POOR LEGIBILITY

PORTIONS OF THIS DOCUMENT MAY BE UNREADABLE, DUE TO THE QUALITY OF THE ORIGINAL

NUS CORPORATION
NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE, SUITE 20
TUCKER, GEORGIA 30084
404-938-7710

Felicia

our 25th year

C-586-2-7-50

#7131

February 13, 1987

Mr. Richard D. Green
Emergency and Remedial Response Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Chloride Metals
Preliminary HRS Score
Florence, Mississippi
TDD #: F4-8406-03

Dear Mr. Green:

FIT conducted a review of the Site Screening Investigation Report (TDD No. F4-8406-03) for the Chloride Metals site in Florence, Mississippi in an attempt to prepare an HRS package for the site. An observed release of contaminants to the surficial aquifer, at depths of less than 40 feet, was indicated in the investigation report. However, communication with Mr. Bill Taylor, Supervisor of the Water and Sewer Department in Florence, Mississippi indicated that the drinking water needs of the population within a three-mile radius of the site were served by the City of Florence and the Rural Water Association. The municipal water supply is produced from wells completed in the Cockfield formation at depths of approximately 1,000 feet below the surface. The Cockfield sands are overlain by the Yazoo Clay, an impervious layer some 350-450 feet thick.

Mr. Taylor indicated that less than 20 private wells could be identified within a three-mile radius of the site. Using a USGS printout furnished by the Mississippi Bureau of Land and Water Resources, FIT determined that only one well is known to have been completed in an aquifer shallower than the Cockfield formation within the area of interest. This well, owned by Slater R. Gordon, is located approximately 1 1/2 miles west of the Chloride Metals site and produces groundwater for domestic use from the Mint Springs formation at a depth of 164 feet below the surface. Utilizing this information, a preliminary HRS score of 13.45 can be documented. As a result, FIT recommends no further action at this site.

Very truly yours,

David Upthegrove

David Upthegrove

Annie Ashofsky

Approval

DU/eaw

cc: Felicia Barnett, ISU

NUS CORPORATION
NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE, SUITE 20
TUCKER, GEORGIA 30084
404-938-7710

our 25th year

C-586-2-7-50

February 13, 1987

Mr. Richard D. Green
Emergency and Remedial Response Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Chloride Metals
Preliminary HRS Score
Florence, Mississippi
TDD #: F4-8406-03

Dear Mr. Green:

FIT conducted a review of the Site Screening Investigation Report (TDD No. F4-8406-03) for the Chloride Metals site in Florence, Mississippi in an attempt to prepare an HRS package for the site. An observed release of contaminants to the surficial aquifer, at depths of less than 40 feet, was indicated in the investigation report. However, communication with Mr. Bill Taylor, Supervisor of the Water and Sewer Department in Florence, Mississippi indicated that the drinking water needs of the population within a three-mile radius of the site were served by the City of Florence and the Rural Water Association. The municipal water supply is produced from wells completed in the Cockfield formation at depths of approximately 1,000 feet below the surface. The Cockfield sands are overlain by the Yazoo Clay, an impervious layer some 350-450 feet thick.

Mr. Taylor indicated that less than 20 private wells could be identified within a three-mile radius of the site. Using a USGS printout furnished by the Mississippi Bureau of Land and Water Resources, FIT determined that only one well is known to have been completed in an aquifer shallower than the Cockfield formation within the area of interest. This well, owned by Slater R. Gordon, is located approximately 1 1/2 miles west of the Chloride Metals site and produces groundwater for domestic use from the Mint Springs formation at a depth of 164 feet below the surface. Utilizing this information, a preliminary HRS score of 13.45 can be documented. As a result, FIT recommends no further action at this site.

Very truly yours,

David Upthegrove

David Upthegrove

Approval

DU/eaw

cc: Felicia Barnett, ISU

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

CHLORIDE METALS 6
EPA SITE NUMBER MSD082002320
FLORENCE
RANKIN COUNTY, MS
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY D.UPTHEGROVE
OF NUS CORPORATION
ON 02/12/87

DATE OF THIS REPORT: 02/12/87
DATE OF LAST MODIFICATION: 02/12/87

GROUND WATER ROUTE SCORE	:	22.37
SURFACE WATER ROUTE SCORE	:	6.38
AIR ROUTE SCORE	:	0.00
MIGRATION SCORE	:	13.45

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	YES	45	45
2. ROUTE CHARACTERISTICS			
DEPTH TO WATER TABLE			
DEPTH TO BOTTOM OF WASTE			
DEPTH TO AQUIFER OF CONCERN			
PRECIPITATION			
EVAPORATION			
NET PRECIPITATION			
PERMEABILITY			
PHYSICAL STATE			
TOTAL ROUTE CHARACTERISTICS SCORE:			N/A
3. CONTAINMENT			N/A
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:LEAD			18
WASTE QUANTITY CUBIC YDS	0		
DRUMS	1		
GALLONS	0		
TONS	0		
TOTAL	0 CU. YDS	1	1
TOTAL WASTE CHARACTERISTICS SCORE:			19
5. TARGETS			
GROUND WATER USE		3	9
DISTANCE TO NEAREST WELL	8000 FEET		
AND	MATRIX VALUE	6	6
TOTAL POPULATION SERVED	4 PERSONS		
NUMBER OF HOUSES	1		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			15

GROUND WATER ROUTE SCORE (Sgw) = 22.37

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER	NO		
SITE WITHIN CLOSED BASIN	NO		
FACILITY SLOPE	3.0 %		
INTERVENING SLOPE	3.0 %	0	0
24-HOUR RAINFALL	4.0 INCHES	3	3
DISTANCE TO DOWN-SLOPE WATER	900 FEET	3	6
PHYSICAL STATE	3		3
TOTAL ROUTE CHARACTERISTICS SCORE:			12
3. CONTAINMENT	3		3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:LEAD			18
WASTE QUANTITY CUBIC YDS	0		
DRUMS	1		
GALLONS	0		
TONS	0		
TOTAL	0 CU. YDS	1	1
TOTAL WASTE CHARACTERISTICS SCORE:			19
5. TARGETS			
SURFACE WATER USE		2	6
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	NONE		
FRESH-WATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	> 3 MILES		
AND	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			6

SURFACE WATER ROUTE SCORE (Ssw) = 6.38

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0

2. WASTE CHARACTERISTICS

REACTIVITY:

MATRIX VALUE

INCOMPATIBILITY

TOXICITY

WASTE QUANTITY CUBIC YARDS
DRUMS
GALLONS
TONS

TOTAL

TOTAL WASTE CHARACTERISTICS SCORE: N/A

3. TARGETS

POPULATION WITHIN 4-MILE RADIUS
- 0 to 0.25 mile
- 0 to 0.50 mile
- 0 to 1.0 mile
- 0 to 4.0 miles

DISTANCE TO SENSITIVE ENVIRONMENTS
- COASTAL WETLANDS
- FRESH-WATER WETLANDS
- CRITICAL HABITAT

DISTANCE TO LAND USES
- COMMERCIAL/INDUSTRIAL
- PARK/FOREST/RESIDENTIAL
- AGRICULTURAL LAND
- PRIME FARMLAND
- HISTORIC SITE WITHIN VIEW?

TOTAL TARGETS SCORE: N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: CHLORIDE METALS 6
AS OF 02/12/87

GROUND WATER ROUTE SCORE

OBSERVED RELEASE		45
WASTE CHARACTERISTICS	X	19
TARGETS	X	15

= 12825 /57,330 X 100 = 22.37 = S_{gw}

SURFACE WATER ROUTE SCORE

ROUTE CHARACTERISTICS		12
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	19
TARGETS	X	6

= 4104 /64,350 X 100 = 6.38 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE 0 /35,100 X 100 = 0.00 = S_{air}

SUMMARY OF MIGRATION SCORE CALCULATIONS

	S	S^2
GROUND WATER ROUTE SCORE (S_{gw})	22.37	500.42
SURFACE WATER ROUTE SCORE (S_{sw})	6.38	40.70
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S^2_{gw} + S^2_{sw} + S^2_{air}$		541.12
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}$		23.26
$S_M = \sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}/1.73$		13.45

NUS CORPORATION
NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE
SUITE 20
TUCKER, GEORGIA 30084
(404) 938-7710

C-586-1-7-51

January 21, 1987

Mr. Richard D. Green
Emergency and Remedial Response Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Chloride Metals
Florence, Mississippi
Site Inspection Report (2070-13)
TDD #: 8406-03

Dear Mr. Green:

A review of the CERCLA List indicated that no Site Inspection Report (2070-13) has been submitted for the Chloride Metals Site, Florence, Mississippi, EPA ID Number: MSD082002320. A site screening investigation was performed at the site in August, 1984. Based on available file material, the Site Inspection form has been completed and is enclosed.

