301SERBSF10,616

301SERBSF10,616

Site Name (Subject):	SMITH METAL & IRON COMPANY
Site ID (Document ID):	NCD024488025
Document Name (DocType):	Preliminary Assessment/Site Inspection (PA/SI)
Report Segment:	
Description:	Phase I Screening Site Inspection
Date of Document:	4/9/1990
Date Received:	5/31/1990
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**

HDR Engineering, Inc. 6400 Fairview Road Charlotte, North Carolina 28210 Telephone: 704 364-1800

Transmittal

CERCLA

To Mr. JACK BUTLER
Superfund Branch/ NCDHS
P.O. Box 2091
Attention Raleigh, N.C. 27602-2091 Date 29 Mar 89 Job No. 06807-001-101

Regarding

We are sending you: ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ Other

Copies	Date	No.	Description
1			All References listed in Draft Sampling Plan, Revision 1, 03 Mar 89.

These are transmitted as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☒ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☒ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review/comment ☐ Other

☐ For bids due _____ 19 ____ ☐ Prints returned after loan to us

Remarks

Copy to Mark Fogel Signed Fletcher Armstrong

If enclosures are not as noted please notify us at once.

H D R

NUS CORPORATION
1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

RECEIVED
MAY 31 1990
SUPERFUND SECTION

SISB/SAS
RECEIVED
APR 16 1990
EPA - REGION IV
ATLANTA, GA.

C-586-4-0-32

CERCLA

April 9, 1990

Mr. A. R. Hanke
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Date: 5/22/90
Site Disposition: Defer to State + Em. Resp.
EPA Project Manager: R. Cain
NFRAP approved

Subject: Screening Site Inspection, Phase I
Smith Metal & Iron Company
Charlotte, Mecklenburg County, North Carolina
EPA ID No. NCD024488025
TDD No. F4-8911-55

Dear Mr. Hanke:

FIT 4 conducted a Screening Site Inspection of the Smith Metal & Iron Company facility in Charlotte, Mecklenburg County, North Carolina. Phase I of the inspection included a review of state and EPA file material, a target survey, and an offsite reconnaissance of the facility and surrounding area.

The Smith Metal & Iron Company facility is located at 712 West Third Street in Charlotte, North Carolina (Refs. 1, 2, 3). The facility was operated by a paper company prior to the 1930s or 1940s, when the family of Elliot Schwartz began operating the facility as a scrap yard. Mr. Schwartz operated the scrap yard from 1970 to 1977. From 1977 to 1982, Smith Metal & Iron Company leased the property from Elliot Schwartz and continued to operate it as a scrap yard. In 1985, all buildings had been removed from the site, and it had been graded and offered for sale (Ref. 4).

Smith Metal & Iron Company stated that 4000 to 5000 pounds of ash were generated from a sweat furnace used for melting and separating bimetallic pieces at the facility. The ash was considered to be hazardous and was disposed of at the Mecklenburg County Landfill (Refs. 5, 6). An environmental assessment of the area by Law Engineering, in conjunction with a real estate sale, detected petroleum hydrocarbons in the soil (Ref. 7). Groundwater samples were collected by Aquaterra, Inc., in November 1988, and the analytical results were within state and federal guidelines for all organic compounds (Refs. 7, 8). Some groundwater samples collected by Law Engineering in August 1988 contained significant concentrations of nickel, chromium, lead, copper, and beryllium. However, the concentrations were much lower in samples collected and analyzed later the same year by Aquaterra (Ref. 8). In December 1988, Aquaterra received information leading them to suspect that transformers may have been stored at the facility. Two soil samples collected by Aquaterra in January 1989 and analyzed for polychlorinated biphenyls showed 94 and 223 ppm, respectively (Ref. 7). Further sampling was done and remediation began in January 1989 (Refs. 7, 9). A soil aerator was used to aerate hydrocarbon contaminated soil (Ref. 10). Remediation continued under state supervision through June 1989 (Ref. 11). In December 1989, the property was still for sale. Many large pits and piles of soil were observed during the offsite reconnaissance (Ref. 12).

In August 1980, Smith Metal & Iron Company filed a Notification of Hazardous Waste Activity, listing the company as a generator, transporter, treater, storer, and disposer of hazardous waste material (Ref. 2). There is no record of a RCRA Part A being filed by the company (Ref. 13). In 1982, Smith Metal & Iron sought and was granted small generator status and was deleted as a generator, transporter, treater, storer, and disposer (Ref. 14). In 1984, the Smith Metal & Iron Company was deleted as a generator, and its identification number was canceled (Ref. 15).

The Smith Metal & Iron facility is located in the Piedmont Physiographic Province in the south-central portion of North Carolina (Ref. 16, p. 4). The area is characterized by rolling hills with moderate relief (Ref. 1). The net annual rainfall is approximately 3 inches, and the 1-year, 24-hour rainfall is approximately 2.8 inches (Refs. 17, 18).

In general, the Piedmont is underlain by massive igneous and metamorphic rocks which, together with the overlying residual soil and weathered rock, known as the saprolite, comprise the crystalline rock aquifer (Ref. 19, pp. 17, 19, 31). The Smith Metal & Iron facility is underlain by Pennsylvanian-aged intrusive granitic rocks (Refs. 15, pp. 66, 67, 69; 20).

Recharge into the crystalline rock aquifer occurs mainly by rainfall which infiltrates through the saprolite. Groundwater occurs mainly in the pore spaces of the saprolite and in the interconnecting fractures, joints, and other secondary openings of the crystalline rock (Refs. 16, pp. 10, 11; 19, pp. 19, 21). The crystalline rock aquifer of the Piedmont is unconfined. The water table level exhibits seasonal variation, rising in winter and declining in summer. The depth to the water table is dependent upon topography, typically ranging from 20 to 100 feet below the land surface (Ref. 16, pp. 10-12). The surficial clay layer represents the unit of lowest hydraulic conductivity (Ref. 16, p. 10). The hydraulic conductivity of this layer is in the range of 1×10^{-7} to 1×10^{-5} cm/sec (Ref. 21, p. 29).

The Charlotte-Mecklenburg Utilities Department supplies water to almost all residences within a 4-mile radius of the facility. The department obtains water from the Catawba River, which is not affected by surface water migration from the facility (Refs. 1, 12, 22). There are no known private potable water wells within a 3-mile radius. The nearest private well is 3.8 miles north of the facility. There are approximately 40 residences with private wells between 3 and 4 miles from the facility (Ref. 12).

Surface water runoff from the Smith Metal & Iron facility flows westward overland for 1800 feet into Irwin Creek. The surface water then flows southward 4.7 miles through residential neighborhoods and enters Sugar Creek. Flow then continues via Sugar Creek beyond 15 miles downstream from the facility (Ref. 1). Sugar Creek is used for some recreational fishing (Ref. 23).

A state-designated endangered species, Schweinitz's Sunflower (Helianthus schweinitzii), and a state-designated threatened species, nestronia (Nestronia umbellula), may be found within 4 miles of the facility (Refs. 24, 25).

The nearest residence is located approximately 200 feet west of the Smith Metal & Iron facility (Refs. 1, 12). There are no onsite workers, and the area is securely fenced (Ref. 12). Johnson Smith University and at least five public schools are located within a 1-mile radius (Ref. 1). Within a 1-mile radius, the population is 6843; 137,667 people live within a 4-mile radius (Ref. 26).

Based on the results of this evaluation and the attached reference material, FIT 4 recommends that no further remedial action be planned for the Smith Metal & Iron Company. Please contact me at NUS Corporation if you have any questions about this assessment.

Very truly yours,

William E. Vasser

William E. Vasser
Project Manager

WEV/gwn

Enclosures

cc: Kelly Cain

Approved:

Bob Donaghue

REFERENCES

1. U.S. Geological Survey, 7.5 minute series Topographic Quadrangle Maps of North Carolina: Charlotte East 1967 (Photorevised 1988), Charlotte West 1968 (PR 1980), Derita 1972, Mountain Island Lake 1969 (Photoinspected 1983), scale 1:24,000.

2. Notification of Hazardous Waste Activity (EPA Form 8700-12) for Smith Metal & Iron Company, Charlotte, North Carolina. Filed by Debbie Shields, secretary of treasury, Smith Metal & Iron Company, August 15, 1980.

3. EPA Potential Hazardous Waste Site Preliminary Assessment (EPA Form 2070-12) for Smith Metal & Iron Company, Charlotte, North Carolina. Filed by Grover Nicholson, North Carolina Department of Human Resources, December 6, 1985.

4. Grover Nicholson, N.C. Solid and Hazardous Waste Division, memo to file, December 9, 1985. Subject: Site chronology, Smith Metal & Iron Co.

5. Grover Nicholson, N.C. Solid and Hazardous Waste Management Division, memo to file, December 13, 1985. Subject: Nature of Hazardous Waste, Smith Metal & Iron Co.

6. Grover Nicholson, North Carolina Department of Human Resources, letter to Denise Bland, Environmental Protection Agency, December 20, 1985. Subject: Preliminary Assessment Report for Smith Metal & Iron Company.

7. Jack Butler, North Carolina Department of Human Resources, memo to file, January 6, 1989. Subject: Activities chronology for Smith Metal & Iron Company.

8. Patrick Baker, Project Manager, Aquaterra, Inc. letter report to Mike Weynand, Robert Buzbee and Associates, December 13, 1988. Subject: Groundwater assessment, Smith Metal & Iron Site.

9. Jack Butler, North Carolina Department of Human Resources, memo to file, January 10, 1989. Subject: Telephone conversation with Patrick Baker, Aquaterra, Inc., concerning Smith Metal & Iron Company.

10. Jack Butler, North Carolina Department of Human Resources, memo to file, January 12, 1989. Subject: Telephone conversation with Eric Kringle concerning remediation activities at Smith Metal & Iron facility.

11. Jack Butler, North Carolina Department of Human Resources, letter to Mark E. Fogel, North Carolina Department of Human Resources, June 1, 1989. Subject: Smith Metal & Iron Company.

12. NUS Corporation Field Logbook No. F4-1909 for Smith Metal & Iron Company, TDD No. F4-8911-55. Documentation of offsite facility reconnaissance, December 18, 1989.

13. EPA State Permitting Report Form for Smith Metal & Iron Company, September 17, 1984.

14. O.W. Strickland, North Carolina Department of Human Resources, letter to Joe J. Smith, Smith Metal & Iron Company, April 7, 1982. Subject: Change of RCRA classification.

15. O.W. Strickland, North Carolina Department of Human Resources, letter to Joe J. Smith, Smith Metal & Iron Company, October 16, 1984. Subject: Change of RCRA classification, cancellation of EPA ID number.

16. H.E. LeGrand and M.J. Mundorff, Geology and Groundwater in the Charlotte Area, North Carolina, Bulletin No 63 (Raleigh, North Carolina: North Carolina Department of Conservation and Development, 1952).

17. U.S. Dept. of Commerce, Climatic Atlas of the United States (Washington, D.C.: GPO, June, 1968) Reprint: 1983, National Oceanic and Atmospheric Administration.

18. U.S. Department of Commerce, Rainfall Frequency Atlas of the United States, Technical Paper No. 40 (Washington, D.C.: GPO, 1961).

19. Michael R. Groves, Preliminary Report on Groundwater Resources of Rowan County, North Carolina, Bulletin No. 22 (Raleigh, North Carolina: North Carolina Department of Natural and Economic Resources, 1976).

20. Geologic Map of North Carolina, Department of Natural Resources and Community Development, scale 1:500,000, 1985.

21. R. Allen Freeze and John A. Cherry, Groundwater (Englewood Cliffs, New Jersey: Prentice Hall, 1979).

22. Victor Espin, Charlotte Municipal Utilities Division, telephone conversation with Loften Carr, NUS Corporation, September 20, 1988. Subject: Water source for Charlotte Municipal Utilities Division.

23. Wayne Chapman, U.S. Fish and Wildlife Service, telephone conversation with Loften Carr, NUS Corporation, September 23, 1988. Subject: Fishing on Sugar Creek.

24. North Carolina Natural Heritage Program Natural Areas Database for Mecklenburg County, North Carolina, printout dated July 5, 1989.

25. North Carolina Natural Heritage Program Element List for Mecklenburg County, North Carolina, printout dated June 30, 1989.

26. U.S. Environmental Protection Agency, Graphical Exposure Modeling System (GEMS) Data Base, compiled from U.S. Bureau of the Census data (1980).

CERCLA ELIGIBILITY QUESTIONNAIRE

Site Name: Smith Metal and Iron Co.

City: Charlotte State: North Carolina

EPA ID Number: NCD 024488025

I. CERCLA ELIGIBILITY	Yes	No
Did the facility cease operations prior to November 19, 1980?	___	✓
If answer YES, STOP, facility is probably a CERCLA site.		
If answer NO, Continue to Part II.		

II. RCRA ELIGIBILITY	Yes	No
Did the facility file a RCRA Part A application?	✓	___
If YES:		
1. Does the facility currently have interim status?	___	✓
2. Did the facility withdraw its Part A application?	___	✓
3. Is the facility a known or possible protective filer? (facility filed in error)	___	✓
4. Type of facility: Generator_____ Transporter_____ Recycler_____ TSD (Treatment/Storage/Disposal)_____	N/A	
Does the facility have a RCRA operating or post closure permit?	___	✓
Is the facility a late (after 11/19/80) or non-filer that has been identified by the EPA or the State? (facility did not know it needed to file under RCRA)	___	✓
If all answers to questions in Part II are NO, STOP, the facility is a CERCLA eligible site.		
If answer to #2 or #3 is YES, STOP, the facility is a CERCLA eligible site.		
If answer #2 and #3 are NO and any OTHER answer is YES, site is RCRA, continue to Part III.		

III. RCRA SITES ELIGIBLE FOR NPL	Yes	No
Has the facility owner filed for bankruptcy under federal or state laws?	___	✓
Has the facility lost RCRA authorization to operate or shown probable unwillingness to carry out corrective action?	___	✓
Is the facility a TSD that converted to a generator, transporter or recycler facility after November 19, 1980?	___	✓

Site Inspection Report

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Smith Metal + Iron Co.	712 W. Third Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Charlotte	NC	28202	Mecklenburg	119	09

09 COORDINATES LATITUDE	LONGITUDE
35 13 50.__	080 51 05.__

10 TYPE OF OWNERSHIP (Check one)
☑ A. PRIVATE ☐ B. FEDERAL ____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER ____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION (BEGINNING YEAR / ENDING YEAR)
12 18 89	☐ ACTIVE ☑ INACTIVE	1930 (?) / 1982 ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
☐ A. EPA ☑ B. EPA CONTRACTOR NUS Corporation (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm)
☐ E. STATE ☐ F. STATE CONTRACTOR ____ (Name of firm) ☐ G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Eric Corbin	Environmental Scientist	NUS Corporation	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Brant McCawless	Geologist	NUS Corporation	(404) 938-7710
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
			( )
			( )
			( )
			( )
			( )
Offsite	Reconnaissance	Performed 12/19/89	( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☐ PERMISSION ☐ WARRANT	1000	Partly cloudy, seasonably cool

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Jack Butler	N.C. Solid + Hazardous Waste Management Div.	(919) 733-2801

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (MONTH DAY YEAR)
Clifford Leonard, Jr.		NUS Corporation	404/938/7710	12 29 89

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS unknown

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	unknown		
SOL	SOLVENTS			
PSD	PESTICIDES			
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
OCC	Polychlorinated Biphenyls	1336-36-3		94-223	PPM
OLW	Petroleum Products				
MES	Metallic Ash				

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)

NUS, STATE AND EPA FILES

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024488025

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

Monitoring wells on site have shown significant levels of nickel, lead, chromium, and copper.

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

Unknown (none documented)

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

None documented

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

N/A

01 ☑ E. DIRECT CONTACT — 02 ☑ OBSERVED (DATE: 1-3-89) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

AREA Fenced and remediation efforts have been underway to remove soil PCB's.

01 ☒ F CONTAMINATION OF SOIL — 02 ☑ OBSERVED (DATE: 1-3-89) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

Petroleum hydrocarbons & PCB's have been detected.

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

None documented

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

None documented

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

None documented

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024488025

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

None documented

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

None documented

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

None documented

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Metals + PCB's detected in Soil and/or Groundwater

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

None documented

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

None documented

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

N/A

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

The site has undergone remediation in the past year for oil waste and PCB contamination.

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

EPA, NUS CORPORATION, STATE FILES

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS			10-18-84	
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☒ B. PILES	Unknown	
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	4000-5000	pounds
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- ☐ A. BUILDINGS ON SITE

06 AREA OF SITE: unknown (Acres)

07 COMMENTS

All buildings used by Smith Metal + Iron have been removed/leveled. ~~Waste~~ 4000-5000 pounds of waste ash removed from facility and disposed in County landfill.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS: The facility site is surrounded by a tall fence.

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

EPA, STATE, NUS CORPORATION

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. X	B. ☐	A. ☐	B. ☐	C. X	A. 7.0 (mi)
NON-COMMUNITY	C. ☐	D. X	D. X	E. ☐	F. ☐	B. 3.8 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) X C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 152

03 DISTANCE TO NEAREST DRINKING WATER WELL 3.8 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
20 (ft)	Southwest (At Site)	20 (ft)	50 (gpd)	☐ YES X NO

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

10 RECHARGE AREA		11 DISCHARGE AREA	
X YES ☐ NO	COMMENTS Unconfined aquifer, Surficial	X YES ☐ NO	COMMENTS To Irwin Creek

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Irwin Creek	☐	0.34 (mi)
Sugar Creek	☐	5.20 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 6,843 (NO. OF PERSONS)	B. 41,728 (NO. OF PERSONS)	C. 87,437 (NO. OF PERSONS)

02 DISTANCE TO NEAREST POPULATION 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE ≈ 20,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site (e.g., rural, village, densely populated urban area))

Densely populated urban area.
Apartment buildings across street from site.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☒ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
70 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
3.0 (in)	2.8 (in)	1 %	Southwest	1 %

09 FLOOD POTENTIAL

SITE IS IN Unknown YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. > 200 (mi)

OTHER: B. 50 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

Unknown (mi)

ENDANGERED SPECIES: Schweinitz's sunflower (in County)

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. 0.25 (mi)	B. 0.1 (mi)	C. 30.0 (mi)	D. 15.0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Smith Metal and Iron facility is located on slight sloping hill and it is surrounded by buildings of a commercial/industrial variety on three sides and apartments on the west.

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

EPA, STATE, NUS CORPORATION File Materials
Soil Surveys of Mecklenburg & York Counties

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE	None		
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	None

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corporation (Name of organization or individual)

03 MAPS X YES ☐ NO

04 LOCATION OF MAPS NUS Corporation file, Tucker, GA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

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

EPA, NUS CORPORATION, STATE FILES

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D 024488025

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
Elliot Schwartz		(SAME)	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
712 West Third Street			
05 CITY	**06 STATE** / **07 ZIP CODE**	**12 CITY**	**13 STATE** / **14 ZIP CODE**
Charlotte	NC / 28230		

PARENT COMPANY (If applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**12 CITY**	**13 STATE** / **14 ZIP CODE**

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**12 CITY**	**13 STATE** / **14 ZIP CODE**

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS** (P.O. Box, RFD #, etc.)	**11 SIC CODE**
05 CITY	**06 STATE** / **07 ZIP CODE**	**12 CITY**	**13 STATE** / **14 ZIP CODE**

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

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

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

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

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

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

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

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

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

EPA, STATE, NWS Corporation FILES

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME (Vacant) ("For Sale")	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME: Smith Metal + Iron Company	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 712 West Third Street	04 SIC CODE
05 CITY: Charlotte,	06 STATE: NC / 07 ZIP CODE: 28230
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME: (Same)	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER
12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
14 CITY	15 STATE / 16 ZIP CODE

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

EPA, STATE, NUS Corporation Files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024188025

II. ON-SITE GENERATOR

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

III. OFF-SITE GENERATOR(S)

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

IV. TRANSPORTER(S)

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

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

EPA, NUS Corporation, State files

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024488025

II. PAST RESPONSE ACTIVITIES

01 ☑ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☒ G. WASTE DISPOSED ELSEWHERE — 02 DATE 1982(?) — 03 AGENCY _____
04 DESCRIPTION
4000-5000 pounds metal ash taken to county landfill

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☒ K. IN SITU PHYSICAL TREATMENT — 02 DATE 12/19/89 — 03 AGENCY _____
04 DESCRIPTION
site appears to be under remediation.
"Aeration" of soil to eliminate organic contaminants

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None documented

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/D

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/D

01 ☐ O EMERGENCY DIKING SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/D

01 ☐ P CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/D

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/D

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024488025

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None documented

01 ☐ S CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE 12/19/89 — 03 AGENCY _____
04 DESCRIPTION AREA FENCED OFF

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/D

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

EPA, STATE, NUS Corporation files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D024488025

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☒ YES NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

(1) 1988 site sampling in conjunction with a real estate sale led to remediation efforts in 1989 for oil residues in the soil.

(2.) A January 1989 investigation of soil samples uncovered the presence of PCB's in soil samples, which led to a state supervised soil remediation program that appears to be ongoing (12/19/89).

