602SERBSF10,635

602SERBSF10,635

Site Name (Subject):	UNION CARBIDE BATTERY
Site ID (Document ID):	NCD980844336
Document Name (DocType):	Correspondence (C)
Report Segment:	
Description:	General Correspondence, 1985 - 1995
Date of Document:	6/5/1995
Date Received:	6/8/1995
Box: *Enter SF and # with no spaces*	SF10,635
Access Level:	PUBLIC
Division:	WASTE MANAGEMENT
Section:	SUPERFUND
Program (Document Group):	SERB (SERB)
Document Category:	FACILITY

Print Report for Record | **Go to New Blank Record** | **Go to New Record - (default to last record values)** | **Delete Record**

UNION CARBIDE

NCD 980 844 336

Folders

1. General Correspondence file, 1985—1995

Bound Reports

1. Photographs
2. *Carolina Cargo: International Communication from the NC State Ports Authority*: October 1984
3. *Carolina Cargo:* December 1984
4. Site Investigation Report: 1985
5. Site Inspection: June 1995

U.S. Environmental Protection Agency

Superfund Information Systems

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CERCLIS Database

Site Documents

Data Element Dictionary (DED)

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CERCLIS Database

UNION CARBIDE BATTERY

Site Information

Site Info | Aliases | Operable Units | Contacts
Actions | Contaminants | Site-Specific Documents

This site has been archived from the CERCLIS inventory.

Site Name: UNION CARBIDE BATTERY
Street: HOVIS RD
City / State / ZIP: CHARLOTTE, NC 28208

NPL Status: Not on the NPL
Non-NPL Status: NFRAP

EPA ID: NCD980844336
EPA Region: 04
County: MECKLENBURG

Federal Facility Flag: Not a Federal Facility

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URL: http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm
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U.S. Environmental Protection Agency

Superfund Information Systems

CERCLIS Database

UNION CARBIDE BATTERY

Aliases

Site Info | Aliases | Operable Units | Contacts
Actions | Contaminants | Site-Specific Documents

Alias Name / Street / City / State / ZIP

STATES PORT AUTHORITY
MECKLENBURG, NC

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U.S. Environmental Protection Agency

Superfund Information Systems

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CERCLIS Database

Site Documents

Data Element Dictionary (DED)

Order Superfund Products

CERCLIS Database

UNION CARBIDE BATTERY

Contacts

Site Info | Aliases | Operable Units | Contacts
Actions | Contaminants | Site-Specific Documents

Title	Name	Phone Number
Remedial Project Manager (RPM)	JON BORNHOLM	(404) 562-8820
Remedial Project Manager (RPM)	Luis Flores	(404) 562-8807
Remedial Project Manager (RPM)	KEN LUCAS	(404) 562-8953
Remedial Project Manager (RPM)	KEN MALLARY	(404) 562-8802
Remedial Project Manager (RPM)	MICHAEL TOWNSEND	(404) 562-8813
Remedial Project Manager (RPM)	SAMANTHA URQUHART F	(404) 562-8760
Remedial Project Manager (RPM)	Phil Vorsatz	(404) 562-8789
Site Assessment Manager (SAM)	Jennifer Wendel	(404) 562-8799

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U.S. Environmental Protection Agency

Superfund Information Systems

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CERCLIS Database

Site Documents

Data Element Dictionary (DED)

Order Superfund Products

CERCLIS Database

UNION CARBIDE BATTERY

Actions

Site Info | Aliases | Operable Units | Contacts
Actions | Contaminants | Site-Specific Documents

OU	Action Name	Qualifier	Lead	Actual Start	Actual Completion
00	DISCOVERY		F		01/01/1985
00	PRELIMINARY ASSESSMENT	L	S		03/27/1985
00	SITE INSPECTION	N	S		03/25/1986
00	ARCHIVE SITE		EP		01/23/1996

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URL: http://cfpub.epa.gov/supercpad/cursites/cactinfo.cfm
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Photo Courtesy KPC Photography

Charlotte . . .
Your Ship Has Come In!

That's the whole idea of this unique shipping concept called the Charlotte Intermodal Terminal . . . an extension of the North Carolina State Port at Wilmington. Conceived and operated by the North Carolina State Ports Authority, the new terminal is now offering exporters and importers from all across the country tremendous savings in transportation costs and time.

By shipping your containers directly to the Charlotte terminal, you could save over half your transportation costs depending on your point of origin.

Your cargo has essentially arrived at the Port of Wilmington once it arrives at the Charlotte Intermodal Terminal.

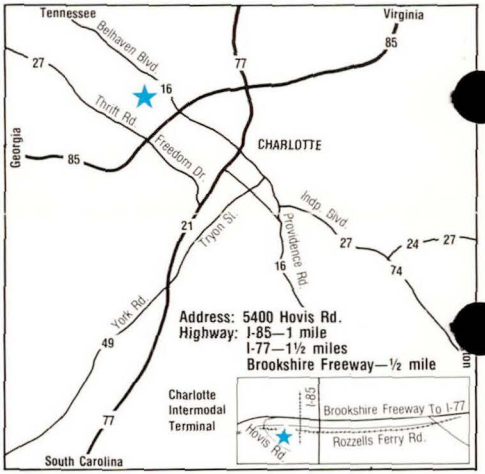
From there, it is loaded onboard flatcars of the Seaboard System Railroad and starts its journey to the coast. In less than six hours, your cargo is dockside, ready for sailing out of Wilmington.

This new terminal is located on a 23-acre site in Charlotte, N.C., the intermodal capital of the Southeast. With interstate highway connectors from every direction, the terminal is easily accessible from any point in the United States.

Modern, efficient switching engines and container stacking equipment, as well as trained personnel, are all part of this innovative transportation operation at both Charlotte and Wilmington.

The North Carolina State Ports Authority has truly brought the Atlantic Ocean two hundred miles inland . . . and, you, as a shipper, can benefit from the new geographical arrangement.

Call the Charlotte Intermodal Terminal today at (704) 398-2076 (or one of our other trade offices nearest you) for the complete details.



Your Ship Has Arrived . . . In Charlotte!!!

Container stacker places container onboard flatcar at Port of Wilmington.

Trade Offices
N.C. State Ports Authority

Wilmington
P.O. Box 9002
2202 Burnett Blvd., 28406
Telephone (919) 763-1621
TWX 510-937-0351
Staff Director: James E. Brown

Morehead City
P.O. Drawer 829
113 Arendell Street, 28557
Telephone (919) 726-3158
TWX 510-924-2983
Contact: Robert D. McMahan

Raleigh
430 N. Salisbury Street, 27611
Telephone (919) 733-6955, 733-6956
Deputy: George W. Young

Charlotte
P.O. Box 16100
5400 Hovis Road, 28216
Telephone (704) 398-2076
TWX 810-621-0386
Trade Representative: Robert G. Dennerline

Greensboro
612 Pasteur Drive, Suite 107, 27403
Telephone (919) 292-3760
Trade Representative: Robert R. Jordan

New York
17 Battery Place, Room 2239, 10004
Telephone (212) 269-1843
Regional Manager: Curtiss Seamans

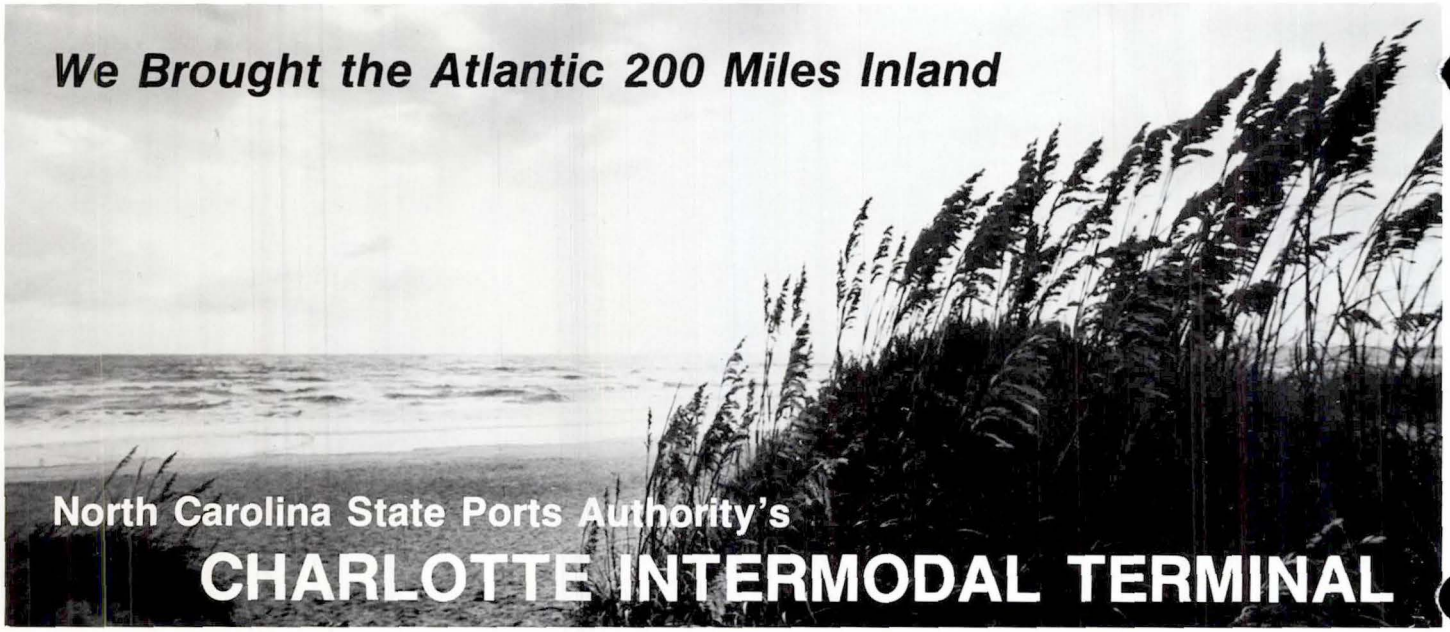
Tokyo
Room 407, Hibiya Park Bldg.
1-8 Yurakucho 1-chome
Chiyoda-ku
Tokyo, Japan 100
Telephone 03-214-0022
Telex: J-32832
Answer Back: NCPorts
Trade Representative: Ichiro Iwao

Foreign Trade Zones
FTZ #66—Wilmington, N.C.
FTZ #67—Morehead City, N.C.
P.O. Box 9002
Wilmington, N.C. 28402
Telephone (919) 763-1621
Toll Free (800) 334-0682 Outside N.C.
Coordinator: Jerry A. Ganey

Charlotte Intermodal Terminal
P.O. Box 16100
5400 Hovis Road, 28216
Telephone (704) 398-2076
TWX 810-621-0386
Manager: B. Elwood Thomas

OUR PEOPLE ARE PORT AUTHORITIES.

NORTH CAROLINA PORTS



DEHNR
Division of Solid Waste Management
☐ Superfund Section
☐ Hazardous Waste Section
☐ Solid Waste Section

Organics Lab: ____
Inorganics Lab: ✓

RECEIVED
JUN 08 1995
SUPERFUND SECTION

CHAIN OF CUSTODY RECORD

Project Name: Union Carbide Corp
Site ID # (NCD#) 980-844-336
Location: 5400 Hovis Road
Address: Charlotte NC

Sampled by: Keith Snowly
Sampler ID
Telephone: (919) 733-2801
Date Sampled: 3-23-95
Time Sampled: 1405 - 1515

Sample Types: Soil ✓ Water ✓ Waste ____ Other ____

Remarks:

Field Sample Numbers: 017461, 017462, 017463, 017464, 017465, 017466

Relinquished by: [signature] (Signature) Date: 3-24-95 Time: 1250

Received by: [signature] (Signature) Date: 24 Mar 95 Time: 12:50

Relinquished by: ____ (Signature) Date: ____ Time: ____

Received by: ____ (Signature) Date: ____ Time: ____

Relinquished by: ____ (Signature) Date: ____ Time: ____

Received by: ____ (Signature) Date: ____ Time: ____

Results Reported: [signature] (Signature) Date: 5 June 95 Time: ____

\\COCR.FRM)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD - 980-844-336 Field Sample Number 017461

Name of Site Union Carbide Corp Site Location Harris Road, Charlotte NC

Collected By RKS - GN ID# _____ Date Collected 3-23-95 Time 1405

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	✓ Solid (5)	Background soil
____ Surface water (2)	____ Liquid (6)	sample near entrance
✓ Soil (3)	____ Sludge (7)	to plant
____ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.43
✓ Cadmium	<0.05
✓ Chromium	<0.05
✓ Lead	<0.10
✓ Mercury	<0.01
✓ Selenium	<0.005
✓ Silver	<0.05
✓ Manganese	0.09
✓ Zinc	0.46

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results (mg/kg)
✓ Arsenic	<3.9
✓ Barium	53
✓ Cadmium	<9.8
____ Chloride	
✓ Chromium	16
____ Copper	
____ Fluoride	
____ Iron	
✓ Lead	90
✓ Manganese	<200
✓ Mercury	0.45
____ Nitrate	
✓ Selenium	<3.9
✓ Silver	<9.8
____ Sulfates	
✓ Zinc	51
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received _____ Reported by _____

Date Extracted _____ Date Reported _____

Date Analyzed _____ Lab Number _____

003861 MAR 24 95

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 017462

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By RKS - GM ID# _____ Date Collected 3-23-95 Time 1420

Agency: ____ Hazardous Waste ____ Solid Waste ____ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	✓ Solid (5)	Soil sample collected
___ Surface water (2)	___ Liquid (6)	in battery disposal
✓ Soil (3)	___ Sludge (7)	area
___ Other (4)	___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.02
✓ Barium	0.25
✓ Cadmium	0.15
✓ Chromium	<0.05
✓ Lead	<0.10
✓ Mercury	<0.01
✓ Selenium	<0.005
✓ Silver	<0.05
✓ Manganese	1.39
✓ Zinc	99.62

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results (mg/kg)
✓ Arsenic	78
✓ Barium	140
✓ Cadmium	16
Chloride	
✓ Chromium	16
Copper	
Fluoride	
Iron	
✓ Lead	600
✓ Manganese	3,100
✓ Mercury	47
Nitrate	
✓ Selenium	<3.9
✓ Silver	12
Sulfates	
✓ Zinc	11,000
pH	
Conductivity	
TDS	
TOC	

Organic Compounds	Results(mg/l)
benzene	
carbon tetrachloride	
chlordane	
chlorobenzene	
chloroform	
o-cresol	
m-cresol	
p-cresol	
cresol	
1,4-dichlorobenzene	
1,2-dichloroethane	
1,1-dichloroethylene	
2,4-dinitrotoluene	
heptachlor	
hexachlorobenzene	
hexachlorobutadiene	
hexachloroethane	
methyl ethyl ketone	
nitrobenzene	
pentachlorophenol	
pyridine	
tetrachloroethylene	
trichloroethylene	
2,4,5-trichlorophenol	
2,4,6-trichlorophenol	
vinyl chloride	
endrin	
lindane	
methoxychlor	
toxaphene	
2,4-D	
2,4,5-TP (Silvex)	

Date Received _____ Reported by _____

Date Extracted _____ Date Reported _____

003862 MAR 24 95

Date Analyzed _____ Lab Number _____

PD-991

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 017464

Name of Site Union Carbide Corp. Site Location Hovis Road, Charlotte NC

Collected By RKS - GN ID# _____ Date Collected 3-23-95 Time 1450

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	Downstream sediment
____ Surface water (2)	____ Liquid (6)	sample collected upgradient
____ Soil (3)	____ Sludge (7)	of outfall of sewer-
✓ Other (4) sediment	____ Other (8)	Near stained soil in stream bank

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.02
✓ Barium	0.71
✓ Cadmium	<0.05
✓ Chromium	<0.05
✓ Lead	<0.10
✓ Mercury	<0.01
✓ Selenium	<0.005
✓ Silver	<0.05
✓ Manganese	10.18
✓ Zinc	5.26

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results (mg/kg)
✓ Arsenic	<3.9
✓ Barium	39
✓ Cadmium	<9.8
____ Chloride	
✓ Chromium	25
____ Copper	
____ Fluoride	
____ Iron	
✓ Lead	<20
✓ Manganese	1,100
✓ Mercury	≤ 0.13
____ Nitrate	
✓ Selenium	<3.9
✓ Silver	<9.8
____ Sulfates	
✓ Zinc	500
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received _____ Reported by _____

Date Extracted _____ Date Reported _____

003863 MAR 24 95

Date Analyzed _____ Lab Number _____

CPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD-980-814-336 Field Sample Number 017466

Name of Site Union Carbide Corp. Site Location Houis Road, Charlotte NC

Collected By RKS-GN ID# _____ Date Collected 3-23-95 Time 1505

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	upstream sediment
____ Surface water (2)	____ Liquid (6)	sample in pool/area
____ Soil (3)	____ Sludge (7)	running stream above
✓ Other (4) sediment	____ Other (8)	disposal area

TCLP Compounds

Inorganic Compounds	Results(mg/l)
✓ Arsenic	<0.02
✓ Barium	0.34
✓ Cadmium	<0.05
✓ Chromium	<0.05
✓ Lead	<0.10
✓ Mercury	<0.01
✓ Selenium	<0.005
✓ Silver	<0.05
✓ Manganese	0.47
✓ Zinc	7.36

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results ~~(mg/l)~~ (mg/kg)
✓ Arsenic	14
✓ Barium	37
✓ Cadmium	<9.8
____ Chloride	
✓ Chromium	16
____ Copper	
____ Fluoride	
____ Iron	
✓ Lead	51
✓ Manganese	390
✓ Mercury	0.42
____ Nitrate	
✓ Selenium	<3.9
✓ Silver	<9.8
____ Sulfates	
✓ Zinc	820
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received _____ Reported by _____

Date Extracted _____ Date Reported _____

Date Analyzed _____ Lab Number _____

003864 MAR 24 95

3PD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

RECEIVED MAY 05 1995 SUPERFUND SECTION

Site Number NCD 980-844-336 Field Sample Number 017463

Name of Site Union Carbide Corp. Site Location Harris Road, Charlotte

Collected By RKS - GN ID# Date Collected 3-23-95 Time 1445

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	Downstream surface
✓ Surface water (2)	✓ Liquid (6)	Water sample collected
___ Soil (3)	___ Sludge (7)	upgradient of sewer
___ Other (4)	___ Other (8)	outfall - near stunted
		vid

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Inorganic Chemistry

Parameter	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.016
✓ Cadmium	<0.002
___ Chloride	
✓ Chromium	<0.01
___ Copper	
___ Fluoride	
___ Iron	
✓ Lead	<0.005
✓ Manganese	1.92
✓ Mercury	<0.0005
___ Nitrate	
✓ Selenium	<0.005
✓ Silver	<0.05
___ Sulfates	
✓ Zinc	5.16
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Date Received ___ Reported by ___

Date Extracted ___ Date Reported 4 May 95

003859 MAR 24 95

Date Analyzed ___ Lab Number ___

PD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 017465

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By RKG-GN ID# Date Collected 3-23-95 Time 1505

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	upstream surface water
✓ Surface water (2)	✓ Liquid (6)	sample in pool area
___ Soil (3)	___ Sludge (7)	running stream above
___ Other (4)	___ Other (8)	disposal area

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)
✓ Arsenic	<0.01
✓ Barium	0.04
✓ Cadmium	<0.002
___ Chloride	
✓ Chromium	<0.01
___ Copper	
___ Fluoride	
___ Iron	
✓ Lead	<0.005
✓ Manganese	1.49
✓ Mercury	<0.0005
___ Nitrate	
✓ Selenium	<0.005
✓ Silver	<0.05
___ Sulfates	
✓ Zinc	0.16
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received ___ Reported by ___

Date Extracted ___ Date Reported ___

003860 MAR 24 95

Date Analyzed ___ Lab Number ___

LPD89E

(1)

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	951175	951176	951178	951180	951182	951184
	FIELD NO	19523	19524	19526	19528	19530	19532
COMPOUND	TYPE	(4)	(3)	(3)	(2)	(4)	(2)
	UNITS	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg
CHLOROMETHANE	20 ppb	U	U	U	U	U	U
VINYL CHLORIDE	10				1J		
BROMOMETHANE	20				U		
CHLOROETHANE	10						
TRICHLOROFLUOROMETHANE	10						
ACETONE	50		25 J,B		4 J,B	10 J,B	
1,1-DICHLOROETHENE	5		U		U	U	
IODOMETHANE	10						
METHYLENE CHLORIDE	5		79 J,B				
CARBON DISULFIDE			U				
TRANS-1,2-DICHLOROETHENE							
ACRYLONITRILE	20						
1,1-DICHLOROETHANE	5				trace		
2-BUTANONE	50				U		
CIS-1,2-DICHLOROETHENE	5				trace		
CHLOROFORM					U		
1,1,1-TRICHLOROETHANE							
CARBON TETRACHLORIDE	10						
BENZENE	5				3J	trace	
1,2-DICHLOROETHANE					trace	U	
TRICHLOROETHENE					U		
1,2-DICHLOROPROPANE							
BROMODICHLOROMETHANE	10						
	↑ MDL ↑						

B - BACKGROUND PRESENT IN LAB BLANKS.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
H - COMPOUND RELIABLY DETECTABLE ONLY AT HIGH CONCENTRATIONS.
C - POSSIBLE LAB CONTAMINATION.

(2)

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	951175	951176	951178	951180	951182	951184
	FIELD NO	19523	19524	19526	19528	19530	19532
COMPOUND	TYPE	(4)	(3)	(3)	(2)	(4)	(2)
	UNITS	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg
DIBROMOMETHANE	5ppb	u	u	u	u	u	u
4-METHYL-2-PENTANONE	50						
CIS-1,3-DICHLOROPROPENE	5						
TOLUENE	↓						
TRANS-1,3-DICHLOROPROPENE	↓						
1,1,2,2-TETRACHLOROETHANE	10						
1,1,2-TRICHLOROETHANE	5						
2-HEXANONE	50						
TETRACHLOROETHENE	5						
DIBROMOCHLOROMETHANE	10						
ETHYLENE DIBROMIDE	5						
CHLOROBENZENE	5						
1,1,1,2-TETRACHLOROETHANE	10				↓		
ETHYL BENZENE	5				trace		
XYLENES	10				trace		
STYRENE	5				u		
BROMOFORM	10				↓		
TRANS-1,4-DICHLORO-2-BUTENE	80						
1,2,3-TRICHLOROPROPANE	20						
1,4-DICHLOROBENZENE	10						
1,2-DICHLOROBENZENE	↓						
1,2-DIBROMO-3-CHLOROPROPANE	20						
VINYL ACETATE	200	↓	↓	↓	↓	↓	↓
	↑MDL↑						

B - BACKGROUND PRESENT IN LAB BLANKS.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
H - COMPOUND RELIABLY DETECTABLE ONLY AT HIGH CONCENTRATIONS.
C - POSSIBLE LAB CONTAMINATION.

(3)

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	951186					
	FIELD NO	19534					
COMPOUND	TYPE	(4)	( )	( )	( )	( )	( )
	UNITS	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg
CHLOROMETHANE	20 ppb	u					
VINYL CHLORIDE	10						
BROMOMETHANE	20						
CHLOROETHANE	10						
TRICHLOROFLUOROMETHANE	10						
ACETONE	50						
1,1-DICHLOROETHENE	5						
IODOMETHANE	10						
METHYLENE CHLORIDE	5						
CARBON DISULFIDE	↓						
TRANS-1,2-DICHLOROETHENE	↓						
ACRYLONITRILE	20						
1,1-DICHLOROETHANE	5						
2-BUTANONE	50						
CIS-1,2-DICHLOROETHENE	5						
CHLOROFORM	↓						
1,1,1-TRICHLOROETHANE	↓						
CARBON TETRACHLORIDE	10						
BENZENE	5						
1,2-DICHLOROETHANE	↓						
TRICHLOROETHENE	↓						
1,2-DICHLOROPROPANE	↓						
BROMODICHLOROMETHANE	10	↓					
	↑ MDL ↑						

B - BACKGROUND PRESENT IN LAB BLANKS.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
H - COMPOUND REUABLY DETECTABLE ONLY AT HIGH CONCENTRATIONS.
C - POSSIBLE LAB CONTAMINATION.

DEHNR 3085-0 (10/93) PURGCOMLORC

STATE LABORATORY OF PUBLIC HEALTH
PO BOX 28047 - 306 N. WILMINGTON ST., RALEIGH, NC 27611

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	951186					
	FIELD NO	19534					
COMPOUND	TYPE	(4)	( )	( )	( )	( )	( )
	UNITS	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg	µg/l µg/kg
DIBROMOMETHANE	5ppb	u					
4-METHYL-2-PENTANONE	50						
CIS-1,3-DICHLOROPROPENE	5						
TOLUENE							
TRANS-1,3-DICHLOROPROPENE							
1,1,2,2-TETRACHLOROETHANE	10						
1,1,2-TRICHLOROETHANE	5						
2-HEXANONE	50						
TETRACHLOROETHENE	5						
DIBROMOCHLOROMETHANE	10						
ETHYLENE DIBROMIDE	5						
CHLOROBENZENE	5						
1,1,1,2-TETRACHLOROETHANE	10						
ETHYL BENZENE	5						
XYLENES	10						
STYRENE	5						
BROMOFORM	10						
H TRANS-1,4-DICHLORO-2-BUTENE	80						
1,2,3-TRICHLOROPROPANE	20						
1,4-DICHLOROBENZENE	10						
1,2-DICHLOROBENZENE							
1,2-DIBROMO-3-CHLOROPROPANE	20						
H VINYL ACETATE	200						
	↑MDL↑						

B - BACKGROUND PRESENT IN LAB BLANKS.
J - Estimated value
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
H - COMPOUND RELIABLY DETECTABLE ONLY AT HIGH CONCENTRATIONS.
C - POSSIBLE LAB CONTAMINATION.