If you have any questions regarding this inspection report, please contact me at NUS Corporation.

Very truly yours,

Scott Blair

Scott Blair
Project Manager

Approval

SB/eaw

Enclosure

cc: Bart Reedy

EPA

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

I. IDENTIFICATION
01 STATE: MS
02 SITE NUMBER: 008200252C

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Chloride Metals
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: Briarhill Rd
03 CITY: Florence
04 STATE: MS
05 ZIP CODE:
06 COUNTY: Rankin
07 COUNTY CODE: 121
08 CONG DIST: 03
09 COORDINATES: LATITUDE ___ LONGITUDE ___
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: 08 08 84 (MONTH DAY YEAR)
02 SITE STATUS: ☐ ACTIVE ☒ INACTIVE
03 YEARS OF OPERATION: 1972 (BEGINNING YEAR) | 1982 (ENDING YEAR) ___ 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.
Johnny Smith	Project Officer	NUS	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Ken Richardson		EPA	(404) 881-2930
Jan Rogers		EPA	(404) 881-3931
Mike Horman		EPA	( )
Willie Smitherman	Enviro Consultant	NUS	(404) 938-7710
Doug Munson	Field Technician	NUS	(404) 938-7710

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Frank Barnett	Production Mgr.	PO Box 485, 3507 50th St South, Tampa Fl 33601	(813) 248-3161
J. T. Morgan	Plant Mgr.	PO Box 398 Briarhill Rd. Florence MS	(601) 845-2281
			( )
Wayne McCoy	Resource Consultants Inc	PO Box 498 Suite 340 Brentwood TN 37027	(615) 373-5040
			( )
			( )

17 ACCESS GAINED BY (Check one): ☒ PERMISSION ☐ WARRANT
18 TIME OF INSPECTION: 8-8/9-84
19 WEATHER CONDITIONS: 8/84 - Cloudy Misting Rain ; 9/84 - clear and hot

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Ken Richardson	EPA	(404) 881-2930

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Scott Blair	EIT	NUS Corp	404-938-7710	01 20 87 (MONTH DAY YEAR)

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
MS	D008200 2320

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

TONS _____
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

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

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
MES	LEAD	7439-92-1	Land Fill	35,000,000	ug/Kg
IOC	ARSENIC	7440-38-2	Land Fill	72,000	ug/Kg
MES	CADMIUM	7440-43-9	Land Fill	8000	"
MES	COPPER	7440-50-8	Land Fill	43,000	"
MES	LEAD	7439-92-1	Land Fill	590	ug/l
IOC	ARSENIC	7440-38-2	Land Fill	30	"
MES	CADMIUM	7440-43-9	Land Fill	75	"
MES	COPPER	7440-50-8	Land Fill	180	"

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)

Chloride Metals Site screening study TDD NO. F4-8406-03; NUS Corporation Superfund Division; June 17, 1985

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	D082 002 302

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
analytical results of groundwater samples collected from the site indicated elevated concentrations of lead (260 ug/l), arsenic (30 ug/l), cadmium (75 ug/l), copper (180 ug/l) and other metals associated w/ Battery reclamation above background samples

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
analytical results of surface water samples collected from the site indicated elevated concentrations of lead (590 ug/l) and other metals associated w/ Battery reclamation above background samples. Analytical results also indicate migration (down-gradient) of potential contaminants from site.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
no air samples collected.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
visual inspection did not indicate any fire/explosive conditions at the site.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
many spent battery carcasses lying in open landfill could reflect direct contact due to trip and fall hazards present.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 6/17/85) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 2 ACRES — 04 NARRATIVE DESCRIPTION
analytical results of soil and sediment samples collected from the site indicated extremely high concentrations of lead (35,000,000 ug/Kg), arsenic (72,000 ug/Kg), cadmium (8000 ug/Kg), copper (43,000 ug/Kg) and other metals associated w/ Battery Reclamation above background samples. Analysis of landfill cores showed highest concentrations.

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

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

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

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	D082002320

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: 8-8-84) — ☒ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

Stressed vegetation observed around spring area indicate down-gradient migration & potential contamination of the site. analysis of soil and water samples from the spring area indicate high concentration of lead (600,000 ug/Kg), arsenic (4200 ug/Kg), cadmium (8000 ug/Kg), copper (13,800 ug/Kg) above background samples

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

Visual inspection did not indicate any damage to fauna at the site.

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

04 NARRATIVE DESCRIPTION

unknown

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids/Leaking drums) — 02 ☒ OBSERVED (DATE: 08-08-84) — ☒ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: unknown — 04 NARRATIVE DESCRIPTION Due to unlined Landfill, unstable containment of wastes is present. Migration of contamination from Landfill area into pond area is apparent

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

04 NARRATIVE DESCRIPTION

unknown

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

04 NARRATIVE DESCRIPTION

unknown

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

04 NARRATIVE DESCRIPTION

unknown

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

unknown

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

Chloride Metals site Screening Study TDD NO. F4-8406-03; NUS Corporation Superfund Division; June 17, 1985

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	0052002320

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
X A. NPDES	MS0033804	11-4-76	11-15-82	
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ 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		
X B. PILES	unknown	
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
X F. LANDFILL	unknown	
☐ 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
- X G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER
- X A. BUILDINGS ON SITE

06 AREA OF SITE
unknown (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

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

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

No liner in place in landfill or onsite pond, located at the base of the battery cover landfill. Also spillway around pond area is unstable. This could present additional migration problems in the event of heavy rains

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: X YES ☐ NO

02 COMMENTS: No Type of Fencing around facility.

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

Chloride Metals Site Screening Study TDD NO. F4-8406-03; NUS Corporation Superfund Division; June 17, 1985.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	2082062320

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☒
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS unknown

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE unknown

A. _____ (mi)
B. _____ (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)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER unknown

03 DISTANCE TO NEAREST DRINKING WATER WELL unknown (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
<10 (ft)	WSW	170 (ft)	unknown (gpd)	☐ YES ☒ NO

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

Florence now utilizes the Cockfield Formation, a high-yielding regional artesian aquifer in excess of 800' below ground surface

10 RECHARGE AREA

☐ YES
☒ NO

COMMENTS

11 DISCHARGE AREA

☒ YES
☐ NO

COMMENTS spring located 200' to west of Landfill

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Indian Creek	☐	.16 (mi)
Steen Creek	☐	2.0 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN unknown

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION .50 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE unknown

04 DISTANCE TO NEAREST OFF-SITE BUILDING .50 (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)

unknown

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION
01 STATE: MS
02 SITE NUMBER: D082002320

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
unknown (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
52 (in)	unknown (in)	12 %	SW	26 %

09 FLOOD POTENTIAL
SITE IS IN NA YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)
ESTUARINE: A _____ (mi)
OTHER: unknown B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
unknown _____ (mi)
ENDANGERED SPECIES: _____

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 unknown (mi)	B. 125 (mi)	C unknown (mi)	D. unknown (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site location is slightly elevated relative to surrounding areas. IT is approximately 40' above nearest stream (Indian Creek)

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

USGS Quad MAPS: Whitfield MS, Florence MS; Rankin County Geology and Mineral Resources Bulletin 115 MS Geological Survey; Chloride Metals Site Screening Study TOD NO. F4-8406-03, NUS Corporation Superfund Division, June 17, 1985.

