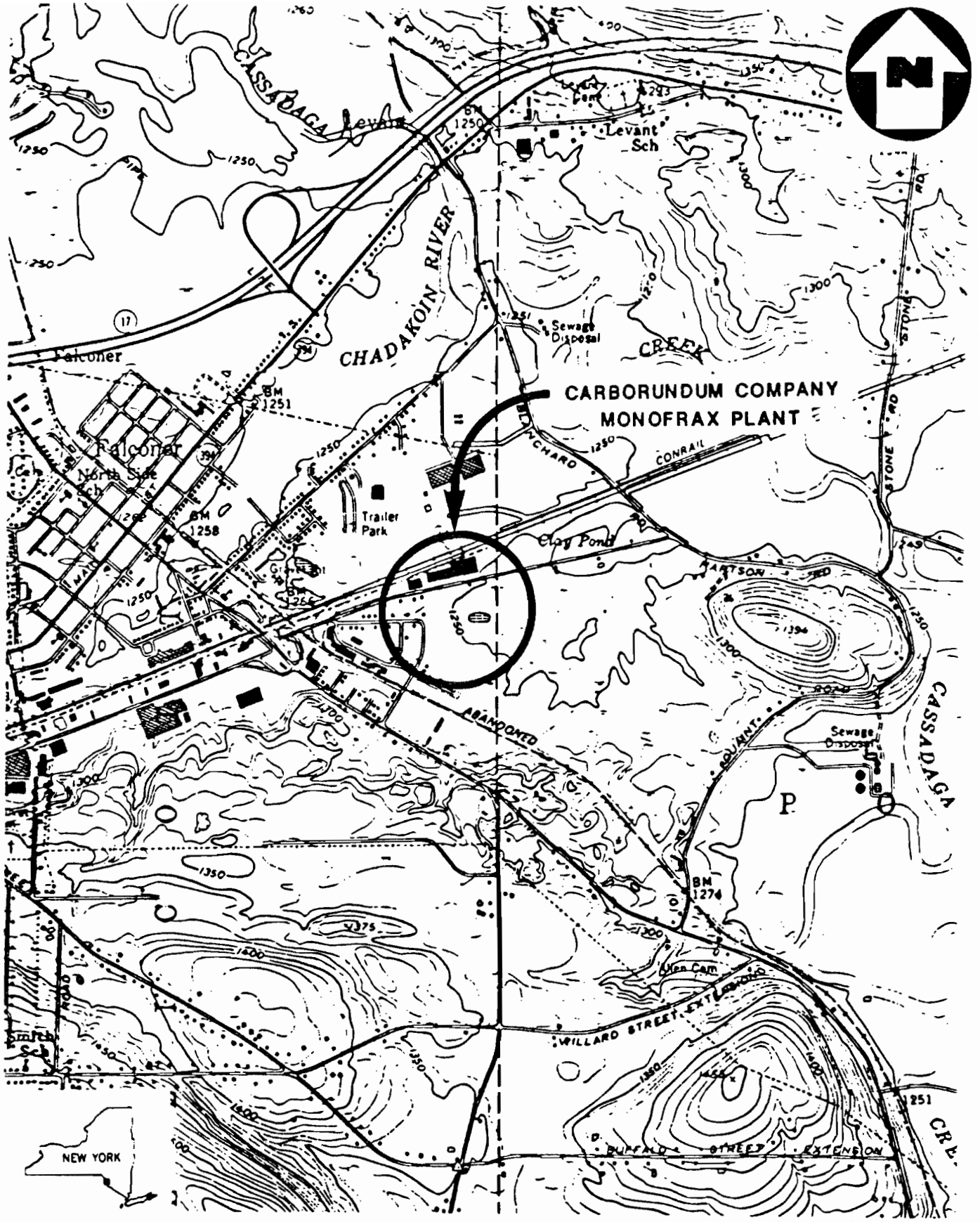
As of 02/07/86, Carborundum/Monofrax Plant was reclassified from Code 2 to Code 3, keeping it on the Inactive Hazardous Waste Disposal Site listing. The existing landfill is closed. NYSDEC has approved a site for a new landfill.

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

NYSDEC Inactive Hazardous Waste Sites in NY State, February, 1986.
NYSDEC RCRA Inspection Form, June, 1983.
Trautman Associates Monitoring Evalaution Report, March, 1981 to May, 1985.
Geographic Exposure Modeling System (GEMS) FIT Region 2.
Telecom note between Randy Rice and Ellicott Town Clerk, April 21, 1987.

APPENDIX A

MAPS AND PHOTOGRAPHS



(QUAD) JAMESTOWN

FIGURE 1

SITE LOCATION MAP

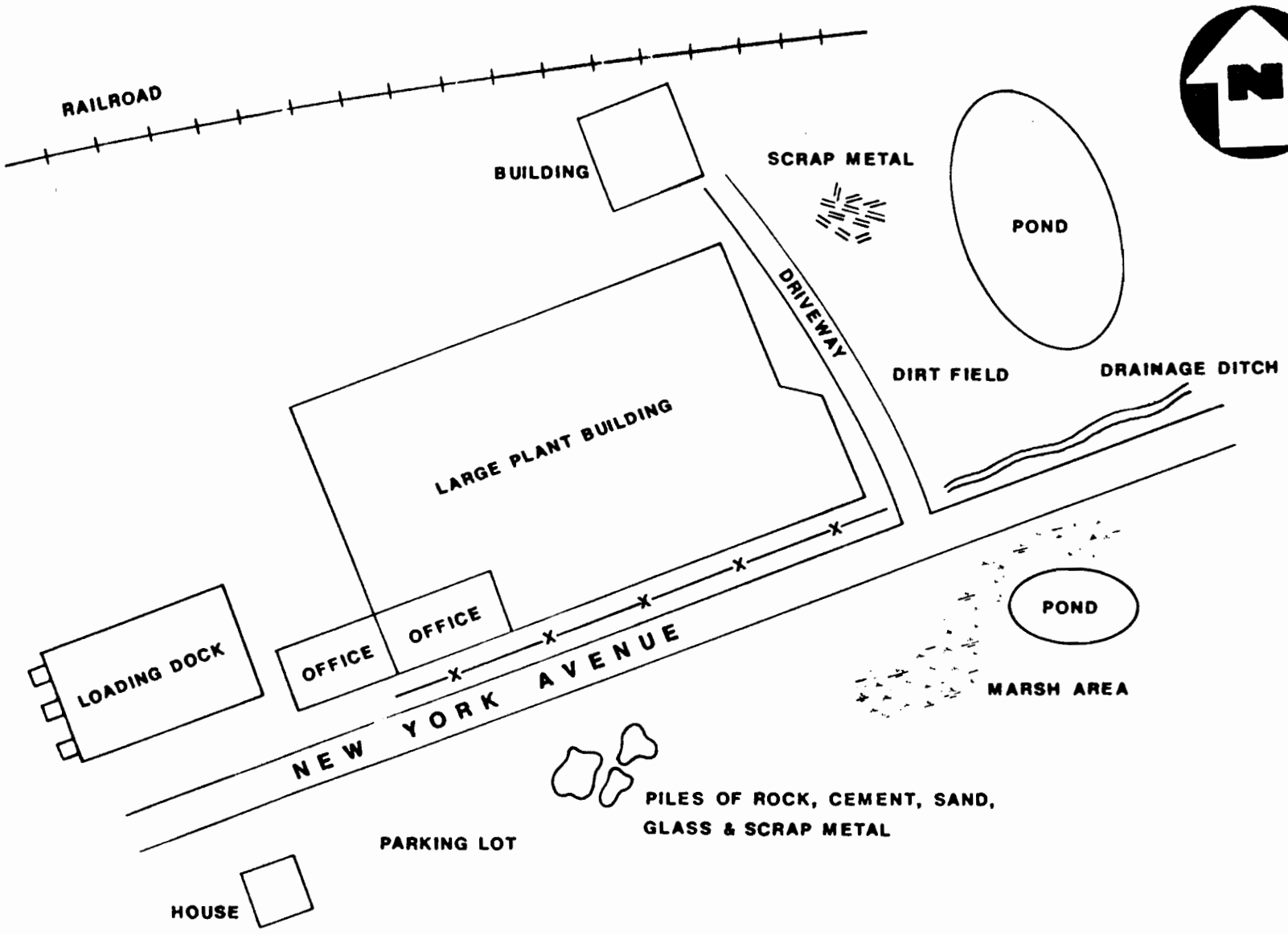
CARBORUNDUM COMPANY, MONOFRAX PLANT

FALCONER, N.Y.

SCALE: 1" = 2000'

NUS CORPORATION

A Halliburton Company



SITE MAP
CARBORUNDUM COMPANY, MONOFAX PLANT
FALCONER, N.Y.

(NOT TO SCALE)

NUS CORPORATION
A Halliburton Company

CARBORUNDUM/MONOFRAX PLANT
FALCONER, NEW YORK
TDD# 02-8703-25
MARCH 18, 1987

PHOTOGRAPH LOG

CARBORUNDUM/MONOFRAX PLANT
FALCONER, NEW YORK
TDD# 02-8703-25
MARCH 18, 1987

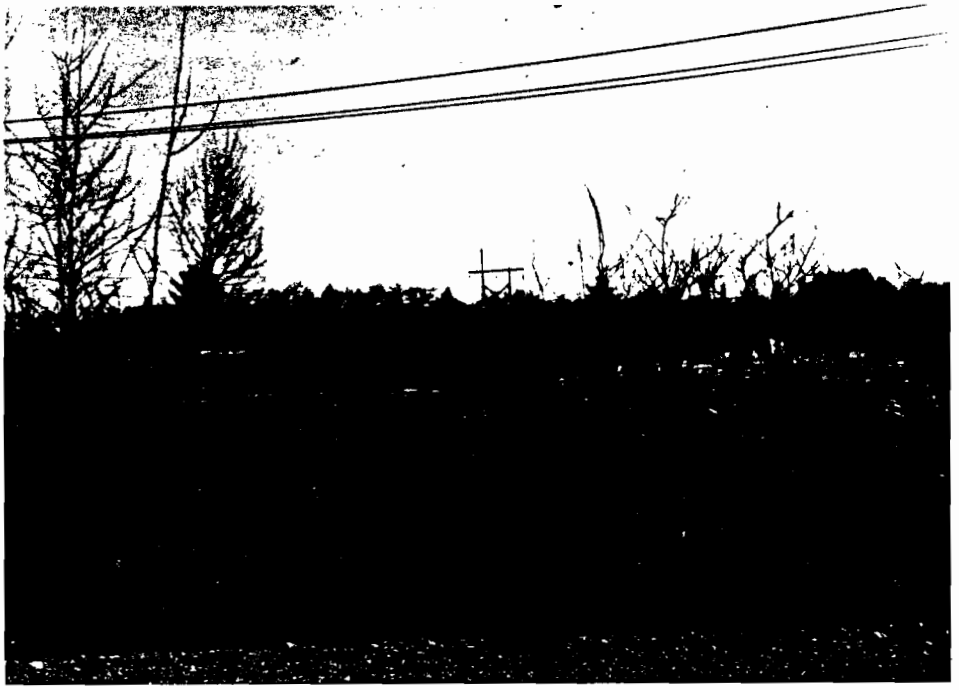
PHOTOGRAPH INDEX

PHOTOGRAPHERS JOHN DUCAR AND BOB NIES

Photo Number	Description	Time
1P-14	From New York Avenue. View of plant facing northwest.	1510
1P-15	From New York Avenue. View of scrap metal facing south.	1514
1P-15A	From New York Avenue. View of site facing south.	1514
1P-16	From New York Avenue. View of dumpsite facing south.	1515
1P-17	From New York Avenue. View of plant facing northeast.	1522

CARBONUNDOM/MONOFRAX PLANT, FALCONER, NEW YORK

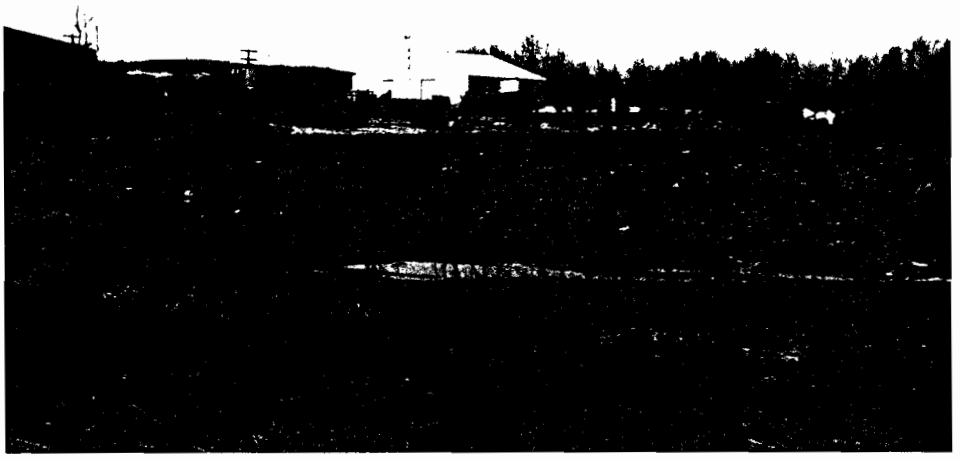
1P-14 March 18, 1987 1510
From New York Avenue. View of plant facing northwest.
Photographer: Bob Nies



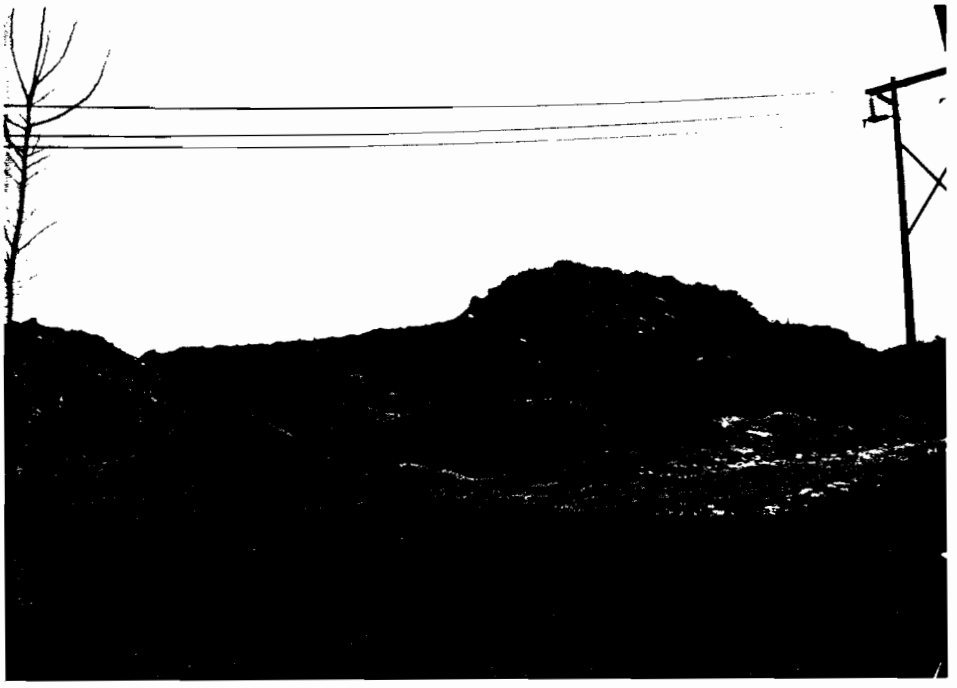
1P-15 March 18, 1987 1514
From New York Avenue. View of scrap metal facing south.
Photographer: John Ducar

NUS CORPORATION

CARBORUNDON/MONOFRAX PLANT, FALCONER, NEW YORK



1P-15A March 18, 1987 1514
From New York Avenue. View of site facing south.
Photographer: Bob Nies



1P-16 March 18, 1987 1515
From New York Avenue. View of dumpsite facing south.
Photographer: John Ducar

NUS CORPORATION

CARBORUNDOR/MONOFRAX PLANT, FALCONER, NEW YORK

1P-17 March 18, 1987 1522
From New York Avenue. View of plant facing northeast.
Photographer: Bob Nies

APPENDIX B

BACKGROUND INFORMATION

Carborundum/Monofrax Plant Falconer, New York.