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

EPA, STATE, NUS FILES

EPA FORM 2070-13 (7-81)

APPENDIX

I. FEEDSTOCKS

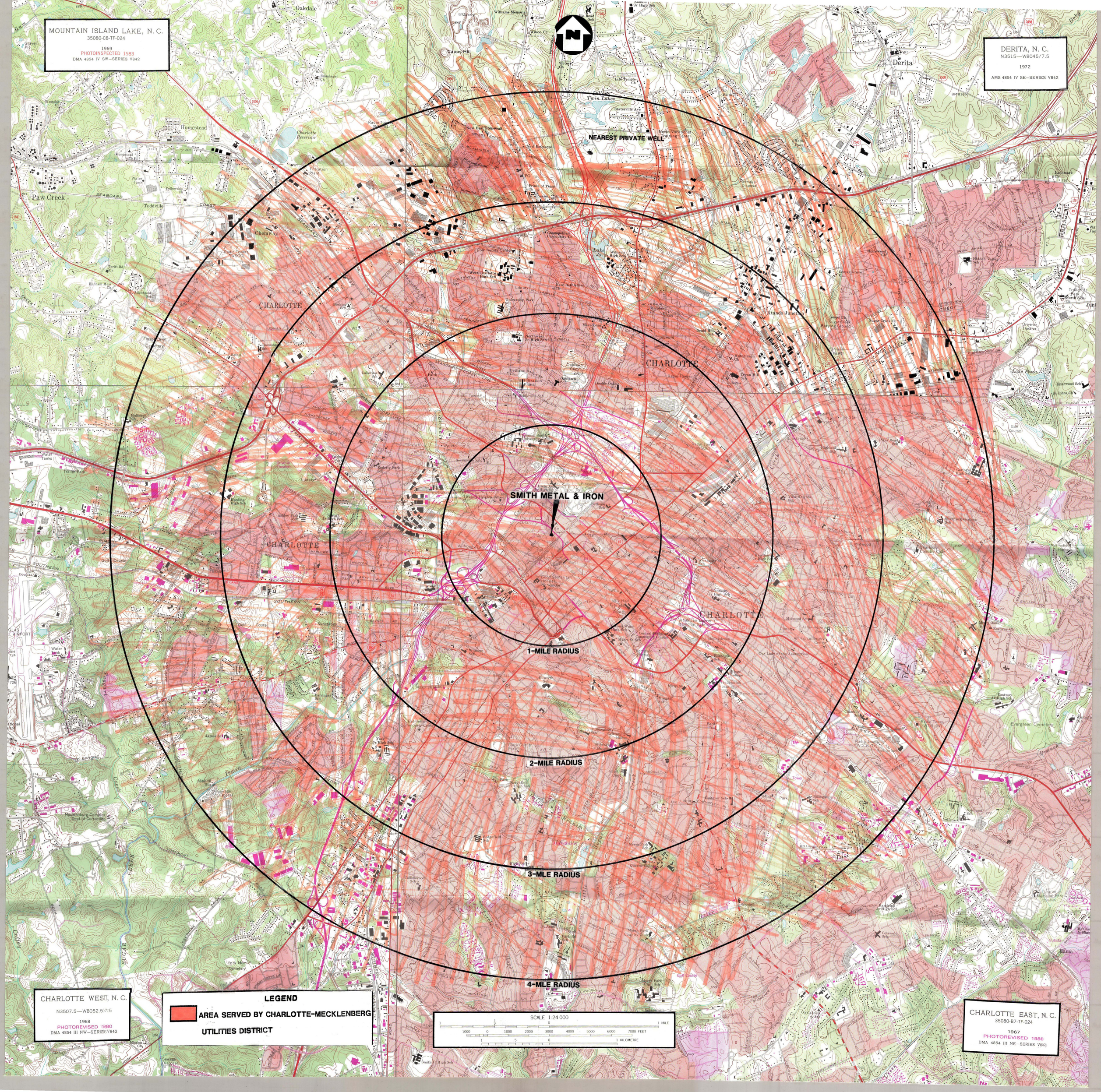
CAS Number	Chemical Name
1. 7664-41-7	Ammonia
2. 7440-36-0	Antimony
3. 1309-64-4	Antimony Trioxide
4. 7440-38-2	Arsenic
5. 1327-53-3	Arsenic Trioxide
6. 21109-95-5	Barium Sulfide
7. 7726-95-6	Bromine
8. 106-99-0	Butadiene
9. 7440-43-9	Cadmium
10. 7782-50-5	Chlorine
11. 12737-27-8	Chromite
12. 7440-47-3	Chromium
13. 7440-48-4	Cobalt
14. 1317-38-0	Cupric Oxide
15. 7758-98-7	Cupric Sulfate
16. 1317-39-1	Cuprous Oxide
17. 74-85-1	Ethylene
18. 7647-01-0	Hydrochloric Acid
19. 7664-39-3	Hydrogen Fluoride
20. 1335-25-7	Lead Oxide
21. 7439-97-6	Mercury
22. 74-82-8	Methane
23. 91-20-3	Napthalene
24. 7440-02-0	Nickel
25. 7697-37-2	Nitric Acid
26. 7723-14-0	Phosphorus
27. 7778-50-9	Potassium Dichromate
28. 1310-58-3	Potassium Hydroxide
29. 115-07-1	Propylene
30. 10588-01-9	Sodium Dichromate
31. 1310-73-2	Sodium Hydroxide
32. 7646-78-8	Stannic Chloride
33. 7772-99-8	Stannous Chloride
34. 7664-93-9	Sulfuric Acid
35. 108-88-3	Toluene
36. 1330-20-7	Xylene
37. 7646-85-7	Zinc Chloride
38. 7733-02-0	Zinc Sulfate

II. HAZARDOUS SUBSTANCES

CAS Number	Chemical Name
1. 75-07-0	Acetaldehyde
2. 64-19-7	Acetic Acid
3. 108-24-7	Acetic Anhydride
4. 75-86-5	Acetone Cyanohydrin
5. 506-96-7	Acetyl Bromide
6. 75-36-5	Acetyl Chloride
7. 107-02-8	Acrolein
8. 107-13-1	Acrylonitrile
9. 124-04-9	Adipic Acid
10. 309-00-2	Aldrin
11. 10043-01-3	Aluminum Sulfate
12. 107-18-6	Allyl Alcohol
13. 107-05-1	Allyl Chloride
14. 7664-41-7	Ammonia
15. 631-61-8	Ammonium Acetate
16. 1863-63-4	Ammonium Benzoate
17. 1066-33-7	Ammonium Bicarbonate
18. 7789-09-5	Ammonium Bichromate
19. 1341-49-7	Ammonium Bifluoride
20. 10192-30-0	Ammonium Bisulfite
21. 1111-78-0	Ammonium Carbamate
22. 12125-02-9	Ammonium Chloride
23. 7788-98-9	Ammonium Chromate
24. 3012-65-5	Ammonium Citrate, Dibasic
25. 13826-83-0	Ammonium Fluoborate
26. 12125-01-8	Ammonium Fluoride
27. 1336-21-6	Ammonium Hydroxide
28. 6009-70-7	Ammonium Oxalate
29. 16919-19-0	Ammonium Silicofluoride
30. 7773-06-0	Ammonium Sulfamate
31. 12135-76-1	Ammonium Sulfide
32. 10196-04-0	Ammonium Sulfite
33. 14307-43-8	Ammonium Tartrate
34. 1762-95-4	Ammonium Thiocyanate
35. 7783-18-8	Ammonium Thiosulfate
36. 628-63-7	Amyl Acetate
37. 62-53-3	Aniline
38. 7647-18-9	Antimony Pentachloride
39. 7789-61-9	Antimony Tribromide
40. 10025-91-9	Antimony Trichloride
41. 7783-56-4	Antimony Trifluoride
42. 1309-64-4	Antimony Trioxide
43. 1303-32-8	Arsenic Disulfide
44. 1303-28-2	Arsenic Pentoxide
45. 7784-34-1	Arsenic Trichloride
46. 1327-53-3	Arsenic Trioxide
47. 1303-33-9	Arsenic Trisulfide
48. 542-62-1	Barium Cyanide
49. 71-43-2	Benzene
50. 65-85-0	Benzoic Acid
51. 100-47-0	Benzonitrile
52. 98-88-4	Benzoyl Chloride
53. 100-44-7	Benzyl Chloride
54. 7440-41-7	Beryllium
55. 7787-47-5	Beryllium Chloride
56. 7787-49-7	Beryllium Fluoride
57. 13597-99-4	Beryllium Nitrate
58. 123-86-4	Butyl Acetate
59. 84-74-2	n-Butyl Phthalate
60. 109-73-9	Butylamine
61. 107-92-6	Butyric Acid
62. 543-90-8	Cadimium Acetate
63. 7789-42-6	Cadmium Bromide
64. 10108-64-2	Cadmium Chloride
65. 7778-44-1	Calcium Arsenate
66. 52740-16-6	Calcium Arsenite
67. 75-20-7	Calcium Carbide
68. 13765-19-0	Calcium Chromate
69. 592-01-8	Calcium Cyanide
70. 26264-06-2	Calcium Dodecylbenzene Sulfonate
71. 7778-54-3	Calcium Hypochlorite
72. 133-06-2	Captan
73. 63-25-2	Carbaryl
74. 1563-66-2	Carbofuran
75. 75-15-0	Carbon Disulfide
76. 56-23-5	Carbon Tetrachloride
77. 57-74-9	Chlordane
78. 7782-50-5	Chlorine
79. 108-90-7	Chlorobenzene
80. 67-66-3	Chloroform
81. 7790-94-5	Chlorosulfonic Acid
82. 2921-88-2	Chlorpyrifos
83. 1066-30-4	Chromic Acetate
84. 7738-94-5	Chromic Acid
85. 10101-53-8	Chromic Sulfate
86. 10049-05-5	Chromous Chloride
87. 544-18-3	Cobaltous Formate
88. 14017-41-5	Cobaltous Sulfamate
89. 56-72-4	Coumaphos
90. 1319-77-3	Cresol
91. 4170-30-3	Crotonaldehyde
92. 142-71-2	Cupric Acetate
93. 12002-03-8	Cupric Acetoarsenite
94. 7447-39-4	Cupric Chloride
95. 3251-23-8	Cupric Nitrate
96. 5893-66-3	Cupric Oxalate
97. 7758-98-7	Cupric Sulfate
98. 10380-29-7	Cupric Sulfate Ammoniated
99. 815-82-7	Cupric Tartrate
100. 506-77-4	Cyanogen Chloride
101. 110-82-7	Cyclohexane
102. 94-75-7	2,4-D Acid
103. 94-11-1	2,4-D Esters
104. 50-29-3	DDT
105. 333-41-5	Diazinon
106. 1918-00-9	Dicamba
107. 1194-65-6	Dichlobenil
108. 117-80-6	Dichlone
109. 25321-22-6	Dichlorobenzene (all isomers)
110. 266-38-19-7	Dichloropropane (all isomers)
111. 26952-23-8	Dichloropropene (all isomers)
112. 8003-19-8	Dichloropropene-Dichloropropane Mixture
113. 75-99-0	2-2-Dichloropropionic Acid
114. 62-73-7	Dichlorvos
115. 60-57-1	Dieldrin
116. 109-89-7	Diethylamine
117. 124-40-3	Dimethylamine
118. 25154-54-5	Dinitrobenzene (all isomers)
119. 51-28-5	Dinitrophenol
120. 25321-14-6	Dinitrotoluene (all isomers)
121. 85-00-7	Diquat
122. 298-04-4	Disulfoton
123. 330-54-1	Diuron
124. 27176-87-0	Dodecylbenzenesulfonic Acid
125. 115-29-7	Endosulfan (all isomers)
126. 72-20-8	Endrin and Metabolites
127. 106-89-8	Epichlorohydrin
128. 563-12-2	Ethion
129. 100-41-4	Ethyl Benzene
130. 107-15-3	Ethylenediamine
131. 106-93-4	Ethylene Dibromide
132. 107-06-2	Ethylene Dichloride
133. 60-00-4	EDTA
134. 1185-57-5	Ferric Ammonium Citrate
135. 2944-67-4	Ferric Ammonium Oxalate
136. 7705-08-0	Ferric Chloride

II. HAZARDOUS SUBSTANCES

CAS Number	Chemical Name
137. 7783-50-8	Ferric Fluoride
138. 10421-48-4	Ferric Nitrate
139. 10028-22-5	Ferric Sulfate
140. 10045-89-3	Ferrous Ammonium Sulfate
141. 7758-94-3	Ferrous Chloride
142. 7720-78-7	Ferrous Sulfate
143. 206-44-0	Fluoranthene
144. 50-00-0	Formaldehyde
145. 64-18-6	Formic Acid
146. 110-17-8	Fumaric Acid
147. 98-01-1	Furfural
148. 86-50-0	Guthion
149. 76-44-8	Heptachlor
150. 118-74-1	Hexachlorobenzene
151. 87-68-3	Hexachlorobutadiene
152. 67-72-1	Hexachloroethane
153. 70-30-4	Hexachlorophene
154. 77-47-4	Hexachlorocyclopentadiene
155. 7647-01-0	Hydrochloric Acid (Hydrogen Chloride)
156. 7664-39-3	Hydrofluoric Acid (Hydrogen Fluoride)
157. 74-90-8	Hydrogen Cyanide
158. 7783-06-4	Hydrogen Sulfide
159. 78-79-5	Isoprene
160. 42504-46-1	Isopropanolamine Dodecylbenzenesulfonate
161. 115-32-2	Kelthane
162. 143-50-0	Kepone
163. 301-04-2	Lead Acetate
164. 3687-31-8	Lead Arsenate
165. 7758-95-4	Lead Chloride
166. 13814-96-5	Lead Fluoborate
167. 7783-46-2	Lead Fluoride
168. 10101-63-0	Lead Iodide
169. 18256-98-9	Lead Nitrate
170. 7428-48-0	Lead Stearate
171. 15739-80-7	Lead Sulfate
172. 1314-87-0	Lead Sulfide
173. 592-87-0	Lead Thiocyanate
174. 58-89-9	Lindane
175. 14307-35-8	Lithium Chromate
176. 121-75-5	Malthion
177. 110-16-7	Maleic Acid
178. 108-31-6	Maleic Anhydride
179. 2032-65-7	Mercaptodimethur
180. 592-04-1	Mercuric Cyanide
181. 10045-94-0	Mercuric Nitrate
182. 7783-35-9	Mercuric Sulfate
183. 592-85-8	Mercuric Thiocyanate
184. 10415-75-5	Mercurous Nitrate
185. 72-43-5	Methoxychlor
186. 74-93-1	Methyl Mercaptan
187. 80-62-6	Methyl Methacrylate
188. 298-00-0	Methyl Parathion
189. 7786-34-7	Mevinphos
190. 315-18-4	Mexacarbate
191. 75-04-7	Monoethylamine
192. 74-89-5	Monomethylamine
193. 300-76-5	Naled
194. 91-20-3	Naphthalene
195. 1338-24-5	Naphthenic Acid
196. 7440-02-0	Nickel
197. 15699-18-0	Nickel Ammonium Sulfate
198. 37211-05-5	Nickel Chloride
199. 12054-48-7	Nickel Hydroxide
200. 14216-75-2	Nickel Nitrate
201. 7786-81-4	Nickel Sulfate
202. 7697-37-2	Nitric Acid
203. 98-95-3	Nitrobenzene
204. 10102-44-0	Nitrogen Dioxide
205. 25154-55-6	Nitrophenol (all isomers)
206. 1321-12-6	Nitrotoluene
207. 30525-89-4	Paraformaldehyde
208. 56-38-2	Parathion
209. 608-93-5	Pentachlorobenzene
210. 87-86-5	Pentachlorophenol
211. 85-01-8	Phenanthrene
212. 108-95-2	Phenol
213. 75-44-5	Phosgene
214. 7664-38-2	Phosphoric Acid
215. 7723-14-0	Phosphorus
216. 10025-87-3	Phosphorus Oxychloride
217. 1314-80-3	Phosphorus Pentasulfide
218. 7719-12-2	Phosphorus Trichloride
219. 7784-41-0	Potassium Arsenate
220. 10124-50-2	Potassium Arsenite
221. 7778-50-9	Potassium Bichromate
222. 7789-00-6	Potassium Chromate
223. 7722-64-7	Potassium Permanganate
224. 2312-35-8	Propargite
225. 79-09-4	Propionic Acid
226. 123-62-6	Propionic Anhydride
227. 1336-36-3	Polychlorinated Biphenyls
228. 151-50-8	Potassium Cyanide
229. 1310-58-3	Potassium Hydroxide
230. 75-56-9	Propylene Oxide
231. 121-29-9	Pyrethrins
232. 91-22-5	Quinoline
233. 108-46-3	Resorcinol
234. 7446-08-4	Selenium Oxide
235. 7761-88-8	Silver Nitrate
236. 7631-89-2	Sodium Arsenate
237. 7784-46-5	Sodium Arsenite
238. 10588-01-9	Sodium Bichromate
239. 1333-83-1	Sodium Bifluoride
240. 7631-90-5	Sodium Bisulfite
241. 7775-11-3	Sodium Chromate
242. 143-33-9	Sodium Cyanide
243. 25155-30-0	Sodium Dodecylbenzene Sulfonate
244. 7681-49-4	Sodium Fluoride
245. 16721-80-5	Sodium Hydrosulfide
246. 1310-73-2	Sodium Hydroxide
247. 7681-52-9	Sodium Hypochlorite
248. 124-41-4	Sodium Methylate
249. 7632-00-0	Sodium Nitrate
250. 7558-79-4	Sodium Phosphate, Dibasic
251. 7601-54-9	Sodium Phosphate, Tribasic
252. 10102-18-8	Sodium Selenite
253. 7789-06-2	Strontium Chromate
254. 57-24-9	Strychnine and Salts
255. 100-420-5	Styrene
256. 12771-08-3	Sulfur Monochloride
257. 7664-93-9	Sulfuric Acid
258. 93-76-5	2,4,5-T Acid
259. 2008-46-0	2,4,5-T Amines
260. 93-79-8	2,4,5-T Esters
261. 13560-99-1	2,4,5-T Salts
262. 93-72-1	2,4,5-TP Acid
263. 32534-95-5	2,4,5-TP Acid Esters
264. 72-54-8	TDE
265. 95-94-3	Tetrachlorobenzene
266. 127-18-4	Tetrachloroethane
267. 78-00-2	Tetraethyl Lead
268. 107-49-3	Tetraethyl Pyrophosphate
269. 7446-18-6	Thallium (I) Sulfate
270. 108-88-3	Toluene
271. 8001-35-2	Toxaphene
272. 12002-48-1	Trichlorobenzene (all isomers)
273. 52-68-6	Trichlorfon
274. 25323-89-1	Trichloroethane (all isomers)
275. 79-01-6	Trichloroethylene
276. 25167-82-2	Trichlorophenol (all isomers)
277. 27323-41-7	Triethanolamine Dodecylbenzenesulfonate
278. 121-44-8	Triethylamine
279. 75-50-3	Trimethylamine
280. 541-09-3	Uranyl Acetate
281. 10102-06-4	Uranyl Nitrate
282. 1314-62-1	Vanadium Pentoxide
283. 27774-13-6	Vanadyl Sulfate
284. 108-05-4	Vinyl Acetate
285. 75-35-4	Vinylidene Chloride
286. 1300-71-6	Xylenol
287. 557-34-6	Zinc Acetate
288. 52628-25-8	Zinc Ammonium Chloride
289. 1332-07-6	Zinc Borate
290. 7699-45-8	Zinc Bromide
291. 3486-35-9	Zinc Carbonate
292. 7646-85-7	Zinc Chloride
293. 557-21-1	Zinc Cyanide
294. 7783-49-3	Zinc Fluoride
295. 557-41-5	Zinc Formate
296. 7779-86-4	Zinc Hydrosulfite
297. 7779-88-6	Zinc Nitrate
298. 127-82-2	Zinc Phenolsulfonate
299. 1314-84-7	Zinc Phosphide
300. 16871-71-9	Zinc Silicofluoride
301. 7733-02-0	Zinc Sulfate
302. 13746-89-9	Zirconium Nitrate
303. 16923-95-8	Zirconium Potassium Fluoride
304. 14644-61-2	Zirconium Sulfate
305. 10026-11-6	Zirconium Tetrachloride


MOUNTAIN ISLAND LAKE, N. C.
35080-C8-TF-024
1969
PHOTOINSPECTED 1983
DMA 4854 IV SW—SERIES V842
DERITA, N. C.
N3515—W8045/7.5
1972
AMS 4854 IV SE—SERIES V842
NEAREST PRIVATE WELL
SMITH METAL & IRON
1-MILE RADIUS
2-MILE RADIUS
3-MILE RADIUS
4-MILE RADIUS
CHARLOTTE
Paw Creek
Derita
Oakdale
Homestead
Chemway
Toddville
Charlotte Reservoir
Twin Lakes
Lake Jo
Lake Plaza
Sugar Creek
CHARLOTTE WEST, N. C.
N3507.5—W8052.5/7.5
1968
PHOTOREVISED 1980
DMA 4854 III NW—SERIES V842
LEGEND
AREA SERVED BY CHARLOTTE-MECKLENBERG UTILITIES DISTRICT
SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETRE
CHARLOTTE EAST, N. C.
35080-B7-TF-024
1967
PHOTOREVISED 1988
DMA 4854 III NE—SERIES V842

Smith Metal & Iron Co.

Scrap Iron & Metals

Address All Communications To

Post Office Box 30488

Telephone 704/332-5191

712 W. THIRD STREET

CHARLOTTE, N. C. 28230

Ref. 2

The attached hazardous waste notification is based upon preliminary results of industry-wide testing of a sample of residue from (aluminum sweat furnaces/ scrap shredder wet-process scrubbing equipment). The tests were sponsored by the Institute of Scrap Iron and Steel, Inc. and conducted by Clayton Environmental Consultants, Inc. Therefore, it is not based on testing or analysis of the wastes generated by the facility for which the notification is submitted.

As owner and operator of the facility for which the attached notification is submitted, (company name) reserves the right, in its discretion, to independently evaluate the residues from the (aluminum sweat furnace/ shredder wet-process scrubbing equipment) located at said facility for the purpose of determining whether those residues have any hazardous characteristics and thus what, if any, compliance obligations may exist with respect to those residues under EPA's Subtitle C regulations, effective November 19, 1980.

Please print or type with ELITE type (12 characters/inch) in the unshaded areas only.

Form Approved OMB No. 158-S79016
GSA No. 0246-EPA-OT

EPA U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

000115

~~NCD990000000~~

SMITH METAL & IRON COMPANY
~~PO BOX 1122,~~
~~CHARLOTTE, NC 28231~~

~~1320 S GRAHAM ST~~
~~CHARLOTTE, NC 28231~~

RECEIVED
EPA/REGION IV
SEP 16 2 25 PM '80
ENFORCEMENT

DETACH

FOR OFFICIAL USE ONLY

COMMENTS: C

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)
F NCD024488025 T/A 1		800818

I. NAME OF INSTALLATION

~~SMITH METAL & IRON CO.~~

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 3 PO BOX 30488

CITY OR TOWN	ST.	ZIP CODE
4 CHARLOTTE, N.C.	NC	28230

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: 5 712 W. THIRD ST

CITY OR TOWN	ST.	ZIP CODE
6 CHARLOTTE	NC	28202

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)	PHONE NO. (area code & no.)
2 SMITH JOSEPH PRESIDENT	704 332 5191

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: 8 SMITH METAL & IRON CO.

B. TYPE OF OWNERSHIP (enter the appropriate letter into box): F = FEDERAL; M = NON-FEDERAL — M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

- [X] A. GENERATION
- [X] B. TRANSPORTATION (complete Item VII)
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only – enter "X" in the appropriate box(es))

- [ ] A. AIR
- [ ] B. RAIL
- [X] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

CONTINUE ON REVERSE

FOR OFFICIAL USE ONLY

W MCD024488025 2 1

DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.31 for each listed hazardous waste from non-specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
7	8	9	10	11	12

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four-digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four-digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48

D. LISTED INFECTIOUS WASTES. Enter the four-digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON-LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non-listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

☐ 1. IGNITABLE (D001) ☐ 2. CORROSIVE (D002) ☐ 3. REACTIVE (D003) ☒ 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE (type or print)	DATE SIGNED
[signature]	Sec. of Treasury	8-15-80

EPA Form 8700-12 (6-80) REVERSE

Ref. 3

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D024488025

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Smith Metal and Iron Company	712 West Third Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Charlotte	NC	28230	Mecklenburg	060	09

09 COORDINATES LATITUDE	LONGITUDE
35 13 50	080 51 05

10 DIRECTIONS TO SITE (Starting from nearest public road)

From I-77 in Charlotte, exit onto West Trade Street going southeast. Turn right (southwest) onto Cedar Street. The site is two blocks down on the left (southeast) side of Cedar Street at West Third Street.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Elliot Schwartz	Box 348

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
North Myrtle Beach	SC	29597	(803) 249-1592

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)

[X] A. PRIVATE [ ] B. FEDERAL: _____ (Agency name) [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL

[ ] F. OTHER: _____ (Specify) [ ] G. UNKNOWN

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

[X] A. RCRA 3001 DATE RECEIVED: 08/15/80 (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)
[X] 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 [X] B. INACTIVE [ ] C. UNKNOWN

03 YEARS OF OPERATION

1930 (?) (BEGINNING YEAR) | 1982 (?) (ENDING YEAR) [ ] UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

This site was added to the ERRIS list apparently by action of the Institute of Scrap Iron and Steel Dealers which helped member companies file a Notification of Hazardous Waste Activity. The supposedly hazardous waste was the ash from the sweat furnace. At

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Smith Metal, this ash consisted of remanants from the iron and aluminum melting process. This ash, which amounted to 4000 to 5000 pounds during the tenure of Smith Metals on the site, was taken to the Mecklenburg County landfill for disposal. Past waste handling practices between 1930 and 1977 are unknown.