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	D082002320

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	Organic Analysis: ENCOTECH; inorganic anal.: Chemtech	1-1-84
SURFACE WATER	4	Organic Analysis: ENCOTECH; inorganic anal.: Chemtech	1-1-84
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	5	Organic Analysis: Bal. Anal. Lab.; inorganic Anal.: Chemtech	1-1-84
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
	Measurements conducted on water samples only
Temp °C	Ranging from 21° to 28°
pH (S.U.)	Ranging from 2.8 to 6.55
Conductivity (umhos/cm)	Ranging from 38 to 40

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS Corp; ATL. GA
Name of organization or individual

03 MAPS ☐ YES ☒ NO

04 LOCATION OF MAPS

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

Chloride Metals site Screening study TOD NO. F4-8406-03; NUS Corp. Superfund Division; June 17, 1985

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
MS	DD8200320

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE
Chloride Metals				

03 STREET ADDRESS (P.O. Box, RFD #, etc.): Briarhill Rd.

05 CITY: Florance

PARENT COMPANY (if applicable)

08 NAME	09 D+B NUMBER	11 SIC CODE	13 STATE	14 ZIP CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.):

12 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

08 NAME	09 D+B NUMBER	11 SIC CODE	13 STATE	14 ZIP CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.):

12 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

08 NAME	09 D+B NUMBER	11 SIC CODE	13 STATE	14 ZIP CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.):

12 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

08 NAME	09 D+B NUMBER	11 SIC CODE	13 STATE	14 ZIP CODE

10 STREET ADDRESS (P.O. Box, RFD #, etc.):

12 CITY:

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

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

IV. REALTY OWNER(S) (if applicable; list most recent first)

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

01 NAME	02 D+B NUMBER	04 SIC CODE	06 STATE	07 ZIP CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.):

05 CITY:

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

Chloride Metals Site Screening Study TDD NO. F4-8406-03; NUS Corp. Superfund Division; June 17, 1985

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
MS	DD8202237U

II. CURRENT OPERATOR (Provide if different from owner)				OPERATOR'S PARENT COMPANY (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER						

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)				PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)			
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						
01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY	06 STATE	07 ZIP CODE		14 CITY	15 STATE	16 ZIP CODE	
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD						

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	DD82002320

II. ON-SITE GENERATOR

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

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	0082002320

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

EPA

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

I. IDENTIFICATION
01 STATE: MS | 02 SITE NUMBER: 0282002320

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

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

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

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

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	0 7 8 2 0 0 2 3 2 0

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION X YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

On 6-15-76, the staff of the MS State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. On August, 1976, The MS Bureau of Pollution Control issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On 11-4-76, the Bureau of Pollution Control issued National Pollution Discharge Elimination System (NPDES) Permit No. MS0033804 to Chloride Metals, placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into nearby creek.

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

Chloride Metals site screening study TDD NO. F4-8406-03; NUS Corporation Superfund Division; June 11, 1985.

EPA FORM 2070-13 (7-81)

NUS CORPORATION
NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE
SUITE 20
TUCKER, GEORGIA 30084
(404) 938-7710

Fernaggnolo

C-586-6-5-21

June 17, 1985

Mr. R. D. Stonebraker, Deputy Chief
Emergency and Remedial Response Branch
Air and Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Site Screening Investigation Report
Chloride Metals Corporation
Florence, Mississippi
TDD F4-8406-03

Dear Mr. Stonebraker:

Enclosed please find three copies of the final site screening investigation report for Chloride Metals Corporation, Florence, Mississippi.

EPA review comments have been addressed and are included in the report.

If you have questions or comments, please contact me at (404) 938-7710.

Very truly yours,

Michael D. Profit

Michael D. Profit
Environmental Health Scientist

MDP/lsr

R-586-6-5-2

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

JUNE 17, 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI
TDD No. F4-8406-03

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants had migrated offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting[1].

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slag waste from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On November 4, 1976, the BPC issued NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804 to Chloride Metals, placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into Indian Creek[1].

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process wastewater exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility[1].

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The wells were constructed during the first week of August, 1980[1].

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed by early 1982. Because regional groundwater flow is generally to the west or southwest, it is presumed that monitoring well MW-8 is the only upgradient well at the site.

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed and the following cleanup activities were scheduled:

1. Clean and wash down all exterior of smelter yard paved area.
2. Treat all wastewater through present system.
3. Clean out all oxides from concrete tanks.
4. Ship all remaining scrap lead and oxide to Columbus Smelter for recycle smelting.
5. Fill all concrete tanks with clean sand to prevent refilling with rainwater.
6. Clean out and deactivate caustic neutralizing system to prevent possible accidental spills and cold weather damage to system.
7. Cap and seal the drain systems in the smelter building and battery cutting area to prevent reuse and rainwater entry.
8. During water treatment shutdown all lead will be stored inside buildings to prevent rainwater contamination from runoff[1].

3.3 Hydrogeology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard. At the site, the clay and siltstone of the Catahoula Formation occurs at the surface.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, occurs at depths of 170 to 250 feet below land surface and is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer. The top of the Cockfield occurs in excess of 800 feet below ground surface.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic

analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only.

5.3 Field Measurements

The temperature and pH were recorded for each water sample collected. Conductivity, water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2.

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900 ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Five organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l),

chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of four compounds, one of which is a priority pollutant (See Table 4).

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of cadmium and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].

REFERENCES

1. EPA File, Chloride Metals, Inc., Florence, Mississippi.

2. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1961. Groundwater Resources of Hinds, Madison and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletins 61-2, part II. 146 p.

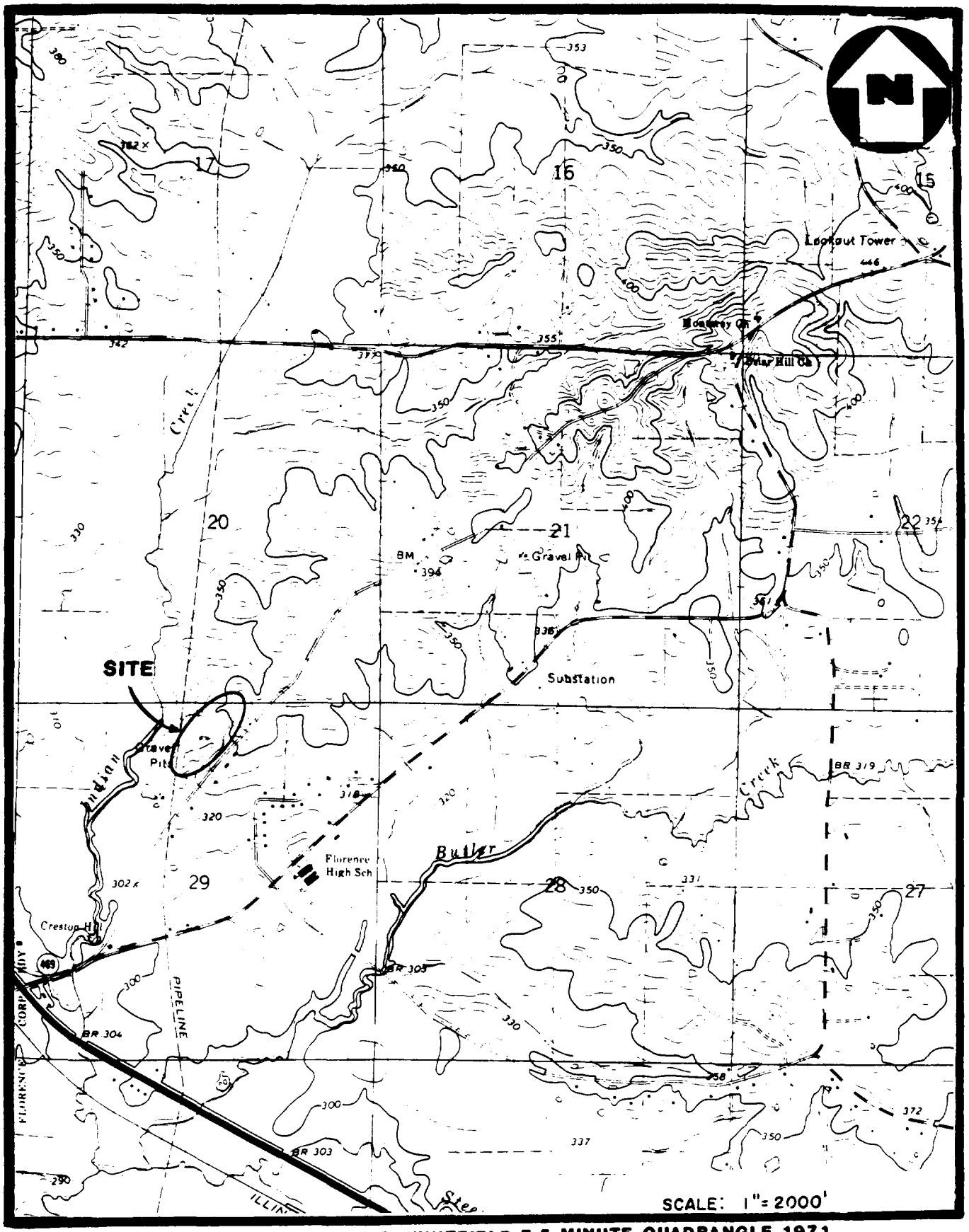
3. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1964. Groundwater Resources of Hinds, Madison, and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletin 64-1. 38 p.