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	951177		951179		951181		951183		951185		951187	
	FIELD #	19525		19527		19529		19531		19533		19535	
COMPOUND	TYPE	(3)		(3)		(2)		(4)		(2)		(4)	
	UNITS	~~µg/l~~	µg/kg	~~µg/l~~	µg/kg	µg/l	~~µg/kg~~	~~µg/l~~	µg/kg	µg/l	~~µg/kg~~	~~µg/l~~	µg/kg
N-nitrosodimethylamine	10/330		U		U		U		U		U		U
bis(2-chloroethyl)ether													
2-chlorophenol													
phenol													
1,3-dichlorobenzene													
1,4-dichlorobenzene													
1,2-dichlorobenzene													
bis(2-chloroisopropyl)ether													
hexachloroethane													
N-nitroso-di-n-propylamine													
nitrobenzene													
isophorone													
2-nitrophenol													
2,4-dimethylphenol													
bis(2-chloroethoxy)methane													
2,4-dichlorophenol													
1,2,4-trichlorobenzene													
naphthalene													
hexachlorobutadiene													
4-chloro-m-cresol													
hexachlorocyclopentadiene													
2,4,6-trichlorophenol													
2-chloronaphthalene													
acenaphthylene													
dimethyl phthalate													
2,6-dinitrotoluene													
acenaphthene	↓												
2,4-dinitrophenol	50/1650												
2,4-dinitrotoluene	10/330												
4-nitrophenol	50/1650												
fluorene	10/330												
4-chlorophenylphenylether													
diethyl phthalate	↓												
4,6-dinitro-o-cresol	50/1650												
diphenylamine	10/330												
azobenzene													
4-bromophenylphenylether													
hexachlorobenzene	↓												
pentachlorophenol	50/1650												
phenanthrene	10/330												
anthracene													
dibutyl phthalate													
fluoranthene	↓	↓		↓		↓		↓		↓		↓	

MDL
H_2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

STATE LABORATORY OF PUBLIC HEALTH

P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	951177	951179	951181	951183	951185	951187
	FIELD #	19525	19527	19529	19531	19533	19535
COMPOUND	TYPE	(3)	(3)	(2)	(4)	(2)	(4)
	UNITS	~~µg/l~~ µg/kg	~~µg/l~~ µg/kg	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg	µg/l ~~µg/kg~~	~~µg/l~~ µg/kg
pyrene	10/330	U	U	U	U	U	U
benzidine	50/1650						
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330		18,467	10K			
di-n-octyl phthalate	10/330		U	U			
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	U	U	U	U	U	U
benzoic acid							
benzyl alcohol							
4-chloroaniline							
dibenzofuran	10/330						
2-methylnaphthalene							
2-methylphenol							
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							

MDL

H2O/50/L

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

NC-DEHNR
Division of Solid Waste Management
☐ Superfund Section
☐ Hazardous Waste Section
☐ Solid Waste Section

Organics Lab: ✓
Inorganics Lab: ____

CHAIN OF CUSTODY RECORD

Project Name: Union Carbide
Site ID # (NCD#) 980-044-336
Location: Charlotte, NC
Address: ____

Sampled by: Keith Snively
Sampler ID ____
Telephone: (919) 733-2801
Date Sampled: 3-23-95
Time Sampled: 1200 - 1505

Sample Types: Soil ✓ Water ✓ Waste ____ Other Sediment

Remarks: ____

Field Sample Numbers: 019523, 019524, 019525, 019526, 019527, 019528, 019529, 019530, 019531, 019532, 019533, 019534, 019535

Relinquished by: Richard Keith Snively (Signature) Date: 3-24-95 Time: 1245

Received by: William Ce Glenn Jr (Signature) Date: 3-26-95 Time: 12:50

Relinquished by: ____ (Signature) Date: ____ Time: ____

Received by: ____ (Signature) Date: ____ Time: ____

Relinquished by: ____ (Signature) Date: ____ Time: ____

Received by: ____ (Signature) Date: ____ Time: ____

Results Reported: John L. Neal (Signature) Date: 4-3-95 Time: ____

A:\COCR.FRM)

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

Lot #

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

APR 4 1995

Site Number NCD-980-844-336 Field Sample Number 019523

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte-Mecklenburg

Collected By RKS - GN ID# _____ Date Collected 3-23-95 Time 1200

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental OR	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	
____ Surface water (2)	~~✓ Liquid (6)~~	Trip Blank
____ Soil (3)	____ Sludge (7)	
✓ Other (4)	____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Date Received 3-26 95 WGAB Reported by John L. Neal

Date Extracted _____ Date Reported 4-3-95

Date Analyzed 3-28-95 nw Lab Number 951175

CPD89E

#951175 - 951187

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986-944-336 Field Sample Number 019524

Name of Site Union Carbide Corp Site Location 66 Hovis Road, Charlotte NC

Collected By RKS - GN ID# Date Collected 3-23-95 Time 1405

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	OR	Concentrate	Comments
___ Ground water (1)		✓ Solid (5)	Background soil
___ Surface water (2)		___ Liquid (6)	~~Leachate~~ Sample near
✓ Soil (3)		___ Sludge (7)	outfall to plant site
___ Other (4)		___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
___ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 3-24-95 W, AB Reported by

Date Extracted Date Reported

Date Analyzed 3-29-95 nw Lab Number 951176

SPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 986-844-336 Field Sample Number 019525

Name of Site Union Carbide Corp. Site Location Hovis Road, Charlotte NC

Collected By GN ID# _____ Date Collected 3-23-95 Time 1405

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental		Concentrate		Comments
____	Ground water (1)	✓	Solid (5)	Background soil
____	Surface water (2)	____	Liquid (6)	sample near entrance
✓	Soil (3)	____	Sludge (7)	to plant
____	Other (4)	____	Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 WG AB Reported by _____

Date Extracted 3-27-95 SA Date Reported _____

Date Analyzed 3-28-95 BD Lab Number 951177

EPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 019526

Name of Site Union Carbide Corp Site Location Houis Road, Charlotte NC

Collected By RKS - GM ID# _____ Date Collected 3-23-95 Time 1420

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	OR	Concentrate	Comments
____ Ground water (1)		✓ ~~Solid (5)~~	Soil sample collected
____ Surface water (2)		____ Liquid (6)	in battery disposal
✓ Soil (3)		____ Sludge (7)	area
____ Other (4)		____ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 WG, AD Reported by _____

Date Extracted _____ Date Reported _____

Date Analyzed 3-29-95 MW Lab Number 951178

SPD59E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-944-336 Field Sample Number 019527

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By RKS - GN ID# _____ Date Collected 3-23-95 Time 1420

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	OR	Concentrate	Comments
___ Ground water (1)		✓ ~~Solid (5)~~	Soil sample collected
___ Surface water (2)		___ Liquid (6)	in battery disposal
✓ Soil (3)		___ Sludge (7)	area
___ Other (4)		___ Other (8)	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
✓ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 3-24-95 - W6, AB Reported by _____

Date Extracted 3-27-95 SA Date Reported _____

Date Analyzed 3-28-95 BD Lab Number 951179

SPD59E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-944-336 Field Sample Number 019528

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By RKS-GAI ID# ____ Date Collected 3-23-95 Time 14 ~~Mar~~ 45

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	OR	Concentrate	Comments
____ Ground water (1)		____ Solid (5)	Downstream ~~Sediment~~
✓ Surface water (2)		~~✓ Liquid (6)~~	surface water sample
____ Soil (3)		____ Sludge (7)	collected upgradient of sewer
____ Other (4)		____ Other (8)	outflow - near stained soil

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)	(mg/kg)
____ Arsenic		
____ Barium		
____ Cadmium		
____ Chloride		
____ Chromium		
____ Copper		
____ Fluoride		
____ Iron		
____ Lead		
____ Manganese		
____ Mercury		
____ Nitrate		
____ Selenium		
____ Silver		
____ Sulfates		
____ Zinc		
____ pH		
____ Conductivity		
____ TDS		
____ TOC		

Date Received 3-24-95 WG, AB Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 3-28-95 MW Lab Number 951180

EPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 019529

Name of Site Union Carbide Corp. Site Location Harris Road, Charlotte NC

Collected By RKS - GRI ID# _____ Date Collected 3-23-95 Time 1445

Agency: ___ Hazardous Waste ___ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
___ Ground water (1)	___ Solid (5)	Downstream surface water
✓ Surface water (2)	✓ Liquid (6)	sample collected upgradient
___ Soil (3)	___ Sludge (7)	of sewer outfall - near
___ Other (4)	___ Other (8)	stained soil

OR

TCLP Compounds

Inorganic Compounds	Results(mg/l)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chromium	
___ Lead	
___ Mercury	
___ Selenium	
___ Silver	

Organic Chemistry

Parameter	Results(mg/l)
___ P&T:GC/MS	
✓ Acid:B/N Ext.	
___ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
___ Gross Alpha	
___ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
___ Arsenic	
___ Barium	
___ Cadmium	
___ Chloride	
___ Chromium	
___ Copper	
___ Fluoride	
___ Iron	
___ Lead	
___ Manganese	
___ Mercury	
___ Nitrate	
___ Selenium	
___ Silver	
___ Sulfates	
___ Zinc	
___ pH	
___ Conductivity	
___ TDS	
___ TOC	

Organic Compounds	Results(mg/l)
___ benzene	
___ carbon tetrachloride	
___ chlordane	
___ chlorobenzene	
___ chloroform	
___ o-cresol	
___ m-cresol	
___ p-cresol	
___ cresol	
___ 1,4-dichlorobenzene	
___ 1,2-dichloroethane	
___ 1,1-dichloroethylene	
___ 2,4-dinitrotoluene	
___ heptachlor	
___ hexachlorobenzene	
___ hexachlorobutadiene	
___ hexachloroethane	
___ methyl ethyl ketone	
___ nitrobenzene	
___ pentachlorophenol	
___ pyridine	
___ tetrachloroethylene	
___ trichloroethylene	
___ 2,4,5-trichlorophenol	
___ 2,4,6-trichlorophenol	
___ vinyl chloride	
___ endrin	
___ lindane	
___ methoxychlor	
___ toxaphene	
___ 2,4-D	
___ 2,4,5-TP (Silvex)	

Date Received 3-24-95 AB, MG Reported by _____

Date Extracted 3-29-95 SA Date Reported _____

Date Analyzed 3-31-95 BD Lab Number 951181

SPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-494-336 Field Sample Number 019530

Name of Site Union Carbide Corp. Site Location Huvis Road, Charlotte, NC

Collected By RKS · GN ID# _____ Date Collected 3-23-95 Time 1450

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	Down stream sediment
____ Surface water (2)	____ Liquid (6)	sample - collected upgradient
____ Soil (3)	____ Sludge (7)	of outfall of sewer -
✓ Other (4) sediment	____ Other (8)	Non stained soil in stream bank

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 AB HB Reported by _____

Date Extracted _____ Date Reported _____

Date Analyzed 3-29-95 MW Lab Number 951182

SPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-844-336 Field Sample Number 019531

Name of Site Union Carbide Corp. Site Location Harris Road, Charlotte NC

Collected By RISI-GN ID# _____ Date Collected 3-23-95 Time 1450

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	Downstream sediment
____ Surface water (2)	____ Liquid (6)	sample collected upgradient
____ Soil (3)	____ Sludge (7)	of outfall of sewer -
✓ Other (4) sediment	____ Other (8)	near stained soil in stream bank

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 KG AB Reported by _____

Date Extracted 3-27-95 SA Date Reported _____

Date Analyzed 3-28-95 BD Lab Number 951183

PD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-647-336 Field Sample Number 019532

Name of Site Union Carbide Corp Site Location Harris Road, Charlotte NC

Collected By RKS-GM ID# _____ Date Collected 3-23-95 Time 1505

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	upstream surface water
✓ Surface water (2)	✓ Liquid (6)	sample in pool near
____ Soil (3)	____ Sludge (7)	running stream above
____ Other (4)	____ Other (8)	disposal area

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 KG AB Reported by _____

Date Extracted _____ Date Reported _____

Date Analyzed 3-28-95 MW Lab Number 951184

CPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-884-336 Field Sample Number 019533

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By _____ ID# _____ Date Collected 3-23-95 Time 1515

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	OR	Concentrate	Comments
____ Ground water (1)		____ Solid (5)	upstream surface water
✓ Surface water (2)		✓ ~~Liquid (6)~~	sample in pool area/
____ Soil (3)		____ Sludge (7)	running stream above
____ Other (4)		____ Other (8)	disposal area

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 HG, AB Reported by _____

Date Extracted 3-29-95 SA Date Reported _____

Date Analyzed 3-31-95 BD Lab Number 951185

CPD89E

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD 980-884-336 Field Sample Number 019534

Name of Site Union Carbide Corp Site Location Hovis Road, Charlotte NC

Collected By RKS - GN ID# ____ Date Collected 3-23-95 Time 1505

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	upstream ~~[illegible]~~ sediment
____ Surface water (2)	____ Liquid (6)	sample in prod area /
____ Soil (3)	____ Sludge (7)	running stream above
✓ Other (4) sediment	____ Other (8)	disposal area

Organic Chemistry

Parameter	Results(mg/l)
✓ P&T:GC/MS	
____ Acid:B/N Ext.	
____ MTBE	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 KG, AB Reported by ____

Date Extracted ____ Date Reported ____

Date Analyzed 3-29-95 MW Lab Number 951186

GPD891

N.C. Department of Environment, Health, & Natural Resources
Solid Waste Management Division

SAMPLE ANALYSIS REQUEST

State Laboratory of Public Health
P.O. Box 28047, 306 N. Wilmington Street
Raleigh, North Carolina 27611

Site Number NCD-980844-336 Field Sample Number 019535

Name of Site Union Carbide Corp Site Location Havis Road, Charlotte NC

Collected By RKS - GN ID# _____ Date Collected 3-23-95 Time 1505

Agency: ____ Hazardous Waste ____ Solid Waste ✓ Superfund

Sample Type

Environmental	Concentrate	Comments
____ Ground water (1)	____ Solid (5)	upstream sediment
____ Surface water (2)	____ Liquid (6)	sample in pool/area
____ Soil (3)	____ Sludge (7)	running stream above
✓ Other (4) sediment	____ Other (8)	disposal area

TCLP Compounds

Inorganic Compounds	Results(mg/l)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chromium	
____ Lead	
____ Mercury	
____ Selenium	
____ Silver	

Organic Chemistry

Parameter	Results(mg/l)
____ P&T:GC/MS	
✓ Acid:B/N Ext.	
____ MTBE	

Inorganic Chemistry

Parameter	Results(mg/l)(mg/kg)
____ Arsenic	
____ Barium	
____ Cadmium	
____ Chloride	
____ Chromium	
____ Copper	
____ Fluoride	
____ Iron	
____ Lead	
____ Manganese	
____ Mercury	
____ Nitrate	
____ Selenium	
____ Silver	
____ Sulfates	
____ Zinc	
____ pH	
____ Conductivity	
____ TDS	
____ TOC	

Radiochemistry

Parameter	Results (PCi/l)
____ Gross Alpha	
____ Gross Beta	

Microbiology

Parameter	Results (Col/100ml)

Organic Compounds	Results(mg/l)
____ benzene	
____ carbon tetrachloride	
____ chlordane	
____ chlorobenzene	
____ chloroform	
____ o-cresol	
____ m-cresol	
____ p-cresol	
____ cresol	
____ 1,4-dichlorobenzene	
____ 1,2-dichloroethane	
____ 1,1-dichloroethylene	
____ 2,4-dinitrotoluene	
____ heptachlor	
____ hexachlorobenzene	
____ hexachlorobutadiene	
____ hexachloroethane	
____ methyl ethyl ketone	
____ nitrobenzene	
____ pentachlorophenol	
____ pyridine	
____ tetrachloroethylene	
____ trichloroethylene	
____ 2,4,5-trichlorophenol	
____ 2,4,6-trichlorophenol	
____ vinyl chloride	
____ endrin	
____ lindane	
____ methoxychlor	
____ toxaphene	
____ 2,4-D	
____ 2,4,5-TP (Silvex)	

Date Received 3-24-95 MG, MB Reported by _____

Date Extracted 3-27-95 SA Date Reported _____

Date Analyzed 3-28-95 BD Lab Number 951187

CPD89E

Site Name: State Ports Authority
Site Number: NCD 980 844 336

Site Location: Charlotte, N.C.
Mecklenburg County
Latitude: 35 16 13.5
Longitude: 80 53 43.5

Date: July 06, 1992

Calculation Results

Distance from Site Location	Population Per Ring	Population Cumulative	Number of Households Per Ring	Number of Households Cumulative
0 to 1/4 mile	278	278	88	88
>1/4 to 1/2 mile	827	1,105	277	365
>1/2 to 1 mile	4,544	5,649	1,754	2,119
>1 to 2 miles	13,284	18,933	5,419	7,538
>2 to 3 miles	24,504	43,437	9,472	17,010
>3 to 4 miles	26,988	70,425	10,553	27,563

Note: The populations and number of households within specified target distance rings were calculated for the NC Superfund Section by the NC State Center for Geographic Information and Analysis using the 1990 US Census data. These values were calculated by summing the population and the number of households data for each census block located within each target ring. For census blocks lying only partially within the ring, the per cent area of the block within the ring was multiplied by the population and household densities of the block.

PMMGRID STATE N.C. PUBLIC WATER SUPPLY SYSTEM 05/23/95

Reference 15

ACTIVE SYSTEMS

GRID LATITUDE: 351248 / 351947, LONGITUDE: 0804930 / 0805805

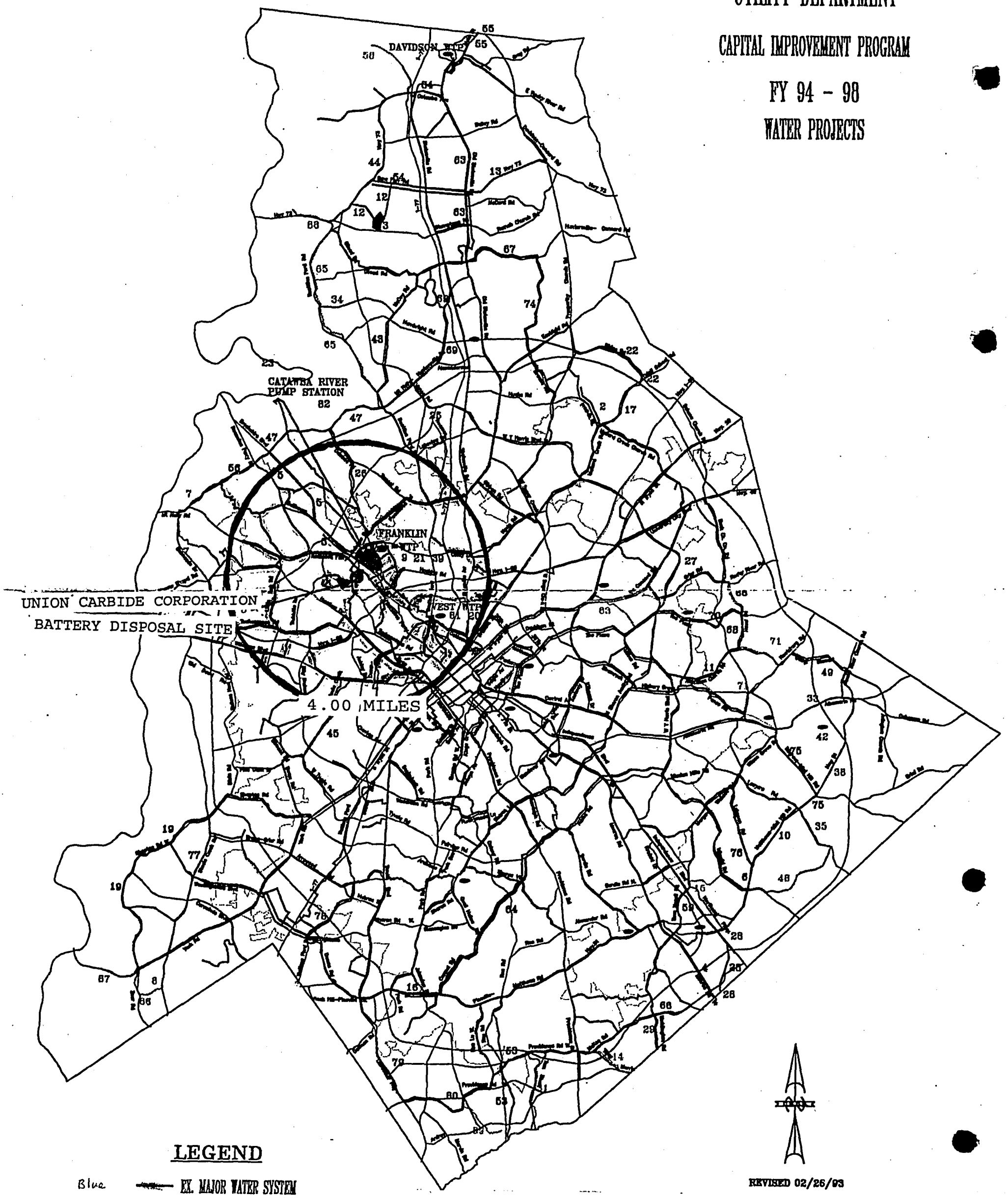
PWS ID	SYSTEM NAME	TYPE	POPULATION	RES.PERSON WORK PHONE	SOURCE NAME	SOURCE TYPE	SOURCE AVAIL.	LATITUDE	LONGITUDE
160103	JUNIPER DRIVE WATER SYSTEM	C	94	7045960655	WELL #1 & #2	G	P	351630	805300
	JUNIPER DRIVE WATER SYSTEM	C	94	7045960655	WELL #1 & #2	G	P	351630	805300
160160	MINERAL SPRINGS MHP	C	108		WELL	G	P	351419	805028
160171	OAKDALE S/D	C	440	7045257990	WELL #2	G	P	351818	805342
	OAKDALE S/D	C	440	7045257990	WELL #1	G	P	351800	805336
160173	PARKWOOD MHP	C	157	9106650817	WELL #2	G	P	351618	805436
	PARKWOOD MHP	C	157	9106650817	WELL #1	G	P	351618	805436
160190	TREXLER PARK	C	114	7045257990	WELL	G	P	351700	805200
160226	FARMINGTON	C	109	7045257990	WELL	G	P	351510	805510
160227	PROVIDENCE WEST S/D	C	309	7045257990	WELL #2	G	P	351700	805500
	PROVIDENCE WEST S/D	C	309	7045257990	WELL #1	G	P	351700	805500
160471	THE LITTLE SUPER MARKET	N	80	7043990739	WELL	G	P	351407	805635
160472	RIVER VIEW INN	N	1000	7043993385	WELL	G	P	351402	805630
160484	ROADWAY EXPRESS	P	95	7045966370	WELL	G	P	351838	805028
160496	BRADLEY MOTEL	N	75	7043923206	WELL	G	P	351404	805627
160497	LITTLE GENERAL STORE	N	25	7043924570	WELL	G	P	351405	805620
160501	RBE INC	N	99	7043913100	WELL	G	P	351250	805730
	RBE INC	N	99	7043913100	WELL	G	P	351256	805730
160517	SHUFFLETON GRILL	N	75	7043931755	WELL	G	P	351945	805715
160527	PINE ISLAND GOLF CLUB	N	100	7043941422	WELL	G	P	351807	805752
160528	COULWOOD HILLS SWIM CLUB	N	350	7043825074	WELL	G	P	351755	805653
160537	WALDROPS GRILL	N	50	7045969968	WELL	G	P	351742	805022
160575	SUNSET HILLS GOLF PRO SHOP	N	900	2043990980	WELL	G	P	351830	805315
160605	BERRYHILL ELEM SCHOOL	P	700	7043436040	WELL	G	P	351332	805731
160608	OAK GROVE BAPTIST CHURCH	N	70	7043945075	WELL	G	P	351701	805747
160619	COPAL GRILL	N	250	7043922241	WELL	G	P	351335	805625
160622	MEMORIAL FOUR SQUARE CHURCH	N	75	7043949997	WELL SUPPLY	G	P	351700	805647
160623	BERRYHILL BAPTIST CHURCH	N	100	7043991870	WELL	G	P	351329	805740
160627	OAKDALE SWIM CLUB	N	25	7043999586	WELL	G	P	351817	805335
160673	MCCALL BROS	P	30	7043991506	WELL	G	P	351733	805453
	MCCALL BROS	P	30	7043991506	WELL	G	P	351738	805458
160675	WILSON MEMORIAL BAPTIST CHURCH	N	70	7043920714	WELL	G	P	351745	805215
160680	OAKDALE BAPTIST CHURCH	N	120	7043947295	WELL	G	P	351730	805407
160681	ROCK OF AGES BAPTIST CH	N	50	7045969489	WELL	G	P	351645	805000
160702	SHIRLEYS CHILD CARE	P	50	7045965206	WELL	G	P	351745	805100
160707	KINGDOM HALL OF JEHOVH'S WITNE	N	90	7043929931	WELL	G	P	351715	805637
160710	SOUTH 21	N	25	7043991678	WELL	G	P	351713	805427
160717	THRIFT ROAD CHRISTIAN CHURCH	N	160	7043926650	WELL	G	P	351515	805515
160763	NORTHWEST AUTO AUCTION	N	37	7043940326	WELL	G	P	351730	805445
160782	MIDSTATE AUTO AUCTION OF CHARL	N	32	7043940326	WELL	G	P	351730	805445
160790	FOX DRIVE-IN THEATER	N	600	7045960115	WELL	G	P	351930	804940
160791	RUDY'S	N	25	7045960090	WELL	G	P	351835	805447

CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT

CAPITAL IMPROVEMENT PROGRAM

FY 94 - 98

WATER PROJECTS



REVISED 02/26/93

LEGEND

Blue — EX. MAJOR WATER SYSTEM
— PREVIOUSLY FUNDED
— FIRST YEAR FUNDED
Green — FUNDS IDENTIFIED
— UNFINANCED
— 10 YEAR NEEDS

All blue lined roads have existing Main lines. All other categories are not in existence as of December 1993. These funded listings are planned extensions for future construction. The accompanying pages list project # (Prj No.) and dates of funding. Some streets show an existing blue main with a projected green parallell extension. This t is to upgrade and replathe weakening blue main.--See Prj. 2.in NE part of County. Numbers on Map refer to project #.

S. Franch, NC Surveyland

GRAPHIC SCALE IN FEET

0 15000 30000

SCALE 1" = 15000'

December 1993

RECEIVED
AUG 28 1995
SUPERFUND SECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

8-18-95

4WD-WPB

Ms. Pat DeRosa, Head
CERCLA Branch
North Carolina Department of Environment,
Health and Natural Resources
Division of Solid Waste Management
P.O. Box 27687
Raleigh, North Carolina 27611-7687

Dear Ms. DeRosa:

The following reports have recently been reviewed and accepted by EPA - Region IV Site Assessment Section:

Preliminary Assessments

Kaplan Ethyl Ether Drums Watauga County NCD 986 228 757	No Further Action Action (NFRAP)

Combined Preliminary Assessment / Site Inspections (PA/SIs)

Chemical Cartage Company Brunswick County NC0 000 183 103	NFRAP
Summit Resource Management Union County NCD 986 232 213	NFRAP

Site Inspection Prioritizations (SIPs)

Carolina Wood Preserving Halifax County NCD 033 200 854	NFRAP
Crown Central Petroleum Co. Mecklenburg County NCD 044 447 639	NFRAP

Fleet Transport Mecklenburg County NCD 062 553 490	NFRAP
Florida Steel Corp. Mecklenburg County NCD 093 340 487	NFRAP
Kerr-McGee Chemical Corp. Brunswick County NCD 980 557 805	Further Action (FA)
Knob Creek Flyash Landfill Transylvania County NCD 980 729 677	NFRAP
Lee's Motor Works Gaston County NCD 986 175 628	NFRAP
Rainbow Drive Battery Site Cabarrus County NCD 981 031 578	NFRAP
Toddville Operations Ctr. Mecklenburg County NCD 981 478 480	NFRAP
Union Carbide Corp. Mecklenburg County NCD 980 844 336	NFRAP

Enclosed please find the Remedial Site Assessment Decision Forms for each report generated by the North Carolina Superfund program.