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)

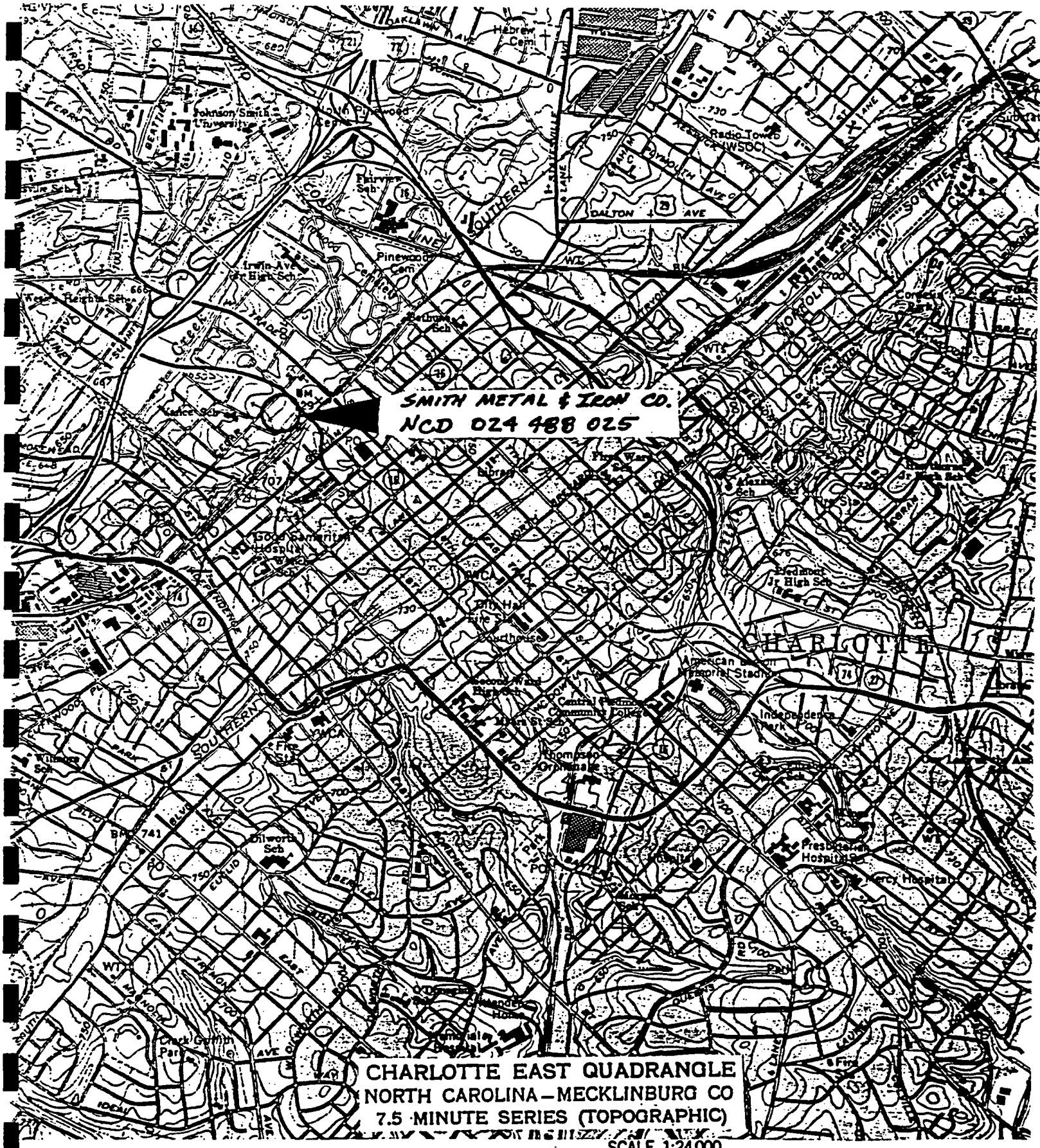
[ ] A. HIGH (Inspection required promptly) [ ] B. MEDIUM (Inspection required) [X] C. LOW (Inspect on time available basis) [ ] D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Elliot Schwartz	Site Owner	(803) 249-1592

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Grover Nicholson	NC DHR/DHS	SHW Mgmt. Br.	(919) 733-2178	12 06 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)



SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

MN GN

4½° 80 MILS

0°06' 2 MILS

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Ref. 4

DATE: December 9, 1985

TO: File

FROM: Grover Nicholson

RE: Smith Metal and Iron Company

I talked by telephone with Mr. Elliot Schwartz on 12/4/85. Mr. Schwartz reported that his family operated a scrap yard on the site beginning in the 1930s or 1940s. Prior to that time, the site was believed to have been used by a paper company. From 1970 until 1977 Elliot Schwartz operated the scrap yard on the site. He reports that no hazardous wastes were generated or disposed of on-site during the time he managed the scrap yard. From about 1977 until about 1982, Joe Smith of Smith Metals and Iron Company leased the property from Mr. Schwartz and operated a scrap yard on-site.

All buildings have been removed from the site and it has been graded. Presently, it is being offered for sale. Mr. Schwartz reports that all traces of scrap yard activities have been removed from the site. During this clean-up phase, several tests were done on the site.

Law Engineering Testing Company did subsurface studies and collected data from boreholes and pits. Mr. Mel Browning of the Charlotte office is the LETCO contact. This work was contracted by Elliot Schwartz. Chemical tests were contracted on soils at the site by Browning Properties of Charlotte. This was done at the request of a potential buyer. Mr. Phil Hayes is the contact at Browning Properties.

Mr. Schwartz was very concerned that his property was on the ERRIS list. I am trying to find out why the site was added to the list. Mr. Schwartz is trying to secure copies of the physical and chemical tests mentioned above to send to me.

GN/tb/0210b

Ref. 5

DATE: December 13, 1985

TO: File

FROM: Grover Nicholson

RE: Smith Metal and Iron Company

I talked today by telephone with Mr. Smith, President of Smith Metal. He explained that the Notification of Hazardous Waste Activity was filed on suggestion of the Institute of Scrap Iron and Steel Dealers. The Institute was concerned that ash from sweat furnaces may be hazardous.

Mr. Smith said that about 4000-5000 pounds of ash was generated durimg the existence of Smith Metal on the site. This ash was taken to the Mecklenburg County Landfill for disposal.

GN/tb/0210b

Ref. 6

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

20 December 1985

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

SUBJECT: Preliminary Assessment Report
Smith Metal and Iron Company NC D024488025
712 West Third Street
Charlotte, NC 28230

Dear Ms. Bland:

Enclosed please find the Preliminary Assessment report for the subject site. This priority is based on review of available data.

A. This site, in the Charlotte downtown area, has been used as a scrap metal yard since the 1930s or 1940s. Prior to that time it is believed to have been used by a paper company. Schwartz and Sons Scrap Yard occupied the site from the 1930s or 1940s until about 1970. From 1970 until 1977 the scrap metal yard was operated by Elliot Schwartz. From 1977 until about 1982, Joe Smith leased the site from Elliot Schwartz and operated Smith Metals and Iron Company there. The production process has apparently always been the recycling of scrap metals.

B. It is reported by Elliot Schwartz that no hazardous wastes were generated or disposed of on-site between 1970 and 1977, the years that he operated the scrap yard. Mr. Schwartz also reports that, to the best of his knowledge, no hazardous wastes were generated or disposed of on-site during the time the site was used by Schwartz and Sons Scrap Yard. Joe Smith also reports no generation or disposal of hazardous wastes on-site during the years 1977 until 1982. Mr. Smith reported that ash from the sweat furnace (used to melt and separate bimetalic pieces) was considered as a possible hazardous waste. About 4000 to 5000 pounds of this ash was generated and disposed of in the Mecklenburg County Landfill. The site is now vacant and up for sale. Mr. Schwartz reports that all vestiges of the scrap yards have been removed from the site. Hazardous waste generation and disposal prior to the 1930s is unknown.

C. Although there is no evidence that hazardous wastes may exist on-site, any buried waste may cause soil and groundwater contamination. Mr. Schwartz reports that the property is slated for high density housing. If significant soil contamination exists on site, a hazard to public health could arise if housing were built over the wastes. The site does not seem to present a hazard at present but could present a hazard because of its intended use for high density housing. The site needs to be inspected as time becomes available. A Low priority for inspection is recommended.

D. Supporting data sources include NC RCRA program files, EPA Region IV RCRA files, telephone conversations with Elliot Schwartz, and telephone conversations with Joe Smith.

On 19 December 1985, this Preliminary Assessment was reviewed by CERCLA Unit personnel and by the following representatives from the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management: Fay Sweat, Groundwater 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/tb/0210b

Ref. 7

January 6, 1989

TO: File

FROM: Jack Butler

SUBJECT: Smith Metal and Iron Company, NCD024488025

Mr. Patrick Baker, Aquaterra (839-0199) contacted our office on this date concerning the subject site. Mr. Baker requested a meeting with our office concerning this site and provided the following background information:

For approximately 40 years this site was used as an iron scrap yard. In the late 1970's or early 1980's Smith Metal and Iron Company moved operation, and leveled the buildings. The site was not used for a number of years. As part of a real estate transfer of this site Law Engineering was contracted to perform an environmental assessment of the site. Four monitoring wells were installed and several soil borings were taken over the next two years. These samples showed petroleum hydrocarbons in the soil. Aquaterra was recently contracted to complete the environmental audit. The ground water appears to be clean and the petroleum hydrocarbons are still present but in lower concentrations than those found by Law Engineering. A remediation program was begun under guidance of the NRCD Mooresville office. Eric Kringle is the NRCD contact person.

In December 1988 Aquaterra received information leading them to suspect that transformers may have been stored on the site. Two soil samples were taken as a double check for PCB's. Six more soil samples and one blank were taken this week with results expected next week. Mr. Baker reported that the site has now been fenced to limit public access.

Mr. Baker is sending a report with lab data for our review and would like to meet with our office soon to determine what cleanup measures are necessary.

Mr. Eric Kringle, NRCD Mooresville Office (704-668-1699) was also contacted on this date. Mr. Kringle is also sending background information on the site but he has nothing presently on the PCB's at the site. Mr. Kringle also requested that the wells on the site be tested for PCB's. Mr. Baker, Aquaterra, confirmed that the wells would be resampled for PCB's next week.

Mr. Kringle reported that Swartz and Son owns the site and that he thought their lawyer would contact our office.

JB/ds/72

(Continuation)

3 Jan 89

(919)

Mark Fogelman - 833-8852 in Raleigh
Atty for Smith Metal & Iron site owner - Mr. Swakty

Smith Metal & Iron. Charlotte
Aquaterra Engineering - consultant

Knew of petroleum problems on site
They were aerating soils.
Found out that transformers ~~were~~ were on site
Stopped work - tested soils on surface for PCB
Found 94 ppm & 223 ppm PCB in soils.

Notified under 103c

Now they will characterize the site.

5 Jan 89

Call from John Gibson, Mecklenburg SPA
Wants to know status of Smith Metal & Iron
Dr Berry - Health Dept - wants to know what's happening.

Ref. 8

GROUND WATER ASSESSMENT
SMITH METAL AND IRON SITE
CHARLOTTE, NORTH CAROLINA
December 13, 1988

Prepared For

Robert Buzbee and Associates
Austin, Texas

Prepared By

Aquaterra, Inc.
Raleigh, North Carolina

AQUATERRA
Aquaterra, Inc. • P.O. Box 50328 • Raleigh, NC 27650 • 919-839-0199

December 13, 1988

Robert Buzbee and Associates
1201 Spyglass Drive
Suite 300
Austin, Texas 78746

Attention: Mr. Mike Weynand

Subject: Ground Water Assessment
Smith Metal and Iron Site
Charlotte, North Carolina
Aquaterra Job #200-88-110

Dear Mr. Weynand:

Aquaterra, Inc. (Aquaterra) is pleased to submit this letter report which provides a description of the ground water assessment conducted at the Smith Metal and Iron Site (the site) located in Charlotte, North Carolina, as shown in Figure 1. The four wells (MW-1, MW-2, MW-3, and MW-4) located at the site were previously sampled by Aquaterra on September 26, 1988. The results of this earlier sampling event are described in the Aquaterra report entitled Soil and Ground Water Assessment, Smith Metal and Iron Site, Charlotte, North Carolina dated October 20, 1988. Also included with this report are all laboratory analytical results and our conclusions and recommendations.

1.0 Ground Water Assessment

On November 8, 1988, a staff geologist collected ground water samples from the four onsite monitoring wells (MW-1, MW-2, MW-3, and MW-4), shown in Figure 2. Prior to sampling, three to five well volumes of water were evacuated from the monitoring wells. The volume of water standing in the well was calculated using the measured depth to water and the known well depth. The well evacuation was considered completed when a volume of water equal to 3 to 5 times the volume contained in the well casing and 0.3 of the volume in the annular space of the borehole outside the casing was remove, or the well was bailed dry. Decontaminated teflon bailers were utilized to accomplish this work task. The sample collector wore clean vinyl gloves for purging and sampling at each well.

After evacuating, three to five volumes of water from each well, the ground water from each well was analyzed in the field for pH, temperature, and conductivity, with results shown in Table 1. Samples were then collected and placed in the sample containers for transfer to the analytical laboratory. Decontamination procedures are shown in Attachment A.

All samples and one sample blank were labelled with a tag identifying sample number, date, time, location, method of collection, analysis to be conducted, samplers and remarks. The samples were kept in a cooler, chilled to approximately 4°C and transported to the analytical laboratory utilizing EPA approved chain-of-custody procedures. The samples were analyzed for the RCRA priority pollutant metals, volatile organic compounds via EPA Method 624, and semi-volatile organic compounds via EPA Method 625. Results are shown in Tables 2, 3, and 4, respectively, and Attachment B.

2.0 Discussion

The four monitoring wells were originally installed and sampled by representatives of Law Engineering (Law). The samples collected by Law yielded concentrations of nickel, total chromium, lead and copper slightly above the North Carolina proposed ground water standards (15 NCAC 2L .0202), shown in Table 2, but showed non-detectable levels of volatile and semi-volatile organic compounds. The Law ground water metal results are shown in Table 2. In order to confirm the Law Engineering results the four wells were resampled by Aquaterra and analyzed for the 13 priority pollutant metals.

The results of the samples collected by Aquaterra on September 26, 1988, shown in Table 2, indicated that the ground water in the vicinity of the four wells is within the proposed North Carolina ground water limits for arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc, as shown in Table 2. Antimony, thallium and beryllium have not yet been addressed by North Carolina, which means that an "allowable" limit for these constituents has not been established by the State of North Carolina.

The laboratory results of the September 26 samples also indicated that antimony, beryllium, and thallium were within the suggested EPA health based limits as shown in Table 2. Since the samples collected by Law had shown non-detectable concentrations of beryllium in wells MW-1 and MW-2 and concentrations of beryllium as low as 0.006 mg/L and 0.01 mg/L in wells MW-3 and MW-4, respectively, the decision was made to resample the four wells to corroborate the September 26, 1988 results. The priority pollutant metals results of the samples collected on November 8, 1988 are shown in Table 2. These results show that the ground water in the vicinity of the four wells is less than or equal to the proposed North Carolina regulations for concentrations of nickel, zinc, arsenic, cadmium, total chromium, lead, silver, copper, and mercury in ground water. The concentrations of antimony and thallium in the four wells remained reasonably constant. The concentrations of beryllium at wells MW-1, MW-2, MW-3, and MW-4 dropped from 0.030 mg/L, 0.011 mg/L, 0.014 mg/L, and 0.011 mg/L, respectively, to less than 0.001 mg/L for all four wells. The concentration of selenium, however, increased in all four wells. In wells MW-1 and MW-4 the concentration of selenium increased to levels slightly above the proposed limit of 0.01 mg/L.

3.0 Conclusions and Recommendations

Based upon the field observations and laboratory analytical results, Aquaterra has reached the following conclusions regarding the ground water beneath the site.

1. Of the five metal which have exceeded the proposed North Carolina proposed ground water standards (nickel, total chromium, lead, copper, and selenium), none have exceeded the proposed limit during more than one of the three sampling events. These were all associated with the Law Engineering sampling run conducted August 10, 1988 except for selenium.

2. Of the three metals for which North Carolina has not established a limit (antimony, beryllium, and thallium), antimony showed <0.6 MG/L the first sampling event and has ranged from 0.01 mg/L to 0.07 mg/L over the subsequent two sampling events. Beryllium showed a high of 0.01 mg/L at MW-4 during the first sampling event. During the second sampling event all four wells showed an increase in beryllium concentration. The results of the third sampling event indicated that the ground water from all four wells contained less than 0.001 mg/L of beryllium. Thallium has shown less than 0.01 mg/L for all three sampling events.

3. All four wells have twice yielded laboratory analytical results for volatile (EPA Method 624) and semi-volatile (EPA Method 625 constituents) organic compounds which there are none-detectable levels of the EPA Method 624 and 625 constituents.

Collectively, the results of the three (3) separate sampling events indicate that the ground water beneath the Smith Metal and Iron site may periodically exceed the limits proposed for ground water standards by the State of North Carolina for nickel, total chromium, lead, copper, and selenium. The exceeded limits determined were all associated with the same sampling event, the Law Engineering sampling event dated August 10, 1988 except for the subsequent selenium data. the selenium data which has only exceeded the proposed limits in MW-1 and MW-4 during the November 8, 1988 sampling event may possibly be due to laboratory error. A general statement summarizing the information and data generated to date pertaining to the ground water quality at the Smith Metal and Iron site can be stated as follows. Based on the two (2) independent sampling events conducted by Aquaterra, Inc. the ground water at the Smith Metal and Iron site does not exceed the limits proposed for ground water by the State of North Carolina at the present time. It should be noted that these conclusions are based on the limited ground water samplings conducted by Aquaterra, Inc. to date, two (2) sampling events, and the evaluation of a separate sampling event conducted previous to Aquaterra's involvement by Law Engineering. Sufficient back-up information regarding the validity of the Law Engineering data has not been provided to date so that evaluation of its validity is still not completed. The assumption has been made that this data contains some possible errors.

It has been a pleasure preparing this report. If you have any questions regarding this report, or if Aquaterra can be of further service, please do not hesitate to call.

Sincerely,

AQUATERRA, INC.

Patrick S. Baker
Project Manager

Phillip L. Rahn
President

cc: Mr. Mark Fogel - Attorney
Mr. Eric Klingel - DEM Mooresville Regional Office

PSB/plv

R339-88

TABLES

TABLE 1

Ground Water Field Tested Parameters
Smith Metal and Iron Site
Charlotte, North Carolina
Aquaterra Job No. 200-88-310

Well I.D.	Date	Conductivity	Temp. (°F)	pH
MW-1	11-8-88	311	65.2	5.65
MW-2	11-8-88	618	63.4	5.44
MW-3	11-8-88	896	63.0	5.63
MW-4	11-8-88	619	63.4	6.10

TABLE 2

Laboratory Results of Ground Water Samples Analyzed
for the Primary Pollutant Metals
Smith Metal & Iron Site
Aquaterra Job No. 200-88-310

ell ID	Date	Units	Nickel	Zinc	Antimony	Arsenic	Beryllium	Cadmium	Total Chromium
IW-1	8-10-88*	mg/l	0.200	1.000	<0.06	0.010	<0.005	0.007	0.140
W-2	8-10-88*	mg/l	<0.100	<0.100	<0.06	<0.005	<0.005	<0.005	0.063
W-3	8-10-88*	mg/l	0.300	1.400	<0.06	0.020	0.006	0.005	0.300
W-4	8-10-88*	mg/l	0.800	2.000	<0.06	0.030	0.010	<0.005	1.400
W-1	9-26-88	mg/l	0.060	0.200	0.010	0.002	0.030	0.007	0.008
IW-1	11-8-88	mg/l	0.090	0.133	0.070	0.005	<0.001	0.010	0.032
IW-2	9-26-88	mg/l	0.062	0.104	0.030	0.001	0.011	0.008	0.016
IW-2	11-8-88	mg/l	0.090	0.012	0.050	0.002	<0.001	0.010	0.013
W-3	9-26-88	mg/l	0.074	0.056	0.020	0.002	0.014	0.010	0.008
IW-3	11-8-88	mg/l	0.080	0.016	0.060	0.001	<0.001	0.008	0.008
IW-4	9-26-88	mg/l	0.062	0.037	0.000	0.003	0.011	0.005	0.012
IW-4	11-8-88	mg/l	0.040	0.030	0.050	0.001	<0.001	0.006	0.018
lank	11-8-88	mg/l	0.080	0.014	0.020	0.001	<0.001	0.007	0.007
.C. roundwater tandards Proposed		mg/l	0.150	5.000	N.L.E.	0.050	N.L.E.	0.010	0.050
lealth Standards[1]						0.146	0.037		

= Samples collected and analyzed by Low Engineering
.L.E. = No level established by North Carolina
lote: Samples collected by Aquaterra were analyzed by Chemical and Environmental Technologies
= U.S. EPA Health Standards from Sitting

TABLE 2 (continued)

Laboratory Results of Ground Water Samples Analyzed
for the Priority Pollutant Metals
Smith Metal & Iron Site
Charlotte, North Carolina
Aquaterra Job No. 200-88-310

Well ID	Date	Units	Lead	Silver	Thallium	Copper	Mercury	Selenium
1W-1	8-10-88*	mg/l	0.320	<0.010	<0.010	0.610	<0.0005	<0.005
1W-2	8-10-88*	mg/l	0.088	<0.010	<0.010	0.140	<0.005	<0.005
1W-3	8-10-88*	mg/l	0.230	<0.010	<0.010	1.000	<0.005	<0.005
1W-4	8-10-88*	mg/l	0.240	<0.010	<0.010	1.300	<0.005	<0.005
1W-1	9-26-88	mg/l	0.006	0.006	<0.010	0.040	0.0006	0.0010
1W-1	11-8-88	mg/l	<0.001	0.001	<0.010	0.010	0.0002	.0154
1W-2	9-26-88	mg/l	0.047	0.002	<0.010	0.022	0.0019	0.0020
W-2	11-8-88	mg/l	<0.001	0.003	<0.010	0.017	<0.0002	0.0078
W-3	9-26-88	mg/l	0.033	0.008	<0.010	0.007	0.0007	0.0020
W-3	11-8-88	mg/l	<0.001	0.004	<0.010	0.014	<0.0002	0.0081
W-4	9-26-88	mg/l	0.001	0.004	<0.010	0.017	0.0005	0.0010
-4	11-8-88	mg/l	<0.001	0.004	<0.010	0.014	<0.0002	0.0102
nk	11-8-88	mg/l	<0.001	0.001	<0.010	0.010	<0.0002	0.0087
C. oundwater ndards propose alth Standards[1]		mg/l	0.050	0.050	N.L.E. 0.013	1.000	0.0020	0.0100