4. Sams, Jay personal communication, 2-13-85. Mississippi Bureau of Geology.

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

6. Analytical Support Branch Operations and Quality Assurance Manual; U. S. Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982.

7. Baughman, W.T., McCutcheon, T.E., Bicker, A.R., Jr., Dinkins, T.H., Jr., and Shows, T.N., 1971. Rankin County geology and mineral resources. Mississippi Bureau of Geology Bulletin 115.



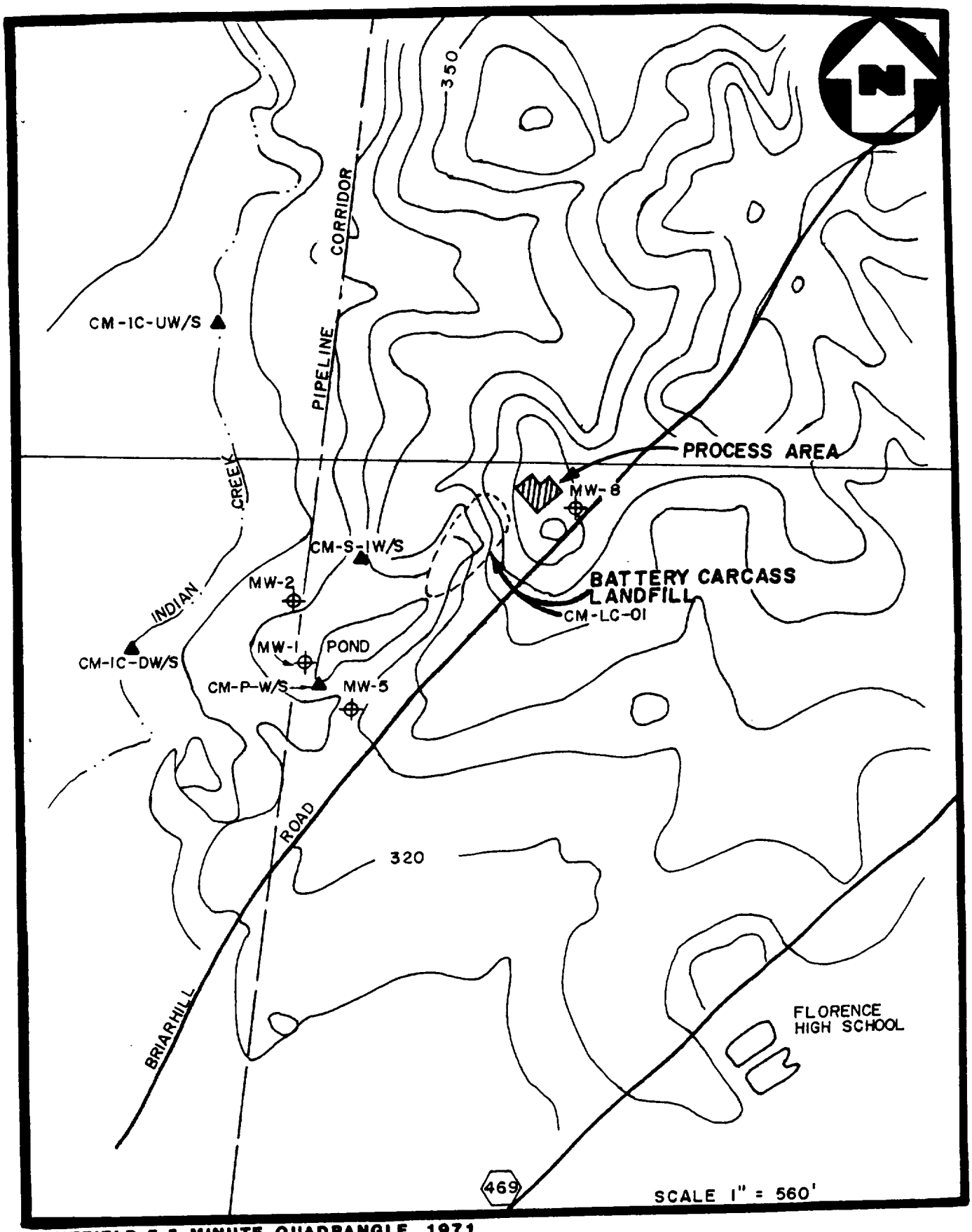
BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION

A Halliburton Company



WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

FIGURE 2

NUS CORPORATION
A Halliburton Company

Table 1
Chloride Metals, Inc.
Sample Code Descriptions

Sample Code	Description
CM-MW-01	Monitoring Well 1 (MW-1)
CM-MW-02	Monitoring Well 2 (MW-2)
CM-MW-05	Monitoring Well 5 (MW-5)
CM-MW-08	Monitoring Well 8 (MW-8)
CM-IC-UW/US	Indian Creek, upstream water/sediment
CM-IC-DW/DS	Indian Creek, downstream water/sediment
CM-P-1W/1S	Onsite pond, water/sediment
CM-S-1W/1S	Onsite spring, water/sediment
CM-LC-01	Battery carcass landfill composite

Table 2
Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp. °C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Conductivity (umhos/cm)	38	38	38	40	-	-	-	-
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-84
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Table 3
Chloride Metals, Inc.
Water Samples
Metals Analyses[a]
Results in ug/l (ppb)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Table 4

Chloride Metals, Inc.

Water Samples

Organic Analyses[a]

Results in ug/l (ppb)

August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Purgeable & Miscellaneous Organics								
Methylene Chloride*	4J	3J	3J	4J	3J	2J	2J	2J
Chloroform*	-	2J	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	3J
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	3J	-	-	-	-	-
Di-N-Butylphthalate*	3J	9J	200	5J	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected.
NA Not applicable
a This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

Table 5

Chloride Metals, Inc.

Soil and Sediment Samples

Metals Analyses[a,b]

Results in ug/kg (ppb)

August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	8,500	-	13,000	13,000	82,000
Beryllium*	700	-	500	-	-
Cadmium*	-	100	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
Lead*	3,000	9,500	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	320,000	360,000	860,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

b Data reported on wet weight basis.

* Priority pollutant

\- Material was analyzed for but not detected.

Table 6
Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses[a,b]
Results in ug/kg (ppb)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	44	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexenol	-	400JN	-	-	-
Cyclohexeneone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecene	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P'-DDT)*	-	-	100J	100J	-

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
b Data reported on dry weight basis.
* Priority pollutant
J Estimated value
N Presumptive evidence of presence of material.
\- Material was analyzed for but not detected.

