302SERBSF10,616

302SERBSF10,616

Site Name (Subject):	SOUTHCHEM LANDFILL
Site ID (Document ID):	NCD980503148
Document Name (DocType):	Correspondence (C)
Report Segment:	
Description:	General Correspondence, 1978 - 2013
Date of Document:	10/11/2013
Date Received:	
Box: *Enter SF and # with no spaces*	SF10,616
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**

SOUTHCHEM

NCD 980 503 148

Folders

1. General Correspondence file, 1978—1993

Bound Reports

1. Maps
2. Site Inspection Report: March 1986

U.S. Environmental Protection Agency

Superfund Information Systems

CERCLIS Database
Archived Sites
Site Documents
Data Element Dictionary (DED)
Order Superfund Products
Customer Satisfaction Survey

Archived Sites

SOUTHCHEM

Site Information

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

Site Name: SOUTHCHEM
Street: 750 E MARKHAM AVE
City / State / ZIP: DURHAM, NC 27702

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

EPA ID: NCD980503148
EPA Region: 04
County: DURHAM

Federal Facility Flag: Not a Federal Facility

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DISCLAIMER: Be advised that the data contained in these profiles are intended solely for informational purposes use by employees of the U.S. Environmental Protection Agency for management of the Superfund program. They are not intended for use in calculating Cost Recovery Statutes of Limitations and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to change these data at any time without public notice.

U.S. Environmental Protection Agency

Superfund Information Systems

Archived Sites

SOUTHCHEM

Aliases

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

Alias Name / Street / City / State / ZIP

CAROLINA AEROSOL LTD
DURHAM, NC

MAJOR CHEMICAL CO
DURHAM, NC

Return to Search Results Return to Search Archived Sites

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U.S. Environmental Protection Agency

Superfund Information Systems

Archived Sites

SOUTHCHEM

Contacts

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

Title	Name	Phone Number
Remedial Project Manager (RPM)	GIEZELLE BENNETT	(404) 562-8824
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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DISCLAIMER: Be advised that the data contained in these profiles are intended solely for informational purposes use by employees of the U.S. Environmental Protection Agency for management of the Superfund program. They are not intended for use in calculating Cost Recovery Statutes of Limitations and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. EPA reserves the right to change these data at any time without public notice.

U.S. Environmental Protection Agency

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- CERCLIS Database
- Archived Sites
- Site Documents
- Data Element Dictionary (DED)
- Order Superfund Products
- Customer Satisfaction Survey

Archived Sites

SOUTHCHEM

Actions

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

OU	Action Name	Qualifier	Lead	Actual Start	Actual Completion
00	DISCOVERY		F		07/01/1980
00	SITE INSPECTION	N	S		08/01/1980
00	PRELIMINARY ASSESSMENT	N	S		05/31/1985
00	ARCHIVE SITE		EP		12/14/2004

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URL: http://cfpub.epa.gov/supercpad/arcsites/cactinfo.cfm
This page design was last updated on Thursday, October 27, 2005
Content is dynamically generated by ColdFusion

MEMO FROM: Jeanette Stanley, Chemist
DATE: October 11, 2013
SUBJECT: Southchem site names

The following two site names are for the same site - in CERCLIS it is known as **Bremntag Southeast Chemical Spill** (NCD 047 372 503), 2000 E Pettigrew St. In the IHSB database, it is known as **Southchem** (NONCD0002494).

In CERCLIS, there is only one **Southchem** site - (NCD 980 503 148) on Markham Ave. In the IHSB database, the Markham Ave site is known as **Southchem Landfill** (NCD 980 503 148). This Markham Ave. site was formerly known in CERCLIS as Major Chemical Co. (NCD 033 859 893). The **Major Chemical** name has been archived.

To repeat, Southchem in CERCLIS is a different site from Southchem in IHSB.

The CERCLIS Southchem site = Southchem Landfill in IHSB
The CERCLIS Bremntag Southeast Chemical Spill site = Southchem in IHSB.

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

11 July 1990

Mr. Robert Morris
EPA Region IV Waste Division
EPA NC CERCLA Project Officer
345 Courtland Street, NE
Atlanta, GA 30365

SUBJECT: Southchem, NCD 980503148
Durham, NC
Copy Request

Dear Mr. Morris:

Enclosed please find a copy of the Site Investigation report and preliminary HRS Score as per your telephone request July 7, 1990.

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

Sincerely,

Pat DeRosa, Project Officer
CERCLA Branch
Superfund Section

PD/dw/pat.doc

file copy

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

June, 29, 1990

Mr. Robert Morris
EPA N.C. CERCLA Project Officer
U.S. EPA Region IV
345 Courtland Street, N.E.
Atlanta, GA 30365

Subject: Preliminary Assessment Report

Site: Major Chemical Co.
NCD 033859893
(duplicate of Southchem/NCD 980503148)
744 East Markham Avenue
Durham, Durham Co., NC 27702

Dear Mr Morris:

It has been determined that Major Chemical Co. is a duplicate of Southchem (NCD 980503148). For further information on this property, please see the 3-25-86 Site Inspection Report prepared for this site by Pat DeRosa.

A copy of the Southchem Preliminary Assessment form, a site map, and other documents which indicate that these two sites are identical are attached. Please contact me at 919/733-2801, if further information is required.

Sincerely,

D. Mark Durway

D. Mark Durway, Hydrogeologist
Superfund Section

DMD/major.pa

DUPLICATE OF SOUTHCHEM (NCD 98[illegible]148)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NCD	033859893

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
MAJOR CHEMICAL CO.	744 East Markham St.				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Durham	NC	27702	Durham	32	02
09 COORDINATES LATITUDE	LONGITUDE				
36° 00' 30"	78° 52' 57"				

10 DIRECTIONS TO SITE (Starting from nearest public road)

III. RESPONSIBLE PARTIES

01 OWNER (if known)	02 STREET (Business, mailing, residential)		
Martin E. McGuire	P.O. Box 1244		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Anna Maria	NC	33501	( )unlisted
07 OPERATOR (if known and different from owner)	08 STREET (Business, mailing, residential)		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☐ YES DATE ___/___/___ (MONTH DAY YEAR)
☐ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)

☐ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION

_____ (BEGINNING YEAR) | _____ (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

SITE IS DUPLICATE OF SOUTHCHEM (NCD 980503148). SEE SITE INSPECTION REPORT FOR SOUTHCHEM PREPARED BY PAT DEROSA, 3-25-86.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

V. PRIORITY ASSESSMENT

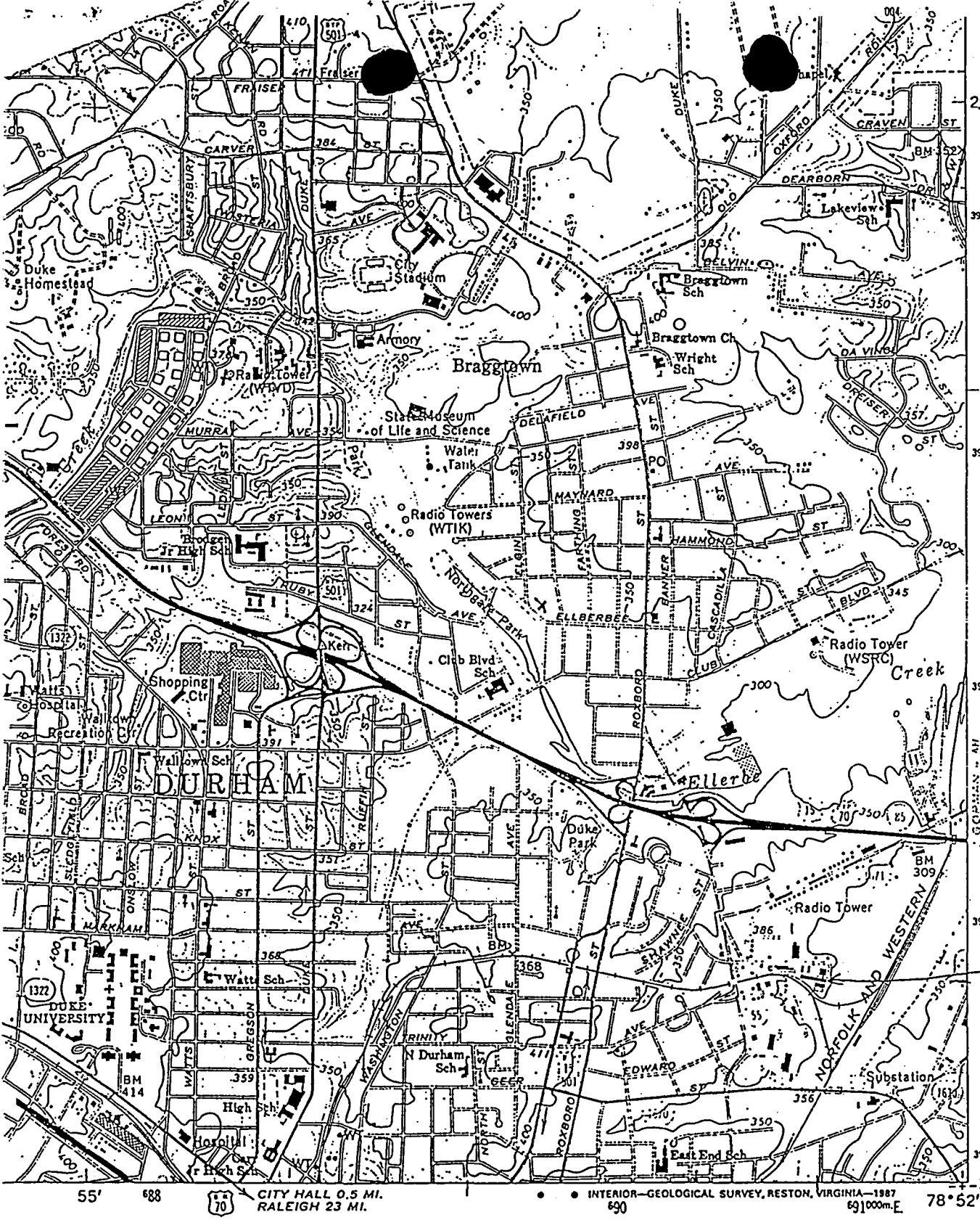
01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☒ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Dr. Thomas Amore	Carochem - Durham			(919) 682-5121
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
D. Mark Durway	NC DEHNR	Superfund	(919) 733-2801	6 / 29 / 90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)



1 MILE

ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route

U. S. Route

State Route

QUADRANGLE LOCATION

Revisions shown in purple and woodland compiled in cooperation with State of North Carolina agencies from aerial photographs taken 1984 and other sources. This information not field checked

NORTHWEST DURHAM, N. C.

SW/4 DURHAM NORTH 15' QUADRANGLE

36078-A8-TF-024

1973

(SOUTHEAST DURHAM) 5255 IV NE

Southchem, Inc.

Ref. 4

20 June 1990

To: File

From: Jack Butler

Subject: Carochem, NCD991278714.

Dr. Thomas Amore, Carochem (919/682-5121), was contacted on this date to obtain information on the subject site. Dr. Amore reported that he purchased the site at 540 Gulf Street in Durham, NC in 1977 from James A. Smith and Company. Dr. Amore reported that he did not know exactly how long the site was owned by James A. Smith prior to his purchasing the site but he thought that they had owned it for a number of years. James A. Smith and Company operated a plastering business on this site. Dr. Amore operated the Carochem business on this site from 1977 until it was destroyed by fire in August 1988. Dr. Amore still owns the site on Gulf Street and is presently using the remaining buildings to store materials. Dr. Amore reported that all the drums on the site after the fire in 1988 were empty and were disposed of in the Durham County Landfill. Dr. Amore is presently operating the Carochem business at 744 East Markham Ave., Durham, NC 27701.

August 24, 1988

TO: File

FROM: Pat DeRosa PD

RE: Southchem, Inc.
NCD980503148

On August 24, 1988, I spoke by telephone with Steve Shy, attorney for Wachovia Bank & Trust, Winston-Salem, North Carolina, (919) 725-2351, regarding the subject site. Mr. Shy said that Wachovia might be hiring Law Engineering to better characterize the site. I suggested that he keep us informed of activities on the site and also to check with us prior to initiating a cleanup. Mr. Shy is planning to review the State and Federal files on the site in order to update himself on site activities.

I also spoke with Grover Nicholson and Stan Atwood today to inform them of possible site activity.

PD/acr/pat.doc1

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

James G. Martin, Governor
David T. Flaherty, Secretary

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

June 11, 1987

Mr. Jim Pounds
Water Quality Section
Division of Environmental Management
3800 Barrett Drive
Raleigh, NC 27608

Dear Mr. Pounds:

As per our telephone conversation today, please find enclosed a copy of excerpts from the NC CERCLA Unit site investigation report for the Southchem site on Markham Road in Durham. In addition to my summary letter, I have included information pertaining to contaminants at the site and in the intermittent creek. Please contact me at (919) 733-2801 should you require additional information.

Sincerely,

Pat DeRosa

Pat DeRosa, Waste Management Specialist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/pw

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

27 March 1986

Ms. Denise Bland
EPA NC CERCLA Project Officer
Air and Hazardous Material Division
345 Courtland Street, N.E.
Atlanta, GA 30365

SUBJECT: Site Inspection Report/Transmittal Letter
Southchem NC D980503148
Durham, NC 27702

Dear Ms. Bland:

Enclosed please find the Site Insepction Report for the subject site. Information and conclusions about the site are based on prior field investigations and sampling data, conversations with site owners and operators familiar with the landfill, and an on-site inspection conducted by NC CERCLA Unit personnel.

The Southchem Site is an old landfill at the east end of Markham Avenue in Durham, NC. The site slopes eastward from the parking lot of the adjoining commercial warehouses to an intermittent creek in a wooded ravine. Due in part to its sloping terrain, the site has been used as a fill area by operators of the adjoining warehouse property.

Construction rubble, including concrete and asphalt, was reportedly disposed of on site in the 1930's and 1940's. Around 1946, the warehouses were leased to Cardinal Products, a distributor of scientific and industrial chemicals. Cardinal Products had a warehouse fire in 1966 and the remaining debris was leveled and pushed into the fill area. In the early 1970's, the warehouse property was leased to Southchem, Inc., another chemical distributor. Southchem used the fill area for disposal of old pallets and cleaned, unusable drums. In addition, it appears that wastewater from a drum and tank cleaning operation may have been discharged directly onto the ground at the site. In August 1978, a fire in the landfill led to an agreement between Southchem and the State to initiate closure. The landfill closure was reportedly complete on October 9, 1978.

On January 26, 1981, Ecology and Environment, Inc. conducted a field investigation at the site (FIT Project) for the US EPA. Aqueous and sediment samples were collected upstream, downstream, and from the leachate stream at the bottom of the slope. In addition, a composite soil sample was collected from the fill surface. Measurable levels of chlorinated and non-chlorinated solvents, boron, dieldrin, and alpha-BHC were detected downstream. Chlorinated and non-chlorinated solvents were also found in the liquid leachate. None of these constituents was detected upstream. Chlorinated pesticides were identified in the composite soil sample at levels significantly higher than those measured in the upstream sediment.

On October 10, 1985, NC CERCLA Unit personnel conducted a site inspection at Southchem to gather information supplementary to the 1981 FIT investigation. As previously described, the site was found to slope steeply to a wooded ravine. The fill surface was overgrown with weeds and pitted with "sinkholes" and depressions. A solvent-like odor was detected. No additional samples were collected. The nearest drinking water well was located at a private residence roughly 3,500 feet northeast of the site. Most of the homes and businesses located within a 3-mile radius of the site are served by the City of Durham water supply system. The intake for this surface water system is upstream of the site. The nearest downstream surface water intake is located on Falls of the Neuse Reservoir, 33 miles downstream of the site. This serves the City of Raleigh.

Currently, it appears that contaminants either on the surface or buried within the landfill have migrated to the intermittent creek at the base of the slope. The surface of the fill is unstable as evidenced by the "sinkholes" indicative of subsurface collapse. The steep slope and lack of an adequate diversion system promote soil erosion and runoff of contaminants from the site.

Based on the information obtained from the Ecology and Environment, Inc. (FIT) report and the NC CERCLA site investigation, 3 potential hazards may exist on site: fire hazard, direct contact hazard, and contamination of surface and ground water.

1. The potential for fire hazard exists at the site based on the site history and contaminants identified in the leachate and downstream water samples. A fire spontaneously ignited at the landfill in 1978. Following this, the landfill was closed, however, no waste was removed. Traces of flammable solvents were detected downstream and in the leachate in 1981.

2. A direct contact hazard may develop due to site accessibility and erosion of the landfill cover. The site is incompletely fenced and the surface is unstable. Continued subsurface collapse and erosion may expose buried waste materials.

3. Contaminants in runoff and leachate may migrate to surface and groundwater. As erosion continues, the quantity of materials leaving the site may increase. Currently, surface and groundwater users are not threatened due to their distance from the site.

If you have any questions, please contact me at (919) 733-2178.

Sincerely,

Pat DeRosa

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/tb/0221b

ENVIRONMENTAL SETTING

TOPOGRAPHY

Durham lies within the Triassic Basin of the Piedmont physiographic region and is dominated topographically by lowland developed on Triassic rocks (29). The site is located in an urban area at the east end of Markham Avenue in the City of Durham. The landfill slopes to the southeast from a parking lot on site to an intermittent creek. Using the 7.5' USGS Quadrangle map for Northwest Durham (2), a 30 foot drop in elevation was measured from the top of the landfill to the intermittent creek. This vertical drop occurs over a horizontal distance of approximately 360 feet. The average facility slope was therefore calculated as 8.3% (Appendix D).

SURFACE WATER

The site slopes to an intermittent creek in which contaminants have been identified (1). The distance between the sampling point in the intermittent creek and Goose Creek is .4 miles (2). The slope of the creek bed, or intervening terrain, between these points is roughly .47% to the northeast (Appendix D). Goose Creek continues to the northeast for about 2 miles where it enters Ellerbe Creek. Ellerbe Creek flows northeast for about 6 miles to the Neuse River. The nearest surface water supply intake lies roughly 25 miles downstream of the mouth of Ellerbe Creek on the Neuse River (8,30). This water supply serves the City of Raleigh. Goose Creek and Ellerbe Creek are Class C streams. The Neuse River is a Class C stream for 10 miles downstream of the mouth of Ellerbe Creek. At the mouth of Little Lick Creek it becomes a Class A II stream (31).

GEOLOGY AND SOILS

The site lies within the Durham-Wadesboro Triassic Basin which extends southwestward through central NC along the Jonesboro fault. The basin is reportedly "surrounded and presumed underlain by the crystalline Piedmont complex composed of acid igneous intrusives, metavolcanics, metasediments, and high-rank metamorphic rocks" (32). The overlying Triassic sediments at the site comprise the Sanford formation which is described as variable in composition with few distinctive beds or subdivisions (9). Wilson and Carpenter (1981) report, "The lower two-thirds of the formation consists of lenticular beds of red or brown claystone, siltstone, and sandstone, with occasional interlayering of beds of arkosic sandstone." The upper third of this formation is fanglomerate which ranges from jumbled angular and subangular fragments with little sandstone matrix, to scattered, isolated blocks embedded in predominantly sandstone matrix (9). According to the US Soil Conservation Service report, Soil Survey of Durham County, NC, the soil types at the subject site have been identified as White Stone sandy loam (WsE) and Roanoke silt loam (Ro) (13).

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

27 March 1986

Ms. Denise Bland
EPA NC CERCLA Project Officer
Air and Hazardous Material Division
345 Courtland Street, N.E.
Atlanta, GA 30365

SUBJECT: Site Inspection Report/Transmittal Letter
Southchem NC D980503148
Durham, NC 27702

Dear Ms. Bland:

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If you have any questions, please contact me at (919) 733-2178.

Sincerely,

Pat DeRosa

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/tb/0221b

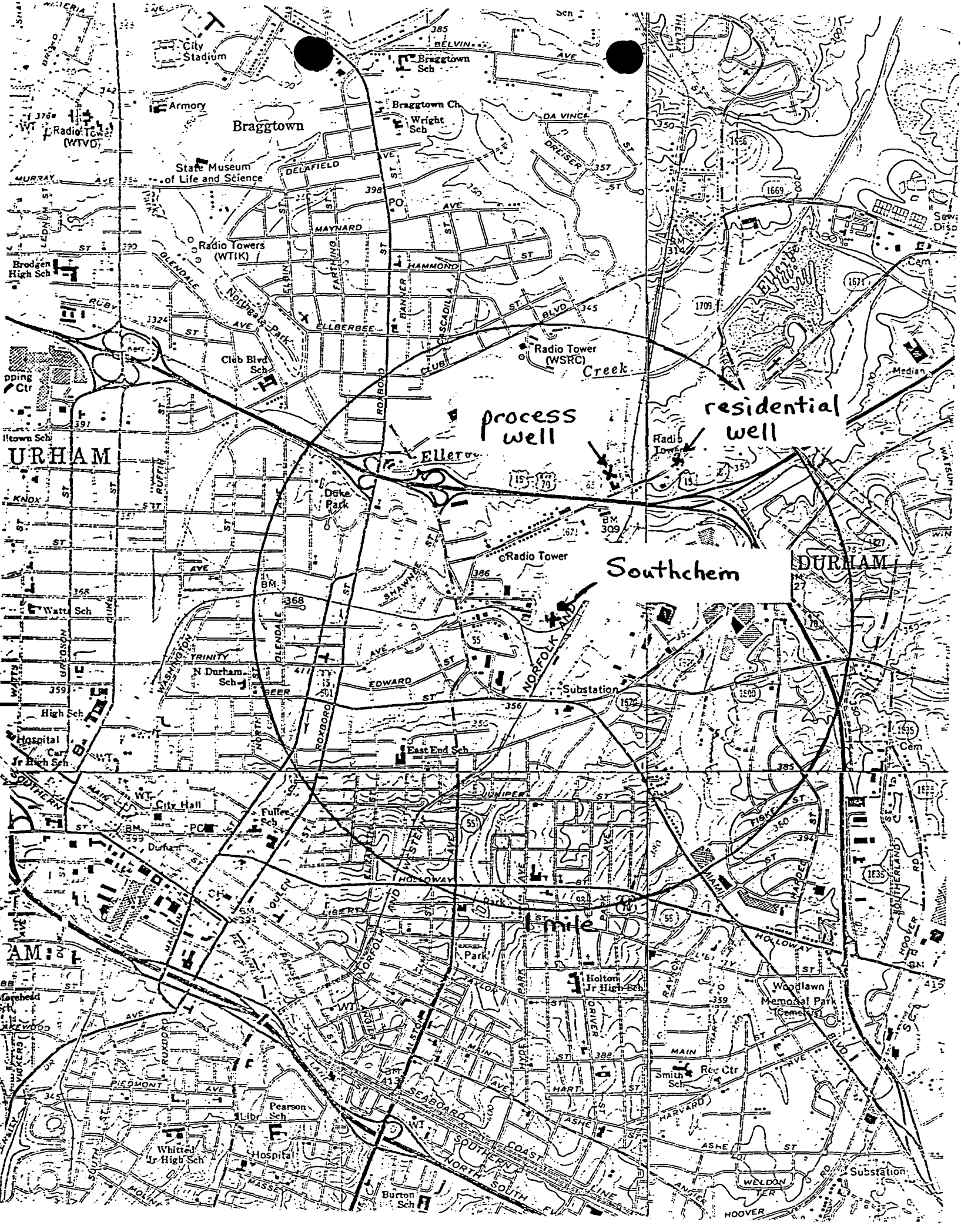
SITE INSPECTION REPORT

Southchem Site
NC D980503148
Durham, NC

25 March 1986

BY

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section
CERCLA Unit


City Stadium
Braggtown Sch
Armory
Braggtown Ch
Braggtown
Wright Sch
Radio Tow (WTVD)
State Museum of Life and Science
Radio Towers (WTIK)
Brodgen High Sch
Northgate Park
Club Blvd Sch
Radio Tower (WSRC)
Creek
process well
residential well
Radio Tower
Southchem
Duke Park
Radio Tower
DURHAM
Watts Sch
N Durham Sch
Substation
High Sch
Hospital
Jr High Sch
East End Sch
City Hall
Fuller Sch
Durham
Park
Holton Jr High Sch
Woodlawn Memorial Park (Cem)
Smith Sch
Rec Ctr
Pearson Sch
Whitted Jr High Sch
Hospital
Burton Sch
Substation
1 mile

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

17 July 1986

Mr. Kenneth Woods
Assistant VP Real Estate
Wachovia Bank
P.O. Box 27886
Durham, NC 27611

SUBJECT: Southchem, NC D980503148
750 East Markham Street
Durham, NC 27702

Dear Mr. Woods:

This letter is in response to your recent request for information regarding the current status of the subject site. A site inspection report has been forwarded to EPA Region IV and a copy of the transmittal letter is enclosed here for your information. The site is currently being evaluated for further action by EPA. If you require additional information regarding EPA's evaluation to date, please contact:

Mr. Walter Jones
Freedom of Information Officer
US EPA
345 Courtland Street, N.E.
Atlanta, GA 30365
(404) 347-3004

If I can be of further assistance, please contact me at (919) 733-2801.

Sincerely,

Pat DeRosa

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/tb/0181b

CITY OF DURHAM
NORTH CAROLINA

Department of Water Resources

CITY OF MEDICINE

RECEIVED
JAN 22 1986
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

January 17, 1986

Mr. William Myers
Solid & Hazardous Waste Management Branch
Environmental Health Section
Division of Health Service
P. O. Box 2091
Raleigh, North Carolina 27602

Dear Mr. Myers:

I understand that the State is currently reinvestigating the old Southchem site at Markham Avenue in Durham. I am enclosing some correspondence we had wih them and hope that this will shed some light on their waste discharge practices while they were there. Should there be anything else I can help with, please feel free to call me at 683-4386.

Yours sincerely,

William Sun
Superintendent I
Wastewater Treatment North-IWC
City of Durham
1900 East Club Boulevard
Durham, North Carolina 27704

WS:ll

101 CITY HALL PLAZA, DURHAM, NORTH CAROLINA 27701
(919) 683-4381

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

CITY OF DURHAM
NORTH CAROLINA

Department of Water Resources

CITY OF MEDICINE

January 16, 1986

Mr. J. H. Collie
Southchem, Incorporated
2000 E. Pettigrew Street
Durham, North Carolina 27704

Dear Mr. Collie:

As per your request, I am sending you a copy of the letter from Mr. Charles Matthews, one of your former Directors of Operations. According to the letter, as late as August of 1978, your Company was still discharging acid and caustic drum rinse and steam cleaning waste of your solvent tank trucks directly on the ground with no treatment.

A temporary neutralization tank was installed at your Markham Avenue site in 1979 shortly before you relocated to your present E. Pettigrew Street site. Your present E. Pettigrew Street site was first inspected in July, 1980 and the acid base neutralization tank was found to be adequate. However, at the same time deficiencies in solvent handling was pointed out to you. I hope the above information can help you and State Officials assessing the environmental impact, if any, of your operations at the Markham Street site.

Yours sincerely,

William Sun
Superintendent I
Wastewater Treatment North-IWC
City of Durham
1900 East Club Boulevard
Durham, North Carolina 27704

WS:ll

cc: L. A. Matthews

101 CITY HALL PLAZA, DURHAM, NORTH CAROLINA 27701
(919) 683-4381

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

SOUTHCHEM Inc.
750 East Markham Avenue
Post Office Box 886
Durham, North Carolina 27702
(919) 688-8046

August 23, 1978

Mr. Bill Sun
CITY OF DURHAM
Northside Treatment Plant
1900 E. Club Blvd.
Durham, NC

Dear Bill:

Enclosed you will find the partially completed Industrial Waste Survey Form as well as the Safety Data Sheet on the items that we repackage on this location.

The container for the acids, Aqua Ammonia and some of the Liquid Caustic Soda drums are washed at the west end of the building. We propose to catch this water in concrete tanks, treated to the proper pH level and pump into the City sewer.

The solvents listed are those that we repackage at this location, but we do not wash the drums we use for these products, rather we get from an outside reconditioner.

There might be very small amounts of the solvents in the wash water generated when we steam clean our tanktrucks and wash the mixing tanks. We propose to catch this waste and run through an oil separater to remove any of the non-soluble solvents test the remaining waste water and pump this to the sewer if it meets the proper standards.

Please let me hear from you at your earliest convenience concerning the necessary permit to pump our waste into the City Sewer.

Very truly yours,

Charles T. Mathews
Director of Opeations

Enclosure

Charter Member
NACD

July 17, 1980

Mr. Joe Collie
South Chem
2002 E. Pettigrew Street
Durham, N. C. 27702

Dear Mr. Collie,

An on site visit last week assisted by Mr. John Pugh of your company showed that the acid drain rinse catchment and the underground neutralization tanks to be satisfactory. The only precaution is that before release of each tank it is imperative that the content is thoroughly mixed and the pH checked to be within the allowable limits of the city code.

Your solvent handling facility drains to the creek next to the railroad. It would be best for you to get in touch with the State's regulatory agency to find out about their requirements immediately.

Yours truly,

William Sun
Industrial Waste Control Engineer
City of Durham
1900 E. Club Blvd.
Durham, N. C. 27704

WS/11

cc: L. A. Matthews
R. H. Ferneyhough

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

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

November 17, 1987

Suzanne Schneider
303 Wachovia Building
Durham, NC 27701

Dear Ms. Schneider:

SUBJECT: Southchem, NCD980503148
Durham, NC

Please find enclosed a copy of the map you requested regarding the subject site.