Press RETURN to pGO

Data List of Dataset: NYN3 Number of Records = 6

REC #	POP	HOUSE	DISTANCE	SECTOR
1	0	0	0.400000	1
2	0	0	0.810000	1
3	0	0	1.60000	1
4	4894	1966	3.20000	1
5	11710	4801	4.80000	1
6	17618	7837	6.40000	1

0004.C
02-8703-2S

NUS CORPORATION AND SUBSIDIARIES — TELECON NOTE

CONTROL NO:	DATE:	TIME:
02-8703-2S	04/21/87	1100

DISTRIBUTION: Carborundum / Monofrax Plant

BETWEEN:	OF:	PHONE:
Town Clerk	Ellicott Administration Bldg	(716) 665-5317

AND: Randy Rice

DISCUSSION:

I Spoke with the Town Clerk of Ellicott Administration Building. He informed me that all the drinking water for Falconer Village and Ellicott comes directly from wells located along the Cassadaga Creek and the area of Poland, (of where the creek runs through) Water from these wells is pumped to the Jamestown water works located on Buffalo Street in Jamestown. From here the water is supplied to homes in the Jamestown, Ellicott and Falconer Villages.

ACTION ITEMS:

NUS 067 REVISED 0685

SYNS:
1-DODECANETHIOL
M-DODECYL MERCAPTAN
1-DODECYL MERCAPTAN
M-LAURYL MERCAPTAN
1-MERCAPTODODECANE
NCI-C60935

TOXICITY DATA:
cyt-rat-ihl 5020 ug/m3/16W

CODEN:
BZARAZ 27,102,74

Reported in EPA TSCA Inventory, 1980.
THR: See mercaptans. MUT data.
Fire Hazard: Low.
To Fight Fire: Alcohol foam.
Disaster Hazard: When heated to decomp it emits tox fumes of SO_x.

LAURYLPYRIDINIUM LAURYLXANTHATE

CAS RN: 14917965 NIOSH #: UU 5775000
mf: $C_{17}H_{30}N \cdot C_{13}H_{25}OS_2$; mw: 509.98

TOXICITY DATA: 2
skn-rbt 500 mg/24H MOD
eye-rbt 20 mg/24H SEV
orl-rat LD50:802 mg/kg

CODEN:
28ZPAK -,174,72
28ZPAK -,174,72
28ZPAK -,174,72

THR: MOD orl. A skn, eye irr.
Disaster Hazard: When heated to decomp it emits very tox fumes of NO_x and SO_x.

LAURYL SULFATE, SODIUM SALT, CONDENSED WITH 3 MOLES OF ETHYLENE OXIDE

NIOSH #: OF 5725000

SYNS:
SODIUM SALT OF SULFATED BROAD-CUT COCONUT ETHOXY(3EO) ALCOHOL
SODIUM SALT OF SULFATED ETHOXYLATE OF BROAD-CUT LAURYL ALCOHOL

TOXICITY DATA: 2
skn-rbt 10 mg MLD
skn-rbt 230 mg/5W open MLD
skn-gpg 115 mg/5W open MLD

CODEN:
JSCCA5 22,411,71
JSCCA5 22,411,71
JSCCA5 22,411,71

THR: A skn irr.
Disaster Hazard: When heated to decomp it emits tox fumes of SO_x.

LAVANDIN OIL

CAS RN: 8022159 NIOSH #: OF 6097500

Main constituent is Linalool; found in plant Lavanoula Hybrida Reverchon; prepared by steam distillation of the flowering stalks of the plant.

SYN: OIL OF LAVANDIN

TOXICITY DATA: 2
skn-rbt 500 mg/24H MLD

CODEN:
FCTXAV 14,443,76

Reported in EPA TSCA Inventory, 1980.
THR: A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVATAR

NIOSH #: OF 6097840

Coal tar distillates in a shampoo base.

TOXICITY DATA:
mma-sat 25 ug/plate

CODEN:
TOLED5 3,325,79

THR: MUT data.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVENDER ABSOLUTE

NIOSH #: OF 6100000

Found in the flowers of Lavandula Officinalis chaix. The main constituent is Linalyl Acetate; prepared from alcoholic extract of a residue, which is extracted from plant material using an organic solvent; a dark green liquid.

TOXICITY DATA: 1
skn-rbt 500 mg/24H MLD
orl-rat LD50:4250 mg/kg

CODEN:
FCTXAV 14,443,76
FCTXAV 14(5),443,76

THR: LOW orl; A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVENDER OIL

CAS RN: 8000280 NIOSH #: OF 6110000

Main constituent is linalyl acetate. Found in the plant Lavandulaofficinalif choix (Fam. Labiate). Prepared by steam distillation of the flowering stalks of the plant.

SYNS:
LAVENDEL OEL (GERMAN)
OIL OF LAVENDER

TOXICITY DATA: 1
skn-rbt 500 mg/24H MLD
orl-rat LD50:9040 mg/kg

CODEN:
FCTXAV 14,443,76
PHARAT 14,435,59

Reported in EPA TSCA Inventory, 1980.
THR: LOW orl. A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LD-813

CAS RN: 64083052 NIOSH #: OF 6730000

Commercial mixture of aromatic amines containing approx. 40% MOCA

TOXICITY DATA: 3
orl-rat TDLo:37 gm/kg/2Y-C:CARC

CODEN:
TXAPA9 31,159,75

THR: An exper CARC. See also aromatic amines.
Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

LEAD

CAS RN: 7439921 NIOSH #: OF 7525000
mf: Pb; mw: 207.19

Bluish-gray, soft metal. mp: 327.43°, bp: 1740°, d: 11.34 @ 20°/4°. vap. press: 1 mm @ 973°.

SYNS:
C.I. 77575
LEAD FLAKE
LEAD S2
OLOW (POLISH)

TOXICITY DATA: 3	CODEN:
orl-rat TDLo:790 mg/kg (MGN)	AEHLAU 23,102,71
orl-rat TDLo:1140 mg/kg (14D pre-21D post)	PHMCAA 20,201,78
orl-mus TDLo:1120 mg/kg (MGN)	AEHLAU 23,102,71
orl-mus TDLo:6300 mg/kg (1-21D preg)	EXPEAM 31,1312,75
orl-mus TDLo:12600 mg/kg (1-21D preg)	EXPEAM 31,1312,75
orl-mus TDLo:4800 mg/kg (1-16D preg)	BECTA6 18,271,77
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXPEAM 25,56,69
orl-dom TDLo:662 mg/kg (1-21W preg)	TXAPA9 25,466,73
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXPEAM 25,56,69
orl-wmn TDLo:450 mg/kg/6Y:CNS	JAMAAP 237,2627,77
ipr-rat LDLo:1000 mg/kg	EQSSDX 1,1,75
orl-pgn LDLo:160 mg/kg	HBAMAK 4,1289,35

Carcinogenic Determination: Indefinite IARC** 23, 325,80.

TLV: AIR: 0.15 mg/m3 DTLVS* 4,243,80; *Toxicology Review:* TRBMAV 33(1),85,75; PGMJAO 51(601),783,75; JDSCAE 58(12),1767,75; IRXPAT 12,1,73; CTPHBG 55,147,71; CTOXAO 6(3),377,73; QURBAW 7(1),75,74; RREVAH 54,55,75; JAVMA4 164(3),277,74; AEMBAP 40,239,73; CTOXAO 5(2),151,72; FOREAE 7,313,42; KOTTAM 11(11),1300,75; GEIGAI 20(3),291,73; STEVA8 2(4),341,74; CLCHAU 19,361,73; AJMEAZ 38,409,65; 85DHAX PB,254,72; PDTNBH 6,204,77; AMTODM 3,209,77. OSHA Standard: Air: TWA 200 ug/m3 (SCP-O) FEREAC 39,23540,74. Occupational Exposure to Inorganic Lead recm std: Air: TWA 0.10 mg(Pb)/m3 NTIS**. "NIOSH Manual of Analytical Methods" VOL 1 102,191,195,200,208,214,262, VOL 3 S341. Reported in EPA TSCA Inventory, 1980.

THR: See lead compounds. A hmn CNS. HIGH orl; MOD irr. A common air contaminant. It is a ± CAR of the lungs and kidney and an exper TER.

Fire Hazard: Mod, in the form of dust when exposed to heat or flame. See also powdered metals.

Explosion Hazard: Mod, in the form of dust when exposed to heat or flame.

Incomp: NH_4NO_3, ClF_3, H_2O_2, NaN_3, Na_2C_2, Zr. disodium acetylide; oxidants.

Disaster Hazard: Dangerous; when heated, emits highly tox fumes; can react vigorously with oxidizing materials.

For further information see Vol. 1, No. 1 of *DPIM Report.*

LEAD ACETATE

CAS RN: 301042 NIOSH #: AI 5250000
mf: $C_4H_6O_4 \cdot Pb$; mw: 325.29

Trihydrate, colorless crystals or white granules or powder. Slightly acetic odor; slowly effloresces; d: 2.55; mp: 75° when rapidly heated. Decomp above 200°; very sol in glycerol. Keep well closed.

SYNS:

ACETIC ACID LEAD (2+) SALT
ACETATE DE PLOMB (FRENCH)
BLEIACETAT (GERMAN)
LEAD (2+) ACETATE
LEAD(II) ACETATE
LEAD DIACETATE
LEAD DIBASIC ACETATE
NORMAL LEAD ACETATE
PLUMBOUS ACETATE
SALT OF SATURN
SUGAR OF LEAD

TOXICITY DATA: 3	CODEN:
dns-rat-ipr 50 ug/kg	PSEBAA 143,446,73
spm-mus-par 1 gm/kg	ARTODN 46,159,80
orl-rat TDLo:7854 mg/kg (6-16D preg)	FCTXAV 13,629,75
orl-rat TDLo:1800 mg/kg (1-22D preg/14D post)	TOLED5 7,373,80
orl-rat TDLo:113 gm/kg (70D pre-21D post)	PBBHAU 8,347,78
orl-mus TDLo:3150 mg/kg (1-21D preg)	CRSBAW 170,1319,76
orl-mus TDLo:4800 mg/kg (1-8D preg)	CRSBAW 172,1037,78
orl-mus TDLo:9 gm/kg (7-21D preg)	CRSBAW 170,1319,76
ipr-mus TDLo:35 mg/kg (8D preg)	BIMDB3 30,223,79
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXMPA6 7,208,67
ivn-ham TDLo:50 mg/kg (8D preg)	EXPEAM 25,56,69
ipr-pgn LDLo:150 mg/kg	ARTODN 46,265,80
cyt-hmn:lym 1 mmol/L/24H	TXCYAC 10,67,78
cyt-mus-orl 16800 mg/kg/4W	JTEHD6 2,619,77
cyt-mky-orl 5760 mg/kg/64W	MUREAV 45,77,77
ipr-mus TDLo:15 mg/kg/(8D preg):TER	BIMDB3 30,223,79
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXMPA6 7,208,67
orl-rat TDLo:250 gm/kg/47W-C:ETA	BJCAAI 16,283,62
ipr-rat LDLo:204 mg/kg	JPETAB 38,161,30
ipr-mus LD50:120 mg/kg	COREAF 256,1043,63
orl-dog LDLo:300 mg/kg	HBAMAK 4,1289,35
scu-dog LDLo:80 mg/kg	HBAMAK 4,1289,35
ivn-dog LDLo:300 mg/kg	EQSSDX 1,1,75
scu-cat LDLo:100 mg/kg	HBAMAK 4,1289,35
scu-rbt LDLo:300 mg/kg	HBAMAK 4,1289,35
ivn-rbt LDLo:50 mg/kg	EQSSDX 1,1,75
scu-frg LDLo:1600 mg/kg	HBAMAK 4,1289,35

Carcinogenic Determination: Animal Positive IARC** 23,325,80; Human Suspected IARC** 23,325,80. *Toxicology Review:* ADTEAS 5,51,72; ENVRAL 13,36,77; 85DHAX Pb,256,72. OSHA Standard: Air: TWA 200 ug(Pb)/m3 (SCP-O) FEREAC 29,23540,74. Occupational Exposure to Inorganic Lead recm std: Air: TWA 0.10 mg(Pb)/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: MUT data. An exper + CARC, TER, ETA. A susp hmn CARC; HIGH ipr, orl, scu, ivn. See also lead compounds. A poison. An insecticide.

Disaster Hazard: When heated to decomp it emits tox fumes of Pb.

Incomp: $KBrO_3$; acids, sol sulfates, citrates, tartrates, chlorides, carbonates, alkalies, tannin phosphates, resorcinol, salicylic acid, phenol, chloral hydrate, sulfites, vegetable infusions, tinctures.

For further information see Vol. 1, No. 4 of *DPIM Report.*

LEAD ACETATE, BASIC

CAS RN: 1335326 NIOSH #: OF 8750000
mf: $C_4H_{10}O_8Pb_3$; mw: 807.71

CHROMIC ACID (MIXTURE)

NIOSH #: GB 2650000

mf: CrO_3; mw: 100.01

mp: 196°; d: 2.70; dark red cryst; decomp @ 250° to $Cr_2O_3 + O_2$; a powerful oxidizer. Water sol.

SYNS:
CHROMIUM TRIOXIDE
CHROMIC ANHYDRIDE

TOXICITY DATA: CODEN:
DOT: Oxidizer, Label: Oxidizer FEREAC 41,57018,76. Occupational Exposure to Cr(VI) recm std: Air: TWA 25 ug(Cr(VI))/m3;CL 50 ug/m3/15M NTIS**.
THR: A poison. See also chromium compounds and chromates. A powerful irr of skn, eyes and mu mem; can cause a dermatitis, bronchoasthma, "chrome holes," damage to the eyes.
Disaster Hazard: May explode in a fire.
Incomp: Acetic acid; acetic anhydride; tetrahydronaphthalene; acetone; alcohols; alkali metals; ammonia; arsenic; bromine penta fluoride; butyric acid; n,n-dimethylformamide; hydrogen sulfide; peroxyformic acid; phosphorus; potassium hexacyanoferrate; pyridine; selenium; sodium; sulfur.

CHROMIC ACID (SOLUTION)

NIOSH #: GB 2670000

SYN: CHROMIC ACID SOLUTION (DOT)

TOXICITY DATA: 3 CODEN:
DOT: Corrosive Material, Label: Corrosive FEREAC 41,57018,76. Occupational Exposure to Cr(VI) recm std: Air: TWA 25 ug(Cr(VI))/m3;CL 50 ug/m3/15M NTIS**.
THR: See chromic acid, dry. See also chromium compounds.

CHROMIC CHLORIDE STEARATE

CAS RN: 15242963 NIOSH #: GB 7280000
mf: $C_{18}H_{36}Cl_4Cr_2O_3$; mw: 546.34

SYNS:
TETRACHLORO-MU-HYDROXY-(MU-OCTADECANOATO-O:O')DI-CHROMIUM
NCI-C60800
STEARATO-CHROMIC CHLORIDE COMPLEX
TETRACHLORO-MU-HYDROXY-(MU-STEARATO)DI-CHROMIUM

TOXICITY DATA: 3 CODEN:
ivn-mus LD50:180 mg/kg CSLNX* NX#03305

Reported in EPA TSCA Inventory, 1980.
THR: HIGH ivn. See also chromium compounds.
Disaster Hazard: When heated to decomp it emits tox fumes of Cl^-.

CHROMIC CHROMATE

CAS RN: 24613896 NIOSH #: GB 2850000
mf: $Cr_3O_{12}{\cdot}2Cr$; mw: 452.00

SYNS:
CHROMIC ACID, CHROMIUM (3+) SALT (3:2)
CHROMIUM CHROMATE

TOXICITY DATA: 3 CODEN:
imp-rat TDLo:112 mg/kg:NEO AIHAAP 20,274,59

Carcinogenic Determination: Animal Positive IARC** 2,100,73. Occupational Exposure to Chromium(VI) recm std: Air: CL 1 ug(Cr(VI))/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.
THR: An exper NEO, CARC. See also chromium compounds. Very powerful oxidizer.

CHROMITE (MINERAL)

CAS RN: 1308312 NIOSH #: GB 4000000
mf: Cr_2FeO_4; mw: 223.85

SYNS:
CHROME ORE
IRON CHROMITE
CHROMITE ORE

TOXICITY DATA: 3 CODEN:
Carcinogenic Determination: Indefinite IARC** 23,-205,80.
THR: See also chromium compounds and iron. An exper ± CARC.