If you have any questions concerning these site decisions, please call me at (404) 347-7791, Extension 2031.

Sincerely,

Cynthia K. Gurley

Cynthia K. Gurley
North Carolina, PO

TO: NC

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Site Name: Union Carbide Corp. **EPA ID#:** NCD 980 844 336

Alias Site Names: _____

City: Charlotte **County or Parish:** Mecklenburg **State:** NC

Refer to Report Dated: June 1995 **Report type:** SIP

Report developed by: Keith Snavely, NCDEHNR

DECISION:

|xx| **1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:**

|xx| 1a. Site does not qualify for further remedial site assessment under CERCLA (No Further Remedial Action Planned - NFRAP)

| | 1b. Site may qualify for further action, but is deferred to: | | RCRA | | NRC

| | **2. Further Assessment Needed Under CERCLA:** 2a. (optional) Priority: | | Higher | | Lower

2b. Activity Type: | | PA | | ESI | | SI | | HRS evaluation

| | Other: _____

DISCUSSION/RATIONALE:

Elevated levels of metals were detected on site and zinc in the downstream surface water sample. During the March 1995 sampling event no residences, daycare centers, or schools were adjacent or within 200 feet of the disposal area. Workers at the plant park their vehicles adjacent to the site on an asphalt parking area. There are no drinking water wells on site or within 1 mile from the site. The adjacent stream is not a fishery and the closest fishery is 3 miles from the PPE. And the closest wetland along the stream is 2 miles downstream.

Based on the available data, a disposition of no further remedial action planned was assigned.

Report Reviewed and Approved by: Cynthia K. Gurley **Signature:** Cynthia Gurley **Date:** 07/11/95

Site Decision Made by: Cynthia K. Gurley **Signature:** Cynthia Gurley **Date:** 07/11/95

EPA Form # 9100-3

MEMO

DATE: May 25, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Public Water Supply Information
Community wells 4-mile Radii
Union Carbide Corporation - 5400 Hovis Road
NCD # 980 844 336

On May 24, 1995, I spoke to Bret Setzer of the Mooresville Regional Office NCDEM (704/ 663-1699), about the location of several community water wells within the 4-mile radius of the subject site. The original data base information received from the State Public Water Supply of NCDEM stated incorrect latitudes and longitudes for several community water supply systems. These are the locations for Mineral Springs MHP, Parkwood MHP, Trexler Park, Farmington, and Providence West. In addition, McCall Brothers and Shirleys Child Care are now on municipal water.

Mineral Springs MHP was located on the data base at latitude 351419 and longitude 805028 but should be located east of North Tryon Road outside of the 4-mile radius of the referenced site (new lat-long not known). Parkwood MHP was originally located at latitude 351618 and longitude 805436. Its correct position should be approximately latitude 351300 and 805900 near Walkers Ferry Road east of Lake Wylie. Trexler park was originally located at latitude 351700 and 805200. It is correct location should be at approximately Latitude 351725 and 805600 near Morningside Road off Valleydale Road north of Mount Holly Road. The Farmington community well was listed at latitude 351510 and longitude 805510. According to Bret Setzer, this community well is located at the south side of Charlotte near Highway 51, several miles south of the 4-mile distance ring of the referenced site. In addition, Providence West Subdivision is not located at latitude 351700 and longitude 805500, but near Providence Road also located at the southside of Charlotte.

MEMO

DATE: May 25, 1995

TO: File

FROM: Keith Snavely KHS
Hydrogeologist
NC Superfund Section

RE: Groundwater Population Information
Union Carbide Corporation Battery Disposal Site
5400 Hovis Road, Charlotte NC
NCD # 980 844 336

On May 24, 1995, I received public water supply information on community wells within 4-miles of the referenced site. Once this information was plotted on the USGS quad maps of Mountain Island Lake, Derita, Charlotte East, and Charlotte West, Charlotte municipal water was delineated in the site area, and residents using groundwater were determined. Houses that were not supplied municipal or community well water were assumed as private well users. There are some residents within the city limits of Charlotte that still use groundwater but have access to municipal water from the Charlotte-Mecklenburg Utility Department (CMUD). The number of these residents are minumal and counted in the groundwater count only in areas where there is known clusters of groundwater users.

The groundwater population was determined by counting houses within each distance ring of 0.0 - 0.25, 0.25 - 0.50, 0.50 - 1.00, 1.00 - 2.00, 2.00 - 3.00, 3.00 - 4.00 miles from the site. To determine the population from each house count, the house counts were multiplied by the person-per-household value for Mecklenburg County of 2.5 persons. Each USGS map uses is a 1"=2000' scale and the total groundwater population includes the community water well information plotted in each distance ring. The total population per distance ring is listed below:

Table 1. Total groundwater population within 4-mile

Distance Ring miles	Population	Cumulative Population
0.0 - 0.25	0	0
0.25 - 0.50	0	0
0.50 - 1.00	0	0
1.00 - 2.00	495	495
2.00 - 3.00	568	1063
3.00 - 4.00	1079	2142

The community groundwater wells per distance ring included in the groundwater totals of Table 1 are listed below.

Table 2. Community Water Wells

Distance Ring	System Name	Population
1.00 - 2.00	Oakdale S/D	440
2.00 - 3.00	Trexler Park	114
3.00 - 4.00	-----	-----

MEMO

DATE: May 17, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Water Supply Information - Charlotte, NC
Union Carbide Corporation Battery Disposal Site
Charlotte, NC
NCD 980 844 336

I spoke to Mr. Barry Beamer of the Charlotte-Mecklenburg Utility Department (CMUD) to discuss city water mains and city water supply hookups from Charlotte in the referenced site area. According to Mr. Beamer, Charlotte, North Carolina receives its water supply from Mountain Island Lake. This water is pumped to the City of Charlotte via the Catawba River pump station. In addition, i asked him if there were any water intakes on Stewart, Irwin, and Sugar Creeks. He said there were no intakes along this surface water pathway, and these streams have been designated for industrial discharge.

I mentioned that on file we have the Capital Improvement Program FY 94-98 water projects map. According to Mr. Beamer, major water main systems are identified on the Capital Improvement Program Fy 94-98 map, but water hookups for several smaller roads are not identified on this map. CMUD has several 1"=100' scale maps identifying roads connected to city water mains at its Charlotte Office at 5100 Brookshire Blvd.

MEMO

DATE: April 28, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Depth to Groundwater
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

The depth of groundwater near the site was approximated from well records from four industrial groundwater wells and one domestic well out of Geology and Ground Water in the Charlotte Area, North Carolina, Legrand and Mundorff, 1952. The well depths range from 150 to 200 feet below groundsurface except for one dug well with a depth of 31 feet below groundsurface. The depth of groundwater from these wells range from 20 to 26 feet below groundsurface. The depth of groundwater chosen for the battery disposal site is estimated at 20 feet below groundsurface. The five wells that were reviewed are: the G.V. Keller well with a depth of 190 feet and water level of 26 feet below ground surface; the Planter's Fertilizers & Phosph. Co. with a well depth of 31 and water level of 25 feet below groundsurface; the Charlotte Pipe and Foundary Co. with a well depth of 196 feet and water level of 20 feet below groundsurface; and Air Reduction Sales Co. and National Welding Supply Co. with well depths respectively at 200 and 150 feet below groundsurface. These last two wells do not contain water level data.

MEMO

DATE: April 28, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Water Recreation areas
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

On March 8, 1995, Mr. Wayne Chapman, the fish biologist in the site area, was contacted and noted children play in Irwin Creek at Revolution Park near Clanton Road in Charlotte. This park is located along the surface water pathway approximately 5 miles south of the PPE of the site.

MEMO

DATE: April 28, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Fishing Information along surface water pathway
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

On March 8, 1995, Mr. Wayne Chapman, the fish biologist in the study site, was contacted and noted fish are present in Stewart, Irwin, and Sugar Creeks. The tributary that drains the site flows through several industrial areas and is not large enough to support fishing. According to Mr. Chapman, there is fishing for catfish and sunfish in Irwin Creek and Sugar Creeks. According to Mr. Chapman, there has also been documented fish kills in Stewart Creek north of the surface water pathway of the site. The amount of fish removed from Irwin and Sugar Creeks are unknown.

MEMO

DATE: April 28, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Surficial Contamination with 200 feet of residence, school, daycare or workplace
Union Carbide Battery Disposal site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

The battery disposal area is located within 200 feet of a workplace. However, the workplace or plant is separated from the site by an asphalt parking lot, and the disposal area is enclosed by a fence. There are no residence, schools, or daycares within 200 feet of the surficial contamination. The disposal area is accessible with no use.

MEMO

DATE: April 27, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: On-site workers
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

Two businesses occupy the plant area near the disposal site. These are Custom Pallet Company and Crating, Inc. and Creative Dying, Incorporated. The actual number of workers present at the site are unknown and estimated at over 20 persons.

MEMO

DATE: April 27, 1995

TO: File

FROM: Keith Snavely KS
Hydrogeologist
NC Superfund Section

RE: Overland distance to surface water from source
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

The distance from the source area to the adjacent stream located east of the disposal area is 0.0 feet since battery parts were noted in the stream, and leachate from the battery landfill area is noted in the stream bank.

MEMO

DATE: April 27, 1995

TO: File

FROM: Keith Snavely
Hydrogeologist
NC Superfund Section

RE: Drainage Area RKS
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

The drainage area of the site includes the source area of 2.4 acres, the area of the stream that borders the eastern edge of the site, and the drainage area south of the disposal area between the disposal area and Seaboard Coast Line Railroad. The acreage for each section of the drainage area is as follows:

The Disposal Area = 2.4 acres

Creek Area = 0.08 acres

Drainage area south of disposal area = approximately 0.25 acres

total acreage = 2.73 acres

MEMO

DATE: April 27, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Wellhead Protection Areas - Mecklenburg County
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

Mr. Randy Prillaman of the Wellhead Protection Program within the Groundwater Section of NC Department of Environmental Health and Natural Resources (NCDEHNR) was contacted on April 26, 1995 to obtain any information on wellhead protection areas in Mecklenburg County. According to the wellhead protection program there are no wellhead protection areas in Mecklenburg County.

MEMO

DATE: April 26, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Site reconnaissance and sampling trip
Union Carbide Battery disposal site
5400 Hovis Road, Charlotte, North Carolina
NCD 980 844 336

Grover Nicholson and I arrived at the referenced site to conduct a site inspection at 11:30 am on March 23, 1995. We briefly met with Mr. Frankie Godley of Godley Auction, the owner of the property, to receive directions to the site. The battery disposal site is 2.4 acres and is located on the southeastern end of the former Eveready Battery Plant property owned by Union Carbide at 5400 Hovis Road in Charlotte, North Carolina.

The 2.4 acre disposal area contains numerous piles of battery parts, stressed vegetation, and stained soils. The site is fenced, however there is not a locked gate at the site entrance. Some of the battery parts appeared to be carried from the site by overland flow past the property boundary fence into a small stream that borders the site to the east. The stream contains numerous battery parts and maroon colored leachate is noted in the soils along the bank of the stream. A portion of the stream bank outside the fence area has subsided into the creek and a thickness of 3 to 4 feet of battery disposal parts were noted along the stream bed near the fence to the disposal area.

During the SI conducted in 1985, stream and soil samples were collected from the battery disposal area. The surface water from the stream adjacent to the disposal area contained 170 ppm of toluene and 50 ppb of tetrachloroethylene. Several soil samples were collected in the battery disposal area and analyzed for total and extractable metals. The laboratory analyses indicate manganese levels with total values of 380 mg/kg to 117,000 mg/kg, and total zinc levels from 540 mg/kg to 108,000 mg/kg. The extractables of zinc and manganese exceed the North Carolina 2L groundwater standards of 2.1 mg/l and 0.05 mg/l, respectively by 100 times. The locations of several stream and background samples were not

present in the SI and therefore, the stream and disposal area were resampled during the SIP.

Currently, the plant building is occupied and rented by Custom Pallet Company, and Crating, Inc. and Creative Dying, Incorporated. The estimation of the number of workers at the plant is unknown. The plant building is located approximately 100 feet north of the disposal area across an asphalt parking area.

The site is bordered by Hovis Road and industrial facilities to the west, the State Port Authority to the north, undeveloped property to the east, and the Seaboard Coastal Railroad and industrial plants to the south.

After a reconnaissance was conducted of the disposal area, Grover Nicholson and I prepared sample containers to collect soil, surface water, and sediment samples from the disposal area and adjacent stream. The GPS unit was used to measure latitude and longitude and was set to record each sample location. The soil, surface water, and sediment samples were collected and analyzed for volatiles, semi-volatiles, and metals.

Two soil samples were collected within 6 inches of groundsurface from the site. An upgradient sample was collected from soil in a grassy area adjacent to the plant entrance south of the entrance driveway outside of the fence. The target soil sample was collected in the eastern part of the disposal area about 25 feet from the fence near a pile of battery parts. The GPS files for the soil sample locations are R-032318A (Background) and R-032319A (target soil sample).

The downstream and upstream soil and sediment samples were collected from the stream located to the east of the site. The downstream sample was collected north of an outfall pipe that was located beneath the landfill area. The origin of this sewer drain is unknown. The downstream surface water and sediment sample were collected in an area of the stream that contained stained soil and discolored surface water. The upstream surface water and sediment sample was collected approximately 100 feet north of the downstream location. The GPS files for the site are R-032319C (downstream) and R-032319D (upstream).

The sample locations and several areas of the disposal site were photographed. Approximately 30 photos were collected during the SIP reconnaissance and sampling. All sample bottles including trip blanks were labeled packed in blue ice and ice in a cooler for transport to Raleigh. We decontaminated our boots, cleaned the van and left the site by 4:00 and arrived in Raleigh by 7:00 PM.

MEMO

DATE: April 26, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Source - Area Approximation
Union Carbide Battery Disposal Site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

A site reconnaissance of the disposal area has approximated the battery source area of contamination as 2.4 acres. A volume was not determined for the source area, although a thickness of 3 feet of fill was noted along the stream bank on the eastern side of the site. There is no information to the depth of the battery fill material in the center and western portions of the disposal area.

MEMO

DATE: April 26, 1995

TO: File

FROM: Keith Snavely RKS
Hydrogeologist
NC Superfund Section

RE: Sensitive Environments
Union Carbide Battery Disposal site
5400 Hovis Road, Charlotte, NC
NCD 980 844 336

On April 25, 1995, I visited the North Carolina National Heritage Foundation of the Parks and Recreation Division of NCDEHNR to review USGS maps of my site area for critical and sensitive environments. Two endangered and possibly extinct marine and estuarine animals were noted within the surface water pathway and within the 4-mile radius of the referenced site as noted on the Charlotte West USGS quadrangle. One was located along the surface water pathway of the site and the other within the 4-mile radius. The animal (mollusks) located along the surface water pathway was sited approximately 8 miles south of the site and is named the Carolina Heelsplitter or **Lasmigona Decorata**. The mollusks located within the 4-mile radius of the site at 3.5 miles west of the site and is the Carolina Elktoe or **Alasmidonta Robusta**.

In addition, I phoned the National Heritage Program at (919) 733-7701) and spoke to Mary Russo and Steve Hall about the dates when these animals were sited, since one is considered endangered and the other extinct. According to Nation Heritage Records, the sitings of the Carolina Heelsplitter along Sugar Creek were documented in the 1870's and 1987. However, due to the increased industry along Stewart, Irwin, and Sugar Creeks these mollusks are considered extirpated. The siting of the Carolina Elktoe was the only location in the State of North Carolina and this mollusks is considered extinct.

MEMO

DATE: April 25, 1995

TO: File

FROM: Keith Snavely KKS
Hydrogeologist
NC Superfund Section

RE: Wetland Frontage along 15-mile Surface Water Pathway
Union Carbide Battery Disposal Area,
5400 Hovis Road, Charlotte, North Carolina
NCD 980 844 336

The wetland frontage was determined along the site's 15-mile surface water pathway (SWP) by tracing the wetland frontage along Stewart Creek to Sugar Creek with a topographic map measurer using a scale of 1"= 2000'. Five national wetland inventory maps were reviewed to determine the wetland frontage along the surface water pathway. These are the wetland inventory maps of Mountain Island Lake, Derita, Charlotte East, Charlotte West, and Fort Mill, SC-NC. Three types of wetlands were identified from these sites. These are forested wetland, scrub-shrub wetland, and emergent wetland.

The total wetland frontage located along the site's 15-mile surface water pathway is approximately 2.6 miles. The frontage was evaluated along the SWP within four flow segments. The first flow segment extends from the site at Stewart Creek to Irwin Creek at Barringer Road. The wetland frontage within this segment is 0.25 miles. The second flow segment extends from Barringer Road to Sugar Creek at the Highway 49 overpass. The wetland frontage within this flow segment is 0.75 miles. The third flow segment extends from the Highway 49 overpass at Sugar Creek to the Highway 21 overpass. The frontage along this segment is 1.50 miles. The last segment extends from the Highway 21 overpass to the end of the 15-mile surface water pathway. This segment contains 0.1 miles of wetland frontage.

MEMO

DATE: April 21, 1995

TO: File

FROM: Keith Snavely
Hydrogeologist RKS
NC Superfund Section

RE: Flow Calculations along the 15-mile surface water pathway
Union Carbide Battery - 5400 Hovis Road
NCD 900 844 336
Charlotte, NC - Mecklenburg County

Flow calculations were determined within the site's 15-mile surface water pathway (SWP) from 4 gauging stations. The 15-mile surface water pathway extends south of the PPE from the battery disposal area along Stewart Creek to the end of the 15-mile SWP in Sugar Creek, Fort Mill quadrangle. Five wetland inventory maps were reviewed for the 15-mile surface water pathway. These are Mountain Island Lake, Charlotte West, Charlotte East, Derita, and Fort Mill, SC-NC. A topographic map measuring wheel was used to determine the length of the 15-mile surface water pathway with a scale of 1"= 2000'.

The references used to determine flow along the Deep River are the US Geological Survey Open-File Report 83-211 - Drainage Areas of Selected Sites on Streams in North Carolina; and Water Resources Investigations Report 88-4094 - Map of Mean Annual Runoff for the Northeastern, Southeastern, and Mid-Atlantic United States, Water Years 1951-80. The mean annual runoff of the site area and the drainage area from each stream segment are placed into a formula used to determine the flow of the stream (s) at various locations along the surface water pathway.

The formula is:

runoff X drainage area/13.58 = flow

The runoff in the site area is 16 inches/year.

The flow calculations at each gauging station are as follows:

1) Stewart Creek at I-85 at Charlotte:

16 in/yr X 3.34 sq. miles/13.58 = 3.93 cubic feet/sec (cfs)

2) Irwin Creek at Barringer Drive at Charlotte:

16 in/yr X 26.0 sq. miles/13.58 = 30.63 cfs

3) Sugar Creek at NC 49 Near Charlotte:

16 in/yr X 41.2 sq. miles/13.58 = 48.54 cfs

4) Sugar Creek at US 21 at Pineville:

16 in/yr X 65.3 sq. miles/13.58 = 76.93 cfs

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #2
LI USING ENGINEER'S SCALE (1/60)

Battery Disposal Site

SITE NAME: Union Carbide Corporation CERCLIS #: NCD 980 844 336

AKA: SSID:

ADDRESS: 5400 Hovis Road

CITY: Charlotte STATE: NC ZIP CODE: 28208

SITE REFERENCE POINT: Battery disposal area located 250' Due S of SE Corner of Main Building and 450' SSE of Water Tank

USGS QUAD MAP NAME: Mountain Island Lake TOWNSHIP: — N/S RANGE: — E/W

SCALE: 1:24,000 MAP DATE: 1969 PR 1983 SECTION: — 1/4 — 1/4 — 1/4

MAP DATUM: 1927 1983 (CIRCLE ONE) MERIDIAN: —

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy):

LONGITUDE: 80° 52' 30" LATITUDE: 35° 15' 0"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:

LONGITUDE: 80° 52' 30" LATITUDE: 35° 15' 0"

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM LATITUDE GRID LINE TO SITE REF POINT: 223

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A x 0.3304 = 73.68"

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1' 13.68"

D) ADD TO STARTING LATITUDE: 35° 15' 0.0" + 1' 13.5 =

SITE LATITUDE: 35° 16' 13.5"

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM RIGHT LONGITUDE LINE TO SITE REF POINT: 222

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A x 0.3304 = 73.34"

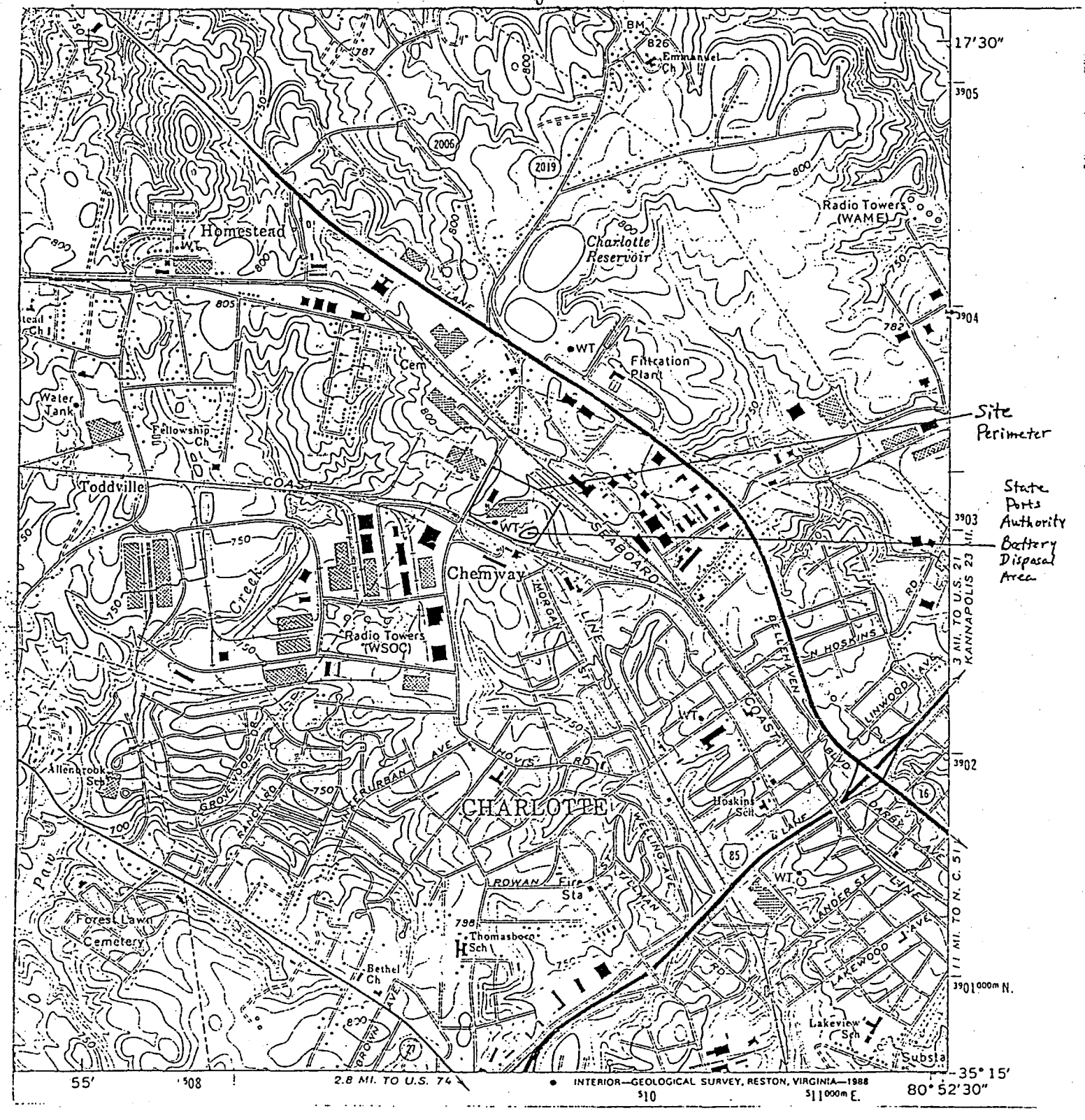
C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1' 13.34"

D) ADD TO STARTING LONGITUDE: 80° 52' 30.0" + 1' 13.5 =

SITE LONGITUDE: 80° 53' 43.5"

INVESTIGATOR: Irene Williams DATE: 5/6/92

SITE NAME: State Ports Authority NUMBER: NCD 980 844 336



TOPOGRAPHIC MAP QUADRANGLE NAME: Mountain Island Lake SCALE: 1:24,000

COORDINATES OF LOWER RIGHT-HAND CORNER OF 2.5-MINUTE GRID:

LATITUDE: 80° 52' 30" LONGITUDE: 35° 15' 0"

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

March 16, 1995

Ms. Cynthia Gurley
EPA NC Cercla Project Officer
EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta, Georgia 30365

RE: Site Sampling Plan
Site Inspection Prioritization
Union Carbide Battery Site
NCD 980 844 336
Charlotte, Mecklenburg Co., NC

Dear Ms. Gurley:

On February 13, 1985, the North Carolina Solid and Hazardous Waste Management Branch conducted a Site Inspection (SI) of the referenced property (Figure 1). The study site is a 2.0 acre battery disposal area adjacent to a former battery manufacturing facility located at 5400 Hovis Road. This plant (formerly the Eveready Battery Plant) was in operation from 1949 to 1979.

During the SI, stream and soil samples were collected from the battery disposal area. The surface water from the stream adjacent to the disposal area, contained 170 ppm of toluene and 50 ppb of tetrachloroethylene. Several soil samples were collected in the battery disposal area and analyzed for total and extractable metals. The laboratory analyses indicate manganese levels with total values of 380 mg/kg to 117,000 Mg/kg, and total zinc levels from 540 mg/kg to 108,000 mg/kg. The extractables of zinc and manganese exceed the North Carolina 2L groundwater standards of 2.1 mg/l and 0.05 mg/l, respectively by 100 times.

A site sampling map was provided with the Site Inspection (SI) letter report that included sampling point locations in the stream and soil. However, laboratory analyses of surface water and one sediment samples are absent from the report.

A review of the available file information indicates there are no groundwater wells for approximately 3 miles, and the site is

located in an industrial area where businesses utilize the municipal water supply. A stream (maybe intermittent) runs adjacent to the site and the closest fishery and wetlands within this stream are located at 3.5 to 4 miles from the site. Currently the plant is being rented to 5 businesses. The total number of workers at these businesses are unknown. There are no residents within 200 feet of the contaminated soil.