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

Sincerely,

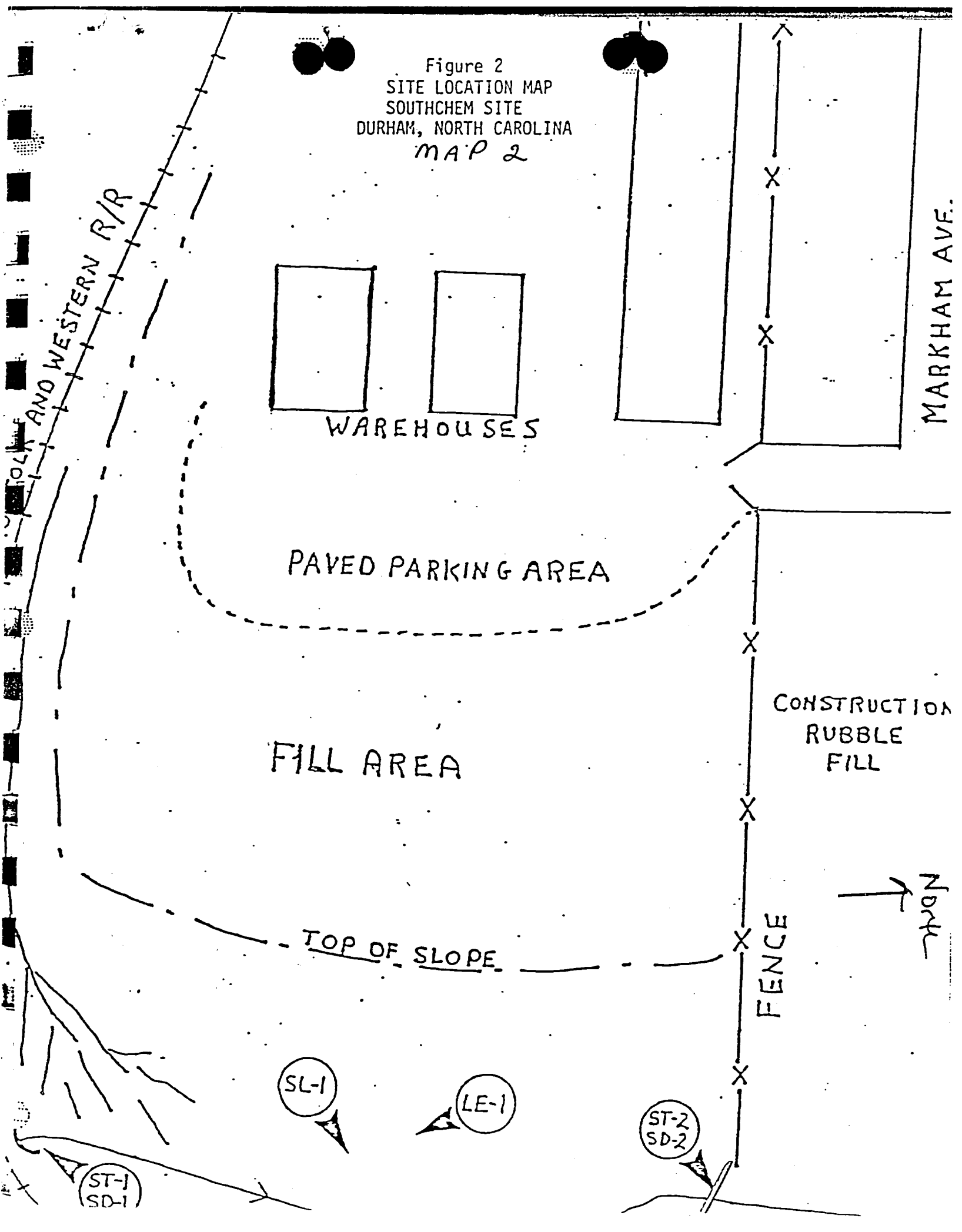
Pat DeRosa

Pat DeRosa, Waste Management Specialist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/ds/0479b/55

Enclosure

Figure 2
SITE LOCATION MAP
SOUTHCHEM SITE
DURHAM, NORTH CAROLINA
MAP 2



DATE: November 12, 1985

TO: File

FROM: Pat DeRosa PD

SUBJECT: Southchem, NC D980503148

I spoke by telephone with Michael Pullum, Housing Planner, Planning and Community Development Department, City of Durham, NC, concerning the population and land area (mi^2) of the City of Durham. Mr. Pullum provided the following estimates current as of September 1985:

Population: 115,687.
Land Area: 50.36 square miles.

PD/tb/0221b

CITY OF DURHAM
NORTH CAROLINA

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT
101 CITY HALL PLAZA
DURHAM, NORTH CAROLINA
27701
(919) 683-4137

CITY OF MEDICINE

October 31, 1985

Ms. Pat DeRosa
Solid and Hazardous Waste Management
Branch
Division of Health Services
Post Office Box 2091
Raleigh NC 27602-2091

Dear Ms. DeRosa:

You had requested information on the human uses of Ellerbee Creek Tributary in order to assess the potential hazards of the hazardous waste site on East Markham Avenue. We have very little information available on current uses within two miles of the site but there are proposed uses which may involve human contact.

The area indicated on the enclosed map is identified as a greenway corridor in the City's plan for urban trails and greenways. This plan was adopted by City Council June 3, 1985. The greenway will include a paved trail for bicyclists and pedestrians as well as providing a natural buffer area. Construction of the trail through this area will probably occur between five to ten years from now.

The second maps indicate the areas identified as "high quality environmental areas" in the 1978 study of Ellerbee Creek by the Corps of Engineers. These swamp forests extend much of the way to the Falls of the Neuse Reservoir.

Although you limited your concerns to two miles downstream of the landfill area, we would like to express our concern for the potential impacts of this site on the Falls of the Neuse Reservoir. The Falls Reservoir, as you know, is the source of drinking water for all of Raleigh and several other communities. It is also a regional recreational resource for boating, fishing and swimming. It is about 8 stream miles from the hazardous waste site to popular fishing areas and about 20 stream miles to the raw water intake. While only a small amount of leachate was being released during the single sampling date (July 21, 1981), we do not know how much enters

the stream during storms, how much material is actually buried or how fast the metal drums are deteriorating. The opportunity exists to remove the chemicals before the reservoir is seriously contaminated.

Both Durham City and County and Raleigh and Wake County have enacted comprehensive regulations to reduce the flow of toxic pollutants in urban runoff to the reservoir. We hope that the State and Federal agencies will support these significant local efforts to protect a regional resource by taking a more active position in cleaning up this hazardous waste site.

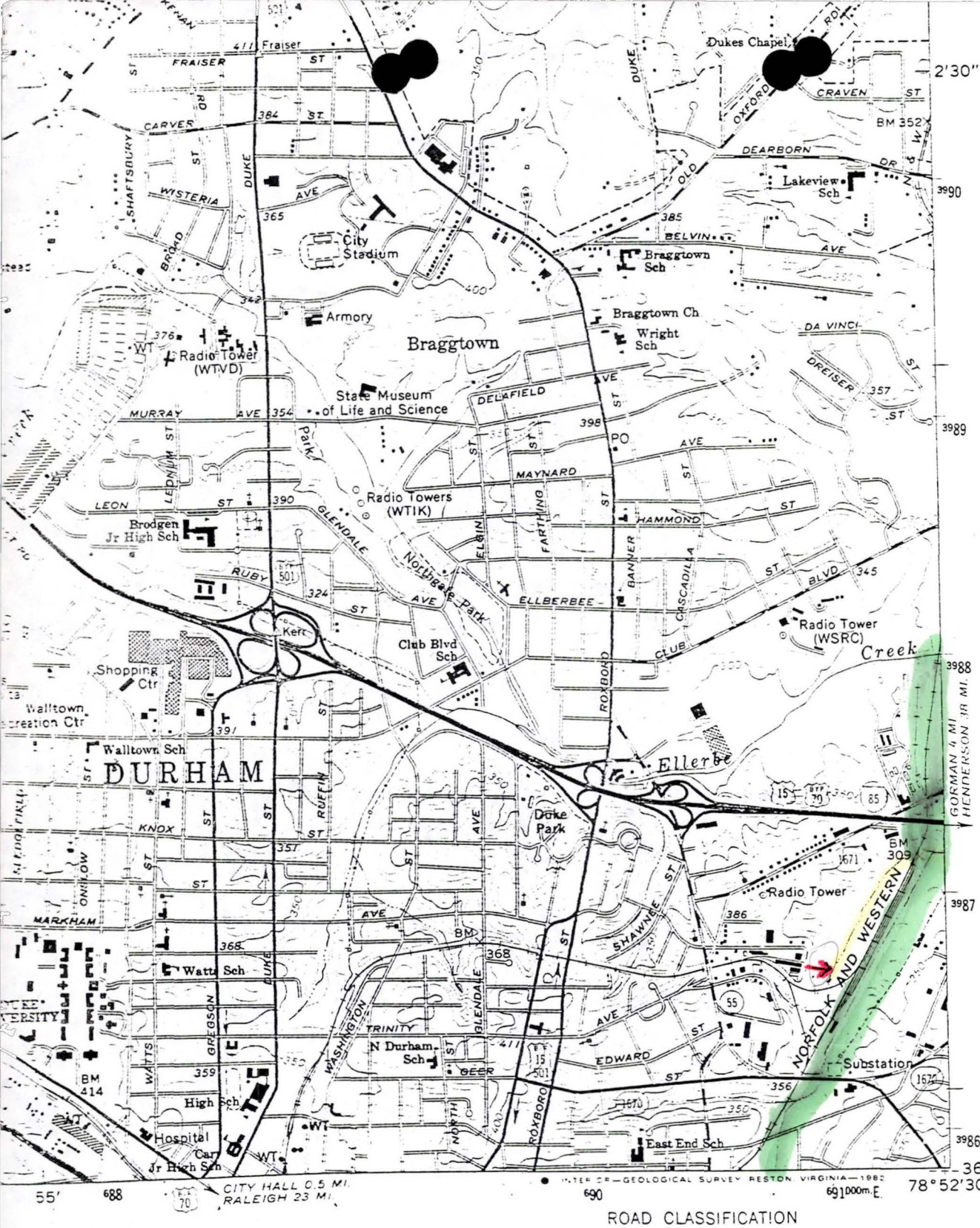
Sincerely,

Annette S. Liggett

Annette S. Liggett
Environmental Coordinator

ASL/e

cc: Paul Norby, Assistant City Manager



ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route U. S. Route State Route

QUADRANGLE LOCATION

...ns shown in purple and woodland compiled in cooperation ...State of North Carolina agencies from aerial photographs taken ...and other sources. This information not field checked ...ted 1981

NORTHWEST DURHAM, N. C.

SW 4 DURHAM NORTH 15' QUADRANGLE

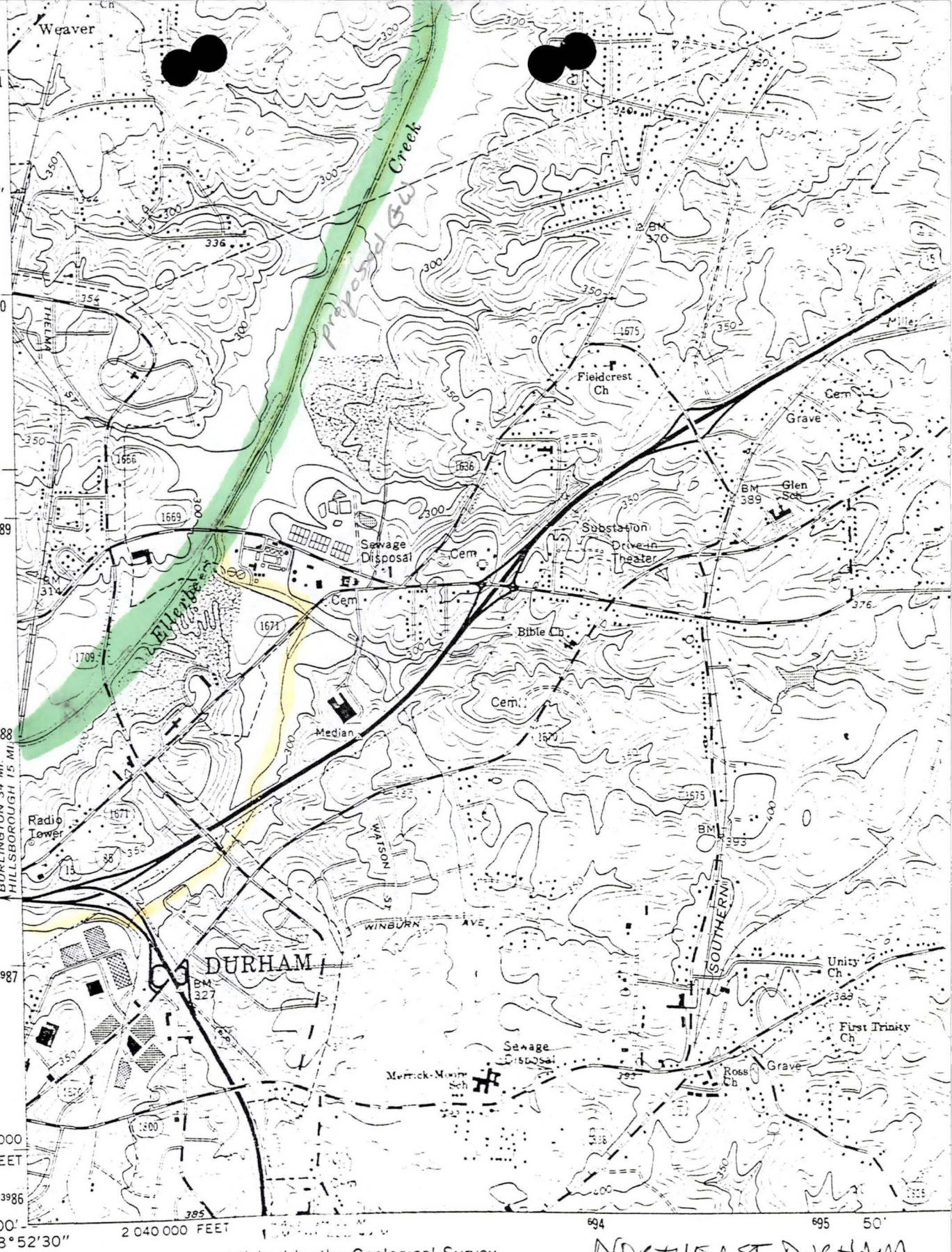
N3600—W7852.5/7.5

1973

PHOTOREVISED 1981

DMA 5256 III SW—SERIES V842

(SOUTHEAST DURHAM)
5255 IV NE



NORTHEAST DURHAM QUAD

Mapped, edited, and published by the Geological Survey

Control by USGS, NOS NOAA, USCE, and North Carolina Geodetic Survey

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

Projection and 10,000-foot grid ticks: North Carolina coordinate system (Lambert conformal conic) 1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue. 1927 North American Datum

To place on the predicted North American Datum 1983 move the projection lines 11 meters south and 73 meters west as shown by dashed corner ticks

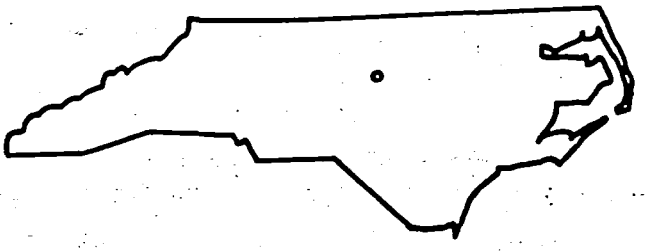
(SOUTHWEST DURHAM)
5255 IV NW

MN GN
6½°
116 MILS
1°17'
23 MILS

UTM GRID AND 1981 MAGNETIC NORTH

Flood Plain Management Planning Assistance For The City of Durham, North Carolina

ELLERBE CREEK

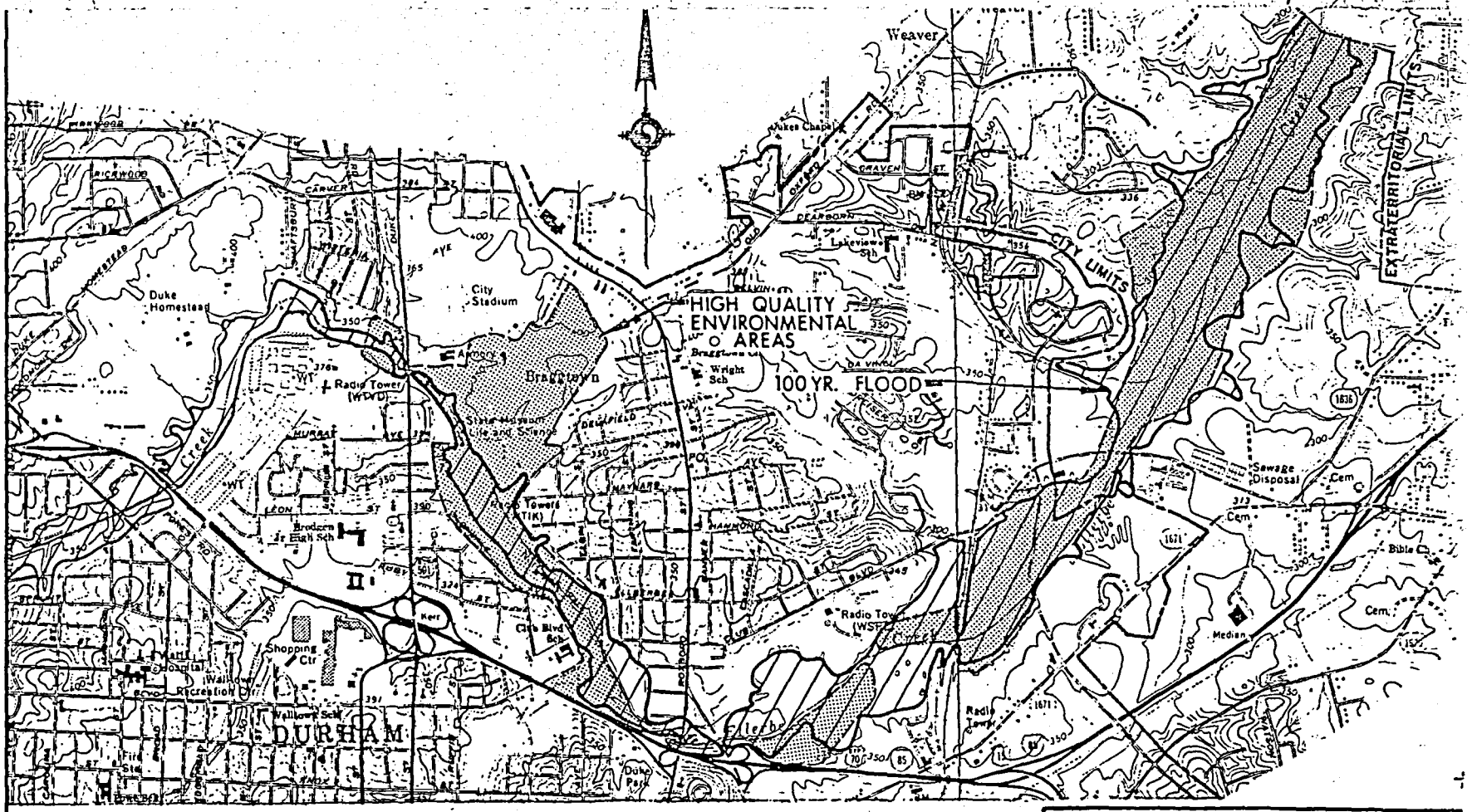


Provided By

United States Army
Corps of Engineers
...Serving the Army
...Serving the Nation

WILMINGTON DISTRICT

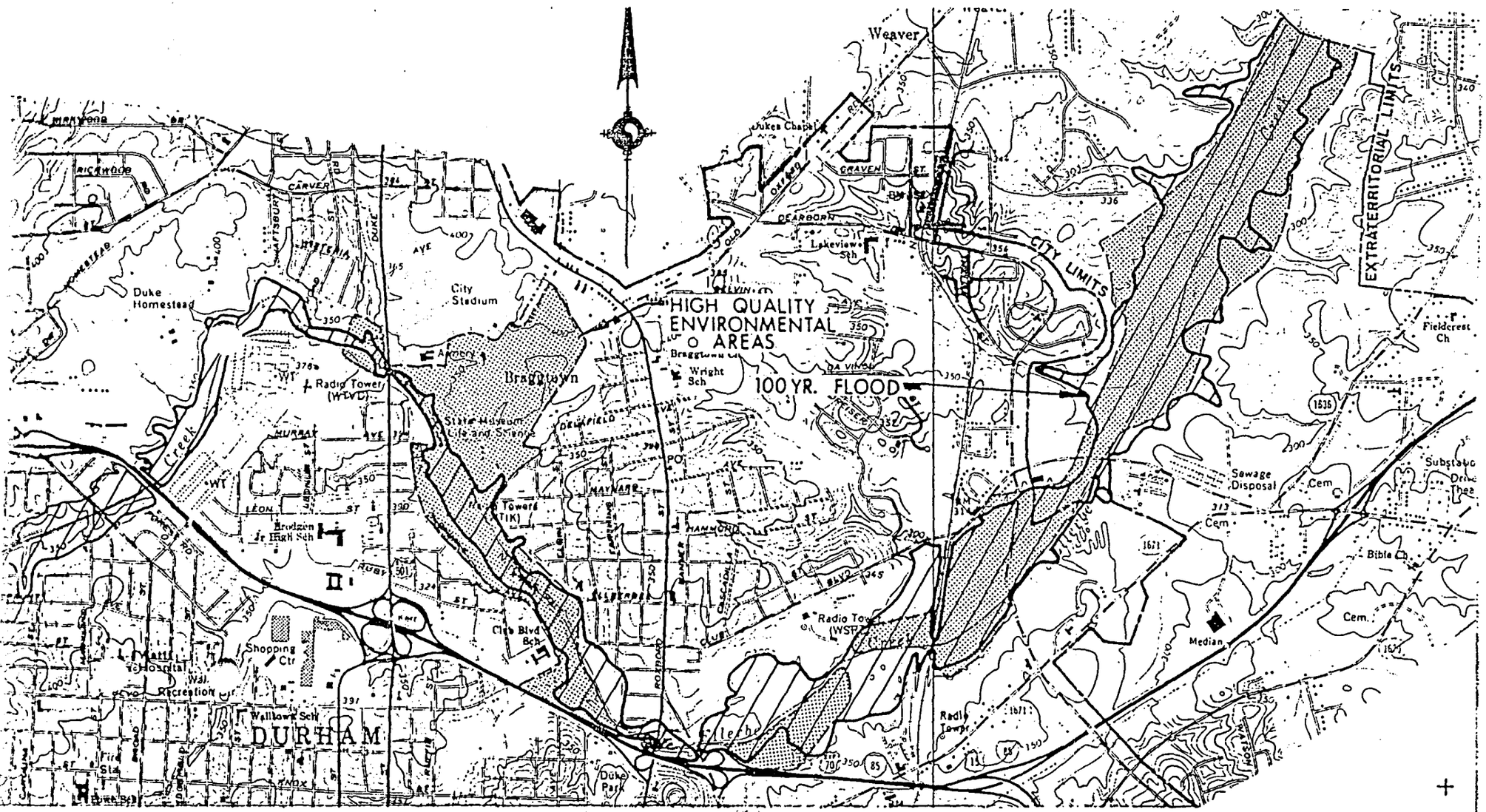
NOVEMBER 1978



DURHAM, N.C.
FLOOD PLAIN MANAGEMENT
PLANNING ASSISTANCE
ELLERBE CREEK

HIGH QUALITY ENVIRONMENTAL ARE

U. S. ARMY ENGINEER DISTRICT, WILMINGTON, N.C.



DURHAM, N.C.
FLOOD PLAIN MANAGEMENT
PLANNING ASSISTANCE
ELLERBE CREEK

HIGH QUALITY ENVIRONMENTAL AREAS

U. S. ARMY ENGINEER DISTRICT, WILMINGTON, N.C.

APPENDIX A

ENVIRONMENTAL ANALYSIS OF ELLERBE CREEK

INTRODUCTION.

The Ellerbe Creek study area lies in a predominately urban area where population density will most likely increase in the future. The many facets of needed open space in this urban area will become more critical with passing time and the presently unused, overlooked, and forgotten open spaces will need to be conserved for that future crowded condition. Furthermore, the problem is not only quantity of open space, rather, the quality of such areas becomes an important consideration. Areas that are composed of both streams and land are particularly noteworthy since here nature is both diverse and productive. The sensitivities of people using these areas are usually heightened by these natural conditions.

In the environmental analysis and assessment of the Ellerbe Creek flood plain it was necessary to establish criteria which would be used to meet the objective of presenting a general but accurate description of the environmental resources and potentials of the project area.

Criteria used in evaluation and judgment making were as follows:

(1) Biotic Diversity

(2) Vegetation Maturity

(3) Uniqueness of Plant Community Types

(4) Natural Beauty

(5) Stream Quality

(6) Presence of non-renewable resources

(7) Potential Values (Education, Recreation, Transportation)

Using these criteria it is the objective of the report to present, in a brief manner, an overview of the resources of the area and discuss the various alternatives for utilization of these resources in the future.

1.00 ENVIRONMENTAL SETTING

1.01 Terrestrial Resources. Within the study area, the terrestrial resources bordering Ellerbe Creek vary in community structure, diversity and maturity. Generally, the natural resources closer to the heart of the city tend to be more limited than those to the east. Urban development has been much more intense in this area and at times has come right to the bank of the creek itself. Patches of woodland have been left near the creek in most areas, separated from the creek by the grassy right-of-way strip used for maintenance of the channel.

Vegetation maps (Exhibits 9, 10, & 11) have been made for the resources which lie in the general area of the creek. Mapping was done using aerial photographs taken in 1974; therefore, it may be inaccurate in some areas due to development which has taken place in the last few years.

Site visitations were made throughout the study area. On such occasions, common species of plants and animals were noted. The resultant lists should serve to give the reader some concept of the resources present at each site. These lists are not all inclusive but are intended to serve only as indicators of the type of habitat which is present.

1.02 Aquatic Resources. Ellerbe Creek has been channelized in the past leaving it with a relatively low diversity of fish species due to the loss of suitable habitat (Exhibit A-1). Although no sampling of fauna was done, diversity and population appear to be low. Ellerbe Creek still serves a valuable function for many forms of wildlife in the area, however. The creek is used for a water supply by animals in the area and is used for a foraging area by raccoons and opossums.

The water quality of Ellerbe Creek is poor. Presently it is classified as having class "D" water; however, under the Water Quality Management Plan for the Neuse River Basin, it is proposed that it be upgraded to class "C" in the future. Best usage and water quality standards for both classes of water follow:[1]

1/"Rules, Regulations, Classifications and Water Quality Standards Applicable to the Surface Water of North Carolina." Adopted by the Board of Water and Air Resources, Department of Natural and Economic Resources, Raleigh, N.C.

1.03 Archaeological Resources. Archaeological resources are fragile and are considered to be non-renewable. Although there has been no systematic or extensive archaeological survey of the Ellerbe Creek basin, there are several sites which have been located in the study area. Any development which takes place in the study area should be preceeded by a complete archaeological survey of the area to be affected to preclude any irretrievable loss of these resources. Although exact site locations cannot be given in a public document, contact with the North Carolina Department of Archives and History should prove to be helpful in determining probability of impact and any mitigation measures which need to be taken.

2.00 PRESENT PUBLIC USE

The present use of the Ellerbe Creek flood plain in non-park areas for educational or recreation purposes is not specifically known and can only be estimated. Recreation along the creek is generally not promoted by the city due to the hazards presented by polluted water and unsupervised water contact.

The maintained right-of-way appears to receive light use by hikers, particularly in the Northgate Park area. In the forested area between Glendale Avenue and Ellerbe Creek there are several trails which appear to receive heavy use. In the Midland Terrace-Club Boulevard area, hiking and camping pressure is present but appears very light. Water contact recreation (fishing, swimming, wading, or boating) appears to be negligible throughout the study area.

The extent to which Ellerbe Creek is used for educational purposes is mixed. An environmental pollution and control class at Duke University monitors the creek's water quality as a part of its program. It seems likely that the creek is used extensively for nature study by local residents. Its close proximity to the population centers and its relatively diverse floral and fauna components make it an ideal area for this purpose.

There are three parks in the study area which are bordered by or surround portions of Ellerbe Creek. These parks are Rock Quarry Park, Murray Avenue Playground and Northgate Park. No park activities are centered around the creek and most park facilities are located far away from the creek. Use of these park lands and associated facilities is quite heavy.

3.00 HIGH QUALITY ENVIRONMENTAL AREAS

A special map (Exhibit 12) has been prepared to delineate areas which possess high natural value (Exhibit A-2 shows the large trees of a mature mesic forest near Ellerbe Creek). An area was considered to have high natural value if it had one or more of the following attributes:

a. High Biological Productivity. It is widely accepted that moist temperate forests are among the worlds most productive ecosystems in terms of net primary productivity. This vegetative productivity in turn supports many animals. For this reason all of the bottomland forests occurring near Ellerbe Creek are considered to have high natural value.

b. High Species Diversity. Stable systems with high diversity of species present are considered valuable as representatives of ecosystems under minimum influence by man. The incidence of uncommon flora and fauna is much greater in such areas.

c. High Potential for Recreation or Education. Many factors were weighed in making the determination of high potential for recreation or education. Examples would be present use, location, accessibility and the natural resources present.

d. Natural Beauty. Although tastes differ, areas which contained large mature trees and a diverse understory population were considered to possess natural beauty worthy of protection.

All archaeological and historical sites should be considered as critical environmental areas due to their fragile and irreplaceable nature. Known sites were not included on Exhibit 12 so as to preclude vandalism.

4.00 CONSIDERATIONS.

The preferred course of action to be taken on Ellerbe Creek in the future is to maintain the presently existing right-of-way with a program to develop and protect the resources present at and near the creek. In this regard, several considerations are in order.

a. Top priority should be given to protecting the critical environmental areas which are indicated in section 3.00. It is felt that these areas are fragile and valuable due to either their biotic makeup or their location in a rapidly developing and growing community. Several methods of protecting these lands are outlined as follows:

Land acquisition in fee simple. This approach involves the purchase of all critical areas to be managed for protection of the natural values which are present. Under this approach, the tax revenue generated by this land would be lost; however, in the long term, this revenue loss is expected to be offset by increased recreational use and the preservation of a desirable natural environment. This alternative would effect the greatest security in the protection of the lands for both their aesthetic and ecological values.

Acquisition of a conservation easement. This alternative would involve acquiring, at fair market price or donation, only certain ownership rights of the critical areas. Use of these areas would be restricted

to uses compatible with maintaining or enhancing biological productivity, habitat diversity, rare species habitat, natural beauty, and historic and archaeological values. This alternative would be more difficult to administer since violations of easements would have a greater probability of occurring than with the acquisition in fee simple alternative.

Transferable Development Rights. This is a rather new concept in land use control and involves a non-traditional method of separating and distributing legal rights to develop land. The technique, therefore, can be used by communities to preserve desired areas. The following passage generally describes this method.*

> Traditional land use controls assume that the development potential of a site may be used only on that site. The new concept proposes to break this linkage between a piece of land and its development potential by permitting the transfer of the development rights to land where greater density will not be objectionable. In freeing the development rights for use elsewhere, the technique would avoid current inequities by enabling the owner of a restricted site to recoup lost economic values by selling the site's development potential.
>
> Under this concept, as it is generally envisioned, all land would initially be assigned the same number of development rights per acre. Then a plan would lay out zones for low, medium, and high density development. Landowners in high density zones, needing more rights in order to build to permitted levels, would buy those rights from landowners in low density zones. Thus, the development rights would be bought and sold on an open market. Any landowner could take part, but he could develop his land only to the degree that he had accumulated development rights and only to the extent permitted by the zone he was in. Unlike current zoning practices, the boundaries of the zones or the degree of development within a zone could not be changed.

Applied to the current study, local government would have to institute legislation and specific planning to carry out such an alternative in the Ellerbe Creek area. There are many unanswered technical questions and State-wide public opinion concerning the topic has not been assessed; however, it may be a feasible alternative once fully explored.

Preferential Tax Assessment. This method controls land use by reducing taxes on property which is considered environmentally valuable if allowed to remain undeveloped. It encourages land uses compatible with uses desired by the community. The alternative could be considered entirely feasible in the present situation.

---

*Council on Environmental Quality. 1974. Environmental Quality. U.S. Government Printing Office, Washington, D.C.

b. The feasibility of developing the existing right-of-way into a trail system should be considered. Since the right-of-way is already maintained, the few minor changes necessary to develop such a system should be relatively inexpensive and the benefits to the public as a recreational area should more than offset the cost.

At the simplest level, a biking and hiking trail could be established and marked with signs delineating special hazard areas. Trash receptacles should be available at every access point so as to minimize litter problems and facilitate its removal. No facilities need be provided; however, as a convenience, primative facilities could be placed in selected locations where they would have minimal effect on the natural or social environment. Camping should either be restricted on one or two locations or be prohibited.