CHROMIUM

CAS RN: 7440473 NIOSH #: GB 4200000
Af: Cr; Aw: 52.0

SYN: CHROME

TOXICITY DATA: CODEN:
ivn-rat TDLo:2160 ug/kg/6W-I TFX:ETA JNCIAM 16,447,55
imp-rat TDLo:1200 ug/kg/6W-I TFX:ETA JNCIAM 16,447,55
imp-rbt TDLo:75 mg/kg:ETA ZEKBAI 52,425,42

Carcinogenic Determination: Animal Suspected IARC** 2,100,73; Animal Indefinite IARC** 23,205,80. TLV-TWA 500 ug/m3 DTLVS* 4,98,80. *Toxicology Review:* 85CVA2 5,63,70; KOTTAM 11(11),1300,75; FOREAE 7,313,42; MIBUBI 9(4),321,75; FCTXAV 9,105,71; PEXTAR 12,102,69; 85DHAX Cr,22,74; BNYMAM 54,413,78; NTIS** Conf-691001. OSHA Standard: Air: TWA 1 mg/m3 (SCP-0) FEREAC 39,23540,74. "NIOSH Manual of Analytical Methods" VOL 1 152,182, VOL 3; S323,352, VOL 5 173#. NIOSH Current Intelligence Bulletin 4, 1975. Reported in EPA TSCA Inventory, 1980. Proposed OSHA Medical Records Rules FEREAC 47,30420,82.
THR: An exper ETA, CARC.
Disaster Hazard: Powder will explode spont in air.
Incomp: Oxidants.
For further information see Vol. 3, No. 3 of *DPIM Report.*

CHROMIUM ACETATE HYDRATE

CAS RN: 628524 NIOSH #: AG 3000000
mf: $C_4H_6CrO_4{\cdot}H_2O$; mw: 188.12

Red crystals.

Carcinogenic Determination: Animal Positive IARC** 23,205,80; Indefinite IARC** 2,100,73. *Toxicology Review:* 85DHAX Cr,22,74; 27ZTAP 3,38,69.
Standards and Regulations: OSHA Standard Air: CL 100 ug(CrO_3)/m^3 (SCP-0) FEREAC 39,23540,74. DOT: Oxidizer, Label: Oxidizer FEREAC 41,47018,76. Occupational Exposure to Cr(VI) recm std: Air: TWA 25 ug(Cr(VI))/m3; CL 50 ug/m3/15M NTIS**. Meets Criteria for Proposed OSHA Medical Records Rule FEREAC 47,30420,82.
THR: MUT data. An exper TER, CARC. HIGH scu. See also chromium compounds.
Disaster Hazard: Powerful oxidizer.
Incomp: Acetic acid; acetic anhydride; acetic anhydride + tetrahydronaphthalene; acetone; alcohols; alkali metals; ammonia; arsenic; bromine pentafluoride; butyric acid; N,N-dimethylformamide; hydrogen sulfide; peroxyformic acid; phosphorus; potassium hexacyanoferrate; pyridine; selenium; sodium; sulfur.

CHROMIUM OXYCHLORIDE

CAS RN: 14977618 NIOSH #: GB 5775000
mf: Cl_2CrO_2; mw: 154.90

Dark red liquid, musty burning odor. mp: −96.5°; bp: 115.7°; d: 1.9145 @ 25°/4°; vap press: 20 mm @ 20°.

SYNS:
CHROMYL CHLORIDE
CHLORURE DE CHROMYLE (FRENCH)
CHROMIC OXYCHLORIDE
CHROMIUM CHLORIDE OXIDE
CHROMIUM DICHLORIDE DIOXIDE
CHROMIUM DIOXIDE DICHLORIDE
CHROMIUM (VI) DIOXYCHLORIDE
CHROMYLCHLORID (GERMAN)
CHROMOXYLCHLORIDE (DUTCH)
CROMILE, CLORURO DI (ITALIAN)
CROMO, OSSICLORURO DI (ITALIAN)
DICHLORODIOXOCHROMIUM
DIOXODICHLOROCHROMIUM
OXYCHLORURE CHROMIQUE (FRENCH)

TOXICITY DATA: 3 CODEN:
mmo-sat 50 ug/plate CRNGDP 1,583,80
mma-sat 100 ug/plate CRNGDP 1,583,80

Aquatic Toxicity Rating: TLm96:under 1 ppm WQCHM* 2,-,74. TLV-TWA 25 ppb DTLVS* 4, 100,80. DOT: Corrosive Material, Label Corrosive FEREAC 41,57018,76. Occupational Exposure to Chromium (VI) recm std: Air: CL 1 ug (Cr(VI))/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.
THR: HIGH via scu and inhl routes. A strong irr. Hydrolyzes to form chromic and hydrochloric acids. See chromium compounds. Reacts violently with alcohol, ether, acetone, turpentine, NH_3, (Cl_2 + C), F_2, P, PCl_3, NaN_3, S, SCl.
Disaster Hazard: Dangerous; see chlorides.
Incomp: During preparation can violently explode. Ammonia; disulfur dichloride; organic solvents; phosphorus, or phosphorus trichloride; sodium azide; sulfur.

CHROMIUM(6+) ZINC OXIDE HYDRATE (1:2:6:1)

CAS RN: 15930946 NIOSH #: GB 3260000
mf: $CrO_4 \cdot H_2O_2 \cdot Zn_2 \cdot H_2O$; mw: 298.78

SYNS:
BUTTERCUP YELLOW
ZINC CHROMATE HYDROXIDE
ZINC CHROMATE (VI) HYDROXIDE
ZINC HYDROXYCHROMATE
ZINC YELLOW

TOXICITY DATA: 3 CODEN:
Carcinogenic Determination: Animal Positive IARC** 2,100,73; Human Positive IARC** 23,205,80. *Toxicology Review:* PEXTAR 12,102,69; 85DHAX Cr,22,74; AMTODM 3,209,77. Occupational Exposure to Chromium (VI) recm std: Air: CL 1 ug(Cr(VI))/m3 NTIS**.
THR: A hmn + CARC. An exper CARC. See also chromium and zinc compounds.

CHROMOMYCIN SODIUM

NIOSH #: RK 4385300

Produced by a strain of Actinomyces Olivoreticuli (85ERAY 2,1322,78)

SYN: OLIVOMYCIN, SODIUM SALT

TOXICITY DATA: 3 CODEN:
ipr-rat LDLo:1 mg/kg ANTBAL 7,53,62
ivn-rat LDLo:1 mg/kg ANTBAL 7,53,62
orl-mus LDLo:250 mg/kg ANTBAL 7,53,62
ipr-mus LD50:12700 ug/kg ANTBAL 7,53,62
scu-mus LD50:15600 ug/kg ANTBAL 7,53,62
ivn-mus LD50:138 mg/kg 85ERAY 2,1322,78
ivn-dog LDLo:300 ug/kg ANTBAL 7,53,62
ivn-rbt LDLo:2500 ug/kg ANTBAL 7,53,62
ipr-gpg LDLo:2 mg/kg ANTBAL 7,53,62

THR: HIGH ipr, ivn, orl, scu.
Disaster Hazard: When heated to decomp it emits acrid smoke and irr fumes.

CHROMYL AZIDE CHLORIDE

mf: $ClCrN_3O_2$; mw: 161.47

Explosive.

CHROMYL ISOCYANATE

mf: $C_2CrN_2O_4$; mw: 168.03

Weak explosion of salt when evaporated with heat @ atmospheric pressure.

CHROMYL PERCHLORATE

mf: Cl_2CrO_{10}; mw: 282.90

Incomp: Self-explodes or organic solvents.

C.I. 45405

CAS RN: 6441776 NIOSH #: LM 5820000
mf: $C_{20}H_6Br_4Cl_2O_5 \cdot 2K$; mw: 794.93

SYNS:
C.I. ACID RED 98
PHLOXINE
TOYO ACID PHLOXINE

TOXICITY DATA: CODEN:
mmo-esc 15 mg/L MUREAV 16,165,72

SITE: NYD000763777 CARBORUNDUM CO MONOFRAX PLANT LAST UPDATE: 2/23/83

EXISTANCE DATE:

501 NEW YORK AVE
FALCONER NY 14733
716/665/2120

CLOSURE DATE:

UNTY: CHAUTAUQUA 013 DISTRICT: 9 BASIN: LATITUDE: 420700.0 LONGITUDE: 0791100.0

ITY STATUS: MODIFY/CONSTRUCT: COMMERCIAL: NON-REGULATED: 1 OWNER TYPE: N FACILITY TYPE:

MAILING ADDRESS
LEH, WILLIAM MRG SPEC PROJ
501 NEW YORK AVENUE
FALCONER NY 14733
716/665 7280

OWNER ADDRESS
THE CARBORUNDUM COMPANY
PO BOX 156
NIAGARA FALLS NY 14302
716/278-2000

OPERATOR ADDRESS
THE CARBORUNDUM COMPANY
PO BOX 156
NIAGARA FALLS NY 14302
716/278-2000

INDICATORS

CONFIDENTIALITY NOTIF : N
CONFIDENTIALITY PART A : N
NATURE BUSINESS IND : A
MAP STATUS IND : A
DRAWING STATUS IND : A
PHOTO STATUS IND : A
INDIAN LAND IND : N
OWNER/OPERATOR IND : Y

NOTIFICATION DATA

PERMIT STATUS:
NOTIFICATION RECEIVED: 8/18/80
NOTIFICATION ACKNOWLEDGED: 11/07/80
PART A RECEIVED: 11/19/80
(1) PART A ACKNOWLEDGED: 1/15/81
(2) PART A ACKNOWLEDGED:

PERMITS 716/665 7224

TYPE	NUMBER	PROCESS	DESIGN CAPACITY AMOUNT	UNIT
N	NY0078506	S03	80000.000	Y

SIC CODES

3297

TRANSPORTATION

WASTE DESCRIPTION

CODE: D009 ESTIMATED AMOUNT: MT PROCESSES:
CODE: U124 ESTIMATED AMOUNT: MT PROCESSES: FURFURAN (FURAN)
CODE: D007 ESTIMATED AMOUNT: 22.680 MT PROCESSES: D80 CHROMIUM
8700# (1982)

COMMENTS

157 811116 10.14905 W

CARBORUNDUM

Sohio Engineered Materials Company
Refractories Division
Monofrax Plant
501 New York Avenue
Falconer, New York 14733

Telephone: 716-483-7200

Mr. Henry G. Williams, Commissioner
Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-0001

Re: DEC Site Number 907001
Site Name: Carborundum-Falconer
Site Address: Ellicott, New York

JAN 22 1986

Dear Mr. Williams:

Pursuant to 27-1305 of the Environmental Conservation Law, request is hereby made for the deletion of the above-captioned site from the DEC's registry of inactive hazardous waste disposal sites. As you may know, our operation at the Monofrax Plant at Falconer is a "foundry" type process in which stable and non-reactive oxides and silicates are electrically fused and cast into ceramic componenets. Products being manufactured and the waste stream generated by the process have long been considered to be of a non-hazardous, non-toxic nature.

Your Inactive Hazardous Waste Disposal Site Report attached to the Department's April 3, 1985 letter (copy attached) notifying us of the designation of our site as an inactive hazardous waste disposal site lists the following hazardous wastes at this location: lube oil, boiler chemicals, mold sand, calcined alumina. Our records indicate that we have accumulations of lube oil contained in drums at this site but all lube oil waste is sent off site to a waste oil refinery. Enclosed is a copy of an invoice evidencing shipments by our company of this waste to outside waste oil refineries.

With respect to boiler chemicals, we have discontinued use of the boiler. There are approximately four drums of unused boiler chemicals on site, to be disposed of. However, there is no hazardous waste associated with the use of the boiler chemicals, and no waste from our use was ever placed on this site.

Your site report further indicates that mold sand and calcined alumina rea also present at this site. We do not dispute the presence of these wastes at the site but contend that these wastes are not considered hazardous or toxic in any form whatsoever.

For a better understanding of the nature and content of wastes at this site, I have enclosed:

A hydrogeological study prepared by Trautman Associates in September, 1980, which contains a detailed report covering the subject site. Copies of this study have been previously forwarded to your departments in Buffalo and Albany as part of an application to construct a new waste disposal site (subsequently approved).

A copy of a recent monitoring report, as submitted to your Department in Buffalo and the Chautauqua County Health Department. These reports have been submitted on a quarterly basis for five years, and demonstrate that no hazardous material is leaching from this site.

A report entitled "Sampling and Analysis of Dump Site Material at Monofrax Plant at Falconer, New York" dated March 13, 1981. This report was prepared for internal use, to ensure that the site did not contain hazardous waste, and would not be subject to the requirements of 40CFR264-265.

We believe the above information demonstrates the non-hazardous nature of materials at this site.

We hereby respectfully request the deletion of the subject site from the DEC's registry of inactive hazardous waste disposal sites.

Respectfully,

William A. Miller

WILLIAM MILLER
Manager, Special Projects

cc: Lawrence G. Clare, P.E.
Senior Sanitary Engineer
New York State Department of
Environmental Conservation
600 Delaware Avenue
Buffalo, New York 14202-1073

Sat 1/25/86
LGC

Carborundum Monofrax
1/16/86 Deletion Petition

1981 Core Sampling (borings) - Don Owens - Earth Dimensions
grayish white sand - including debris
240 ft in diameter - containing 100,000 tons

6 EP Toxicity Tests
All samples were NOT toxic for metals
5 samples had measurable arsenic 13-19 ppb vs 5 ppm

2nd Quarter 1985 Groundwater Monitoring Report
NO Analyses
No measurable Cr^{+6}, Al, Cu, Pb, Hg, Cr
Fe .28 → 8.65 mg/l
Petition contents ¼ reports for past 5 years show
no toxics leaching from the site.

September, 1980 Hydrogeological Study - Performed to support
application for new landfill (subsequently approved)
contains water sampling data
Some PCB's found - high of 70 ppb in 1 of 6 wells
Lead - 5 samples - high of .58 ppm mg/l in lower aquifer (.05 Drinking Water)

New York State Department of Environmental Conservation

MEMORANDUM

TO: Mr. Olazagasti, Bureau of Hazardous Site Control, Attn: Mr. D. Ferrar
FROM: Mr. P. Buechi, Region 9
SUBJECT: Carborundum - Falconer Monofrax, Site No. 907001 (Page 9-55)
DATE: February 7, 1986

The January, 1986 petition by William Miller addressed to Commissioner Williams to have the Carborundum Monofrax facility removed from the Inactive Hazardous Waste Disposal Site listing has been reviewed by Region 9. The following points are relevant to the request made:

1. The data supporting Carborundum's request shows the following:

   a. Lead concentrations in the lower aquifer slightly exceed drinking water standards

   b. No other parameters measured exceed standards

2. The existing landfill is closed. A Closure Plan has not been approved. A firm commitment for continued monitoring of groundwater has not been made. According to Region 9 Solid Waste staff, the actual closure is acceptable. A new landfill has been approved for the site.

3. Region 9 Solid Waste staff advised that groundwater concentrations of some parameters (As,Pb) have intermittently exceeded groundwater standards in monitoring wells on the upstream side of the old landfill.

Based on the data submitted and the current status of the facility in the active program, it is believed that sufficient information exists on this site to categorize the site. It is our recommendation that this site be changed to a classification code 3. When the closure plan is approved and the monitoring program formalized, it is our belief that a Code 4 would be justified. However, since groundwater contamination has been measured in the area, it is not believed that delisting is justified.

Please contact either Larry Clare or myself if you have any questions on this recommendation.

LC/jmf

L. Clare
s/c
Carborundum
Falconer

April 8, 1986

Mr. William Miller
Manager, Special Projects
Sohio Engineered Materials Company
Refractories Division, Monofrax Plant
501 New York Avenue
Falconer, New York 14733

Dear Mr. Miller:

Thank you for your letter of January 1986. After review of your petition for deletion by both Regional and Central office personnel, we have determined that the Carbordunum Falconer site, No. 907001, cannot be delisted at this time. However, we do believe that a change in classification is warranted.

The data supporting your petition for deletion shows that lead concentrations in the lower aquifer slightly exceed drinking water standards. According to our Region 9 Solid Waste staff, groundwater concentrations of some parameters (As, Pb) have intermittently exceeded groundwater standards in monitoring wells. The Regional staff has also indicated that although the landfill is closed, a closure plan has not been approved, and no firm commitment for continued monitoring of groundwater has been made.

Based on the data submitted by Carborundum and the current status of the facility in the active program, the Department of Environmental Conservation believes that there is sufficient information to reclassify this site from a class 2a (a temporary classification assigned to sites for which there is inadequate or insufficient data to assign any other code) to a class 3 (does not present a significant threat to the environment, action may be deferred). When a closure plan is approved and the monitoring program has been formalized, we would support a classification of 4 (site properly closed, requires continued management). However, since groundwater contamination has been measured in the area, we cannot justify deletion of this site.

If you have any questions or problems, please contact me at (518) 457-0730.

Sincerely,

Charles N. Goddard

Charles N. Goddard, P.E.
Chief
Bureau of Hazardous Site Control
Division of Solid and Hazardous Waste

DF/CNG:cl

bcc: R. Olazagasti
P. Buechi, Region 9
L. Clare, Region 9
J. Eckl

ATTACHMENT B

ADVANCED ENVIRONMENTAL SYSTEMS, INC.