Samples collected by Low Engineering
.E. = No level established by North Carolina
U.S. EPA Health Standards from Sitting

TABLE 3

Laboratory Results of Ground Water Samples
Analyzed for Volatile Organic Compounds (VOCs)
Via EPA Method 624
Smith Metal & Iron Site
Charlotte, North Carolina
Aquaterra Job No. 200-88-310

Well ID	Date Sampled	Units	Total VOCs
MW-1	11-8-88	ug/L	ND
MW-2	11-8-88	ug/L	ND
MW-3	11-8-88	ug/L	ND
MW-4	11-8-88	ug/L	ND
Blank	11-8-88	ug/L	ND

ND = None Detected

Laboratory = Chemical and Environmental Technologies
Cary, North Carolina

TABLE 4

Laboratory Results of Ground Water Samples
Analyzed for Semi-Volatile Organic Compounds (VOCs)
Via EPA Method 625
Smith Metal & Iron Site
Charlotte, North Carolina
Aquaterra Job No. 200-88-310

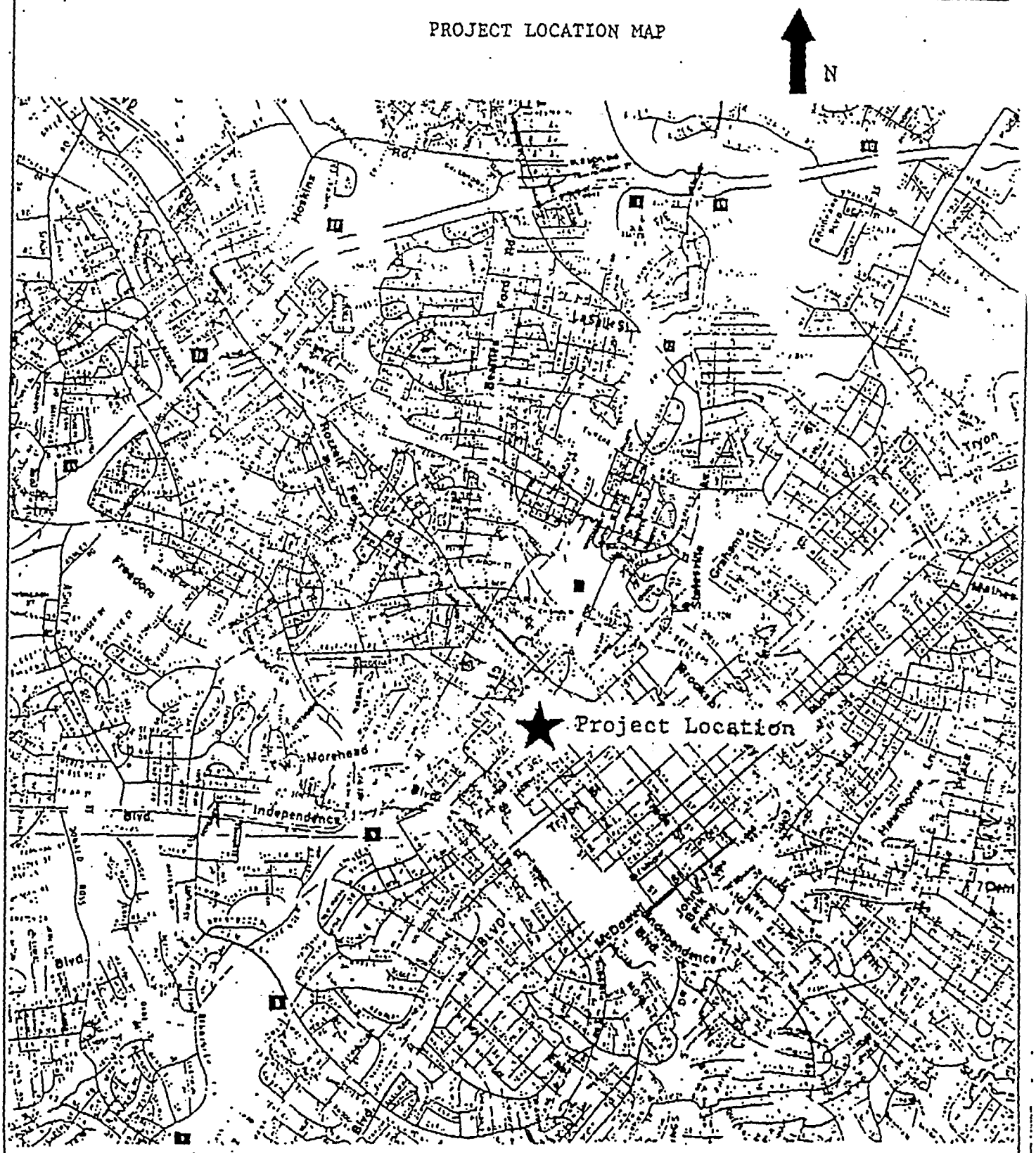
Well ID	Date Sampled	Units	Total Semi-VOCs
MW-1	11-8-88	ug/L	ND
MW-2	11-8-88	ug/L	ND
MW-3	11-8-88	ug/L	ND
MW-4	11-8-88	ug/L	ND
Blank	11-8-88	ug/L	ND

ND = None Detected

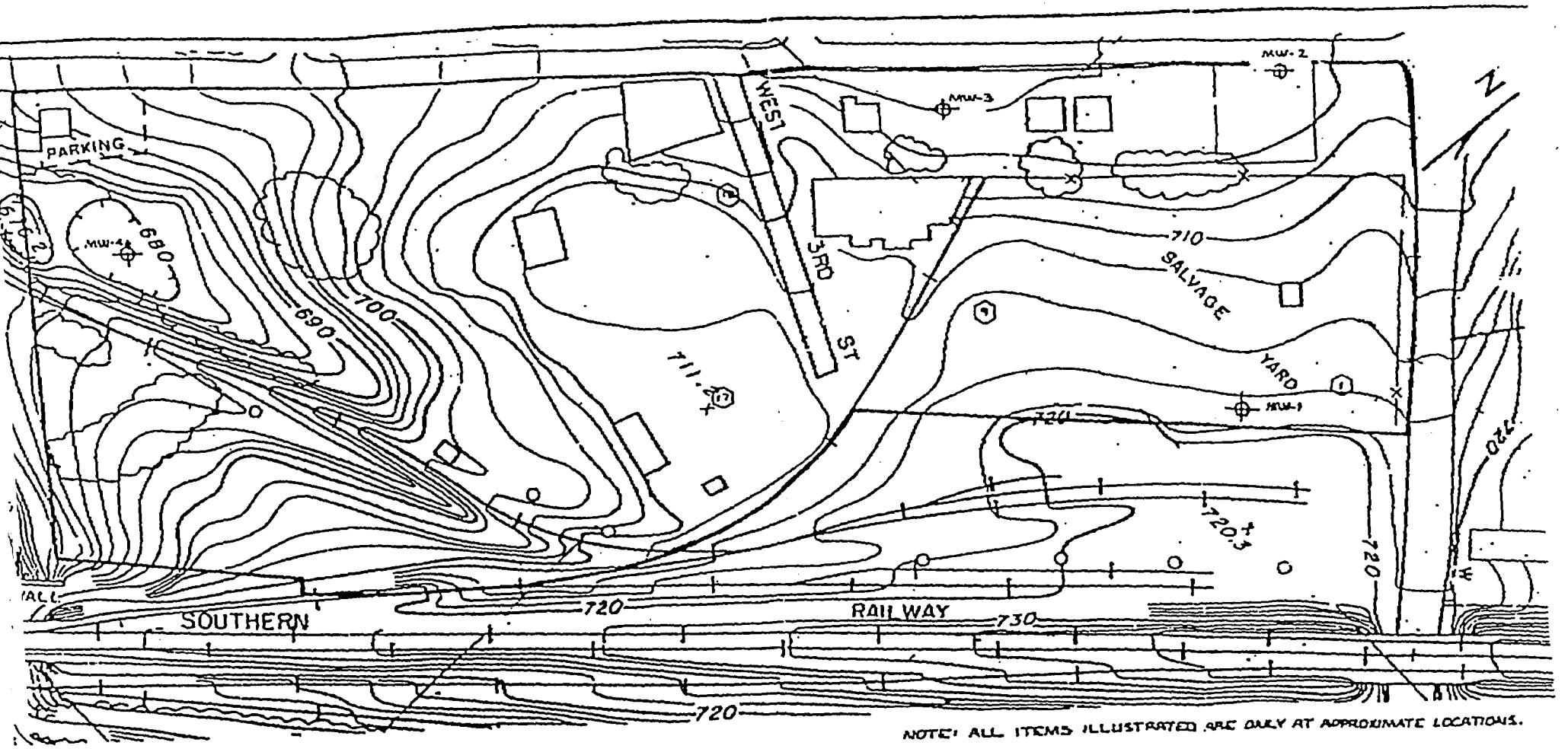
Laboratory = Chemical and Environmental Technologies
Cary, North Carolina

FIGURES

PROJECT LOCATION MAP



PROJECT	AQUATERRA, INCORPORATED RALEIGH, NORTH CAROLINA	SCALE: N.T.S.
Smith Metal & Iron Facility Charlotte, North Carolina		JOB NO: 200-88-307 FIGURE NO: 1



APPROX. SCALE FT.
0' 50' 100'

LEGEND

⊕ Monitoring Well Location

PROJECT	AQUATERRA, INCORPORATED RALEIGH, NORTH CAROLINA	SCALE: Bar
Smith Metal & Iron Facility Charlotte, North Carolina		JOB NO: 200-88-007
		FIGURE NO: 2

CITY OF CHARLOTTE TOPOGRAPHIC MAP, SHEET NO 3, DATED 1984.

Ref. 9

January 10, 1989

TO: File

FROM: Jack Butler

SUBJECT: Telephone conversation with Mr. Patrick Baker, Aquaterra (704-393-5162) concerning Smith Metal and Iron Company, NCD024488025

Mr. Baker was contacted at the Aquaterra Charlotte office on this date concerning the subject site. Mr. Baker reported that Mr. Fogel, attorney for the site owner, would like to meet with us to determine the lead agency and necessary clean-up levels for the subject site. Mr. Baker was informed that I had talked to Eric Kringle, NRCD, and it had been determined that the NC Superfund Branch would be the lead agency for remediation of the PCB's in the soil at the site. I also agreed to send Mr. Baker a copy of a Remedial Action Outline, January 1989 for his use in preparing a Remedial Action Plan to be submitted to our office. After we have received and reviewed this plan we will meet with him to discuss the activity at this site if necessary.

JB/ds/76.

Ref. 10

January 12, 1989

TO: File

FROM: Jack Butler

SUBJECT: Telephone conversation with Eric Kringle, NRCD Mooresville, (704-663-1699) about Smith Metal and Iron, NCD024488025

Mr. Kringle reported that the aeration of soil to remove hydrocarbons that was done at the subject site was done on a voluntary basis by the owner of the site. Mr. Kringle added that since there was no ground water violation on the site and no violation of the oil spill act he did not think there was authority for any cleanup order from NRCD.

Mr. Kringle reported that the soil aerator operated like a gravel sifter in that the soil was fed onto a vibrating conveyor that fed a screen sifter. This sifter exposed the soil to air, however there was no forced air involved. Much of the soil passed through this process several times before the hydrocarbon level was below the action level. Mr. Kringle knew of no air permit that was required by the state. He added that in Mecklenburg County air permitting is handled by a county office but he did not know if a county air permit was issued or required by the activity at the site up to this point.

JB/ds/ibm.78

Ref. 11

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

June 1, 1989

Mark E. Fogel
The Raleigh Building
5 West Hargett Street
Suite 510
Raleigh, NC 27601

SUBJECT: Smith Metal and Iron Company
NCD024488025

Dear Mr. Fogel:

As you, Mr. Fletcher Armstrong, HDR Engineering, Inc. and I discussed, the Final Sampling Plan for the Smith Metal and Iron Site in Charlotte, NC has been reviewed. At least one additional soil sampling location in the transformer storage area shown in Figure 1-2 should be added to the sampling location indicated in Figure 3-1. It is also suggested that the samples collected from the excavated soil piles, bottoms of the excavated areas, soil borings, and groundwater monitoring wells be analyzed for semi-volatile organics in addition to the planned analyses for the four metals, VOC's, and PCB's. It is our understanding that the purpose of this sampling plan is to define the extent of contamination at the subject site and therefore may require modification during this sampling phase as data is gathered for the site. We understand that the sampling will be initiated in the immediate future and we look forward to receiving the draft feasibility plan for remediation of the site.

If you have any questions, please feel free to contact Jack Butler or me at (919) 733-2801.

Sincerely,

Jack Butler

Jack Butler, Environmental Engineer
Superfund Branch

JB/ds/smith.doc/p.2

cc: Fletcher Armstrong
Elliott Schwartz

"Rite in the Rain"®

ALL-WEATHER

LEVEL

Notebook No. 311

F4-1909

Smith Metal and Iron Company
TDD# F4-8911-55
Charlotte, Mecklenburg County, North Carolina
Eric Corlin For: Project Manager Clifford Leonard
CERCLIS ID. No. NCD024488025

Ref. 12

[illegible]

All entries in this log book
will be made by myself
and Colin [illegible] Project Manager
[illegible]
[illegible] Any and all corrections
will be properly initialed
[illegible]

Signature: Eric L. Carlson [illegible]

All notes and observations
made during this Phase
I Inspection will be
documented in the
logbook.

This logbook is [illegible]
[illegible] TDW [illegible]

[illegible]

000002

The following ML Squad [illegible]
[illegible]
[illegible] the following
NBS/EB documents [illegible]

Work [illegible]

Upon confirmation of [illegible]
[illegible] having [illegible]
the above listed [illegible]
[illegible]
[illegible]

[illegible]
[illegible]

9/18/84 E. L. Cole

[illegible]

0821 [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
Knight Templar [illegible]
[illegible] the [illegible]
305

0930 [illegible]

1050 [illegible]
[illegible]
[illegible]

1150 [illegible]
[illegible]
[illegible]
[illegible]

[illegible]

12/18/84 E. L. Cole

000003

1415 - Arrive at Sinclair [illegible] facility to conduct [illegible] this facility.

1530 - Travel to the Smith Metal and Iron Company facility located approximately [illegible] northwest of Charlotte, NC, at West Third Street on the southeast side of Cedar [illegible]. The facility is not existent and is located in a residential/commercial portion of Charlotte [illegible] to a large apartment [illegible]. The facility appears [illegible] existed on what is now a vacant lot which is circumvented by a [illegible] high chain link fence. No fence entrance gate was locked. It appears that remediation of the facility is ongoing [illegible]

E.J. Cole 12/18/89 E.J. Cole

because many large pits have been dug and many drums for waste removal were scattered around piles of soil and the pits. The property lies between the railroad tracks and Cedar street and is currently an open lot. One road to the fence entrance gates exists which leads off of Cedar street. Drainage from the facility property would follow a pathway probably northwest to a nearby creek. The nearest homes to the site are apartments located across from the site on Cedar Street. Several schools exist within a ½ mile radius of the facility site however no day-care centers have

12/18/89 E.J. Cole 000005

000006

been identified. The
exist on the property
is apparent that not
existed here for some
Pictures were taken of
area. No asbestos was
disposal or waste cont
seen on the property

Weather forecast for tomorrow
showing thunderstorms

10/18/89 E.A. Corbin

N 1300000

Buildings

Pits

Chain link fenced Property
Enclosure

10/18/89 E.A. Corbin

000007

1000 Information regarding
the locations for the
Smith Metal and Chemical
within a ½ mile radius
was obtained from the
material TDD# F4-8901
The map showing these
locations is known as the
Charlotte-Mecklenburg
Utility Dept. Major Water
Line Map. By using the
identifying areas served by
municipal water within
mile radius of the site it
possible to isolate areas
potentially served by private
wells. According to information
obtained from NUS FT. TDD# F4-8901-44 the
of Charlotte also
from the Charlotte-Mecklenburg Utility Dept. (CMUD)
CMUD with drinking water from
5000 12/19/89 E.A. Corbin

water intakes located just
downriver on the Catawba
River. Almost all residents
within the city limits of
Charlotte have the opportunity
to connect to CMUD lines.
Any surface water runoff
from the site area would
enter the Catawba River
within a 5 mile downstream
reach of the site. Info.
received from the CMUD
distribution line map
used to isolate areas
that are not served by the
municipal system.

Plans to conduct private
plans to conduct residential
inventories for Union Oil
Company, S.E. Jeronimo
Inc., City Refining Company
and Goodrich.

12/19/89 E.A. Corbin

1400 Began to conduct a
well survey. Based on
obtained from the CMUD
line map, areas suspected
not to be served were
Almost all areas
a 4-mile radius of
Metal & Iron Co
to be served by the
water system. The
area where no water
yet exists and where
could be developed
area located approx
3.8 miles north of
facility. Known area
as Dillon Tarn
The area is based
by major water mains
CMUD water distrib
map and a U.S.G.S.
topographical quad
utilized to determine the
of private wells.

000010
12/19/89 E.L. Cole

well identified
0-1 mile b-1 c
2-2 c/c
3-1 mile radius - 0
2 mile radius - 0
3 mile radius - 0
4 mile radius - @ 40 homes

facility recon

12/19/89 E.L. Cole

000040

Date 12-18-89 By Whom E. Cole

Time: 1545 # keyed to map: 1

Location: On site property looking west

Picture of: Site property

Date 12-18-89 By Whom E. Cole

Time: 1545 # keyed to map: 2

Location On site property looking north

Picture of: Site property

Date 12-18-89 By Whom E. Cole

Time: 1545 # keyed to map: 3

Location On site property looking northwest

Picture of: Site property w/ apartments in background

000041

000042

Date 12-18-89 By Whom E. Carlin

Time 1545 # keyed to map

Location On site property looking west

Picture of: Site property

Date By Whom

Time # keyed to map

Location

Picture of:

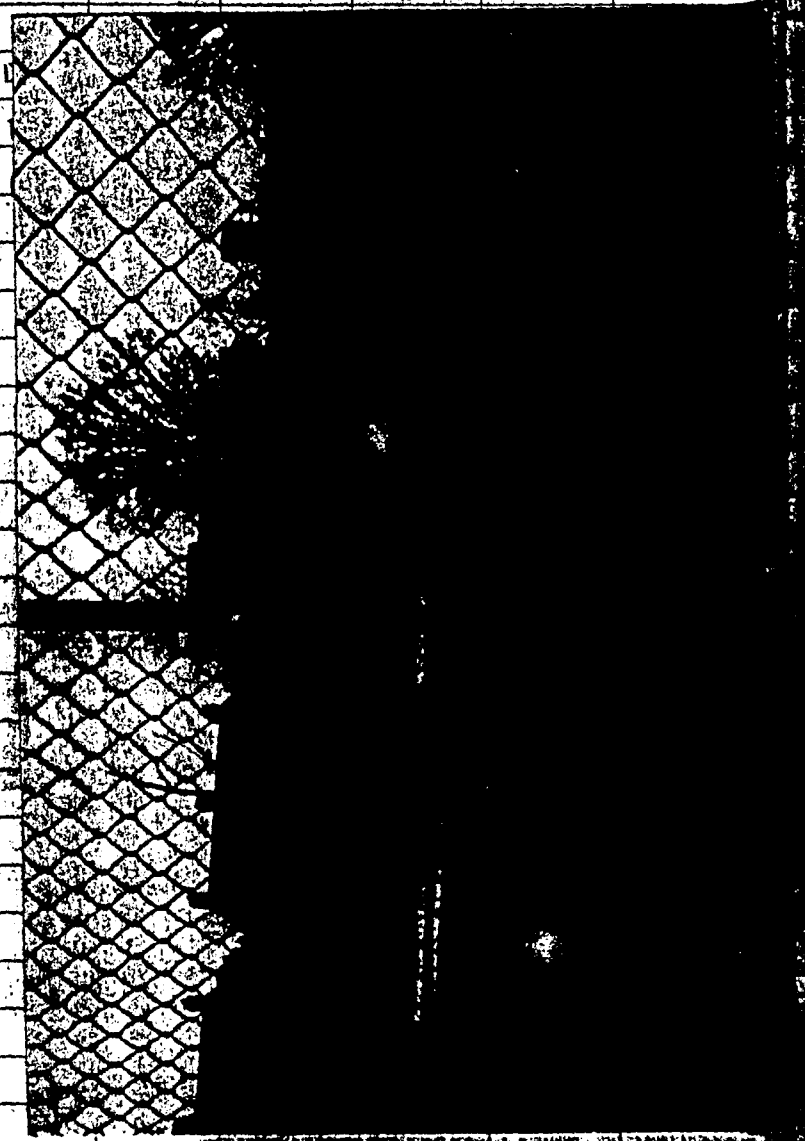
Date By Whom

Time # keyed to map

Date By Whom

[redacted]

000043



Ref. 13

EPA REGION IV
STATE PERMITTING REPORT FORM

EPA ID NCD 024 448 025

FACILITY NAME Smith Metal + Iron Corp.

FOR STATE USE ONLY

(7)

CALLED	SUBMITTED	PERMITTED	CLOSING	PROCESS CODE	AMOUNT	UNIT (CHECK ONE)	
				S01 STORAGE CONTAINERS No part		☐ gallons	☐ liters
				S02 STORAGE TANKS A on		☐ gallons	☐ liters
				T01 TREATMENT TANKS file.		☐ gpd	☐ lpd
				T04 OTHER TREATMENT		☐ gpd	☐ lpd
				T03 INCINERATOR		☐ tons/hr ☐ gallons/hr	☐ m tons ☐ BTU/h
				S03 WASTE PILES		☐ yards^3	☐ meters
				S04 STORAGE SURFACE IMPOUNDMENTS		☐ gallons	☐ liters
				T02 TREATMENT SURFACE IMPOUNDMENTS		☐ gpd	☐ lpd
				D83 DISPOSAL SURFACE IMPONDMENTS		☐ gallons	☐ liters
				D79 INJECTION WELLS		☐ gallons	☐ liters
				D80 LANDFILLS		☐ acre-feet	☐ hecter
				D81 LAND APPLICATION		☐ acres	☐ hecter

1. PART B CALL - IN 10/26/83 (1/20/84)
2. PART B RECEIVED ___/___/___
6. APPLICATION COMPLETE ___/___/___
13. PUBLIC NOTICE 7/20/84
   - ___ draft permit
   - X intent to deny permit
   - X termination of interim status
   - ___ closure plan
   - ___ post closure plan
16. PERMIT DECISION 9/17/84
   - ___ permit issued
   - X permit denied
17. PERMIT EFFECTIVE ___/___/___
36. PERMIT EXPIRES ___/___/___

33. REQUESTED WITHDRAWAL ___/___/___
   - ___ 90 day storage
   - X small quantity generator **
   - ___ no RCRA waste handled now
   - ___ protective filer ___ closing
32. DETERMINATION ON REQUEST ___/___/___
   - ___ approved. Closure plan approved.
   - ___ approved. No closure required.
   - ___ denied
82. CLOSURE PLAN SUBMITTED ___/___/___
83. CLOSURE PLAN APPROVED ___/___/___
87. CLOSURE CERTIFICATION ___/___/___
84. POST C. PLAN SUBMITTED ___/___/___
85. POST C. PLAN APPROVED ___/___/___

** Failed to supply part B within 6 mo.

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

Ref. 14

Keith

Date: April 7, 1982

Mr. Joe J. Smith
Smith Metal & Iron Company
P.O. Box 30488
Charlotte, NC 28230

Re: Facility ID NO. NCD024488025

Dear Mr. Smith:

Based on information supplied by you we have processed and accepted at the State level your request for the facility identified with the above ID number to receive the indicated change in classification under RCRA:

Add as	Delete as	
☐	☒	generator
☐	☒	transporter
☐	☒	treater
☐	☒	storer
☐	☒	disposer
☒	☐	small generator

We are advising EPA of the change in your status. Please notify us if there is any further change in your operations which would again affect your status. Your EPA ID NO. is ☐ is not ☒ being cancelled.