At a more advanced level, interpretive features could be included making the trail an educational facility as well as a recreational one. A self-guided nature trail delineating the more prominent or interesting natural features could be established or the right-of-way trail itself could contain interpretive features.

c. The rights-of-way maintenance should be conducted during the autumn or winter months to preclude any impacts on the nesting songbird populations. Nesting density in trees immediately adjacent to the creek is probably high and the impact of maintenance during nesting months (March through July) is likely to be severe, particularly on species which favor such locations (e.g., Kingfishers, Yellow Warblers, etc.). By maintaining only during the off-nesting seasons significant increases in songbird populations could be realized in the Ellerbe Creek area.

d. Ways to improve stream quality should be investigated. Various options include:

(1) Placement of baffles in different areas of the creek. Baffles would vary the current flow and tend to create pools which would increase the streams suitability for fishes.

(2) A series of low profile check dams. Check dams could be constructed of riprap and would serve the multiple purpose of reaerating the water, improving fish habitat, and adding to the scenic beauty of the creek.

Neither of the above options, if implemented, should significantly alter the capacity of the stream for carrying floodwaters due to their low profiles.

e. It is suggested that desirable tree species be either planted or left during right-of-way maintenance, at intervals of .25 mile. Trees could be placed between the water and the maintenance road, alternating

between creek banks. These trees would serve the functions of providing nesting habitat for water-loving songbirds, aid in shading the stream, thereby reducing water temperature, and adding to the scenic beauty of the creek. Desirable tree species could include those which bear fruit or mast, providing a food source for wildlife. Trees should be pruned during right-of-way maintenance in order to provide for straight unbranching growth for the trunk of the tree thereby reducing the potential for developing snags during high water periods.

f. Efforts should be made to reverse the current trend to regard Ellerbe Creek as a problem area in the city. To this end, presently existing recreational resources could be promoted to help increase public awareness of Ellerbe Creek's potential as a recreational area. Until the time when the people of Durham can see the potential and the value of such a greenway, efforts toward improving the opportunities for recreation in the area will likely be met with an unfavorable response.

CONCLUSION

Past land use practices neglected Ellerbe Creek as a resource and subsequently, through unwise development, reduced its potential to its present levels; however, Ellerbe Creek still represents a valuable resource to the City of Durham. Aside from performing its present day functions it could, with proper planning, be an educational and recreational resource fulfilling much of the city's future needs in these areas. The resources associated with Ellerbe Creek, as a part of the larger environmental system for the Durham area, can be effectively used only through the explicit and early efforts of the citizens, local groups, and Governments in the area.

DATE: November 6, 1985

TO: File

FROM: Pat DeRosa PD

SUBJECT: Southchem site, NC D980503148

On October 4, 1985 I spoke by telephone with Annette Liggett, Environmental Coordinator, Planning and Community Development Department, City of Durham, NC (919) 683-4137. At that time I requested any information available on surface water usage of the 3 mile segment downstream of the subject site. On October 7, 1985, I dropped off a map at Ms. Liggett's office indicating the specific segment of stream in question.

PD/tb/0221b

11 October 1985

TO: File

FROM: Pat DeRosa PD

RE: Summary Trip Report
Southchem Site, NC D980503148

The Southchem site is a landfill/dumpsite located at East Markham Avenue in Durham, NC. Dumping reportedly began at the site in 1966 when Cardinal Chemical Co. disposed of fire-damaged building debris and drummed chemicals. Building rubble was allegedly dumped there from the early 1970's through 1978. Southchem, Inc., a chemical distributor, and former tenant of the property claims to have periodically dumped unusable pallets and empty drums at the site. The drums were all reportedly purged with water before dumping. However, the last materials which may have been contained in the drums include numerous corrosive solvents and other organic chemicals.

On July 21, 1981, Ecology and Environment, Inc. conducted a field investigation at the site (FIT Project) for the US EPA. They indicate in their report that the fill surface drops off steeply to a creek and that the surface contains sinkholes and depressions. Samples of leachate oozing from the base of the landfill and from the creek were taken. No organics were identified in the upstream water sample while 9 organic priority pollutants were identified immediately downstream and 5 organic priority pollutants were identified in the leachate.

On October 10, 1985 Grover Nicholson, Lee Crosby, Denise Bland and myself visited the site to gather information supplementary to the 1981 investigation. It was determined that additional sampling was not necessary at this time since contaminants from the site had already been identified. The area immediately behind the parking lot slopes slightly toward the creek and has a gravel cover overgrown with weeds. We proceeded cautiously to an area where the slope dropped off and depressions and sinkholes in the tall grass prevented us from proceeding safely. A solvent-like chemical odor was perceived a this point. The steep slope and overgrowth blocked our view of the creek area.

In order to assess groundwater targets in the area, the well located nearest to the site was sought. Two wells were located between 2000 ft and 1 mile of the site. One well is used for supplementary process water by Muirhead Construction Co., at 1435 Camden Avenue, Durham, NC. The other well serves the residence of Roy McDonald at 1601 Camden Avenue, Durham, NC.

PD/tb/0221b

SITE SAFETY PLAN
A. GENERAL INFORMATION

Site Name Southchem Site Number NC D980503148
Location 750 E. Markham Avenue Date 10-10-85
Durham, NC 27702

Purpose of Visit ____ PA X SI ____ Other

Proposed Date of Inspection 10-10-85

Date of Briefing 10-9-85

Priority Ranking ____ Low X Medium ____ High

Site Investigation Team

Personnel	Responsibilities
Pat DeRosa	site inspection/no sampling/locate site
Grover Nicholson	" " " " " "
Lee Crosby	overview
Denise Bland	overview

PLAN PREPARATION:
Prepared By Pat DeRosa Pat DeRosa

Approved By ____

B. SITE/WASTE CHARACTERISTICS

Waste Type(s) X Liquid X Solid ____ Sludge ____ Gas

Characteristics X Corrosive X Ignitable ____ Radioactive
____ 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	EFFECT(S)
physical	sinkholes and depressions in surface from decomposing drums and buried materials
potential chem. constituents of drums, acids (nitric, sulfuric, muriatic, acetic phosphoric, formic) solvents, alcohols, esters, ketones, sodium silicate, caustic soda.	acids and caustics -burns - acute hazards from direct contact solvents & organics - specific compounds unknown

Facility Description: Size 2 acres Buildings _____

Disposal Methods Being Investigated dumping, landfilling of materials, drums and rubble.

Unusual Features on Site (dike integrity, power lines, terrain etc.): sloping terrain and sinkholes in surface.

History of the Site: Dumping reportedly began at the site in 1966 when Cardinal Chemical Co. disposed of fire-damaged bldg. debris & drummed chemicals. Bldg. rubble dumped there from early 1970's through 1978. Southchem, a former occupant of property, periodically dumped pallets & empty drums at the site.

C. HAZARD EVALUATION

The site slopes off to the intermittent creek. The slope has depressions & sinkholes and is overgrown by tall grass creating a physical hazard. Materials may be exposed on the surface. Site personnel should review the site with caution proceeding only in those areas where it is safe to walk.

D. WORK PLAN INSTRUCTION

Map or Sketch Attached? Yes
Perimeter Identified? Yes
Command Post Identified? No
Zones of Contamination Identified? Yes

Personal Protective Equipment

Level of Protection ____A ____B ____C X D

Modifications coveralls and workshoes

Surveillance Equipment:

_____	H Nu	_____	Detector Tubes and Pumps
_____	Explosimeter	_____	02 Meter
_____	TLD	_____	(Radiation Monitor)

Decontamination Procedures

____ Level A Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, suit and hard hat removal, SCBA backpack removal, inner glove wash, inner glove removal, inner clothing removal, field wash, redress

____ Level B Segregated equipment drop, boot cover and glove wash,boot cover and glove rinse, tape removal. boot cover removal outer glove removal, suit/safety removal, SCBA backpack removal, inner glove wash, inner glove rinse, facepiece removal, inner glove removal, inner clothing removal, field wash, redress.

____ Level C Segregated equipment drop, boot cover and glove wash, boot cover and glove rinse, tape removal, boot cover removal, outer glove removal,suit/safety boot wash, suit/safety boot rinse (Canister or Mask CHange), safety boot removal, splash suit removal, inner glove wash, inner glove rinse, facepiece removal, inner glove removal, inner clothing removal. field wash redress.

__X__ Level D Segregated equipment drop. boot and glove wash, boot and glove rinse.

Modifications remove outer clothing and boots at site.

Work Schedule/ Limitations Proceed with caution. Surface inspection only, no sampling.

EMERGENCY PRECAUTIONS

Acute Exposure Symptoms	First Aid
trip, fall	treat for cuts or bruises
	any more severe injuries - hospital

Hospital (Address and Phone Number)

Durham County Hospital (919) 471-3411

3642 N. Roxboro Road, Durham, NC

Emergency Transportation Systems (Phone Numbers)

Fire use 911

Ambulance use 911

Rescue Squad use 911

Emergency Route to Hospital From Southchem to NC 55 via Markham Ave., north on NC 55 to Roxboro Road (NC 501). Hospital is on left.

PREVAILING WEATHER CONDITIONS AND FORECAST Clear and cool

EQUIPMENT CHECKLIST

	Air purifying respirator	X	First Aid Kit
	Cartridges for respirator		3 gal. Distilled H20
	3M 8710 Respirator		Personal Protective Clothing
	02 Indicator		
	Detector Tube & Pump	X	Boots or Boot Covers
	Eye Wash Unit	X	Coveralls (tyvek)
	H Nu		Eye Protection
	pH Meter		Hard Hat
	Explosimeter		Decontamination Materials.
	Radioactive Monitor		

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 Medical 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

1-800-722-2222

DATE: October 7, 1985

TO: File

FROM: Pat DeRosa PD

SUBJECT: Southchem Site, NC D980503148

Part of the area within a 3 mile radius of this site is outside the distribution system of the City of Durham water supply system. This was determined by comparing the area identified on 7.5' USGS quads with a map of the distribution system provided by the City of Durham. A house count of 573 multiplied by a factor of 3.8 yields an estimated total of 2,177 residents not served by city water. It is believed that these residents are using groundwater for drinking water supply. (See Map 1, Appendix A).

PD/tb/0221b

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

4 October 1985

Mr. John Sutherland
Division of Water Resources
North Carolina Department of
National Resources & Community Development

RE: Southchem Site, Durham, NC, NC D980503148

Dear Mr. Sutherland:

I have enclosed a copy of the USGS quads indicating the location of the subject site and roughly a three-mile downstream segment. Could you please indicate the current uses of this downstream segment? It appears to be a Class C waterway with no drinking water supply intakes along this stretch of stream. However, I need to know whether it is used by any industrial/commercial facilities or for irrigation, food preparation, or recreation such as fishing, boating or swimming.

I would appreciate any information you can provide. My extension is 3-2178. Thanks very much.

Sincerely,

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/tb/0210b

MEMO

DATE: 10/10/85

TO: Pat DeRosa,

SUBJECT: Grove Creek/Ellerbe Creek - Durham

John Kuchnia, an engineer in our Division, checked out the water use data we had for that three mile stretch of stream. He found virtually no use within the 3 miles (see attached notes). I also asked Bo Burns, a coop student from Duke who has fished near Ellerbe Creek and he said that the fishing occurs farther downstream on Ellerbe Creek. Hope this helps.

John Sutherland
4064

North Carolina Department of Natural Resources & Community Development

John Sutherland
Allan Dietemann
RECORD OF TELEPHONE CALL:

DATE: Wed Oct 9, 1985

TIME: 3 PM

CALLER: John Kuchnia

EMPLOYER:

NUMBER:

CALLED: Jay Sauber; talked to Jim Fisher

EMPLOYER: DEM

NUMBER: 733-6510

SUBJECT: Water use on the segment downstream of the old Southchem site in Durham.

NARRATIVE: No known use of water on this 3 mile segment. The stream is classified as C. Jim said it would be a D under the old classification system. He called it a typical urban stream in its character and appearance.

Records indicate that only the Durham WWTP discharges into Ellerbe Creek on this 3 mile segment.

John Sutherland
Allan Dietemann

RECORD OF TELEPHONE CALL:

DATE: Thu Oct 10, 1985

TIME: 9:30 AM

CALLER: John Kuchnia

EMPLOYER:

NUMBER:

CALLED: Terry Rolan; spoke to Leslie Mathews

EMPLOYER: Northside WWTP supt City of Durham

NUMBER: 919-683-4386

SUBJECT: Water use on tributary st/and Ellerbe Creek.

NARRATIVE: That tributary is known as Goose Creek and only flows when it rains as does Ellerbe Creek above the WWTP, which discharges an average daily flow of 17mgd.

The only known uses occur on Ellerbe Creek.

Six miles below the WWTP, B & B Topsoil removes sand from the creek bottom, mixes it with local dirt and sells it for topsoil. Mr Mathews has used some and can attest to it as being of good loamy quality. The 15' holes created by the creek dredging are used by the teenage children of the dredging operation owner as bass fishing grounds. The fish have been observed by Mathews to be good quality in appearance although he hasn't eaten any. The dredging operation performs an advantageous service in that it reduces downstream siltation of Falls Lake.

(Over)

Eight miles downstream of the WWTP a farmer irrigates his tobacco crop. Amounts withdrawn from Ellerbe Creek are not known.

Mathews said the southchem site is really inappropriately named. Cardinal Products is really the name that applies. The confusion probably developed because of the amount of southchem HTH distributed by Cardinal from the site. When some Southchem drums were unearthed there some years ago, it drew a lot of publicity. However, analysis by Durham divulged no heavy metals; the state tested for organics. In spite of the publicity there were no drums leaking. All of this came about when the Cardinal laboratory supply house burned.

As a matter of record, Mathews said that a Joe Colley (sp?) was a VP of Southchem. Joe Amore (sp?) was an officer of West Chemical Co. Southchem is located in the former Mead Plant on Petigrew Street.

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

02 October 1985

Meg Kerr
Water Quality Section
Division of Environmental Management
NC Dept. of NRCD
Raleigh, NC

RE: Southchem Site Durham, NC, NC D980503148

Dear Meg Kerr:

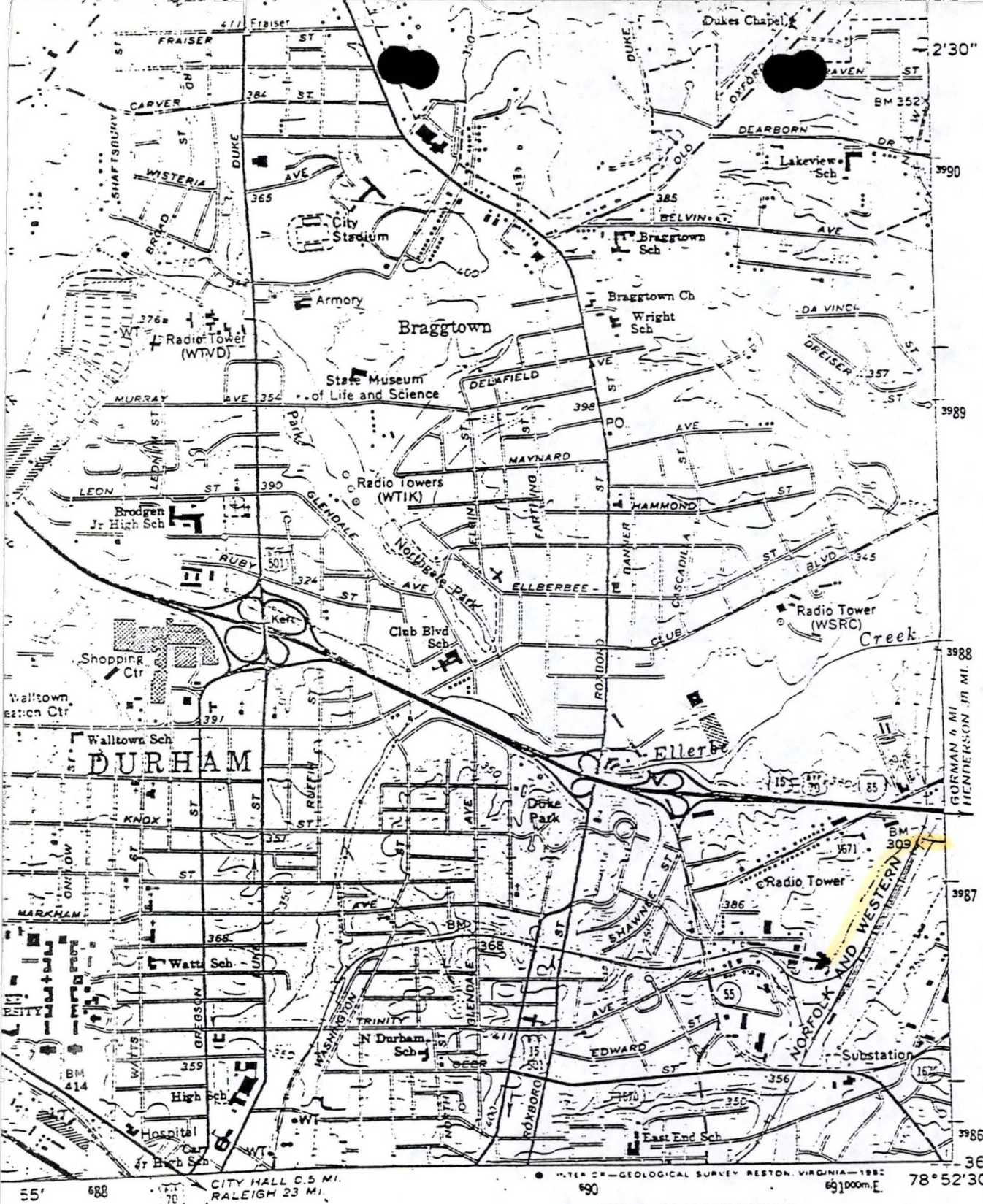
I have enclosed a copy of the USGS quads indicating the location of the subject site and roughly a three mile downstream segment. Could you please indicate the current uses of this downstream segment? It appears to be a Class C waterway with no drinking water supply intakes along this stretch of stream. However, I need to know whether it is used by any industrial/commercial facilities or for irrigation, food preparation, or recreation such as fishing, boating, or swimming.

I would appreciate any information you can provide. My extension is 3-2178. Thanks very much.

Sincerely,

Pat DeRosa
Waste Management Specialist
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/tb/0210b



ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route U. S. Route State Route

(SOUTHEAST DURHAM)
5256 IV NE

QUADRANGLE LOCATION

...s shown in purple and woodland compiled in cooperation ...ne of North Carolina agencies from aerial photographs taken ...and other sources. This information not field checked

NORTHWEST DURHAM, N. C.

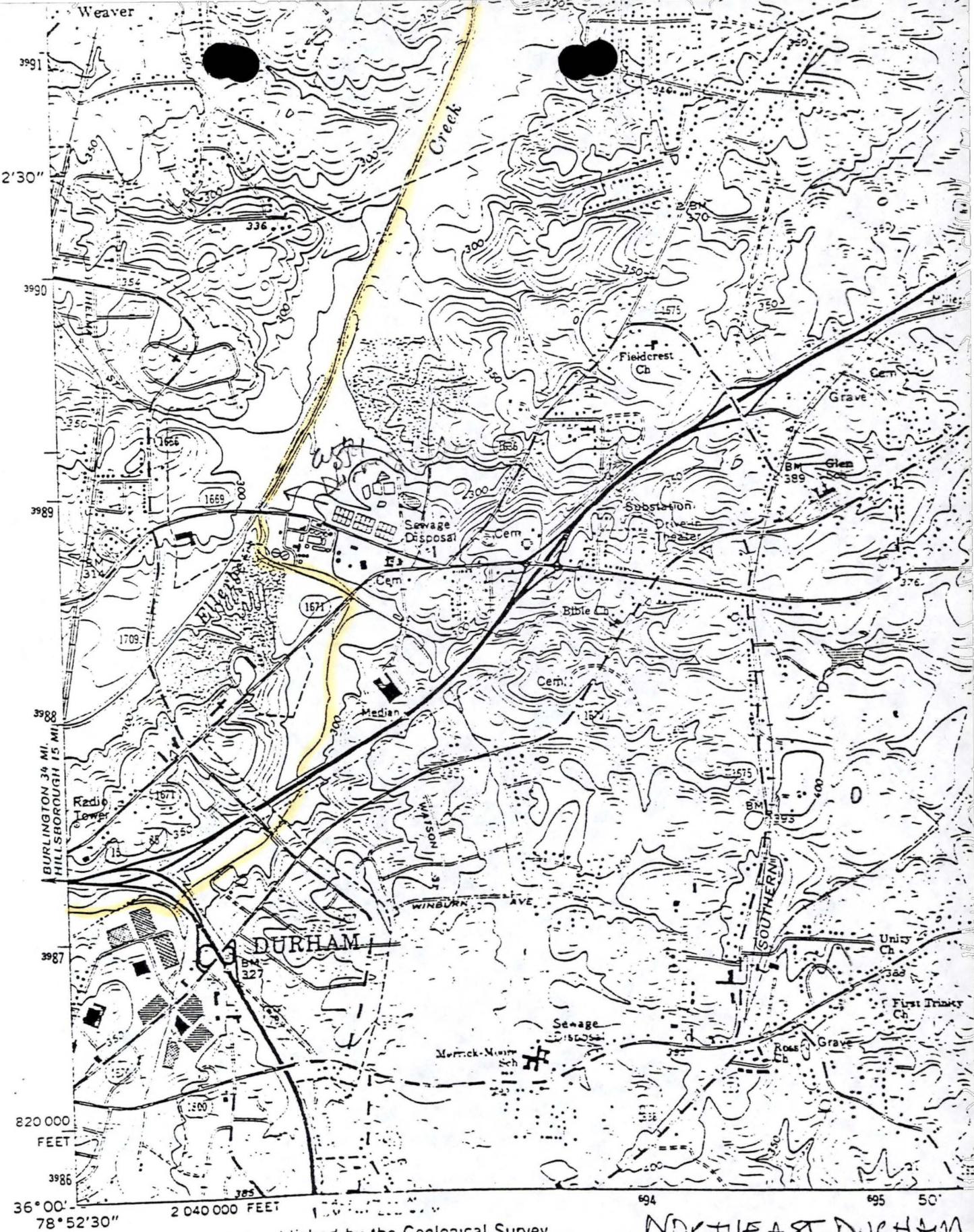
SW 4 DURHAM NORTH 15' QUADRANGLE

N3600—W7852.5/7.5

1973

PHOTOREVISED 1981

DMA 5256 III SW—SERIES V842



NORTHEAST DURHAM QUAD

Mapped, edited, and published by the Geological Survey

Control by USGS, NOS NOAA, USCE, and North Carolina Geodetic Survey

Topography by photogrammetric methods from aerial photographs taken 1972. Field checked 1973

Projection and 10,000-foot grid ticks: North Carolina coordinate system (Lambert conformal conic). 1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue. 1927 North American Datum

To place on the predicted North American Datum 1983 move the [illegible] meters south and 23 meters west as shown

(SOUTHWEST DURHAM) 5555 IV NW

MN GN 6½° 116 MILS 1°17' 23 MILS

DATE: October 11, 1985

TO: File

FROM: Pat DeRosa

SUBJECT: Southchem Site NCD980503148

I spoke by phone with Carla Sanderson, Technical Services, DEM, NC Department of NRCD. Ms. Sanderson received my request for information from Meg Kerr. Ms. Sanderson contacted Dave Atkins of the DEM regional office in Raleigh concerning use of the designated stream segment. He was not aware of any recreational usage or agricultural usage of the stream segment. However, the stream does receive wastewater from 2 minor domestic type discharges and a municipal WWTP.

PD/tb/0210b

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

April 1, 1985

Ms. Denise Bland
EPA NC 3012 Project Officer
Air and Hazardous Materials Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Re: Preliminary Assessment Reports - Transmittal Letter

A.B. Carter, Inc. Gastonia, NC 28052	NC D003154010
Airco Ind. Gases RTP, NC 27709	NC D084172469
ESB Exide - Charlotte Service Center Charlotte, NC 28208	NC D091258806
Exide Corp. AKA ESB Inc. Raleigh, NC 27604	NC D075563932
Guyton Battery Service Chadbourn, NC 28431	NC D024459471
Hull Service Station Vale, NC 28186	NC D083674713
Meadowlark Gliderport Whitsett, NC 27377	NC D107885188
Royal Development Company Courtesy Road High Point, NC 27261	NC D003521960
Royal Development Company Kettering Drive High Point, NC 27260	NC D991277898
Royal Development Company Red Springs, NC 28377	NC D057454571

An Equal Opportunity / Affirmative Action Employer

Southchem
Durham, NC 27702

NC D980503148

Tungsten Queen Mine
Townsville, NC 27584

NC D082362989

Dear Ms. Bland:

Enclosed please find the Preliminary Assessment reports for the subject sites. Each priority is based on our review of available data, and on conversations and correspondence with site owners and operators.

A.B. Carter, Inc.
U.S. Hwy 321 South
Gastonia, NC 28052

NC D003154010
Gaston County

A.B. Carter, Inc., is presently a generator and a TSD facility. They generate, treat, and land dispose of wastewater and sludges from chrome and nickel plating operations. The surface impoundments are unlined and some appear to have been overtopped. Soil contamination, groundwater contamination, and surface water contamination may exist. The site has been assigned a Medium Priority for inspection. It is recommended that soil and groundwater in the vicinity of the surface impoundments be sampled and analyzed, and that the stream downgradient of the impoundment also be sampled and analyzed.

Airco Industrial Gases
P.O. Box 12338
Research Triangle Park, NC 27709

NC D084172469
Durham County

Airco is listed as a small generator. The waste products consist of about 110 gallons of pump oil and 55 gallons of trichloroethylene generated every three years. These wastes are stored in drums and shipped off-site at least every 90 days. There is no indication that there has been any treatment, disposal, storage, or spillage of hazardous wastes or materials at this facility. No Further Action is recommended.

ESB Exide, Charlotte Service Center
3300 Piper Lane
Charlotte, NC 28208

NC D091258806
Mecklenburg County

ESB Exide is presently a small generator that generates waste batteries and a sludge containing iron and lead. These waste materials have always been sold to scrap dealers off-site for metals recovery. There is no indication that there has been any other treatment, storage, disposal, or spillage of hazardous wastes or materials at this facility. No Further Action is recommended.

Exide Corporation
AKA ESB, Inc.
2510 North Boulevard
Raleigh, NC 27604

NC D075563932
Wake County

Exide Corporation is in the process of closing this facility, which has been manufacturing batteries since 1954. An 1984, Exide sampled soil from several areas on the site. Analyses of the samples showed total lead content ranging from 90 ppm to 523 ppm. This site has been assigned a Medium Priority for inspection. Prior to Exide moving from the site, soil samples should be taken and analyzed for lead content using the EP toxicity method.

Guyton Battery Service, Inc.
P.O. Box 451
Chadbourn, NC 28431

NC D024459471
Columbus County

This company has operated as a battery repair and recycling station for approximately 30 years. As best as could be determined, the operation consisted only of handling unbroken batteries. However, since the facility has been in operation for 30 years, there is significant concern about the past practices of battery repair and handling. The possibility of spilled or buried acid or lead wastes seems very high. For this reason, the site has been assigned a Medium Priority for inspection.

Hull Service Station
Route 4, Box 89
Vale, NC 28168

NC D083674713
Lincoln County

Old underground tanks and surface spillage at the service station, which is situated between the houses of Tom Hull and Ted Hull, is the apparent source of methyl benzene and trichloroethane found in the well water of the houses. Groundwater is the sole drinking water supply for the area. It is suspected that the bedrock aquifer and some of the overlying soil is contaminated. This site has been assigned a Medium Priority for inspection

Meadowlark Gliderport
P.O. Box 173 6504 Burlington Rd.
Whitsett, NC 27377

NC D107885188
Guilford County

A small area adjacent to the airstrip was found to have high levels of pesticides and other hazardous chemicals in the soil. Water from the gliderport well, however, showed no contamination when analyzed. The contamination of the soil does not appear to be very extensive, however, so this site has been assigned a Low Priority for inspection.

Royal Development Co., Inc.
1417 Courtesy Road
High Point, NC 27261

NC D003521960
Guilford County

Royal Development Co., Inc.
325 Kettering Drive
High Point, NC 27261

NC D991277898
Guilford County

Royal Development Co., Inc.
Highway 71 West
Red Springs, NC 28377

NC D057454571
Robeson County

These three facilities are essentially identical. All are listed as RCRA generators and the Courtesy Road plant is listed as a transporter also. The generated waste is lacquer thinner which contains alcohol, ketone, toluene, and xylene. The waste has apparently always been drummed and moved off-site to be recycled. There is no indication that there has every been any treatment, storage, disposal, or spillage of hazardous wastes or materials at any of the three facilities. No Further Action is recommended.

Southchem
750 East Markham Ave.
Durham, NC 27702

NC D980503148
Durham County

This site is an urban area where unknown chemicals and demolition rubble were dumped and covered over. It has been investigated by an EPA contractor, Ecology and Environment, which sampled leachate sediment and liquid, stream sediment and water, and soil. Twenty organic compounds, some of which are priority pollutants, were positively identified and thirteen were tentively identified. This site lies adjacent to an intermittent tributary to a major surface water supply. It has been assigned a Medium Priority for inspection.

Tungsten Queen Mine
SR 1348, near Tungsten, NC
Townsville, NC

NC D082362989
Vance County

This mine was closed in 1972 and has not been reopened. The mine does have a large tailings pond on the east bank of Island Creek. It is suspected that metals contamination may be present in the soil, the groundwater, and possibly in Island Creek. A Low Priority of inspection has been assigned.

On 14 March 1985, each of the subject site was reviewed by Jerry Rhodes, Operations Chief, Solid and Hazardous Waste Management Branch, by NC RCRA 3012 personnel; and by the following representatives from the NC Department of Natural Resources and Community Development, Division of Environmental Management: Lee Laymon and Faye Sweat (Groundwater Section), Howard Bryant (Water Quality Section), and Glen Ross (Air Quality Section).

If you have any questions, please call me at (919) 733-2178.