Due to the lack of groundwater, surface water, and soil exposure targets, the site does not score according to PRESCORE HRS and may not need to be sampled for completion of the SIP. However, the SI analytical data is incomplete and a site reconnaissance of the area may point to areas that need further sampling. If the site is sampled approximately two surface water and two sediment samples will be collected from the adjacent stream, one located upgradient for background and one below the probable point of entry (PPE- which was not established in the SI). In addition, one soil sample may be collected from the disposal area near the stream and one sample will be collected as background off-site. See Table 1 for the sample IDs and locations and Figure 2 for sample location points. Each sample will be analyzed for volatiles, semi-volatiles and inorganics. The proposed sample date is March 23, 1995.

Table 1. Sample IDs, Descriptions and Comments

Sample ID	Description	Comments and Notes
UC-SW-BG1	Background surface water sample in stream	Sample to be collected approximately 200 feet north of site
UC-SD-BG1	Background sediment sample in stream	Sample to be collected approximately 200 feet north of site
UC-SW-01	Target surface water sample	Located south of PPE of disposal area
UC-SD-01	Target sediment sample	Located south of PPE of disposal area
UC-SD-BG1	Background soil sample off-site	Off site grounds
UC-SD-01	Soil sample collected in disposal area	Soil sample in disposal area near stream
UC-TB-00	Trip Blank	Trip Blank

UC- Union Carbide TB-Trip Blank
BG- Background
SW- Surface water
SD- Sediment

If you have any questions about this plan, please contact me at 919/782-6703.

Sincerely,

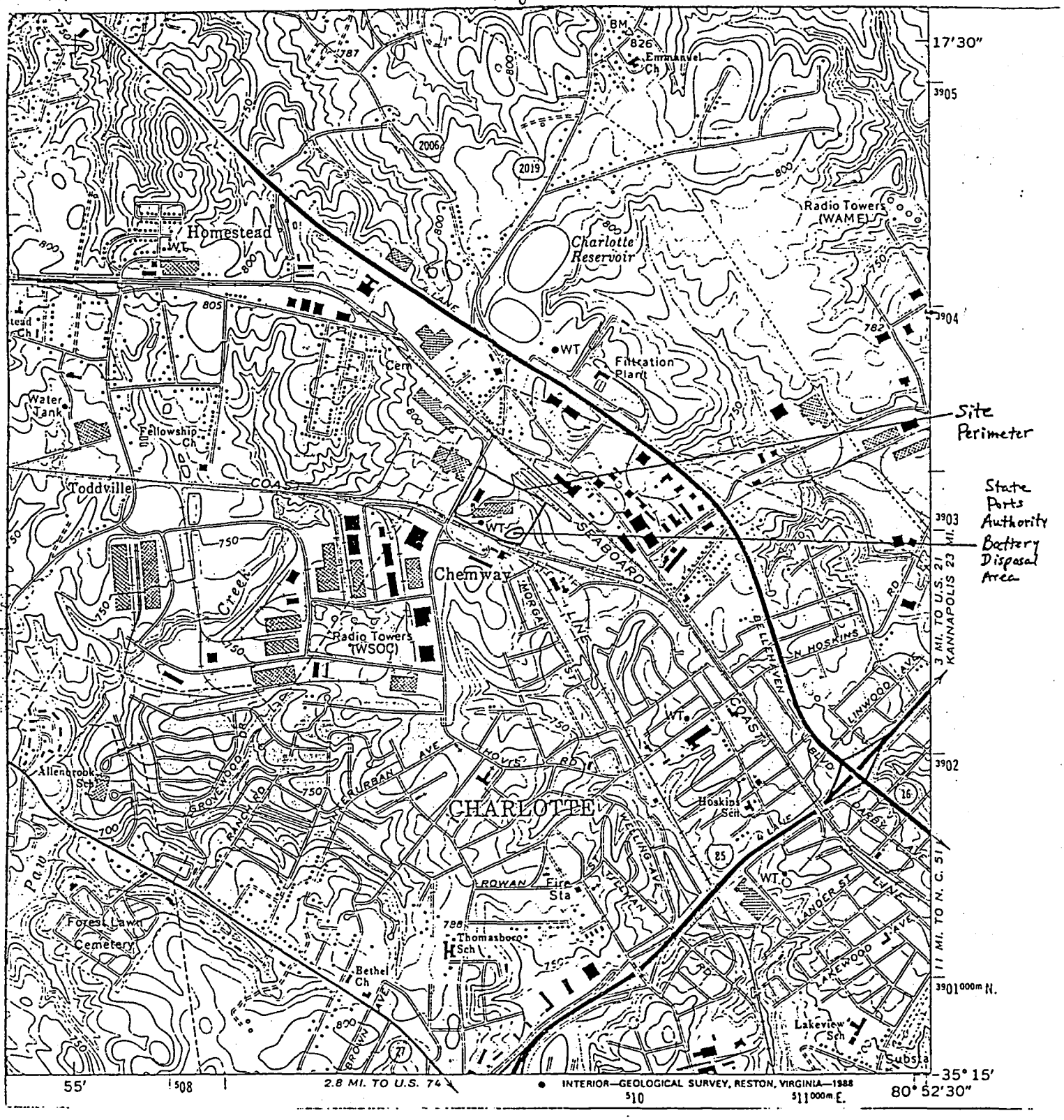
Keith Snavely

Keith Snavely
Hydrogeologist
NC Superfund

APPROVED:

Ms. Cynthia Gurley Date
EPA NC CERCLA Project Officer

SITE NAME: State Ports Authority NUMBER: NCD 980 844 336

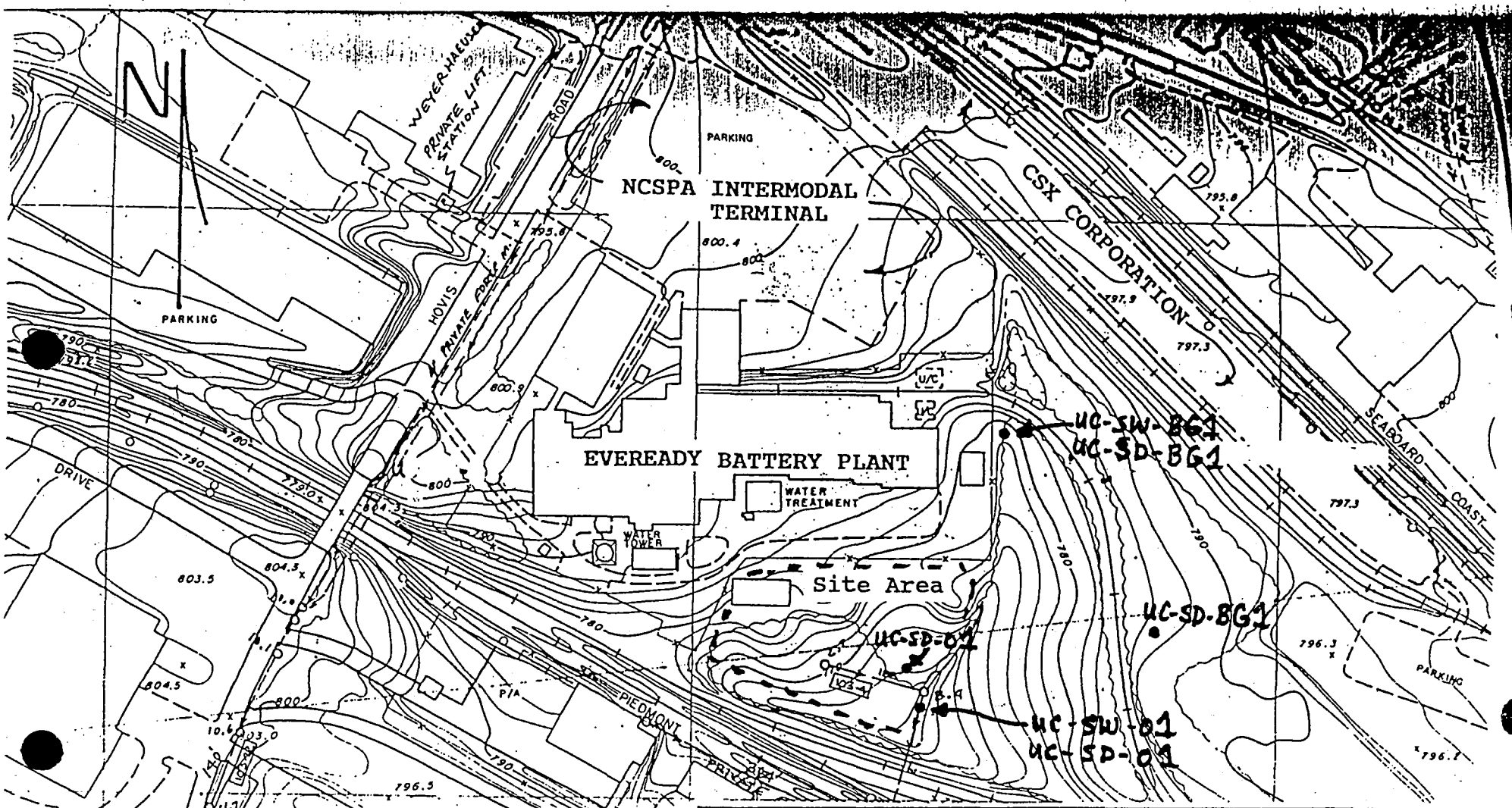


TOPOGRAPHIC MAP QUADRANGLE NAME: Mountain Island Lake SCALE: 1:24,000.

COORDINATES OF LOWER RIGHT-HAND CORNER OF 2.5-MINUTE GRID:

LATITUDE: 80° 52' 30" LONGITUDE: 35° 15' 0"

Figure 1



SCALE

200 100 0 200 400

TOPO MAP 103
SOURCE OF BASE MAP: CITY OF CHARLOTTE
ENGINEERING DEPT, CHARLOTTE, NC

Sample Location Map

SCALE: 1"= 200'	CONTOUR INTERVAL = 2'	DRAWN BY DWD
DATE: 1-30-92		REVISED

PHASE 1 ENVIRONMENTAL ASSESSMENT
NCSPA CHARLOTTE INTERMODAL TERMINAL

COASTAL ENVIRONMENTAL SERVICES CO.
ENVIRONMENTAL CONSULTING WILMINGTON, NORTH CAROLINA

Figure 2

8½ X 11 PRINTED ON NO. 1000H CLEARPRINT

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▶ 1

To Keith Snavely	From Cindy Gurley
Dept./Agency NC Superfund	Phone # EPA
Fax # 919 733-4811	Fax # 347-4862

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Table 1. Sample IDs,

Sample ID	Description	Comments and Notes
UC-SW-BG1	Background surface water sample in stream	Sample to be collected approximately 200 feet north of site
UC-SD-BG1	Background sediment sample in stream	Sample to be collected approximately 200 feet north of site
UC-SW-01	Target surface water sample	Located south of PPE of disposal area
UC-SD-01	Target sediment sample	Located south of PPE of disposal area
UC-SD-BG1	Background soil sample off-site	Off site grounds
UC-SD-01	Soil sample collected in disposal area	Soil sample in disposal area near stream
UC-TB-00	Trip Blank	Trip Blank

UC- Union Carbide TB-Trip Blank
BG- Background
SW- Surface water
SD- Sediment

If you have any questions about this plan, please contact me at 919/782-6703.

Sincerely,

Keith Snavely

Keith Snavely
Hydrogeologist
NC Superfund

APPROVED: Cynthia Gurley 3-16-95

Ms. Cynthia Gurley
EPA NC CERCLA Project Officer

Date

SITE HEALTH AND SAFETY PLAN

A. General Information

Site Name Union Carbide Battery ID # NCD 980 844 336

Location 5400 Hovis Road, Charlotte,
Mecklenburg County, NC

Proposed Date of Investigation March 23, 1995

Date of Briefing March 22, 1995

Date of Debriefing March 24, 1995

Nature of Visit (check one):

On-Site Reconnaissance	
Off-Site Reconnaissance	
Sampling	X
Sampling Overview	
Remediation Overview	

Health Department Official Contacted Mrs. Cooper

Date of Contact March 8, 1995

Site Investigation Team: All site personnel have read the Site Health and Safety Plan and are familiar with its provisions.

	Personnel	Responsibilities	Signature
Team 1	Keith Snavely	team leader, sampling	
Team 1	Grover Nicholson	sampling	
Team 2			
Team 2			

Plan Preparation:

Prepared By: David Lilley, Industrial Hygiene Consultant David B. Lilley

Reviewed By: Jack Butler, Environmental Engineering Supervisor

B. SITE/WASTE CHARACTERISTICS

Waste Type(s) __X__ Liquid __X__ Solid _____ Sludge _____ Gas _____ Vapor

Characteristics _____ Corrosive __X__ Ignitable _____ Radioactive

__X__ Volatile __X__ Toxic _____ Reactive _____ Other

List Known or Suspected Hazards (physical, chemical biological or radioactive) on Site and their toxicological effects. Also, if known, list chemical amounts

HAZARD	WARNING PROPERTIES	EXPOSURE LIMIT
Toluene	Odor Threshold (OT) = 0.17 - 40 ppm	50 ppm
Tetrachloroethylene	OT = 4.68 - 50 ppm	25 ppm
PCBs	OT = no data	1 mg/m^3
Manganese	OT = no data	5 mg/m^3
Zinc	OT = no data	10 mg/m^3
Lead	OT = no data	0.05 mg/m^3
Cadmium	OT = no data	0.01 mg/m^3

UNDERGROUND UTILITIES CHECKLIST

Utility	Locator/Contact Person	Phone #	Date of Location
Power	NA		
Telephone	NA		
Gas	NA		
Water	NA		
Sewer	NA		

Call made by:

ID # NCD 980 844 336

Facility Description: Size about 2 acres Buildings yes

Disposal Methods Being Investigated The property is a battery disposal site.

Unusual Features on Site (dike integrity, power lines, terrain, etc.): none known

History of the Site: The property is a former battery disposal site.

C. HAZARD EVALUATION

The site can be toured and sampled in level D protection. PE or PVC gloves will be worn while collecting water and sediment samples. PE or PVC gloves over nitrile gloves will be worn while collecting discolored sediment. Tyvek suits (saranex in wet conditions) will be carried to the sediment/surface water sampling sites and will be worn if the samples cannot be collected without getting clothing muddy. Steel toed work boots will be worn while collecting sediment and surface water, steel toed hiking boots may be worn while collecting drinking water samples.

D. WORK PLAN INSTRUCTION

Map or Sketch Attached? yes

Perimeter Identified? no

Command Post Identified? no

Zones of Contamination Identified? no

Personal Protective Equipment/Level of Protection: ____C _X_D

Modifications Wear goggles, face shield, and PVC gloves while preparing acid preserved samples, goggles and PVC gloves while collecting acid preserved samples. Avoid breathing acid vapors.

ID # NCD 980 844 336

Surveillance Equipment:

_____ HNU	_____ Detector Tubes and Pumps
_____ OVA	_____ 02 Meter
_____ Explosimeter	_____ Radiation Monitor

Decontamination Procedures

_____Level C Respirator wash, respirator removal, suit wash (if needed), suit removal, boot wash, boot removal and glove removal.

___X___Level D Boot wash and rinse and boot removal, suit removal, glove and goggle removal.

Modifications Dispose of trash properly, on-site if possible.

Work Schedule/Visit Objectives The purpose of this visit is to determine if the site poses a threat to the public health or environment because of releases of contaminants to soil, surface water, groundwater, or air. Sampling may consist of surface water and sediment sampling.

EMERGENCY PRECAUTIONS

Route of Exposure	First Aid
Eyes	irrigate immediately
Skin	soap and water wash
Inhalation	fresh air and artificial respiration
Ingestion	get medical attention immediately

ID # NCD 980 844 336

Location of Nearest Phone: unknown (nearby businesses/residences?)

Hospital (Address and Phone Number)

Mercy Hospital, 2001 Vail Avenue, Charlotte, NC (704) 379-5000

can handle chemically contaminated patients

Emergency Transportation Systems (Phone Numbers)

Fire 911

Ambulance 911

Rescue Squad 911

Emergency Route to Hospital Take a right onto Hovis Road, then a right onto Route 16. Exit Route 16 onto Route 74/27, then turn right onto Hawthorne Road. From Hawthorne Road, turn left onto Randolph Road, left onto N. Caswell Rd, then right onto Vail Ave. The hospital is about 7 miles from the site.

PREVAILING WEATHER CONDITIONS AND FORECAST Partly cloudy, high in the upper 70s.

EQUIPMENT CHECKLIST

___	Air purifying respirator	X	First Aid Kit
___	Cartridges for respirator	X	3 gal. Deionized H20
X	Eye Wash Unit	X	Rain suit
___	HNU	X	Gloves (PE/PVC/nitrile/cloth)
___	OVA	X	Boots/Boot Covers
___	Explosimeter	X	Coveralls (tyvek/saranex)
___	Radiation Monitor	X	Eye Protection (goggles/shield)
X	Decontamination Materials	X	Hard Hat

Poison Control Center - State Coordinator
Duke University Medical Center
Telephone: 1-800-672-1697
Box 3024
Durham, NC 27710

ASHEVILLE 704-255-4490	Western NC Poison Control Center Memorial Mission Hosp. 509 Biltmore Ave. 28801	HENDERSONVILLE 704-693-6522 Ext. 555,556	Margaret R. Pardee Memorial Hospital Fleming St., 28739
CHARLOTTE 704-379-5827	Mercy Hospital 2001 Vail Ave, 28207	HICKORY 704-322-6649	Catawba Mem. Hosp. Fairgrove Chur. Rd 28601
DURHAM 1-800-672-1697	Duke Univ. Med. Center Box 3007, 27710	JACKSONVILLE 919-577-2555	Onslow Mem. Hospital Western Blvd. 28540
GREENSBORO 919-379-4105	Moses Cone Hospital 1200 N. Elm St. 27420	WILMINGTON 919-343-7046	New Hanover Mem. Hospital 2131 S. 17th St. 28401

Site
28216
28202
28203
28204
28207
FOR DETAIL SEE DOWNTOWN INSET
WEST CHARLOTTE PARK
NORTH LIBRARY
UNIVERSITY PARK CENTER
NORTHWEST JR HIGH SCHOOL
J T WILLIAMS JR HIGH SCHOOL
LINCOLN HEIGHTS ELEM. SCHOOL
DRUID HILLS ELEM. SCHOOL
THOMASBORO ELEM. SCHOOL
OAKLAWN CEMETERY
OAKLAWN ELEM. SCHOOL
TRYON HILLS ELEM. SCHOOL
FREEDOM MALL
ENDERLY PARK
WEST LIBRARY
JOHNSON C. SMITH UNIVERSITY
N. PINEWOOD CEMETERY
GREENTLEEF PARK
AMTRAK STATION
BRUNS AVE ELEM. SCHOOL
IRWIN AVE ELEM. SCHOOL
ELMWOOD CEMETERY
BELMONT CENTER LIBRARY
ASHLEY PARK ELEM. SCHOOL
SPAUGH JR HIGH SCHOOL
FRAZIER PARK
SETTLERS CEMETERY
MAIN LIBRARY
FIRST WARD ELEM. SCHOOL
PIEDMONT ELEM. SCHOOL
BRYANT PARK
CAROLINA GOLF CLUB
WEST BLVD LIBRARY
BARRINGER ELEM. SCHOOL
REVOLUTION PARK & GOLF COURSE
DILWORTH ELEM. SCHOOL
CHILDRENS THEATRE
MIDTOWN SQUARE
PRESBYTERIAN SPEC. HOSP
PRESBYTERIAN HOSP
MERCY HOSP
ORTHOPAEDIC HOSP
INDEPENDENCE PARK
ELIZABETH ELEM. SCHOOL
KINGS COLLEGE
LATTA PARK
ST PATRICKS CATHOLIC SCHOOL
COLONIAL PARK
CAROLINAS MEDICAL CENTER
CHARLOTTE INSTITUTE OF REHABILITATION
EDGEHILL PARK
MARIE DAVIS ELEM. SCHOOL
SEDGEFIELD PARK
SEDGEFIELD JR HIGH SCHOOL
SEDGEFIELD ELEM. SCHOOL
EASTOVER PARK
EASTOVER ELEM. SCHOOL
MYERS PARK LIBRARY
MYERS PARK SHOP. CEN.
MINT MUSEUM OF ART
FREEDOM PARK
MYERS PARK ELEM. SCHOOL
CHARLOTTE CATHOLIC HIGH SCHOOL
SCALEYBARK LIBRARY
SOUTHERN R.R.
CSX R.R.
BROOKSHIRE FRWY
I-85
I-77
I-277
I-485
N HOSKINS RD
ROZZELLES FERRY RD
BEATTIES FORD RD
STATESVILLE AVE
N GRAHAM ST
TUCKASEEGEE RD
FREEDOM DR
ASHLEY RD
CAMP GREENE ST
W TRADE ST
W 4TH ST EXT
W MOREHEAD ST
BLVD WILKINSON
REMOUNT BLVD
CLANTON RD
S TRYON ST
S KINGS DR
PROVIDENCE RD
EASTOVER RD
DALTON AVE
N TRYON ST
N CHURCH ST
N DAVIDSON ST
E 10TH ST
CENTRAL AVE
HAWTHORNE LN
INDEPENDENCE BLVD
E MOREHEAD ST
S MINT ST
S CALDWELL ST
S BREVARD ST
S DAVIDSON ST
S STONEWALL ST
S TRYON ST
S CHURCH ST
S MCDOWELL ST
S INDEPENDENCE BLVD
CLIFFWOOD DR
W TREMONT AVE
SOUTH BLVD
KENILWORTH AVE
QUEENS RD
NORRIS AVE
W 30TH STE

TO BE COMPLETED BY PROJECT MANAGER

PROJECT MANAGER: Keith Snavely PROJECT: Union Carbide Battery

INVESTIGATION DATE: March 23, 1995

RECONNAISSANCE _____ SAMPLING VISIT __X__ REMEDIATION/SAMPLING OVERVIEW ____

Materials Used (Please insert a number in the blank)

_____ Air Purifying respirator cartridges
_____ Eye Wash Units
_____ First Aid Kit
_____ Gloves (polyethylene)
_____ Gloves (PVC)
_____ Gloves (nitrile)
_____ Gloves (cloth)
_____ Boot covers
_____ Coveralls (tyvek)
_____ Coveralls (saranex)

Respirator Worn By

Approximate Time in Respirator

Air Monitoring Data (Include Calibration Reading)

HNU: _____

OVA: _____

Explosimter: _____

Radiation Meter: _____

Were there any injuries? _____ If yes, explain: _____

If the maximum personal protective equipment as outlined in the Hazard Evaluation Section was not used, please justify:

Visitors Present

Organization Represented

Signature

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Toluene (Methyl benzene, toluol)

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula C_7H_8 1,2,3,4

Natural Physical State at 25°C liquid 1,2,3,4
Vapor Pressure 20 mm Hg at 20°C 3
Melting Point -95 °F/°C Boiling Point 110.6 °F/°C 1,3,4
Flash Point (open or closed cup) 40 °C/°F 1,2,3,4

Solubility - H_2O slightly soluble 1,3,4

Other miscible with alcohol, chloroform, 1,3,4

ether, acetone, glacial acetic acid, carbon disulfide

Physical Features: (odor, color, etc.) colorless liquid with an aromatic odor, IP 8.82 eV, (3) derived from coal tar oil or petroleum

Relative response on HNU = 10

II. TOXICOLOGICAL DATA

Standards: 50 ppm (5) TLV 100 ppm (6) PEL 2000 ppm IDLH 4

Routes of Exposure: inhalation; ingestion, skin contact, eye contact

Acute/Chronic Symptoms: Narcotic in high concentrations, headache, lassitude, and nausea. Chronic: anemia and dermatitis. (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Toluene

III. HAZARDOUS CHARACTERISTICS
Reference

A. Combustibility Yes X No ___ 4

Toxic by-products _____ _____
_____ _____

B. Flammability LEL 1.0% UEL 7.0% 4

C. Reactivity Hazard strong oxidizers 3

D. Corrosivity Hazard yes/no pH: _____ _____

Neutralizing agent: _____ _____

E. Radioactive Hazard Exposure Rate
Background yes/no _____ _____

Alpha particles yes/no _____ _____

Beta particles yes/no _____ _____

Gamma radiation yes/no _____ _____

IV. REFERENCES

(1) The Merck Index, 11th Edition, 1989
(2) Documentation of the TLV, 4th Edition, 1980
(3) NIOSH Pocket Guide for Chemical Hazards, 1990
(4) NEPA, Protection Guide on Hazardous Materials, 8th Edition, 1984
(5) Threshold Limit Values and Biological Exposure Indices for 1993-1994.
(6) 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Perchloroethylene

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula C2 C14 — 1

Natural Physical State at 25oC liquid — 2

Vapor Pressure 14 mm Hg at 20oC — 2

Melting Point -2 oF/oC Boiling Point 250 oF/oC — 2

Flash Point (open or closed cup) N/A oC/oF — 2

Solubility - H_2O 0.015% — 2

Other misc with alcohol, ether, chloroform, benzene — 1

Physical Features: (odor, color, etc.) colorless liquid with an odor like ether or chloroform IP=9.32 eV (2) OVA Relative Response = 70%

II. TOXICOLOGICAL DATA

Standards: 25 ppm(3) TLV 25 ppm (4) PEL suspect human carcinogen IDLH 2

Routes of Exposure: Inhalation, Ingestion, Skin and/or Eye Contact (2)

Acute/Chronic Symptoms: Irritation of eyes, nose, and throat, nausea, flushed face and neck, vertigo, dizziness, incoordination, headache, carcinogen (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately.

Chemical Name: Perchloroethylene

III. HAZARDOUS CHARACTERISTICS
Reference

A. Combustibility Yes ___ No X 2

Toxic by-products _____ _____

_____ _____

B. Flammability LEL none UEL none 2

C. Reactivity Hazard Incompatible with strong oxidizers, chemically active metals, such as barium, lithium, and beryllium & barium; caustic soda; sodium hydroxide, potash (2)

D. Corrosivity Hazard yes/no pH: _____ _____

Neutralizing agent: _____ _____

E. Radioactive Hazard Exposure Rate

Background	yes/no	_____	_____
Alpha particles	yes/no	_____	_____
Beta particles	yes/no	_____	_____
Gamma radiation	yes/no	_____	_____

IV. REFERENCES

1. The Merck Index, 11th Edition, 1989
2. NIOSH Pocket Guide to Chemical Hazards, 1990
3. Threshold Limit Values and Biological Exposure Indices for 1993-94, ACGIH.
4. CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: PCBs (polychlorinated biphenyls) 42% & 54% chlorine

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula $C_{12}H_7Cl_3$ (42%) & $C_{12}H_7Cl_5$ (54%)	1-3
Natural Physical State at 25°C liquid	1-3
Vapor Pressure 0.001 mm Hg at 20°C	1-3
Melting Point -19-10 °F/°C Boiling Point 325-390 °F/°C	1-3
Flash Point (open or closed cup) 349-432 °C/°F	1
Solubility - H_2O insoluble	1-3
Other	

Physical Features: (odor, color, etc.) colorless to dark brown liquid with a mild hydrocarbon odor.