Cordially,

O. W. Strickland, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

OWS

cc: John Herrmann
EPA Region IV
Emil Breckling

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

Ref. 15

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

Date: October 16, 1984

Mr. Joe Smith
Smith Metal & Iron Company
Post Office Box 30488
Charlotte, NC 28230

Re: Facility ID No. NCD 024 488 025

Dear Mr. Smith:

Based on information supplied by you we have processed and accepted at the State level your request for the facility identified with the above ID number to receive the indicated change in classification under RCRA:

Add As	Delete As	
☐	☒	generator
☐	☐	transporter
☐	☐	treater
☐	☐	storer
☐	☐	disposer
☐	☐	small generator

We are advising EPA of the change in your status. Please notify us if there is any further change in your operations which would again affect your status. Your EPA ID NO. is ☒ is not ☐ being cancelled.

Cordially,

O. W. Strickland, Head
Solid & Hazardous Waste Management Branch
Environmental Health Section

OWS/jasd

cc: Doug McCurry
EPA Region IV
Emil Breckling
Mack Henderson
Mecklenburg Co. Health Dept.

This is to show that this company is no longer in business in Charlotte.

DHS Form 3048 3/82
Solid & Haz. Waste Mgt. Branch

Reference No 16

NORTH CAROLINA
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
GEORGE R. ROSS, DIRECTOR

DIVISION OF MINERAL RESOURCES
JASPER L. STUCKEY, STATE GEOLOGIST

BULLETIN NUMBER 63

GEOLOGY AND GROUND WATER
IN THE
Charlotte Area, North Carolina

BY

H. E. LeGRAND AND M. J. MUNDORFF
GEOLOGISTS, U. S. GEOLOGICAL SURVEY

PREPARED COOPERATIVELY BY THE GEOLOGICAL SURVEY,
UNITED STATES DEPARTMENT OF THE INTERIOR

1952

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4. Diagrammatic section illustrating the relation of the water table to topography 11

is at Shelby and the least is at Concord. The maximum annual precipitation averaged for the entire area was 65.82 inches in 1929 and the minimum was 31.41 inches in 1925. The greatest annual rainfall recorded at any station was 75.59 at Mount Holly in 1908, and the least was 29.71 at Charlotte in 1925. The maximum recorded rainfall in a single month was 18.47 inches at Lincolnton in July 1916.

The average annual snowfall is about 7 inches.

Temperature.—Records of daily maximum and minimum temperatures for the station at Charlotte are published by the U. S. Weather Bureau. In addition, mean monthly temperatures are available for the stations at Concord, Gastonia, and Shelby. The average mean annual temperature is 60.6° F. at Charlotte, which probably is representative of the area as a whole. The coldest month is January, which has an average mean temperature of 41.8° F., and the warmest month is July, which has an average mean temperature of 78.8° F.

PHYSIOGRAPHY

The Charlotte area lies within the upland section of the Piedmont physiographic province which is an uplifted, submaturely to maturely dissected peneplane on somewhat resistant rocks.[1]

In the Charlotte area the upland surface, which generally slopes south or southeast, is interrupted by a number of monadnock-type hills and ridges, some of which rise as much as 1,600 feet above the surrounding uplands.

The area is drained by three major drainage systems. All of Cabarrus County and the eastern part of Mecklenburg County is drained by the Rocky River which flows into the Pee Dee River. The western and southern parts of Mecklenburg County, practically all of Lincoln and Gaston Counties, and a small strip along the eastern edge of Cleveland County are drained by the Catawba River and its tributaries. All of Rutherford and most of Cleveland and Polk Counties are drained by the Broad River and its tributaries. The three drainage systems extend southeastward through South Carolina to the Atlantic Ocean, although the courses of the individual streams within the area are quite diverse. The courses of some of the streams are determined by the geology of the area, and all of them reflect its geologic history.

GEOLOGY

INTRODUCTION

The Charlotte area is underlain by ancient igneous and metamorphic rocks. As the existing geologic maps were entirely inadequate for use in determining the quantity and quality of water available from the different rock units, mapping of the geology of the area represented a part of the field program. Considering the large size of the area and the short time spent in mapping, it is readily apparent that the geology was necessarily generalized and that the map is only a reconnaissance map. The rock classifications chosen are discretionary and often include several kinds of rocks. For example, the intrusion of granite into most of the preexisting country rocks has resulted in types displaying many variations and gradations.

The gradations between the rocks are of two types. The first is that in which the progressive change from one petrographic type to another occurs within a few inches or a few feet. This type of gradation is readily apparent and is seen in one outcrop. The other type, of greater magnitude, may represent a zone of many feet or of a few miles in which two rocks are interpenetrated and a progressive change in the dominant rock can be generally observed. In the latter case granite everywhere represents one of the rock types, and precise local contacts may occur. It follows that generally the various rocks are so intimately interlayered or interpenetrated that only the dominant rock can be shown except on very large scale maps. Insofar as small-scale mapping is concerned, most geologic boundaries are indeterminate. Best use of the accompanying geologic maps can be made by considering the contacts approximate or arbitrary. The classification of rocks in the Charlotte area used in this report is based on lithology and physical appearance and not necessarily on stratigraphic relations.

[1]Fenneman, N. M., Physiographic divisions of the United States: Assoc. *Am. Geographers* Annals, vol. 18, no. 4, p. 290, 1928.

The slates are generally regarded as being of pre-Cambrian age. Detailed studies of local areas in the slate belt by Laney,[11] Pogue,[12] and Stuckey,[13] and regional investigations by King[14] indicate that the age is conjectural.

Greenstone schist.—The greenstone schist crops out in a thin belt extending northeastward through the eastern parts of Mecklenburg and Cabarrus Counties. The greenstone includes an assemblage of rocks that were mapped together because it is difficult to separate them in the field. All are green in color, are slightly to highly schistose, and are mafic rocks of igneous origin. The typical greenstone is fine-grained and in the more massive facies[15] phenocrysts of dark-green hornblende and greenish-yellow epidotized feldspars are distinguishable. The rock probably represents a basic lava flow. Along its western border the greenstone is coarser and is similar to the schistose diorite with which it is in contact on the west side. The contact was not observed, chiefly because of the thick cover of decomposed rock.

Insofar as the capacity to yield ground water is concerned, the greenstone is similar to the rocks of the slate belt in structure, showing strong schistosity and prominent joints transverse to the schistosity. It is similar to the diorite in general chemical composition and in the quality of ground water that it yields. Both the greenstone and diorite are intruded by granite, whereas the slate is not.

GROUND WATER

Ground water in the Charlotte area is derived from precipitation as rain or snow. The average annual precipitation of the area is about 47 inches.

The surficial materials at many places are relatively impermeable clays, and the fraction of precipitation that reaches the water table may be somewhat less than one-third. Thus, recharge to the ground-water reservoir probably is between 10 and 15 inches per year. Seasonal fluctuations of the water table are considerable, and there may be considerable change in water level between dry and wet years. However, over a period of many years the net change in water level is small, indicating that the average annual discharge of ground water is about equal to the average annual recharge.

Ground water is discharged by springs and seeps, by evaporation and transpiration, and by wells. Most of the water discharged by springs and seeps enters the streams and maintains their flow during periods of fair weather.

OCCURRENCE AND MOVEMENT

Large quantities of water are contained below the land surface in the openings or interstices in the rocks. These range in size from the minute pores in clays to large tunnels and caverns in lavas and limestones. The interstices in unconsolidated sedimentary rocks, such as gravel, sand, and clay, are primary interstices consisting of pores or openings between the sand or clay particles. Crystalline rocks, such as granite, diorite, gneiss, and schist, have little primary pore space between the component grains. The important interstices in these rocks are the joints, fractures, cleavage planes, planes of schistosity, bedding planes, and solution channels. Consolidated sedimentary rocks have had their primary openings reduced by compaction and cementation. However, in these rocks jointing and fracturing have produced secondary interstices in which water may accumulate.

The porosity of a rock is the percentage of the total volume that is occupied by the interstices. The porosity of the different rock materials covers a wide range, that of some clays, for example, may be more than 50 percent, whereas that of some crystalline rocks may be less than 1 percent. The porosity of clean sands and gravels generally is between 20 and 40 percent. Sands and clays that are cemented and compacted to form sandstones and shales have a much lower porosity.

---

[11]Laney, F. B., Op. cit., p. 74.
[12]Pogue, J. E., Jr., Cid mining district of Davidson County: North Carolina Geol. and Econ. Survey Bull. 22, p. 95, 1910.
[13]Stuckey, J. L., The pyrophyllite deposits of North Carolina: North Carolina Dept. Cons. and Dev. Bull. 37, p. 25, 1928.
[14]King, P. B., Tectonic framework of the Southeastern States: Proc. Symposium on the mineral resources of the Southeastern United States, University of Tennessee Press, Knoxville, p. 18, 1949.
[15]Laney, F. B., Op. cit., p. 43.

Many of the secondary interstices in the igneous and metamorphic rocks are formed or enlarged by weathering processes near the earth's surface; therefore they decrease in number and size with depth. Solution of mineral constituents of the soil and decay of vegetal matter in it may result in a porosity of 50 percent or more, but the porosity decreases downward in the subsoil and the partially decomposed and disintegrated bedrock. The solid bedrock may have a very low porosity.

A material may have a high porosity and yet yield little water, even though saturated and allowed to drain for a long time. For example, a clay having a porosity of 50 percent might not yield any water because of the smallness of the pores, the water being retained because of molecular attraction. Some water may be retained in a rock also because the pores are isolated or poorly interconnected. The ratio of the volume of water that saturated material will yield to the total volume is known as the specific yield and is stated as a percentage.

One of the most important characteristics of an aquifer is its permeability, that is, its relative ability to transmit water. Permeability and porosity are not necessarily related; a clay having a porosity of 50 percent may transmit water very slowly or not at all, whereas a sand or gravel having half the porosity may transmit water with relative rapidity.

The movement of ground water generally is due to the force of gravity and the velocity of flow varies directly with the hydraulic gradient. Normally the places at which ground water discharges are at lower altitudes than the areas of recharge. In a humid region such as the Charlotte area, recharge occurs in the interstream areas and the discharge is into streams, lakes, and swamps. Rain falling on the land surface percolates downward to the water table and then moves laterally toward the points of discharge. During the winter and spring, when the water table is higher, the head is greater; therefore the velocity is higher and the volume of ground water discharged is greater than in summer and autumn when the water table is lower.

THE WATER TABLE

A part of the rain falling on an area percolates downward through the soil until it reaches the zone of saturation. In this zone all the pores and interstices are completely filled with water. The top of the zone of saturation is known as the water table, which is not a stationary surface, but one which is continually fluctuating, rising during and immediately after periods of rainfall and declining during periods of fair weather. In humid regions such as the Charlotte area, the water table is an undulating surface reflecting in a subdued way the irregularities of the topography. The relief, that is the difference in altitude between high and low points of the water table, generally is much less than the relief of the topography.

The depth to the water table depends chiefly upon the climate, the topography, and the character of the rocks. In the Charlotte area the climate is fairly uniform and the various rocks are similar in regard to porosity and permeability, so that differences in depth to the water table depend largely upon topography. In valleys the water table generally is at or near the surface; on wide flat uplands the water table generally is not more than a few tens of feet below the surface; and on sharp hills the water table may be more than 100 feet below the surface. The relation of the water table to the topography, in homogeneous materials, is shown in figure 4.

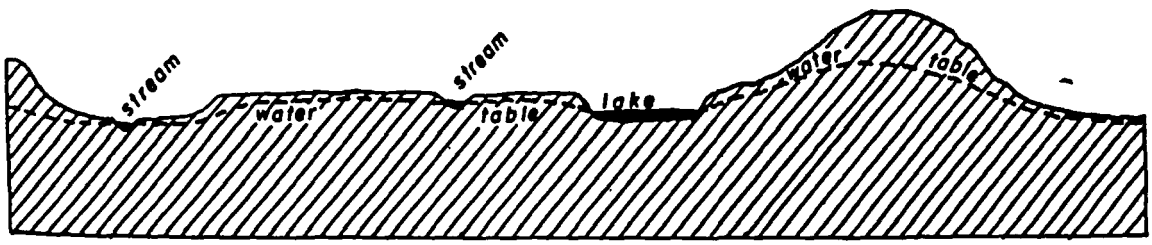


FIGURE 4.—*Diagrammatic section illustrating the relation of the water table to the topography.*

FLUCTUATIONS OF THE WATER TABLE

As the source of ground water is precipitation, the water table fluctuates in response to rainfall. However, correlation of the fluctuations with the rainfall is complicated by a number of factors.

The intensity and duration of the rainfall have a considerable effect on the proportion of water that reaches the water table. A heavy rainfall of short duration may result in a large percentage of surface runoff because of the inability of the soil to transmit the water rapidly to the water table. The same amount of rain, falling during a longer period, may result in a much larger proportion of water reaching the water table. However, during the longer period of rainfall there may be an increase in the total amount of water evaporated, reducing to that extent the amount of water reaching the water table.

The evaporation capacity of the air which is dependent upon temperature, humidity, and rate of air movement, determines the rate of evaporation and thus has considerable bearing on the proportion of rainfall that may reach the water table. Evaporation records are available for a floating pan on Lake Michie, near Durham.[16] Average monthly evaporation ranges from 1.44 inches in January to 6.39 inches in July.

Transpiration is an important factor with respect to recharge and discharge of ground-water. During spring and summer months large quantities of water are used by plants and a considerable part of the rainfall is taken from the soil before it can reach the water table. Also, large quantities of ground water are withdrawn by plants growing in lowlands and swamps. During fall and winter months vegetation requires much less water. Transpiration probably has greater effect on the proportion of rainfall that reaches the water table at various seasons than any other factor in this area.

The porosity and permeability of the soil differs from place to place and thus variously affects the proportion of rainfall that recharges the ground-water reservoir. The porosity and permeability may be changed by rainfall, heavy rains beating down and compacting the soils. Type of vegetation and land usage also have considerable effect on the porosity and permeability; intensive cultivation usually reduces both.

In the Charlotte area water levels begin to decline in April or May, owing to the increasing amount of evaporation and transpiration by plants. Generally this decline continues, interrupted only by minor rises due to heavy rainfall, through summer and early autumn, in spite of the fact that the greatest average monthly rainfall occurs in July and August. In late autumn, generally in November or December, when most of the vegetation is dormant and the evaporative capacity of the air is low, the water levels begin to rise. The winter rains generally are slow and steady in comparison with the summer rains and are more favorable for infiltration than the summer rainstorms. The first rains in winter often do not have as much effect on the water table as the later winter and spring rains because of the general deficiency in soil moisture prevailing by late autumn. Soil, which consists of varying proportions of fine sand, silt, and clay, holds considerable amounts of water in its pore space by molecular attraction of the particles, and this water does not percolate downward to the water table. After a long dry period this moisture is depleted, perhaps for many feet below the surface, by evaporation and transpiration. Before any water can reach the water table, this soil-moisture deficiency must be made up, and sometimes several weeks of winter rains are needed.

UTILIZATION OF GROUND WATER

In the Charlotte area water is obtained through dug, bored, or drilled wells or springs.

Dug wells.—Dug wells listed in this report range in depth from 17 to 100 feet, although the majority are from 25 to 60 feet. The diameter of the curbed wells ranges from 18 to 36 inches, and the diameter of uncurbed wells is somewhat larger. The well with the largest diameter, 120 inches, was dug as a shaft for a mine.

Many dug wells are curbed with stone, brick, clay, or concrete tile, and occasionally wood. Many are not curbed or lined in any way, and others have only a few joints of tile placed in the bottom, generally extending a short distance above the water table.

The chief advantage of a dug well is its large storage capacity, which helps to afford an adequate supply for domestic use if the yield is low.

[16] Hydrologic data on the Neuse River basin, 1866-1945, North Carolina Dept. Cons. and Devel., 1947.

MECKLENBURG COUNTY

(Area 542 square miles; population in 1950, 197,052)

Geography and physiography.—Mecklenburg County, in the southeast part of the Charlotte area, is the most densely populated county in the area. Charlotte, the only city, is the county seat; it is the largest city in the State and had a population of 133,219 according to the 1950 U. S. census. The county is the center of the textile industry of the State, many of the mills lying in the close environs of Charlotte.

That part of the Piedmont Province that includes Mecklenburg County consists of a series of moderately level interstream areas which are appreciably hilly near the larger streams. No hills stand out prominently above the general level of the upland. The highest land in the county is near Davidson, in the extreme northern part of the county, where the altitude is slightly more than 850 feet above sea level, and the lowest land is on the Catawba River at the South Carolina line, where the altitude is about 520 feet.

The western part of Mecklenburg County is drained by the Catawba River, whereas the eastern part is drained by small streams tributary to Rocky River, which itself is in the drainage basin of the Pee Dee River. The major divide formed by these drainage systems extends from Davidson in the north through Derita to the vicinity of Matthews. The Catawba River flows southward along the western border of the county, whereas the Rocky River flows along the northeast part. These rivers are only 10 miles apart in the northern part of the county, and as a consequence the interstream area is narrow and much dissected. On the other hand, Catawba and Rocky Rivers in the southern part of the county are more widely spaced which results in longer tributaries of lower gradients extending to the major divide. Thus, the topography in the southern part is rather gentle.

Geology.—The most striking feature of the geology of Mecklenburg County is the near absence of schistose rocks (fig. 17). With the exception of a thin belt of slaty rocks in the extreme east, the rocks of the county are, for the most part, massive and are generally lacking in regional structural trends.

Rocks of the Carolina slate belt occur in the southeastern part of the county where they extend southward from Cabarrus County. Although several types of rock occur within the belt only two are shown on the accompanying geologic map; they are the greenstone and undifferentiated rocks, including slates and associated volcanic rocks. The slates are generally composed of dense, fine-grained siliceous material. At least a part of the slate is well bedded and resembles the slate at Monroe,[28] which is a distinctive part of the Carolina slate belt. The slates, as a rule, are well jointed and possess a gentler dip than other rocks in the Charlotte area.

With the exception of the rocks of the Carolina slate belt in the east, the rocks of Mecklenburg County belong to the diorite-granite complex or are believed to be associated with it. Gabbro-diorite is widely exposed along N. C. Route 49 south of Shopton in the southwest part of the county. It is a massive medium- to coarse-grained dark colored igneous rock composed mostly of pyroxene or hornblende and plagioclase feldspars. It is exposed in a few road cuts and as isolated boulders above the generally flat land surface. It is locally referred to as "blackjack" and is the source of the Mecklenburg soil type.[29] The extent of the gabbro-diorite to the south in South Carolina is not known, but it is bounded in Mecklenburg County by rocks of the diorite-granite complex.

The diorite-granite complex proper covers a large area around Charlotte. Bodies of diorite are locally separate from bodies of granite, but as a whole the two rocks are too closely intermixed to map separately. Outcrops are not common enough to ascertain the predominance of one type over the other except in a general way. However, the granite component is everywhere conspicuous and appears to make up the greater part of the complex. It appears to be subordinate to the diorite in a band bordering the gabbro-diorite in the south and along the Cabarrus County line in the northeast.

Rocks in the northern part of the county do not fall easily into the classification of rocks designed for the Charlotte area. They are granitic but contain considerable hornblende and biotite in places. They

[28]Stuckey, J. L., Personal communication.
[29]Report on Mecklenburg County Soils, Agriculture, and Industry: North Carolina Dept. Agriculture County Soil Report No. 1, vol. 38, no. 4, p. 32, 1917.

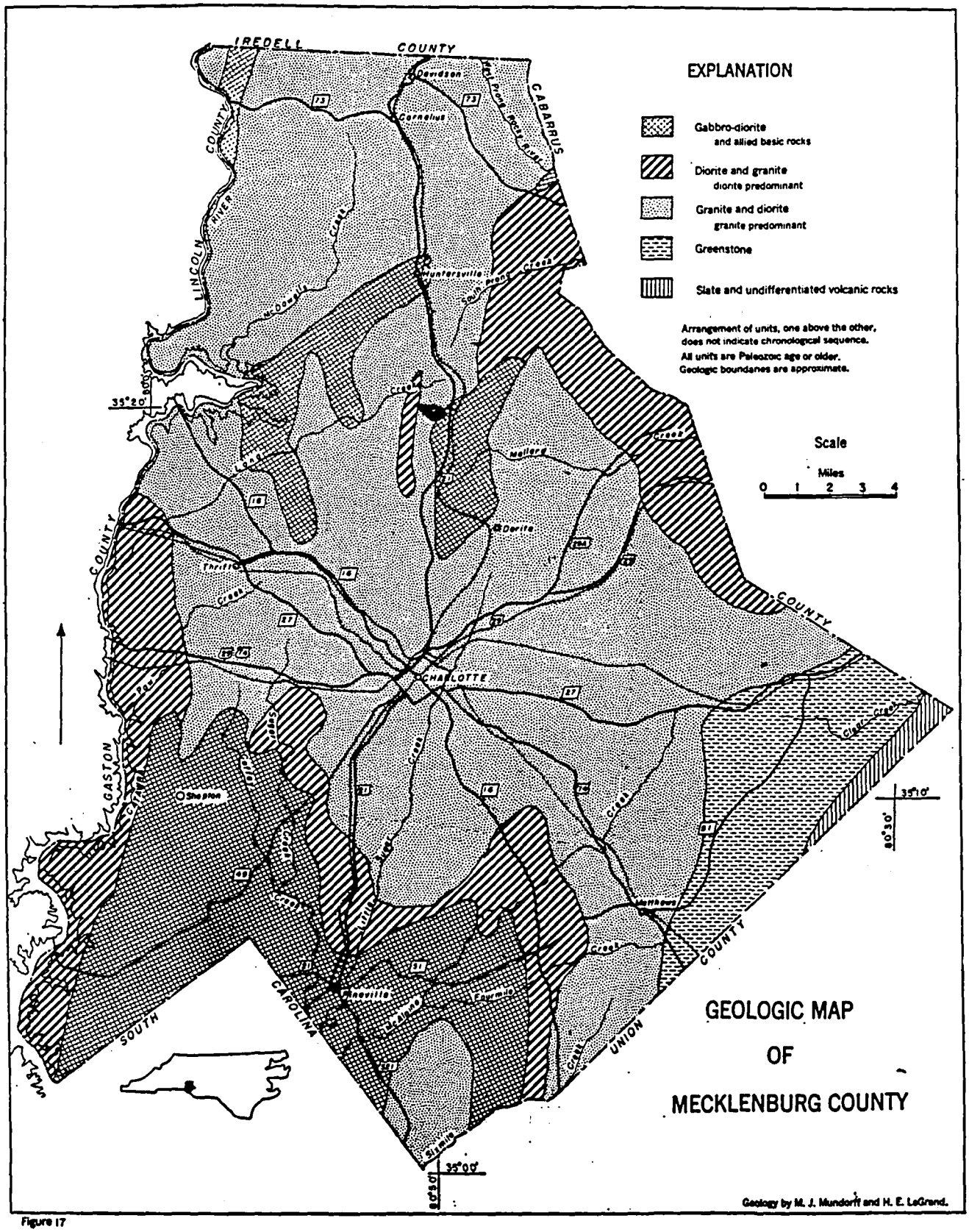


Figure 17

FIGURE 17.—GEOLOGIC MAP OF MECKLENBURG COUNTY.

are shown on the geologic map of Mecklenburg County as predominantly granite although they contain a greater quantity of black minerals than other granites in the Charlotte area. These rocks appear to have the same composition as those of the diorite-granite complex if a complete mixing of diorite and granite had occurred. Thus this approximate equivalence and the juxtaposition of these rocks suggest that they may be genetically related and that the hornblende-biotite granite in the northern part of the county may represent a nearly complete mixing of the diorite and granite components.