Sincerely,

Grover Nicholson

Grover Nicholson, Geologist
Solid and Hazardous Waste Management Branch
Environmental Health Section

GN/lw/2
Enclosures

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980503148

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Southchem Site	750 East Markham Ave.				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Durham	NC	27702	Durham	032	02
09 COORDINATES LATITUDE	LONGITUDE				
36 00 30	078 52 50 gcN				

10 DIRECTIONS TO SITE (Starting from nearest public road)
From I-85/US 70, take the Avondale Dr. (NC 55) exit and go south on NC 55. After driving approx. 2,000 ft. on NC 55, turn left onto Markham Ave. Go about 1,500 ft. to the end of Markham Ave., turn right onto a gravel road, and drive onto the site.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Martin E. McGuire	P.O. Box 1244		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Anna Maria	FL	33501	( ) unlisted
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Wachovia Bank & Trust Co., N.A., Trustee	P.O. Box 2252		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Durham,	NC	27702	(919) 683-5250

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES DATE 9 / 23 / 80 C (MONTH DAY YEAR)
☐ NO 1 26 81 B

BY (Check all that apply)
☐ A. EPA ☒ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): Ecology and Environment, Inc. (FIT)

02 SITE STATUS (Check one)
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1966 (BEGINNING YEAR) | 1981 (?) (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED Samples of stream water, stream sediment, soil, leachate sediment, and leachate liquid were collected on 1/26/81 by Ecology and Environment, Inc. (FIT). Analyses of these samples showed the presence of 20 organic compounds, some of which are priority pollutants, and tentatively identified another

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION 13 organic compounds. Leachate from the landfill apparently flows into Goose Creek, a tributary to Ellerbe Creek, and from Ellerbe Creek into the Neuse River, a major surface water supply for downstream cities.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Asst. VP Kenneth Woods, Real Estate	Wachovia Bank & Trust Co, N.A.	919 683-5250

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Grover Nicholson/Lee Crosby	NC DHR/ Div. of Health Services	Solid & Haz. Waste	(919) 733-2178	3 / 7 / 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980503148

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

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

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

TONS Unknown
CUBIC YARDS Unknown
NO. OF DRUMS Unknown

03 WASTE CHARACTERISTICS *(Check all that apply)*

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

Unknown

III. WASTE TYPE

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

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

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

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

N. C. Department of Human REsources, Division of Health Services files.

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D980503148

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☒ OBSERVED (DATE: 1/26/81) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Large — 04 NARRATIVE DESCRIPTION

Leachate may potentially reach the water supply (Neuse River) for Raleigh and other downstream cities.

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

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

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

01 ☒ F. CONTAMINATION OF SOIL — 02 XX OBSERVED (DATE: 1/26/81) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

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

See B above

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

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

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

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

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

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

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

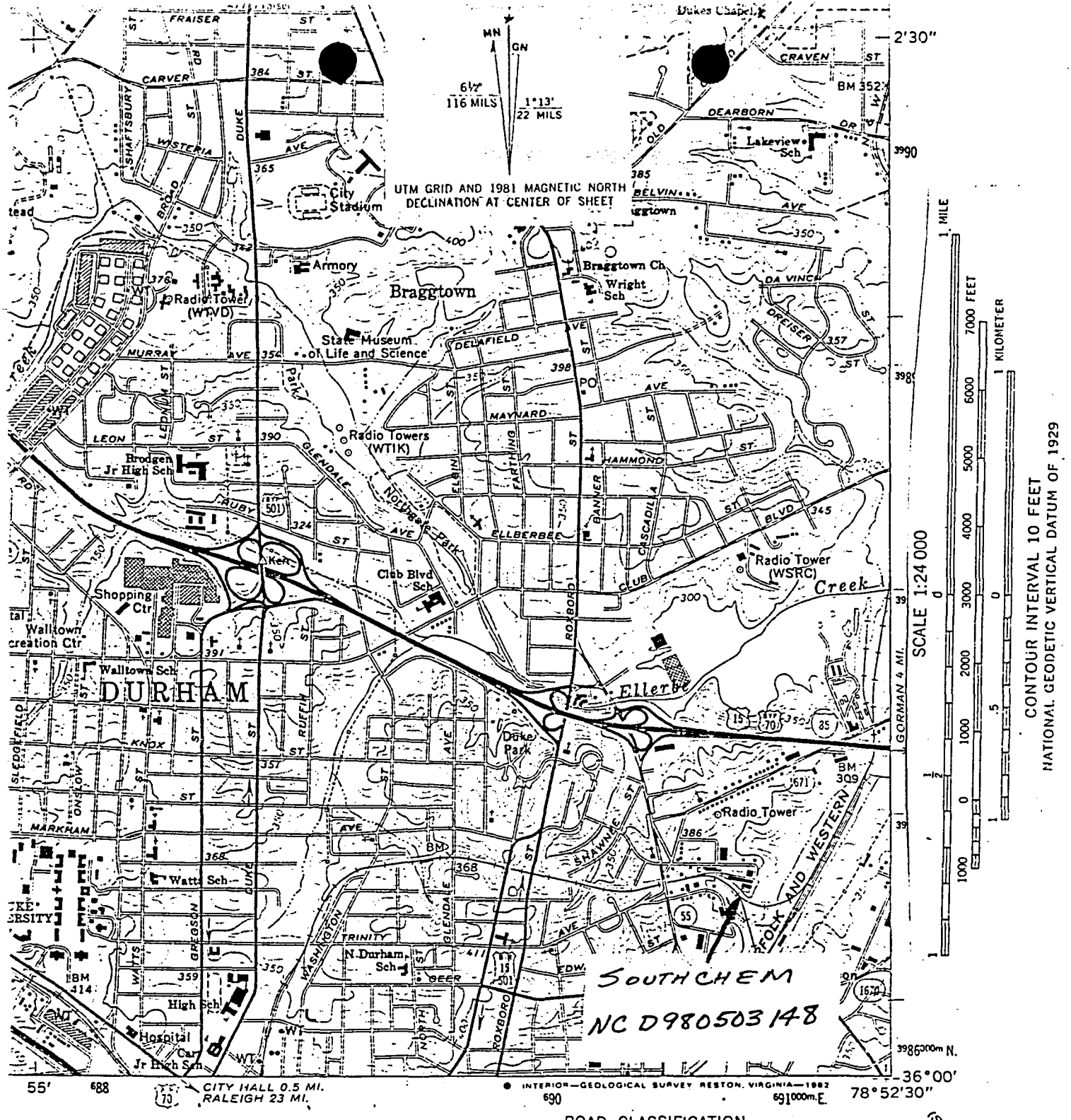
01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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



ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Interstate Route

U. S. Route

State Route

QUADRANGLE LOCATION

...ons shown in purple and woodland compiled in cooperation ...State of North Carolina agencies from aerial photographs taken ... and other sources. This information not field checked ...edited 1981

NORTHWEST DURHAM, N. C.

SW/4 DURHAM NORTH 15' QUADRANGLE

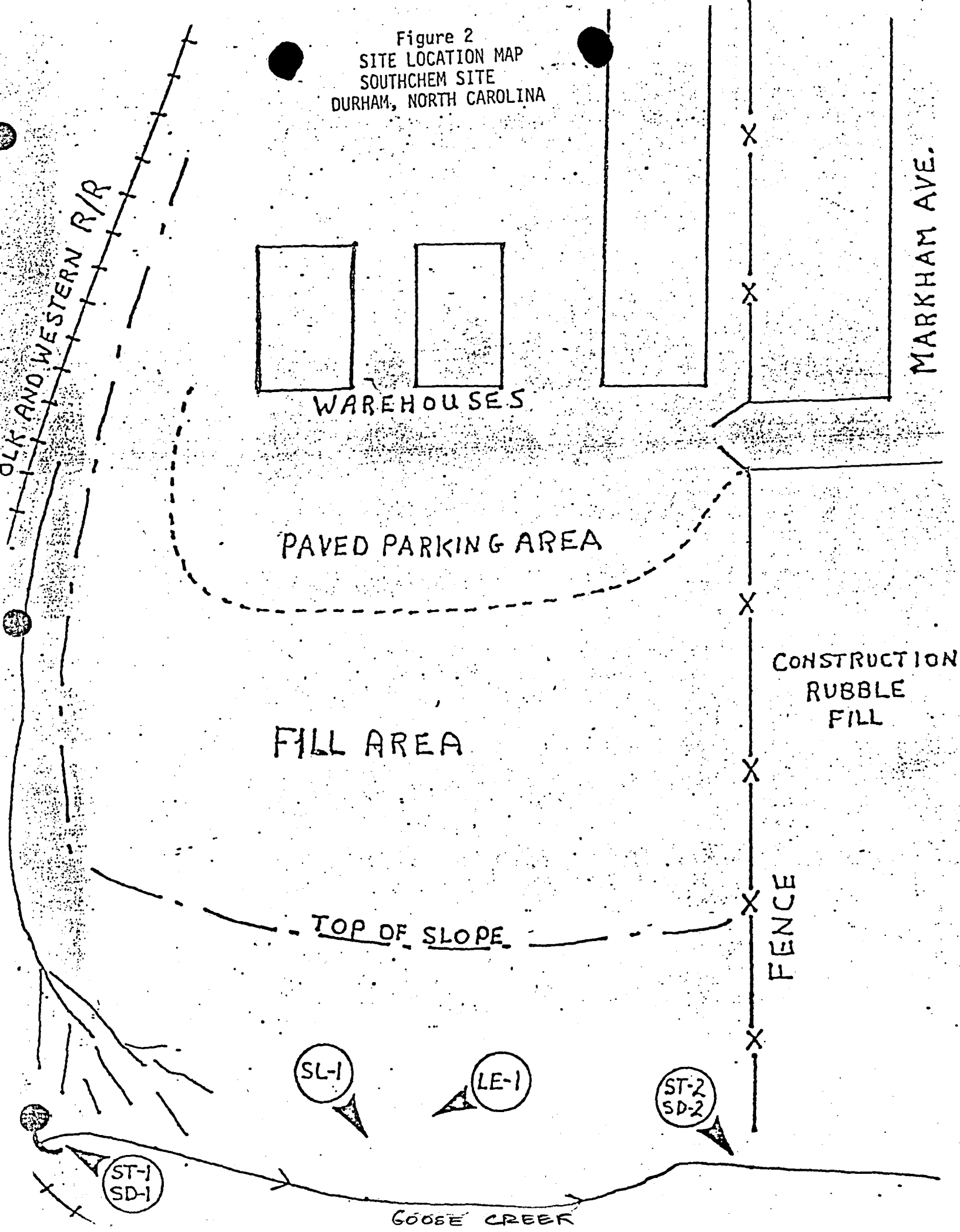
N3600—W7852.5/7.5

1973

PHOTOREVISED 1981

DMA 5256 III SW—SERIES V842

Figure 2
SITE LOCATION MAP
SOUTHCHEM SITE
DURHAM, NORTH CAROLINA



DATE: 21 February 1985

TO: File

FROM: Grover Nicholson gon

RE: Southchem PA

I talked with Mr. Kenneth Woods by Telephone on 2/20/85 and 2/21/85. He is the Assistant Vice President, Real Estate, at Wachovia Bank & Trust Company in Durham, (919) 683-5250.

Wachovia is the trustee for the site which is still owned by Martin E. McGuire. Mr. McGuire now lives in Florida.

According to Mr. Woods, the site is not presently active as a landfill but warehouses on the site are being used for storage. Mr. Woods did not know what material was being stored in the warehouses.

GN/lw/2095A

Durham
SHW

SOUTHCHEM Inc.
2000 East Pettigrew Street
Post Office Box 886
Durham, North Carolina 27702
(919) 596-0681

Joseph H. Collie
President

RECEIVED
OCT 7 1981
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

September 30, 1981

Mr. William Strickland, Manager
Hazardous Waste Division
Department of Human Resources
Albemarle Building - 325 N. Salisbury Street
Raleigh, North Carolina 27611

Dear Mr. Strickland:

We are most appreciative of your help and understanding in the problems involved with the East Markham Avenue landfill in which we were the last tenant.

Certainly, Southchem is desirous of maintaining its position of a law-abiding and environmental protection firm. We all know the importance of the chemical industry to the growth of any industrial nation. We as a chemical distributor have no interest in compromising our position of representing the chemical industry.

It seems that in the last few weeks Southchem has had an undue amount of publicity for the size firm that it really is. Fortunately, some of the more recent press copy has been of a more positive nature.

Although I assume you may have this information, I am enclosing some clippings from the Durham newspapers, some of which you may not have seen.

We look forward to seeing you when you may have time to visit with us. Again, let me assure you of our desire to work with all regulatory agencies, and our particular appreciation for your desire for a fair appraisal of a problem, and not being swayed by journalistic myopia.

Most sincerely,

Joseph H. Collie

JHC:ahc
encl.

cc: David F. Tompkins

CHARTER MEMBER
NACD

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES

FIT PROJECT

RECEIVED
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH
AUG 19 1981

TASK REPORT TO THE
ENVIRONMENTAL PROTECTION AGENCY
CONTRACT NO. 68-01-6056

[redacted]

1 copy

FIELD INVESTIGATIONS OF UNCONTROLLED HAZARDOUS WASTE SITES

FIT PROJECT

TASK REPORT TO THE ENVIRONMENTAL PROTECTION AGENCY CONTRACT NO. 68-01-6056

INVESTIGATION REPORT
SOUTHCHEM SITE
DURHAM, NORTH CAROLINA
July 21, 1981

TDD # F4-8010-05

Prepared by: Neal Strickland
Charles Wilson
Submitted to: R. D. Stonebraker

ecology and environment, inc.

International Specialists in the Environmental Sciences

recycled paper

INVESTIGATION REPORT
SOUTHCHEM SITE
DURHAM, N.C.
JANUARY 26, 1981

INTRODUCTION

A hazardous waste site investigation was conducted on January 26, 1981, at the Southchem site by Charles Wilson and Neal Strickland of Ecology and Environment, Inc., Field Investigation Team (FIT) for the Air and Hazardous Materials Division, U.S. Environmental Protection Agency (EPA).

Southchem is a two acre site located in Durham, North Carolina at the east end of Markham Avenue. Dumping began there in 1966 when Cardinal Chemical Company disposed of fire-damaged building debris and drummed chemicals (1). In the early 1970's, E. C. Henslee, for reasons not identified, allegedly used the landfill as a chemical waste dump (2). The wastes were covered with soil, and from the early 1970's until 1978 construction rubble was dumped on this site. The property's trustee, the Wachovia Bank and Trust Company, Raleigh, North Carolina, admits knowledge of the landfill's contents resulting from the chemical warehouse fire at Cardinal Chemical Company in the 1960's. According to the bank's records, the drums buried in the landfill could have included:

nitric acid	alcohols
sulfuric acid	ketones
muratic acid	glycols
acetic acid	esters
phosphoric acid	petroleum solvents
formic acid	sodium silicate
chlorinated solvents	liquid caustic soda

In October 1980, a preliminary inspection of this site was conducted by FIT members Gary Clemons and Neal Strickland. During this investigation a pungent chemical odor, believed to be organic, was noticed, and considerable dead vegetation was observed in the low areas. However, sand and silt washing from the fill area may have resulted in a natural die back condition in these areas. The alleged leachate stream that flows into Goose Creek was not identified at that time. (3) At the present time the site is inactive as a landfill or as a chemical storage facility.

STUDY AREA

The Southchem Site (Figure 2) is bounded on the north and west side by an eight foot chain link fence and on the east and south side by Norfolk and Western railroad tracks. Goose Creek, a small and intermittent tributary to Ellerbie Creek, is located along the eastern boundry of the landfill. The creek is situated in the bottom of a natural ravine and apparently the fill material was placed directly in the west side of this depression to produce a level surface. Three empty warehouses that were used as chemical storage facilities are located on the western side of the site. The fill surface closest to the site entrance and near the warehouses is covered with slag and was used as a parking area when the facility was active. The eastern

portion of the fill surface drops steeply toward Goose Creek and contains sinkholes and depressions that have evidently resulted from the incomplete application of soil cover over the fill material. During the investigation only one leachate stream was observed which was consistent with a previously referenced report. The leachate stream was not actively entering Goose Creek during this investigation, but sufficient precipitation would possibly increase the flow to a point where it could actively enter the creek. Unsecured gates and the unfenced southern and eastern boundaries of the site would permit unrestricted entry to the site by the public.

RESULTS AND DISCUSSION

General

Figure 2 shows the locations of all sampling points. Table I lists the sample locations and types of samples collected. Aqueous and sediment samples were collected upstream, downstream, and in the leachate stream. Due to the small size of the site, all samples were collected in close proximity to one another. All samples except the leachate samples were analyzed for organic compounds, metals, and cyanide, including priority pollutants. The leachate samples were analyzed for volatile organics and metals only, due to the limited quantity available. Analysis of aqueous samples for organics was conducted by Mead Technology, Research Triangle Park, North Carolina, and analysis of aqueous samples for inorganics was conducted by Versar, Inc., Springfield, Virginia. Soil, sediment, and total phenols analyses were conducted by EPA Surveillance and Analysis Division Laboratory Services Branch, Athens, Georgia. A copy of the results from the laboratory analyses is included with this report as Appendix A.

Stream Samples

Tables 2 and 3 show the results of the inorganic analyses of the Goose Creek aqueous samples. There is a marginal increase in the levels of several metals between the upstream and downstream Goose Creek samples. However, cyanide was detected at 80 ug/L in the upstream Goose Creek aqueous sample, but not detected at all in the downstream sample.

Tables 5 and 6 show the results of the organics analyses of the Goose Creek aqueous samples. No organics were detected in the upstream aqueous sample. However, in the downstream aqueous sample, nine organic priority pollutants were positively identified (see Table 5) and five other organics were tentatively identified (see Table 6). None of the organic compounds listed in Table 5 exceeds the allowable limits set for ambient water quality (8, 9, 10, 11).

Chlordane-gamma, chlordane-alpha, and DDD were detected in both upstream and downstream Goose Creek sediment samples, while dieldrin was detected only in the downstream sample (see Table 4).

No phenolic compounds were detected in any of the Goose Creek aqueous samples.

Leachate Samples

The results of the inorganic analyses of the sediment sample collected at the leachate point are comparable to those of the Goose Creek sediment samples (see Table 2). The only organics detected in the leachate sediment sample were chlordane-gamma and chlordane-alpha (see Table 4).

The volatile organics detected in the leachate aqueous sample included 1,2-trans-dichloroethylene, toluene, chloroform, and ethylbenzene (see Table 5). The concentration of all of the compounds detected in the aqueous leachate sample were below the allowable limits for ambient water quality (8, 9, 10, 11).

Composite Soil Sample

The inorganic analysis of the composite soil sample produced data generally comparable to that of the Goose Creek sediment samples.

The organic analysis of the soil sample showed nine compounds, all of which were either pesticides or pesticide related and five of which are priority pollutants (dieldrin, DDT, DDD, BHC-alpha, and BHC-gamma).

METHODOLOGY

During this investigation all sampling and preservation methods used were in accordance with Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual, August 29, 1980 (Draft) (12). Chain of custody was maintained from time of collection until samples were relinquished to Federal Express Corporation or to the Laboratory Services Branch (LSB) personnel at the EPA Athens, Ga. lab.

REFERENCES

(1) Report - Potential Hazardous Waste Site Inspection - Report- Durham, North Carolina Division of Health Services; August 14, 1980.

(2) File Memorandum - Southchem Site file, Durham, N.C., EPA, Joe Young, August 11, 1980.

(3) File Memorandum - Southchem Site file, Durham, N.C., EPA, Joe Young, August 11, 1980.

(4) Ambient Water Quality Criteria for Cyanides; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(5) Ambient Water Quality Criteria for Aldrin/Dieldrin; U.S. Environmental Protection Agency, Office of Water Regulaitons and Standards, Criteria and Standards Division, October 1980.

(6) Ambient Water Quality Criteria for DDT and Metabolites; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(7) Ambient Water Quality Criteria for Chlorodane; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(8) Ambient Water Quality Criteria for Chlorinated Ethanes; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(9) Ambient Water Quality Criteria for Tetrachloroethylene; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(10) Ambient Water Quality Criteria for Vinyl Chloride; U.S. Environmental Protection Agency, Office of Water Regulations and Standard, Criteria and Standards Division, October 1980.

(11) Ambient Water Quality Criteria for Toluene; U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, October 1980.

(12) Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual. (draft); U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division, August 29, 1980.

FIGURE 1
GENERAL MAP LOCATION
SOUTHCHEM SITE
DURHAM, NORTH CAROLINA

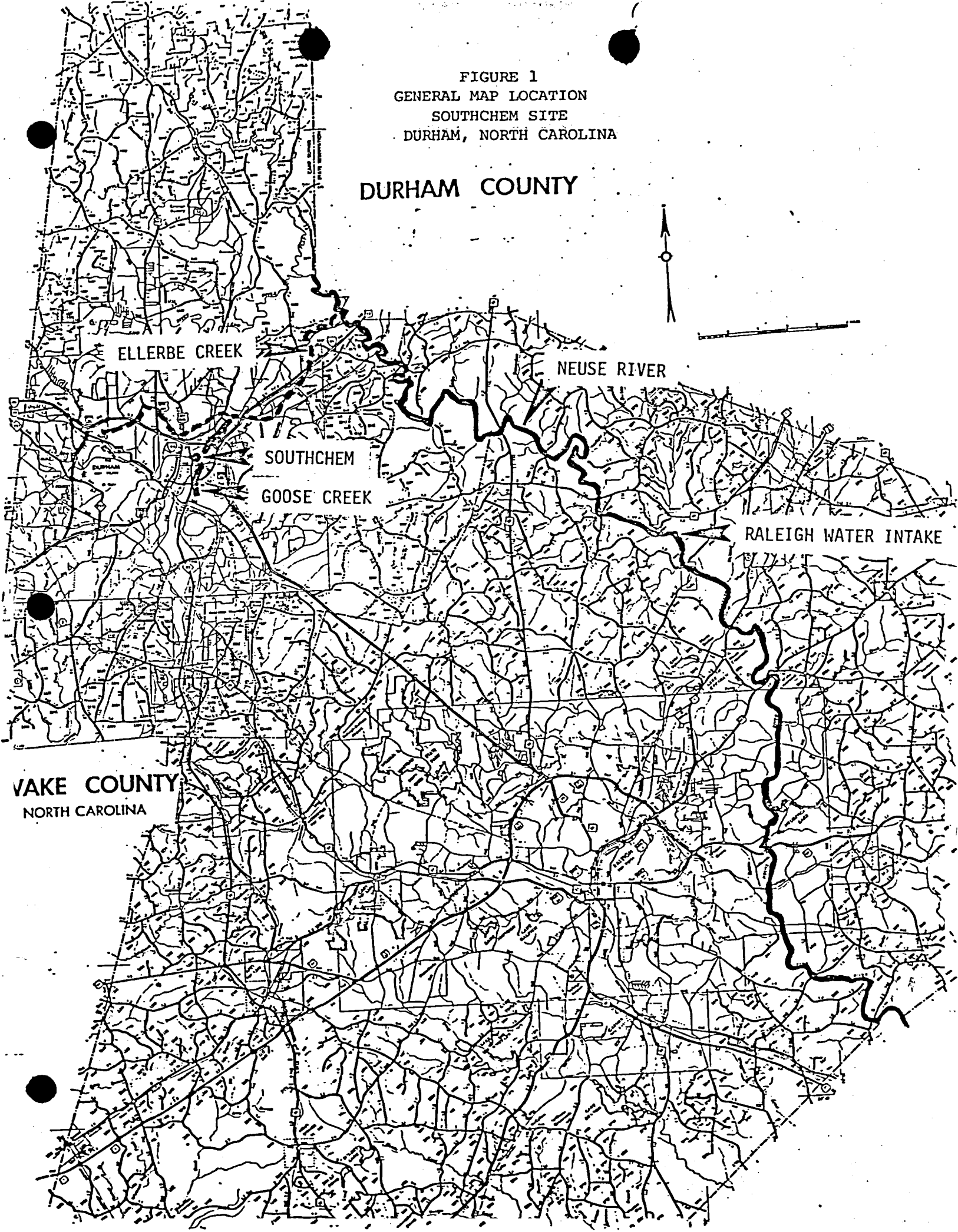


Figure 2
SITE LOCATION MAP
SOUTHCHEM SITE
DURHAM, NORTH CAROLINA

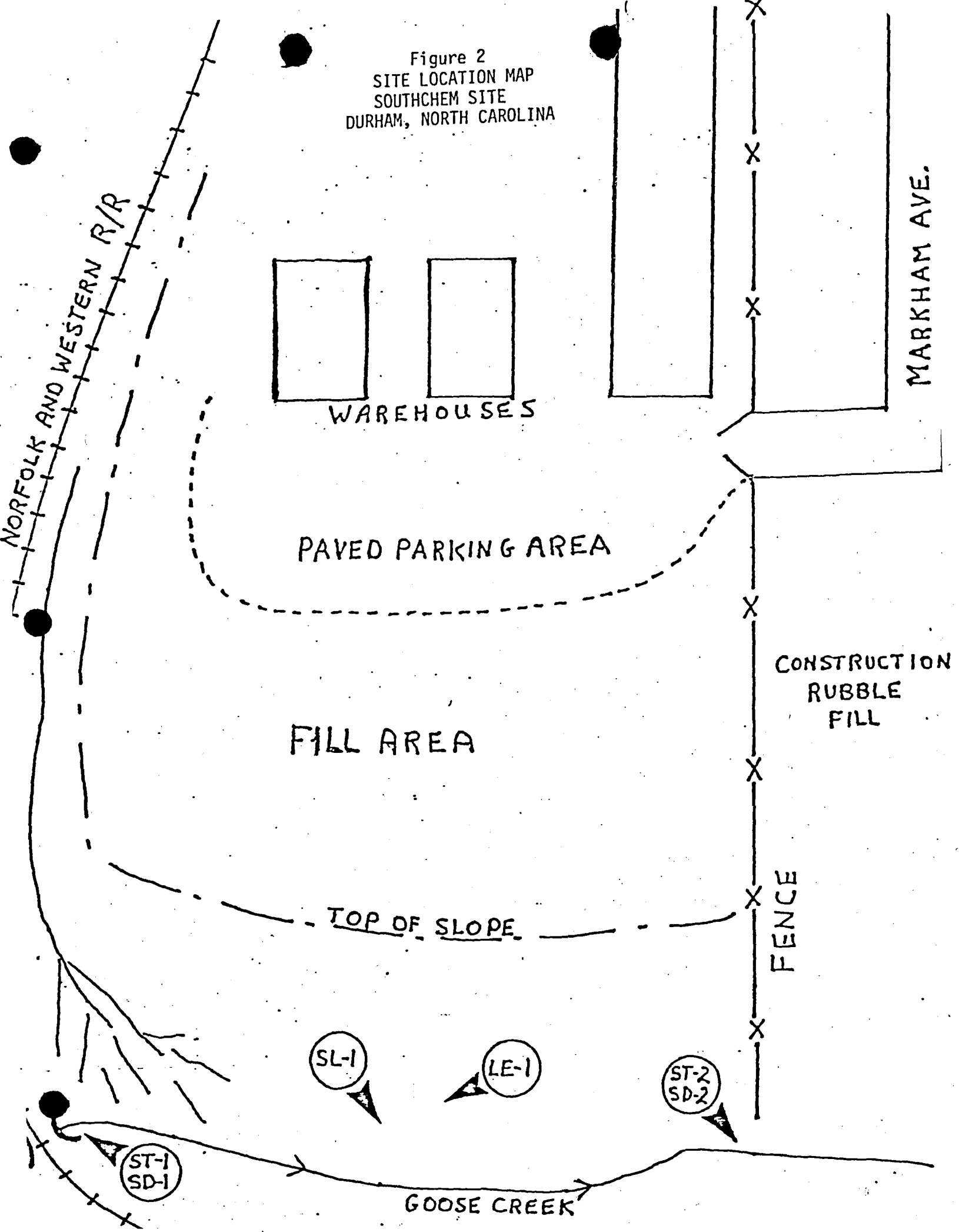


TABLE 1
SOUTHCHEM SITE
SAMPLE LOCATIONS AND TYPES

Designation	Type	Location
ST-1	water	Goose Creek upstream of site
ST-2	water	Goose Creek downstream of site
SD-1	sediment	Goose Creek upstream of site
SD-2	sediment	Goose Creek downstream of site
SL-1	composite soil	Goose Creek flood plain
LE-1 (W)	water	Leachate spring at bottom of fill slope
LE-1 (S)	sediment	Leachate spring at bottom of fill slope

TABLE 2
SOUTHCHEM SITE
SEDIMENT AND SOIL SAMPLES
POSITIVELY IDENTIFIED METALS (mg/kg)

	SL-1	SD-1	SD-2	LE-1
Lead*	53	47	92	20
Barium	66	45	69	62
Chromium*	15	10	20	17
Copper*	18	15	35	13
Nickel*	13	15	16	10
Strontium	12	30	27	28
Titanium	315	326	227	135
Vanadium	21	20	21	38
Yttrium	2	3.8	5	7.5
Zinc*	23	76	99	75
Calcium	1,600	5,100	4,840	3,830
Magnesium	1,160	2,920	2,150	1,870
Aluminum	9,080	7,940	11,300	14,800
Iron	13,400	14,000	13,200	22,000
Manganese	72	366	164	340
Sodium	360	560	800	550
Mercury*	.12	.10	.13	.12

*Priority Pollutants

TABLE 3
SOUTHCHEM SITE
STREAM SAMPLES
POSITIVELY IDENTIFIED INORGANICS (ug/L)

	ST-1	ST-2
Barium	110	50
Boron	---	1020
Cobalt	10	10
Zinc*	1030	1100
Aluminum	300	650
Manganese	1400	3300
Calcium	58000	59000
Magnesium	22000	24000
Sodium	15000	148000
Cyanide*	80	-

*Priority Pollutants

---Analyzed for but not detected.

TABLE 4
SOUTHCHEM SITE
SEDIMENT AND SOIL SAMPLES
POSITIVELY IDENTIFIED ORGANICS (mg/kg)

	SL-1	SD-1	SD-2	LE-1(S)
Dieldrin*	.043	---	.0069	---
DDT*	.130	---	---	---
o.p. DDT	.032	---	---	---
DDD*	.054	.009	.021	---
o.p. DDD	.010	---	---	---
BHC-alpha*	.080	---	---	---
BHC-gamma*	.058	---	---	---
Chlordane-gamma	.200	.012	.031	.0075
Chlordane-alpha	.200	.0089	.026	.0065

*Priority Pollutants

---Analyzed for but not detected

TABLE 5
SOUTHCHEM SITE
WATER SAMPLES
POSITIVELY IDENTIFIED ORGANICS (ug/L)

		ST-1	ST-2	LE-1(W)
1,2 Dichloroethane*	12	---	12	---
1,1,1 Trichloroethane*	12	---	27	---
1,2 Trans-Dichloroethylene*	12	---	46	28
Methylene Chloride*	12	---	69	---
Tetrachloroetheylene*	12	---	10	<10
Toluene*	9	---	14	3700
Trichloroethylene*	12	---	19	<10
Vinyl Chloride*	15	---	53-	19
Chloroform*		---	---	310
Ethylbenzene*		---	---	460
Bis (2-Ethylhexyl) Phthalate*		---	<10	NA
a-BHC-Alpha*	15	---	0.3	NA

*Priority Pollutants

---Analyzed for but not detected.