II. TOXICOLOGICAL DATA

Standards: 1 mg/m³ (42%) 0.5 mg/m³ (54%) (4) TLV; 1 mg/m³ (42%) 0.5 mg/m³ (54%) (5) PEL; potential human carcinogin (6) IDLH

Routes of Exposure: Inhalation, skin and ingestion

Acute/Chronic Symptoms: Irritates the eyes, nose, and skin. Can cause chloracne. Liver injury is possible. May cause jaundice and dark urine. (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: PCB's

III. HAZARDOUS CHARACTERISTICS Reference

A. Combustibility (Instability w/very high heat) 1,3

Toxic by-products HCl & CO gases may be realeased 1,3

B. Flammability LEL N/A UEL

C. Reactivity Hazard contact with strong oxidizers may 1,3 cause fire or explosion.

D. Corrosivity Hazard yes/no pH:

Neutralizing agent:

E. Radioactive Hazard Exposure Rate

Background yes/no

Alpha particles yes/no

Beta particles yes/no

Gamma radiation yes/no

IV. REFERENCES

1. Chemical Safety Data Guide, BNA - 1985.
2. Pocket Guide to Chemical Hazards, NIOSH - 1990.
3. PA Chemical Emergency Preparedness Program - Chemical Profiles - 1985
4. Threshold Limit Values and Biological Exposure Indices for 1993-1994, ACGIH
5. 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Manganese

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula Mn 1,2

Natural Physical State at 25°C solid 1,2

Vapor Pressure -- mm Hg at 20°C

Melting Point 2271 °F/°C Boiling Point 3564 °F/°C 1,2

Flash Point (open or closed cup) -- °C/°F

Solubility - H_2O N/A

Other

Physical Features: (odor, color, etc.) Metal, a lustrous, brittle, silvery solid (2)

II. TOXICOLOGICAL DATA

Standards: dust = 5 mg/m^3 (3) TLV; ceiling= 5 mg/m^3 (4) PEL; 10,000mg/m^3 (2) IDLH

Routes of Exposure: Inhalation, ingestion, skin/eye contact

Acute/Chronic Symptoms: Parkinson's disease; sleepiness; sleeplessness; mental problems; metal fume fever; dry throat coughing; tight chest; lower back pain; vomiting; difficulty breathing (2)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Manganese

III. HAZARDOUS CHARACTERISTICS Reference

A. Combustibility Yes ___ No x 1,2

Toxic by-products _____ _____

_____ _____

B. Flammability LEL N/A UEL _____ ____

C. Reactivity Hazard None ____

D. Corrosivity Hazard yes/no pH: _____ ____

Neutralizing agent: _____ ____

E. Radioactive Hazard Exposure Rate

Background yes/no _____ ____

Alpha particles yes/no _____ ____

Beta particles yes/no _____ ____

Gamma radiation yes/no _____ ____

IV. REFERENCES

1. Chemical Safety Data Guide - BNA, 1985.
2. Pocket Guide to Chemical Hazards, NIOSH, 1990.
3. Threshold Limit Values and Biological Exposure Indices for 1993-94, ACGIH
4. 29 CFR 1910.1000.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Zinc

I. PHYSICAL/CHEMICAL PROPERTIES

	Reference
Chemical Formula Zn	1
Natural Physical State at 25°C solid	1
Vapor Pressure _____ mm Hg at 20°C	_____
Melting Point 419.5 °F/°C Boiling Point 908 °F/°C	2
Flash Point (open or closed cup) _____ °C/°F	_____
Solubility - H_2O insoluble	1
Other soluble in acids and alkalis	1

Physical Features: (odor, color, etc.) shining white metal with bluish gray luster (1)

II. TOXICOLOGICAL DATA

	Zinc oxide dust	total dust		
Standards:	10 mg/m³(3) TLV	10 mg/m³(4) PEL	_____	IDLH _____

Routes of Exposure: Inhalation, Ingestion, Eye contact, skin contact

Acute/Chronic Symptoms: Inhalation of fumes can result in sweet taste, throat dryness, cough, weakness, generalized aching, chills, fever, nausea, vomiting. Ingestion of soluble salts may cause nausea, vomiting, purging (2).

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Zinc

III. HAZARDOUS CHARACTERISTICS — Reference

A. Combustibility Yes X No ___ — 1

Toxic by-products _____

B. Flammability LEL _____ UEL _____

C. Reactivity Hazard reacts slowly with ammonia water and aretic acid, rapidly with ammonia — 2

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard — Exposure Rate

Background	yes/no		
Alpha particles	yes/no		
Beta particles	yes/no		
Gamma radiation	yes/no		

IV. REFERENCES

(1) The Merck Index, 11th Edition, 1989

(2) Pocket Guide to Chemical Hazards, NIOSH, 1990

(3) The Condensed Chemical Dictionary, 11th Edition

(4) Threshold Limit Values and Biological Exposure Indices for 1993-94, ACGIH

(5) 29 CFR 1910.1000

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Lead, inorganic dusts

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula Pb 1

Natural Physical State at 25°C solid 1

Vapor Pressure N/A mm Hg at 20°C 1

Melting Point 327.4 °F/°C Boiling Point 1,740 °F/°C 1

Flash Point (open or closed cup) N/A °C/°F

Solubility - H_2O N/A

Other N/A

Physical Features: (odor, color, etc.) appearance and odor vary depending upon specific compound.

II. TOXICOLOGICAL DATA

suspected or confermed human carcinogen

Standards: .15 mg/m^3 (2) TLV 0.05 mg/m^3 (3) PEL N/A (4) IDLH

Routes of Exposure: inhalation, ingestion, eye contact, skin contact(3)

Acute/Chronic Symptoms: Acute: lassitude, pallor, constipation, abdominal pain, gingival gum line, tremors. Target organs: GI tract, CNS, kidneys, blood.(3)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately

Chemical Name: Lead, inorganic dusts

III. HAZARDOUS CHARACTERISTICS
Reference

A. Combustibility Yes ___ No X

Toxic by-products _____

_____

B. Flammability LEL N/A UEL _____

C. Reactivity Hazard None

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard Exposure Rate

Background	yes/no	_____
Alpha particles	yes/no	_____
Beta particles	yes/no	_____
Gamma radiation	yes/no	_____

IV. REFERENCES

(1) The Merck Index, 11th Edition, 1989
(2) Threshold Limit Values and Biological Exposure Indices for 1993-1994, ACGIH.
(3) 29 CFR 1910.1025
(4) Pocket Guide to Chemical Hazards, NIOSH, 1990.

HAZARDOUS SUBSTANCE INFORMATION FORM

Chemical Name: Cadmium dust (as Cd)

I. PHYSICAL/CHEMICAL PROPERTIES

Reference

Chemical Formula Cd 1

Natural Physical State at 25°C solid 1

Vapor Pressure N/A mm Hg at 20°C

Melting Point °F/°C Boiling Point °F/°C

Flash Point (open or closed cup) N/A °C/°F

Solubility - H_2O not soluble 1

Other

Physical Features: (odor, color, etc.) appearance and odor vary for specific compound.

II. TOXICOLOGICAL DATA

Standards: 0.01 mg/m³(2) TLV 0.2 mg/m³(3) PEL potential carcinogen (4)IDLH

Routes of Exposure: Inhalation and ingestion, skin contact, eye contact

Acute/Chronic Symptoms: cough, tight chest, headache, chills, muscle aches, nausea, diarrhea. (4)

First Aid: Inhalation: artificial respiration; Ingestion: get medical attention immediately; Eye contact: irrigate immediately; Skin contact: soap and water wash immediately.

Chemical Name: Cadmium dust (as Cd)

III. HAZARDOUS CHARACTERISTICS Reference

A. Combustibility Yes ___ No X 2

Toxic by-products _____

_____

B. Flammability LEL N/A UEL _____

C. Reactivity Hazard strong oxidizers, elemental sulfur, 2
selenium and tellurium.

D. Corrosivity Hazard yes/no pH: _____

Neutralizing agent: _____

E. Radioactive Hazard Exposure Rate

Background	yes/no	_____	_____
Alpha particles	yes/no	_____	_____
Beta particles	yes/no	_____	_____
Gamma radiation	yes/no	_____	_____

IV. REFERENCES

(1) The Merck Index, 11th Edition, 1989.
(2) Threshold Limit Values and Biological Exposure Indices for 1993-1994, ACGIH.
(3) 29 CFR 1910.1000
(4) Pocket Guide To Chemical Hazards, NIOSH, 1990.

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director

DEHNR

March 8, 1995

Mr. John Gibson
Solid and Hazardous Waste Program Manager
Mecklenburg County Department of Environmental Protection
700 North Tryon Street
Charlotte, NC 28202

COPY

RE: Site Inspection Prioritization
Union Carbide Corporation
NCD 980 844 336

Dear Mr. Gibson:

David Lilley of the NC Superfund Section spoke with Mrs. Cooper of your office today to notify you that the NC Superfund Section will conduct a site inspection of the subject site located in Mecklenburg County, North Carolina. The inspection will be conducted on March 23, 1995 by Keith Snavely of the NC Superfund Section.

The purpose of the inspection is to determine if the site poses a hazard to public health or the environment because of releases of contaminants to soil, surface water, groundwater, or air. The inspection team will take samples on and around the site to determine if a hazardous condition exists. Additionally, they will locate all nearby water supplies (surface and groundwater, community and private) and any close sensitive environments, schools, and day care centers.

This inspection is not an emergency situation but is a normal step in the evaluation of all uncontrolled and unregulated potential hazardous waste site sin North Carolina. You may want to have your representative meet the inspection team at the site., If so, please contact Keith Snavely at (919) 733-2801 and he will coordinate a meeting. I am enclosing background data on the site for your information.

If the inspection indicates the need for future study of the site, we will contact your office to advise. If you have any questions, please don't hesitate to call David Lilley or me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

Enclosures

cc: Phil Prete
Doug Holyfield
Pat Williamson
Scott Ross
David Lilley
Donna Keith

Federal
Trip Notification & Authorization

Prepared by: Keith Snavely

Today's Date: March 6, 1995

*Use Black Ink or Typewriter only-Staff to fill out first 2 blocks only.

Site Trip

Date of Trip: March 23, 1995

If trip date changed or cancelled note below:
Trip Date Changed To: Mar 22, 1995 Cancelled: ____

NCD#: 980-844-336 Site Name: Union Carbide Corp.
City: Charlotte County: Mecklenburg

Reason for Trip: Site Inspection Prioritization

Name of Hotel (Overnight Trip): _____ Hotel Telephone Number: ( ) ___ - _____

Authorized by: David B. [illegible]
Industrial Hygienist

Project Team Leader: Keith Snavely

Assistants: Grover Nicholson, _____, _____

Attach To Notification Form: 1 copy each:
Submit to the
Industrial Hygienist

- Preliminary Assessment Form (First page only)
- Site Map
- PA Transmittal Letter

(Please list appropriate County Health Department contact person to call to advise of trip)
Environmental Supervisor or Health Director to call: Mr. John Gibson Title: Solid & Hazardous Waste Program Mgr.
(Note if Dr., M.P., etc.)
Telephone Number: (704) 336 - 5500

Notes: Health Department Official Contacted: Mrs. Cooper
Back Up Letter Required: Yes ✓ No ____
Notified Mrs. Cooper for John Gibson on 3-8-95 (DBL)

Note: Signed original to Data Manager

Site Name: State Ports Authority
Site Number: NCD 980 844 336

Site Location: Charlotte, N.C.
Mecklenburg County
Latitude: 35 16 13.5
Longitude: 80 53 43.5

Date: July 06, 1992

Calculation Results

Distance from Site Location	Population Per Ring	Population Cumulative	Number of Households Per Ring	Number of Households Cumulative
0 to 1/4 mile	278	278	88	88
>1/4 to 1/2 mile	827	1,105	277	365
>1/2 to 1 mile	4,544	5,649	1,754	2,119
>1 to 2 miles	13,284	18,933	5,419	7,538
>2 to 3 miles	24,504	43,437	9,472	17,010
>3 to 4 miles	26,988	70,425	10,553	27,563

Note: The populations and number of households within specified target distance rings were calculated for the NC Superfund Section by the NC State Center for Geographic Information and Analysis using the 1990 US Census data. These values were calculated by summing the population and the number of households data for each census block located within each target ring. For census blocks lying only partially within the ring, the per cent area of the block within the ring was multiplied by the population and household densities of the block.

LATITUDE AND LONGITUDE CALCULATION WORKSHEET #2
LI USING ENGINEER'S SCALE (1/60)

SITE NAME: State Ports Authority CERCLIS #: NCD 980 844 336

AKA: _____ SSID: _____

ADDRESS: 5400 Hovis Road

CITY: Charlotte STATE: NC ZIP CODE: 28208

SITE REFERENCE POINT: Battery disposal area located 250' Due S of SE Corner of Main Building and 450' SSE of Water Tank

USGS QUAD MAP NAME: Mountain Island Lake TOWNSHIP: — N/S RANGE: — E/W

SCALE: 1:24,000 MAP DATE: 1969 PI 1983 SECTION: — 1/4 — 1/4 — 1/4

MAP DATUM: 1927 1983 (CIRCLE ONE) MERIDIAN: —

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP (attach photocopy):

LONGITUDE: 80° 52' 30" LATITUDE: 35° 15' 0"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5' GRID CELL:

LONGITUDE: 80° 52' 30" LATITUDE: 35° 15' 0"

CALCULATIONS: LATITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM LATITUDE GRID LINE TO SITE REF POINT: 223

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A x 0.3304 = 73.68"

C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1' 13.68"

D) ADD TO STARTING LATITUDE: 35° 15' 0.0" + 1' 13.5" =

SITE LATITUDE: 35° 16' 13.5"

CALCULATIONS: LONGITUDE (7.5' QUADRANGLE MAP)

A) NUMBER OF RULER GRADUATIONS FROM RIGHT LONGITUDE LINE TO SITE REF POINT: 222

B) MULTIPLY (A) BY 0.3304 TO CONVERT TO SECONDS:

A x 0.3304 = 73.34"

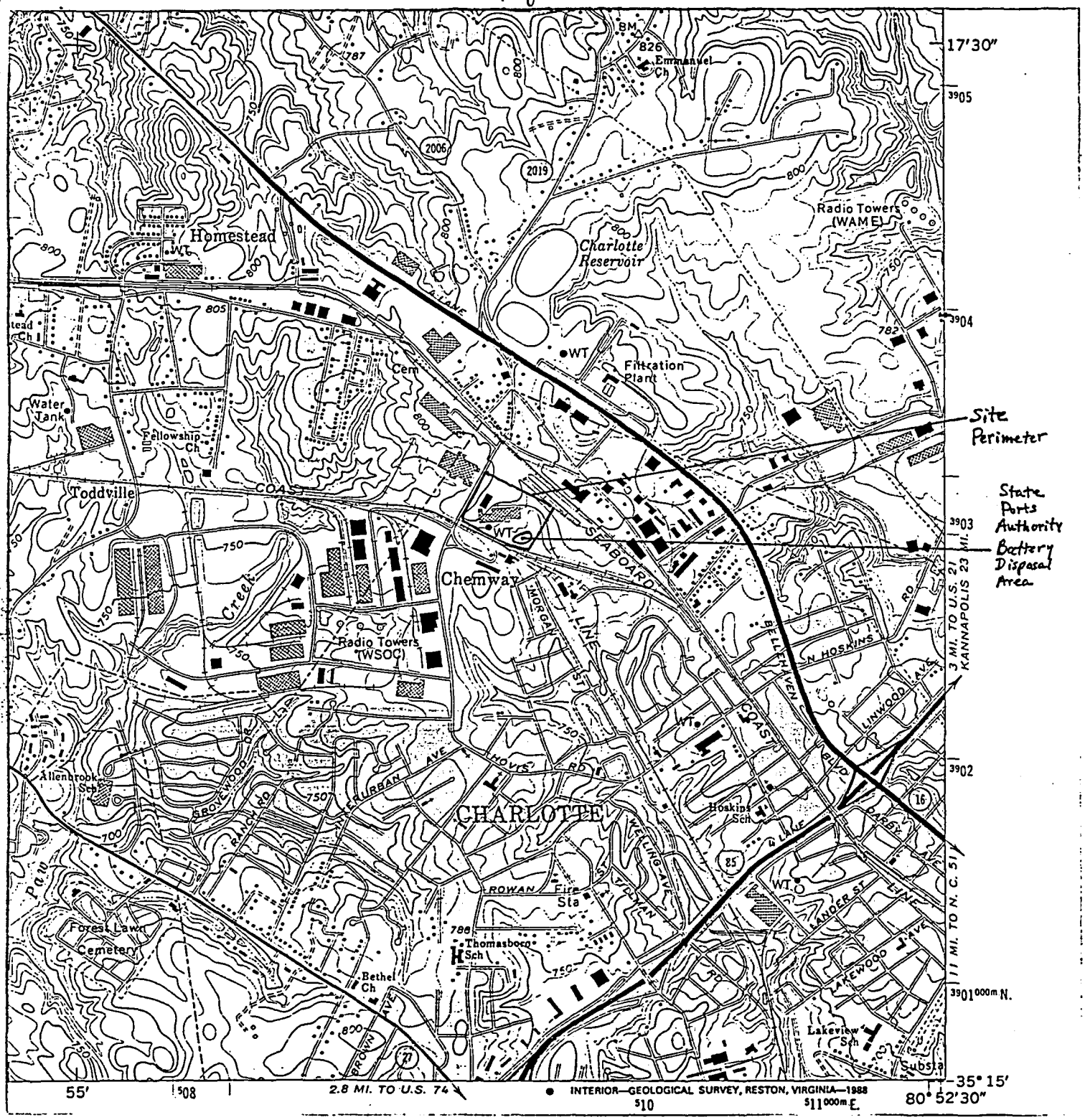
C) EXPRESS IN MINUTES AND SECONDS (1'= 60"): 1' 13.34"

D) ADD TO STARTING LONGITUDE: 80° 52' 30.0" + 1' 13.5" =

SITE LONGITUDE: 80° 53' 43.5"

INVESTIGATOR: Steve Williams DATE: 5/6/92

SITE NAME: State Ports Authority NUMBER: NCD 980 844 336



TOPOGRAPHIC MAP QUADRANGLE NAME: Mountain Island Lake SCALE: 1:24,000.

COORDINATES OF LOWER RIGHT-HAND CORNER OF 2.5-MINUTE GRID:

LATITUDE: 80° 52' 30" LONGITUDE: 35° 15' 0"

file

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

February 13, 1992

Ms. Bonnie Albritton
North Carolina State Board Authority
P. O. Box 9002
Wilmington, NC 28402

Subject: States Port Authority
NCD 980 844 336

Dear Ms. Albritton:

Thank you for forwarding the information delineating the portion of the subject site actually owned by the NC State Ports Authority. As Ms. Crosby discussed with you last week, the Superfund Section has contacted the US EPA requesting that the site be renamed "Union Carbide Battery Site". A copy of this request was forwarded to you last week. If you have any other questions about the site, please feel free to contact Lee Crosby or me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

cc: Lee Crosby

PD/kc

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

February 6, 1992

Mr. Craig Benedikt
NC Project Officer
EPA Region IV Waste Division
345 Courtland Street, NE
Atlanta, GA 30365

Subject: Proposed Change to Wastelan Preremedial Report 20

Dear Mr. Benedikt:

Please review the following proposed change to the Wastlan Preremedial Report 20 information:

SITE NAME: States Port Authority
EPA ID#: NCD 980 844 336

Proposed Change(s): Change name to: Union Carbide Battery Site

If you have any questions, please contact me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
Superfund Section

PD/kc/change.docwp

cc: Patricia Delaney
Pat DeRosa
File

NORTH CAROLINA PORTS

NORTH CAROLINA STATE PORTS AUTHORITY

POST OFFICE BOX 9002 / WILMINGTON, NORTH CAROLINA 28402 / (919) 763-1621

RECEIVED
FEB 7 1992
SUPERFUND SECTION

JAMES E. BROWN
Director, Planning

February 6, 1992

Ms. Lee Crosby
Environment, Health and
Natural Resources
Solid Waste Management
Superfund Branch
401 Oberlin Road
Raleigh, North Carolina 27605-1350

Dear Ms. Crosby:

I enjoyed talking with you yesterday and appreciate your understanding of our position in requesting efforts be made to remove the North Carolina State Ports Authority's (NCSPA) name from existing EPA file number NC D980844336 and titled "State Ports Authority." It is my understanding you intend to immediately submit a form to EPA renaming subject file "Battery Disposal Site" or "Union Carbide Disposal Site" thereby eliminating the possibility of naming the NCSPA as a potential responsible party. Please furnish the NCSPA a copy of the form you submit to EPA.

The referenced EPA file resulted from our request of the State Property Office to investigate the "disposal site" to determine its impact on future development of the site should the NCSPA acquire the Godley property (former Union Carbide property) located in Charlotte, North Carolina. As a result of the findings of subject investigation reported in your letter dated March 15, 1985 to Alton Phillips (copy enclosed), the NCSPA entered into negotiations to purchase only 6± acres of existing paved open area located approximately 400 feet from the 2 acres of hazardous waste disposal. I have enclosed a copy of a photograph outlining in red the portion of property acquired by NCSPA. The contaminated site is highlighted in yellow.

Should you need additional information, please feel free to contact me. Again, thank you in advance for your assistance in clearing up this matter.

Sincerely,

Bonnie R. Albritton

Bonnie R. Albritton
Property Administrator

Enclosures

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

25 March 1985

Mr. Alton Phillips
Real Property Agent
State Property Office
Department of Administration
116 West Jones St.
Raleigh, NC 27611

Dear Mr. Phillips:

In response to a request from the State Property office, the Solid and Hazardous Waste Management Branch initiated a site investigation of the property leased by the State Ports Authority. On February 13, 1985, soil and stream samples were taken from a battery disposal area at 5400 Hovis Road in Charlotte.

Analysis of the surface water from a stream along the perimeter of the battery disposal site shows 170 ppm toluene and 50 ppm tetrachloroethylene. No purgeables including toluene and tetrachloroethylene were detected in the soil. Laboratory analyses also indicates that low concentrations of polychlorinated biphenyls (PCBs) may be present in the soil.

50 ppb! see lab sheet

All inorganic analyses of all soil and stream samples have not been completed. However, EP toxicity tests of one sample do not indicate the presence of barium, cadmium, chromium, lead, silver or mercury. The EP toxicity level for manganese is 6.8 ppm and for zinc is 64 ppm.

The levels of manganese and zinc are more than ten times greater than EPA interim primary drinking water standards. Therefore, the Solid and Hazardous Waste Management Branch would not approve disposal of the battery waste in a sanitary landfill in North Carolina.

Regulations require that hazardous waste removed from the site be manifested to an approved hazardous waste landfill. The cost is approximately $20.00 per cubic yard. If one acre of soil is excavated at a depth of four to ten feet, approximately 6,500 to 16,000 cubic yards of soil would need to be removed.

If the battery wastes remained on site, the disposal site would be subject to 10 NCAC 10G Section .0500 of the Solid Waste Management Rules for non-conforming sites/open dumps.

An Equal Opportunity / Affirmative Action Employer

If the State Ports Authority purchases the property at 5400 Hovis Road, the State as the owner of the property would be a responsible party for costs of removal of the waste or remedial action. The Solid and Hazardous Waste Management Branch does not recommend purchasing the property.

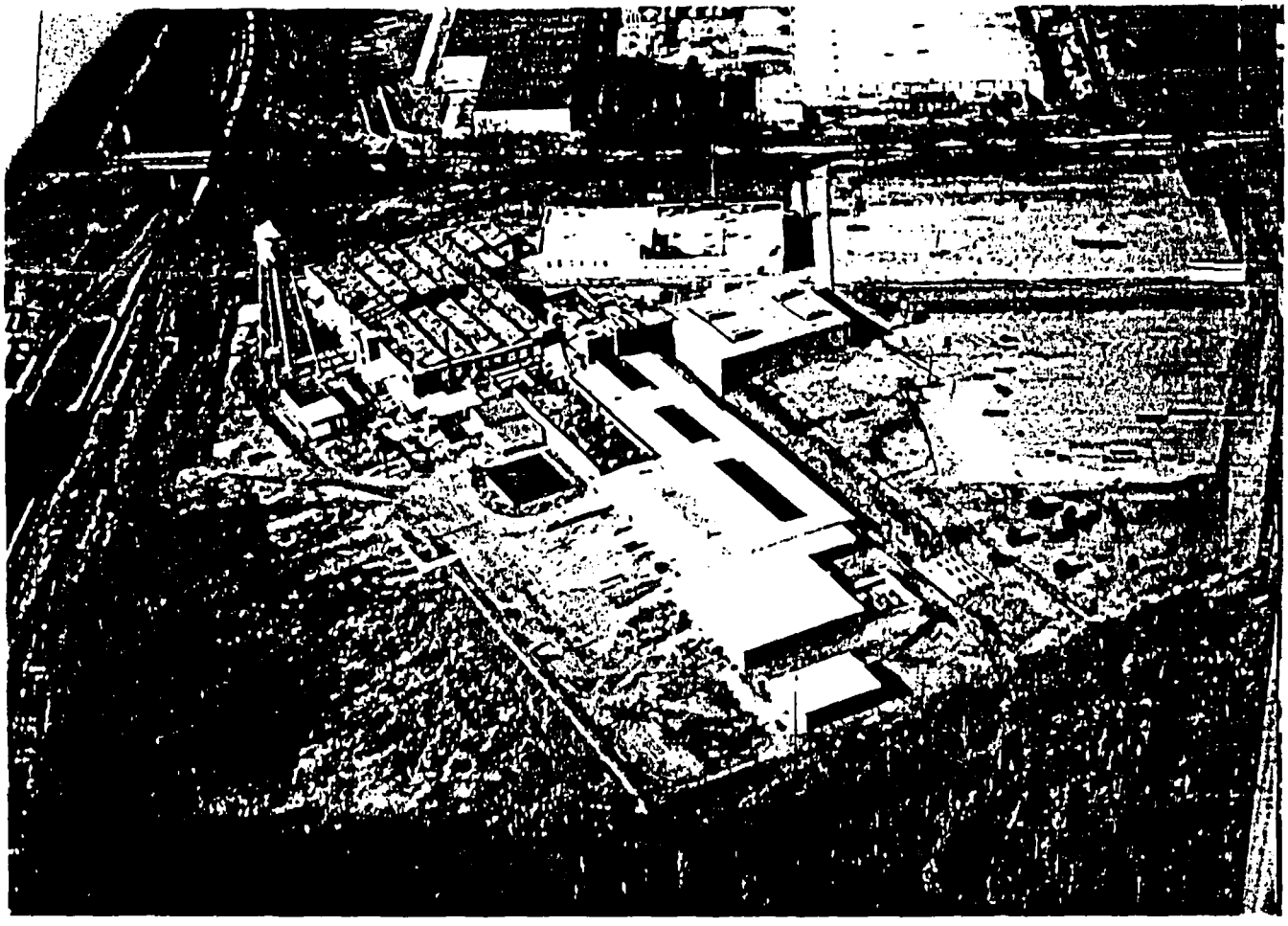
If you have any questions, please call me at 733-2178.