MONITORING AND SUPPORT LABORATORY

Location:

Bell Aerospace Textron
Building No. 75
Walmore Road (Gate 6)
Niagara Falls, New York

P.O. Box 165
Niagara Falls, N.Y. 14304
(716) 731-3291

March 16, 1981

Mr. Ron Reid
The Carborundum Company
Corporate Planning and Development
P.O. Box 1054
Niagara Falls, New York 14302

Dear Mr. Reid:

With this letter you will find our analytical report for metals analyses which we performed on six EP extract samples submitted to our laboratories on March 11, 1981.

If you have any questions regarding this report, please call me at the above number.

Thank you.

Sincerely,

ADVANCED ENVIRONMENTAL SYSTEMS, INC.

Robert C. Wojcik

Robert C. Wojcik
Operations Manager

/jm
Enclosure - Report GV

METALS ANALYSES
ON SIX EP EXTRACTS

Report Prepared For

THE CARBORUNDUM COMPANY

by

ADVANCED ENVIRONMENTAL SYSTEMS, INC.

Prepared by:

Robert C. Wojcik

Robert C. Wojcik
Operations Manager

March 16, 1981

AES - Report GV

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

QUALITY ASSURANCE

I. Precision

All samples were integrated in triplicate. The values reported are an average of the triplicate integrations.

II. Accuracy

As a check on the accuracy of the analysis, spiked samples and EPA Test Standards were run in parallel with the Carborundum samples. Table 2, on the next page, lists the results of these analyses.

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

SCOPE OF WORK

Advanced Environmental Systems (AES) has been retained by The Carborundum Company to perform analysis on six EP extracts and one blank sample. The six extracts were submitted to AES by Mr. Ron Reid of Carborundum on March 11, 1981, and were analyzed for the eight EP metals.

The six samples had been extracted at the Carborundum laboratory according to the "EP Toxicity" test detailed in Federal Register, Vol. 45, No. 98, May 19, 1980, Section 261, Appendix II.

METHODOLOGY

Analysis for extracts for the metals was performed in accordance with methods detailed in "Methods for the Analysis of Water and Wastes", U.S. EPA 600/4-79-020.

All metals were analyzed by Mr. David Szczesny, Laboratory Supervisor, on a Jarrell-Ash, Model 810, Atomic Absorption Spectrophotemeter.

RESULTS

Table 1. Analysis of EP Extracts for the Carborundum Company
(Expressed as micrograms per liter or ppb)

Sample	Arsenic	Barium	Cadmium	Chromium* (Hexavalent)	Lead	Mercury	Selenium	Silver
C-1 Falconer	14.	150.	<30.	<75.	<250.	<0.5	<10.	<50.
C-2 Falconer	15.	<100.	<30.	<75.	<250.	<0.5	<10.	<50.
C-3 Falconer	15.	<100.	<30.	<75.	<250.	<0.5	<10.	<50.
C-4 Falconer	15.	150.	<30.	<75.	<250.	<0.5	<10.	<50.
C-5 Falconer	13.	<100.	<30.	<75.	<250.	<0.5	<10.	<50.
G-6 Falconer	19.	<100.	<30.	<75.	<250.	<0.5	<10.	<50.
Blank	<10.	<100.	<30.	<75.	<250.	<0.5	<10.	<50.

*Total chromium on all samples was less than 75 micrograms per liter (ppb).

METHODS USED FOR DETERMINATION OF VALUES IN ATTACHMENT C

pH:	Methods for Chemical Analysis of Water and Wastes E.P.A. 600/4-79-020 Method 150.1
CONDUCTANCE:	Methods for Chemical Analysis of Water and Wastes E.P.A. 600/4-79-020 Method 120.1
CHLORIDES:	Amenco Chloride Titrator
SULFATES:	Methods for Chemical Analysis of Water and Wastes E.P.A. 600/4-79-020 Method 375.4
PHENOL:	Standard Methods For the Examination of Water and Wastewater Direct Photometric Method 510C

ATTACHMENT C

E ER	pH	CONDUCTIVITY (MHOS)	CHLORIDES (ppm)	SULFATES (ppm)	PHENOL (ppm)
	8.7	3.7×10^{-4}	0.836	5.9	.063
	9.1	3.5×10^{-4}	2.299	6.2	.054
	8.8	1.1×10^{-4}	1.708	5.1	.880
	8.7	0.6×10^{-3}	1.014	5.0	.046
	7.5	0.96×10^{-3}	1.212	5.1	.063
	6.3	1.2×10^{-4}	1.129	6.2	.063

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

DISCUSSION

Quality assurance data indicates that the values reported are within the 95% Confidence Limits recommended by the U.S. EPA, Environmental Monitoring and Support Laboratory.

QUALITY ASSURANCE (cont'd)

II. Accuracy

Table 2. Results of Spiked Samples and EPA Test Standards
(Expressed as micrograms per liter or ppb)

Analysis	Type	Original Concent.	Added Concent.	Expected Concent.	Reported Concent.	Acceptable 95% Confidence Limits
Arsenic	Spike	15.	25.	40.	48.	28. - 68.
	EPA	61.	-	61.	60.	43. - 87.
Barium	Spike	150.	2,500.	2,650.	2,550..	2,250. -2,777.
Cadmium	Spike	<30.	50.	50.-80.	50.	40. - 100.
	EPA	59.	-	59.	50.	47. - 74.
Chromium (Hexavalent)	Spike	<75.	500.	500.-575.	508.	400. - 718.
Lead	EPA	383.	-	383.	375.	306. - 477.
Mercury	Spike	0.5	3.0	3.0-3.5	2.85	1.5 - 7.0
	EPA	4.4	-	4.4	4.5	2.0 - 6.0
Selenium	Spike	<10.	25.	25.-35.	34.	15. - 58.
	EPA	48.0	-	48.0	41.	29. - 80.
Silver	Spike	<50.	2,500.	2,500-2550.	2,350.	2,000. - 3,200.

W.A. MILLER

HYDROGEOLOGICAL STUDY

CARBORUNDUM COMPANY
MONOFRAX PLANT
FALCONER, NEW YORK

DEC No.907-99-0096
TA Project No.7981

SEPTEMBER 1980

DRAFT

HYDROGEOLOGICAL STUDY

CARBORUNDUM COMPANY - MONOFRAX PLANT
FALCONER, NEW YORK

SEPTEMBER 1980

PROJECT 7981

TRAUTMAN ASSOCIATES
Engineers - Architects

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

Henry G. Williams
Commissioner

April 4, 1983

Mr. William Miller
Carborundum Monofrax Plant
501 New York Avenue
Falconer, NY 14733

Re: Old dumpsite
Superfund List

Dear Mr. Miller:

Relative to our discussion regarding the removal of your site from the State Superfund List, this department is recommending that the site be removed as you have volunteered to remediate the site. Until such time that this department can review your hydrogeologic investigation to determine its adequacies or lack thereof, no time schedule for remediation of the site can be developed for inclusion in an Order on Consent. Upon completion of the review, a draft Order on Consent will be forwarded to you for review.

If you have any further questions, please contact this office.

Very truly yours,

Robert J. Mitrey, P.E.
Associate Sanitary Engineer

KRE:sg

cc: Mr. Steve Johnson, Chaut. County Health Dept.

REVIEWED BY RTM

VS

47-15-15(7/82)

RCRA INSPECTION FORM

NOT MARKED ON HWDMS LIST — AS OBSERVED

Report Prepared for:

Generator [X]

Transporter [X]

HWM (TSD) facility [X]

Copy of report sent to the facility [ ]

Facility Information

Name: CARBORUNDUM CO. NIAGARA PLANT

Address: 501 NEW YORK AVE.
FALCONER, N.Y.

EPA ID#: NYD 046 763 777

Date of Inspection: JUNE 2, 1983

Participating Personnel

State or EPA Personnel: A.D. McKENZIE

Facility Personnel: WM. MILLER, MGR. PRODUCT & PROCESS ENGINEERING

Report Prepared by Name: A.D. McKENZIE

Agency: N.Y.S.D.E.C.

Telephone #: (716) 847-4585

Approved for the Director by: _____

Facility Name CARBORUNDUM Co, MONOFRAX PLANT Date Of Inspection 6/2/83.

EPA I.D No. NYD 046 763 777

NOT FOR RELEASE TO COMPANY, PROTECTED INFROMATION

Summary, Conclusions and Recommendations

Carborundum generates an average of 0.33 metric tons per month of hexavalent chromium containing dust + is consequently exempt from RCRA as a small generator.

Carborundum does not transport, treat or dispose of hazardous waste

The chromium containing dust is accumulated after collection + before pelletizing for less than 90 days — consequently the waste is not stored. Even if the 90 day accumulation time were exceeding such storage on site would be excluded under RCRA because of beneficial recovery.

The 32 tons of chromium containing dust (admission by Carborundum) in the landfill will apparently not be an issue if it can not be detected. That is presently the case. Carborundum is now developing a monitoring procedure for their on site landfill to be approved by N.Y.S.D.E.C. Favorable results from this program will be used as the basis for RCRA delisting.

Summary of Findings

Facility Description and Operations

Carborundum Co. Monofrax Plant specializes in the production of fused cast refractories used for the manufacture of glass. 11 different refractories are required to meet the varied & harsh conditions of glass manufacturing furnaces & tanks. Only two of these refractories contain chromium which is this firms sole hazardous waste. In addition only one (of five) furnaces runs part time on these two chromium containing products.

Dust from this process is collected separately & stored in dust tight containers until it can be pelletized. Pelletizing takes place shortly (much less than 90 days) after the furnace run. The pelletized dust is then the equivalent of the normal furnace charge.

Initially furfuran was listed as a hazardous waste because there was a chance that the furfuran constituent of the resin might be extracted by an EP toxicity test from the mold sand. Such tests have detected no furfuran.

ARK230 11

-B- (1)

Describe the activities that result in the generation of hazardous waste.

- Chromium containing ceramics are fused in an electric arc furnace & cast to shape. Some of the material becomes airborne & is caught in a dust collector. The basic environment of this process causes the formation of a high concentration of hexavalent Chromium. All dust is now pelletized & recycled to the furnace - the dust formerly (before 1977) went to the on site landfill

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes)

Hexavalent chromium containing furnace dust (D007) is generated at the rate of 8700 #/yr. (0.33 MT/mo.). Concentrations of hexavalent chromium in this dust normally test (by EP toxicity) 25 to 35 mg/lt. with a high of 372 mg/lt. The furnace dust composition is the same as the furnace charge. The on site landfill presently (6/83) contains 80,000 tons of waste (mostly mold sand). It is estimated that 32 tons of the chromium containing dust landfilled before 1977 is uniformly spread throughout the sand.

EP toxicity tests of materials from random cored samples from the landfill have all tested less than 75 micrograms

-B- 2

Describe the activities that result in the generation of hazardous waste.

Identify the hazardous waste located on site, and estimate the approximate quantities of each. (Identify Waste Codes) (cont'd)

per liter (detection limit) of hexavalent chromium. The maximum concentration of hexavalent chromium by EP toxicity test of the monitoring wells has been 0.078 milligrams/liter.

Is there reason to believe that the facility has hazardous waste on-site? yes

a. If yes, what leads you to believe it is hazardous waste? Check appropriate boxes:

☒ Company admits that its waste is hazardous during the inspection.

☒ Company admitted the waste is hazardous in its RCRA notification and/or Part A Permit Application.

☐ The waste material is listed in the regulations as a hazardous waste from a nonspecific source (§261.31)

☐ The waste material is listed in the regulations as a hazardous waste from a specific source (§261.32)

☐ The material or product is listed in the regulations as a discarded commercial chemical product (§261.33)

☐ Testing has shown characteristics of ignitability, corrosivity, reactivity or extraction procedure toxicity, or has revealed hazardous constituents (please attach analysis report)

☐ Company is unsure but there is reason to believe that waste materials are hazardous. (Explain)

MS

Transporter Inspection Report Form

40 CFR Part 263 Transporter Standards	YES	NO	N/A
263.10 - Does the transporter carry hazardous waste?	___	___	___
263.12 - Does the transporter store hazardous waste at a transfer facility - if yes, how long? _____10 days or less _____more than 10 days (complete TSD form)	___	___	___
263.20 - Manifest System			
1) Does the transporter have a copy for each manifest shipment of hazardous waste?	___	___	___
2) Does a representative portion of the manifests show the following information (if no, circle the missing information)	___	___	___
o Generator's name, address, telephone and EPA I.D. numbers, signature and date of signature	___	___	___
o Transporter's name, EPA I.D. number, signature and date of signature	___	___	___
o TSDF's name, address and EPA I.D. Number	___	___	___
and either the signature and date of the TSDF or the name, EPA I.D., signature and date of the next transporter.	___	___	___
o Manifest Document number	___	___	___
o Proper DOT shipping description	___	___	___
o Quantity & type of containers	___	___	___
(If no, to any of the above obtain copies of incomplete manifests).			
3) Based on available information, do all manifests conform to the hazardous waste shipments made? If no, explain	___	___	___
262.22 - Have records been kept since November 19, 1980?	___	___	___
263.30 - Has there ever been a spill or discharge of hazardous waste during transportation?	___	___	___
If yes, was the incident report submitted to DOT? (obtain copy of the report)	___	___	___
263.31 - If there was any spill or discharge of hazardous waste, was it cleaned up? If no, explain.	___	___	___

General Comments:

ship to generation sheet

HAZARDOUS WASTE MANAGEMENT FACILITY CHECK LIST
(Facilities Subject to 40 CFR 265 Standards)

	YES	NO	N/A
40 CFR Part 265 Subpart B General Facility Standards			
265.13–General Waste Analysis			
1) Is there a detailed chemical and physical anaylsis of a representative sample of the waste or each waste? (At a minimum this analysis must contain all the information necessary for proper management of the waste)	___	___	___
2) Does the character of the waste handled at the facility change from day to day, week to week, etc., thus requiring frequent testing? You may check only one			
Waste characteristics vary _____			
All waste are basically the same _____			
Company treats all waste as hazardous ___			
3) Is there a written waste analysis plan at the facility?	___	___	___
Does it contain the following:			
a) Parameters for each waste to be analyzed and the rationale for the selection of these parameters.	___	___	___
b) Test methods used to test these parameters.	___	___	___
c) Sampling methods to obtain a representative sample of the waste to be analyzed.	___	___	___
d) Frequency of repeated analysis to ensure accurate and current information.	___	___	___
4) Does hazardous waste come to this facility from an outside source? e.g. another generator.	___	___	___
5) If waste comes from an outside source, are there procedures in the plan to insure that waste received conforms to the accompanying manifest?	___	___	___
265.14–Security			
1) Is there: a) a 24-hour surveillance system? or, b) a suitable barrier which completely surrounds the active portion of this facility?	___	___	___
2) Are there "Danger-Unauthorized Personnel Keep Out" signs posted at each entrance to the facility?	___	___	___
If no, explain what measures are taken for security.			
265.15 - General Inspections Requirements			
1) Does the facility have a written inspection schedule?	___	___	___
2) Does the schedule identify the types of problems to be looked for and the frequency of inspections?	___	___	___
3) Does the owner/operator record inspections in a log?	___	___	___
4) Is there evidence that problems reported in the inspection log have been remedied?	___	___	___
If no, please explain.			

GENERATOR INSPECTION CHECKLIST

40 CFR 262 Subpart A-General	YES	NO	N/A
262.11 - Hazardous waste determination			
1) Did the generator test its waste to determine whether it is hazardous?	✓		
Is the waste hazardous?	✓		
2) Is the generator determining that its waste exhibits a hazardous waste characteristic(s) based on its knowledge of the material(s) or processes used?	✓		
40 CFR 262 Subpart B-The Manifest			
Has hazardous waste been shipped off-site since November 19, 1980?		✓	completely recycled
If yes, approximately how many shipments, off-site, have been made and describe the approximate size of an average shipment made on a monthly basis. If facility is a small quantity generator, please explain.			
262.21 Does each manifest (or representative sample) have the following information? Please circle the missing elements.			
— a manifest document number?			✓
— the generators name, mailing address, telephone number and EPA I.D. Number?			✓
— the transporters name and EPA I.D. Number?			
— the name, address and EPA ID Number of the designated facility?			✓
— a description of the wastes (DOT)?			✓
— the total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle?			✓
— a certification that the materials are properly classified, described, package, marked and labeled, and are in proper condition for transportation under regulations of the DOT and EPA?			✓
(obtain a copy of the incomplete manifests)			
40 CFR 262 - Subpart D - Recordkeeping and Reporting			
262.40 Has the generator maintained facility records since Nov. 19, 1980? (manifest, exception report and waste analysis)			✓
262.42 Has the generator received signed copies (from the TSD facility) of all the manifests for waste shipped off-site more than 35 days ago?			
If not, have Exception Reports been submitted to EPA covering any of these shipments made more than 45 days ago?			