APPENDIX A

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
4.2	SU	PH	00400
22	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.10U	MG/L	CYANIDE	00720
3.65	SU	PH	00400
22	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/10/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
3.5	SU	PH	00400
21	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
5.25	SU	PH	00400
24	DEG C	TEMPERATURE	00010
40	UMHOS	CONDUCTIVITY	00095

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW,
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
6.55	SU	PH	00400
25	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
2.8	SU	PH	00400
24	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
6	SU	PH	00400
28	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
5.5	SU	PH	00400
26	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
16	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
17	UG/L	BERYLLIUM
75	UG/L	CADMIUM
520	UG/L	COBALT
72	UG/L	CHROMIUM
72	UG/L	COPPER
NA	UG/L	MOLYBDENUM
370	UG/L	NICKEL
200	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
900	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
41000	UG/L	ALUMINUM
27000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
65	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
23	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
24	UG/L	BERYLLIUM
56	UG/L	CADMIUM
660	UG/L	COBALT
47	UG/L	CHROMIUM
180	UG/L	COPPER
NA	UG/L	MOLYBDENUM
140	UG/L	NICKEL
260	UG/L	LEAD
34	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
580	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.48	UG/L	MERCURY
130000	UG/L	ALUMINUM
11000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
62	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
30	UG/L	ARSENIC
NA	UG/L	BORON
280	UG/L	BARIUM
7	UG/L	BERYLLIUM
37	UG/L	CADMIUM
100	UG/L	COBALT
90	UG/L	CHROMIUM
140	UG/L	COPPER
NA	UG/L	MOLYBDENUM
88	UG/L	NICKEL
130	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
310	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.3	UG/L	MERCURY
80000	UG/L	ALUMINUM
2800	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
86	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/19/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL .

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
1U	UG/L	CADMIUM
50U	UG/L	COBALT
30	UG/L	CHROMIUM
53	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
120	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
29	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
75	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
14000	UG/L	ALUMINUM
92	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
9.4	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
1U	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
76	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
15	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
3800	UG/L	ALUMINUM
590	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
3.6	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
6	UG/L	BERYLLIUM
6.5	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
31	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
26	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
2400	UG/L	ALUMINUM
2300	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
2	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-8-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
19	UG/L	BERYLLIUM
68	UG/L	CADMIUM
600	UG/L	COBALT
62	UG/L	CHROMIUM
180	UG/L	COPPER
NA	UG/L	MOLYBDENUM
180	UG/L	NICKEL
570	UG/L	LEAD
28	UG/L	ANTIMONY
20	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
910	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
200000	UG/L	ALUMINUM
14000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
42	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
3.4	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
590	UG/L	LEAD
29	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
10U	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
350	UG/L	ALUMINUM
70	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
0.58	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000U	UG/L	ACROLEIN
1000U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
4J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
3.1	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
2J	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
3J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
100	UG/L	CHLOROMETHANE
100	UG/L	BROMOMETHANE
100	UG/L	VINYL CHLORIDE
100	UG/L	CHLOROETHANE
4.1	UG/L	METHYLENE CHLORIDE
100	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
100	UG/L	1,1-DICHLOROETHANE
100	UG/L	TRANS-1,2-DICHLOROETHENE
100	UG/L	CHLOROFORM
100	UG/L	1,2-DICHLOROETHANE
100	UG/L	1,1,1-TRICHLOROETHANE
100	UG/L	CARBON TETRACHLORIDE
100	UG/L	BROMODICHLOROMETHANE
100	UG/L	1,2-DICHLOROPROPANE
100	UG/L	TRANS-1,3-DICHLOROPROPENE
100	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
100	UG/L	BENZENE
100	UG/L	DIBROMOCHLOROMETHANE
100	UG/L	1,1,2-TRICHLOROETHANE
100	UG/L	CIS-1,3-DICHLOROPROPENE
100	UG/L	2-CHLOROETHYLVINYL ETHER
100	UG/L	BROMOFORM
100	UG/L	1,1,2,2-TETRACHLOROETHANE
100	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
100	UG/L	TOLUENE
100	UG/L	CHLOROBENZENE
100	UG/L	ETHYL BENZENE
100	UG/L	M-XYLENE
100	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: B4C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHB

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
3.1	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
2J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
100	UG/L	CHLOROMETHANE
100	UG/L	BROMOMETHANE
100	UG/L	VINYL CHLORIDE
100	UG/L	CHLOROETHANE
21	UG/L	METHYLENE CHLORIDE
100	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
100	UG/L	1,1-DICHLOROETHANE
100	UG/L	TRANS-1,2-DICHLOROETHENE
100	UG/L	CHLOROFORM
100	UG/L	1,2-DICHLOROETHANE
100	UG/L	1,1,1-TRICHLOROETHANE
100	UG/L	CARBON TETRACHLORIDE
100	UG/L	BROMODICHLOROMETHANE
100	UG/L	1,2-DICHLOROPROPANE
100	UG/L	TRANS-1,3-DICHLOROPROPENE
100	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
100	UG/L	BENZENE
100	UG/L	DIBROMOCHLOROMETHANE
100	UG/L	1,1,2-TRICHLOROETHANE
100	UG/L	CIS-1,3-DICHLOROPROPENE
100	UG/L	2-CHLOROETHYLVINYL ETHER
100	UG/L	BROMOFORM
100	UG/L	1,1,2,2-TETRACHLOROETHANE
100	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
100	UG/L	TOLUENE
100	UG/L	CHLOROBENZENE
100	UG/L	ETHYL BENZENE
100	UG/L	M-XYLENE
100	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
23	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
5U	ACETONE
5U	METHYL ETHYL KETONE
5U	CARBON DISULFIDE
5U	METHYL BUTYL KETONE
5U	METHYL ISOBUTYL KETONE
5U	STYRENE
5U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: NONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHB

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
3J	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
3J	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
9J	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400	UG/L	BENZIDINE
200	UG/L	1,3-DICHLOROBENZENE
200	UG/L	1,4-DICHLOROBENZENE
200	UG/L	1,2-DICHLOROBENZENE
200	UG/L	BIS(2-CHLOROETHYL) ETHER
200	UG/L	HEXACHLOROETHANE
200	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200	UG/L	N-NITROSODI-N-PROPYLAMINE
200	UG/L	NITROBENZENE
200	UG/L	HEXACHLOROBUTADIENE
200	UG/L	1,2,4-TRICHLOROBENZENE
200	UG/L	NAPHTHALENE
200	UG/L	BIS(2-CHLOROETHOXY) METHANE
200	UG/L	ISOPHORONE
200	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200	UG/L	2-CHLORONAPHTHALENE
200	UG/L	ACENAPHTHYLENE
200	UG/L	ACENAPHTHENE
200	UG/L	DIMETHYL PHTHALATE
200	UG/L	2,4-DINITROTOLUENE
200	UG/L	2,6-DINITROTOLUENE
200	UG/L	4-CHLOROPHENYL PHENYL ETHER
200	UG/L	FLUORENE
33	UG/L	DIETHYL PHTHALATE
200	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200	UG/L	HEXACHLOROBENZENE (HCB)
200	UG/L	4-BROMOPHENYL PHENYL ETHER
200	UG/L	PHENANTHRENE
200	UG/L	ANTHRACENE
200	UG/L	DI-N-BUTYLPHTHALATE
200	UG/L	FLUORANTHENE
200	UG/L	PYRENE
200	UG/L	BENZYL BUTYL PHTHALATE
34	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200	UG/L	BENZO(A)ANTHRACENE
200	UG/L	CHRYSENE
200	UG/L	3,3'-DICHLOROBENZIDINE
200	UG/L	DI-N-OCTYLPHTHALATE
200	UG/L	BENZO(B)FLUORANTHENE
200	UG/L	BENZO(K)FLUORANTHENE
200	UG/L	BENZO-A-PYRENE
200	UG/L	INDENO (1,2,3-CD) PYRENE
200	UG/L	DIBENZO(A,H)ANTHRACENE
200	UG/L	BENZO(GHI)PERYLENE
200	UG/L	2-CHLOROPHENOL
200	UG/L	2-NITROPHENOL
200	UG/L	PHENOL
200	UG/L	2,4-DIMETHYLPHENOL
200	UG/L	2,4-DICHLOROPHENOL
200	UG/L	2,4,6-TRICHLOROPHENOL
200	UG/L	4-CHLORO-3-METHYLPHENOL
500	UG/L	2,4-DINITROPHENOL
200	UG/L	2-METHYL-4,6-DINITROPHENOL
200	UG/L	PENTACHLOROPHENOL
500	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
5.1	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
20U	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400	UG/L	BENZIDINE
200	UG/L	1,3-DICHLOROBENZENE
200	UG/L	1,4-DICHLOROBENZENE
200	UG/L	1,2-DICHLOROBENZENE
200	UG/L	BIS(2-CHLOROETHYL) ETHER
200	UG/L	HEXACHLOROETHANE
200	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200	UG/L	N-NITROSODI-N-PROPYLAMINE
200	UG/L	NITROBENZENE
200	UG/L	HEXACHLOROBUTADIENE
200	UG/L	1,2,4-TRICHLOROBENZENE
200	UG/L	NAPHTHALENE
200	UG/L	BIS(2-CHLOROETHOXY) METHANE
200	UG/L	ISOPHORONE
200	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200	UG/L	2-CHLORONAPHTHALENE
200	UG/L	ACENAPHTHYLENE
200	UG/L	ACENAPHTHENE
200	UG/L	DIMETHYL PHTHALATE
200	UG/L	2,4-DINITROTOLUENE
200	UG/L	2,6-DINITROTOLUENE
200	UG/L	4-CHLOROPHENYL PHENYL ETHER
200	UG/L	FLUORENE
200	UG/L	DIETHYL PHTHALATE
200	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200	UG/L	HEXACHLOROBENZENE (HCB)
200	UG/L	4-BROMOPHENYL PHENYL ETHER
200	UG/L	PHENANTHRENE
200	UG/L	ANTHRACENE
200	UG/L	DI-N-BUTYLPHTHALATE
200	UG/L	FLUORANTHENE
200	UG/L	PYRENE
200	UG/L	BENZYL BUTYL PHTHALATE
200	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200	UG/L	BENZO(A)ANTHRACENE
200	UG/L	CHRYSENE
200	UG/L	3,3'-DICHLOROBENZIDINE
200	UG/L	DI-N-OCTYLPHTHALATE
200	UG/L	BENZO(B)FLUORANTHENE
200	UG/L	BENZO(K)FLUORANTHENE
200	UG/L	BENZO-A-PYRENE
200	UG/L	INDENO (1,2,3-CD) PYRENE
200	UG/L	DIBENZO(A,H)ANTHRACENE
200	UG/L	BENZO(GHI)PERYLENE
200	UG/L	2-CHLOROPHENOL
200	UG/L	2-NITROPHENOL
200	UG/L	PHENOL
200	UG/L	2,4-DIMETHYLPHENOL
200	UG/L	2,4-DICHLOROPHENOL
200	UG/L	2,4,6-TRICHLOROPHENOL
200	UG/L	4-CHLORO-3-METHYLPHENOL
500	UG/L	2,4-DINITROPHENOL
200	UG/L	2-METHYL-4,6-DINITROPHENOL
200	UG/L	PENTACHLOROPHENOL
500	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: M01945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
200U	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
200U	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
20J	1 UNKNOWN COMPOUND

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
1000	BENZOIC ACID
50	2-METHYLPHENOL
50	4-METHYLPHENOL
1000	2,4,5-TRICHLOROPHENOL
50	ANILINE
200	BENZYL ALCOHOL
500	4-CHLOROANILINE
100	DIBENZOFURAN
200	2-METHYL NAPHTHALENE
1000	2-NITROANILINE
1000	3-NITROANILINE
1000	4-NITROANILINE
90J	2 UNKNOWN COMPOUNDS

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHU

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
200J	1 UNKNOWN COMPOUND

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHB

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
NA	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: B4C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: BD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
20	BROMOCHLOROCYCLOHEXANE
200J	4 UNKNOWN COMPOUNDS

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
20J	1-UNKNOWN COMPOUND

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.60U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	
0.02U	UG/L	ALDRIN	
0.02U	UG/L	HEPTACHLOR	
0.02U	UG/L	HEPTACHLOR EPOXIDE	
0.02U	UG/L	ALPHA-BHC	
0.02U	UG/L	BETA-BHC	
0.06U	UG/L	GAMMA-BHC (LINDANE)	
0.05U	UG/L	DELTA-BHC	
0.02U	UG/L	ENDOSULFAN I (ALPHA)	
0.02U	UG/L	DIELDRIN	
0.08U	UG/L	4,4'-DDT (P,P'-DDT)	
0.02U	UG/L	4,4'-DDE (P,P'-DDE)	
0.02U	UG/L	4,4'-DDD (P,P'-DDD)	
0.04U	UG/L	ENDRIN	
0.02U	UG/L	ENDOSULFAN II (BETA)	
0.10U	UG/L	ENDOSULFAN SULFATE	
0.20U	UG/L	CHLORDANE (TECH. MIXTURE)	/1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)	
0.10U	UG/L	PCB-1254 (AROCLOR 1254)	
0.30U	UG/L	PCB-1221 (AROCLOR 1221)	
0.40U	UG/L	PCB-1232 (AROCLOR 1232)	
0.40U	UG/L	PCB-1248 (AROCLOR 1248)	
0.10U	UG/L	PCB-1260 (AROCLOR 1260)	
0.40U	UG/L	PCB-1016 (AROCLOR 1016)	
0.06U	UG/L	TOXAPHENE	
0.06U	UG/L	ENDRIN ALDEHYDE	
NA	UG/L	2,3,7,8 TCDD(DIOXIN)	
--	UG/L	CHLORDENE	/2
--	UG/L	ALPHA-CHLORDENE	/2
--	UG/L	GAMMA-CHLORDENE	/2
--	UG/L	1-HYDROXYCHLORDENE	/2
--	UG/L	GAMMA-CHLORDANE	/2
--	UG/L	TRANS-NONACHLOR	/2
--	UG/L	ALPHA-CHLORDANE	/2
--	UG/L	CIS-NONACHLOR	/2
NA	UG/L	METHOXYCHLOR	

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.03U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.07U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.07U	UG/L	TOXAPHENE
0.07U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-8-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.03U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.60U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.30U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.03U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.60U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.30U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.250	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM .

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 09/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
8.5	MG/KG	BARIUM
0.7	MG/KG	BERYLLIUM
0.05U	MG/KG	CADMIUM
50U	MG/KG	COBALT
10U	MG/KG	CHROMIUM
2.5	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
20	MG/KG	NICKEL
3	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
1U	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
4	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
320	MG/KG	ALUMINUM
73	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
690	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
5U	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
0.1	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
0.9	MG/KG	CHROMIUM
2.5U	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
2U	MG/KG	NICKEL
9.5	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
1U	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
1U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
3.7	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
360	MG/KG	ALUMINUM
46	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
920	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
1.2	MG/KG	ARSENIC
NA	MG/KG	BORON
13	MG/KG	BARIUM
0.5	MG/KG	BERYLLIUM
8	MG/KG	CADMIUM
5.3	MG/KG	COBALT
3.3	MG/KG	CHROMIUM
19.3	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
3.5	MG/KG	NICKEL
60	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
10	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
10	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.22	MG/KG	MERCURY
860	MG/KG	ALUMINUM
6	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
6000	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
13	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
0.3	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
3.3	MG/KG	CHROMIUM
3.5	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
2U	MG/KG	NICKEL
100	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
1U	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
5.3	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
1900	MG/KG	ALUMINUM
20	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
2900	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
72	MG/KG	ARSENIC
NA	MG/KG	BORON
82	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
4.2	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
2.3	MG/KG	CHROMIUM
43	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
13	MG/KG	NICKEL
35000	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.6	MG/KG	SELENIUM
2.9	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
28	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
1100	MG/KG	ALUMINUM
28	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
3400	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
16	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: M01951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
800	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
19	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/KG	ACROLEIN
1000	UG/KG	ACRYLONITRILE
200	UG/KG	CHLOROMETHANE
200	UG/KG	BROMOMETHANE
200	UG/KG	VINYL CHLORIDE
200	UG/KG	CHLOROETHANE
44	UG/KG	METHYLENE CHLORIDE
200	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
200	UG/KG	1,1-DICHLOROETHANE
200	UG/KG	TRANS-1,2-DICHLOROETHENE
200	UG/KG	CHLOROFORM
200	UG/KG	1,2-DICHLOROETHANE
200	UG/KG	1,1,1-TRICHLOROETHANE
200	UG/KG	CARBON TETRACHLORIDE
200	UG/KG	BROMODICHLOROMETHANE
200	UG/KG	1,2-DICHLOROPROPANE
200	UG/KG	TRANS-1,3-DICHLOROPROPENE
200	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
200	UG/KG	BENZENE
200	UG/KG	DIBROMOCHLOROMETHANE
200	UG/KG	1,1,2-TRICHLOROETHANE
200	UG/KG	CIS-1,3-DICHLOROPROPENE
200	UG/KG	2-CHLOROETHYLVINYL ETHER
200	UG/KG	BROMOFORM
200	UG/KG	1,1,2,2-TETRACHLOROETHANE
30	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
72	UG/KG	TOLUENE
200	UG/KG	CHLOROBENZENE
200	UG/KG	ETHYL BENZENE
200	UG/KG	M-XYLENE
200	UG/KG	O&P-XYLENE(MIXED)
39	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
30	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
14	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SFD1M