Sincerely,

Lee Crosby

Lee Crosby
RCRA 3012 Project Officer
Solid and Hazardous Waste Management Branch
Environmental Health Section

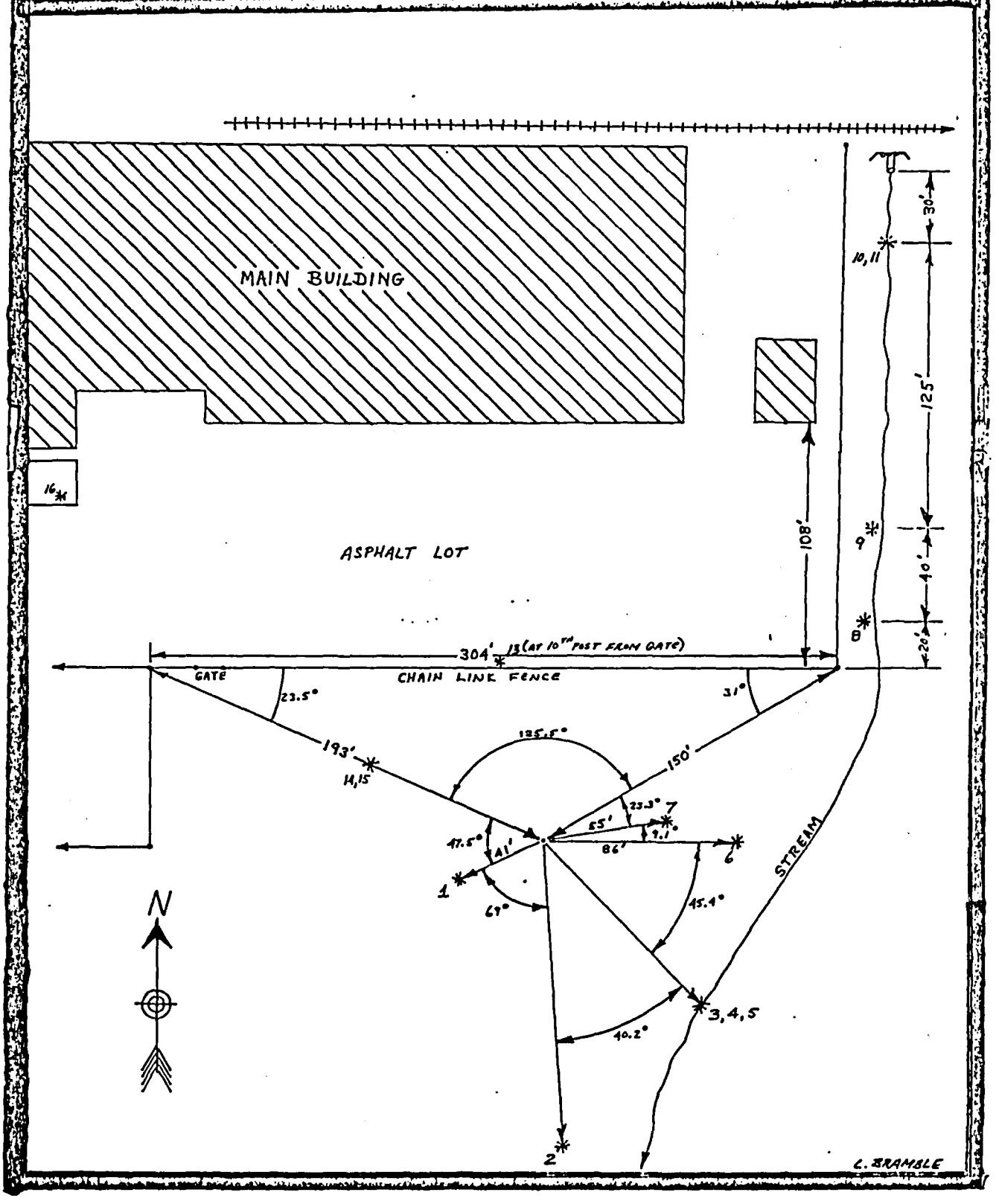
2149A

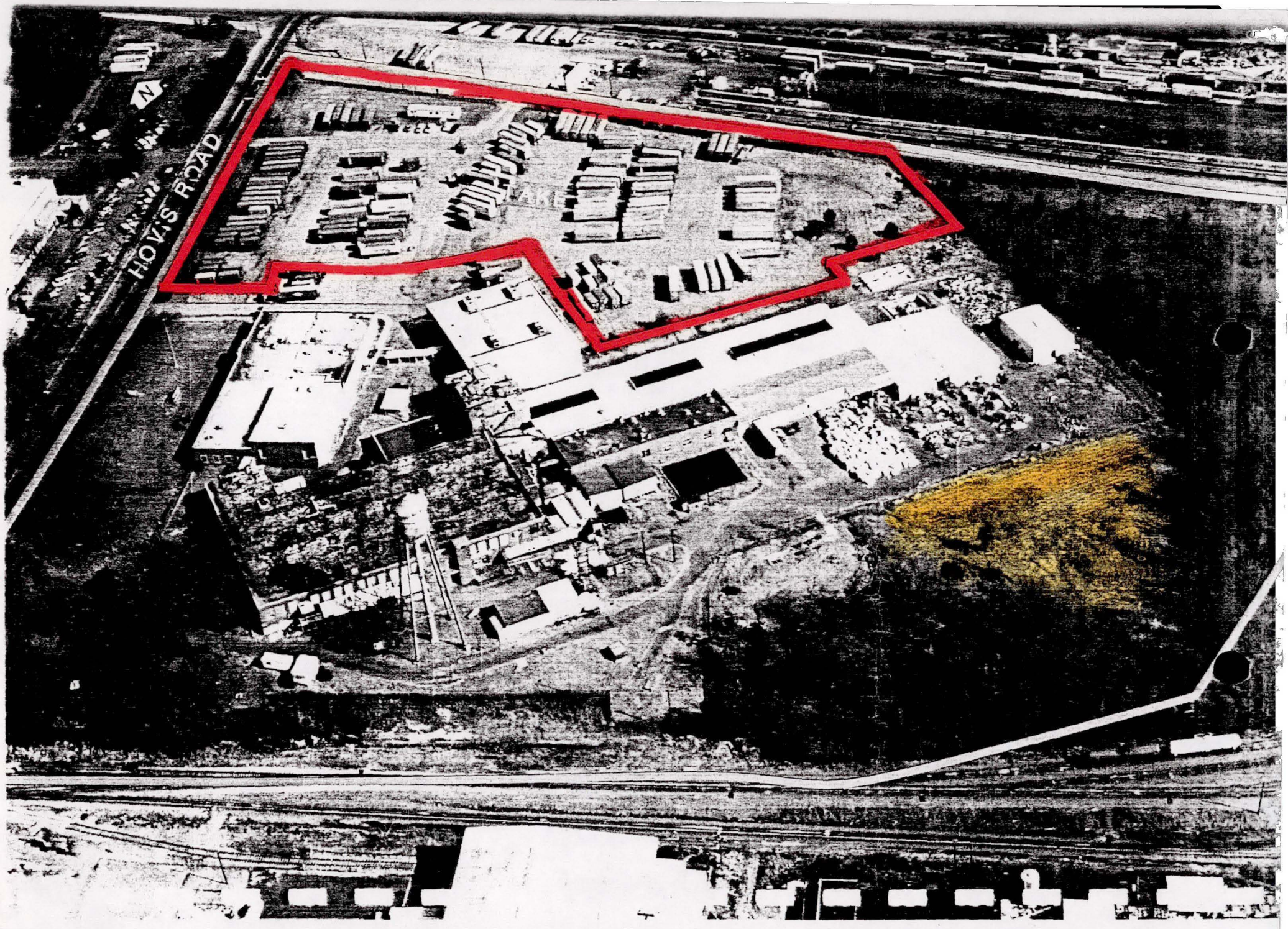


State Ports Authority
NC D980844336

STATE PORTS AUTHORITY — CHARLOTTE

SAMPLING POINTS ARE DESIGNATED WITH AN ASTERISK AND FIELD SAMPLE NUMBER




HOVIS ROAD
N

2:15	~~#12~~			augured soil sample
2:20	#13	inside parking lot (tenth fence post from gate)		Soil Sample
2:25	#14	84 ft from field X	1 foot auger hole	inorganic soil samp
2:30	#15		1 foot auger hole	organic soil samp
2:35	#16	across parking lot		H_2O sample from tank
2:45	Bkgd 17	outside		
2:50	Bkgd 18			

Time	Sample#	Photograph	distance field x to sampling pt	angle field x to sampling pt	inorganic
12.40 pm	1	#11	41 ft	85° 16'	soil
12:55 pm	2	#12	134 ft	15° 58' ~~34~~	inorganic soil
1:10 pm	3	#13	100 ft	135° 35'	stream sediment soil
		#14			
1:13 pm	4	#15			stream H_2O inorganic
		#16			
1:15 pm	5				stream H_2O organic
1:25 pm	#6	#17, 18, 19, #20	86 ft	289° 52'	inorganic soil
1:35	#7	#21	.55 ft	280° 47'	inorganic soil
	~~#8~~				
1:50	#8	#22, #23			inorganic soil
1:55	#9		≈ 45' south to sampling pt (fence post (near lamp post))		~~[illegible]~~ soil inorganic ~~[illegible]~~
2:00	#10		≈ 80' north to sampling pt (fence post near lamp post)		stream inorganic sediment
2:05	#11		(≈30' downstream from culvert underneath RR		inorganic H_2O

March 5, 1985

MEMORANDUM

TO: Lee Crosby

FROM: Len Bramble

RE: State Port Authority, Charlotte
60D980844336

Yesterday I received a call from Alton Phillips of the State Property Office (3-4346) regarding results from the RCRA 3012 site investigation at the Port Authority facility in Charlotte. They are anxiously awaiting our results so that they can initiate appropriate proceedings in regards to buying/leasing/condemning of this site.

I checked on our inorganic samples and found that only the water samples have been processed. The most downgradient water sample showed the following levels:

Manganese	13.06 MG/L
Zinc	31.8 MG/L
Mercury	0.0019 MG/L
Barium	0.2 MG/L

Bill Walker will call us when he reaches any results on the inorganic sediment samples.

I informed Mr. Phillips of the water sample results and indicated that our group will notify him as soon as additional results are determined.

LB/lw/2149A

RUSH

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D980844336 Field Sample Number 002631

Name of Site STATE Port Authority Site Location Havis Road, Charlotte

Collected By L. Crosby/L. Bramble ID# 1 Date Collected 13 Feb 1985 Time 12:40pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	6.5	___ Chloride	
✓ Barium	<0.1	✓ Barium	45	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	6.5	___ Copper	
✓ Chromium	<0.05	✓ Chromium	34	___ Fluoride	
✓ Lead	<0.1	✓ Lead	460	___ Iron	
✓ Mercury	<0.02	✓ Mercury	16	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<2.5	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Manganese	2.6	✓ Manganese	19,300	___ Sulfates	
✓ Zinc	64	✓ Zinc	10,500	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03632 FEB 20 85

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

RUSH

Site Number 60 D980844336 Field Sample Number 002632

Name of Site STATE Port Authority Site Location Hovis Road, Charlotte

Collected By L. Crosby / L. Bramble ID# #2 Date Collected 13 Feb 1985 Time 12:55

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	2.9	___ Chloride	
✓ Barium	0.1	✓ Barium	62	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	<2.4	___ Copper	
✓ Chromium	<0.05	✓ Chromium	23	___ Fluoride	
✓ Lead	<0.1	✓ Lead	91	___ Iron	
✓ Mercury	<0.02	✓ Mercury	0.77	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<2.4	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.4	___ pH	
✓ Manganese	6.8	✓ Manganese	4350	___ Sulfates	
✓ Zinc	4	✓ Zinc	1050	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03633 FEB 20 85

RUSH

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STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D980844336 Field Sample Number 002633

Name of Site STATE Port Authority Site Location Havis Road, Charlotte.

Collected By L. Crosby / L. Bramble ID# 3 Date Collected 13 Feb 85 Time 1:10 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	___ Solid	sediment sample from stream
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	1.5	Chloride	
✓ Barium	<0.1	✓ Barium	20	Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	<2.5	Copper	
✓ Chromium	<0.05	✓ Chromium	48	Fluoride	
✓ Lead	<0.1	✓ Lead	20	Iron	
✓ Mercury	<0.02	✓ Mercury	<4.6	Manganese	
✓ Selenium	<0.005	✓ Selenium	<0.25	Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	pH	
✓ Manganese	1.6	✓ Manganese	2130	Sulfates	
✓ Zinc	4	✓ Zinc	1290	TDS	
				Zinc	
				TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
Endrin		Toxaphene		PCB's	
Lindane		2,4-D		Petroleum	
Methoxychlor		2,4,5-TP(Silvex)		EDB	
				TOX	

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
Gross Alpha	
Gross Beta	

Date Received _____ Date Reported _____

Date Extracted _____ Date Analyzed _____

Reported By _____ Lab Number 03634 FEB 20 85

RUSH

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P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number NCD 980844336 Field Sample Number 002635

Name of Site STATE PORTS AUTHORITY Site Location 5400 Havis Road Charlotte

Collected By Crosby / Bramble ID# 6 Date Collected 13 Feb 1985 Time 1:25 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	7.4	___ Chloride	
✓ Barium	0.1	✓ Barium	54	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	4.0	___ Copper	
✓ Chromium	<0.05	✓ Chromium	26	___ Fluoride	
✓ Lead	<0.1	✓ Lead	160	___ Iron	
✓ Mercury	<0.02	✓ Mercury	11	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<2.5	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Mn	4.1	✓ manganese	12,700	___ Sulfates	
✓ Zn	37	✓ zinc	14,800	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03635 FEB 20 85

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D980844336 Field Sample Number 002636

Name of Site State Ports Authority Site Location 5400 Hovis Road Charlotte

Collected By Crosby / Bramble ID# 7 Date Collected 13 Feb 1985 Time 1:35 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	19	___ Chloride	
✓ Barium	0.2	✓ Barium	77	___ Conductivity	
✓ Cadmium	0.15	✓ Cadmium	18	___ Copper	
✓ Chromium	<0.05	✓ Chromium	28	___ Fluoride	
✓ Lead	<0.1	✓ Lead	700	___ Iron	
✓ Mercury	<0.02	✓ Mercury	39	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<4.8	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.4	___ pH	
✓ Mn	16.0	✓ Manganese	74,400	___ Sulfates	
✓ Zn	380	✓ Zinc	50,500	___ TDS	
___		___		___ Zinc	
___		___		___ TOC	
___		___		___	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
___		___		___ TOX	
___		___		___	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls
___
___

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	
___	
___	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03636 FEB 20 85

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P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number ~~NC~~ 60 D980844336 Field Sample Number 002637

Name of Site STATE PORTS AUTHORITY Site Location 5400 Hovis Road Charlotte

Collected By Crosby / Bramble ID# 8 Date Collected 13 Feb 1985 Time 1:50 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	24	___ Chloride	
✓ Barium	0.2	✓ Barium	59	___ Conductivity	
✓ Cadmium	0.09	✓ Cadmium	11	___ Copper	
✓ Chromium	<0.05	✓ Chromium	49	___ Fluoride	
✓ Lead	<0.1	✓ Lead	440	___ Iron	
✓ Mercury	<0.02	✓ Mercury	40	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<5.0	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Mn	4.8	✓ Manganese	31,500	___ Sulfates	
✓ Zn	140	✓ Zinc	15,800	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY	RADIOCHEMISTRY	
Parameter	Parameter	Results PCi/l
___ (MF) Coliform Colonies/100mls	___ Gross Alpha	
___ (MPN) Coliform Colonies/100mls	___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03637 FEB 20 85

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P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D980844336 Field Sample Number 002638

Name of Site State Port Authority Site Location 5400 Hovis Road Charlotte

Collected By Crosby/Bramble ID# 9 Date Collected 13 Feb 1985 Time 1:55 pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
/ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	23	___ Chloride	
✓ Barium	0.1	✓ Barium	69	___ Conductivity	
✓ Cadmium	0.35	✓ Cadmium	33	___ Copper	
✓ Chromium	<0.05	✓ Chromium	33	___ Fluoride	
✓ Lead	<0.1	✓ Lead	230	___ Iron	
✓ Mercury	<0.02	✓ Mercury	72	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<5.0	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Manganese	8.7	✓ Manganese	67,100	___ Sulfates	
✓ Zinc	370	✓ Zinc	51,000	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY	RADIOCHEMISTRY	
Parameter	Parameter	Results PCi/l
___ (MF) Coliform Colonies/100mls	___ Gross Alpha	
___ (MPN) Coliform Colonies/100mls	___ Gross Beta	

Date Received _____ Date Reported _____

Date Extracted _____ Date Analyzed _____

Reported By _____ Lab Number 03638 FEB 20 85

DHS 3191 (Revised 2/84)

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STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

002639

Site Number 60 D980844336 Field Sample Number ~~[illegible]~~

Name of Site STATE PORT AUTHORITY Site Location Harris Road Charlotte

Collected By Crosby / Bramble ID# 10 Date Collected 13 Feb 1985 Time 2:00

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	2.0	___ Chloride	
✓ Barium	0.1	✓ Barium	30	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	<2.5	___ Copper	
✓ Chromium	<0.05	✓ Chromium	27	___ Fluoride	
✓ Lead	<0.1	✓ Lead	15	___ Iron	
✓ Mercury	<0.02	✓ Mercury	0.23	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<0.25	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Manganese	3.6	✓ Manganese	380	___ Sulfates	
✓ Zinc	2.6	✓ Zinc	540	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03639 FEB 20 85

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P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980 844 336 Field Sample Number 002641

Name of Site STATE Port AUTHORITY Site Location 5400 Havis Road, Charlotte

Collected By Crosby / Bramble ID# 13 Date Collected 13 Feb 85 Time 2:20

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	0.05	✓ Arsenic	37	Chloride	
✓ Barium	0.3	✓ Barium	250	Conductivity	
✓ Cadmium	0.19	✓ Cadmium	24	Copper	
✓ Chromium	<0.05	✓ Chromium	44	Fluoride	
✓ Lead	<0.1	✓ Lead	1700	Iron	
✓ Mercury	<0.02	✓ Mercury	75	Manganese	
✓ Selenium	<0.005	✓ Selenium	<4.9	Nitrate	
✓ Silver	<0.05	✓ Silver	2.5	pH	
✓ Mn	2.0	✓ Mn	88,800	Sulfates	
✓ Zn	335	✓ Zn	37,900	TDS	
				Zinc	
				TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
Endrin		Toxaphene		PCB's	
Lindane		2,4-D		Petroleum	
Methoxychlor		2,4,5-TP(Silvex)		EDB	
				TOX	

MICROBIOLOGY	RADIOCHEMISTRY	
Parameter	Parameter	Results PCi/l
(MF) Coliform Colonies/100mls	Gross Alpha	
(MPN) Coliform Colonies/100mls	Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03640 FEB 20 85

Revised 2 '84

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STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980844336 Field Sample Number 002642

Name of Site STATE PORT AUTHORITY Site Location 5400 Harris Road, Charlotte

Collected By Crosby / Bramble ID# 14 Date Collected 13 Feb 1985 Time 2:25pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	40	___ Chloride	
✓ Barium	0.1	✓ Barium	160	___ Conductivity	
✓ Cadmium	0.5	✓ Cadmium	57	___ Copper	
✓ Chromium	<0.05	✓ Chromium	28	___ Fluoride	
✓ Lead	<0.1	✓ Lead	490	___ Iron	
✓ Mercury	<0.02	✓ Mercury	130	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<5.0	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Mn	4.3	✓ Mn	117,000	___ Sulfates	
✓ Zn	1400	✓ Zn	108,000	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY	RADIOCHEMISTRY	
Parameter	Parameter	Results PCi/l
___ (MF) Coliform Colonies/100mls	___ Gross Alpha	
___ (MPN) Coliform Colonies/100mls	___ Gross Beta	

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03641 FEB 20 85

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STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980 844 336 Field Sample Number 002644
Name of Site STATE PORT AUTHORITY Site Location 5400 Hovis Rd Charlotte
Collected By Crosby / L. Bramble ID# 17 Date Collected 13 Feb 85 Time 2:45
Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	X Solid	
___ Surface Water	___ Liquid	
X Soil	___ Sludge	
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	4.0	___ Chloride	
✓ Barium	<0.1	✓ Barium	40	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	<2.5	___ Copper	
✓ Chromium	<0.05	✓ Chromium	23	___ Fluoride	
✓ Lead	<0.1	✓ Lead	40	___ Iron	
✓ Mercury	<0.02	✓ Mercury	0.48	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<2.5	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Mn	<0.03	✓ Mn	544	___ Sulfates	
✓ Zn	0.12	✓ Zn	78,700	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

Date Received _____ Date Reported _____
Date Extracted _____ Date Analyzed _____
Reported By _____ Lab Number 03642 FEB 20 85

N. C. DEPARTMENT OF HUMAN RESOURCES
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STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980 844 336 Field Sample Number 002645

Name of Site STATE PORT AUTHORITY Site Location 5400 Havis Road Charlotte

Collected By Crosby / Bramble ID# 19 Date Collected 2/13/85 Time 2:05pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	___ Solid	rectangular battery parts
___ Surface Water	___ Liquid	
___ Soil	___ Sludge	
✓ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	180	___ Chloride	
✓ Barium	<0.1	✓ Barium	210	___ Conductivity	
✓ Cadmium	1.07	✓ Cadmium	54	___ Copper	
✓ Chromium	<0.05	✓ Chromium	10	___ Fluoride	
✓ Lead	<0.1	✓ Lead	400	___ Iron	
✓ Mercury	0.13	✓ Mercury	80	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<2.4	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.4	___ pH	
✓ Mn	14.7	✓ Mn	117,000	___ Sulfates	
✓ Zn	1990	✓ Zn	219,000	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY	RADIOCHEMISTRY	
Parameter	Parameter	Results PCi/l
___ (MF) Coliform Colonies/100mls	___ Gross Alpha	
___ (MPN) Coliform Colonies/100mls	___ Gross Beta	

EP Toxicity

Date Received _____ Date Reported _____

Date Extracted _____ Date Analyzed _____

Reported By _____ Lab Number 03643 FEB 20 85

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DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D980844336 Field Sample Number 002645

Name of Site STATE PORT AUTHORITY Site Location

Collected By Crosby / Bramble ID# 20 Date Collected 2/13/85 Time 2:05pm

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	___ Solid	2 Battery core.
___ Surface Water	___ Liquid	length
___ Soil	___ Sludge	diameter
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	Insufficient	✓ Arsenic	7.4	___ Chloride	
✓ Barium	Sample	✓ Barium	15	___ Conductivity	
✓ Cadmium	For	✓ Cadmium	<2.4	___ Copper	
✓ Chromium	Extraction	✓ Chromium	3.4	___ Fluoride	
✓ Lead		✓ Lead	44	___ Iron	
✓ Mercury		✓ Mercury	9	___ Manganese	
✓ Selenium		✓ Selenium	<0.24	___ Nitrate	
✓ Silver		✓ Silver	<2.4	___ pH	
✓ Manganese		✓ Manganese	4480	___ Sulfates	
✓ Zinc		✓ Zinc	3900	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

EP Toxicity

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03644 FEB 20 85

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980 844 336 Field Sample Number 2647

Name of Site STATE Port Authority Site Location Havis Rd Charlotte

Collected By Crosby Brambl ID# 21 Date Collected 13 Feb 85 Time

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	___ Solid	1 Battery core
___ Surface Water	___ Liquid	length: 7-5 inches
___ Soil	___ Sludge	diameter: <1 inch
___ Other	___ Other	

INORGANIC CHEMISTRY

Extractables Parameter	Results mg/l	Total Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	<0.01	✓ Arsenic	1.0	___ Chloride	
✓ Barium	<0.1	✓ Barium	<5.0	___ Conductivity	
✓ Cadmium	<0.05	✓ Cadmium	<2.5	___ Copper	
✓ Chromium	<0.05	✓ Chromium	<2.5	___ Fluoride	
✓ Lead	<0.1	✓ Lead	<5.0	___ Iron	
✓ Mercury	<0.02	✓ Mercury	1.1	___ Manganese	
✓ Selenium	<0.005	✓ Selenium	<0.25	___ Nitrate	
✓ Silver	<0.05	✓ Silver	<2.5	___ pH	
✓ Mn	0.8	✓ Mn	64	___ Sulfates	
✓ Zn	1.8	✓ Zn	57	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

EP Toxicity

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03645 FEB 20 85

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
STATE LABORATORY OF PUBLIC HEALTH
P. O. BOX 28047 - 306 N. WILMINGTON ST., RALEIGH 27611

Site Number 60 D 980 844 336 Field Sample Number 2648

Name of Site STATE Port Authority Site Location Havis Rd Charlotte

Collected By Crosby Bramble ID# 22 Date Collected 13 Feb 85 Time

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater	___ Solid	Battery
___ Surface Water	___ Liquid	
___ Soil	___ Sludge	
___ Other	X Other	

INORGANIC CHEMISTRY

Extractables Parameter	Results mg/l	Total Parameter	Results mg/l	Parameter	Results mg/l
✓ Arsenic	Insufficient	✓ Arsenic	Discontinued	___ Chloride	
✓ Barium	Sample	✓ Barium	after discussion	___ Conductivity	
✓ Cadmium	for	✓ Cadmium	w/Haz. Waste	___ Copper	
✓ Chromium	Extraction	✓ Chromium	Staff - Sample	___ Fluoride	
✓ Lead		✓ Lead	proved to be a	___ Iron	
✓ Mercury		✓ Mercury	piece of wood	___ Manganese	
✓ Selenium		✓ Selenium	rather than	___ Nitrate	
✓ Silver		✓ Silver	a battery part	___ pH	
✓ Mn		✓ Mn	weld	___ Sulfates	
✓ Zn		✓ Zn	27 Mar 85	___ TDS	
				___ Zinc	
				___ TOC	

ORGANIC CHEMISTRY

Parameter	Results mg/l	Parameter	Results mg/l	Parameter	Results mg/l
___ Endrin		___ Toxaphene		___ PCB's	
___ Lindane		___ 2,4-D		___ Petroleum	
___ Methoxychlor		___ 2,4,5-TP(Silvex)		___ EDB	
				___ TOX	

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/l
___ Gross Alpha	
___ Gross Beta	

EP Toxicity

Date Received ___ Date Reported ___

Date Extracted ___ Date Analyzed ___

Reported By ___ Lab Number 03646 FEB 20 85

Revised 2/84)

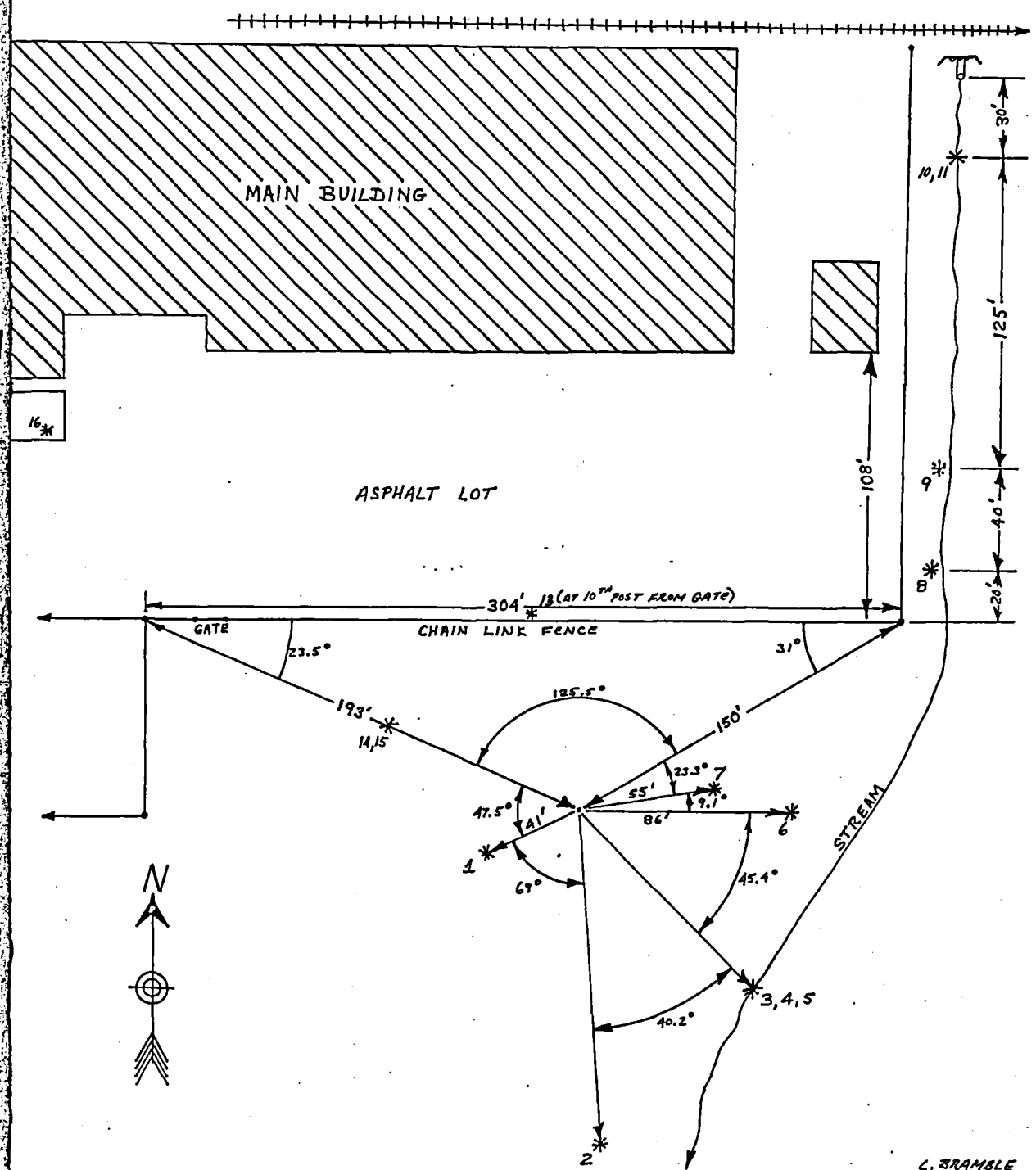
8/19/86

These analyses sheets are duplicates of the Computer printed analyses sheets in the SI.