	YES	NO	N/A
40 CFR 262 - Subpart C - Pretransportation Requirements			
262.30-33 Before transporting or offering hazardous waste for transportation off-site does the generator:			
1) Package the waste in accordance with applicable DOT regulations (i.e., 49 CFR Parts 173, 178 & 179)			✓
2) Label each package according to DOT (i.e., 49 CFR 172)			✓
3) Mark each package according to DOT (i.e., 49 CFR 172)			✓
4) Mark each container of 110 gallons or less with the words "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. EPA," and include the generators name, address and manifest document number. (i.e., 49 CFR 172.304)			✓
262.34 Accumulation Time			
1) How is waste accumulated on-site?			
☐ Containers			
☐ Tanks			
☐ Surface impoundments (complete BMF checklist)			
☐ Piles (complete BMF checklist)			
2) Is waste accumulated for more than 90 days?		✓	
If yes, complete BMF checklist			
3) Is each container clearly dated with each period of accumulation so as to be visible for inspection?		✓	
4) Is each container or tank marked or labeled with the words "hazardous waste" or in compliance with the DOT labeling requirements?		✓	

STOP HERE IF THE HAZARDOUS WASTE MGT FACILITY (TSD) CHECKLIST IS FILLED OUT

262.34 - SHORT TERM ACCUMULATION STANDARDS

(For generators who accumulate waste in tanks or containers for 90 days or less)

	YES	NO	N/A
40 CFR 265 - Subpart I Containers			
265.170 - What type of containers are used for storage. Describe the size, type and quantity and nature of waste (e.g., 12 fifty-five gallon drums of waste acetone).			
265.171 - Do the containers appear to be in good condition, not in danger of leaking?	✓		
If not, please describe the type, condition and number of leaking or corroded containers. Be detailed and specific.			
265.172 - Are hazardous waste stored in containers made of compatible materials?	✓		
If not, please explain.			
265.173(a) - Are all containers closed except those in use?	✓		
265.173(b) - Do containers appear to be properly opened, handled or stored in a manner which will minimize the risk of the container rupturing or leaking?	✓		
265.174 - Is the storage area inspected at least weekly?	✓		
265.176 - Are containers holding ignitable and reactive waste located at least 50 feet (15 meters) away from the facility's property line?	✓		
265.177 - Are incompatible wastes stored separate from each other?			✓

NA

40 CFR 265 Subpart J - Tanks	YES	NO	N/A
265.190 1) What are the approximate number and size of tanks containing hazardous waste?			
2) Identify the waste treated/stored in each tank.			
265.192 - General Operating Requirements			
1) Are the tanks maintained so that there is no evidence of past, present, or risk of future leaks?			
If no, please explain.			
2) Are there leaking tanks?			
3) Are all hazardous wastes or treatment reagents being placed in tanks compatible with the tank material so that there is no danger of ruptures, corrosion, leaks or other failures?			
4) Do uncovered tanks have at least 2 feet of freeboard or an adequate containment structure?			
5) If waste is continuously fed into a tank, is the tank equipped with a means to stop the inflow from the tank? e.g. bypass system to a standby tank			
265.194 - Inspections			
1) Is the tank(s) inspected each operating day for a) discharge control equipment b) monitoring equipment c) level of waste in tank			
2) Are the tanks and surrounding areas (e.g., dike) inspected weekly for leaks, corrosion or other failures?			
3) Are there underground tanks?			
If yes, how many and can they be entered for inspection?			
265.198 - Are ignitable or reactive wastes stored in a manner which protects them from a source of ignition or reaction?			
If no, please explain.			
265.199 - Does it appear that incompatible wastes are being stored separate from each other?			

	YES	NO	N/A
265.16 - Personnel Training – exempt			
1) Have facility personnel successfully completed a program of classroom instruction or on-the-job training within 6 months of having been employed?	—	—	✓
If yes, have facility personnel taken part in an annual review of training?	—	—	—
2) Is there written documentation of the following:			
—job title for each position at the facility related to hazardous waste management and the name of the employee filling each job?	—	—	—
—type and amount of training to be given to personnel in jobs related to hazardous waste management?	—	—	—
—actual training or experience received by personnel?	—	—	—
3) Are training records kept on all employees for at least 3 years?	—	—	—
40 CFR 265 - Subpart C - Preparedness and Prevention exempt			
265.32 Does the facility comply with preparedness and prevention requirements including maintaining:			
— an internal communications or alarm system?	—	—	✓
— a telephone or other device to summon emergency assistance from local authorities?	—	—	—
— portable fire equipment?	—	—	—
— water at adequate volume and pressure to supply water hose streams, foam producing equipment, etc.	—	—	—
265.33 Is equipment tested and maintained?	—	—	—
265.34 Is there immediate access to communications or alarm systems during handling of hazardous waste?	—	—	—
265.35 Adequate aisle space?	—	—	—
If no, please explain storage pattern.			
In your opinion, do the types of waste on-site require all of the above procedures, or are some not needed: Explain.	—	—	—
40 CFR 265 - Subpart D - Contingency Plan and Emergency Procedures exempt			
Does the facility have a written contingency plan for emergency procedures designed to deal with fires, explosions or any unplanned release of hazardous waste?	—	—	✓
1) Does the plan describe arrangements made with the local authorities?	—	—	—
2) Has the contingency plan been submitted to the local authorities?	—	—	—
3) Does the plan list names, addresses and phone numbers of Emergency Coordinators?	—	—	—
4) Does the plan have a list of what emergency equipment is available?	—	—	—
5) Is there a provision for evacuating facility personnel?	—	—	—
6) Was there an emergency coordinator present or on call at			

PRINTED IN U.S.A.

THE CARBORUNDUM CO.
NIAGARA FALLS, N.Y.

No. 03237

MATERIAL TRANSFER
(Do Not Use For Products)

Originating Division: Falconer New York Date 3-22-85

Sold or Charged To: Speedy Oil Services Inc
141 Milton
Buffalo N.Y

Ship To:

REASON FOR SHIPMENT
- Repair or Processing Order ☐
- Test Material or Equipment ☐
- Returnable Containers, etc. ☐
- Accommodation Sale ☐
- Rejected Material ☐
- Salvage Sales Order ☒
- Other:

VIA | PREPAID ☐ COLLECT ☐ | TRANSPORTATION CHARGES

TERMS | CHARGE | CREDIT

OUR P.O. REF. | YOUR ORDER NO.

QUANTITY	UNIT	DESCRIPTION	I.C. COMM. NO.	UNIT PRICE	TOTAL	VALUE
3,710	GAL.	WASTE OIL AT. 20 A 9A1				
6009-130						
		E.P.A. NO. 9A077				

DEBIT MEMO

PLEASE INDICATE OUR DEBIT MEMO NUMBER ON YOUR REMITTANCE

MATERIAL TRANSFER SENT TO (Bill Lyle) (Mike Thompson) SHIPMENT AUTHORIZED BY

GOLDEN ROD - ORIGINAL
PINK - RECORDS COPY
BLUE - SHIPPING ORDER
YELLOW - SERVICE COPY
WHITE - ORIGINATOR'S COPY

SPEEDY OIL SERVICES INC

Western PA 1-412-264-4281
Central NY 1-315-475-74
Northeast OH 1-216-473-7900
Western NY 1-716-891-8101
West Virgini 1-304-722-69

89 Montour Rd., Coraopolis, PA 15108

Received From Carborundum Date of Pickup 3/22/85
501 New York Ave
Falconer N.Y.

Authorized Signature Mike Thompson

Dry Gallons Credited 3710 @20g

Driver BILL

THANK YOU

Re-Refining your waste oil at a profit to you.

PROMPT, EFFICIENT SERVICE
TOP PRICES PAID

WHITE-CUSTOMER: CANARY-FILE: PINK-OFFICE: GOLDENROD-OFFICE

600 Delaware Avenue, Buffalo, New York 14202-1073

September 25, 1985

Mr. William Miller
Manager - Special Products
SOHIO Engineered Materials Company
Refractions Division
Monofrax Plant
501 New York Avenue
Falconer, New York 14733

Dear Mr. Miller:

Inactive Hazardous Waste Site
Registry No. 907001

This letter is being written in response to our September 23, 1985 telephone conversation regarding a 1985 listing of an inactive hazardous waste site at your plant in our Registry. A copy of the current listing is attached.

A review of our files both in this office and in our Albany office (Site Control Section) failed to locate any request from your firm for delisting the disposal area. For your information, delisting requests are normally evaluated based on the amount of information, data and documentation available to support a finding of no significance. Very little information is currently available on the Carborundum - Falconer Monofrax site in our files.

If you desire to request delisting, such a request may take the form of a letter to:

Henry Williams, Commissioner
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233

CARBORUNDUM COMPANY
MONOFRAX PLANT - FALCONER, NEW YORK
7981

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FIGURES

Figure 1 - Site Location Plan

Drawing H-1 - Boring and Sampling Well Locations

Plate P-1 - E-W Profile Through Wells B-11W & B-10W

Plate P-2 - N-S Profile Through High Point of Fill

APPENDIX

INTRODUCTION

This report covers a hydrogeological study made at the Carborundum Company, Monofrax Plant, Falconer, New York. The purpose of the study was to determine soil and water conditions at an existing industrial solid waste disposal area on the plant site. The preparation of this report was authorized by Carborundum Company Purchase Order No. 6345.

In part, this report supplements information contained in a report entitled "Solid Waste Storage and Reclamation Plans" of the Carborundum Company and an Application for Approval to Operate a Solid Waste Management Facility dated 18 July 1979. Copies of the previous report and application are included in the Appendix.

GENERAL SITE DESCRIPTION

The Carborundum Company, Monofrax Plant is located along New York Avenue at the easterly outskirts of Falconer, New York in the Town of Ellicott, Chautaugua County. The plant's east property line is along the line between the Towns of Ellicott and Poland. See Figure 1 and Drawing H-1 included.

Present total acreage of the Carborundum property at this site is about 45 acres, less than 6 acres of which is located on the north side of New York Avenue. The remaining property is located to the south of New York Avenue; roughly half of which is utilized for employee parking and auxiliary facilities such as transformers, water recirculating facilities and the solid waste disposal area. The remaining area of about 20 acres at the southerly portion of the property is undeveloped and covered with scattered trees, brush and undergrowth.

With the exception of the solid waste area, topography is relatively flat with a general slope to the swampy area immediately to the east of the property. The swampy area has been declared the "Clay Pond Wetland" and is subject to the rules and regulations of Article 24 of the New York State Environmental Conservation Law. The site is within the Chadekoin River - Cassadaga Creek watershed. According to information obtained by Hibbard Engineers, highest recorded flood elevation is 97.88 ft and a serious flood in 1976 reached an elevation of 90.12, datum being elevation 100 (plant floor).

The area at the southerly perimeter of the solid waste disposal area has been ditched. These ditches receive effluent from an oil separator/ settling tank as well as storm water from the area to the west of the

GENERAL SITE DESCRIPTION - Continued

property. A baffled outlet from the ditches discharges to the swamp area along the easterly property line. It is estimated that roughly half of the storm water runoff from the solid waste area is received by the ditches.

A cooling water recirculation pond has been constructed to the south of the ditched area. Overflows from the pond discharge to the swampy area previously mentioned.

GENERAL SOILS DATA

A general soils map for the plant area south of New York Avenue was prepared by the USDA Soil Conservation Service and is included in the Appendix. This general study indicates that most of the property is underlain by the poorly drained Candice or Canandaigua silt loam. Both these soils have high water tables and low permeability. Some Pompton and Chenango gravelly silt loam may occur along the westerly part of the site. The former has a seasonal high water table. The latter has a water table greater than 6 feet deep. Both are permeable.

Mixed soil and industrial waste overlies the original soil in the area along New York Avenue used for the employee parking lot, which is not paved, and auxiliary plant facilities. This fill varies in depth from about 2 to 6 feet. A "peninsula" of this fill material also extends to the south of the water recirculation pond near the easterly property line.

SOLID WASTE STORAGE AREA

The present solid waste disposal area occupies an area of about 3 acres. It is estimated to contain in the order of 70,000 cu yd of waste material, accumulated since 1970. Maximum height above the general surrounding grade is about 20 ft. The estimated contents of the material accumulated in the period 1971-1980, based upon information furnished by the Carborundum Company, is shown below. Chemical composition of the material can be found in the Carborundum Report in the Appendix.

SOLID WASTE STORAGE AREA - Continued

TABLE 1

A.	Used mold sand		51,100 tons
B.	Calcined alumina		15,100 tons
C.	Product scrap		
	Mix spillage	3,860 tons	
	Furnace splatter	1,300 tons	
	Broken castings, headers	540 tons	5,700 tons
D.	Dust collector fines		
	D-1	550 tons	
	D-2	810 tons	
	D-3 (D & E FCE)	2,770 tons	
	D-4 (C FCE)	810 tons	
	D-5 (A & B FCE)	80 tons	5,020 tons
E.	Graphite, dust and pieces		500 tons
F.	Tramp material, wood, metal		1,000 tons
1980	ESTIMATED TOTAL		78,420 tons

+25000 To 1985

SOLID WASTE STORAGE AREA - Continued

TABLE 1

A.	Used mold sand		51,100 tons
B.	Calcined alumina		15,100 tons
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	D-1	550 tons	
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	D-3 (D & E FCE)	2,770 tons	
	D-4 (C FCE)	810 tons	
	D-5 (A & B FCE)	80 tons	5,020 tons
E.	Graphite, dust and pieces		500 tons
F.	Tramp material, wood, metal		1,000 tons
	ESTIMATED TOTAL		78,420 tons

1980

SUBSURFACE INVESTIGATION

The log of a large yield well drilled in 1966 at the site indicates that bedrock is at a depth of over 185 feet. Water is drawn from a sand and gravel aquifer located between the 150 and 183 foot depths. Above this aquifer and extending to the surface, the soil is described as "clay". The static water level is indicated at 15 feet below the ground level. Therefore the tapped aquifer is confined or "artesian". The well location is shown on Drawing H-1 and the well log is included in the Appendix.

A subsurface investigation was carried out by Earth Dimensions Inc. in April, 1980. Eight borings were made at this time. The locations are shown on Drawing H-1.

The borings suggest that an arm of the present swamp to the east of the site extended into the site where the present disposal area and recirculating pond are located. Underlying the original soil of the area are sandy silts, silty sands, and clayey silts. A thin (1 ft to 3 ft thick) layer of coarser sand and gravel was found in the westerly borings (B-1, B-4 and B-7). The sandy silts and silty sands which grade downward to clayey silt, were also found in the more westerly part of the site. The coarser soils appear to be lacking in the easterly part of the site. Most of the soil which underlies the site contains permeable layers of sand and gravel. These diminish with depth.

Permeability tests were performed on undisturbed clayey silt taken from borings B-1 and B-2 at depths of 7.5 to 9.5 ft and 10 to 12 ft respectively. Recompacted permeability tests were performed on the clayey silt from borings B-3 and B-5 at depths ranging from 4.5 to 18.0 ft. The undisturbed samples resulted in K factors of 7.8×10^{-8} and 1×10^{-7} cm/sec. The recompacted samples resulted in K factors ranging from 2.4×10^{-8} to 6.5×10^{-8} cm/sec.

The complete soils report is included in the Appendix. Generalized cross sections are shown in plates P-1 and P-2.

The borings indicate a perched water table exists on the site. At the time of the borings (in late spring) this water was at or near the original surface. The general movement of the perched groundwater is in a west to east direction with apparent movement altered by the fill. With the exception of boring No. B-8, the water table was found to be within the filled areas. Some mounding appears to occur within the disposal area. The perched water table may be considered visible in the swamp.

SUBSURFACE INVESTIGATION - Continued

Boring B-8 indicated a water table at 15 ft below the surface, which is probably erroneous due to soil impermeability.

Due to the relatively high permeability of the solid waste disposal area and the adjacent filled areas, including the parking lot, surface runoff should be considered as rather low in the detailed study area.

Due to course soil layers in the silts and clays, groundwater migration should be much more pronounced laterally than vertically. Vertical desiccation cracks were found in boring B-8 at the surface of the clayey-silt and also in the boring for well B-11; hence there may be some vertical movement of groundwater for short distances in the clayey-silt.