NA Not analyzed for

TABLE 6
SOUTHCHEM SITE
WATER SAMPLES
TENTATIVELY IDENTIFIED ORGANICS

ST-2
tributyl ester of phosphoric acid
acetone
tetrahyrofuran
1,4 dioxane
methyl pentanone
(3 unidentified compounds)

LE-1
hexanol
methyl propyl estes of acetic acid
methyl cyclohexane
butanol
proponal
methanethial
mehtyl pentanoni

APPENDIX A

ANALYTICAL DATA

SOUTHCHEM SITE

DURHAM, NORTH CAROLINA

DATA REPORTING SHEET
SEDIMENT

EPA-SAD-LSB-4

PROJECT Southchem
Durham, NC

CHEMIST McDaniel REC'D 1/28/81 COMPL'D 3/1

PROJECT NUMBER 81-38 RESULTS ON DRY WEIGHT BASIS

SAD NO.		81C0792	81C0793	81C0794	81C0795
SOURCE & STATION		SL-1S	SD-1S	LE-1S	SD-2S
DATE/TIME		1/27/81 @ 1430	1/27/81 @ -----	1/27/81 @ 1330	1/27/81 @
ELEMENT (mg/kg)					
Silver*	01078	2K	2K	3K	2K
Arsenic*	01003	8K	8K	12K	8K
Boron	01023	—	—	—	—
Barium	01008	66	45	62	69
Beryllium*	01013	2K	2K	3K	2K
Cadmium*	01028	2K	2K	3K	2K
Cobalt	01038	—	—	—	—
Chromium*	01029	15	10	17	20
Copper*	01043	18	15	13	35
Molybdenum	01063	5K	5K	8K	5K
Nickel*	01068	13	15	10	16
Lead*	01052	53	47	20	92
Antimony*	01098	5K	5K	8K	5K
Selenium*	01148	8K	8K	12K	8K
Tin	01103	—	—	—	—
Strontium	01083	12	30	28	27
Tellurium	45513	—	—	—	—
Titanium	01153	315	326	135	227
Thallium*	34480	—	—	—	—
Vanadium	01088	21	20	38	21
Yttrium	45514	2	3.8	7.5	5
Zinc*	01093	23	76	75	99
Zirconium	01163	—	—	—	—
Mercury*	71921	0.12	0.10	0.12	0.13
Calcium	00917	1,600	5,100	3,830	4,840
Magnesium	00924	1,160	2,920	1,870	2,150

- CONTINUED ON BACK -

K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
* - Priority Pollutant.

- CONTINUATION -
DATA REPORTING SHEET
SEDIMENT

EPA-SWD-LSB-4-1

PROJECT Southchem Durham, NC CHEMIST McDaniel REC'D 1/28/81 COMPL'D 3/13/8

PROJECT NUMBER 81-38 RESULTS ON DRY WEIGHT BASIS

SAD NO.		81C0792	81C0793	81C0794	81C0795
SOURCE & STATION		SL-15	SD-15	LE-15	SD-25
DATE/TIME					
ELEMENT (mg/kg)					
Aluminum	01108	9,080	7,940	14,800	11,300
Iron	01170	13,400	14,000	22,000	13,200
Manganese	01053	72	366	340	164
Sodium	00934	360	560	550	800
Cyanide*(Wet Weight)	00721				
Percent Moisture (%)		11%	22%	32%	32%
Asbestos *	34228	NA	NA	NA	NA

K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
* - Priority Pollutant.

DATA RECORD SHEET
WATER

EPA-[illegible] 4-10-80

PROJECT South Chem Durham, NC | CHEMIST McDaniel | DATA REC'D 3-20-81 | COMPL'D 3-25-81

PROJECT No. 81-38

Contractor Versar, Inc.

SAD NO. 81C	0796	0797		
Contractor Sample No.'s	MD8075	MD8077		
SOURCE & STATION	ST-1W upstr of site	ST-2W downstr of site		
DATE/TIME	1-27-81 1315	1-27-81 1245		
ELEMENT (ug/L)				
Silver * 01077	20K	20K		
Arsenic * 01002	10K	10K		
Boron 01022	10K	1,020		
Barium 01007	110	50		
Beryllium * 01012	2K	2K		
Cadmium * 01027	5K	5K		
Cobalt 01037	10	10		
Chromium * 01034	10K	10K		
Copper * 01042	20K	20K		
Molybdenum 01062	—	—		
Nickel * 01067	20K	100		
Lead * 01051	40K	40K		
Antimony * 01097	20K	20K		
Selenium * 01147	10K	10K		
Tin 01102	20K	100K		
Strontium 01082	—	—		
Tellurium 01064	—	—		
Titanium 01152	—	—		
Thallium * 01059	10K	10K		
Vanadium 01087	10K	30		
Yttrium 01203	—	—		
Zinc * 01092	1,030	1,090		
Zirconium 01162	—	—		
Mercury * 71900	1K	1K		
Aluminum 01105	300	650		
Manganese 01055	1,420	3,320		

K – Actual value is known to be less than value given.
L – Actual value is known to be greater than value given.
* – Priority Pollutant.

DATA REPORTING SHEET
WATER

PROJECT South Chem CHEMIST _____ DATA REC'D _____ COMPL'D _____
Durham, NC
PROJECT No. _____ Contractor _____

SAD NO.	81C	0796	0797		
Contractor Sample No.		MD8075	MD8077		
SOURCE & STATION					
DATE/TIME					
ELEMENT (mg/L)					
Calcium	00916	58	59		
Magnesium	00927	22	24		
Iron	74010	1.7	16		
Sodium	00929	15	148		
Cyanide *	00720	0.08	0.01K		
Asbestos *	34225	NA	NA	NA	N

K – Actual value is known to be less than value given.

CLIENT South Chem CHEMIST E. W. Loy, JR. REC'D. 1-28-81 COMPL'D. 4-14-81

Durham, NC

[illegible]S ON DRY WEIGHT BASIS

[illegible] NO.	81C 0792	81C 0793	81C 0794	81C 0795
[illegible]URCE [illegible] STATION	SL-1S Midway of Goose Cr. & Fill area.	SD-1S no end of RR Culvert upstr. of site from Goose.	LE-1S leachate Pt midway N & S ½ from bottom of Fl.	SD-2S Downstr. of site on line with no property line.
[illegible]TE/TIME	1-27-81@ 1430	1-27-81 @	1-27-81@ 1330	1-27-81 @ 1245
COMPOUND	Concentration ug/kg	Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
aldrin 2/ 39333	60U	3U	30U	6U
dieldrin 2/ 39383	43 5/	3U	3U	6.9
chlordane (tech. mixture & metabolites) 2/ 39351	3/	3/	3/	3/
4,4'-DDT (p,p'-DDT) 2/ 39301	130 5/	20U	30U	30U
4,4'-DDE (p,p'-DDE) 2/ 39321	10U	20U	30U	30U
4,4'-DDD (p,p'-TDE) 2/ 39311	54 5/	9 5/	30U	21 5/
a-endosulfan-Alpha 2/ 34364	4U	2U	3U	3U
b-endosulfan-Beta 2/ 34359	6U	7U	8U	8U
endosulfan sulfate 2/ 34354	10U	20U	20U	20U
endrin 2/ 39393	3U	4U	5U	5U
endrin aldehyde 2/ 34369	NA	NA	NA	NA
heptachlor 2/ 39413	60U	3U	30U	6U
heptachlor epoxide 2/ 39423	60U	3U	30U	6U
a-BHC-Alpha 2/ 39076	80 5/	3U	80U	6U
b-BHC-Beta 2/ 34257	60U	3U	30U	6U
g-BHC-(lindane)-Gamma 2/ 39343	58 5/	3U	30U	6U
d-BHC-Delta 2/ 34262	60U	3U	300U	6U
PCB-1242 (Aroclor 1242) 2/ 39499	500U	40U	70U	20U
PCB-1254 (Aroclor 1254) 2/ 39507	1000U	100U	300U	70U
PCB-1221 (Aroclor 1221) 2/ 39491	500U	40U	300U	20U
PCB-1232 (Aroclor 1232) 2/ 39495	500U	40U	300U	20U
[illegible]-1248 (Aroclor 1248) 2/ 39503	500U	40U	70U	20U
[illegible]-1260 (Aroclor 1260) 2/ 39511	1000U	100U	300U	70U
PCB-1016 (Aroclor 1016) 2/ 39514	500U	40U	70U	20U
Toxaphene 2/ 39403	1000U	100U	70U	70U
2,4-D 39731	1000U	100U	70U	70U
Silvex 39761	1000U	100U	70U	70U
2,4,5-T 39741	1000U	100U	70U	70U
Propachlor (Ramrod) 66672*	1000U	100U	70U	70U
Prometon 66673*	1000U	100U	70U	70U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 2/ 34678	— NA	— NA	— NA	— NA
Alpha Hydroxy Chlordene	200U 4/	4U 4/	15U 4/	6U 4/
Gamma Chlordane	200 4/5/	12 4/5/	7.5 4/5/	31 4/5/
Alpha Chlordane	200 4/5/	8.9 4/5/	6.5 4/5/	26 4/5/
o,p'-DDT	32 5/	20U	30U	30U
o,p'-DDD	10 5/	20U	30U	30U

Not Analyzed
[illegible] Estimated value.
[illegible] Actual value is known to be less than value given.
[illegible] Actual value is known to be greater than value given.
[illegible] Material was analyzed for but not detected. The number is the Minimum Detection Limit.
[illegible] Tentative identification.
[illegible] On NRDC List of Priority Pollutants.

3/- Reported as individual compounds.
4/- Constituents of Technical Chlordane.
5/- Confirmed on two separate GC Columns.
* - Made up parameter numbers.

SEDIMENT DATA REPORT SHEET
PURGEABLE ORGANICS ANALYSIS

ATHENS, GA
4/80

PROJECT South Chem, Durham, NC CHEMIST E. William Loy REC'D. 1-28-81 COMPLET'D. 3-17-

BASED ON WET WEIGHT BASIS

SAD NO.		81C0792	81C0793	81C0794
SOURCE & STATION		SL-1S midway of Goose cr & Fill area	SD-1S no end of RR culvert upstr of site from Goose	LE-1S leakage pt midway N&S 1/4 from bott of FI
DATE/TIME		1-27-81 1430	1-27-81	1-27-81 1330
Compound		ug/kg	ug/kg	ug/kg
dichlorodifluoromethane 2/	34334	5U	5U	5U
methyl chloride 2/	34421	5U	5U	5U
methyl bromide 2/	34416	5U	5U	5U
vinyl chloride 2/	34495	5U	5U	5U
chloroethane 2/	34314	5U	5U	5U
methylene chloride 2/	34426	5U	5U	5U
trichlorofluoromethane 2/	34491	5U	5U	5U
1,1-dichloroethylene 2/	34504	5U	5U	5U
1,1-dichloroethane 2/	34499	5U	5U	5U
1,2-trans-dichloroethylene 2/	34549	5U	5U	5U
chloroform 2/	34318	5U	5U	5U
1,2-dichloroethane 2/	34534	5U	5U	5U
1,1,1-trichloroethane 2/	34509	5U	5U	5U
carbon tetrachloride 2/	34299	5U	5U	5U
dichlorobromomethane 2/	34330	5U	5U	5U
1,2-dichloropropane 2/	34544	5U	5U	5U
1,3-dichloropropylene 2/	34564	5U	5U	5U
trichloroethylene 2/	34487	5U	5U	5U
benzene 2/	34237	5U	5U	5U
chlorodibromomethane 2/	34309	5U	5U	5U
1,1,2-trichloroethane 2/	34514	5U	5U	5U
2-chloroethyl vinyl ether (mixed) 2/	34579	5U	5U	NA
bromoform 2/	34290	5U	5U	5U
1,1,2,2-tetrachloroethane 2/	34519	5U	5U	5U
tetrachloroethylene 2/	34478	5U	5U	5U
toluene 2/	34483	5U	5U	5U
chlorobenzene 2/	34304	5U	5U	5U
ethylbenzene 2/	34374	5U	5U	5U
acrolein 2/	34213	100U	100U	100U
acrylonitrile 2/	34218	100U	100U	100U

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.

SEDI[illegible]
DATA REPOR[illegible] SHEET
PURGEABLE ORGANIC ANALYSIS

EPA-SAD, REG. IV
ATHENS, GA
4/80

2

PROJECT South Chem
Durham, North Carolina

CHEMIST E. W. Loy, Jr.

REC'D. 1-28-81

COMPLET'D. 3-9-81

BASED ON WET WEIGHT BASIS

SAD NO.		81C 0795		
SOURCE & STATION		SD-2S Down strean of site on line with no prop. line.		
DATE/TIME		1-27-81 @ 1245		
Compound		ug/kg	ug/kg	ug/kg
dichlorodifluoromethane 2/	34334	5U		
methyl chloride 2/	34421	5U		
methyl bromide 2/	34416	5U		
vinyl chloride 2/	34495	5U		
chloroethane 2/	34314	5U		
methylene chloride 2/	34426	5U		
trichlorofluoromethane 2/	34491	5U		
1,1-dichloroethylene 2/	34504	5U		
1,1-dichloroethane 2/	34499	5U		
1,2-trans-dichloroethylene 2/	34549	5U		
chloroform 2/	34318	5U		
1,2-dichloroethane 2/	34534	5U		
1,1,1-trichloroethane 2/	34509	5U		
carbon tetrachloride 2/	34299	5U		
dichlorobromomethane 2/	34330	5U		
1,2-dichloropropane 2/	34544	5U		
1,3-dichloropropylene 2/	34564	5U		
trichloroethylene 2/	34487	5U		
benzene 2/	34237	5U		
chlorodibromomethane 2/	34309	5U		
1,1,2-trichloroethane 2/	34514	5U		
2-chloroethyl vinyl ether (mixed) 2/	34579	5U		
bromoform 2/	34290	5U		
1,1,2,2-tetrachloroethane 2/	34519	5U		
tetrachloroethylene 2/	34478	5U		
toluene 2/	34483	5U		
chlorobenzene 2/	34304	5U		
ethylbenzene 2/	34374	5U		
acrolein 2/	34213	100U		
acrylonitrile 2/	34218	100U		

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.

WATER
DATA REPORTING SHEET

SAD NO. 81C0796 CONTRACT LAB NO. D0309 CONTRACT LAB Head Technology
PROJECT South Chem Durham, NC SOURCE & STATION ST-1W
DATE/TIME SAMPLED 1-24-81 @ 1315 SAMPLE RECEIVED 1-28-81 @ 1015 DATA RECEIVED 3-6-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
1B	Acenaphthene	34205	10U
5B	Benzidine	39120	10U
8B	1,2,4-Trichlorobenzene	34551	10U
9B	Hexachlorobenzene	39700	10U
12B	Hexachloroethane	34396	10U
17B	Bis(Chloromethyl) Ether	34268	NA
18B	Bis(2-Chloroethyl) Ether	34273	10U
20B	2-Chloronaphthalene	34581	10U
25B	1,2-Dichlorobenzene	34536	10U
26B	1,3-Dichlorobenzene	34566	10U
27B	1,4-Dichlorobenzene	34571	10U
28B	3,3'-Dichlorobenzidine	34631	10U
35B	2,4-Dinitrotoluene	34611	10U
36B	2,6-Dinitrotoluene	34626	10U
37B	1,2-Diphenylhydrazine 1/	34346	10U
39B	Fluoranthene	34376	10U
40B	4-Chlorophenyl Phenyl Ether	34641	10U
41B	4-Bromophenyl Phenyl Ether	34636	10U
42B	Bis(2-Chloroisopropyl) Ether	34283	10U
43B	Bis(2-Chloroethoxy) Methane	34278	10U
52B	Hexachlorobutadiene	39702	10U
53B	Hexachlorocyclopentadiene	34386	10U
54B	Isophorone	34408	10U
55B	Naphthalene	34696	10U
56B	Nitrobenzene	34447	10U
61B	N-Nitrosodimethylamine	34438	NA
62B	N-Nitrosodiphenylamine 2/	34433	10U
63B	N-Nitrosodi-N-Propylamine	34428	10U
66B	Bis(2-Ethylhexyl) Phthalate	39100	10U
67B	Butyl Benzyl Phthalate	34292	10U
68B	Di-N-Butylphthalate	39110	10U
69B	Di-N-Octylphthalate	34596	10U
70B	Diethylphthalate	34336	10U
71B	Dimethylphthalate	34341	10U
72B	Benzo (A) Anthracene 4/	34526	10U
73B	Benzo(A) Pyrene	34247	10U
74B	3,4-Benzofluoranthene 5/	34230	10U
75B	Benzo(K) Fluoranthene 5/	34242	10U
76B	Chrysene 4/	34320	10U
77B	Acenaphthylene	34200	10U
78B	Anthracene 3/	34220	10U
79B	Benzo(GHI) Perylene	34521	25U
80B	Fluorene	34381	10U
81B	Phenanthrene 3/	34461	10U
82B	Dibenzo(A, H) Anthracene	34556	25U
83B	Indeno (1,2,3-CD) Pyrene	34403	25U
84B	Pyrene	34469	25U

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
21A	2,4,6-Trichlorophenol	34621	25U
22A	p-Chloro-m-Cresol	34452	25U
24A	2-Chlorophenol	34586	25U
31A	2,4-Dichlorophenol	34601	25U
34A	2,4-Dimethylphenol	34606	25U
57A	2-Nitrophenol	34591	25U
58A	4-Nitrophenol	34646	25U
59A	2,4-Dinitrophenol	34616	250U
60A	4,6-Dinitro-o-Cresol	34657	250U
64A	Pentachlorophenol	39032	25U
65A	Phenol (GC/MS)	34694	25U

K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
1/ - And/or Azobenzene.
2/ - And/or Diphenylamine.
3/ - 81B Phenanthrene and/or 78B Anthracene.
4/ - 76B Chrysene and/or 72B Benzo(A) Anthracene.
5/ - 74B 3,4-Benzofluoranthene and/or 75B Benzo(K) Fluoranthene.
NA - Not analyzed.
J - Estimated value.

(over)

WATER
DATA REPORTING SHEET

SAD NO. 81C0796 CONTRACT LAB NO. D0309 CONTRACT LAB Mead Technology
PROJECT South Chem SOURCE & STATION ST-1W
Durham, NC
DATE/TIME SAMPLED 1-27-81 @ 1315 SAMPLE RECEIVED 1-28-81 @ 1015 DATA RECEIVED 3-6-81

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS		ug/L	TENTATIVELY-IDENTIFIED COMPOUNDS	ug
2V Acrolein	34210	100U		
3V Acrylonitrile	34215	100U		
4V Benzene	34030	10U		
6V Carbon Tetrachloride	32102	10U		
7V Chlorobenzene	34301	10U		
10V 1,2-Dichloroethane	32103	10U		
11V 1,1,1-Trichloroethane	34506	10U		
13V 1,1-Dichloroethane	34496	10U		
14V 1,1,2-Trichloroethane	34511	10U		
15V 1,1,2,2-Tetrachloroethane	34516	10U		
16V Chloroethane	34311	10U		
19V 2-Chloroethylvinyl Ether	34576	10U		
23V Chloroform	32106	10U		
29V 1,1-Dichloroethylene	34501	10U		
30V 1,2-Trans-Dichloroethylene	34546	10U		
32V 1,2-Dichloropropane	34541	10U		
33V 1,3-Dichloropropylene	34561	10U		
38V Ethylbenzene	34371	10U		
44V Methylene Chloride	34423	10U		
45V Methyl Chloride	34418	10U		
46V Methyl Bromide	34413	10U		
47V Bromoform	32104	10U		
48V Dichlorobromomethane	32101	10U		
49V Trichlorofluoromethane	34488	10U		
50V Dichlorodifluoromethane	34668	10U		
51V Chlorodibromomethane	34306	10U		
85V Tetrachloroethylene	34475	10U		
86V Toluene	34010	10U		
87V Trichloroethylene	39180	10U		
88V Vinyl Chloride	39175	10U		

PESTICIDES/PCB'S ON NRDC LIST OF PRIORITY POLLUTANTS		ug/L
89P Aldrin	39330	0.10U
90P Dieldrin	39380	0.10U
91P Chlordane (Tech. Mixture & Metabolites)	39350	0.10U
92P 4,4'-DDT (p,p'-DDT)	39300	0.10U
93P 4,4'-DDE (p,p'-DDE)	39320	0.10U
94P 4,4'-DDD (p,p'-TDE)	39310	0.10U
95P a-Endosulfan-Alpha	34361	0.10U
96P b-Endosulfan-Beta	34356	0.10U
97P Endosulfan Sulfate	34351	0.10U
98P Endrin	39390	0.10U
99P Endrin Aldehyde	34366	0.10U
100P Heptachlor	39410	0.10U
101P Heptachlor Epoxide	39420	0.10U
102P a-BHC-Alpha	39337	0.10U
103P b-BHC-Beta	39338	0.10U
104P γ-BHC-(Lindane)-Gamma	39340	0.10U
105P Δ-BHC-Delta	34259	0.10U
106P PCB-1242 (Aroclor 1242)	39496	0.10U
107P PCB-1254 (Aroclor 1254)	39504	0.10U
108P PCB-1221 (Aroclor 1221)	39488	0.10U
109P PCB-1232 (Aroclor 1232)	39492	0.10U
110P PCB-1248 (Aroclor 1248)	39500	0.10U
111P PCB-1260 (Aroclor 1260)	39508	0.15U
112P PCB-1016 (Aroclor 1016)	34671	0.10U
113P Toxaphene	39400	0.40U
129P 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	34675	0.10U

NA - Not analyzed.
J - Estimated value.
K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
N - Not quantified.

WATER
DATA REPORTING SHEET

SAD NO. 81C0797 CONTRACT LAB NO. D0314 CONTRACT LAB Mead Technology
PROJECT South Chem SOURCE & STATION ST-2W
Durham, NC
DATE/TIME SAMPLED 1-27-81 @ 1245 SAMPLE RECEIVED 1-28-81/1015 DATA RECEIVED 3-13-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
1B	Acenaphthene	34205	10U
5B	Benzidine	39120	10U
8B	1,2,4-Trichlorobenzene	34551	10U
9B	Hexachlorobenzene	39700	10U
12B	Hexachloroethane	34396	10U
17B	Bis(Chloromethyl) Ether	34268	NA
18B	Bis(2-Chloroethyl) Ether	34273	10U
20B	2-Chloronaphthalene	34581	10U
25B	1,2-Dichlorobenzene	34536	10U
26B	1,3-Dichlorobenzene	34566	10U
27B	1,4-Dichlorobenzene	34571	10U
28B	3,3'-Dichlorobenzidine	34631	10U
35B	2,4-Dinitrotoluene	34611	10U
36B	2,6-Dinitrotoluene	34626	10U
37B	1,2-Diphenylhydrazine 1/	34346	10U
39B	Fluoranthene	34376	10U
40B	4-Chlorophenyl Phenyl Ether	34641	10U
41B	4-Bromophenyl Phenyl Ether	34636	10U
42B	Bis(2-Chloroisopropyl) Ether	34283	10U
43B	Bis(2-Chloroethoxy) Methane	34278	10U
52B	Hexachlorobutadiene	39702	10U
53B	Hexachlorocyclopentadiene	34386	10U
54B	Isophorone	34408	10U
55B	Naphthalene	34696	10U
56B	Nitrobenzene	34447	10U
61B	N-Nitrosodimethylamine	34438	NA
62B	N-Nitrosodiphenylamine 2/	34433	10U
63B	N-Nitrosodi-N-Propylamine	34428	10U
66B	Bis(2-Ethylhexyl) Phthalate	39100	10K
67B	Butyl Benzyl Phthalate	34292	10U
68B	Di-N-Butylphthalate	39110	10U
69B	Di-N-Octylphthalate	34596	10U
70B	Diethylphthalate	34336	10U
71B	Dimethylphthalate	34341	10U
72B	Benzo (A) Anthracene 4/	34526	10U
73B	Benzo(A) Pyrene	34247	10U
74B	3,4-Benzofluoranthene 5/	34230	10U
75B	Benzo(K) Fluoranthene 5/	34242	10U
76B	Chrysene 4/	34320	10U
77B	Acenaphthylene	34200	10U
78B	Anthracene 3/	34220	10U
79B	Benzo(GHI) Perylene	34521	25U
80B	Fluorene	34381	10U
81B	Phenanthrene 3/	34461	10U
82B	Dibenzo(A, H) Anthracene	34556	25U
83B	Indeno (1,2,3-CD) Pyrene	34403	25U
84B	Pyrene	34469	25U

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
21A	2,4,6-Trichlorophenol	34621	25U
22A	p-Chloro-m-Cresol	34452	25U
24A	2-Chlorophenol	34586	25U
31A	2,4-Dichlorophenol	34601	25U
34A	2,4-Dimethylphenol	34606	25U
57A	2-Nitrophenol	34591	25U
58A	4-Nitrophenol	34646	25U
59A	2,4-Dinitrophenol	34616	250U
60A	4,6-Dinitro-o-Cresol	34657	250U
64A	Pentachlorophenol	39032	25U
65A	Phenol (GC/MS)	34694	25U

K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
1/ - And/or Azobenzene.
2/ - And/or Diphenylamine.
3/ - 81B Phenanthrene and/or 78B Anthracene.
4/ - 76B Chrysene and/or 72B Benzo(A) Anthracene.
5/ - 74B 3,4-Benzofluoranthene and/or 75B Benzo(K) Fluoranthene.
NA - Not analyzed.
J - Estimated value.

(OVER)

WATER
DATA REPORTING SHEET

SAD NO. 81C0797 CONTRACT LAB NO. D0314 CONTRACT LAB Mead Technology
PROJECT South Chem SOURCE & STATION ST-2W
Durham, NC
DATE/TIME SAMPLED 1-27-81 @ 1245 SAMPLE RECEIVED 1-28-81 @ 1015 DATA RECEIVED 3-13-8

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	TENTATIVELY-IDENTIFIED COMPOUNDS	ug
2V	Acrolein	34210	100U	tributyl ester of phosphoric acid	N
3V	Acrylonitrile	34215	100U	acetone	N
4V	Benzene	34030	10U	tetrahyrofuran	N
6V	Carbon Tetrachloride	32102	10U	1,4-dioxane	N
7V	Chlorobenzene	34301	10U	methyl pentenone	N
10V	1,2-Dichloroethane	32103	12	3 unidentified compounds	N
11V	1,1,1-Trichloroethane	34506	27		
13V	1,1-Dichloroethane	34496	10U		
14V	1,1,2-Trichloroethane	34511	10U		
15V	1,1,2,2-Tetrachloroethane	34516	10U		
16V	Chloroethane	34311	10U		
19V	2-Chloroethylvinyl Ether	34576	10U		
23V	Chloroform	32106	10U		
29V	1,1-Dichloroethylene	34501	10U		
30V	1,2-Trans-Dichloroethylene	34546	46		
32V	1,2-Dichloropropane	34541	10U		
33V	1,3-Dichloropropylene	34561	10U		
38V	Ethylbenzene	34371	10U		
44V	Methylene Chloride	34423	69		
45V	Methyl Chloride	34418	10U		
46V	Methyl Bromide	34413	10U		
47V	Bromoform	32104	10U		
48V	Dichlorobromomethane	32101	10U		
49V	Trichlorofluoromethane	34488	10U		
50V	Dichlorodifluoromethane	34668	10U		
51V	Chlorodibromomethane	34306	10U		
85V	Tetrachloroethylene	34475	10		
86V	Toluene	34010	14		
87V	Trichloroethylene	39180	19		
88V	Vinyl Chloride	39175	53		

PESTICIDES/PCB'S ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
89P	Aldrin	39330	0.10U
90P	Dieldrin	39380	0.10U
91P	Chlordane (Tech. Mixture & Metabolites)	39350	0.10U
92P	4,4'-DDT (p,p'-DDT)	39300	0.10U
93P	4,4'-DDE (p,p'-DDE)	39320	0.10U
94P	4,4'-DDD (p,p'-TDE)	39310	0.10U
95P	a-Endosulfan-Alpha	34361	0.10U
96P	b-Endosulfan-Beta	34356	0.10U
97P	Endosulfan Sulfate	34351	0.10U
98P	Endrin	39390	0.10U
99P	Endrin Aldehyde	34366	0.10U
100P	Heptachlor	39410	0.10U
101P	Heptachlor Epoxide	39420	0.10U
102P	a-BHC-Alpha	39337	0.3
103P	b-BHC-Beta	39338	0.10U
104P	γ-BHC-(Lindane)-Gamma	39340	0.10U
105P	Δ-BHC-Delta	34259	0.10U
106P	PCB-1242 (Aroclor 1242)	39496	0.10U
107P	PCB-1254 (Aroclor 1254)	39504	0.10U
108P	PCB-1221 (Aroclor 1221)	39488	0.10U
109P	PCB-1232 (Aroclor 1232)	39492	0.10U
110P	PCB-1248 (Aroclor 1248)	39500	0.10U
111P	PCB-1260 (Aroclor 1260)	39508	0.15U
112P	PCB-1016 (Aroclor 1016)	34671	0.10U
113P	Toxaphene	39400	0.40U
129P	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	34675	0.10U

NA - Not analyzed.
J - Estimated value.
K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
N - Not quantified.

WATER
DATA REPORTING SHEET

SAD NO. 81C CONTRACT LAB NO. D0315 CONTRACT LAB Mead Technology
PROJECT South Chem SOURCE & STATION LE-1W
Durham, NC
DATE/TIME SAMPLED 1-27-81 @ 1330 SAMPLE RECEIVED 1-28-81 @ 1015 DATA RECEIVED 3-6-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
1B	Acenaphthene	34205	NA
5B	Benzidine	39120	NA
8B	1,2,4-Trichlorobenzene	34551	NA
9B	Hexachlorobenzene	39700	NA
12B	Hexachloroethane	34396	NA
17B	Bis(Chloromethyl) Ether	34268	NA
18B	Bis(2-Chloroethyl) Ether	34273	NA
20B	2-Chloronaphthalene	34581	NA
25B	1,2-Dichlorobenzene	34536	NA
26B	1,3-Dichlorobenzene	34566	NA
27B	1,4-Dichlorobenzene	34571	NA
28B	3,3'-Dichlorobenzidine	34631	NA
35B	2,4-Dinitrotoluene	34611	NA
36B	2,6-Dinitrotoluene	34626	NA
37B	1,2-Diphenylhydrazine 1/	34346	NA
39B	Fluoranthene	34376	NA
40B	4-Chlorophenyl Phenyl Ether	34641	NA
41B	4-Bromophenyl Phenyl Ether	34636	NA
42B	Bis(2-Chloroisopropyl) Ether	34283	NA
43B	Bis(2-Chloroethoxy) Methane	34278	NA
52B	Hexachlorobutadiene	39702	NA
53B	Hexachlorocyclopentadiene	34386	NA
54B	Isophorone	34408	NA
55B	Naphthalene	34696	NA
56B	Nitrobenzene	34447	NA
61B	N-Nitrosodimethylamine	34438	NA
62B	N-Nitrosodiphenylamine 2/	34433	NA
63B	N-Nitrosodi-N-Propylamine	34428	NA
66B	Bis(2-Ethylhexyl) Phthalate	39100	NA
67B	Butyl Benzyl Phthalate	34292	NA
68B	Di-N-Butylphthalate	39110	NA
69B	Di-N-Octylphthalate	34596	NA
70B	Diethylphthalate	34336	NA
71B	Dimethylphthalate	34341	NA
72B	Benzo (A) Anthracene 4/	34526	NA
73B	Benzo(A) Pyrene	34247	NA
74B	3,4-Benzofluoranthene 5/	34230	NA
75B	Benzo(K) Fluoranthene 5/	34242	NA
76B	Chrysene 4/	34320	NA
77B	Acenaphthylene	34200	NA
78B	Anthracene 3/	34220	NA
79B	Benzo(GHI) Perylene	34521	NA
80B	Fluorene	34381	NA
81B	Phenanthrene 3/	34461	NA
82B	Dibenzo(A, H) Anthracene	34556	NA
83B	Indeno (1,2,3-CD) Pyrene	34403	NA
84B	Pyrene	34469	NA

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
21A	2,4,6-Trichlorophenol	34621	NA
22A	p-Chloro-m-Cresol	34452	NA
24A	2-Chlorophenol	34586	NA
31A	2,4-Dichlorophenol	34601	NA
34A	2,4-Dimethylphenol	34606	NA
57A	2-Nitrophenol	34591	NA
58A	4-Nitrophenol	34646	NA
59A	2,4-Dinitrophenol	34616	NA
60A	4,6-Dinitro-o-Cresol	34657	NA
64A	Pentachlorophenol	39032	NA
65A	Phenol (GC/MS)	34694	NA

K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
1/ - And/or Azobenzene.
2/ - And/or Diphenylamine.
3/ - 81B Phenanthrene and/or 78B Anthracene.
4/ - 76B Chrysene and/or 72B Benzo(A) Anthracene.
5/ - 74B 3,4-Benzofluoranthene and/or 75B Benzo(K) Fluoranthene.
NA - Not analyzed.
J - Estimated value.