The soil derived from the hornblende-biotite granite has a deeper color than soils from other granites of the Charlotte area and contains many yellow flakes of vermiculite.

The rock weathers deeply, owing to the sharp relief in its area of outcrop, thus allowing a thick zone of weathering above the general water table.

Ground water.—Nearly all domestic water supplies and three municipal water supplies are obtained from wells (fig. 18).

Dug wells are extensively used for domestic supplies in rural districts. Normally they are from about 15 to 50 feet deep and 2½ to 4 feet in diameter. As these wells cannot easily penetrate hard rock, they generally yield adequate water as long as the water table does not fall below the surface of the hard rock, or more specifically as long as the water table does not fall below the bottom of the well. Where the bedrock lies at or near the surface, as in much of the area underlain by diorite and gabbro in the southwestern part of the county, wells may not be dug deep enough to prevent them from going dry during long periods of dry weather.

Records of more than 245 drilled wells are given in the tables of well data for Mecklenburg County. Many of these, especially in the rural areas, were core-drilled with chilled shot and are 2 or 3 inches in diameter. Their cheapness makes them suitable for domestic use, but inasmuch as 7 or 8 gallons a minute is the maximum rate at which water can be removed from a 2-inch well by a deep-well pump they are not generally used where large supplies of water are desired. Most industrial and public-supply wells are drilled with a percussion drill and are from 4 to 8 inches in diameter. The large-diameter wells might encounter fractures and cracks than missed by small-diameter wells. Also, more water can be pumped from a large-diameter well. Also, pumps with greater capacities can be installed in the larger wells.

The rocks penetrated by wells in Mecklenburg County are chiefly granite and diorite. The gabbroid rocks, occurring mostly in the southwestern part of the county, are included, for the purposes of ground-water description, with the diorite. A few wells in the eastern part of the county are drilled in slate but complete data on these wells are lacking. As the diorite and granite are rather closely intermingled, some wells doubtless penetrate both rocks. Table 13 presents characteristics of the wells as related to rock types and topographic locations.

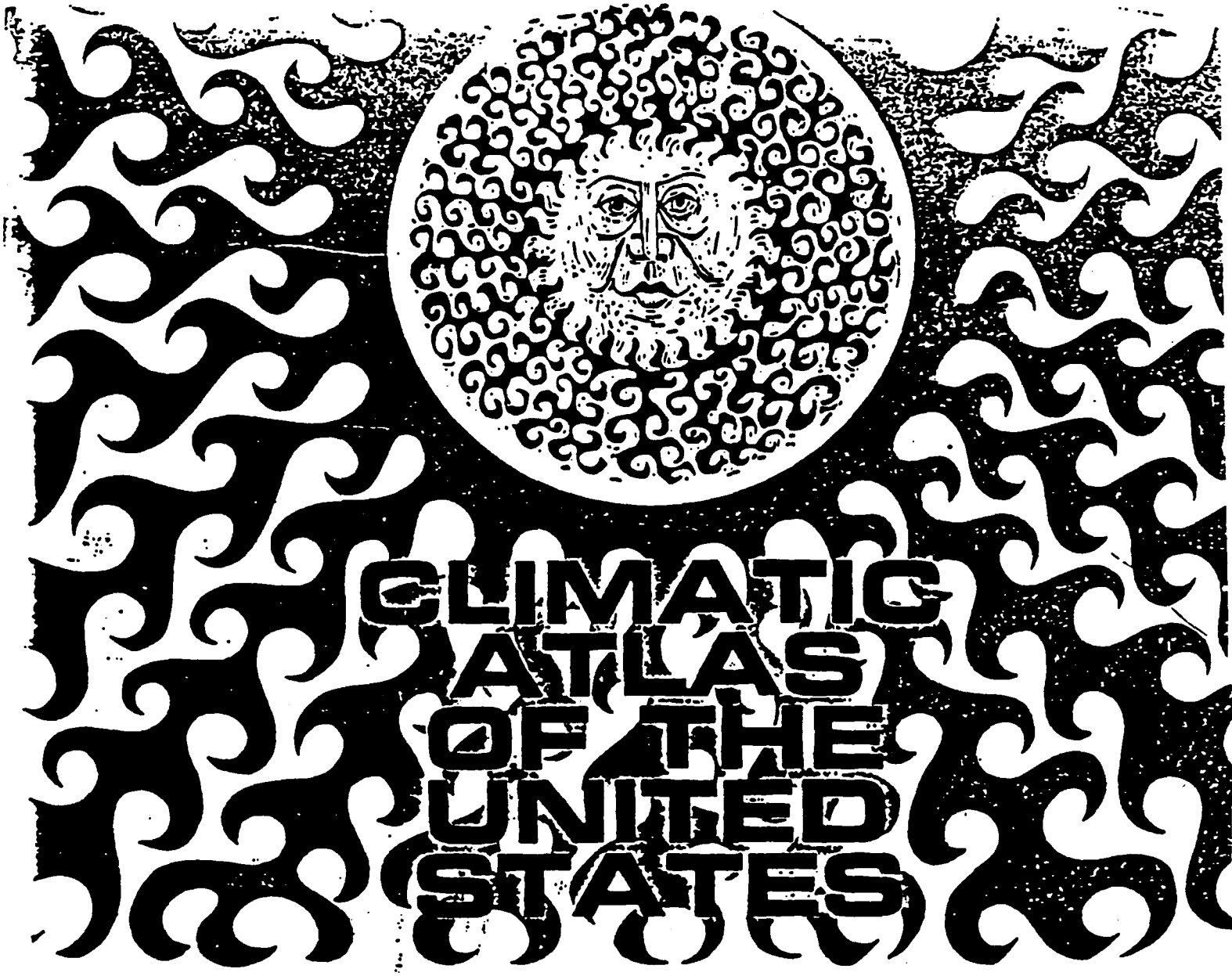
TABLE 13.—SUMMARY OF DATA ON WELLS IN MECKLENBURG COUNTY

ACCORDING TO ROCK TYPE

Type of Rock	Number of wells	Average depth (feet)	Yield (gallons a minute)			Percent of wells yielding 1 gallon a minute or less.
			Range	Average	Per foot of well	
Diorite	41	117	1—75	17.9	0.153	2
Granite	54	124	2—65	11.5	.092	0
All wells	95	132	1—75	14.3	.109	1

[1] Drilled wells 2 inches or more in diameter.

Ref. 17



CLIMATIC ATLAS OF THE UNITED STATES

RCE • Environmental Science Services Administration • Environmental Data Service

U.S. DEPARTMENT OF COMMERCE
C. R. Smith, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

JUNE 1968

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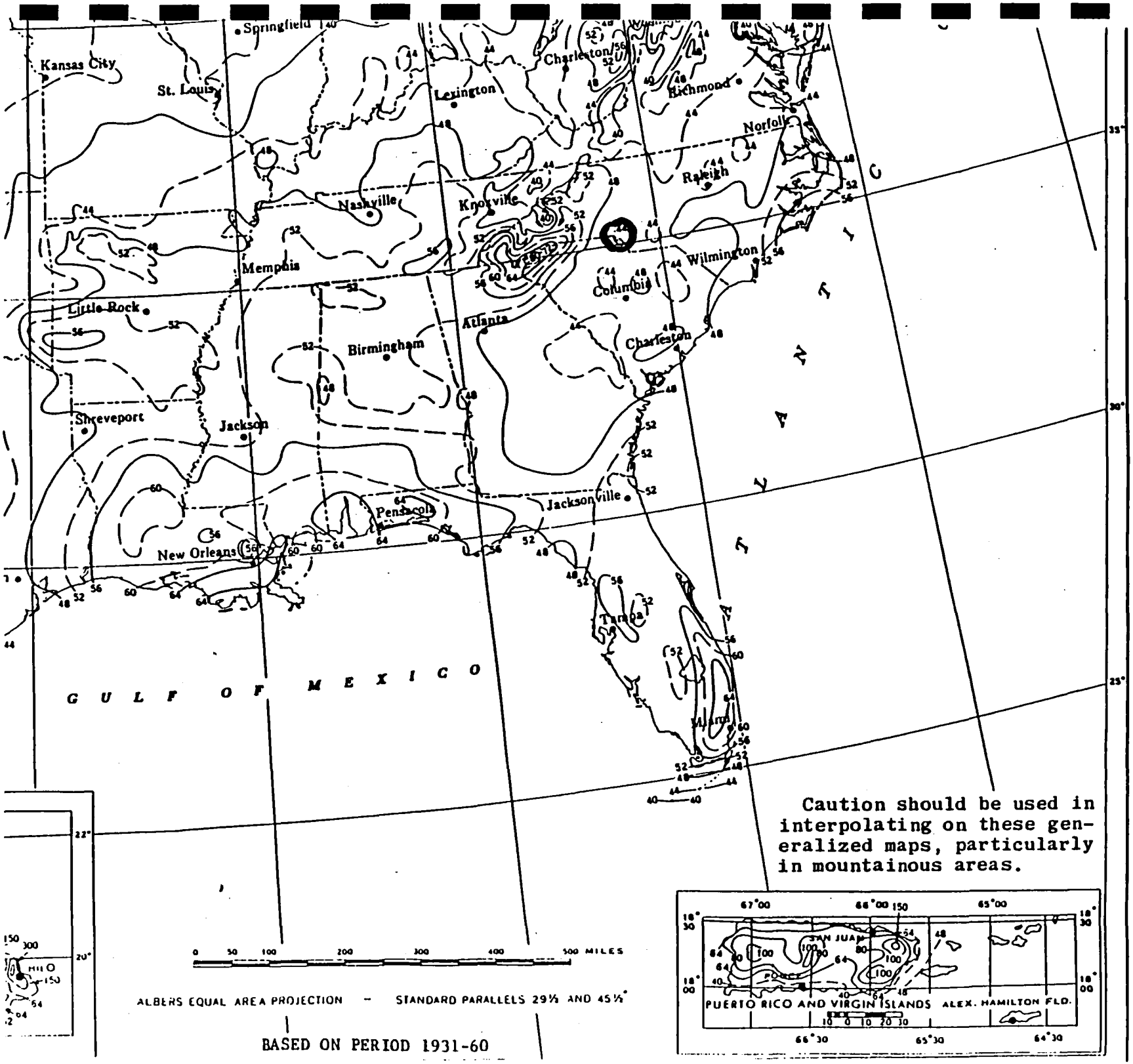
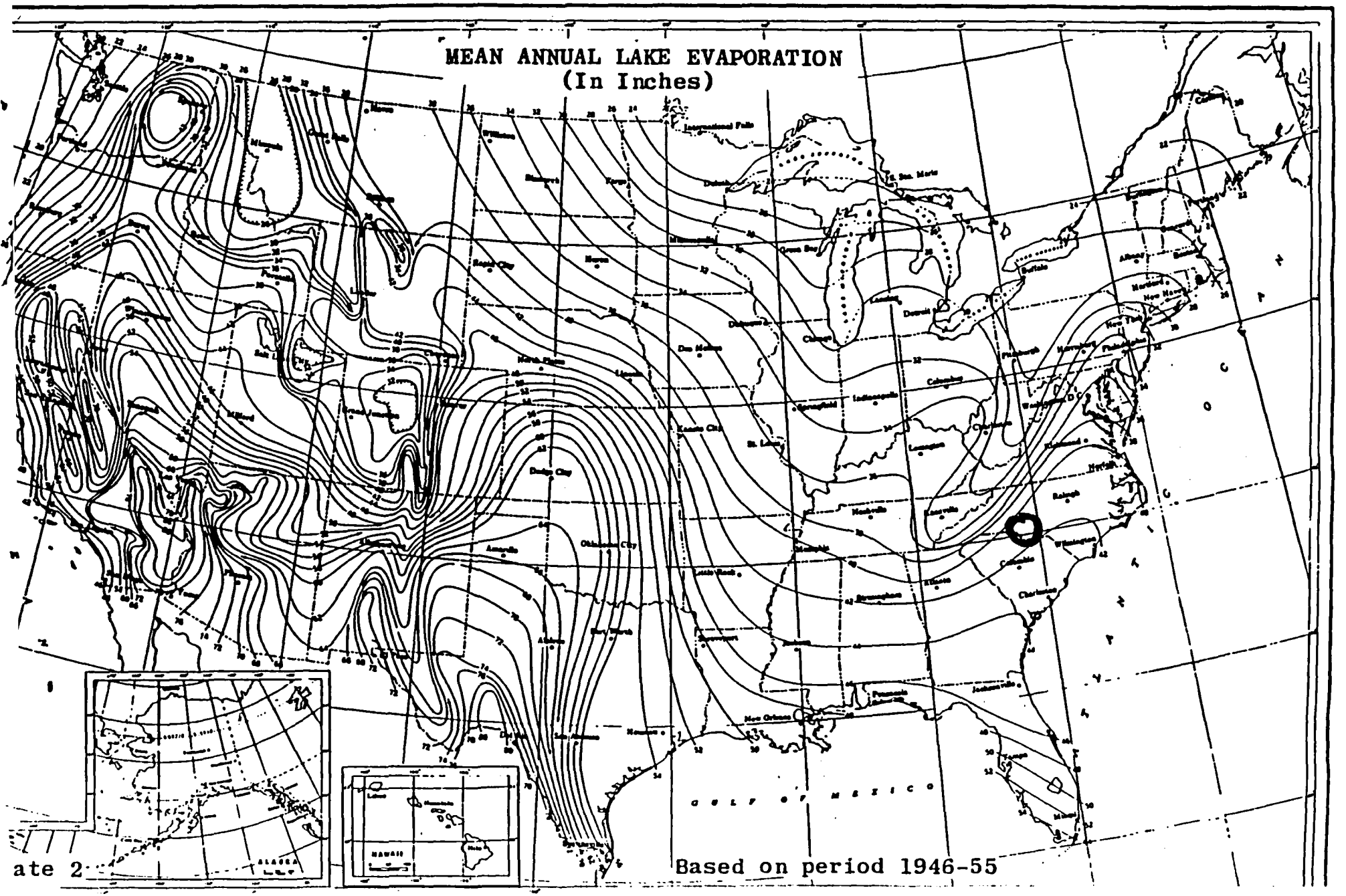
1983



Caution should be used in interpolating on these generalized maps, particularly in mountainous areas.

E EVAPORATION



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WEATHE
F. W. REICH

TECHNICAL PAPER NO. 40

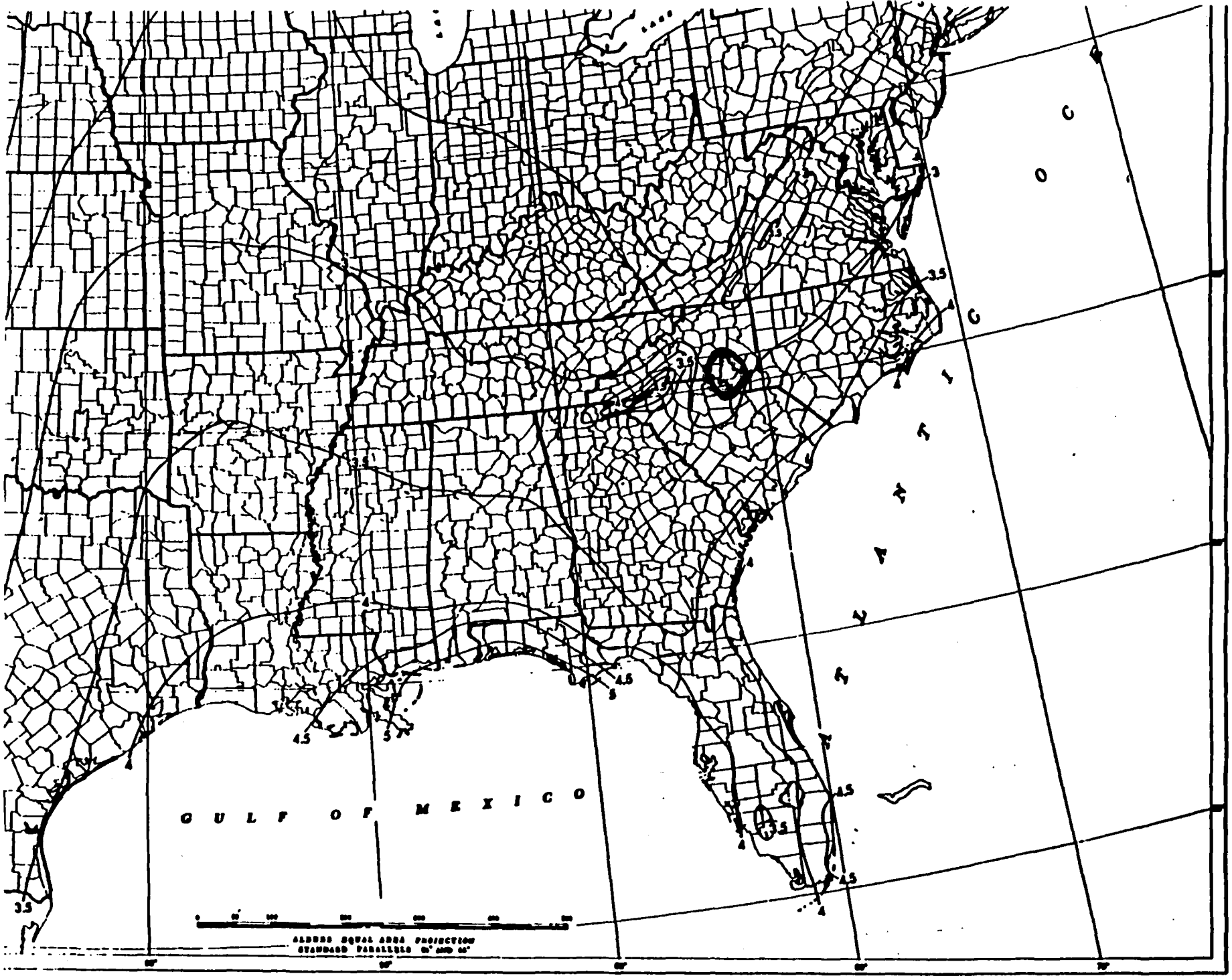
RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture

Ref. 18

PROPERTY
FTT


GULF OF MEXICO
ATLANTIC OCEAN
ALBERS EQUAL AREA PROJECTION
STANDARD PARALLELS 29° AND 45°

PRELIMINARY REPORT ON GROUNDWATER RESOURCES
OF
ROWAN COUNTY, NORTH CAROLINA

BY

MICHAEL R. GROVES, HYDROLOGIST

GROUNDWATER SECTION

GROUNDWATER SECTION

Harry M. Peek, Chief

DIVISION OF ENVIRONMENTAL MANAGEMENT

W. E. Knight, Director

NORTH CAROLINA DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES

George W. Little, Secretary

JULY 1976

	Thickness (feet)	Depth (feet)
Well N62 e-7 - continued		
Diorite, medium- to fine-grained, chiefly plagioclase, hornblende, olivine, biotite, some orthoclase, quartz, pyrite.....	70	310
Diabase, aphanitic, grayish-black to black, some feldspar phenocrysts, some pyrite.....	20	330
Gabbro, fine-grained phaneritic rock, general color is dark-gray, composed of plagioclase, hornblende, or pyroxene, some olivine, pyrite.....	90	420
Diorite, medium-grained, chiefly feldspars, pyroxene, some quartz, pyrite.....	20	440

total depth - 445 feet

Geophysical Logs

Geophysical logs of natural gamma radiation and electrical resistivity have been made in several wells in Rowan County. Figure 7 shows selected geophysical logs correlated with geologic data where available. The electrical resistivity logs show possible fractured zones by decreasing resistivity measurements. The fractured areas are assumed to be water entrance zones. Changes in natural gamma radiation indicate changes in lithology as shown in figure 7.

Groundwater in the Saprolite

Saprolite is chemically weathered rock material that has undergone all changes in place and has not undergone any erosional transport. Weathering rates vary from rock type to rock type depending on the mineral composition and their respective weathering properties. Weathering also varies from area to area dependent upon the degree of fracturing. The weathering rates in Rowan County are not variable from place to place because of climatic

differences. The county area is relatively small, and the entire county receives the same average precipitation.

The approximate saprolite thickness is shown in figure 8. This figure shows several areas of thin saprolite, probably associated with topographic and bedrock highs. The factors which would produce this situation are resistance to weathering by the bedrock or degradation by erosion. The figure also shows several areas of thick saprolite which may indicate holes or depressions in the bedrock surface.

The Carolina Slate Belt unit exhibits a fairly constant rate of weathering throughout, with most saprolite thickness in the range from 30 to 50 feet. The igneous rocks underlying the remainder of the county have a wide range of saprolite thicknesses that vary from rock type to rock type and within the same rock unit.

Groundwater in the saprolite occurs under water table conditions. The water occupies the interstices between the grains of the saprolite and is in hydrostatic balance with the atmosphere. The groundwater occurring under these conditions in the saprolite is the majority of the groundwater in storage in Rowan County.

The saprolite has a relatively low permeability as would be associated with a clay or a sandy clay mixture. The saprolite developed from the metavolcanic rocks contains more clay than that from the intrusive rocks. Horizontal and vertical permeabilities differ because the individual minerals have weathered in place and any lineation of mineral grains in the rock will be represented by varying permeability in the saprolite.

Groundwater in the Crystalline Rock Aquifer

In crystalline rocks groundwater occurs in the fractures, joints, faults,

and other openings in the rock. These openings intersect the top of the bedrock and are supplied groundwater by the water in storage in the overlying saprolite. When a well is constructed and intersects a fracture, water moves through the fractures, joints, and faults from the saprolite to the well.