SAMPLING WELL INSTALLATION

Three sets of sampling wells were installed by Earth Dimensions Inc. in mid-June 1980. One set was installed upgradient to the west of the solid waste disposal area and two sets were installed downgradient along the eastern edge of the disposal area. It would have been desireable to have installed at least one set of wells farther to the east to obtain groundwater quality away from the immediate disposal area, but this could not be done due to access problems. All wells sample perched ground water.

In order to obtain an indication of variation of groundwater quality with depth, each set of wells consisted of one shallow well (10 to 15 ft deep) and one deeper well (20 to 25 ft deep). All wells are two-inch diameter PVC pipe with 3 ft sand packs and 2 ft long screens. Screens have 12.03 - .002 inch slots per inch. Bore holes were plugged above the sand packs to the surface. The well logs and report are included in the Appendix.

LEACHATE TESTS

Leachate tests were performed on the individual components which make up the solid waste stored on the site. Additionally, a leachate test was performed on material taken at the base of the solid waste pile from boring No. B-3.

LEACHATE TESTS - Continued

In an effort to compare the results of the tests on material from boring No. B-3 and those of the various constituents, a "composite" sample was calculated. Referring to Table 1, the dust collector fines from D-2 are similar to product scrap and the fines from D-1 are similar to D-3. The product scrap is considered to be inert; hence leachate tests were not performed on this constituent. The composite sample therefore, is based on the material and percentages shown below in Table 2.

TABLE 2

Constituent	Estimated Total Tons	Leachate Total Tons	Percentage
Mold sand	51,000	51,100	72.1
Calcined alimina	15,100	15,100	21.3
Scrap, D-2 dust coll.	6,510	0	0
D-1 & D-3 (D&E FCE)	3,320	3,320	4.7
D-4 (CFCE)	810	810	1.1
D-5 (A&B FCE)	80	80	0.1
Graphite	500	500	0.7
Tramp material	1,000	0	0
TOTAL	78,420	70,910	100.

Table 3 shows the results of the leachate tests and the "composite sample". Drinking water standards are shown for purposes of comparison. The leachate tests are included in the Appendix.

Referring to Table 3, it can be seen that only phenol exceeds 10 times the drinking water standard for in-place sample No.4, while the composite sample would indicate that chromium would also exceed 10 times the standard. No constituent of either the in-place sample or the composite sample would exceed 100 times the standard - reference being made to the EPA EP Toxicity.

TABLE 3
LEACHATE TESTS

Parameter	Units	Potable Water Std.	Used Mold Sand	Calcined Alumina (System Out from Sand Silo)	D & E FCE Dust Coll.	C FCE Dust Coll.	A & B FCE Dust Coll.	Graphite	In-Place Sample #4	CALCULATED Composite Sample
pH	STD	6.5-8.5	8.38	7.67	8.98	10.45	3.04	6.94	8.10	-
Conductance	µMhos/CM	-	862	618	10,800	40,800	14,900	499	690	1,728
T.O.C.	MG/l	-	20.0	19.5	165	440	102	17	14	31.4
Total phenolic	MG/l	.001	.035	0.030	0.172	0.030	0.004	< .01	0.04	0.04
Chloride	MG/l	250	3.9	0.6	290	1,620	-	10.5	13	35.6
Sulfate	MG/l	250	9.2	28	1,080	580	7,960	54	180	78.1
Aluminum	MG/l	< .05*	0.3	1.3	9.5	< 0.1	8.9	2.8	0.6	0.97
Cadmium	MG/l	.01	< .005	< .005	< .005	0.006	0.133	< 0.003	< .003	< 0.004
Chromium	MG/l	.05	< .004	< .004	2.72	2.22	1,620	0.04	0.006	< 1.774
Copper	MG/l	1.0	< .003	.006	0.250	< .003	2.44	< .004	0.014	< .016
Lead	MG/l	0.05	< .03	< .03	0.82	0.43	0.17	< .03	< 0.02	< 0.069
Manganese	MG/l	0.05	.02	.08	0.07	< 0.02	3.6	< .02	0.03	< 0.037
Mercury	MG/l	.002	< .002	< .002	< .002	< .002	< .002	< 0.6	< .002	< .001
Zinc	MG/l	5.0	< .003	.037	5.3	< .003	115	0.151	0.013	< 0.367
Zirconium	MG/l	-	< 2	< .002	< 2	< 2	< 2	< 10	< 10	< 1.628

*AWWA GOAL, 1968

WATER QUALITY

Surface runoff is sampled periodically at points 01, 02, and 03 shown on Drawing H-1. The results of sampling on 15 July 1980 are:

	Point 01 Sample #1	Point 02 Sample #2
pH	7.74	7.16
Suspended solids	20.0 mg/l	-
Oil and grease	3.5 mg/l	1.6 mg/l
Total chromium	.002 mg/l	-
Hexavelent chromium	.002 mg/l	-
$B.O.D._5$	4.0 mg/l	-
Phenol	less than .01 mg/l	less than .01

The analysis was made by the Blackstone Corporation. The report is included in the Appendix.

The groundwater sampling wells were initially pumped by Recra Research on 9 July 1980 in preparation for sampling on 10 July 1980. The shallow wells recharged overnight. The deeper wells were slow to recharge and well No. B-11WD did not recharge at all. It was later found that B-11WD was clogged. It was subsequently cleaned; this well was sampled on 13 August 1980.

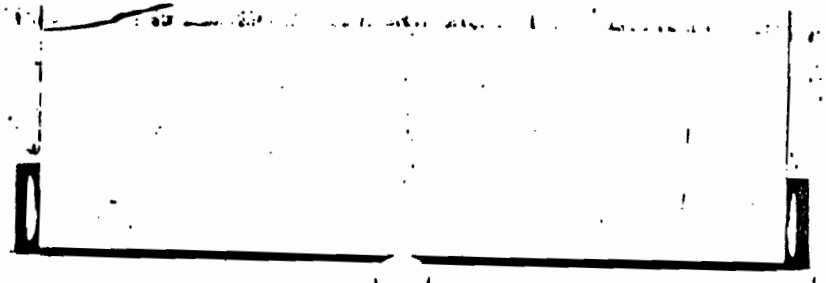
The results of the sampling and analyses of the six wells are shown in Tables 4A and 4B. Copies of Recra Research's reports from which these tables were prepared are included in the appendix.

It should be recognized that the well sampling data are limited and that well No. B11WD was sampled about a month later than the other wells.

TABLE 4A

SAMPLING WELL DATA

PARAMETER	UNITS OF MEASURE	DRINKING WATER STANDARD	SAMPLE IDENTIFICATION				
			B-9-W SHALLOW	B-10-W DEEP	B-10-W SHALLOW	B-11-W SHALLOW	B-11W - DEEP
pH	Standard Units	6.5-8.5	8.28	7.66	7.51	7.86	8.16
Conductivity	µmhos/cm	—	1,010	755	660	740	298
Biochemical Oxygen Demand (5 day)	mg/l	—	8.0	47	4.8	17	64
Chloride	mg/l	250	7.5	8.2	2.1	24	22
Sulfate	mg/l	250	690	130	51	61	25
Total Residue (103°C)	mg/l	—	5,100	12,000	520	9,900	1,100
Total Organic Carbon	mg/l	—	70	61	14	63	84
Total Recoverable Phenolics	mg/l	.001	<0.01	0.01	0.02	0.04	0.02
Chemical Oxygen Demand	mg/l	—	170	250	110	170	440
Total Aluminum	mg/l	—	1,400	5.4	49	210	760
Total Cadmium	mg/l	.01	<0.003	<0.003	<0.003	<0.003	<0.003
Total Chromium	mg/l	.05	3.1	0.010	0.064	0.162	0.982
Hexavalent Chromium	mg/l	.05	<0.03	<0.01	<0.03	<0.03	—
Total Copper	mg/l	1.0	1.6	0.034	0.070	0.330	0.831
Total Lead	mg/l	.05	0.03	<0.02	0.02	0.21	0.58
Total Manganese	mg/l	.05	30	0.50	0.91	2.5	170
Total Mercury	µg/l	2.0	<0.8	<0.8	<0.8	<0.8	0.6
Total Zinc	mg/l	5.0	51	0.113	0.218	0.670	2.7
Total Zirconium	mg/l	—	<10	<10	<10	<10	<10
DISTANCE - TOP OF CASING TO WATER			7'11"	6'-10"	16'-7½"	5'-7"	5'6" NOT REPORTED
DATE OF SAMPLING			7/10/80	7/10/80	7/10/80	7/10/80	8/13/80



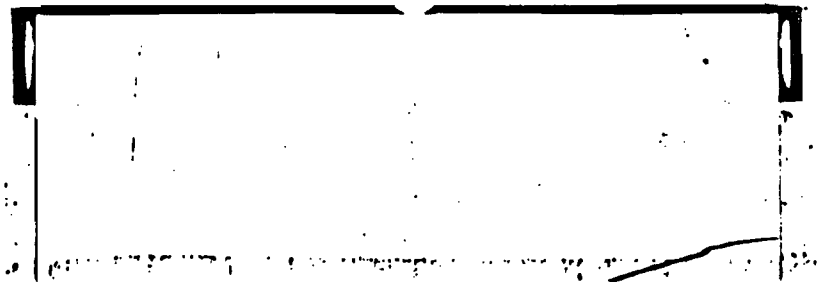


TABLE 48

SAMPLING WELL DATA

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION					
		B-9-W DEEP	B-9-W SHALLOW	B-10-W DEEP	B-10-W SHALLOW	B-11-W SHALLOW	B-11W - DEEP
Polychlorinated Biphenyls	ug/l as Aroclor 1016	<0.5	<5	<1	<1	<1	<0.1
	ug/l as Aroclor 1221	<0.5	<5	≤9	≤20	≤8	<0.1
	ug/l as Aroclor 1232	<0.5	<5	<1	<1	<1	<0.1
	ug/l as Aroclor 1242	≤1	≤20	<1	<1	<1	<0.1
	ug/l as Aroclor 1248	3	70	<1	<1	<1	<0.1
	ug/l as Aroclor 1254	<0.5	<5	<1	<1	<1	<0.1
	ug/l as Aroclor 1260	<0.5	<5	<1	<1	<1	<0.1
	ug/l as Aroclor 1262	<0.5	<5	<1	<1	<1	<0.1
	ug/l as Aroclor 1268	<0.5	<5	<1	<1	<1	<0.1
DATE OF SAMPLING		7/10/80	7/10/80	7/10/80	7/10/80	7/10/80	8/13/80

WATER QUALITY - Continued

Comparing well numbers B9WS and B9WD with the other wells, it can be seen that one or the other of these wells has the highest levels of conductivity, pH, sulfate, T.O.C., C.O.D., chromium, lead, and zinc. This is to be expected since these wells are very close to the major concentration of solid waste.

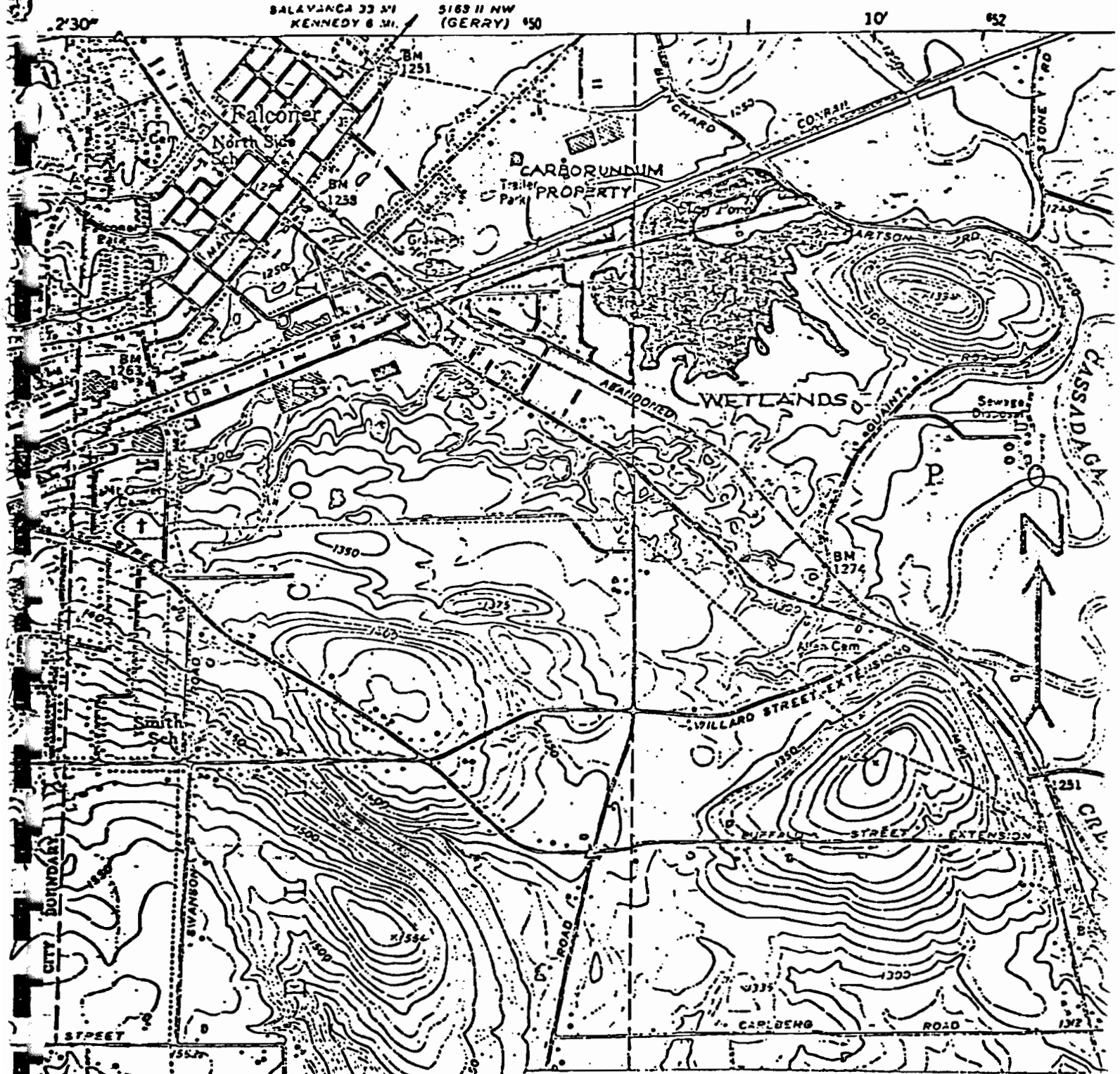
Well number B9WS samples water directly from the fill, so that, in effect, it samples leachate rather than groundwater. Well number B9WD affords a more accurate picture of ground water conditions below the fill. Comparing this well with the upgradient wells B11WS and B11WD, it can be seen that, of the metals, only lead is found in higher concentration than in the upgradient wells and the difference does not appear to be great.

There appears to be detectable amounts of PCB's (3 to 70 parts per billion) in the samples taken from the B9W wells. The source or significance of this is not known.

CONCLUSION

The initial data from the sampling wells seem to indicate that the present solid waste disposal area is contributing to a minor increase in mineralization of the perched groundwater table below the site. With the possible exception of lead, which should attenuate rapidly downgradient from the disposal area, the present disposal pile does not appear to be contributing significant quantities of those elements by which groundwater standards are measured.

The data appear to indicate that the perched water table upgradient from the disposal area contains higher concentrations of phenol, lead, and manganese than those permitted in drinking water standards. Total chromium may also exceed these limits, but hexavalent chromium does not appear in high concentrations.



HYDROGEOLOGICAL SURVEY
CARBORUNDUM CO.
FALCONER NEW YORK

TRAUTMAN ASSOCIATES

SCALE 1"=2000'	FIG 1	79E

APPENDIX C

FEASIBILITY STUDY

SOLID WASTE RECOVERY

PILOT PLANT

OPERATOR:

NEWCO WASTE SYSTEMS, INC.

4626 ROYAL AVENUE

NIAGARA FALLS, NEW YORK 14303

Newco Waste Systems Inc.

May 4, 1979

Mr. Arthur Jones
Carborundum Technical Center
Whirlpool Avenue
Niagara Falls, New York

Dear Art:

As you are aware, John Younkins, John Rolfe and myself visited the Falconer Project Plant on Thursday, April 26, 1979, and we drew for the last time samples that are presently being put threw our lab. As I have said in the past, I am confident we can process this product. My engineers have confirmed this and we are making this proposal.