(OVER)

WATER
DATA REPORTING SHEET

SAD NO. 81C CONTRACT LAB NO. D0315 CONTRACT LAB Mead Technology
PROJECT South Chem SOURCE & STATION LE-1W
Durham, NC
DATE/TIME SAMPLED 1-27-81@ 1330 SAMPLE RECEIVED 1-28-81@1015 DATA RECEIVED 3-6-

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS		ug/L	TENTATIVELY-IDENTIFIED COMPOUNDS	ug
2V Acrolein	34210	100U	hexanol	N
3V Acrylonitrile	34215	100U	methyl propyl ester of acetic acid	N
4V Benzene	34030	10U	methyl cyclohexane	N
6V Carbon Tetrachloride	32102	10U	butanol	N
7V Chlorobenzene	34301	10U	propanol	N
10V 1,2-Dichloroethane	32103	10U	methanethiol	N
11V 1,1,1-Trichloroethane	34506	10U	methyl pentanone	N
13V 1,1-Dichloroethane	34496	10U		
14V 1,1,2-Trichloroethane	34511	10U		
15V 1,1,2,2-Tetrachloroethane	34516	10U		
16V Chloroethane	34311	10U		
19V 2-Chloroethylvinyl Ether	34576	10U		
23V Chloroform	32106	310		
29V 1,1-Dichloroethylene	34501	10U		
30V 1,2-Trans-Dichloroethylene	34546	28		
32V 1,2-Dichloropropane	34541	10U		
33V 1,3-Dichloropropylene	34561	10U		
38V Ethylbenzene	34371	460		
44V Methylene Chloride	34423	10U		
45V Methyl Chloride	34418	10U		
46V Methyl Bromide	34413	10U		
47V Bromoform	32104	10U		
48V Dichlorobromomethane	32101	10U		
49V Trichlorofluoromethane	34488	10U		
50V Dichlorodifluoromethane	34668	10U		
51V Chlorodibromomethane	34306	10U		
85V Tetrachloroethylene	34475	10K		
86V Toluene	34010	3700		
87V Trichloroethylene	39180	10K		
88V Vinyl Chloride	39175	19		

PESTICIDES/PCB'S ON NRDC LIST OF PRIORITY POLLUTANTS		ug/L
89P Aldrin	39330	NA
90P Dieldrin	39380	NA
91P Chlordane (Tech. Mixture & Metabolites)	39350	NA
92P 4,4'-DDT (p,p'-DDT)	39300	NA
93P 4,4'-DDE (p,p'-DDE)	39320	NA
94P 4,4'-DDD (p,p'-TDE)	39310	NA
95P a-Endosulfan-Alpha	34361	NA
96P b-Endosulfan-Beta	34356	NA
97P Endosulfan Sulfate	34351	NA
98P Endrin	39390	NA
99P Endrin Aldehyde	34366	NA
100P Heptachlor	39410	NA
101P Heptachlor Epoxide	39420	NA
102P a-BHC-Alpha	39337	NA
103P b-BHC-Beta	39338	NA
104P γ-BHC-(Lindane)-Gamma	39340	NA
105P Δ-BHC-Delta	34259	NA
106P PCB-1242 (Aroclor 1242)	39496	NA
107P PCB-1254 (Aroclor 1254)	39504	NA
108P PCB-1221 (Aroclor 1221)	39488	NA
109P PCB-1232 (Aroclor 1232)	39492	NA
110P PCB-1248 (Aroclor 1248)	39500	NA
111P PCB-1260 (Aroclor 1260)	39508	NA
112P PCB-1016 (Aroclor 1016)	34671	NA
113P Toxaphene	39400	NA
129P 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	34675	NA

NA - Not analyzed.
J - Estimated value.
K - Actual value is known to be less than value given.
U - Material was analyzed for but not detected. The number is the minimum detection limit.
N - Not quantified.

DATE: 02/06/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
81C0792 - 81C0797
PROJECT # 81-38 ***PROG ELEMENT # HWSR

SOURCE: SOUTHCHEM

SAMPLE RECEIVED DATE &

CITY : DURHAM STATE: NC

CHEMIST:

COMPLETED: 2/10/

SAD NO.	SI-EPP	STATION	DATE & TIME SAMPLED	SAMPLE TYPE	ANALYSES TO BE RUN				
81C0792		SL-1S MIDWAY OF GOOSE CR & FILL AREA	01/27/81- 1430- 00/00/00 0	SOIL	METSC	ORGS	VOA	HG	UG/
81C0793		SD-1S NO END OF RR CULVERT UPSTR OF SITE FR GOOSE	01/27/81- 0- 00/00/00 0	SEDIM	METSC	ORGS	VOA	HG	UG/
81C0794		LE-1S LEACHAGE PT MIDWAY N&S & 1/4 FR BOTTOM OF PI	01/27/81- 1330- 00/00/00 0	SEDIM	METSC	ORGS	VOA	HG	UG
81C0795		SD-2S DOWNSTR OF SITE ON LINE WITH NO PROP LINE	01/27/81- 1245- 00/00/00 0	SEDIM	METSC	ORGS	VOA	HG	UG/
81C0796		ST-1W NO END OF RR CULVERT UPSTR OF SITE GOOSE CR	01/27/81- 1315- 00/00/00 0	AMBWA	PHENOUG/L	PH PH	TEM DEG C		
					10K	6.2	5.0		

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

SECU 825
(02-05-09)

CHECKING DEPOSIT

CASH
66-7704/2531

Date:_____

Name:_____

Start Account Number Here
Leading Zeros Not Required

ACCOUNT NUMBER

SUB TOTAL

LESS CASH RECEIVED

*

$

⑆2531770491⑆

: 02/06/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
81C0792 - 81C0797
PROJECT # 81-38 ***PROG ELEMENT # HWSR

CE: SOUTHCHEM

SAMPLE RECEIVED DATE & TIME

: DURHAM STATE: NC

IST:

COMPLETED: 2/10/81

NO.	SI-EPP	STATION	DATE & TIME SAMPLED	SAMPLE TYPE	ANALYSES TO BE RUN			
					PHENOUG/L	PH PH	TEM DEG C	
797		ST-2W DOWNSTR, ON LINE WITH NO PROP, GOOSE CREEK	01/27/81- 1245- 00/00/00 0	AMBWA	10K	6.4	7.5	

Wachovia

Wachovia Bank & Trust Company, N.A.
P.O. Box 27886
Raleigh, NC 27611

RECEIVED
JAN 12 1981
SOLID & HAZARDOUS WASTE MANAGEMENT BRANCH

January 7, 1981

Mr. Francis M. Alpiser
Environmental Engineer
State of North Carolina
Department of Human Resources
Division of Health Services
Post Office Box 2091
Raleigh, N. C. 27602

Re: Southchem Landfill
730 East Markham Avenue
Durham, N. C.

Dear Mr. Alpiser:

We have finally received the results of the soil analysis from Guilford Laboratories, Inc. Please find enclosed a copy of the test results for your review. It is our understanding from Mr. Jim Rayburn of Guilford Laboratories that the test showed there were no priority pollutants found in the soil samples. We would appreciate hearing from you at your convenience with respect to the test results, and what corrective action will be required.

Thank you for your cooperation.

Sincerely,

Edwin H. Bland

Edwin H. Bland
Trust Officer

EHB/llv

GUILFORD LABORATORIES, INC.
P.O. Box 9735/Plaza Station/Greensboro, N.C. 27408

REPORT OF ANALYSIS

Job #: WAC0925

Customer: Wachovia Trust Dept.-Mr. Eddy Bland

Samples: #10003 #4 sample from Southchem property collected by Wm.Paige

RESULTS:

I Volatile Organics	ppb Found
1. chloromethane	<10
2. dichlorodifluoromethane	<10
3. bromomethane	<10
4. vinyl chloride	<10
5. chloroethane	<10
6. methylene chloride	<10
7. trichlorofluoromethane	<10
8. 1,1-dichloroethylene	<10
9. 1,1,-dichloroethane	<10
10. 1,1,1-trichloroethane	<10
11. carbon tetrachloride	<10
12. bromodichloromethane	<10
13. bis-chloromethyl ether	<10
14. 1,2-dichloropropane	<10
15. trans-1,3-dichloropropene	<10
16. trichloroethylene	<10
17. dibromochloromethane	<10
18. cis-1,3-dichloropropene	<10
19. 1,1,2-trichloroethane	<10
20. benzene	<10
21. 2-chloroethylvinyl ether	<10
22. bromoform	<10
23. 1,1,2,2-tetrachloroethene	<10
24. 1,1,2,2-tetrachloroethane	<10
25. toluene	<10
26. chlorobenzene	<10
27. ethylbenzene	<10

GUILFORD LABORATORIES, INC.
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		ppb Found
28.	acrolein	<20
29.	acrylonitrile	<20

II Pesticides & PCB's

1.	-endosulfan	<10
2.	-BHC	<10
3.	-BHC	<10
4.	-BHC	<10
5.	aldrin	<10
6.	heptachlor	<10
7.	heptachlorepoxide	<10
8.	-endosulfan	<10
9.	dieldrin	<10
10.	4,4'-DDE	<10
11.	4,4'-DDD	<10
12.	4,4'-DDT	<10
13.	endrin	<10
14.	endosulfan sulfate	<10
15.	Delta-BHC	<10
16.	chlordane	<10
17.	toxaphene	<10
18.	PCB-1242	<10
19.	PCB-1254	<10

III Base/Neutrals

1.	1,3-dichlorobenzene	<10
2.	1,4-dichlorobenzene	<10
3.	hexachloroethane	<10
4.	1,2-dichlorobenzene	<10
5.	bis (2-chloroisopropyl)ether	<10
6.	hexachlorobutadiene	<10
7.	1,2,4-trichlorobenzene	<10
8.	naphthalene	<10
9.	bis(2-chloroethyl)ether	<10
10.	hexachlorocyclopentadiene	<15
11.	nitrobenzene	<10
12.	bis(2-chloroethoxy)methane	<10

Base-neutral, continued

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P.O. Box 9735/Plaza Station/Greensboro, N.C. 27408

		ppb Found
13.	2-chloronaphthalene	<10
14.	acenaphthalene	<10
15.	acenaphthene	<10
16.	isophorone	<10
17.	fluorene	<10
18.	2,6-dinitrotoluene	<10
19.	1,2-diphenyl hydrazine	<40
20.	2,4-dinitrotoluene	<10
21.	N-nitrosodiphenylamine	<40
22.	hexachlorobenzene	<10
23.	4-bromophenyl phenyl ether	<10
24.	phenanthrene	<10
25.	anthracene	<10
26.	dimethylphthalate	<10
27.	diethylphthalate	<10
28.	fluoranthene	<10
29.	pyrene	<10
30.	di-n-butylphthalate	<10
31.	benzidine	<50
32.	butyl benzylphthalate	<10
33.	chrysene	<10
34.	bis(2-ethylhexyl)phthalate	<10
35.	benzo(a)anthracene	<10
36.	benzo(b)fluoranthene	<10
37.	benzo(k)fluoranthene	<10
38.	benzo(a)pyrene	<10
39.	indeno(1,2,3-cd)pyrene	<10
40.	dibenzo(a,h)anthracene	<10
41.	benzo(g,h,i)perylene	<10
42.	N-nitrosodimethylamine	<20
43.	N-nitrosodi-n-propylamine	<20
44.	4-chloro-phenyl phenyl ether	<10
45.	endrin aldehyde	<10
46.	3,3'-dichlorobenzidine	<40
47.	2,3,7,8-tetrachlorodibenzo-p-dioxin	<20
48.	bis(chloromethyl)ether	<20

GUILFORD LABORATORIES, INC.
P.O. Box 9735/Plaza Station/Greensboro, N.C. 27408

IV Acid Extractables	ppb Found
1. 2-chlorophenol	< 10
2. phenol	< 10
3. 2,4-dichlorophenol	< 10
4. 2-nitrophenol	< 20
5. p-chloro-m-cresol	< 10
6. 2,4,6-trichlorophenol	< 10
7. 2,4-dimethylphenol	< 10
8. 2,4-dinitrophenol	< 20
9. 4,6-dinitro-o-cresol	< 20
10. 4-nitrophenol	< 20
11. pentachlorophenol	< 10

VI Metals & Inorganics

1. Beryllium
2. Cadmium
3. Chromium
4. copper
5. nickel
6. lead
7. zinc
8. cyanide
9. total phenols

N.D. = None Detected

GUILFORD LABORATORIES, INC.

J. A. Rayburn

N. DEPT. OF NATURAL RESOURCES & COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT
FIELD/LAB FORM

LAB NUMBER 1407
DATE RECEIVED 4-29-80
RECEIVED BY KC
DATA ENTRY BY [illegible] CK [illegible]
DATE REPORTED 12-10-80

RIVER BASIN NEUSE

REPORT TO: (Circle One)
ARO, WSRO, MRO, FRO, WaRO, WiRO, RRO, TS, BM
AM, OTHER

COLLECTOR TAYLOR / SANFORD
BOD RANGE _____ SEED _____
CHLORINATED

SAMPLE TYPE (Submit Seperate DM-1 For Each Type)
[X] WATER [ ] SEDIMENT [ ] TISSUE
[ ] AMBIENT [ ] COMPLIANCE [X] INTENSIVE S. [ ] CORE [ ] SPLIT [ ] EMERGENCY

STATION LOCATION WEEPING EFFLUENT FROM SOUTHERN LANDFILL
REMARKS BLACK, SEPTIC / CHEMICAL SMELL

Station No.	Date Begin	Time Begin	Date End	Time End	Depth DM DB DMB	Value Type A H L	T, S, or B	Sample Type C G GNXX
	80/04/29	G						

1		BOD_5 310	mg/l		Chloride 940	mg/l		NH_3 as N 610	mg/l	X	Mn - Manganese 1055 2600 ug/l
2	X	COD 340 620	mg/l		Arsenic 1002	ug/l		TKN as N 625	mg/l		Mo - Molybdenum 1062 ug/l
3		Coliform, MF Fecal 31616	/100ml		Chl a Tri 32210	ug/l		NO_2+NO_3 as N 630	mg/l	X	Na - Sodium 929 460 mg/l
4		Coliform, MF Total 31504	/100ml		Chl a Corr 32211	ug/l		PO_4 as P 70507	mg/l	X	Ni - Nickel 1067 200 ug/l
5		Coliform, Tube Fecal 31615	/100ml		Pheophytin a 32218	ug/l		P, Total as P 665	mg/l	X	Pb - Lead 1051 200 ug/l
6		Coliform, Tube Total 31505	/100ml		Color (True) 80	units		Ag - Silver 1077	ug/l		Sb - Antimony 1097 ug/l
7		Residue, Total 500	mg/l		Chromium Hexavalent 1032	ug/l	X	Al - Aluminum 1105 1600	ug/l	X	Sn - Tin 1102 <5000 ug/l
8		Volatile 505	mg/l		Cyanide 720	mg/l	X	Ba - Barium 1007 <1000	ug/l	X	V - Vanadium 1087 <200 ug/l
9		Fixed 510	mg/l		Flouride 951	mg/l		Be - Beryllium 1012	ug/l	X	Zn - Zinc 1092 310 ug/l
10		Residue, Suspended 530	mg/l		Formaldehyde 71880	mg/l		Ca - Calcium 916	mg/l	X	Pesticides (Specify)
11		Volatile 535	mg/l		Grease and Oils 556	mg/l	X	Cd - Cadmium 1027 <150	ug/l		
12		Fixed 540	mg/l		Hardness, Total 900	mg/l		Co - Cobalt 1037	ug/l		
13		pH	units		MBAS 38260	mg/l	X	Chromium - Total 1034 <50	ug/l	X	Organics (Specify) SCANS
14		Acidity to pH 4.5	mg/l		Phenols 32730	ug/l	X	Cu - Copper 1042 40	ug/l		
15		Acidity to pH 8.3	mg/l		Sulfate 945	mg/l	X	Fe - Iron 1045 1000	ug/l		See attached sheet
16		Alkalinity to pH 8.3	mg/l		Sulfide 745	mg/l	X	Hg - Mercury 71900 N.S	ug/l		
17		Alkalinity to pH 4.5	mg/l		Specific Cond 95	UMHOS/cm		Li - Lithium 1132	ug/l		
18		TOC 680	mg/l				X	Mg - Magnesium 927 *	mg/l		

Sampling Point PT %	Temp. C°	D.O.	pH Units	pH 8.3 Alkalinity	ph.4.5	pH 4.5	Acidity	pH 8.3	Turbidity Hach FTU
A 83 2	10	300	400	415	410	436	435		76

Secchi Disk M	1 Hr. Set. Solids	Conductivity UMHOS	Salinity S/L	R.P.	Stream Stage Ft.	Flow, Inst. CFS	Hydro Elec Dam Dis. CFS	Flow, MGD
B 78	50096	95	70303	01647	65	61	72034	50051

Stream Flow Severity	Cloud Cover	Precipitation Inches	Wind Direction From North	Wind Force Beaufort	Turbidity Severity	Oil-Grease Severity	Sludge Severity	Floating Debris Severity
C 1351	32	45	36	37	1380	1300	1315	1345

Odor-Atmos Severity	Detergent Suds Severity	Dead Fish Severity	Stream Color	Silt or Sediment Susp. Severity	Sed. Severity	Identity	Aquatic Vegetation Support Medium	Severity
D 1330	1305	1340						

DM1/REV. 9-78

RALEIGH

* Sample discarded before analyzed

Francis

STATE OF NORTH CAROLINA

JAMES B. HUNT, JR.
GOVERNOR

SARAH T. MORROW, M.D., M.P.H.
SECRETARY

DEPARTMENT OF HUMAN RESOURCES

Division of Health Services

P. O. Box 2091 Raleigh 27602

HUGH H. TILSON, M.D.
DIRECTOR

September 9, 1980

Mr. Eddie Bland
Wachovia Bank and Trust
Company (919) 683-5211
Trustee for Martin E. McGuire
P.O. Box 2252
Durham, NC 27702

Dear Mr. Bland:

The North Carolina Division of Health Services, Solid and Hazardous Waste Management Branch has been asked to handle the problem of the potential hazardous liquid waste discharged from the South Chemical Landfill. The site history at 730 East Markham Avenue, Durham, North Carolina dates back to 1966 when Cardinal Chemical Company was at this location.

The attached letter from South Chemical, Inc. gives the history of the problems at this site. A fire at Cardinal Chemical Company in 1960 was followed by dumping of rubble and unknown chemical residues from the fire. In the early 1970's, C. B. Hensley dumped rubble from demolished buildings and covered the rubble with dirt.

At a later date, South Chemical Company dumped broken and unused pellets as well as empty drums that could not be reconditioned. These drums could have contained any number of acids or solvents that South Chemical Company handled at the site. Further information about the site's history is attached to this letter. On August 22, 1980, our field sanitarian inspected the site and noticed a black effluent discharging into the Ellerbee Creek from the landfill on the site.

Your site does not have a permit for an effluent from the landfill site into the creek. Would you please investigate this problem and let us know if it contains hazardous chemicals, solvents and/or heavy metals. Also, if this effluent is found to contain hazardous chemicals, solvents and/or heavy metals, what corrective action will be taken to correct this potential hazardous problem.

Sincerely yours,

Francis M. Alpiser

Francis M. Alpiser, Environmental Engineer
Solid & Hazardous Waste Management Branch
Environmental Health Section

FMA:nlc

cc: Mr. Larry D. Perry

Attachments: (4)

EPA

POTENTIAL HAZARDOUS WASTE SITE INSPECTION REPORT

REGION IV | SITE NUMBER (to be assigned by HQ)

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: South Chemical Co. Old Cardinal Chem. Co. Site

B. STREET (or other identifier): 750 E. Markham Ave.

C. CITY: Durham

D. STATE: N.C.

E. ZIP CODE: 27702

F. COUNTY NAME: Durham

G. SITE OPERATOR INFORMATION

1. NAME:

2. TELEPHONE NUMBER:

3. STREET:

4. CITY:

5. STATE:

6. ZIP CODE:

H. REALTY OWNER INFORMATION (if different from operator of site)

1. NAME: MARTY MCQUIRE

2. TELEPHONE NUMBER:

3. CITY: Contact Wachovia Bank in Raleigh - (Mr. McGuire Resides in Fla. Wachovia manages property)

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION: Dump area that has been filled in and made into parking lot

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.):

B. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE

Unknown

PREPARER INFORMATION

NAME: Larry D. Perry

2. TELEPHONE NUMBER: 919-733-2178

3. DATE (mo., day, & yr.): 8-22-80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: PERRY LARRY

2. TITLE: District Sanitarian

3. ORGANIZATION: Solid & Hazardous Waste Branch - N.C. Div. of Health Services

4. TELEPHONE NO. (area code & no.): 919-733-2178

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS

Continued From Front

I. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (source(s) of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases) ☐ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF	X	N.C. Div. of Health Services Lab	
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS

☐ a. GROUND ☐ b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☒ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☒ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres)

1-1 1/2

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify): Chem. Storage

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	X	3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this form.

☐ 1. STORAGE ☐ 2. INCINERATION ☐ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☒ 1. LIQUID ☐ 2. SOLID ☐ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☒ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE

☐ 5. TOXIC ☐ 6. REACTIVE ☐ 7. INERT ☐ 8. FLAMMABLE

☐ 9. OTHER (specify):

C. WASTE CATEGORIES

Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Continue On Reverse

Continued From Front

VI. WASTE RELATED INFORMATION *(continued)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER *(specify)*:
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*:		

Unknown Amounts

LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM (mark 'X')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

[X] A. HUMAN HEALTH HAZARDS

- Steady stream of black liquid coming out of site, flowing in direction of Ellerby Creek which flows into Beaver River

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☒ I. FISH KILL

See Part A

☐ J. CONTAMINATION OF AIR

☒ K. NOTICEABLE ODORS

Liquid has a very noticeable sulfur-"rotten egg" smell

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

 Continue On Page 7

☐ B. NON-WORKER INJURY/EXPOSUR

☐ C. WORKER INJURY/EXPOSURE

☒ D. CONTAMINATION OF WATER SUPPLY

See Part A

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

See Part A

☒ G. CONTAMINATION OF SURFACE WATER

See Part A

Continued From Page 5

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

☒ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

See Part A

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

None

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS* ☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS _____

☐ 3. SURFACE WATER ☐ 4. WELL

 Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND				
	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

Continue On Reverse

Continued From Page 6

III. HAZARD DESCRIPTION *(continue*

☐ N. FIRE OR EXPLOSION

☒ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

See Part A

☐ P. SEWER, STORM DRAIN PROBLEMS

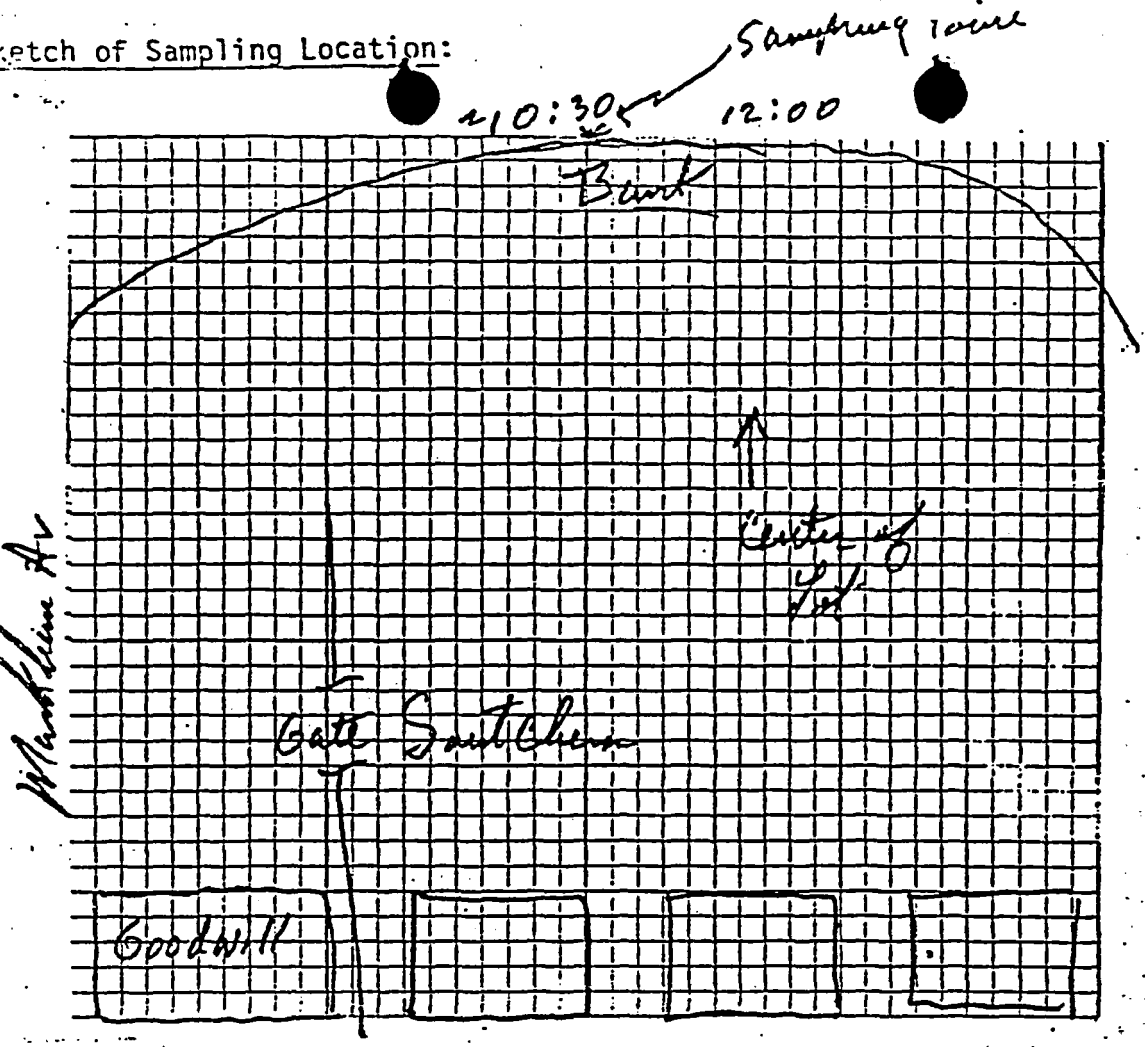
☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

None

Sketch of Sampling Location:



Vol. 45—No. 101
5-22-80
BOOK 2:
PAGES
34557-34860

FEDERAL REGISTER

Extra

Book 2 of 2 Books
Thursday May 22, 1980

for HS

34560 Part II—DOT/RSPA:
Identification Numbers, Hazardous Wastes, Hazardous Substances, International Descriptions, Improved Descriptions, Forbidden Materials, and Organic Peroxides

34708 Part III—U.S. Regulatory Council:
Guidelines for the May 1980 Calendar of Federal Regulations

34718 Part IV—EPA:
Light-Duty Diesel Vehicles; Revised Motor Vehicle Exhaust Emission Standards for Oxides of Nitrogen for 1981-1982 Model Years; Applications for Waiver of 1981-1985 Model Year Oxides of Nitrogen Emission Standard

34752 Part V—Pennsylvania Avenue Development Corporation:
Guidelines and Standards for Design of Development

34759 Part VI—Interior/NPS:
Mount McKinley National Park; Mining, Climbing and Vehicle Regulations

34762 Part VII—Environmental Protection Agency:
Visibility Protection for Federal Class I Areas

34782 Part VIII—DOT/FAA:
Airport Aid Program; Revision of Requirements

34802 Part IX—EPA:
Motor Vehicle Emission Control System Performance; Warranty Regulations; Warranty Short Tests

34846 Part X—DOE/ERA:
Gasohol Pricing and Allocation

FEDERAL REGISTER

Thursday
May 22, 1980

Part II

Department of Transportation

Research and Special Programs Administration

Transport of Hazardous Wastes and Hazardous Substances

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 172, 173, 174, 176, 177

[Docket Nos. HM-118, 126A, 126B, 145A, 145B, 159, and 171; Amdt. Nos. 171-53, 172-55, 173-137, 174-37, 176-11, 177-48]

Identification Numbers, Hazardous Wastes, Hazardous Substances, International Descriptions, Improved Descriptions, Forbidden Materials, and Organic Peroxides

AGENCY: Materials Transportation Bureau (MTB), Research and Special Programs Administration, Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The purpose of this final rule is to accomplish the following: (1) adopt a numerical identification system for hazardous materials transported in commerce; (2) adopt regulations pertaining to the transportation of hazardous wastes; (3) adopt regulations pertaining to the identification of, and discharge notifications for, hazardous substances; (4) list certain forbidden materials by name and revise the general criteria applicable to forbidden materials; (5) provide proper shipping names for organic peroxides; (6) require inclusion on shipping papers of the technical names of certain hazardous components of materials covered by n.o.s. entries; and (7) provide for the optional use of certain United Nations shipping descriptions. The principal objective of this rule, as it pertains to the use of the identification numbers, is to improve the capabilities of emergency response personnel, such as firemen and policemen, to quickly identify hazardous materials and to assure the accurate transmission of information to and from the scenes of accidents involving hazardous materials.

EFFECTIVE DATE: November 20, 1980, unless otherwise specified in the regulations adopted under this rulemaking. Shipments may be prepared, offered for transportation, and transported in accordance with these amendments beginning July 1, 1980.

FOR FURTHER INFORMATION CONTACT: L. Metcalfe (202-426-0656) or Delmer Billings (202-426-2075), Standards Division, Office of Hazardous Materials Regulation, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590. Office hours are 8 a.m. to 4:30 p.m. Eastern Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: This action by the Materials Transportation Bureau (MTB) consolidates several related rulemakings into one final rule. By "related", MTB means that in many instances, the same sections of the Hazardous Materials Regulations are affected by the different rulemakings covered by this final rule. The notices of rulemakings containing the proposals, identified by docket number, Federal Register publication, date of publication and title are as follows:

1. Docket HM-118, Notice No. 74-9 (39 FR 25235, July 9, 1974), Expanded Polystyrene Resin and the Definition of a Flammable Solid.
2. Docket HM-145A, Notice No. 78-6 (43 FR 22626, May 25, 1978), Transportation of Hazardous Waste Materials.
3. Docket HM-145B, Notice No. 79-2 (44 FR 10676, February 22, 1979), Transportation of Hazardous Substances.
4. Docket HM-126A, Notice No. 79-9 (44 FR 32972, June 7, 1979), Display of Hazardous Materials Identification Numbers; Improved Emergency Response Capability.
5. Docket HM-126A (additional proposal), Notice No. 79-9 (44 FR 43858, July 26, 1979), Descriptions for Organic Peroxides.
6. Docket HM-159, Notice No. 79-12 (44 FR 43861, July 26, 1979), Forbidden Materials.
7. Docket HM-171, Notice No. 79-11 (44 FR 43864, July 26, 1979), Use of United Nations Shipping Descriptions.
8. Docket HM-126B, Notice No. 79-14 (44 FR 65020, November 8, 1979), Improved Descriptions of Hazardous Materials for Emergency Response.