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
240	ACETONE
20U	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
20U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-15
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
260	ACETONE
87	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE./TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
20U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
5000	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
5000	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
5000	UG/KG	BENZYL BUTYL PHTHALATE
5000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
5000	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
5000	UG/KG	DI-N-OCTYLPHTHALATE
5000	UG/KG	BENZO(B)FLUORANTHENE
5000	UG/KG	BENZO(K)FLUORANTHENE
5000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
5000	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
16	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
500U	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
500U	UG/KG	BENZIDINE
500U	UG/KG	1,3-DICHLOROBENZENE
500U	UG/KG	1,4-DICHLOROBENZENE
500U	UG/KG	1,2-DICHLOROBENZENE
500U	UG/KG	BIS(2-CHLOROETHYL) ETHER
500U	UG/KG	HEXACHLOROETHANE
500U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
500U	UG/KG	N-NITROSODI-N-PROPYLAMINE
500U	UG/KG	NITROBENZENE
500U	UG/KG	HEXACHLOROBUTADIENE
500U	UG/KG	1,2,4-TRICHLOROBENZENE
500U	UG/KG	NAPHTHALENE
500U	UG/KG	BIS(2-CHLOROETHOXY) METHANE
500U	UG/KG	ISOPHORONE
500U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	UG/KG	2-CHLORONAPHTHALENE
500U	UG/KG	ACENAPHTHYLENE
500U	UG/KG	ACENAPHTHENE
500U	UG/KG	DIMETHYL PHTHALATE
500U	UG/KG	2,4-DINITROTOLUENE
500U	UG/KG	2,6-DINITROTOLUENE
500U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
500U	UG/KG	FLUORENE
500U	UG/KG	DIETHYL PHTHALATE
500U	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
500U	UG/KG	HEXACHLOROBENZENE (HCB)
500U	UG/KG	4-BROMOPHENYL PHENYL ETHER
500U	UG/KG	PHENANTHRENE
500U	UG/KG	ANTHRACENE
500U	UG/KG	DI-N-BUTYLPHTHALATE
500U	UG/KG	FLUORANTHENE
500U	UG/KG	PYRENE
500U	UG/KG	BENZYL BUTYL PHTHALATE
500U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
500U	UG/KG	BENZO(A)ANTHRACENE
500U	UG/KG	CHRYSENE
500U	UG/KG	3,3'-DICHLOROBENZIDINE
500U	UG/KG	DI-N-OCTYLPHTHALATE
500U	UG/KG	BENZO(B)FLUORANTHENE
500U	UG/KG	BENZO(K)FLUORANTHENE
500U	UG/KG	BENZO-A-PYRENE
500U	UG/KG	INDENO (1,2,3-CD) PYRENE
500U	UG/KG	DIBENZO(A,H)ANTHRACENE
500U	UG/KG	BENZO(GHI)PERYLENE
500U	UG/KG	2-CHLOROPHENOL
500U	UG/KG	2-NITROPHENOL
500U	UG/KG	PHENOL
500U	UG/KG	2,4-DIMETHYLPHENOL
500U	UG/KG	2,4-DICHLOROPHENOL
500U	UG/KG	2,4,6-TRICHLOROPHENOL
500U	UG/KG	4-CHLORO-3-METHYLPHENOL
800U	UG/KG	2,4-DINITROPHENOL
500U	UG/KG	2-METHYL-4,6-DINITROPHENOL
500U	UG/KG	PENTACHLOROPHENOL
1800U	UG/KG	4-NITROPHENOL
19	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD, REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
5000	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
5000	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
5000	UG/KG	BENZYL BUTYL PHTHALATE
5000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
5000	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
5000	UG/KG	DI-N-OCTYLPHTHALATE
5000	UG/KG	BENZO(B)FLUORANTHENE
5000	UG/KG	BENZO(K)FLUORANTHENE
5000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
5000	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
39	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHR

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
5000	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
5000	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
5000	UG/KG	BENZYL BUTYL PHTHALATE
5000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
5000	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
5000	UG/KG	DI-N-OCTYLPHTHALATE
5000	UG/KG	BENZO(B)FLUORANTHENE
5000	UG/KG	BENZO(K)FLUORANTHENE
5000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
5000	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
30	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
2000J	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
2000J	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
2000J	UG/KG	BENZYL BUTYL PHTHALATE
2100	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
2000J	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
1900	UG/KG	DI-N-OCTYLPHTHALATE
2000J	UG/KG	BENZO(B)FLUORANTHENE
2000J	UG/KG	BENZO(K)FLUORANTHENE
2000J	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
2000J	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
14	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
18000	BENZOIC ACID
2000	2-METHYLPHENOL
2000	4-METHYLPHENOL
2000	2,4,5-TRICHLOROPHENOL
2000	ANILINE
2000	BENZYL ALCOHOL
10000	4-CHLOROANILINE
1000	DIBENZOFURAN
2000	2-METHYL NAPHTHALENE
18000	2-NITROANILINE
14000	3-NITROANILINE
20000	4-NITROANILINE
800JN	OXABICYCLOHEPTANE
500JN	BROMOPENTAFLUOROBENZENE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: B4C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
1800U	BENZOIC ACID
200U	2-METHYLPHENOL
200U	4-METHYLPHENOL
2000U	2,4,5-TRICHLOROPHENOL
200U	ANILINE
200U	BENZYL ALCOHOL
1000U	4-CHLOROANILINE
100U	DIBENZOFURAN
200U	2-METHYL NAPHTHALENE
1800U	2-NITROANILINE
1400U	3-NITROANILINE
2000U	4-NITROANILINE
700JN	OXIBICYCLOHEPTANE
500JN	BROMOPENTAFLUOROBENZENE
400JN	CYCLOHEXENEOL

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
1800U	BENZOIC ACID
200U	2-METHYLPHENOL
200U	4-METHYLPHENOL
2000U	2,4,5-TRICHLOROPHENOL
200U	ANILINE
200U	BENZYL ALCOHOL
1000U	4-CHLOROANILINE
100U	DIBENZOFURAN
200U	2-METHYL NAPHTHALENE
1800U	2-NITROANILINE
1400U	3-NITROANILINE
2000U	4-NITROANILINE
600JN	BENZODIOXOLONE
500JN	BROMOPENTAFLUOROBENZENE
300JN	CYCLOHEXENEONE
2000JN	OCTADECENE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
2000	BENZOIC ACID
2000	2-METHYLPHENOL
18000	4-METHYLPHENOL
2000	2,4,5-TRICHLOROPHENOL
2000	ANILINE
2000	BENZYL ALCOHOL
10000	4-CHLOROANILINE
1000	DIBENZOFURAN
2000	2-METHYL NAPHTHALENE
18000	2-NITROANILINE
14000	3-NITROANILINE
20000	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
18000	BENZOIC ACID
2000	2-METHYLPHENOL
2000	4-METHYLPHENOL
20000	2,4,5-TRICHLOROPHENOL
2000	ANILINE
2000	BENZYL ALCOHOL
10000	4-CHLOROANILINE
1000	DIBENZOFURAN
2000	2-METHYL NAPHTHALENE
18000	2-NITROANILINE
14000	3-NITROANILINE
20000	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4254 SAMPLE TYPE: SEDIM .