In the granite and diorite-gabbro units the openings in the rocks are commonly either fractures, joints, or faults. The metavolcanic unit is different because, although it contains fractures, joints, and faults, it also contains the openings associated with slaty cleavage.

The joints occurring in the granitic bodies are vertical or near vertical with strikes in two main directions. Councill (1954) measured the strikes in various quarries in Rowan County and determined that there is one set striking in the direction of N. 10° E. to N. 70° E. and a second set striking from N. 10° W. to N. 70° W. Horizontal sheeting planes are also common near the surface of the bedrock. These joints and sheeting planes give three sets of openings which may be intercepted by a well.

The size of the openings supplying water to a well vary considerably in width. The width of a single fracture or joint is probably a tenth of an inch or less. Well contractors report fractures or openings of sufficient size to cause a noticeable drop by the drill bit. Geophysical logs made on wells (fig. 7) show that water entrances may be from fractured zones which may be as much as ten feet in width. These fractured zones when encountered at a depth below the bedrock surface are probably faults or faulted zones.

The groundwater in the crystalline rock aquifer is under artesian conditions. However, since most water-bearing fractures intersect the bedrock surface in the vicinity of the well, the artesian water level or potentiometric head is closely associated with the water table. Figure 9 shows the approximate depth to water from land surface based on reported water-level

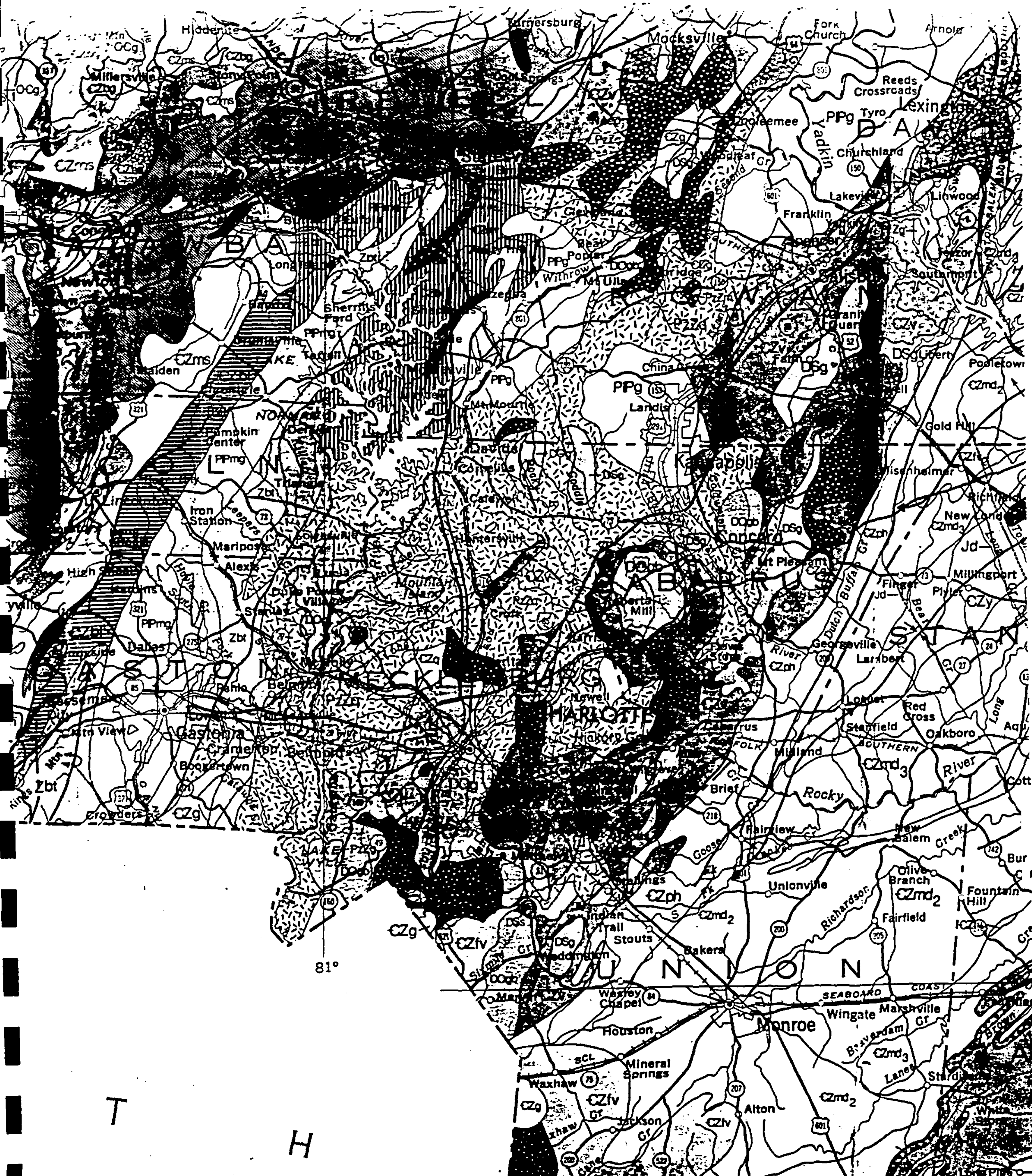
Ref. 20

Geologic Map of North Carolina

Department of Natural Resources and Community Development

Scale 1:500,000

1985



Hiddenite
Millersville
Mocksville
Fork Church
Arnold
Reeds Crossroads
Lexington
Cooleemee
Tyro
Yadkin
Churchland
Woodleaf
Franklin
Linwood
Southmont
Sherrills Ford
Maiden
China Grove
Landis
Gold Hill
Pumpkin Center
Iron Station
Triangle
Cornelius
Kannapolis
Concord
Mt Pleasant
Mariposa
Alexis
High Shoals
Stanley
Dallas
Huntersville
Gastonia
Cramerton
Belmont
Ranlo
Boogertown
Crowders
Newell
Cabarrus
Midland
Georgeville
Lambert
Locust
Stanfield
Red Cross
Oakboro
Millingport
Misenheimer
New London
Richfield
Fairview
Brief
Rocky
River
Unionville
New Salem
Olive Branch
Fountain Hill
Fairfield
Indian Trail
Stouts
Bakers
Weddington
Wesley Chapel
Monroe
Wingate
Marshville
Houston
Mineral Springs
Waxhaw
Alton
Jackson
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STATE OF NORTH CAROL

JAMES G. MARTIN, GOVERNOR

BELT,
AND
INORIUM

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tone, marble lenses

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anite occur locally;
quartzite, calc-silicate

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— Megacrystic, in

— Massive to
on east side

n, 409 my: 13) —
ontains biotite

— Poorly foliated;

CHARLOTTE AND MILTON BELTS

METAMORPHIC ROCKS

FINE-GRAINED BIOTITE GNEISS — Massive to strongly foliated; minor layers of amphibolite and muscovite schist

FELSIC MICA GNEISS — Interlayered with biotite and hornblende gneiss and schist

BIOTITE GNEISS AND SCHIST — Inequigranular and megacrystic; abundant potassic feldspar and garnet; interlayered and gradational with calc-silicate rock, sillimanite-mica schist, mica schist, and amphibolite. Contains small masses of granitic rock

METAVOLCANIC ROCK — Interbedded felsic to mafic tuffs and flowrock

MAFIC METAVOLCANIC ROCK — Metamorphosed basaltic to andesitic tuffs and flows, grayish green to black. Locally includes hypabyssal intrusives and minor felsic metavolcanic rock

€Zfv — FELSIC METAVOLCANIC ROCK — Metamorphosed dacitic to rhyolitic flows and tuffs, light gray to greenish gray; minor mafic and intermediate metavolcanic rock

€Zq — QUARTZITE — Massive to well foliated; contains andalusite, kyanite, or sillimanite, chloritoid, and pyrite

€Zph — PHYLLITE AND SCHIST — Minor biotite, pyrite, and sillimanite; includes minor quartzite

INTRUSIVE ROCKS

Jd — DIABASE — Dikes, gray to black

PIPg — GRANITIC ROCK (Pennsylvanian to Permian, 265-325 my; 11,9) — Megacrystic to equigranular. Churchland Plutonic Suite (Western group) - Churchland, Landis, and Mooresville intrusives

DSg — GRANITE OF SALISBURY PLUTONIC SUITE (Devonian to Silurian, 385-415 my; 5) — Pink, massive to weakly foliated. Gold Hill, Kannapolis, Salisbury, Southmont, and Yadkin intrusives

DSs — SYENITE OF CONCORD PLUTONIC SUITE (Silurian, 404 my; 9) — Includes the Concord ring dike

DOgb — GABBRO OF CONCORD PLUTONIC SUITE (Devonian to Ordovician, 399-479 my; 24) — Barber, Concord, Farmington, Mecklenburg, and Weddington intrusives

DOg — GRANITIC ROCK — Locally pinkish gray, massive to weakly foliated; contains hornblende

SHELTON GRANITE GNEISS (Silurian, 429 my; 21) — Poorly foliated, lineated granitic to quartz monzonitic gneiss

PzZg — METAMORPHOSED QUARTZ DIORITE — Foliated to massive

PzZg — METAMORPHOSED GABBRO AND DIORITE — Foliated to massive

METAMORPHOSED MAFIC ROCK — Metagabbro, metadiorite, and mafic plutonic-volcanic complexes

META-ULTRAMAFIC ROCK — Metamorphosed dunite and peridotite; serpentinite, soapstone, and other altered ultramafic rock. Only larger bodies shown

€Zg — METAMORPHOSED GRANITIC ROCK — Megacrystic, well foliated; locally contains hornblende

€Zy

€Zmd

€Zfv

€Zlv

€Zy

€Zve

€Zc

€Zph

Jd

PIPg

Pgb

PzZg

€Zg

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GROUNDWATER

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

Ref. 2.1

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Table 2.2 Range of Values of Hydraulic Conductivity and Permeability

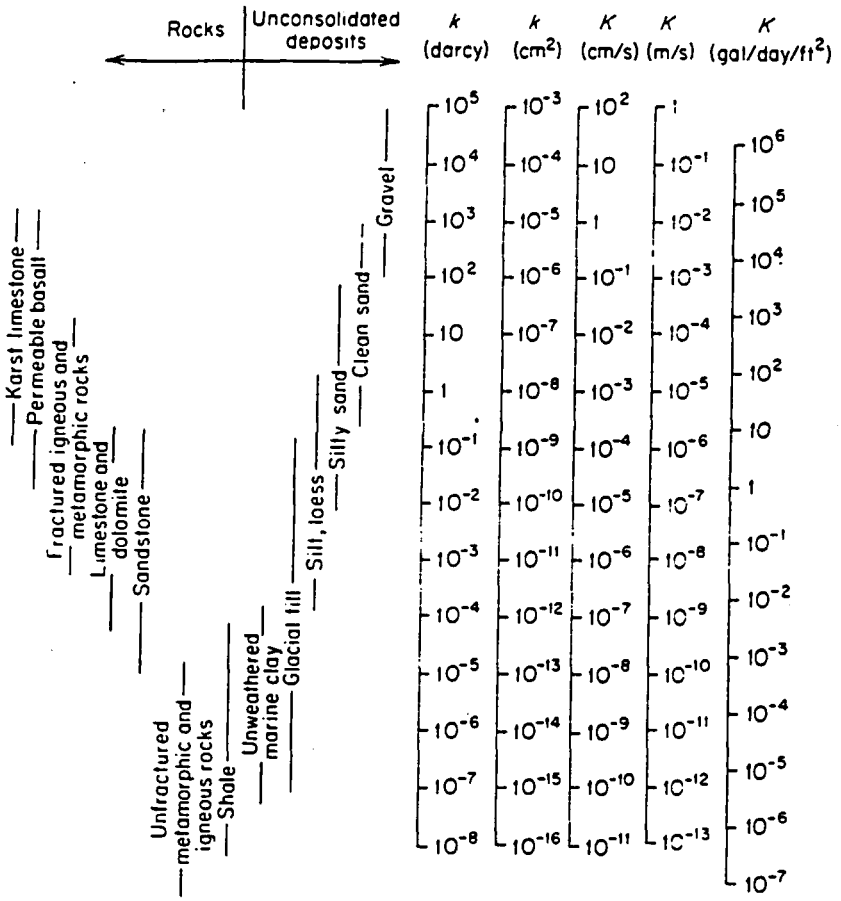

Table 2.3 Conversion Factors for Permeability and Hydraulic Conductivity Units

	Permeability, k*			Hydraulic conductivity, K		
	cm²	ft²	darcy	m/s	ft/s	U.S. gal/day/ft²
cm²	1	1.08×10^{-3}	1.01×10^{8}	9.80×10^{2}	3.22×10^{3}	1.85×10^{9}
ft²	9.29×10^{2}	1	9.42×10^{10}	9.11×10^{5}	2.99×10^{6}	1.71×10^{12}
darcy	9.87×10^{-9}	1.06×10^{-11}	1	9.66×10^{-6}	3.17×10^{-5}	1.82×10^{1}
m/s	1.02×10^{-3}	1.10×10^{-6}	1.04×10^{5}	1	3.28	2.12×10^{6}
ft/s	3.11×10^{-4}	3.35×10^{-7}	3.15×10^{4}	3.05×10^{-1}	1	6.46×10^{5}
U.S. gal/day/ft²	5.42×10^{-10}	5.83×10^{-13}	5.49×10^{-2}	4.72×10^{-7}	1.55×10^{-6}	1

*To obtain k in ft², multiply k in cm² by 1.08×10^{-3}.

ALSO check HRS MANUAL

NUS CORPORATION AND SUBSIDIARIES

Reference ~~Number~~

Ref. 22

CONTROL NO.	DATE: 9/20/88	TIME: 10:30 a.m.

DISTRIBUTION:

BETWEEN: Victor Espin	OF: Charlotte Municipal Utilities Division-Engineering Service	PHONE: (704) 399-2551

AND: Loften Carr, NUS Corporation

Loften Carr

DISCUSSION:

Are water lines present throughout a 4 mile radius of the intersection of Woodlawn and South Boulevard?

CMUD covers entire city. There are only a few places without service. Those without would only require a minor extention of water lines. York Road area has 24 inch water lines. Some people on private wells, but most have wterlines that they choose not to tie into.

All surface water, no wells, Charlotte gets water from intake at Mountain Island Lake on the Catauba River where Belhaven (NC/6) crosses the River. Slighthy north of this point.

Ref. 23

NUS CORPORATION AND SUBSIDIARIES		TELECON NOTE
CONTROL NO.	DATE: 9/23/88	TIME: 10:20 a.m.
DISTRIBUTION:		
BETWEEN: Wayne Chapman	OF: U. S. Fish & Wildlife N. C. Wildlife, District Fisheries Biologist	PHONE: (704) 782-9255
AND: Loften Carr, NUS Corporation		

DISCUSSION:

What type of fishing and recreational use is there on Little Sugar Creek?

Not much fishing pressure because of small fish population ;due to the fact that the creek is pretty polluted.

WOODS MOUNTAIN-SINGECAT RIDGE

COUNTYNAME: NCMCDO
QUADNAME: CELO
DIRECTIONS: FROM PARKING LOT AT JCT. OF NC 80 AND BLUE RIDGE PKY, FOLLOW DIRT ROAD TO HAZELNUT GAP, RIGHT ON WOODS MTN. TRAIL...
OWNER: USFS-PISGAH NF
SITEDESC:
PINE/OAK HEATH NATURAL COMMUNITY ON N-FACING OUTCROPS OF N-S RUNNING RIDGE (3500 FEET ELEV.) SUPPORTING HUDSONIA MONTANA POPULATION IS MAIN FEATURE. PLANTS INCL. PINUS PUNGENS, KALMIA LATIFOLIA WITH CASTANEA PUMILA, POTENTILLA TRIDENTATA, POLYTRICHUM JUNIPERINUM, CLADINA...
SIZE: 0 PRIORITY: A
RANKCOMM: FEDERALLY THREATENED PLANT SPECIES--MOUNTAIN GOLDEN HEATHER--ONLY POPULATION KNOWN OUTSIDE OF LINVILLE GORGE
PROTSTAT: NEEDS PROTECTION. HUDSONIA SUBJECT TO TRAMPLING

BACK CREEK SWAMP

COUNTYNAME: NCMECK
QUADNAME: HARRISBURG
DIRECTIONS: W SIDE OF SR 2827, 1/4 MI S OF NC 49

OWNER: PRIVATE
SITEDESC:
FREQUENTLY FLOODED BOTTOMLAND FOREST DOMINATED BY TULIP POPLAR, SWEETGUM, RED MAPLE, SLIPPERY ELM, WILLOW OAK, AND SYCAMORE. LUSH HERBACEOUS GROWTH INCLUDES 12 FERN SPECIES, INCLUDING RARE WOOD FERN (DRYOPTERIS SPINULOSA). SURROUNDED BY DRYER OAK-HICKORY-PINE FORESTS AND FARMLAND.
SIZE: 60 PRIORITY: C
RANKCOMM:

PROTSTAT: NO PROTECTION STATUS

GAR CREEK SCHWEINITZ'S SUNFLOWER SITE

COUNTYNAME: NCMECK
QUADNAME: MOUNTAIN ISLAND LAKE
DIRECTIONS: 1/4 MI W OF SR 2074 (BEATTY'S FORD RD) ON SAMPLE ROAD: SOUTH SIDE OF RD. BEHIND PUCKETT HOME AT BACK EDGE OF PASTURE.
OWNER: MR. E.M. PUCKETT
SITEDESC:
LARGEST INTACT POPULATION OF ENDANGERED SCHWEINITZ'S SUNFLOWER (HELIANTHUS SCHWEINITZII)(S1,G1) KNOWN AT THIS TIME. EDGE OF PINE-MIXED HARDWOOD UPLAND JUST ABOVE SLOPE TO CREEK. PLANTS AT INTERFACE WITH OLD PASTURE--CEDAR, LOBLOLLY PINE, PRIVET, LIGUSTRUM INVADING. GOOD SUNFLOWER REPRODUCTION.
SIZE: 4 PRIORITY: B
RANKCOMM: STATE ENDANGERED AND POTENTIAL FEDERAL ENDANGERED SPECIES.

PROTSTAT: 4A. MANAGEMENT AGREEMENT WITH TNC. ALSO PROPOSED FOR REGISTRY.

PROVIDENCE FLATS SWAMP

COUNTYNAME: NCMECK
QUADNAME: WEDDINGTON
DIRECTIONS: ON SOUTH SIDE OF PROVIDENCE ROAD (SR 3476), 1.1. MILE WEST OF ITS JUNCTION WITH NC 16. ON SE OUTSKIRTS OF CHARLOTTE.
OWNER:
SITEDESC:
LARGE, FLAT UPLAND SURFACE ON GABBRO. CLAY HARDPAN SOIL PONDS WATER. HIGH QUALITY UPLAND DEPRESSION SWAMP FOREST DOMINATED BY WILLOW OAK AND OVERCUP OAK-MOST EXTENSIVE EXAMPLE KNOWN.

SIZE: 0 PRIORITY: B
RANKCOMM: HIGH QUALITY RARE NATURAL COMMUNITY.

PROTSTAT: NO PROTECTION STATUS.

NOLICHUCKY RIVER GORGE

COUNTYNAME: NCMITC NCYANC
QUADNAME: CHESTOA, HUNTDALE
DIRECTIONS: NOLICHUCKY RIVER FORMS THE BORDER BETWEEN MITCHELL AND YANCEY COS.
OWNER: USFS-PISGAH NF
SITEDESC:
NO DATA ON VEGETATION. HARDWOOD SLOPE AND COVE FORESTS PREDOMINATE. SURVEY WORK NEEDED.

SIZE: 0 PRIORITY: C
RANKCOMM:

PROTSTAT: BEING STUDIED FOR NATIONAL WILD & SCENIC STATUS.

ROAN MOUNTAIN HIGHLANDS MEGASITE

COUNTYNAME: NCMITC NCAVER
QUADNAME:
DIRECTIONS:

OWNER:
SITEDESC:

SIZE: 0 PRIORITY:
RANKCOMM:

PROTSTAT:

EXPLANATION OF NC NATURAL HERITAGE PROGRAM DATABASE OUTPUT

Probably the most important database kept by the N.C. Natural Heritage Program is the one that tracks occurrences of elements of natural diversity (rare animals, rare plants, geologic features, special animal habitats). The output (printout) you have received is a subset of this very large database. Each record (an occurrence) is printed out in a particular format, the structure of which is explained below.

EOCODE: Internal coding for the element occurrence. The first letter indicates the kind of element:

A=vertebrate animal	N=nonvascular plant
G=geologic feature	P=vascular plant
I=invertebrate animal	S=special animal habitat

For vertebrates, the second letter indicates the order (taxonomic), with A=amphibians, B=birds, F=fish, etc. For vascular plants, the second letter indicates whether the plant is a monocot (M), dicot (D), pteridophyte (P), or gymnosperm (G). For nonvascular plants, the second letter indicates whether the plant is a bryophyte (B) or lichen (L).

The last 3 digits, following the decimal point, are the number of that occurrence of the species in the database. For plants, numbers with an H are occurrences reported from before 1935 which have not been found since. In some cases, H has also been used to indicate very vague records, or populations known to have been extirpated.

NAME: Scientific name of the element.

COMNAME: Common name of the element.

FEDSTAT: Federal status of the species, from Endangered & Threatened Wildlife and Plants, April 10, 1987. 50 CFR 17.11 & 17.12. Department of Interior. Established by the Endangered Species Act of 1973, as amended.

LE = Taxa currently listed as Endangered
LT = Taxa currently listed as Threatened
PE = Taxa currently proposed for listing as Endangered
PT = Taxa currently proposed for listing as Threatened
Taxa under review for possible listing ("candidate species"):
C1 = Taxa with sufficient information to support listing
C2 = Taxa without sufficient information to support listing

STATESTAT: Status of the species in North Carolina. For plants, from Sutter, R.D., L. Mansberg, and J.H. Moore. 1983. Endangered, threatened, and rare plant species of North Carolina: a revised

list. ASB Bulletin 30:153-163, and updated lists of the Natural Heritage and Plant Conservation Programs.

E = Endangered
T = Threatened
SC = Special Concern
PP = Primary Proposed
SR = Significantly Rare

E,T,and SC species are protected by state law (the Plant Protection an Conservation Act, 1979); the other two categories indicate rarity and the need for population monitoring, as determined by the Plant Conserv tion and Natural Heritage Programs.

For animals, from Cooper, J.E., S.S. Robinson, and J.B. Funderbur (Eds.). 1977. Endangered and Threatened Plants and Animals of North Carolina. N.C. Museum of Natural History, Raleigh, NC. 444 pages + i-xvi.

E = Endangered
T = Threatened
SR = Sifnificantly Rare
SC = Special Concern
UNK = Undetermined
EX = Extirpated

GRANK: Nature Conservancy "global rank."

G1 = Critically imperiled globally because of extreme rarity or otherwise very vulnerable to exinction throughout its range.
G2 = Imperiled globally because of rarity or otherwise vulnerable to extinction throughout its range.
G3 = Either very rare and local throughout its range, or found locally in a restricted area.
G4 = Apparently secure globally, though it may be quite rare in parts of its range (especially at the periphery).
G5 = Demonstrably secure globally, though it may be quite rare i: parts of its range (especially at the periphery).
GU = Possibly in peril but status uncertain; need more informati
GX = Believed to be extinct throughout range.
Q = a suffix attached to the Global Rank indicating questionabl taxonomic status.
T_ = an additional status for the subspecies or variety; the G r then refers only to the species as a whole.