Gram Nathersen

STATE PORTS AUTHORITY — CHARLOTTE

SAMPLING POINTS ARE DESIGNATED WITH AN ASTERISK AND FIELD SAMPLE NUMBER



ZINC/CARBON - POUNDS/YEAR

LECLANCHE

Parameter	Data in State's Letter of 3/31/83 lbs./yr.	Actual Data
Total Weight	1,232,000	661,404
Manganese	232,848	-
Manganese Dioxide	-	318,151
Zinc	299,376	81,273*
Chloride	181,104	56,251
Nitrate	54,208	-
Nitrogen (From Ammonium Chloride)	-	15,541
Mercury	34,496	127

*73,991 pounds as metalic zinc
7,282 pounds as from ZnCl2

GWB/rp
4/20/83

Mercury Content of Various Union Carbide Corporation Battery Types

Battery Type	Other Battery Designations	Mercury Content as a % of Battery Weight	Remarks
Leclanche	1) Carbon-Zinc Battery 2) "Standard" or "Ordinary" Flashlight Battery	0.02-0.04% ($HgCl_2$)	Manufactured in Asheboro, N. C., Plant I
Alkaline	1) Zinc-Manganese Dioxide Battery 2) "Eveready Energizer"	0.5-0.8% (elemental Hg)	Manufactured in Asheboro, N. C., Plant II
Mercury		25-43% (HgO) plus 0.5-0.8% (elemental mercury)	Manufactured in Bennington, Vt. All scrap mercury batteries are recovered for their Hg content or disposed of in a HW landfill

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

April 7, 1992

Mr. Craig Benedikt
NC Project Officer
EPA Region Iv Waste Division
345 Courtland Street, NE
Atlanta, GA 30365

Subject: Proposed Change to Wastelan Preremedial Report 20

Dear Mr. Benedikt:

Please review the following proposed change to the Wastelan Preremedial Report 20 information:

SITE NAME: States Port Authority
EPA ID #: NCD 980 844 336

Proposed change: Change name to Union Carbide Battery Site

This was an old battery manufacturing site formerly owned and operated by Union Carbide. A battery disposal area has been identified on the southern portion of the site. This area is not owned by the States Ports Authority and they would prefer not to have their name attached to the site (see attached). We request that the name be changed as indicated above.

If you have any questions, please contact me at (919) 733-2801.

Sincerely,

Pat DeRosa, Head
CERCLA Branch
NC Superfund Section

Attachment

PD/kc/change.doc

cc: Angie Coppola
Pat DeRosa
File

NORTH CAROLINA PORTS

NORTH CAROLINA STATE PORTS AUTHORITY

POST OFFICE BOX 9002 / WILMINGTON, NORTH CAROLINA 28402 / (919) 763-1621

RECEIVED
FEB 7 1992
SUPERFUND SECTION

JAMES E. BROWN
Director, Planning

February 6, 1992

Ms. Lee Crosby
Environment, Health and
Natural Resources
Solid Waste Management
Superfund Branch
401 Oberlin Road
Raleigh, North Carolina 27605-1350

Dear Ms. Crosby:

I enjoyed talking with you yesterday and appreciate your understanding of our position in requesting efforts be made to remove the North Carolina State Ports Authority's (NCSPA) name from existing EPA file number NC D980844336 and titled "State Ports Authority." It is my understanding you intend to immediately submit a form to EPA renaming subject file "Battery Disposal Site" or "Union Carbide Disposal Site" thereby eliminating the possibility of naming the NCSPA as a potential responsible party. Please furnish the NCSPA a copy of the form you submit to EPA.

The referenced EPA file resulted from our request of the State Property Office to investigate the "disposal site" to determine its impact on future development of the site should the NCSPA acquire the Godley property (former Union Carbide property) located in Charlotte, North Carolina. As a result of the findings of subject investigation reported in your letter dated March 15, 1985 to Alton Phillips (copy enclosed), the NCSPA entered into negotiations to purchase only 6± acres of existing paved open area located approximately 400 feet from the 2 acres of hazardous waste disposal. I have enclosed a copy of a photograph outlining in red the portion of property acquired by NCSPA. The contaminated site is highlighted in yellow.

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

25 March 1985

Mr. Alton Phillips
Real Property Agent
State Property Office
Department of Administration
116 West Jones St.
Raleigh, NC 27611

Dear Mr. Phillips:

In response to a request from the State Property office, the Solid and Hazardous Waste Management Branch initiated a site investigation of the property leased by the State Ports Authority. On February 13, 1985, soil and stream samples were taken from a battery disposal area at 5400 Hovis Road in Charlotte.

Analysis of the surface water from a stream along the perimeter of the battery disposal site shows 170 ppm toluene and 50 ppm tetrachloroethylene. No purgeables including toluene and tetrachloroethylene were detected in the soil. Laboratory analyses also indicates that low concentrations of polychlorinated biphenyls (PCBs) may be present in the soil.

All inorganic analyses of all soil and stream samples have not been completed. However, EP toxicity tests of one sample do not indicate the presence of barium, cadmium, chromium, lead, silver or mercury. The EP toxicity level for manganese is 6.8 ppm and for zinc is 64 ppm.

The levels of manganese and zinc are more than ten times greater than EPA interim primary drinking water standards. Therefore, the Solid and Hazardous Waste Management Branch would not approve disposal of the battery waste in a sanitary landfill in North Carolina.

Regulations require that hazardous waste removed from the site be manifested to an approved hazardous waste landfill. The cost is approximately $20.00 per cubic yard. If one acre of soil is excavated at a depth of four to ten feet, approximately 6,500 to 16,000 cubic yards of soil would need to be removed.

If the battery wastes remained on site, the disposal site would be subject to 10 NCAC 10G Section .0500 of the Solid Waste Management Rules for non-conforming sites/open dumps.

An Equal Opportunity / Affirmative Action Employer

If the State Ports Authority purchases the property at 5400 Hovis Road, the State as the owner of the property would be a responsible party for costs of removal of the waste or remedial action. The Solid and Hazardous Waste Management Branch does not recommend purchasing the property.

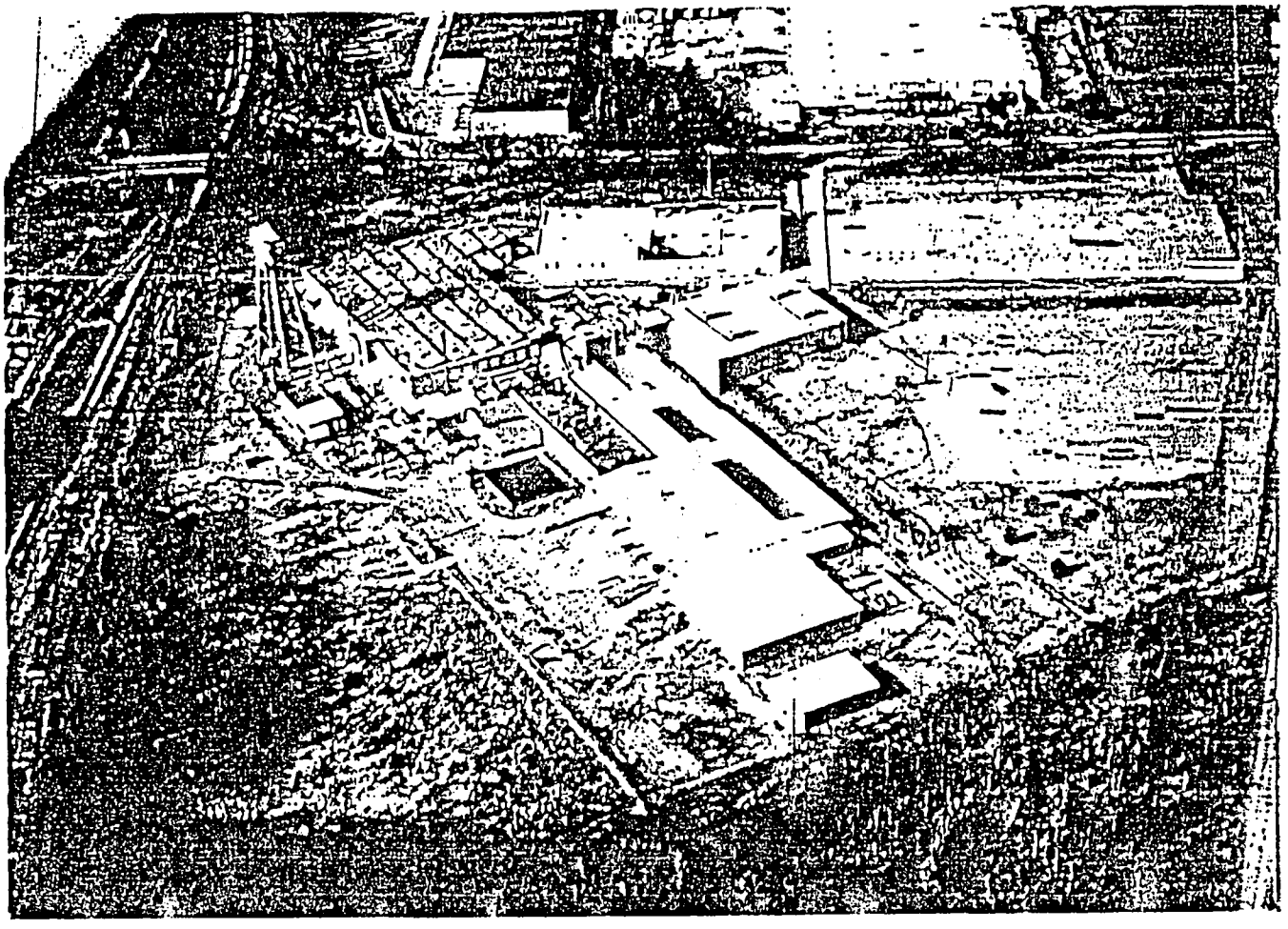
If you have any questions, please call me at 733-2178.

Sincerely,

Lee Crosby

Lee Crosby
RCRA 3012 Project Officer
Solid and Hazardous Waste Management Branch
Environmental Health Section

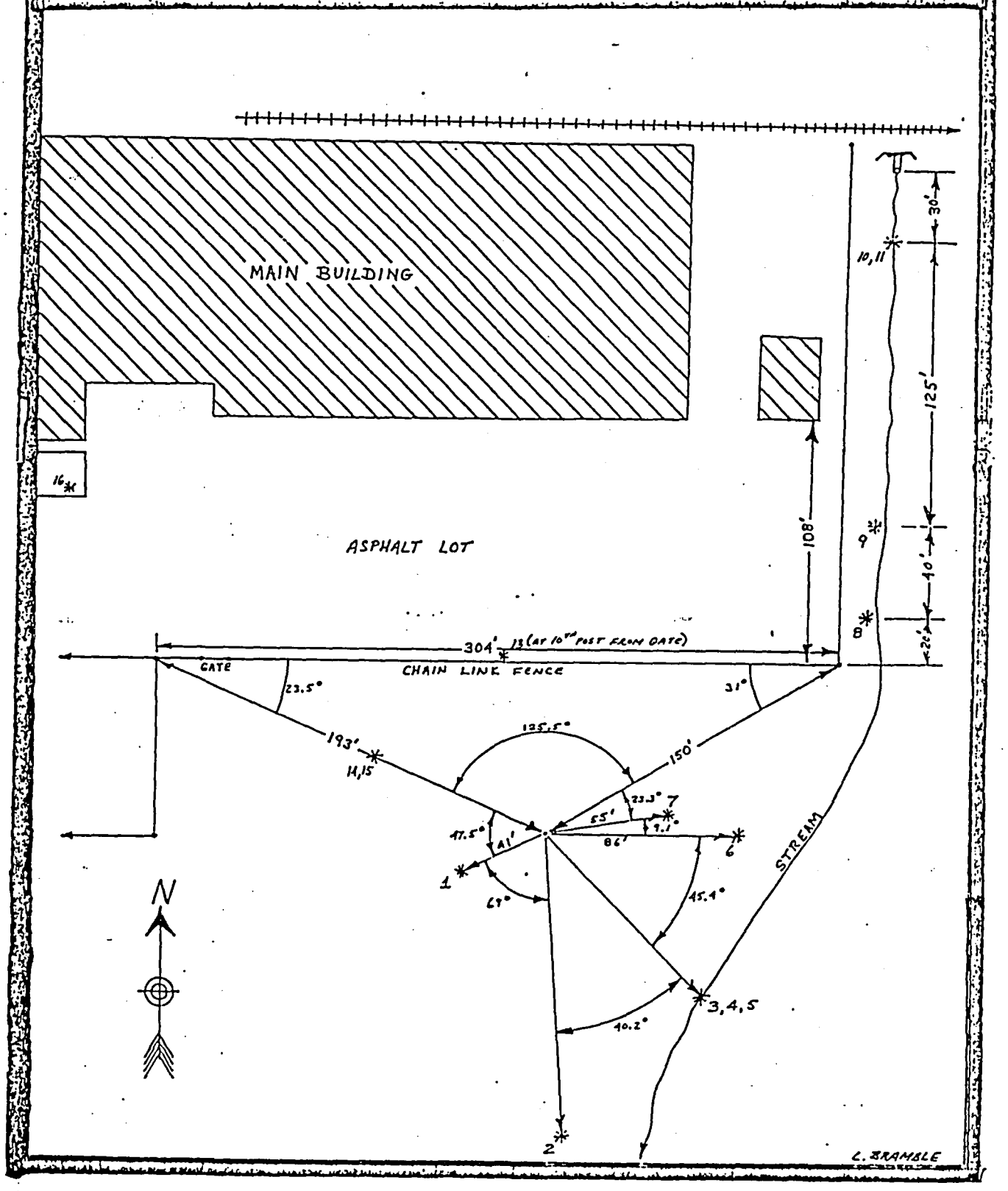
2149A

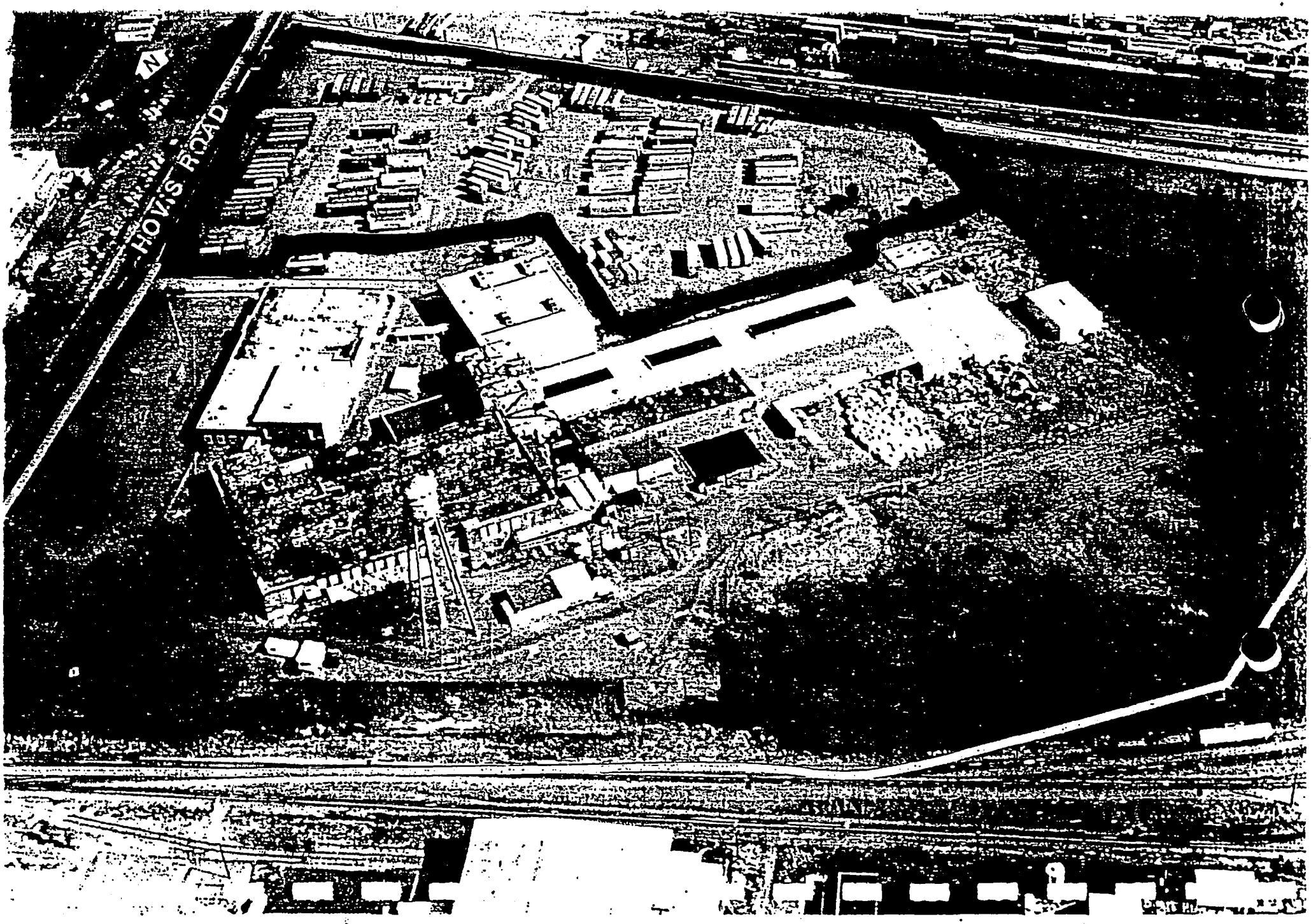


State Ports Authority
NC D980844336

STATE PORTS AUTHORITY — CHARLOTTE

SAMPLING POINTS ARE DESIGNATED WITH AN ASTERISK AND FIELD SAMPLE NUMBER




N
HOVIS ROAD

N.C. Calls Waste Site Hazardous

5/5/85 OBSERVER

By JOHN MINTER
Staff Writer

North Carolina has added Union Carbide Corp.'s former battery factory in Charlotte to its list of hazardous-waste sites, a state spokesman said Thursday.

During testing in February, state officials found barium, manganese, zinc, tolvene and tetrachloroethylene — all considered hazardous — on the ground and in a creek on the 23-acre site on Hovis Road off Rozzelle's Ferry Road in northwest Charlotte.

The chemicals were detected on 2 acres behind the plant where old, deteriorating batteries were found, said Len Bramble of the N.C. Solid and Hazardous Waste Branch.

Bramble said levels of zinc and manganese found in a nearby stream exceeded the federal Environmental Protection Agency's (EPA) standards for safe drink-

See N.C. CALLS Page 4C

N.C. Calls Waste Site In Charlotte Hazardous

Continued From Page 1C

drinking H_2O
Mn 0.05
Zn 5.0

ing water.

Zinc was found at six times the safe level and manganese at 260 times the safe level, Bramble said.

Barium was found at levels below the drinking water standard. And though there are no standards for tolvene and tetrachloroethylene, Bramble said, "If it's there we are concerned about it."

State officials say they do not know if the chemicals pose any immediate danger, but do not think the stream contributes to any water supplies. No tests have been done on the groundwater that might be contaminated by chemicals leaking through the soil.

Though further evaluation of the hazardous site is under way, it has been added to the state's Emergency Remedial Response Information System (ERIS) list and recommended for the federal "superfund" list of hazardous-waste sites.

The state list contains 650 sites across the state, Bramble said.

He said the EPA will determine the danger to the public health and whether the site presents an emergency and needs to be cleaned up with federal money or simply listed as a hazardous site.

"There are not public water wells in danger," Bramble said. "But we would like to see it removed."

Union Carbide closed its military battery factory in 1978 and sold the site in October 1982 to M.R. Godley, a local auctioneer, and members of his family.

Godley, as the current owner of the property, is responsible for the cleanup, but can sue Union Carbide to recover his costs.

But Godley said the hazardous chemicals "don't amount to nothing."

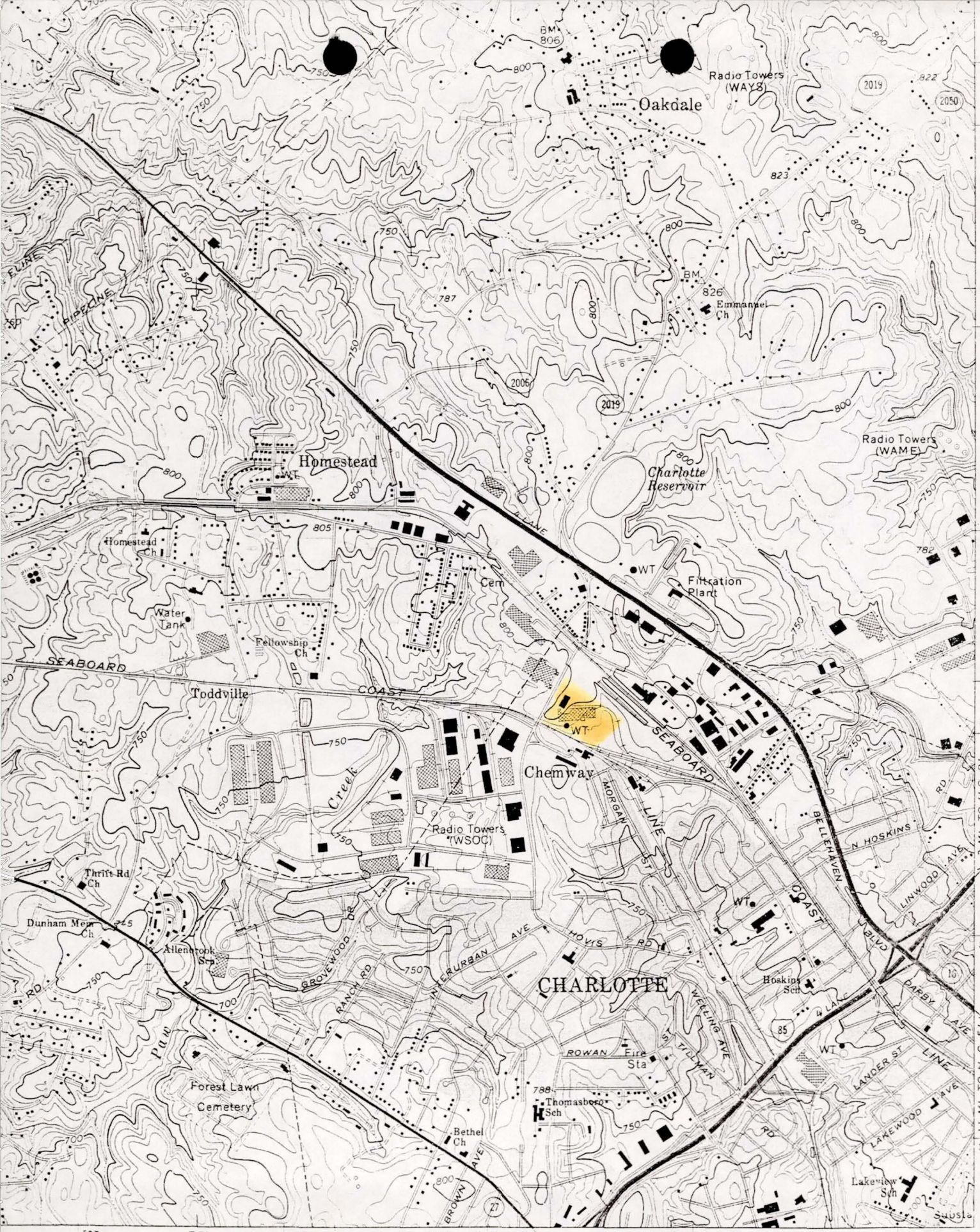
Ed VandenAmeele, a spokesman for Danbury, Conn.-based Union Carbide, said Thursday he had not heard of the discovery of hazardous waste at the Charlotte site, but would ask about it.