This consolidated publication of final regulations pertaining to the subjects covered by the dockets identified above was requested by many commenters responding to the different proposals. MTB agrees that all the referenced proposals should be acted upon in one body of final regulations so that persons affected by these new and revised regulations may plan their future business activities relative to training, development and acquisition of shipping documents, the marking of packages, and the development of procedures to comply with the revised incident reporting and newly adopted identification requirements. However, MTB is not able to be fully responsive to those commenters who requested that all of the amendments covered by this action be made effective on the same date (in several comments, the date suggested was two to three years from the date of publication of final regulations). With the exception of regulations pertaining to hazardous wastes, hazardous substances, empty packagings, and certain organic peroxides, more than one year is being provided for the implementation of procedures to comply with the requirements adopted in this action; in fact approximately three years is being provided for compliance with the packaging marking requirements. Instead of specifying a set of lengthy and complicated effective dates in this preamble, the effective date for compliance with each regulation that is effective after November 20, 1980, is set forth in a specific regulation associated with each new or revised requirement. Sections containing compliance dates after November 20, 1980, are § 172.101 (j) and (k); § 172.200(c); § 172.203(k); § 172.300(c)(3); § 172.324(b); § 172.336(c)(6) and (7); and § 172.402(a)(10). The principal requirements that become effective on November 20, 1980 (with certain exceptions) pertain to the transportation of hazardous wastes, hazardous substances, certain forbidden materials (organic peroxides), and empty packagings.

Also bearing on the matter of effective dates, is the requirement for compliance by MTB with the Federal Reports Act of 1942 and procedures administered thereunder by the Office of Management and Budget (OMB) relating to prior clearance of recordkeeping requirements imposed by Federal regulatory action. Prior OMB clearance is required with respect to the provisions adopted herein which impose recordkeeping or report preparation requirements.

MTB will inform the public through notification in the Federal Register when OMB clearance of these requirements has been received. It is anticipated that this clearance process will be completed prior to November 20, 1980, the earliest of the effective dates prescribed herein.

It should be noted that most of the materials that this rule indicates by name to be "Forbidden" materials in column 3 of the Table in § 172.101 are and have been "Forbidden" materials in the past under general prohibitions. The listing of these materials by name, and the effective dates specified for these amendments, does not change the present "Forbidden" status of these materials if they were not authorized to be offered for transportation prior to this publication.

Concerning special requirements pertaining to hazardous wastes and hazardous substances, it is important to note that those requirements do not apply unless a material is a hazardous waste or a hazardous substance (or both) according to the definitions in § 171.8. This determination is separate

B. Previous Permits

All previous State water quality permits issued to this facility, whether for construction or operation or discharge, are hereby revoked by issuance of this permit. The conditions, requirements, terms, and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System governs discharges from this facility.

C. Construction

No construction of wastewater treatment facilities or additions thereto shall be begun until Final Plans and Specifications have been submitted to the Division of Environmental Management and written approval and Authorization to Construct has been issued. If no objections to Final Plans and Specifications has been made by the DEM after 30 days following receipt of the plans or issuance of this permit, whichever is latter, the plans may be considered approved and construction authorized.

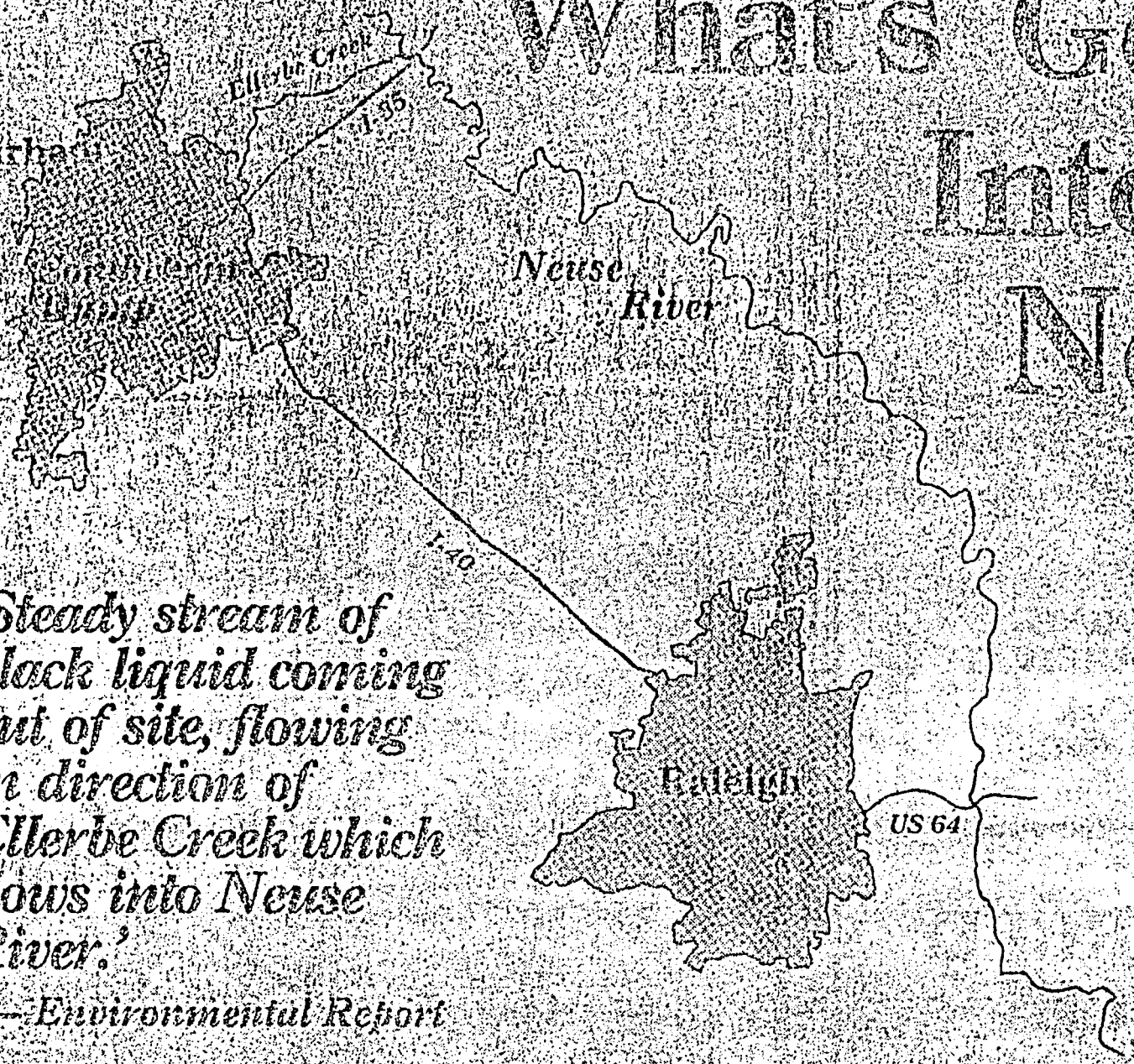
D. Certified Operator

Pursuant to Chapter 90A of North Carolina General Statutes, the permittee shall employ a certified wastewater treatment plant operator in responsible charge of the wastewater treatment facilities. Such operator must hold a certification of the grade equivalent to the classification assigned to the wastewater treatment facilities.

From the Spectator 2002 2004

Bo, Hey! Here's a little present for your return — Jamie

What's Getting Into The Neuse?



'Steady stream of black liquid coming out of site, flowing in direction of Ellerbe Creek which flows into Neuse River.'

—Environmental Report

See Page 5 For a Special Report

(Continued from page 7)
things that can happen. And even the things that do happen is frightening.

The test we had run indicated that this [illegible] be happening. An anonymous but very competent chemist in a city far to the north ran a sample of the leakage from the Cardinal/Southchem dump in a gas chromatograph. She was not trying to identify a specific organic compound but to identify how many organic compounds were in the leakage. The results were spectacular; an hour and a half later peaks were still coming off the machine; then she cut it off, afraid that she had blown a $15,000 piece of gear. It produced over 150 peaks, indicating at least that many organic compounds. That Southchem/Cardinal dump could be a chemical breeder, a poison factory, continually discharging its new products into Raleigh's water system every day.

It is obvious that organic compounds of unknown qualities, new to nature in the [illegible]30 years, are entering the water system. Have state and federal authorities performed their responsibility to protect the citizens, if all they have done is commission an unrelated test, and another test, that may be valuable but is 20 months late and has yet to be released? As for the Cardinal/Southchem dump, they have not found out what is in it. Certainly it is hard to believe that the charred remains of Cardinal Chemical, the only waste that is supposed to be buried there, could be so foul after 15 years. Did the tooth fairy slip in in the night and tuck those barrels under that hill? Bulldozers and trucks were obviously used, and dozens of people saw and heard that action. The right questions have not been posed to the right people in the right manner. Whose interests are the state and federal authorities protecting? Are their actions, like the dirt scratched over the barrels, merely an attempt to conceal the obvious?

JM — Why wasn't a mass spectrometer analysis done two years ago?

OWS — We didn't have one and why the EPA didn't do one I don't know.

JM — Couldn't you have contracted an outside firm to do one?

OWS — We have never done one ourselves and were never contracted with anyone. EPA has been our only source, or telling the individual you must get your own (test) run.

JM — Could you have gotten Wachovia or Southchem to do a mass spec?

OWS — That is a possibility.

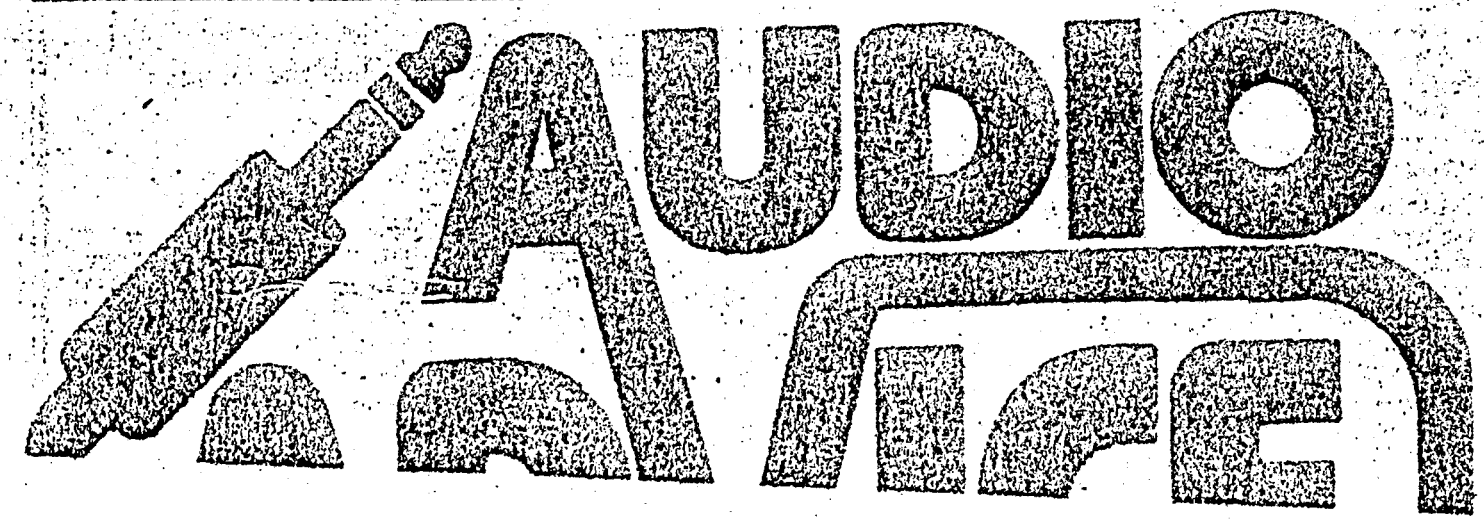
JM — You walk over that site (Southchem) and the odors are so powerful, it's hard to imagine that this is just what comes from an empty barrel.

OWS — Yes it seems to be that way.

What seems to be developing is a contradiction between the health and welfare of the citizenry and basic operating procedures of entities established for its protection. There is ample evidence that one should be cautious of the advice of experts and the tests that they produce. As Michael Brown related so well in *Laying Waste — The Poisoning of America*, the experience of the people in Love Canal, Hemlock, Michigan, and Medon, Tennessee, with federal and state authorities, was one of continual denial of any danger, when an immediate and deadly threat was obvious. Christopher Norwood in *At Highest Risk* offers numerous examples of the people rather than the state forcing action on toxic waste sites. As the song goes, "you don't need a weatherman to know which way the wind blows," nor do you need a chemist to tell you that the foul dreck flowing from the Cardinal/Southchem dump is nothing you want to drink.

OWS — In years gone by when there was no regulation these people would put anything in. Now, I've passed the Haw River on I-85, Friday afternoon, and I smelled it when I crossed it. And what I can't understand is we've had laws since the 1950's to clean it up. They've had all these pollution laws for years and still the Haw River is so black, so black you can almost walk across it. How come we're not on them? I know why — it comes out [illegible] political football

Now, I've passed the Haw River on I-85, on Friday afternoon, and I smelled it when I crossed it. And what I can't understand is we've had laws since 1950's to clean it up... and still the Haw is so black you can almost walk across it.



IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	11 Homes within ¼ mile			
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS (parks, schools, etc.)				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit): 9.5 – 72 ft +

B. DIRECTION OF FLOW

A report on the Sorrell Landfill near Apex, showing 11 homes within a quarter-mile of the site.

frequently found dangerous carcinogens. Guilford Laboratories found no trace of any of these substances in the leakage. In addition to the obvious criticism that there are millions of other organic compounds that one would not wish to consume which were not tested for, the relevancy of that test is subject to question. Three-fourths of the compounds tested were products of combustion that are to be found in the top of smokestacks, or they are so volatile that

This test should identify some of the organic compounds that are migrating into Raleigh's water supply.

they would long since have evaporated. Others are not water soluble, or are such products as PCB's or insecticides that are highly unlikely to be dumped by firms that specialize in textile chemicals, as did Cardinal/Southchem.

be produced.

O.W. Strickland — I think we are going to have to I think you are probably right about it. I think we are going to have to get some indicators....

JM — If you test for the waste they produce it would be much more...

OWS — ...realistic, much more.

JM — If there are millions of organic compounds?

OWS — That's right unless you know something about what you're looking for it really puts a man at a disadvantage.

Obviously, no specific tests were run for the type of chemicals that would likely be dumped by Cardinal/Southchem. Now, some 22 months after their initial discovery of the Cardinal/Southchem dump, the EPA has commissioned and received the results of a "state of the art" test which could provide valuable information. The leakage was fed into a gas chromatograph, a machine that will make a peak on a sheet of graph paper as it identifies each organic compound in a given sample. The graph is fed into a

result of which the EPA is still pondering should identify some of the organic compounds that are migrating into Raleigh's water supply. However, this machine will not identify any compound that is not on the computer. Chemists make completely new compounds every day, as that dump may well be doing.

JM — With a dump like Southchem, with the chemicals, the dirt, the sun mixing together — you can't tell what you are going to get?

OWS — *God only knows.*

JM — That's just like a breeder of some sort.

OWS — Yeah, that's right. The mixing of this chemical and that will form another chemical. I don't guess anyone knows all the potential.

JM — Then when you consider that the water from Southchem is going down stream, mixing with the chlorine in the water treatment plant in Raleigh and forming cancer-causing trihalomethanes....

OWS — I tell you it's sometimes frightening when you think of the many

(Continued on page 8)

Smith, Anderson, Blount, Dorsett, Mitchell and Jernigan
Lawyers
Announce
The Relocation of Their Offices
To
1300 St. Mary's Street
Raleigh, N.C. 27605
Telephone: (919) 821-1220
September 1, 1981

John Huske Anderson
James K. Dorsett, Jr.
Lee C. Smith
James D. Blount, Jr.
Henry A. Mitchell, Jr.
John L. Jernigan
Samuel G. Thompson
James G. Billings

James K. Dorsett, III
Raymond H. Goodmon, III
Nigle B. Barrow, Jr.
James D. Cox
R. Marks Arnold
Jodee Sparkman King
Julian D. Bobbitt, Jr.
Robin K. Vinson

What's Leaking Into The Neuse River?

'God Only Knows'

BY JAMES F. MORTON AND JOSEPH T. HUGHES

abandoned chemical dump decaying and leaking at the end of Markham St. on the eastern edge of the Durham city lim- . Within the center of the two acre mp an unknown number of 55 gallon ums are rotting. The chemicals that they ce held are mixing with each other, the il, and the rainfall to form chemical mpounds. This toxic waste is a foul elling black liquid as it drains from the derbelly of the dump in a steady stream to the marsh that borders the dump, to the creek that rises from the marsh, to Ellerbe Creek that flows into the euse River, into the reservoir that feeds aleigh, and into the lives of the people ho drink the water.

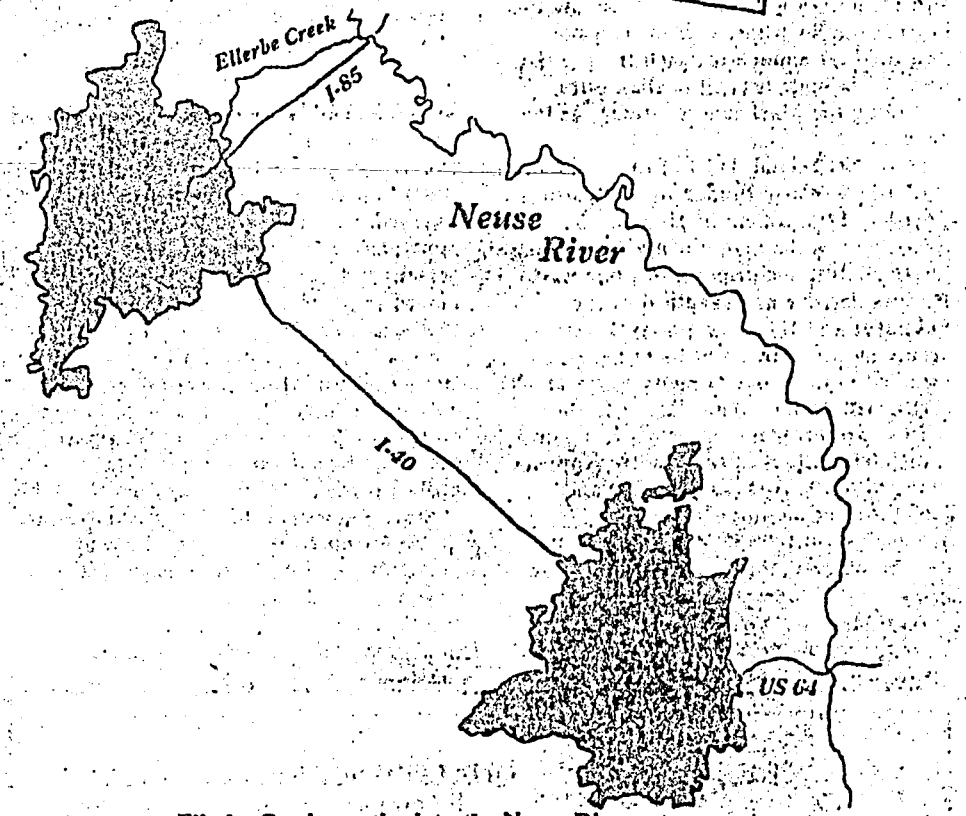
As one walks across this dump and sees e sinkholes that are being fomred by the llaps rrels, the deep ravines that e being t by the rain, there is no scernible evidence that any attempt has en made to contain the spillage. The nstruction of the dump involved little ore than carving the face of a plateau so at drums could be stacked then covered ith dirt.

Sadly, the Markham St. dump is no erration in a system of production that ll produce 120 million gallons of toxic waste-chemical poison in North Carolina this year. Virtually all of these chemical poisons are classified as organic compounds, meaning they have in common a carbon base. Organic compounds, capable of bonding with any carbon based substance, perform invaluable transformations in an industrial process. The carbon based human body is also responsive to the bonding, transforming power of organic compounds, making many of these chemical carcinogens, mutagens, teratogens. There are two safe methods for the disposal of chemical poisons — above ground storage and, in limited instances, incineration in a catalytic burner. Both of these methods are expensive.

ames F. Morton is a freelance writer om Chapel Hill. Joseph T. Hughes is orking on his Masters at the School of ublic Health at UNC.

Sadly the Markham St. dump is no aberration in a system of production that will produce 120 million gallons of toxic waste-chemical poison in North Carolina this year.

This country could have on its hands a river of poison. Many industrial concerns seem too willing to dump it themselves in a manner that they think they can get away with or to turn it over to the most cost effective disposers, the mafia hood, the sleazy businessman. This dump is not the worst dump in the Triangle area, nor may it be the most threatening to the citizens of Raleigh. It is, however, typical of the problem faced when dealing with toxic dumps: the inability of the state and federal authorities to acknowledge the danger and take effective action. It is also characteristic of a process, the unrestrained manufacture and disposal of chemical poisons, that is fundamentally dangerous to human life, that will soon be irreversible, but it is not irreversible at this time.



Map shows how Ellerbe Creek empties into the Neuse River.

There is nothing hidden about the dangers of the Markham St. dump; you can see the leakage coming from the site, a topographic map will show its route to the Neuse and as your head begins to throb and you feel nauseated, there should be no doubt that what is in that dump is toxic to humans.

On File

There are two very important reports on the condition of hazardous waste sites in North Carolina. The first, the Eckhardt Report, was the result of a detailed questionnaire that was sent out by the staff of a Senate committee headed by Senator Robert Eckhardt (D-Texas) to the fifty largest chemical companies in the nation. They were asked to describe in detail the amount and general type of waste that they had produced, and what they had done with it. One hundred and seventeen sites were listed for North Carolina. The dump on Markham St. is one of these sites. The second report was prepared by Joseph Hughes, who took the information on the 13 sites that the Eckhardt report lists in Wake, Durham, Chatham and Lee counties, combined it with reports by the N.C. Department of Human Resources and the EPA on these sites, and analyzed the data.

The most dangerous of these sites may be the Kopper's Company of Morrisville which uses pentachlorophenol (PCP) as a wood preservative. PCP is a nasty enough carcinogen as it comes off the line, but it has a truly horrifying capacity to degenerate into dioxon — a very powerful carcinogen. It is a mutagen of such

...d from page 5)

...ciency that it can deform the unborn by twisting the sperm, the ova or fetus. PCP has entered the ground water, the company's well, the well of a nearby resident, and two wet weather springs. According to the Eckhardt Report, Kopper's has also disposed of 20,000 gallons of liquid and several tons of solid waste designated as toxic organic in two landfills near Apex, Sorrell's and the Apex municipal landfill. A variety of toxic, organic waste has been dumped by chemical companies in other landfills in Wake, Chatham and Lee counties. There have been no tests for organic chemical contamination at any of these landfills. It is most likely that whatever poisons were put in those landfills will be getting into the ground water. An EPA study of fifty landfills, just like those mentioned above, found 48 of them contaminating the ground water within 10 years. The two sites that were not contaminating the aquifer were low level radioactive landfills in desert areas whose poisons had not migrated far enough to reach the ground water. The state lists all of these sites, including the Markham St. dump, as low hazard.

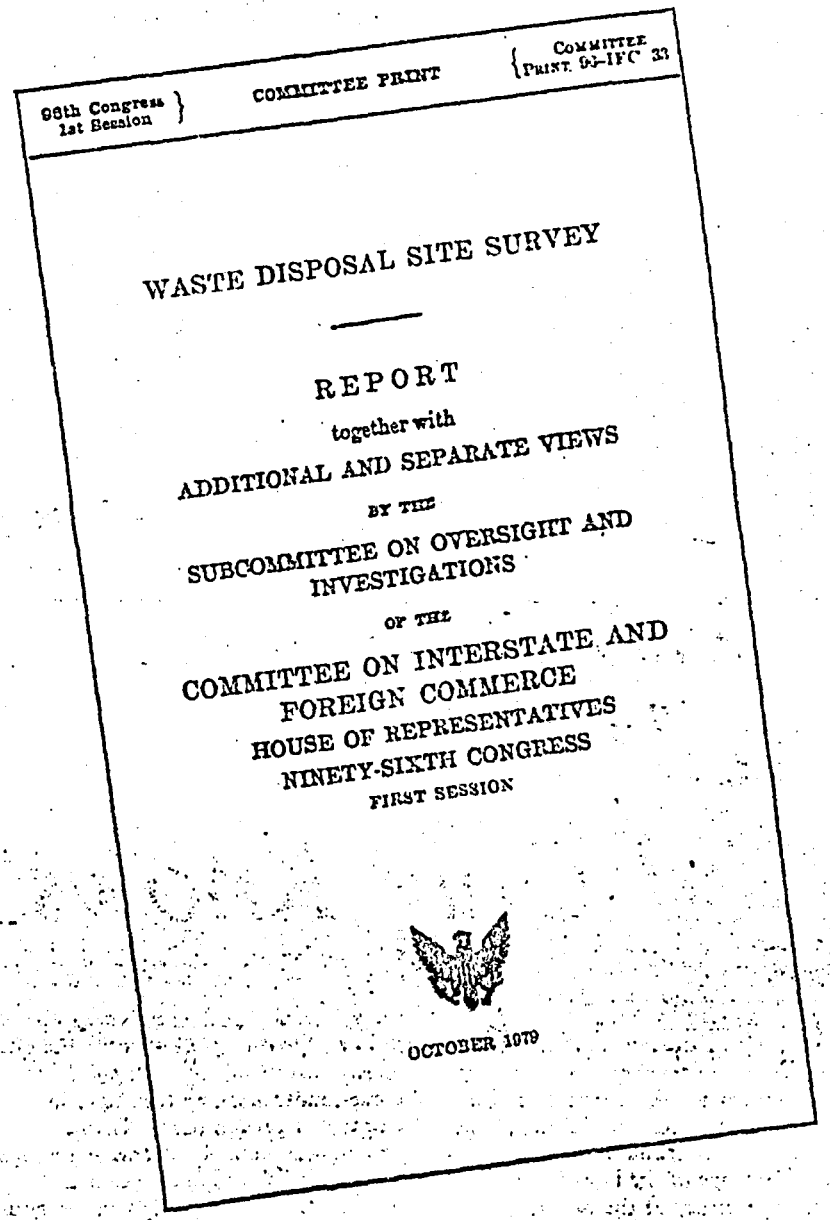
O.W. Strickland, head of the Solid and Hazardous Waste Branch of the North Carolina Department of Human Resources, is the man directly responsible for regulating the disposal of toxic waste. He was derisive and skeptical of the Eckhardt and Hughes reports: "a very deceiving list," "many of them have received nothing but cafeteria waste or cardboard," "don't trust it a bit farther than I can throw it." When asked about the 15,000 gallons of toxic waste Koppers dumped in the Apex city landfill and 3,600 tons of organic waste Allied dumped in Sorrell's landfill, he reported that he had no more idea "than the man in the moon" where those figures came from. (They came from Koppers and Allied through the Eckhardt Report.) Mr. Strickland claims to have investigated all the sites on the Eckhardt Report, and he spent an entire weekend on the telephone calming the press when the report was released in October 1979. From his comments, Strickland admits that he has not learned the methodology of the report well enough to know that those figures came from the companies themselves, nor has he used his statutory powers to demand company records for the period, which would tell him what is in those sites.

The land the dump is on is owned by Martin E. McGuire, who may live in Fort Lauderdale, and is managed for him by the Trust Department of Wachovia Bank. In the early Sixties McGuire's land was the home of Cardinal Chemical Co., a firm that dealt in textile chemicals and the reprocessing of waste oil. Cardinal entered bankruptcy proceedings in 1969 or 1970 and a new company, Southchem, emerged, with the same business in the same place and with most of the same personnel. Four years ago Southchem moved to its present location on East Pettigrew St. in Durham. According to reports from the North Carolina Department of Human Resources, the only waste that is supposed to be buried on the company's former Markham St. site is the remains of a fire in 1966, broken pallets and empty drums.

A variety of toxic, organic waste has been dumped by chemical companies in other landfills in Wake, Chatham and Lee counties.

State and federal officials became aware of the Cardinal/Southchem dump in September of 1980 in response to citizen complaints. Subsequently, the Environmental Protection Agency and the Solid and Hazardous Waste Management Branch of the North Carolina Department of Human Resources sent investigators to the site. The condition of the dump, the leakage, and the possibility of contamination of Raleigh's water supply were duly noted. The Department of Human Resources ran an analysis for heavy metals which showed lead, these investigators represent most of their effort to protect the people of Raleigh from chemical contamination of their drinking water.

The North Carolina state inspectors turned their sample of the leakage over to Guilford Laboratories, which had been comissioned by the Trust Department of



96th Congress 1st Session } COMMITTEE PRINT { COMMITTEE PRINT 96-IFC 33

WASTE DISPOSAL SITE SURVEY

REPORT

together with

ADDITIONAL AND SEPARATE VIEWS

BY THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

HOUSE OF REPRESENTATIVES

NINETY-SIXTH CONGRESS

FIRST SESSION

OCTOBER 1979

The Eckhardt Report describes 117 chemical dumps in North Carolina.

RALEIGH SILK SCREEN

QUALITY SCREEN PRINTING
by professional in-house artists
Specializing in: shirts, jerseys, jackets and caps for teams, PTA groups, clubs, events, license plates and decals

DIVISION OF ENVIRONMENTAL MANAGEMENT

August 31, 1979

Mr. Joseph H. Collie, President
Southchem Incorporated
Post Office Box 886
Durham, North Carolina 27702

SUBJECT: Application for Discharge Permit
Southchem Incorporated
Durham County

Dear Mr. Collie:

Reference is made to your letter of August 23, 1979 applying for discharge permit to be part of your application for industrial revenue bond financing.

Mr. J. C. Millsaps of this office was in contact with your office noting that Permit Number NC0044644 was issued to Southchem Incorporated on April 30, 1979 for discharge of process wastewater from your plant. Since your copy of the permit has apparently been misplaced, please find a copy attached. If this is not sufficient, please call.

Since the requested permit has been issued, we are returning your applications.

Sincerely,

R. S. Taylor (919) 733-2314
Regional Supervisor
Joe Millsaps
750 East Markham Ave
Durham, N.C
(919) 688-8046
E Herbert Street

JM/dc

Attachment

cc: Permits and Engineering
Raleigh Regional Office

SOUTHCHEM Inc.
750 East Markham Avenue
Post Office Box 886
Durham, North Carolina 27702
(919) 688-8046

Joseph H. Collie
President

RECEIVED
AUG 30 1979
RALEIGH REGIONAL OFFICE

August 23, 1979

Mr. Stanley Taylor
Raleigh Field Office
N. C. Dept. of Natural Resources
and Community Development
North Hills Office
3800 Barrett Drive
Raleigh, N C

Dear Mr. Taylor:

We are filing this original permit request with your office in accordance with our understanding of the requirements needed for approval of an application for industrial revenue bond financing.