1. Pilot Plan

(a) We are to produce at the Pilot Plant here in Niagara Falls, New York for one month (21 working days) between two to three tons per day of sized, dry sand containing less than 1% aluminum. This will be carried out at our Buffalo Avenue Site, and you and your staff will be welcome to observe and comment on the process. The product will be returned to where ever you direct for your further testing and sampling.

2. The cost of the Pilot Project will be determined in the following manner:

(a) All equipment that is used in the Pilot Project, that is used in the final operation, will have no charge. If for some reason, you decide not to go forward with the project, Carborundum will be billed for the screener. The approximate cost of the screener is between nine and twelve thousand dollars ($9,000 to $12,000).

3. The estimated costs incurred in the Pilot Project will be:

a.	Labor	$ 6,400.00
b.	Drying Room	500.00
c.	Trucking	1,000.00
d.	Rolling Equipment	3,700.00 (fork lift, dozer, etc.)
e.	Miscellaneous (testing and engineering)	5,000.00
		$ 16,600.00 (approx.)

The minimum cost of the Pilot Program will be $15,000, and the maximum cost will be $33,000; the difference being the cost of the screener or possible overruns in the estimated cost.

Again, let me thank you and Bill Miller and all of your people at the Falconer Plant for their patience and cooperation. Again, let me remind you that it will take DEREK a couple of weeks to supply the necessary screens. As soon as there is a definite answer, please contact me at once.

Sincerely,

Joseph N. Williams

JNW:dmr

SOLID WASTE DISPOSAL PLAN

2. Composition of Solid Waste

The fusion casting of Monofrax Refractories generates a considerable quantity of solid waste, predominately used mold sand and calcined alumina (used to insulate the hot castings). The waste materials, since 1970, have been stored on the side indicated on Carborundum drawing FP 4513 ZZ , located S. of New York Avenue and adjacent to the Clay Pond Wetlands. It has been anticipated that recovery of the major portion of these wastes is feasible and economically justified.

The annual accumulation of the solid waste is estimated at approximately 12,000 tons. This waste is of an inert nature, insoluble in water.

Estimated annual accumulation in order of decreasing importance:

75.0%	Used Mold Sand	9,000 Ton
16.7%	Waste Calcined Alumina	2,000 Ton
4.2%	Product Scrap	500 Ton
1.7%	Dust Collector Fines	200 Ton
2.4%	Misc.	300 Ton
100.0%	TOTAL	12,000 Ton

The physical-chemical properties of these materials are shown in appendix A.

SOLID WASTE STORAGE PLAN

3. Monitoring and Control

The storage area for the solid waste being generated at the Monofrax Plant is shown on Drwg. FP 4709ZZ. It presently occupies the areas designated as A & B, South of New York Avenue and West of the "Clay Pond Wetlands". This site has been used since 1970 when a process change (sand molding) was introduced. The intent was to isolate the silica sand until the possibility of recovery was examined. The cleanest mold sand is being stored in Area A. The total accumulation is today estimated at about 70,000 tons with the approximate composition as shown in section 2.

Since this storage and disposal site bounds on "Wetlands" area as well as a drainage and impounding system for process waste water, discharge monitoring permits have been issued:

SPDES Permit #N.Y. 007-8506
NYS Wetlands Permit #907-99-0096

Three monitoring points, shown on FP 4709ZZ are periodically sampled to guard against contamination from process waste water and/or leachate from solid waste storage pile. Typical results of this monitoring process are shown in Appendix B-1.

SOLID WASTE STORAGE PLAN

4. Material Recovery Process

It has been anticipated that a considerable quantity of the solid waste accumulation will be recoverable and reusable. The basis for the separation to be on particle size, thus:

+10 Mesh - Process Waste
-10 +60 Mesh - Sand
-60 Mesh - Predominately alumina

It has also been determined, on laboratory scale, that wet washing and separation will be necessary to return the mold sand to a resuable quality level. This then will be followed by drying and returning the recovered sand to a "Reclaimed" sand silo (presently being provided). From the silo, the reclaimed sand will be proportioned with new sand and delivered to the molding stations. The fine residue of the wet wash operation will contain predominately aluminum oxide with some silica contamination. When dried, this residue is potentially resuable for insulating the hot castings again.

Feasibility Study

A contract has now been issued to Newco Chemical Waste Systems, Niagara Falls, New York to set up and operate a pilot plant for a period of one month. The purpose of this pilot plant operation will be:

1. To provide approximately 50 tons of clean washed, dried mold sand for evaluation.

2. To provide approximately 5 tons of recovered dried aluminum oxide for evaluation.

3. To establish design criteria for a full scale waste recovery operation to be built at the Falconer, New York site during 1980.

The Newco Pilot Operation is scheduled to be run in August and September, 1979. Details of this operation are shown in Appendix C.

SOLID WASTE STORAGE PLAN

5. Environmental Protection Schedules

1. Stockpiling of Sand-Alumina Solid Waste.
This material continues to accumulate on an annual basis of approximately 12,000 tons. The area required (Area B on Dwg. FP 4709ZZ) must expand southward toward recirculating pond. An increase of approximately 15,000 ft.^{2}.

Form 95-19-2 for Fresh Water Wetlands is also included in this application to indicate additional expansion of the solid waste storage area.

2. Property acquisition in the Area D (Dwg. FP 4709ZZ) location is projected. This is in anticipation for landfill, grade, and cover in the C & D areas. These landfill areas are to receive the final tailings from the reclamation process. This will provide an additional 50,000 ft.^{2}.

3. Feasibility studies and pilot pland sand-alumina recovery to begin by August, 1979, under Newco Waste Systems operation. Design data, both process and environmental to be developed.

4. Full scale recovery plant for sand and aluminum oxide to be installed and operative by 1980.

5. Final environmental protection plans to be augmented with completion of sand-alumina recovery plant.

a) Hydrogeologic surveys
b) Subsurface monitoring wells
c) Final landfill disposal plans for tailing

6. No filling to be permitted East of forced sewer connection causeway (adjacent to Wetlands) existing fill to be covered and seeded along edge of causeway.

SOLID WASTE STORAGE PLAN

6. OPERATING PROCEDURE

The solid waste from the fusion casting process at the Monofrax Plant of the Carborundum Company is collected in tote bins of 60 cu. ft. capacity. Each bin holds approximately 2-3 tons of waste material, dependent on its composition. A normal operating day results in an accumulation of about 15 bins of waste. The bins are stored during the afternoon and night shifts and are transported to the disposal and storage area on the day shift where the bins are dumped. All bins are segregated according to the quality of the scrap materials contained. This segregation is primarily based on the point of collection of the material. The four basic categories collected are:

1. Loose mold sand and aluminum oxide mixture.
2. Lumpy mold sand and aluminum oxide with chunks of fused material.
3. Dust collector fines.
4. Miscellaneous floor sweepings, basically aluminum oxide and sand.

The loose sand, item 1 above, is considered the most recoverable material and this is held on Area A. Other materials having lesser recovery potential are stored in Area B. (DRWG FP 4709 22)

Organic waste, paper, wood, etc. is not placed in this facility. Such wastes are segregated at their source and are removed by an Industrial Waste Contractor.

7. DUST CONTROL AND FOUL WEATHER PROCEDURES

Typical properties and particle size of these materials is found in Appendix A-1, A-2, and A-3. Sand grains are relatively coarse but the aluminum oxide, used for annealing has 10-25% -325 mesh, a relatively dusty material. It has been found that this fine alumina, when mixed with the coarser sand, is not dusty in nature. The finer portions, as collected by dust collectors provides the major dust problem.

To combat this, the finer portions of the solid waste are piled along the Southern and Western boundaries of Area B and then covered with the coarser scrap material. This minimizes air-born particles and still preserves the recoverability of all fractions of the waste supply.

FOUL WEATHER OPERATIONS

Use of the Solid Waste Storage area is generally not affected by weather and deposition of the scrap materials continue daily.

Due to the permeable nature of the materials deposited in the area, accumulation of surface water and erosion is not a factor.

Water permeating the piles flows into the drainage channels and impounding lagoons. Outflow of these lagoons is monitored and reported monthly as described in Appendix B-1.

APPENDIX A

A-1 Composition of Used Mold Sand and Calcined Annealing Alumina

CHEMICAL	MOLD SAND	ANNEALING ALUMINA
Al_2O_3		98.0 Min.
SiO_2	99.5	0.05
Na_2O	* 0.5	0.75
PARTICLE SIZE		
US SCREEN % ON		
On 20	-	-
40	70	-
60	26	-
100	4	5 - 15
325	-	70 - 95
- 325	-	10 - 25

* Note: Na_2O included in mold sand is residue of sodium silicate binder.

A-2 Typical Analysis of Product Scrap

CHEMICAL COMPOSITION	AZS COMPOSITION	Hi Al_2O_3 COMPOSITION	CHROME COMPOSITION
Al_2O_3	50%	94%	60%
Fe_2O_3	TR.	TR.	5
ZrO_2	34	-	-
SiO_2	14	1	2
Cr_2O_3	-	-	27
Na_2O	2	4	TR
MgO	-	TR	6
Estimated % of Total Product Scrap	55%	38%	8%

A-3 Composition of Dust Collector Fines

CHEMICAL ANALYSIS	A&B FURNACE	C FURNACE	D&E FURNACE
Al_2O_3	83.5	92.4	73.2
ZrO_2	-	-	5.5
SiO_2	2.5	0.6	9.0
Cr_2O_3	12.5	-	-
Na_2O	1.5	7.0	2.5
PARTICLE SIZE US MESH			
On 100	14.2	17.3	12.5
200	74.4	76.2	67.4
325	3.5	4.3	2.5
- 325	7.9	2.2	17.5

APPENDIX B

1. Typical water discharge monitoring values.
Discharge Point 001. 1978-79

		MIN.	AVG.	MAX.
Bio Oxygen Demand -	MG/L	2.5	4.2	5.8
Flow Rate	G/DY	86100	89500	92000
PH	SU	6.8	7.6	7.9
Oil and Grease	MG/L	0.0	4.3	21.3
Chrome, Hexavalent	MG/L	0.000	0.026	0.200
Suspended Solids	MG/L	2.4	6.8	13.2
Chrome - Total	MG/L	0.000	0.053	0.300

Newco
Chemical Waste
Systems Inc.

4626 Royal Avenue
Niagara Falls, N.Y. 14303
716-285-6944

June 22, 1979

William A. Miller
Manager, Engineer
The Carborundum Company
Refractories Division
Monofrax Plant
Falconer, New York 14733

RE: SAND/ALUMINA RECLAMATION

Dear Bill:

As per your request, I am enclosing information on the pilot project for your files.

Yours truly,

NEWCO CHEMICAL WASTE SYSTEMS, INC.

JRolfe

John Rolfe,
Program Manager

JR:erm
Enclosures

DESCRIPTION OF OPERATION

Material is brought in by truck in Carborundum boxes.

Boxes unloaded by fork lift trucks into Building #1 - material stays in boxes until needed.

Boxes dumped on floor shoveled onto virbrating screen. Water nozzles wash material through screen.

Large lumps, trash, etc. removed by operator for the pilot test.

Oversize from screen (sand) is shoveled into trays and spread evenly.

Fork lift transports trays to drying room.

Underflow through screen flows into a settling box where alumina settles out.

Occasionally alumina is shoveled out onto trays where it is dryed out in same manner as sand.

Overflow from settling tank flows to sewer. There is no problem violating our sewer permit. In the full scale system, water would be recirculated.

The dried material both sand and alumina is dumped (separately) from the trays into the Carborundum boxes, covered and shipped back to Carbo.

W YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK 12233

APPLICATION FOR PERMIT

APPLICATION NO.

☐ Article 15 (STREAM PROTECTION) Environmental Conservation Law
- ☐ For the construction, reconstruction or repair of a DAM or other impoundment structure.
- ☐ For the construction, reconstruction or repair of any permanent DOCK, pier or wharf; and any dock, or wharf, built on open work supports, which has a top surface area of more than 200 square feet.
- ☐ For the disturbance of a STREAM BED or excavation in or fill of navigable waters.

☒ Article 24 (FRESHWATER WETLANDS) Environmental Conservation Law

☐ Article 25 (TIDAL WETLANDS) Environmental Conservation Law

ad Instructions on reverse side of last sheet before completing this application. PLEASE TYPE OR PRINT CLEARLY IN INK.

1. NAME AND ADDRESS OF APPLICANT
First: THE CARBORUNDUM CO. M.I. Last: MONOFRAX PLANT
TELEPHONE NO. 716-665-2120
Street Address: 501 NEW YORK AVE.
Post Office: FALCONER, N.Y. State: NEW YORK Zip Code: 14733

2. NAME AND ADDRESS OF OWNER (If different from Applicant)
First: THE CARBORUNDUM CO. M.I. Last:
Street Address: CARBORUNDUM CENTER, P.O. BOX 156
Post Office: NIAGARA FALLS, N.Y. State: NEW YORK Zip Code: 14302

3. AGENCY SUBMITTING APPLICATION

PROJECT DATA

4. LOCATION OF WETLAND OR ADJACENT AREA, STREAM, OR BODY OF WATER
Body of Water: CLAY POND WETLAND Town: POLAND County: CHAUTAUQUA
ocate by giving distance and direction from a commonly accepted and identifiable landmark or body of water or U.S.G.S. coordinates.

5. SIZE OF WORK SECTION: APPROX. 1 ACRE

6. SPECIFIC LOCATION: S. OF NEW YORK AV. AND W. OF WETLANDS. 79°10'50"x42°16'55"

7. WILL PROJECT UTILIZE STATE OWNED LANDS? ☐ Yes ☒ No

TYPE AND EXTENT OF WORK (Feet of new channel; yards of material to be removed, draining, dredging, filling, etc.)
EXTEND SAND FILL & STORAGE AREA (AREA S DRWG. FF 470922 ATTACHED) AREA TO BE EXTENDED SOUTH APPROX. 30 FT., AN INCREASE IN AREA OF APPROX. 15000 FT^2

9. OES PROJECT COMPLY WITH Use Guidelines (If any): YES

8. Development Restrictions (If any):

PURPOSE (Hardship): SOLID WASTE, SAND & CALCINED ALUMINA WILL CONTINUE TO ACCUMULATE AT RATE OF 12000 TON ANNUALLY UNTILL RECLAMATION FACILITIES COMPLETE. THIS WILL NECESSITATE ADDITIONAL SPACE REQUIRED. MOVE ALSO FACILITATES BETTER CONTRO OVER PROCESS WATER TREATMENT PONDS AND DRAINAGE CHANNELS.

11. IF A DAM OR OBSTRUCTION, INDICATE Height _____ Size of Pond _____

12. PROPOSED STARTING DATE

13. APPROXIMATE COMPLETION DAT

14. NAME AND ADDRESS OF TWO OFFICIAL NEWSPAPERS IN LOCALITY WHERE PROPOSED ACTIVITY IS LOCATED
JAMESTOWN POST JOURNAL, 15 W. 2nd. ST., JAMESTOWN, N.Y. 14701 .
WARREN TIMES OBSERVER, 205 PENNSYLVANIA AVE., WARREN, PA.

15. CERTIFICATION
I hereby affirm under penalty of perjury that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. As a condition to the issuance of a permit, the applicant accepts full legal responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.

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: 907001

NAME OF SITE : Carborundum-Falconer Monofrax
STREET ADDRESS: 501 New York Avenue
TOWN/CITY: COUNTY: ZIP:
Falconer Chautauqua

SITE TYPE: Open Dump-X Structure- Lagoon- Landfill- Treatment Pond-
ESTIMATED SIZE: 9 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Carborundum-Monofrax
CURRENT OWNER ADDRESS.: 501 New York Avenue, Falconer, NY
OWNER(S) DURING USE...: Carborundum Monofrax
OPERATOR DURING USE...: Carborundum Monofrax,DivSOHIO CarboNFNY
OPERATOR ADDRESS.....: 501 NY Ave., Falconer, NY
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From To

SITE DESCRIPTION:
Site in wetlands (or immediately adjacent thereto) used for silica sand and refractory material disposal. This site is being properly closed and a new landfill is being constructed to meet the new Part 360 requirements.