SRANK: Nature Conservancy state rank. Coding similar to global ranks.

COUNTYNAME: Acronym for the county. In general, this is the first four letters of the county name.

QUADNAME: USGS quad map name, at 7.5 minute scale when available.

PRECISION: The precision with which the location can be mapped from the available information: S=seconds (hundreds of feet), M=minutes (up to 1.5 mile radius), G=general (to a place name only, or up to 5 mile radius).

LAT, LONG: Latitude and Longitude coordinates for the center of the occurrence.

LASTOBS: Year, month, and day the element was last observed.

DIRECTIONS: How to find the site.

GENDESC: General description. A word picture of the site, describing the habitat.

ELEV, SIZE: Elevation and size of the occurrence.

EODATA: Information on number, size, condition, and other relevant information on the element occurrence.

COMMENTS: Additional information on the occurrence, the site, or sources of information.

SITENAME: Name of the site as standardized by the Natural Heritage Program for internal use. Many sites do not have a name.

OWNER: Name of owner of the site (some abbreviations used).

SPECSTAT: Codes indicating special status of the site.

AEC=Area of Environmental Concern
DED=Dedicated State Nature Preserve
ESN=National Estuarine Sanctuary
EWA=Established Wilderness Area
EAN=Conservation Easement
NNL=National Natural Landmark
NPK=National Park
NPY=National Parkway
NSH=National Seashore
RHA=Registered Natural Heritage Area
RNA=Research Natural Area (USFS)
SPK=State Park (incl. State Natural Areas)
ORW=Outstanding Resource Water
WSR=Wild and Scenic River
...and a few others, infrequently used

OWNERCOM: Comments on ownership.

PROTCOMM: Comments on need for additional protection for the element.

MGMTCOMM: Comments on need for management of the site for the element.

SOURCE: Best source of information on the element occurrence.

NORTH CAROLINA NATURAL HERITAGE PROGRAM ELEMENT LIST

scientific and common name	state stat	fed stat	state rank	glob rank
ETHEOSTOMA COLLIS CAROLINA DARTER	SC		S3	G3
HYBOPSIS ZANEMA SANTEE CHUB	SC		S3	G3?
UPLAND DEPRESSION SWAMP FOREST			S2	G3
TORTULA PROPAGULOSA BUDDING TORTULA	PP		S1S2	G1G2
ANEMONE BERLANDIERI SOUTHERN THIMBLEWEED	PP		S1	G3G4
BOTRYCHIUM JENMANII ALABAMA GRAPE FERN	SR		S1	G3G4
CAREX PROJECTA NECKLACE SEDGE	PP		S1	G5
DENTARIA MULTIFIDA DIVIDED TOOTHWORT	SR		S1	G5Q
ECHINACEA PALLIDA PALE CONEFLOWER	PP		S1	G4G5
ECHINACEA PURPUREA PURPLE CONEFLOWER	SR		SH	G4G5
HELIANTHUS SCHWEINITZII SCHWEINITZ'S SUNFLOWER	E	C1	S1	G1
LOTUS PURSHIANUS VAR HELLERI HELLER'S TREFOIL	SR		S2	G4G5T
NESTRONIA UMBELLULA NESTRONIA	T	C2	S3	G3G4

EXPLANATION OF SPECIES STATUS CODES

The attached output from the N.C. Natural Heritage Program database is a listing of the elements (rare species, geologic features, natural communities, special animal habitats) known to occur in your geographic area of interest. Following is an explanation of the four columns of status codes on the righthand side of the printout.

STATE STATUS

Plants:

From Sutter, R.D., L. Mansberg, and J.H. Moore. 1983. Endangered, threatened, and rare plant species of North Carolina: a revised list. ASB Bulletin 30:153-163, and updated lists of the Natural Heritage and Plant Conservation Programs.

E = Endangered
T = Threatened
SC = Special Concern
PP = Primary Proposed
SR = Significantly Rare

E,T,and SC species are protected by state law (the Plant Protection and Conservation Act, 1979); the other two categories indicate rarity and the need for population monitoring, as determined by the Plant Conservation and Natural Heritage Programs.

Animals:

From Cooper, J.E., S.S. Robinson, and J.B. Funderburg (Eds.). 1977. Endangered and Threatened Plants and Animals of North Carolina. N.C. Museum of Natural History, Raleigh, NC. 444 pages + i-xvi, and updated lists of the Natural Heritage Program.

E = Endangered
T = Threatened
SR = Significantly Rare
SC = Special Concern
UNK= Undetermined
EX = Extirpated

FEDERAL STATUS

From Endangered & Threatened Wildlife and Plants, April 10, 1987. 50 CFR 17.11 & 17.12. Department of Interior. Established by the Endangered Species Act of 1973, as amended.

E = Taxa currently listed as Endangered
T = Taxa currently listed as Threatened
PE = Taxa currently proposed for listing as Endangered
PT = Taxa currently proposed for listing as Threatened

Taxa under review for possible listing ("candidate species"):

C1 = Taxa with sufficient information to support listing
C2 = Taxa without sufficient information to support listing

GLOBAL RANK (STATE RANK)

The Nature Conservancy's system of measuring rarity and threat status. "Global" refers to worldwide, "State" to statewide.

G1 = Critically imperiled globally because of extreme rarity or otherwise very vulnerable to exinction throughout its range.

G2 = Imperiled globally because of rarity or otherwise vulnerable to extinction throughout its range.

G3 = Either very rare and local throughout its range, or found locally in a restricted area.

G4 = Apparently secure globally, though it may be quite rare in parts of its range (especially at the periphery).

G5 = Demonstrably secure globally, though it may be quite rare in parts of its range (especially at the periphery).

GU = Possibly in peril but status uncertain; need more information.

GX = Believed to be extinct throughout range.

Q = a suffix attached to the Global Rank indicating questionable taxonomic status.

T_ = an additional status for the subspecies or variety; the G rank then refers only to the species as a whole.

State rank codes follow the same definitions, except substitute the words, "in the state," for "globally" or "throughout its range."

Ref. 26

Enter the next ring distance
SEMS> 3.4

Enter the next ring distance
SEMS>
No city found ! press RETURN to try again.

COVERAGE
========

STATE	COUNTY	STATE NAME	COUNTY NAME
37	71	North Carolina	Gaston Co
37	119	North Carolina	Mecklenburg Co
37	179	North Carolina	Union Co

CENTER POINT AT STATE : 37 North Carolina
COUNTY : 119 Mecklenburg Co

Press RETURN key to continue...

REGION OF THE COUNTRY
==========

Zipcode found: 28279 at a distance of 0.3 Km

STATE	CITY NAME	COMMUNITY	FIPSCODE	LATITUDE	LONGITUDE
NC		CHARLOTTE	37119	35.2300	80.8483

Press RETURN key to continue ...

CENSUS DATA
==========

Smith Metal & Iron Company
LATITUDE 35:13:50 LONGITUDE 80:51: 5 1980 POPULATION

KM	0.00-.400	.400-.810	.810-1.60 (1mile)	1.60-3.20	3.20-4.80	4.80-6.40 (4miles)	SECTOR TOTALS
1	0	370	0	4978	4651	0	9999
S 2	0	0	0	5523	3128	2754	11405
S 3	0	0	1024	4772	8925	12779	27500
4	0	93	0	3857	7656	7076	18682
S 5	0	0	1255	2960	6452	9879	20546
S 6	0	183	27	4586	4261	6129	15186
7	573	0	1070	2904	5401	7023	16971
8	0	0	2248	4805	5735	4590	17378

5624
646
573
1 mile → 6,843
4 miles → 137,667

TOTALS

Press RETURN key to continue ...

STAR STATION

INDEX NUMBER	STATION NAME	LATITUDE DEGREE	LONGITUDE DEGREE	PERIOD OF RECORD	STABILITY CLASSES	DISTANCE (km)
13881	CHARLOTTE/DOUGLAS NC	35.2167	80.9333			6 7.59
93804	SPARTANBURG MEM SC	34.9167	81.9500			6105.30
13807	WINSTON SALEM/S RE/N	36.1333	80.2333			6114.76
13723	GREENSBORO/SSC-HI NC	36.0833	79.9500			6124.83
93870	GREENVILLE-SPARTANBU	34.7000	82.2167			6129.47
13883	COLUMBIA/MET SC	33.9500	81.1167			6144.32
13812	ASHEVILLE NC	35.4333	82.5333			6154.09

Press RETURN key to continue ...

U.S. SOIL DATA

STATE : NORTH CAROLINA

LATITUDE : 35:13:50 LONGITUDE : 80:51: 5
THE STATION IS INSIDE H.U. 3050103

GROUND WATER ZONE	:	8		
RUNOFF SOIL TYPE	:	2		
EROSION	:	1.1950E-03		CM/MONTH
DEPTH TO GROUND WATER BETWEEN	:	3.0000E+02	AND 1.0000E+03	
FIELD CAPACITY FOR TOP SOIL	:	7.2000E-02		
EFFECTIVE POROSITY BETWEEN	:	1.0000E-02	AND 1.0000E-01	
SEEPAGE TO GROUNDWATER BETWEEN	:	4.6330E+02	AND 9.2660E+02	CM/MONTH
DISTANCE TO DRINKING WELL	:	2.0000E+04		CM

Press RETURN key to continue ...

U.S. CITY

MENU: Geodata Handling Data List procedures

1. Site level retrieval of data (SITERET)
2. Access Census Data (CENSUS)
3. Determine County Coverage (COVERAGE)
4. Geographic Data Management (GEODM)
5. HUCODE/SOIL locator (HUCODE)
6. Convert to Lat/Long (LATLON)
7. Lookup/Examine Star Station Data (STAR)
8. Find US cities (USCITY)
9. Find Soil Survey Status of Counties (SSURVEY)

Enter an option number or a procedure name (in parentheses)
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS>

```
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS>

Enter an option number or a procedure name (in parentheses)
or a command: HELP, HELP option, BACK, CLEAR, EXIT, TUTOR
GEMS> EXIT

Type YES to confirm the EXIT command; type NO to restart GEMS
GEMS> YES
$
$ LOGOUT
 WRT          logged out at 20-FEB-1990 15:10:11.17
 Itemized resource charges, for this session, follow:

NODE: JAXTM1
ACCT: NTIS                          START TIME:    20-FEB-1990 15:04:55.89
PROC: NTISNUCN                      FINISH TIME:   20-FEB-1990 15:10:11.17
USER: JRT                           BILLING PERIOD:900201
UIC:  [000750,000112]               WEEKDAY:       TUESDAY
BAUD:                               TERMINAL PORT: VTA267

DESCRIPTION OF CHARGE                QUANTITY              EXPENDITURE
-----------------------------------------------------------------------

  ALL CHARGE LEVELS
    300  baud          (Seconds)        315                    0.7875
    CPU TIME           (Seconds)          6                    0.3967
                                                            -----------
    TOTAL FOR THIS SESSION                                $     1.1842
NODE 3157  HOST 1038: DROPPED BY HOST
please log in: X

error, type user name:
```

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

MEMORANDUM

DATE: May 18, 1990

SUBJECT: CITIZEN SUIT
Committee to Preserve and Restore Third Ward, Inc. and the Third Ward Neighbors' Association, Plaintiffs, and Mr. Elliott Schwartz and Schwartz & Son, Inc., proposed Defendants

FROM: Elaine G. Levine
Assistant Regional Counsel
Hazardous Waste Law Branch

TO: Patrick Tobin
Director
Waste Management Division

At the request of Anne Heard, I am delivering to you letter notice of intent to file a citizens suit from the two neighborhood associations listed above against Mr. Elliott Schwartz under the provisions of RCRA, TSCA, CERCLA and the CWA. Also enclosed is a letter (which was attached to the notice letter) from the above-described plaintiffs to Mr. Elliott Schwartz regarding the plaintiffs' intentions to file such a suit and the basis for their case.

The plaintiffs allege that there is PCB contamination on a 13.6-acre tract of property owned by Mr. Schwartz or by his company, Schwartz & Son, Inc. The documents indicate that the Schwartz family currently owns the property and used it until 1977 to operate a scrap metal business. The plaintiffs maintain that the contamination is a result of the intentional cracking open and dumping out of transformers to reclaim metal.

We need to know as soon as practicable the nature and extent of any EPA activity involving this Site and whether EPA should should take any actions at the Site.

cc: James H. Scarbrough
Robert Jourdan
Doug Lair
Howell K. Lucius
Doug Mundrick

Printed on Recycled Paper

ROBINSON, BRADSHAW & HINSON, P.A.
ATTORNEYS AT LAW
1900 INDEPENDENCE CENTER
101 NORTH TRYON STREET
CHARLOTTE, NORTH CAROLINA 28246

RUSSELL M. ROBINSON, II
ROBERT W. BRADSHAW, JR.
ROBIN L. HINSON
ROBERT C. SINK
A. WARD MCKEITHEN
GIBSON L. SMITH, JR.
GRAHAM D. HOLDING, JR.
CARL E. JOHNSON, JR.
RICHARD A. VINROOT
CLAUDE O. FREEMAN, JR.
WILLIAM T. GRAVES
JOHN R. WESTER
MARTIN L. BRACKETT, JR.
ROBERT S. LILIEN
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PETER C. BUCK
ROBERT M. BRYAN
CHRISTY EVE REID
ROBERT G. GRIFFIN
EDWIN F. LUCAS, III
MOLLY B. GRIFFIN
J. DICKSON PHILLIPS, III
THOMAS B. HENSON
EVERETT J. BOWMAN
DAN T. COENEN
PATRICIA B. THRONEBURG
HAYNES P. LEA
CAROLINE W. SINK
HENRY H. RALSTON
HERMAN SPENCE, III
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MARK W. MERRITT
KEN R. BRAMLETT, JR.
GARLAND S. CASSADA
ROBERT W. FULLER
KENT J. MCCREADY
DAVID C. WRIGHT, III
LOUIS A. BLEDSOE, III
CHRISTOPHER W. LOEB
D. BLAINE SANDERS
ROBERT W. SIMMONS
RICHARD W. GIBSON, JR.
STOKELY G. CALDWELL, JR.
WILLIAM M. EVANS
STEPHEN M. LYNCH
BARRY M. WERTHEIMER
CAMMIE R. HAUPTFUHRER
ALLAIN C. ANDRY, III
JOHN B. ORGAIN, III
JANE S. RATTEREE
JOHN J. ROONEY
LOIS L. SHEPHERD
RICHARD B. WHISNANT
CAROLINE T. WILSON
BENJAMIN W. BALDWIN
MARTHA A. CROMARTIE
MARY CATHERINE ANDRY
DAVID R. WILES
ALAN M. RULEY
JOHN B. GARVER, III
RICHARD L. MACK
EDWARD F. HENNESSEY, III
ALLEN K. ROBERTSON
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1939-1986

H. PATRICK TAYLOR, JR.
JOHN M. CONLEY
COUNSEL

TELEPHONE
(704) 377-2536

TELECOPIER
(704) 376-2226

TELEX
802046

WRITER'S DIRECT DIAL

(704) 377-8329

April 26, 1990

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Administrator of the Environmental
Protection Agency
401 M Street, SW
Washington, DC 20460

Regional Administrator, EPA-IV
345 Courtland Street, NE
Atlanta, Georgia 30365

Chief Administrative Officer, Division
of Solid and Hazardous Waste Management
North Carolina Department of Environmental
Health and Natural Resources
512 North Salisbury Street
Raleigh, North Carolina 27604

Ms. Brenda Smith, Regional Supervisor
Division of Environmental Management
North Carolina Department of Environmental
Health and Natural Resources
919 North Main Street
Post Office Box 950
Mooresville, North Carolina 28115

Mr. Elliott Schwartz
c/o Mark E. Fogel, Esquire
5 West Hargett Street
Post Office Box 1189
Raleigh, North Carolina 27602

Re: Notice of Citizens Suit -- Elliott Schwartz Property
North Carolina Site No. D024488025(EPA) (Smith Metal and
Iron Company, Charlotte, North Carolina 28230)

Dear Sir or Madam:

We represent the Committee to Preserve and Restore Third Ward, Inc. and the Third Ward Neighbors' Association in connection with their efforts to clean up the above-referenced property. This is a notice of intent to file a citizens suit against Mr. Elliott Schwartz under the provisions of one or more of the following: the Resource Conservation and Recovery Act, the Toxic Substances Control Act, Comprehensive Environmental Response, Compensation and Liability Act, and the Clean Water Act. We have enclosed a letter from leaders in these two neighborhood organizations which more fully sets out these citizens' complaints and demands. We are hereby serving this and the enclosed notice on you in accordance with the notice requirements for these statutes as set out in the various provisions of the Code of Federal Regulations.

Our understanding is that the City of Charlotte has contracted to buy part or all of this land and to spend a certain, limited amount of money to clean up part of it. On behalf of the citizens in the neighborhood, who live immediately adjacent to and downgradient from the contaminated property, we intend to see that the entire site is cleaned up to standards acceptable for a residential neighborhood.

Please feel free to contact the undersigned attorneys with any questions about this matter.

Very truly yours,

ROBINSON, BRADSHAW & HINSON, P.A.

Everett J. Bowman

Everett J. Bowman

Richard B. Whisnant

Richard B. Whisnant

Enclosure
cc: Dr. Mildred Baxter Davis
Mr. Darrel Williams

April 22, 1990

BY CERTIFIED MAIL

Mr. Elliott Schwartz
c/o Mark E. Fogel, Esq.
5 West Hargett Street
P.O. Box 1189
Raleigh, N.C. 27602

Dear Mr. Schwartz:

We write as representatives of the Third Ward neighborhood in Charlotte, North Carolina. Our neighborhood adjoins a 13.6 acre tract (the "Schwartz property"), comprised of approximately thirty-five individual tracts, which you own either individually or as controlling shareholder of Schwartz & Son, Inc. We understand that the Schwartz family has been in possession of part of this property since the early 1930s and used it to operate a scrap metal business until 1977, when you leased the site to Smith Metal and Iron Company to continue the scrap metal business.

Several environmental assessments of the Schwartz property, commissioned by you and by others, have revealed extensive contamination on the site. There is PCB contamination, apparently the result of the intentional cracking open and dumping out of transformers to reclaim metal. There is petroleum-based contamination, presumably from the cracking open and dumping of motor blocks and the open storage of petroleum products. There is lead contamination, possibly from the storage of automobile batteries. The production process of the scrapyard produced large quantities of ash from a sweat furnace. Other metal and organic compounds found in the soil and water which exceed state and federal standards, include: Bis (2-Ethylhexyl) Phthalate, cadmium, chloroform, chromium, copper, and nickel.

This is a neighborhood which is working hard to restore its status as a safe and secure place for Charlotteans of all ages, races and income levels to live. Your contaminated property is a primary threat to our residential redevelopment effort. It has also seriously diminished and damaged the value of property in our neighborhood.

Just over one year ago, the Charlotte *Observer* publicized the PCB contamination at the site, where for years we walked, exercised our pets, and let our children play. You belatedly fenced off the area where the worst contamination apparently exists--the parcel owned since the 1930s by your family. We have waited anxiously for some further remediation action by you since that adverse publicity one year ago. You assured our

representative, through your attorney, Mr. Fogel, on June 21, 1989, that you would have the site characterized and some remediation plan in place within two to two and a half months. As of this date, nothing has been done.

This inaction and intransigence is intolerable. As the owner or former owner of the property, you are responsible for the cleanup.

This is to give you formal notice of our intention to file a lawsuit against you for violations of the Toxic Substances Control Act (TSCA), the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Clean Water Act (CWA). We shall add as pendant state claims any other legal violations you have committed against us, such as those under North Carolina's Oil and Hazardous Substance Pollution Act. Each of the federal statutes noted gives you sixty days following this notice, under certain circumstances, to remedy the violations before we file a complaint against you. By copies of this letter, we are informing the relevant personnel at the Environmental Protection Agency and in the State of North Carolina of our intention to sue to protect our neighborhood.

We have reviewed the situation at the Schwartz property, your inaction and these statutes with counsel and are now choosing a law firm to represent us in the litigation. We are apprised of the following violations of federal law for which you are responsible. We expect to sue you for all or part of these violations, pending our further investigation and advice.

You are in violation of TSCA, 15 U.S.C. § 2601 *et seq.*, and more particularly, the regulations issued under § 6(e) of TSCA governing the disposal, storage, marking and record-keeping of polychlorinated biphenyls (PCBs). See 40 C.F.R. Part 761.

You are responsible for PCB contamination, an "imminently hazardous chemical substance or mixture," in a residential area. 15 U.S.C. § 2606(a)(1).

As the owner of a disposal facility for hazardous wastes regulated under RCRA, you are in violation of RCRA permitting requirements. See 42 U.S.C. § 6925. As the owner of a facility in which wastes are stored and treated along with soils contaminated by spills, you are likewise in violation of RCRA permitting requirements.

You are also in violation of regulations governing the management of hazardous waste facilities, particularly in respect of failure to protect groundwater, follow closure procedures, follow post-closure procedures, and demonstrate financial responsibility. See 40 C.F.R. Part 265.

You are also a person who has contributed to past handling, storage, treatment, transportation or disposal of waste which may present an imminent and substantial endangerment to health and the environment. *See* RCRA § 7003, 42 U.S.C. § 6973.

You are liable under CERCLA as the owner or operator of a facility from which hazardous substances have been released into the environment. See 42 U.S.C. § 9607(a). These releases have both generated response costs and have injured, destroyed, and resulted in the loss of natural resources. See 42 U.S.C. 9607(a)(4)(C).

Finally, the groundwater pollution on the Schwarz property may make its way into the navigable waters of the United States, and thus violate the CWA. The CWA prohibits and imposes liability for discharges of oil and hazardous substances into the waters of the United States. 33 U.S.C. § 1321.

The activities that constitute these violations are those same activities, best known to you, that created the environmental insult in our neighborhood: the breaking and dumping out of transformers and motor blocks, the improper storage of lead-acid batteries, the dumping of ash from the sweat furnace, and the various other scrapyard processes that caused the contamination.

In addition, further violations are created and ongoing due to your refusal, to date, to clean up the contamination. For example, the filling in and grading over of contaminated soil is an inadequate and illegal disposal practice under RCRA.

For such practices, we shall hold you accountable. The dates of these violations, to the best of our knowledge, began with your family's operation of the scrapyard in the 1930s and are ongoing today.

Unless you act within the next sixty days to remedy this contamination completely, we shall file suit in the United States District Court for the Western District of North Carolina. We have retained the law firm of Robinson, Bradshaw & Hinson, P.A. to represent us in this suit. Please contact Mr. Robert C. Sink (704/377-2536) of that firm with any response you may make to this demand that you take action.

Sincerely,

THE COMMITTEE TO PRESERVE AND RESTORE
THIRD WARD, INC.

by: Mildred Baxter Davis

Dr. Mildred Baxter Davis, President

THIRD WARD NEIGHBORS ASSOCIATION

by: _____

Darryl Williams, Vice President

cc: U.S. Environmental Protection Agency
N.C. Dept. of Solid and Hazardous Wastes