The application for the financing is being forwarded to the proper Durham Authority.

We respectfully request the discharge application be reviewed as early as possible to permit our expediting financing and implementation of our expansion plans.

D.E.C.

Very truly yours,

Joseph H. Collie

JHC:hjc

Enclosure

CHARTER MEMBER
MEMBER
NACD

= Lowe's Chemical

Notes on Calls

9/23/80 South Chemical sample taken
9/25/80 Gulfport Rob picked up sample
10/6/80 TMO called Gulfport Rob
11/14/80 W.P. called Wachovia Bank
11/20/80 W.P. called Wachovia Bank
1/7/81 Letter from Wachovia Bank
1/16/81 Tom Nelson, Ecology & Environmental called to inform of his visit to South Chemical to sample South Chemical dump & effluent

Neuse River

Goose Creek joins Ellerbe Creek
→ not in Durham Supply
C Classification

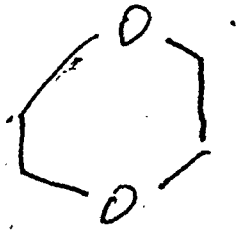
However, 10 miles from Ellerbe mouth
becomes A 2 classification for
Ral.

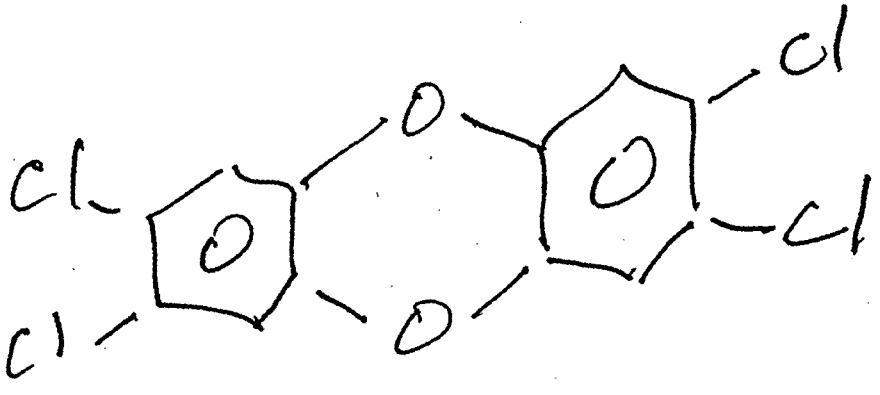
Sam N. Chemin Co 10/30/80

Raleigh to Durham via NC Highway 70 to junction with US Hwy 85. Go to Wonable Dr. turn off from US 85-NC-70, Wonable Dr. is NC Hwy 55. Go towards down town Durham until Wonable Dr. become Alston. Go about 3-5 block on the south side of US 85 to E. Main Durham. Turn left on Main on E. Durham. At end of Main, turn right on the only gravel road to the end. Go through open gate and to left on parking lot. Now a built up parking lot and 3 empty. Took 3 photos. One of parking lot

one of entrance one blue drum
and one of 3 buildings

CH_2





[illegible]

[illegible]

[illegible]

[illegible] organic [illegible] and numerous [illegible]

[illegible] 1/3 X 5 [illegible]

[illegible]

3 X 4 [illegible] 6 [illegible]

[illegible]

/23/80 Sample leachate from [illegible]
fill area about 7/8 down a 50-70 ft
slope. a small trickle about 1-2 gal per
hr with dead weeds downstream
from flow. Landfill slope has several
sinkholes one to three feet deep. There
empty building with signs for chlorine
gas outlet water to fill flammable solvents
outside of building and inside buildings
empty drums of 35% H_2O_2 and three [illegible]
drums [illegible] with trash + solid debris and
[illegible] with water & organic solvents. Took

an one gal sample in clear glass bottle &
two one quart PVC sample bottle. Wil-
ian Paige lead sample with beaker
Note flow rate varies with rain.
Through Council of Government notified
the N.C. D.E.H.N.R. Management. Large
sample to Guilford Lab for Wachovia
Bank in Durham. *99% run the
priority water pollutants and N.C.
Health Lab run heavy metals

Pachuca Bonilla Chart
Pablo Bland

GC/MS organic scan

#250
#125
#525

[illegible] specific #125

Ocean discharge water
" " fluoride
[illegible]
GC/MS organic [illegible]

from Kelp
inorganic metals by AA
inorganic pesticides } GC/electron
organic pesticides } capture
acid, neutral, volatile organics
priority pollutants by GC #125
with MS #125
and [illegible] specific pesticides
2-3½ X #125 at 350-550 GC-MS

over

Drinking Water Std.

Contaminant	Max. Con. mg/l or pCi/l
As	0.05
Ba	1.
Cd	0.010
Cr	0.05
Pb	0.05
Hg	0.002
NO_3 as N	10
Se	0.01
Ag	0.05
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
2,4-D	0.1
2,4,5-TP	0.01

Michael Zucker - N.C. Public Interest Research Group
831 Wilkerson Ave
Durham NC 27707

Sept 22 1983

Reviewed this file

7 - 306 N. WILMINGTON ST., RALEIGH 27611

CHEMIC[illegible] ANALYSES - SOLID AND HAZARDOUS WASTE

Copy

rce: Southchem

dress: 750 E. Markham Av.

Durham, N.C. Zip

nty: Durham

port To: Ken Paige

ress: Haz Waste

Zip

ephone Number: ( ) 2188 -

lected By: Ken Paige

e Collected: 9/23/80 Time 10:00 AM PM

tion of Sampling Point: Bank deslimer

Sample #2

Remarks:

Extractable Metals Total Metals	Results	Results expressed in ppm unless otherwise indicated.	Results
Arsenic	<0.01	Solids, dissolved	
Barium	0.2	Solids, suspended	
Cadmium	<0.005	Solids, total	
Chloride		Solids, total volatile	
Chromium	0.03	Spec. Conductivity	
Color		Zinc	
Copper		Endrin	
Flammability		Lindane	
Fluoride		Methoxychlor	
Iron		Toxaphene	
Lead	0.04	2,4-D	
Manganese		2,4,5-TP	
Mercury	<0.002		
Nitrate			
pH	7.8		
Selenium	<0.005		
Silver	<0.05		

Received 9/23/80 Date Reported OCT 9 1980 Reported By 4296

Laboratory Number

N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON ST. RALEIGH 27611

CHEMICAL ANALYSES - SOLID AND HAZARDOUS WASTE

Copy

rce: Southchem

ress: 750 E. Markham Av.

Durham, N.C. Zip

nty: Durham

ort To: Jim Page

ress: Hay Waste

Zip

phone Number: ( ) 2188 -

ected By: Jim Page

Collected: 9/23/90 Time 10:00 AM/PM

tion of Sampling Point: bank discharge
Sample #1

Remarks:

xtractable Metals otal Metals	Results	Results expressed in ppm unless otherwise indicated.	Results
Arsenic	< 0.01	Solids, dissolved	
Barium	0.2	Solids, suspended	
Cadmium	<0.005	Solids, total	
Chloride		Solids, total volatile	
Chromium	0.02	Spec. Conductivity	
Color		Zinc	
Copper		Endrin	
Flammability		Lindane	
Fluoride		Methoxychlor	
Iron		Toxaphene	
Lead	0.03	2,4-D	
Manganese		2,4,5-TP	
Mercury	<0.002		
Nitrate			
pH	7.2		
Selenium	<0.005		
Silver	<0.05		

eceived 9/23/90 Date Reported OCT 9 1990 Reported By

SEP 24 1990 Laboratory Number 4295

. . . . . T. ST., RALEIGH 27611

CHEMICA[illegible]NALYSES – SOLID AND HAZARDO[illegible] WASTE

Copy

E

ce: Southchem

ess: 750 E. Markham Av.

Durham, N.C. Zip

ty: Durham

rt To: Wm Paige

ess: Hay Waste

Zip

phone Number: ( ) 2188 –

ected By: Wm Paige

Collected: 9/23/80 Time 10:00 AM/PM

Distilled Hzo

tion of Sampling Point: ~~[illegible]~~

Sample #3

Remarks:

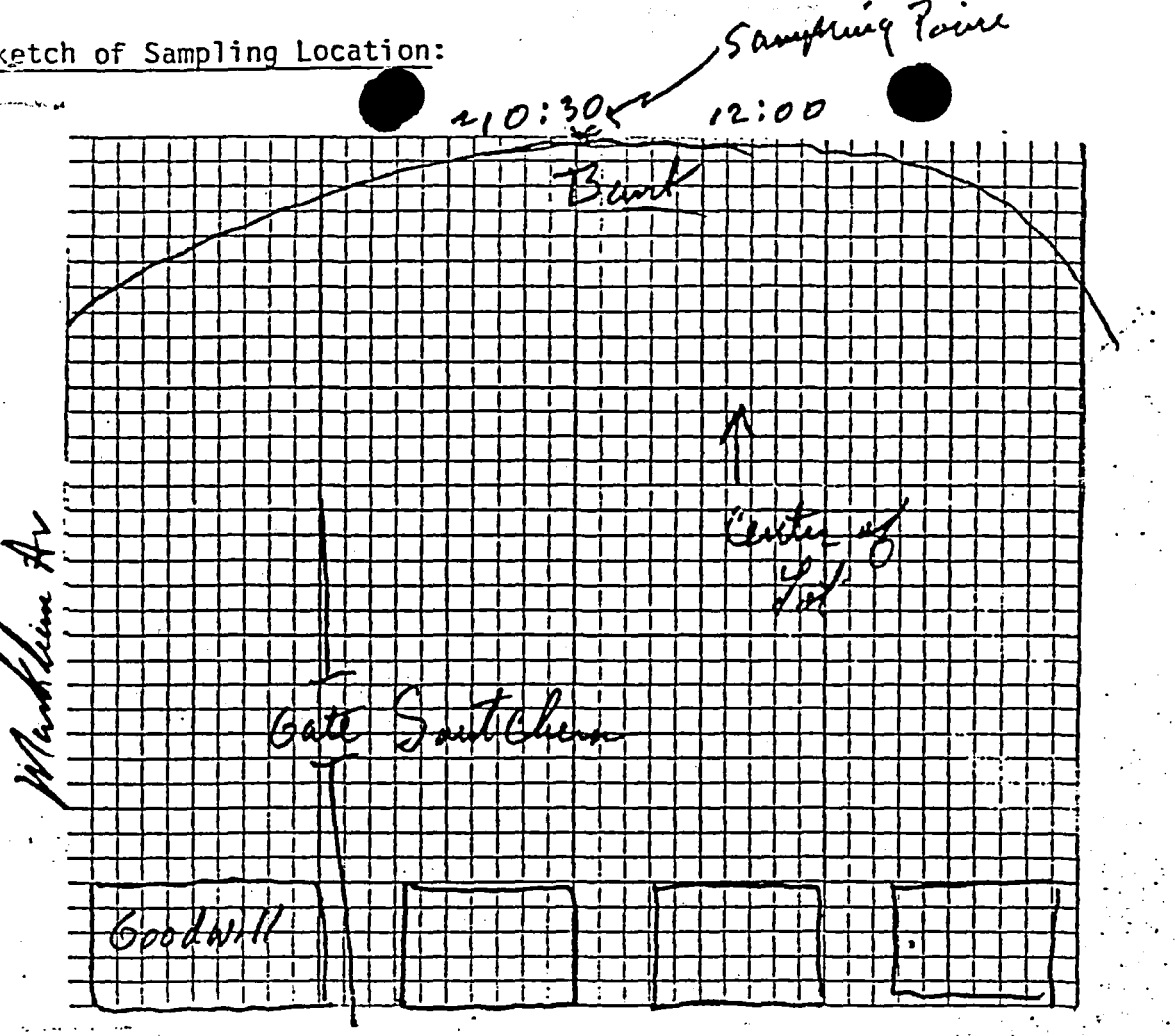
Barrel Hornelin

tractable Metals tal Metals	Results	Results expressed in ppm unless otherwise indicated.	Results
Arsenic	<0.01	Solids, dissolved	
Barium	<0.1	Solids, suspended	
Cadmium	<0.005	Solids, total	
Chloride		Solids, total volatile	
Chromium	<0.01	Spec. Conductivity	
Color		Zinc	
Copper		Endrin	
Flammability		Lindane	
Fluoride		Methoxychlor	
Iron		Toxaphene	
Lead	<0.03	2,4-D	
Manganese		2,4,5-TP	
Mercury	<0.002		
Nitrate			
pH	7.1		
Selenium	<0.005		
Silver	<0.05		

eceived 9/23/80 Date Reported OCT 9 1980 Reported By

Laboratory Number 14297

Sketch of Sampling Location:



So)& Hazardous Waste Management)nch
Division of Health Services
N.C. Department of Human Resources
P.O. Box 2091, 306 N. Wilmington Street

CHAIN OF CUSTODY RECORD
Hazardous Waste Materials

Location of Sampling: ___ Generator ___ Transporter ___ Treatment Facility
___ Storage Facility ___ Disposal Facility
X Other: Old Chemical Subdivider

Company's Name Southchem Telephone (___) _____

Address 750 E. Markham Av. Durham N.C.
number street city state zip

Collector's Name William Paige Telephone (919) 733-2188
signature

Date Sample Sept. 23, 1980 Time Sampled 10:00 hours

Type of Process Generating Waste Old Chemical Subdivider

Field Information (sketch sampling location on back)
Sample #1, #2 for Inorganics, #3 Blank for Inorganics
#4 - Organics

Field Sample No. 1 2 3 4 ___ ___ ___

___ ___ ___ ___ ___ ___ ___ ___ ___

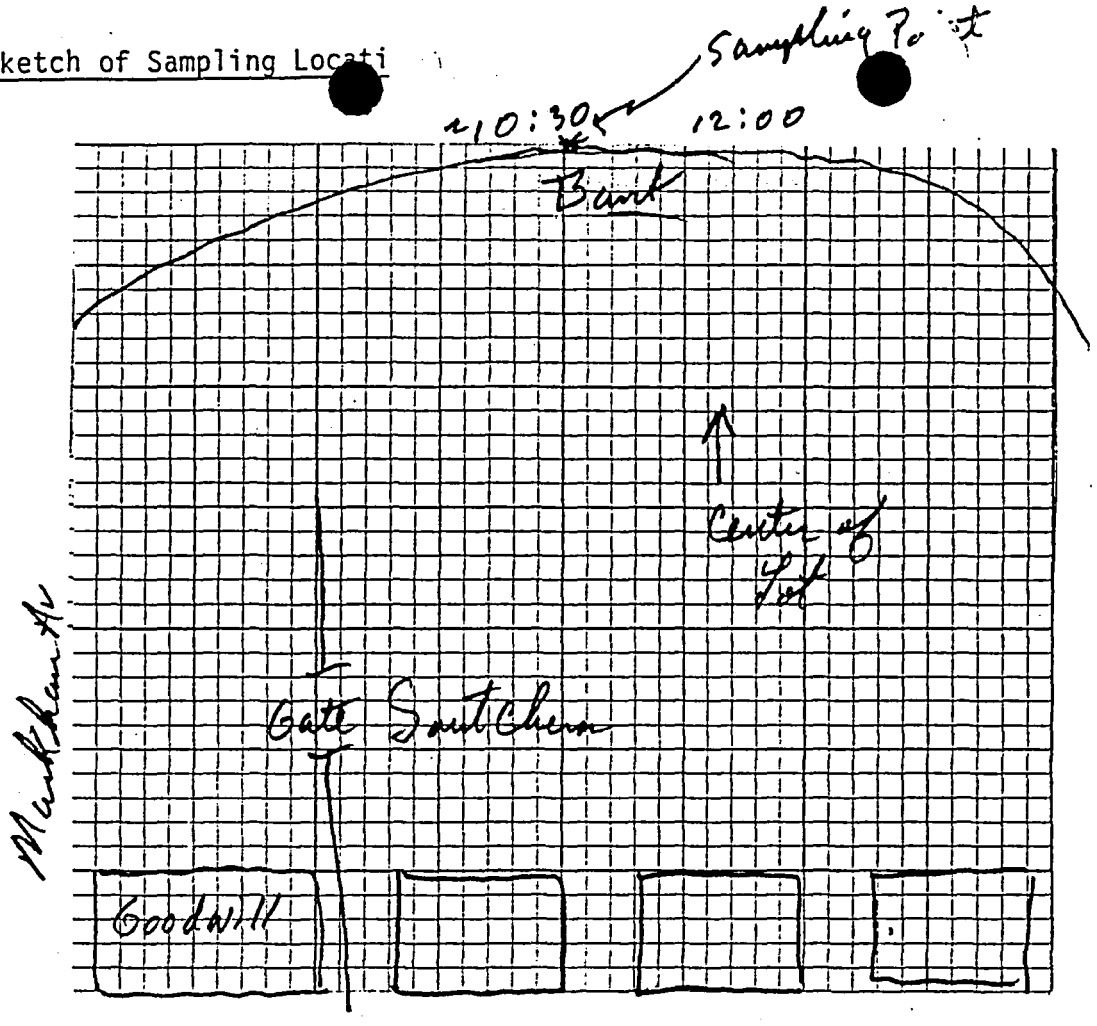
Chain of Possession

signature	title	inclusive dates
1. William Paige	Envir. Chemist	9/23/80 - 9/23/80
2. Paul J. Childers	Envir. Chem. Supv.	9/23/80
3. Larry G. Laughery	President GCC	9/25 -

274-2907

I L.G. Laughery received sample No. 4 for organic analysis from William Paige on 9/25/80.

Sketch of Sampling Locati



Solid & Hazardous Waste Management Branch
Division of Health Services
N.C. Department of Human Resources
P.O. Box 2091, 306 N. Wilmington Street

CHAIN OF CUSTODY RECORD
Hazardous Waste Materials

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X Other: Old Chemical Subdivider

Company's Name Southchem Telephone (___) _____

Address 750 E. Markham Av. Durham N.C.
number street city state zip

Collector's Name William Paige Telephone (919) 733-2188
signature

Date Sample Sept. 23, 1980 Time Sampled 10:00 hours

Type of Process Generating Waste Old Chemical Subdivider

Field Information (sketch sampling location on back)
Sample #1, #2 for Inorganics, #3 Blank for Inorganics
#4 - Organics

Field Sample No. 1 2 3 4 ___ ___ ___

Chain of Possession

	signature	title	inclusive dates
1.	William Paige	Envir. Chemist	9/23/80 - 9/23/80
2.	Paul J. Childers	Envir. Chem Sup.	9/23/80
3.	[illegible]	President GLC	9/25/80 -

I [illegible] received sample No. 4 for organic analysis from William Paige on 9/25/80

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by Hq)

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (*Section II*). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)		
Old Cardinal Chem. Co. Site	750 E. Markham Ave.		
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Durham	N.C.	27702	Durham

G. SITE OPERATOR INFORMATION

1. NAME	2. TELEPHONE NUMBER

3. STREET	4. CITY	5. STATE	6. ZIP CODE

H. REALTY OWNER INFORMATION (*if different from operator of site*)

1. NAME	2. TELEPHONE NUMBER
MARTY McQUIRE	

3. CITY	4. STATE	5. ZIP CODE
Contact Wachovia Bank in Durham - (Mr. McQuire Resides in Fla. Wachovia manages property)		

I. SITE DESCRIPTION

Dump area that has been filled in and made into parking lot

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION (*complete this section last*)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (*mo., day, & yr.*)	B. APPARENT SERIOUSNESS OF PROBLEM
	☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE Unknown

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (*mo., day, & yr.*)
Larry D. Perry	919-733-2178	8-22-80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE
PERRY LARRY	District Sanitarian

3. ORGANIZATION	4. TELEPHONE NO. (*area code & no.*)
Solid & Hazardous Waste Branch - N.C. Div. of Health Services	919-733-2178

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.

C. SITE REPRESENTATIVES INTERVIEWED (*corporate officials, workers, residents*)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS

Continued From Front

INSPECTION INFORMATION (continu[illegible])

D. GENERATOR INFORMATION (sourc[illegible] waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases) ☐ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF	X	N.C. Dept of Health Services Lab	
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

 Continue On Page 3

Continued From Page 2

IV. SAMPLING INFORMATION *(continued)*

C. PHOTOS

1. TYPE OF PHOTOS

☐ a. GROUND ☐ b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE *(deg.-min.-sec.)*

2. LONGITUDE *(deg.-min.-sec.)*

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☒ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☒ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(in acres)*

1-1 1/2

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES *(specify)*: Chem. Storage

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity*(ies)* and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	X	3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER *(specify)*:		6. OTHER *(specify)*:		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER *(specify)*:
					9. OTHER *(specify)*:		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

☐ 1. STORAGE ☐ 2. INCINERATION ☐ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☒ 1. LIQUID ☐ 2. SOLID ☐ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☒ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE

☐ 5. TOXIC ☐ 6. REACTIVE ☐ 7. INERT ☐ 8. FLAMMABLE

☐ 9. OTHER *(specify)*:

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

 Continue On Reverse

Continued From Front

VII. WASTE RELATED INFORMATION (continued)

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER(specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER(specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER(specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER(specify):
			(6) CYANIDE	(6) OTHER(specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER(specify):		

Unknown Amounts

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

[X] A. HUMAN HEALTH HAZARDS

Steady stream of black liquid coming out of site, flowing in direction of Ellerby Creek which flows into Neuse River

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☒ D. CONTAMINATION OF WATER SUPPLY

See Part A

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

See Part A

☒ G. CONTAMINATION OF SURFACE WATER

See Part A

 Continue On Reverse

Continued From Front

III. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☒ I. FISH KILL

See Part A

☐ J. CONTAMINATION OF AIR

☒ K. NOTICEABLE ODORS

Liquid has a very noticeable sulfur-"rotten egg" smell

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

 Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

☒ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

See Part A

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Unknown

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS* ☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS _____

☐ 3. SURFACE WATER ☐ 4. WELL

 Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH *(specify unit)*	3. LOCATION *(proximity to population/buildings)*	4. NON-COMMUNITY *(mark 'X')*	5. COMMUNITY *(mark 'X')*

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER *(specify)*:

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type*(s)* of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK *(specify below)*	'X'	C. OTHER *(specify below)*
	1. SAND				
	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH *(100,000 to 1000 cm/sec.)* ☐ C. HIGH *(1000 to 10 cm/sec.)*

☐ D. MODERATE *(10 to .1 cm/sec.)* ☐ E. LOW *(.1 to .001 cm/sec.)* ☐ F. VERY LOW *(.001 to .00001 cm/sec.)*

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.

J. OTHER GEOLOGICAL DATA

 Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE *(e.g., RCRA, State, NPDES, etc.)*	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED *(mo., day, & yr.)*	E. EXPIRATION DATE *(mo., day, & yr.)*	F. IN COMPLIANCE *(mark 'X')*		
					1. YES	2. NO	3. UNKNOWN

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☐ YES *(summarize in this space)*

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

980503148 N[illegible] - Eckhardt Site Durham

EPA

POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION

REGION	SITE NUMBER
IV	NC ~~[illegible]~~

NOTE: The initial identification of a potential site or incident should not be interpreted as a finding of illegal activity or confirmation that an actual health or environmental threat exists. All identified sites will be assessed under the EPA's Hazardous Waste Site Enforcement and Response System to determine if a hazardous waste problem actually exists.

Non-Eckhardt Site

A. SITE NAME	B. STREET (or other identifier)		
Southchem			
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Durham	NC		Durham Co.

G. OWNER/OPERATOR (if known)

1. NAME	2. TELEPHONE NUMBER
Southchem	

H. TYPE OF OWNERSHIP (if known)

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

In the early 1970s, chemical wastes were buried 30-ft. deep over a 1 acre area. Leachate from buried material now leaving site and entering stream.

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)	K. DATE IDENTIFIED (mo., day, & yr.)
North Carolina Solid & Hazardous Waste	7/15/80

SUMMARY OF POTENTIAL OR KNOWN PROBLEM

Site is apparently contaminating surface water. There is a strong possibility that the site is resulting in groundwater contamination.

North Carolina Solid & Hazardous Waste is investigating and collecting samples.

M. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE (mo., day, & yr.)
Joe Young, Env. Scientist	FTS 257-3016	7/31/80

Form 2070-8 (5-80)

by PTD

ed by SMJ

upervisor REK

Date 5-1-80

ORGANIC ANALYSIS

Entered by [illegible]

Checked by [illegible]

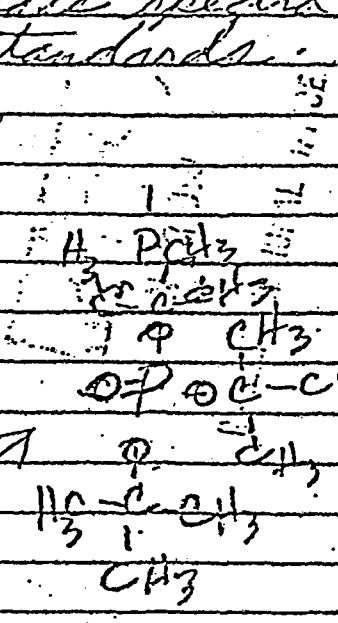
CHEMTR 800-424-9300

EPA 1-404-[redacted]

OIL,ETC 881 3931

TOXIC 881 3864

Lab No.	Analytical Results
1907	The following compounds were identified by matching with library mass spectra. They were not matched to standards.
	methyl benzene "TOLUENE"
	phosphoric acid tributyl ester
	sulfur (S_8)
	No Pesticides detected



RALPH JENNINGS / TOXIC - EPA (404 881 3864)

→ NOT LISTED IN CHIP OR NIOSH

→ USED AS PLASTICIZER, SAPONIFIER, PAINT

→ MEMO TO R.W. STRICKLAND (2178)

→ MR COLLIE / SOUTHCHEM (2800 EAST PETTIGREW)

→ THINKS IT IS SEWER (WE SHOULD TEST FOR COLIFORM)

→ FIRM IN 1976 HAD FIRE, DISPOSED OF ALL STOCK

→ NEVER OWNED PROPERTY

→ SOUTHCHEM IS NOT AT PROPERTY ANY MORE

→ POT STRICKLAND ON MOVES

→ SOLID / HAZARDOUS WASTE / BILL MYER

✓ GC/MS/DS used

W.Q. File

November 1, 1978

MEMORANDUM

TO: R. A. Carter

FROM: R. S. Taylor RST

SUBJECT: South Chem, Inc.
Durham

On October 23, 1978, Joe Millsaps, Environmental Engineer, Raleigh Regional Office, visited the subject plant to check compliance with discharge abatement schedule. The drum wash facilities have been completed and the discharge is now to the City of Durham collection system (Northside plant). A drainage pad with facilities to divert all washwater from the truck washing area to an oil separator, has been completed. The oil separator had an overflow line to the stream, but since the tank had not filled, there was no discharge. Mr. Charles Matthews, Production Manager, was informed a discharge permit would be necessary. Also, plans and specs for facilities to meet the established effluent limits would be necessary. Mr. Matthews was given applications for NPDES permit.

RST/mdp

cc:
Marshall Rackley

September 6, 1978

REPORT OF INVESTIGATION

BY: J. C. Millsaps JCM

SUBJECT: Illegal Wastewater Discharge
SouthChem, Inc.
Durham, N. C.

On August 8, 1978, this office was notified by the City of Durham Fire Dept. of a fire on the property of SouthChem, Inc. in Durham. Because of the possibility of chemical spills, J. C. Millsaps of this office visited the site. This investigation revealed a fire in the landfill behind the warehouse. This landfill contained many abandoned drums, some still containing varying volumes of acids or commercial solvents. The firefighting water entered an inaccessable swamp, tributary to Ellerbee Creek, and could not be sampled. A follow-up investigation revealed most of the drums were cleaned on site prior to reconditioning and reuse. It was also noted that many of the chemical transport trucks were washed on site. The company does not have a discharge permit and the discharge has been existing for an unknown period of time. A conference was held on August 31, 1978 with company officials and City of Durham officials in which it was agreed that this wastewater would be pre-treated to City of Durham standards, and discharged to the Durham system for final disposal. No samples were taken because there was no discharge at the time of this visit. A schedule to cease discharge to the surface waters by October 31, 1978 was proposed.

This discharge is in violation of NCAC Title 15, Chapter 2H .0104 (a) (b) (1).

RECOMMENDATION: In view of this, it is recommended that the company be ordered to cease its discharge to the surface waters.

SEP 11 1978 rec'd

Bromby

September 6, 1978

MEMORANDUM

TO: Craig Bromby

FROM: L. P. Benton

SUBJECT: Proposed Enforcement Action
SouthChem, Inc.
Durham County

Please find attached a report of investigation and recommendation for enforcement action prepared by Mr. J. C. Millsaps of the Raleigh Regional Office. If additional information is needed, please advise.

September 6, 1978

RECOMMENDATION OF REGIONAL ENGINEER: BSB

Since the discharge of wastewater was initiated without a permit and since the discharge is continuing a civil penalty would normally be recommended. In this case we have been unable to collect a sample to document the wastewater discharge, and the company is in the process of eliminating the discharge. For these reasons it is recommended that the enforcement action be an order to the company to cease discharging any wastewater to the surface waters of the State by October 31, 1978.

SOUTHCHEM Inc.
750 East Markham Avenue
Post Office Box 886
Durham, North Carolina 27702
(919) 688-8046

RECD AUG 17 1978

RECEIVED
AUG 24 1978
AIR QUALITY DIVISION
CENTRAL OFFICE

August 11, 1978

Mr. Bryant Foust
N. C. Department of Natural and Economic Resources
P. O. Box 27667
Raleigh, NC 27611

Dear Mr. Foust:

I am writing concerning the landfill located at 750 East Markham Avenue, Durham. The following, to the best of my knowledge is what is contained in this landfill.

The fill was started in 1966 when Cardinal Chemicals was at this location and the building burned. The rubble and chemical residue from this fire were dumped in this landfill and covered with dirt. From the early 1970's up until the present, C. B. Hinesley has dumped rubble from demolished buildings and covered with dirt. This is the majority of the landfill.

Southchem Inc. from time to time, has dumped broken and unusable pallets as well as empty drums that could not be reconditioned. These drums could have contained any number of the acids or solvents that we handle here. Some of the last items that might have been contained by these drums are as follows:

ACIDS	OTHER ITEMS	
Nitric	Chlorinated Solvents	Sodium Silicate
Sulfuric	Alcohols	Liquid Caustic Soda
Muriatic	Ketones	
Acetic	Glycols	
Phosphoric	Esters	
Formic	Petro Solvents	

I would like to point out that these were empty drums, and in many cases, they were purged with water before they were put in the fill. I would also like to point out that I or no one else have any way of knowing what is in this landfill. I have only mentioned items that I felt might have been last contained by some of the drums in this fill.

If I can be of any further help concerning this matter, please give me a call.

Charter Member
NACD

Very truly yours,

Charles T. Mathews, Director of Operations

methyl Benzene

~~Pho~~ Tributyl Phosphate

COD 620.00

TOC