HAZARDOUS WASTE DISPOSED: Confirmed-X Suspected -

TYPE	QUANTITY (units)
Lube Oil Boiler chemicals	
Mold Sand, Calcined Alumina	

ANALYTICAL RESULTS

THE CARBORUNDUM COMPANY

Report Date: 8/13/80
Date Received: 7/10/80

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION				
		B-9-W DEEP	B-9-W SHALLOW	B-10-W DEEP	B-10-W SHALLOW	B-11-W SHALLOW
Polychlorinated Biphenyls	µg/l as Aroclor 1016	<0.5	<5	<1	<1	<1
	µg/l as Aroclor 1221	<0.5	<5	≤9	≤20	≤8
	µg/l as Aroclor 1232	<0.5	<5	<1	<1	<1
	µg/l as Aroclor 1242	≤1	≤20	<1	<1	<1
	µg/l as Aroclor 1248	3	70	<1	<1	<1
	µg/l as Aroclor 1254	<0.5	<5	<1	<1	<1
	µg/l as Aroclor 1260	<0.5	<5	<1	<1	<1
	µg/l as Aroclor 1262	<0.5	<5	<1	<1	<1
	µg/l as Aroclor 1268	<0.5	<5	<1	<1	<1

COMMENTS: All values reported as "less than" (<) indicate the working detection limits for the particular PCB mixture. Values reported as "less than or equal to" (≤) indicate that the particular mixture may be present at levels relative to the detection limits reported. Differences in detection limits are a function of variance in response factors for the individual PCB mixtures, volume of sample extracted, and/or the presence of chromatographable organic constituents not of interest to these analyses.

FOR RECRA RESEARCH, INC. Larry E Rougeau

DATE 8/13/80

RECRA RESEARCH, INC.
I.D. #692

ANALYTICAL RESULTS

THE CARBORUNDUM COMPANY

Report Date: 8/13/80
Date Received: 7/10/80

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION				
		B-9-W DEEP	B-9-W SHALLOW	B-10-W DEEP	B-10-W SHALLOW	B-11-W SHALLO
pH	Standard Units	8.56	8.28	7.66	7.51	7.86
Conductivity	µmhos/cm	3,840	3,010	755	660	740
Biochemical Oxygen Demand (5 day)	mg/l	63	8.0	47	4.8	17
Chloride	mg/l	13	7.5	8.2	2.1	24
Sulfate	mg/l	220	690	130	51	61
Total Residue (103°C)	mg/l	71,000	5,100	12,000	520	9,900
Total Organic Carbon	mg/l	490	70	61	14	63
Total Recoverable Phenolics	mg/l	<0.01	<0.01	0.01	0.02	0.04
Chemical Oxygen Demand	mg/l	500	170	250	110	170
Total Aluminum	mg/l	170	1,400	5.4	49	210
Total Cadmium	mg/l	<0.003	<0.003	<0.003	<0.003	<0.003
Total Chromium	mg/l	0.282	3.1	0.010	0.064	0.162
Hexavalent Chromium	mg/l	<0.03	<0.03	<0.01	<0.03	<0.03
Total Copper	mg/l	0.160	1.6	0.034	0.070	0.330
Total Lead	mg/l	0.88	0.03	<0.02	0.02	0.21
Total Manganese	mg/l	2.0	30	0.50	0.91	2.5
Total Mercury	µg/l	<0.8	<0.8	<0.8	<0.8	<0.8
Total Zinc	mg/l	0.383	51	0.113	0.218	0.670
Total Zirconium	mg/l	<10	<10	<10	<10	<10

COMMENTS: Comments pertain to data on one or all pages of this report. All analyses were performed according to U.S. Environmental Protection Agency methodologies. Values reported as "less than" (<) indicate the working detection limit for the particular sample or parameter.

FOR RECRA RESEARCH, INC. J. Phillips

DATE 8/14/80

RECRA RESEARCH, INC.
I.D.#692

ANALYTICAL RESULTS

THE CARBORUNDUM COMPANY

Report Date: 8/9/80
Date Received: 8/13/80

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION
		B-11W - DEEP
Polychlorinated Biphenyls	µg/l as Aroclor 1016	<0.1
	µg/l as Aroclor 1221	<0.1
	µg/l as Aroclor 1232	<0.1
	µg/l as Aroclor 1242	<0.1
	µg/l as Aroclor 1248	<0.1
	µg/l as Aroclor 1254	<0.1
	µg/l as Aroclor 1260	<0.1
	µg/l as Aroclor 1262	<0.1
	µg/l as Aroclor 1268	<0.1

COMMENTS: All values reported as "less than" (<) indicate the working detection limits for the particular PCB mixture.

FOR RECRA RESEARCH, INC. R. V. Finn

DATE 9/8/80

ANALYTICAL RESULTS

THE CARBORUNDUM COMPANY

Report Date: 9/8/80
Date Received: 8/13/80

PARAMETER	UNITS OF MEASURE	SAMPLE IDENTIFICATION B-11W - DEEP
pH	Standard Units	8.16
Conductivity	µmhos/cm	298
Biochemical Oxygen Demand (5 day)	mg/l	64
Chloride	mg/l	22
Sulfate	mg/l	25
Total Residue (103°C)	mg/l	1,100
Total Organic Carbon	mg/l	84
Total Recoverable Phenolics	mg/l	0.02
Chemical Oxygen Demand	mg/l	440
Total Aluminum	mg/l	760
Total Cadmium	mg/l	<0.003
Total Chromium	mg/l	0.982
Hexavalent Chromium	mg/l	-
Total Copper	mg/l	0.831
Total Lead	mg/l	0.58
Total Manganese	mg/l	170
Total Mercury	µg/l	0.6
Total Zinc	mg/l	2.7
Total Zirconium	mg/l	<10

COMMENTS: Comments pertain to data on both pages of this report. Sample was received at Recra on 8/13/80. Analyses were performed according to U.S. Environmental Protection Agency methodologies. Values reported as "less than" (<) indicate the working detection limit for the particular sample or parameter. Hexavalent chromium analysis could not be performed due to interfering substances present in the sample.

FOR RECRA RESEARCH, INC. R. V. Finn

DATE 9/8/80

ANALYTICAL REPORT

TRAUTMAN ASSOCIATES
SOLID WASTE ANALYSIS

Report Date: 5/13/80
Sample Date: 4/15/80

SAMPLE #4

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Dry Weight	%	85	-	-
Total Recoverable Phenolics	µg/g (dry)	1.5	mg/l	0.04
Total Organic Carbon	-	-	mg/l	14
pH	-	-	Standard Units	8.10
Specific Conductance	-	-	µmhos/cm	690
Chloride	-	-	mg/l	13
Sulfate	-	-	mg/l	180
Aluminum	µg/g (dry)	4,100	mg/l	0.6
Cadmium	µg/g (dry)	<0.2	mg/l	<0.003
Chromium	µg/g (dry)	34	mg/l	0.006
Copper	µg/g (dry)	5.9	mg/l	0.014
Lead	µg/g (dry)	5.9	mg/l	<0.02
Manganese	µg/g (dry)	59	mg/l	0.03
Mercury	µg/g (dry)	<0.08	µg/l	<2
Zinc	µg/g (dry)	25	mg/l	0.013
Zirconium	µg/g (dry)	-	mg/l	<10

COMMENTS: Sample was received at Recra on 4/15/80. The solid sample identified as Sample #4 was analyzed directly for the above parameters and the results are presented in the left data column. This same sample was subjected to the NYS-DEC leaching potential test and the resulting leachate was analyzed for the requested parameters. Results of these analyses are presented in the right data column.
Total metals were determined on the solid sample while soluble metals analyses were performed on the leachate liquid. All analyses of the solid sample are expressed on a dry weight basis. Values reported as "less than" (<) indicate the working detection limit for the particular sample or parameter. Analyses were performed according to U. S. Environmental Protection Agency methodologies. Due to the nature of the solid sample, the detection limit for Zirconium was unrealistically high and was not reported.

FOR RECRA RESEARCH, INC. R. V. Finn

DATE 5/14/80

RECEIVED
William R. Trautman Associates
Professional Engineers
MAY 16 1980

RECRA RESEARCH, INC.

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
SLUDGE - LEACHATE ANALYSES

Report Date: 7/23/80
Date Received: 6/13/80

GRAPHITE DUST

PARAMETER	SAMPLE IDENTIFICATION: SOLID WASTE MATERIAL UNITS OF MEASURE	SOLID WASTE MATERIAL VALUE	LEACHATE UNITS OF MEASURE	LEACHATE VALUE
pH	-	-	Standard Units	6.94
Specific Conductance	-	-	µmhos/cm	499
Chloride	-	-	mg/l	10.5
Sulfate	-	-	mg/l	54
Total Organic Carbon	-	-	mg/l	17
Total Recoverable Phenolics	µg/g (dry)	5.8	mg/l	<0.01
Dry Weight	%	99	-	-
Aluminum	µg/g (dry)	1,400	mg/l	2.8
Cadmium	µg/g (dry)	<0.15	mg/l	<0.003
Chromium	µg/g (dry)	130	mg/l	0.040
Copper	µg/g (dry)	2.4	mg/l	<0.004
Lead	µg/g (dry)	2.0	mg/l	<0.03
Manganese	µg/g (dry)	5.5	mg/l	<0.02
Mercury	µg/g (dry)	<0.06	µg/l	<0.6
Zinc	µg/g (dry)	12	mg/l	0.151
Zirconium	µg/g (dry)	500	mg/l	<10

COMMENTS: Comments pertain to data on one or all pages of this report. Sample was received at Recra on 6/13/80. The solid sample identified as Graphite Dust was analyzed directly for the above parameters and the results are presented in the left data column. This same sample was subjected to the NYS-DEC leaching potential test and the resulting leachate was analyzed for the requested parameters. Results of these analyses are presented in the right data column. Total metals were determined on the solid sample while soluble metals analyses were performed on the leachate liquid.

FOR RECRA RESEARCH, INC. Karen D. Marchese

DATE 7/23/80

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
FALCONER REFRACTORY DIVISION

Report Date: 1/23/80
Sample Received: 11/21/79

USED MOLD SAND

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Total Solids (103°C)	%	100	-	-
pH	-	-	Standard Units	8.38
Conductance	-	-	µmhos/cm	862
Phenols	µg/g (dry)	0.600	mg/l	0.035
Chloride	-	-	mg/l	3.9
Sulfate	-	-	mg/l	9.2
Total Organic Carbon	-	-	mg/l	20.0
Aluminum	µg/g (dry)	280	mg/l	0.3
Cadmium	µg/g (dry)	0.307	mg/l	<0.005
Chromium	µg/g (dry)	<0.1	mg/l	<0.004
Copper	µg/g (dry)	<0.2	mg/l	<0.003
Lead	µg/g (dry)	<1	mg/l	<0.03
Manganese	µg/g (dry)	1.0	mg/l	0.02
Mercury	µg/g (dry)	<0.05	µg/l	<2
Zinc	µg/g (dry)	1.0	mg/l	<0.003
Zirconium	µg/g (dry)	<8	mg/l	<2

COMMENTS: Values reported as "less than" indicate the working detection limits for the particular sample/parameter. Differences in detectability for a given parameter are generally a function of volume and/or weight of sample available for analysis.

FOR RECRA RESEARCH, INC. Ralph K. Wyatt

DATE 1/23/80

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
FALCONER REFRACTORY DIVISION

Report Date: 1/23/80
Sample Received: 11/21/79

USED ANNEALING ALUMINA

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Total Solids (103°C)	%	99.2	-	-
pH	-	-	Standard Units	7.67
Conductance	-	-	µmhos/cm	618
Phenols	µg/g (dry)	0.988	mg/l	0.030
Chloride	-	-	mg/l	6.0
Sulfate	-	-	mg/l	28.0
Total Organic Carbon	-	-	mg/l	19.5
Aluminum	µg/g (dry)	2,200	mg/l	1.3
Cadmium	µg/g (dry)	0.171	mg/l	<0.005
Chromium	µg/g (dry)	3.26	mg/l	<0.004
Copper	µg/g (dry)	2.57	mg/l	0.006
Lead	µg/g (dry)	<1	mg/l	<0.03
Manganese	µg/g (dry)	10.3	mg/l	0.08
Mercury	µg/g (dry)	<0.05	µg/l	<2
Zinc	µg/g (dry)	4.84	µg/l	0.037
Zirconium	µg/g (dry)	<8	µg/l	<2

COMMENTS: (continued from page 3 of 5). Due to pH problems and interferences due to color of leachate, the chloride analysis could not be completed. Phenol determination of C FLE collection is of questionable reliability due to violent, uneven boiling during distillation.

FOR RECRA RESEARCH, INC. Robert K Wyatt

DATE 1/23/80

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
FALCONER REFRACTORY DIVISION

Report Date: 1/23/80
Sample Received: 11/21/79

D+E FLE COLLECTOR

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Total Solids (103°C)	%	98.8	-	-
pH	-	-	Standard Units	8.98
Conductance	-	-	µmhos/cm	10,800
Phenols	µg/g (dry)	1.18	mg/l	0.172
Chloride	-	-	mg/l	290
Sulfate	-	-	mg/l	1,080
Total Organic Carbon	-	-	mg/l	165
Aluminum	µg/g (dry)	17,000	mg/l	9.5
Cadmium	µg/g (dry)	0.385	mg/l	<0.005
Chromium	µg/g (dry)	15.5	mg/l	2.72
Copper	µg/g (dry)	10.6	mg/l	0.250
Lead	µg/g (dry)	190	mg/l	0.82
Manganese	µg/g (dry)	14.0	mg/l	0.07
Mercury	µg/g (dry)	<0.05	µg/l	<2
Zinc	µg/g (dry)	485	mg/l	5.30
Zirconium	µg/g (dry)	25	mg/l	<2

COMMENTS: (continued from page 2 of 5). Soluble metals concentrations were determined for the leachates of the solid waste materials. All requested/required parameters have been completed and are reported except for the leachate chloride content for the A+B FLE collection.

FOR RECRA RESEARCH, INC. Robert K. Wyett

DATE 1/23/80

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
FALCONER REFRACTORY DIVISION

Report Date: 1/23/80
Sample Received: 11/21/79

C FLE COLLECTOR

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Total Solids (103°C)	%	96.0	-	-
pH	-	-	Standard Units	10.45
Conductance	-	-	µmhos/cm	40,800
Phenols	µg/g (dry)	<0.030	mg/l	0.030
Chloride	-	-	mg/l	1,620
Sulfate	-	-	mg/l	580
Total Organic Carbon	-	-	mg/l	440
Aluminum	µg/g (dry)	17,000	mg/l	<0.1
Cadmium	µg/g (dry)	0.399	mg/l	0.006
Chromium	µg/g (dry)	11.8	mg/l	2.22
Copper	µg/g (dry)	3.99	mg/l	<0.003
Lead	µg/g (dry)	55	mg/l	0.43
Manganese	µg/g (dry)	5.2	mg/l	<0.02
Mercury	µg/g (dry)	<0.05	µg/l	<2
Zinc	µg/g (dry)	158	mg/l	<0.003
Zirconium	µg/g (dry)	<10	mg/l	<2

COMMENTS: (continued from page 1 of 5). All analyses were performed according to U. S. Environmental Protection Agency methodologies. Leachate samples are the result of the standard New York State Leaching Potential Test. Total metals concentrations were determined for the solid waste materials.

FOR RECRA RESEARCH, INC. Robt K. Wyett

DATE 1/23/80

ANALYTICAL REPORT

THE CARBORUNDUM COMPANY
FALCONER REFRACTORY DIVISION

Report Date: 1/23/80
Sample Received: 11/21/79

A+B FCE COLLECTOR

PARAMETER	SAMPLE IDENTIFICATION			
	SOLID WASTE MATERIAL		LEACHATE	
	UNITS OF MEASURE	VALUE	UNITS OF MEASURE	VALUE
Total Solids (103°C)	%	98.3	-	-
pH	-	-	Standard Units	3.04
Conductance	-	-	µmhos/cm	14,900
Phenols	µg/g (dry)	0.049	mg/l	0.004
Chloride	-	-	mg/l	-
Sulfate	-	-	mg/l	7,960
Total Organic Carbon	-	-	mg/l	102
Aluminum	µg/g (dry)	15,000	mg/l	8.9
Cadmium	µg/g (dry)	0.774	mg/l	0.133
Chromium	µg/g (dry)	11,000	mg/l	1,620
Copper	µg/g (dry)	11.8	mg/l	2.44
Lead	µg/g (dry)	63	mg/l	0.17
Manganese	µg/g (dry)	30	mg/l	3.6
Mercury	µg/g (dry)	<0.05	µg/l	<2
Zinc	µg/g (dry)	600	mg/l	115
Zirconium	µg/g (dry)	32	mg/l	<2

COMMENTS: Samples were collected, labelled and shipped by Carborundum personnel and received at Recra on 11/21/79. One of the two "used mold sand" samples was received broken. Analyses of the five samples was begun on 12/31/79 after confirmation of required parameter list from the New York State Department of Environmental Conservation.

FOR RECRA RESEARCH, INC. Robert K Wyeth

DATE 1/23/80