State officials began testing the site after the N.C. States Ports Authority expressed interest in buying it from Godley. The ports authority uses about 6 acres of the site for its Charlotte Intermodal Terminal — where four employees ship containerized cargo to Wilmington's port by rail. The inland terminal opened in January 1984.

State Solid and Hazardous Waste officials have advised the Ports Authority not to buy the contaminated site. Ports authority officials still plan to buy the 6 acres they lease.

That area — a paved parking lot — is about 400 feet from the 2 contaminated acres and would not be affected by the hazardous materials, Ports Authority spokesman William Stover said.

But Godley says he doesn't plan to sell a portion of the site.



INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1973

1 MILE

7000 FEET

1 KILOMETER

ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway,

(CHAR)

28208
WESTBOURNE
OAKDALE
OAK FOREST
BELHAVEN
PLANK
PEACHTREE
CAPPS HILL MINE RD.
STATESVILLE
FORD
SUNSET
HOMESTEAD VILLAGE
Holly Rd.
Mount
Oakdale Rd.
AUTEN
BLVD.
UNIVERSITY PARK NORTH
CINDY LN.
Nevins
ESTATES
BROOK FIELD
WESTCHESTER
TAR HEEL RD
LEWIS
FOREST
THOMASBORO
HOSKINS
Hoskins
DALEBROOK
Rozzelles Ferry Rd.
ACRES
RIDGEVILLE
Freedom
ENDERLY PARK
ASHLEY
WESTERLY HILLS
WANBAWOOD
Wilkinson
Independence
Blvd.
WILMORE
Morehead
Tyvola
McDowell
Toddville
Wilmont
Dixie
AIRPORT INDUSTRIAL PARK
Canton Rd.
Tyron
KINGS
Graham
Statesville
Brookshire
John Belk
Freeway
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6 February 1985

TO: RCRA 3012 File

FROM: Lee Crosby

RE: Union Carbide Property
Charlotte, N,C.

Joe Henderson (733-4346) with the Department of Administration will be back in the office Friday, 8 February 1985.

LC/lw/1961A

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

25 March 1985

Mr. Alton Phillips
Real Property Agent
State Property Office
Department of Administration
116 West Jones St.
Raleigh, NC 27611

Dear Mr. Phillips:

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If you have any questions, please call me at 733-2178.

Sincerely,

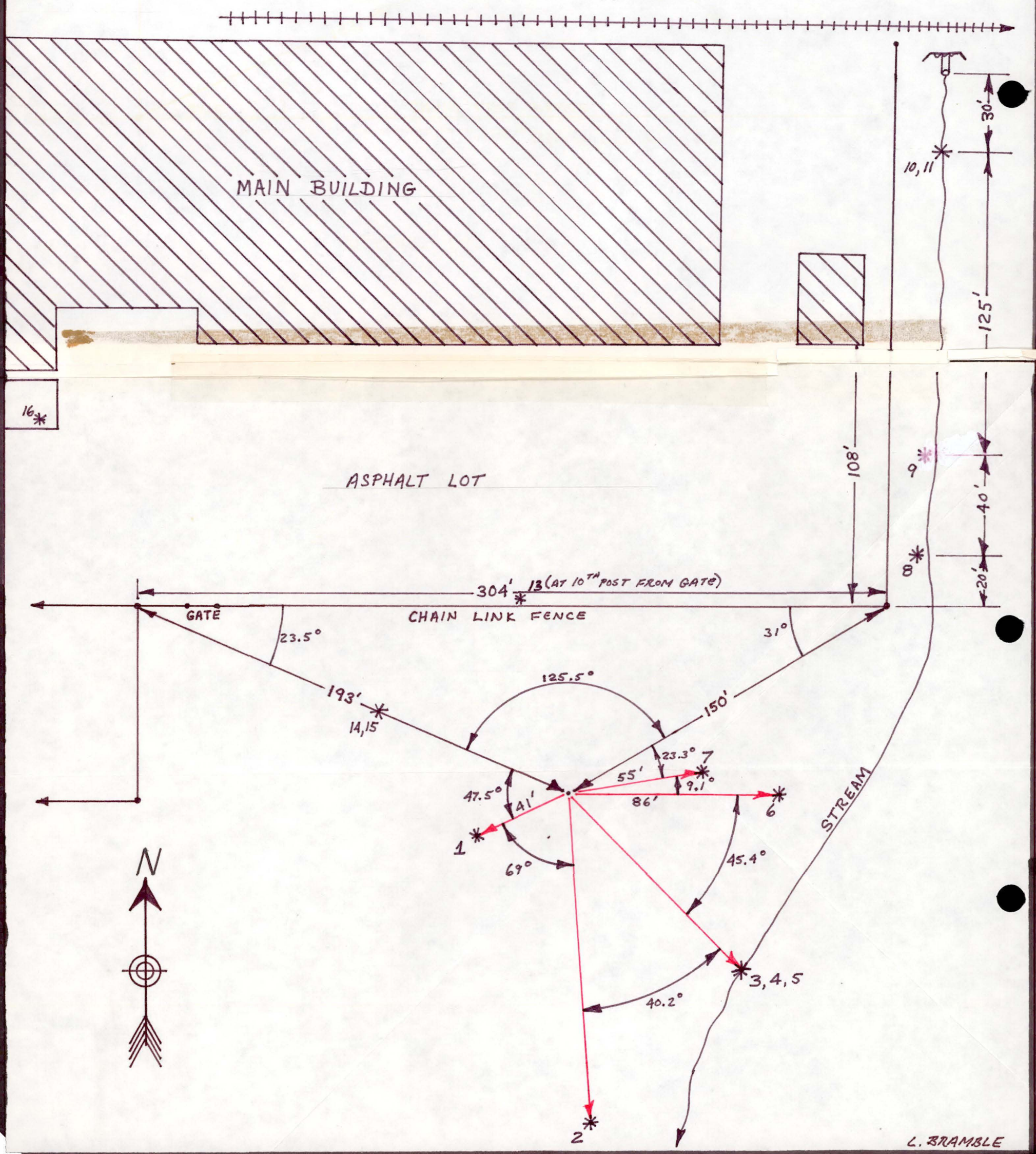
Lee Crosby

Lee Crosby
RCRA 3012 Project Officer
Solid and Hazardous Waste Management Branch
Environmental Health Section

2149A

STATE PORTS AUTHORITY — CHARLOTTE

SAMPLING POINTS ARE DESIGNATED WITH AN ASTERISK AND FIELD SAMPLE NUMBER



L. BRAMBLE

North Carolina State Ports Authority

William T. Stover, Jr.
Director
Advertising and Promotion
P. O. Box 9002
Wilmington, N.C. 28402
Tel. 919-763-1621

February 13, 1985

Ms. Lee Crosby
North Carolina Dept. of Human Resources
Post Office Box 2091
Raleigh, N.C. 27602

Dear Ms. Crosby:

Enclosed are three aerial photographs (slides) of the Charlotte Intermodal Terminal to assist you with your study.

I am sending them to you as requested by Mr. Elwood Thomas, manager of the C.I.T.

Sincerely,

Robert S. Brown 3rd

Robert S. Brown, 3rd
Assistant to the Director
of Advertising and Promotion

RSB/snr

Enclosures

Rec'd
2-14-85

North Carolina
Department of Administration

James G. Martin, Governor

Grace J. Rohrer, Secretary

January 29, 1985

MEMORANDUM TO: William L. Meyer
Health Services
Department of Human Resources

FROM: Charles L. Holliday
Deputy Director
State Property Office

RE: Testing of 2.40 acres
5400 Hovis Road
Charlotte, Mecklenburg County File 60-B

The State Property Office, at the request of State Ports Authority, has initiated negotiations to acquire approximately 23 acres of land in Charlotte to establish an inland container terminal. It has been brought to our attention that 2.40 acres of the total area is referred to as an "Old Battery Scrap Disposal Area".

This is a request for your office to proceed with an investigation of the 2.40 acre tract to determine if hazardous waste materials, or whatever, is present. Enclosed is a copy of the deed, a location map, and written permission from the property owner to perform tests on his property.

If hazardous waste are present, please advise what expense would be involved to remove it.

HAP/ewv

Enclosure

116 West Jones Street • Raleigh, North Carolina 27611 • Telephone 919-733-7232

An Equal Opportunity / Affirmative Action Employer

4360 0786

THIS DEED made the 5th day of November, 1980, by UNION CARBIDE CORPORATION (formerly known as UNION CARBIDE AND CARBON CORPORATION), a corporation organized and existing under and by virtue of the laws of the State of New York, party of the first part, to GODLEY AUCTION COMPANY, INC., having an address at Rozzells Ferry Road, Charlotte, North Carolina 28216, party of the second part.

PRESENTED FOR REGISTRATION NOV 18 4 49 PM '80 CHARLES E. CROWDER REGISTER OF DEEDS MECKLENBURG CO N.C.

W I T N E S S E T H :

That, the said party of the first part, in consideration of Ten Dollars ($10.00) to it paid by the said party of the second part, the receipt of which is hereby acknowledged, has bargained and sold and by these presents does bargain, sell and convey unto the said party of the second part and its successors and assigns, the following described property located in Mecklenburg County, State of North Carolina:

Property situate, lying and being in Paw Creek Township, Mecklenburg County, State of North Carolina and more particularly described as follows:

> BEGINNING at the intersection of the center line of Belt Road, so-called, with a line 150 feet from the southwesterly right of way line of Seaboard Airline Railway and 250 feet from the center line of the right of way of said Railway measured at a right angle therefrom; thence south 45° 17' east at 150 feet from and parallel to said southwesterly right of way line a distance of 1,365 feet to a concrete monument; thence south 66° 00' west a distance of 795.95 feet to an iron stake; thence north 85° 05' west a distance of 332 feet to the center line of the right of way of Piedmont and Northern Railroad; thence north 60° 23' west along said center line a distance of 550 feet to a stake in the center line of said Belt Road; thence north 29° 55' east along said center line of Belt Road a distance of 1,136.16 feet, more or less, to the point or place of beginning, containing 23.61 acres, being the property conveyed to the party of the first part by National Carbon Company, Inc. by deed dated December 31, 1949 and recorded in the Register of Deeds Office of Mecklenburg County on the 26th day of January, 1950.

Together with all other real property and rights in real property, whether legal or equitable, owned by the party of the first part on the date of the ensealing of these presents relating to the

property described herein.

Subject to (a) zoning regulations and ordinances and building restrictions and regulations, if any, (b) real estate taxes for the year 1980 and thereafter, (c) notices, violations of statutes, ordinances, orders or requirements of state, county or municipal governments or departments having jurisdiction issued to or received by Seller or posted on said premises between the date hereof and the date of delivery of the deed, (d) any state of facts which an accurate survey would show, (e) existing leases and tenants in possession, if any, and (f) any and all covenants, liens, encumbrances, reservations, restrictions, easements and rights of way, whether or not recorded, (g) rights of North Carolina State Highway Commission and the public over that part of the premises lying within the right of way of the Belt Road, (h) the right of way of the Piedmont and Northern Railway Company over a strip of land along the southwesterly side thereof and subject to the rights of the North Carolina State Highway Commission over that portion of said tract lying within the right of way of the Belt Road along the westerly side of said tract.

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging and anywise appertaining.

TO HAVE AND TO HOLD the aforesaid tracts or parcels of land and all privileges and appurtenances thereunto belonging to the said party of the second part and its successors and assigns forever subject to the following limitations, restrictions, conditions and covenants which shall apply to the Property and to its use by the second party, its successors and assigns in perpetuity:

"The Grantee covenants that that part of the premises identified as "Old Battery Scrap Disposal Area"

(hereinafter called the "Area"), as described in Exhibit "A" attached hereto and made a part hereof, shall not be used except for a parking lot; that Grantee, it successors and assigns will not construct any buildings thereon or any part thereof; that pipes, drains or other improvements of any nature or kind shall not be installed or placed below the surface thereof; and that Grantee, its successors and assigns will take all precautions and actions to effectively prevent the escape of any of the contents located therein into the adjacent soil or waters.

Grantee, its successors and assigns shall indemnify, defend and hold Grantor harmless from any and all claims arising out of its use of the said Area or from the conduct of its business or from any activity, work or things which may be permitted or suffered by Grantee or its successors or assigns or from any violation of this covenant whether such breach is caused or occasioned by Grantee, its successors or assigns or their agents, contractors, employees or invitees.

This covenant shall run with the land and bind all future owners thereof."

And the said party of the first part, for itself, its successors and assigns, covenants with the said party of the second part, its successors and assigns only that it has done nothing to encumber the Property while seized of same except as aforesaid.

IN TESTIMONY WHEREOF, the said party of the first part has caused these presents to be signed by its duly authorized officer and its corporate seal to be affixed and attested the day and year first above written.

ATTEST:

Assistant Secretary

UNION CARBIDE CORPORATION

By

Its Treasurer

STATE OF NORTH CAROLINA
NOV 18 '80
P.B. 10709
Real Estate Excise Tax
500.00

STATE OF NEW YORK)
:.ss:
COUNTY OF NEW YORK)

This 18th day of November, A.D. 1980, personally came before me, a Notary Public for the County and State aforesaid , who being by me duly sworn says that he is the Treasurer of UNION CARBIDE CORPORATION, and that the seal affixed to the foregoing instrument in writing is the corporate seal of said corporation and that said writing was signed and sealed by him in behalf of said corporation by its authority duly given, and the said acknowledged the said writing to be the act and deed of said corporation.

Notary Public

GRACE M. MAHELSKY
Notary Public, State of New York
No. 4674483
Qualified in Westchester County
Certified in New York County
Term Expires March 30, 19

STATE OF NORTH CAROLINA)
COUNTY OF MECKLENBURG)

The foregoing certificate of a Notary Public for the State of New York

BOOK PAGE

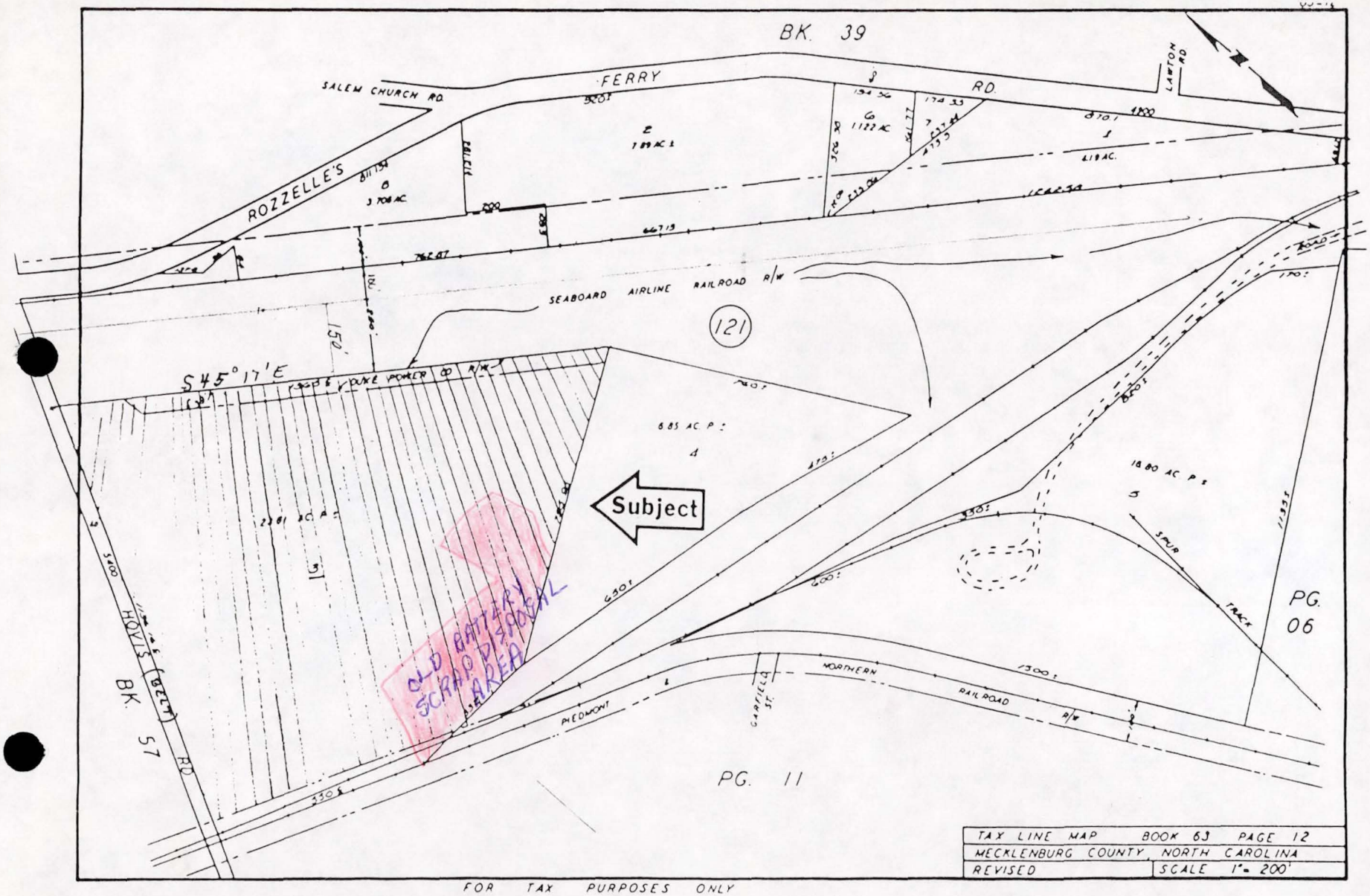
4369 0790

State of North Carolina, County of Mecklenburg
The foregoing certificate(s) of Grace M. Mahelsky
a Notary(~~ies~~) Public ~~of~~ for the ~~County~~ State of New York
is ~~xxx~~ certified to be correct. This 18 day of November, 19 80
Charles E. Crowder, Register of Deeds, By: Mary C. Bice
DEPUTY

See Exhibit A-Page 0791

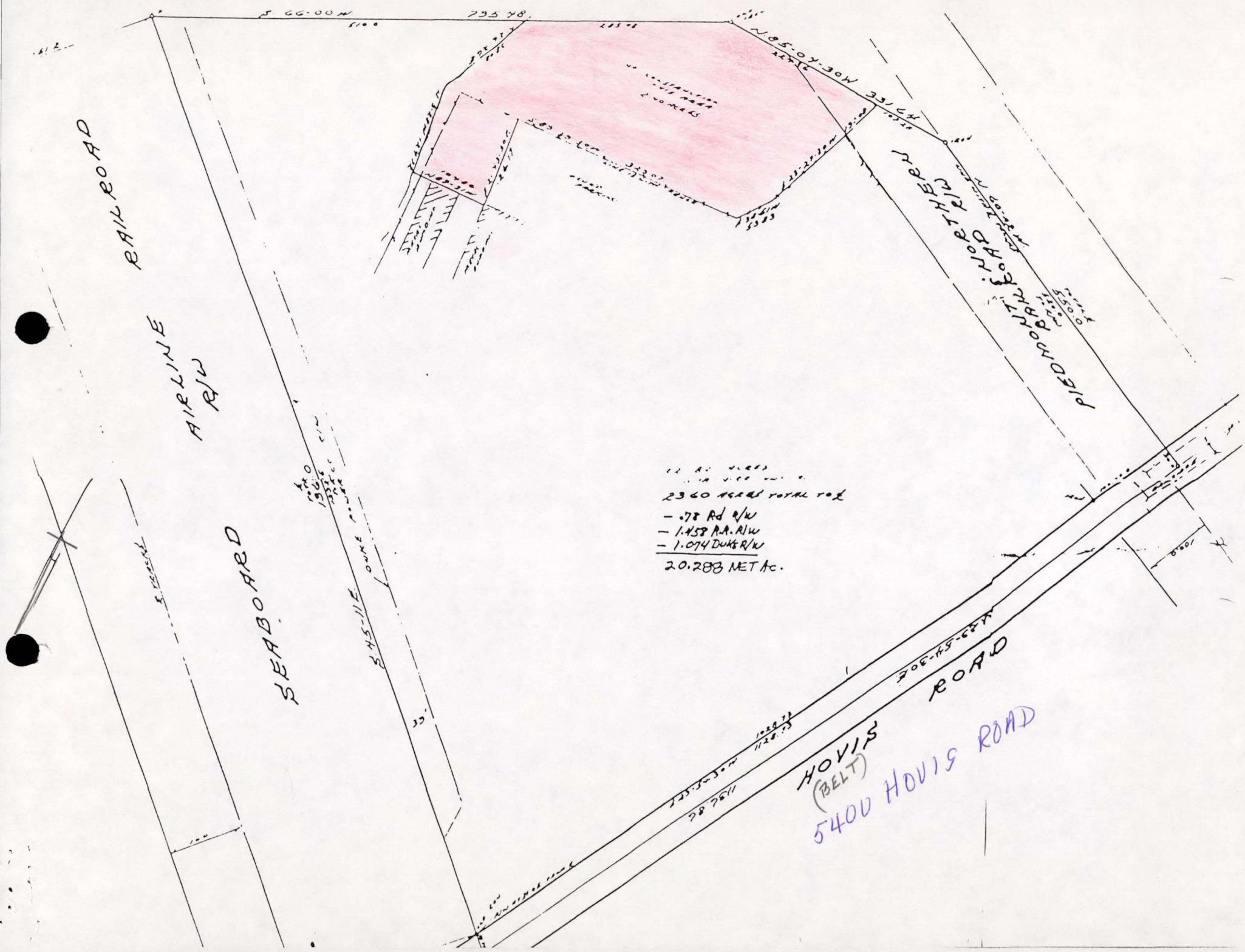
EXHIBIT A TO DEED DATED NOVEMBER 5, 1980
FROM UNION CARBIDE CORPORATION TO GODLEY AUCTION COMPANY, INC.

BEGINNING at an old iron S. 66-00 W. 795.48 feet from an existing concrete monument which marks the southeasterly corner of the property conveyed to Union Carbide and Carbon Corporation (now UNION CARBIDE CORPORATION) by Deed dated December 31, 1949, and recorded January 26, 1950, in Book 1420 at page 431 of the Mecklenburg County Public Registry, thence from said Beginning point, as thus established, N. 85-04-30 W. 224.36 feet to a point in the right-of-way of Piedmont & Northern Railroad; thence N. 23-27-30 E. 192.08 feet to a point; thence N. 38-51 E. 53.83 feet to a point; thence along a line of an existing fence N. 89-39-30 E. 329.07 feet to a point; thence N. 2-43-30 W. 126.17 feet to a point; thence S. 89-31 E. 104.86 feet to a point; thence S. 3-28 E. 124.72 feet to a point; thence S. 26-26 W. 138.08 feet to a point; thence S. 66-00 W. 285.48 feet to an old iron, the point and place of BEGINNING, containing 2.40 acres, all as described on that certain boundary survey of the property of Godley Auction Co., Inc. dated November 6, 1980, as revised November 11, 1980, as prepared by Charles E. Moon, NCRLS, L-1489.



TAX LINE MAP BOOK 63 PAGE 12	
MECKLENBURG COUNTY, NORTH CAROLINA	
REVISED	SCALE 1" = 200'

FOR TAX PURPOSES ONLY


RAILROAD
AIRLINE R/W
SEABOARD
HOVIS ROAD
(BELT)
5400 HOVIS ROAD
2360 acres total tract
- .78 Rd R/W
- 1.458 R.R. R/W
- 1.074 Duke R/W
20.288 NET Ac.

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
Phillip J. Kirk, Jr., Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director
919/733-3446

25 March 1985

Mr. Alton Phillips
Real Property Agent
State Property Office
Department of Administration
116 West Jones St.
Raleigh, NC 27611

Dear Mr. Phillips:

In response to a request from the State Property office, the Solid and Hazardous Waste Management Branch initiated a site investigation of the property leased by the State Ports Authority. On February 13, 1985, soil and stream samples were taken from a battery disposal area at 5400 Hovis Road in Charlotte.

Analysis of the surface water from a stream along the perimeter of the battery disposal site shows 170 ppm toluene and 50 ppm tetrachloroethylene. No purgeables including toluene and tetrachloroethylene were detected in the soil. Laboratory analyses also indicates that low concentrations of polychlorinated biphenyls (PCBs) may be present in the soil.

All inorganic analyses of all soil and stream samples have not been completed. However, EP toxicity tests of one sample do not indicate the presence of barium, cadmium, chromium, lead, silver or mercury. The EP toxicity level for manganese is 6.8 ppm and for zinc is 64 ppm.

The levels of manganese and zinc are more than ten times greater than EPA interim primary drinking water standards. Therefore, the Solid and Hazardous Waste Management Branch would not approve disposal of the battery waste in a sanitary landfill in North Carolina.

Regulations require that hazardous waste removed from the site be manifested to an approved hazardous waste landfill. The cost is approximately $20.00 per cubic yard. If one acre of soil is excavated at a depth of four to ten feet, approximately 6,500 to 16,000 cubic yards of soil would need to be removed.

If the battery wastes remained on site, the disposal site would be subject to 10 NCAC 10G Section .0500 of the Solid Waste Management Rules for non-conforming sites/open dumps.

If the State Ports Authority purchases the property at 5400 Hovis Road, the State as the owner of the property would be a responsible party for costs of removal of the waste or remedial action. The Solid and Hazardous Waste Management Branch does not recommend purchasing the property.

If you have any questions, please call me at 733-2178.

Sincerely,

Lee Crosby

Lee Crosby
RCRA 3012 Project Officer
Solid and Hazardous Waste Management Branch
Environmental Health Section

2149A

North Carolina
Department of Administration

James G. Martin, Governor

Grace J. Rohrer, Secretary

JAN 1985
STATE PROPERTY OFFICE

January 22, 1985

Mr. Frankie H. Godley
Godley Auction Company
4918 Rozzell's Ferry Road
Charlotte, NC 28216

Re: Property of Godley Auction Company
Inland Container Terminal Site File 60-B

Dear Mr. Godley:

Pursuant to your conversation with Alton Phillips of this office, this is to confirm our request for permission to enter your property on Hovis Road in Charlotte for the purpose of making tests on that 2.40 acre section referred to in the deed as "Old Battery Scrap Disposal Area".

If you have no objection to the State of North Carolina making tests on the 2.40 acre section, please indicate by signing this letter in the lower left where indicated, and return it in the enclosed envelope. A copy of this letter is enclosed for your file.

Sincerely,

Charles L. Holliday, Deputy Director
State Property Office

HAP/ewv

Enclosure

Godley Auction Company

By: _____
Frank H. Godley, Vice President

116 West Jones Street • Raleigh, North Carolina 27611 • Telephone 919-733-7232

An Equal Opportunity / Affirmative Action Employer