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100U	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
200U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
16	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C425R SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100U	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
200U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
19	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/KG	ALDRIN
1000	UG/KG	HEPTACHLOR
1000	UG/KG	HEPTACHLOR EPOXIDE
1000	UG/KG	ALPHA-BHC
1000	UG/KG	BETA-BHC
1000	UG/KG	GAMMA-BHC (LINDANE)
1000	UG/KG	DELTA-BHC
1000	UG/KG	ENDOSULFAN I (ALPHA)
1000	UG/KG	DIELDRIN
100J	UG/KG	4,4'-DDT (P,P'-DDT)
1000	UG/KG	4,4'-DDE (P,P'-DDE)
1000	UG/KG	4,4'-DDD (P,P'-DDD)
1000	UG/KG	ENDRIN
1000	UG/KG	ENDOSULFAN II (BETA)
1000	UG/KG	ENDOSULFAN SULFATE
1000	UG/KG	CHLORDANE (TECH. MIXTURE) /1
1000	UG/KG	PCB-1242 (AROCLOR 1242)
1000	UG/KG	PCB-1254 (AROCLOR 1254)
1000	UG/KG	PCB-1221 (AROCLOR 1221)
1000	UG/KG	PCB-1232 (AROCLOR 1232)
1000	UG/KG	PCB-1248 (AROCLOR 1248)
1000	UG/KG	PCB-1260 (AROCLOR 1260)
1000	UG/KG	PCB-1016 (AROCLOR 1016)
4000	UG/KG	TOXAPHENE
1000	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
39	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100J	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
200U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
30	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	
100U	UG/KG	ALDRIN	
100U	UG/KG	HEPTACHLOR	
100U	UG/KG	HEPTACHLOR EPOXIDE	
100U	UG/KG	ALPHA-BHC	
100U	UG/KG	BETA-BHC	
100U	UG/KG	GAMMA-BHC (LINDANE)	
100U	UG/KG	DELTA-BHC	
100U	UG/KG	ENDOSULFAN I (ALPHA)	
100U	UG/KG	DIELDRIN	
100U	UG/KG	4,4'-DDT (P,P'-DDT)	
100U	UG/KG	4,4'-DDE (P,P'-DDE)	
100U	UG/KG	4,4'-DDD (P,P'-DDD)	
100U	UG/KG	ENDRIN	
100U	UG/KG	ENDOSULFAN II (BETA)	
100U	UG/KG	ENDOSULFAN SULFATE	
100U	UG/KG	CHLORDANE (TECH. MIXTURE)	/1
100U	UG/KG	PCB-1242 (AROCLOR 1242)	
100U	UG/KG	PCB-1254 (AROCLOR 1254)	
100U	UG/KG	PCB-1221 (AROCLOR 1221)	
100U	UG/KG	PCB-1232 (AROCLOR 1232)	
100U	UG/KG	PCB-1248 (AROCLOR 1248)	
100U	UG/KG	PCB-1260 (AROCLOR 1260)	
100U	UG/KG	PCB-1016 (AROCLOR 1016)	
400U	UG/KG	TOXAPHENE	
100U	UG/KG	ENDRIN ALDEHYDE	
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)	
--	UG/KG	CHLORDENE	/2
--	UG/KG	ALPHA-CHLORDENE	/2
--	UG/KG	GAMMA-CHLORDENE	/2
--	UG/KG	1-HYDROXYCHLORDENE	/2
--	UG/KG	GAMMA-CHLORDANE	/2
--	UG/KG	TRANS-NONACHLOR	/2
--	UG/KG	ALPHA-CHLORDANE	/2
--	UG/KG	CIS-NONACHLOR	/2
NA	UG/KG	METHOXYCHLOR	
14	%	MOISTURE	

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSD 082002320

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Chloride Metals	Briarhill Rd.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Florence	MS		Rankin	121	03

09 COORDINATES LATITUDE	LONGITUDE	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	02 SITE STATUS	03 YEARS OF OPERATION
08 / 08 / 84 (MONTH DAY YEAR)	☐ ACTIVE ☐ INACTIVE	1972 / 1982 (BEGINNING YEAR / ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR NUS Corp. (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.
Johnny Smith	Project Officer	NUS	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Ken Richardson		EPA	404 881-2930 ~~(404) 938-7710~~ JSS
Jan Rogers		EPA	404 881-3931 ~~(404) 938-7710~~ JSS
Mike Horman		EPA	( )
Willie Smitherman	Enviro. Consultant	NUS	(404) 938-7710
Doug Munson	Field Tech	NUS	(404) 938-7710

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Frank Barnett	Prod Mgr	3507 50th St. South P.O. 485, Tampa, Fla 33601	(813) 248-3161
J. T. Morgan	Plant Mgr.	P.O. 38 Briar Hill Rd	(601) 845-2281
Resource Consultant			( )
Wayne McCoy	Senior Associate	P.O. 438 Brentwood, TN. 37027	(615) 373-5040
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	08-08/09/84	08- Misty Cloudy off and On, 09 Clear and Hot

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Ken Richardson	EPA	404) 881-2930

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Johnny Smith	FIT	NUS	404-938-7710	8 / 20 / 84 (MONTH DAY YEAR)

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
MS	MSD082002320

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 _____
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

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

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
MES	LEAD	7439-92-1	LF	35,000,000	ug/kg
IOC	ARSENIC	7440-38-2	LF	72,000	"
MES	CADMIUM	7440-43-9	LF	8,000	"
MES	COPPER	7440-50-8	LF	43,000	"
MES	LEAD	7439-92-1	LF	590	ug/l
IOC	ARSENIC	7440-38-2	LF	30	"
MES	CADMIUM	7440-43-9	LF	75	"
MES	COPPER	7440-50-8	LF	180	"

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)

Field Observations and Log Book
Miss. DNR Files NVS - Files
EPA - Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD082002320

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

Sampled for potential Ground water contamination

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

possible runoff from site into Indian Creek

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

Unknown

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

Unknown

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

Thousands ~~tot~~ of open battery carcas lying in the open landfill

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED 28 acres (Acres) — 04 NARRATIVE DESCRIPTION

Landfill has the potential of being contaminated.

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

~~potential~~ JSS 8-20-84

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

Unknown

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

Unknown

EPA

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

I. IDENTIFICATION
01 STATE: MS
02 SITE NUMBER: D082002320

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE 8-8-84) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
around the spring there is dead vegetation and small tree's.

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

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

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Soils, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE 8-8-84) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: UNKNOWN
04 NARRATIVE DESCRIPTION
On a heavy Rain the Landfill Runoff into the pond could cause a heavy runoff from spillway into the creek

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

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

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

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSD082002320

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				
☐ 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		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ 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

_____ (Acres)

07 COMMENTS

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.

Open Landfill and Runoff could present a potential problem

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☐ NO

02 COMMENTS

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

Field Observations

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSU082002320

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
B. _____ (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)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER _____

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (mi)

04 DEPTH TO GROUNDWATER _____ (ft)

05 DIRECTION OF GROUNDWATER FLOW _____

06 DEPTH TO AQUIFER OF CONCERN _____ (ft)

07 POTENTIAL YIELD OF AQUIFER _____ (gpd)

08 SOLE SOURCE AQUIFER ☐ YES ☐ NO

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

10 RECHARGE AREA
☐ YES
☐ NO
COMMENTS

11 DISCHARGE AREA
☐ YES
☐ NO
COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
	☐	_____ (mi)
	☐	_____ (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. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION _____ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE _____

04 DISTANCE TO NEAREST OFF-SITE BUILDING _____ (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)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD 082002320

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	
_____ (ft)	_____ (ft)	_____	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
_____ (in)	_____ (in)	_____ %		_____ %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A _____ (mi)

OTHER: B _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

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 _____ (mi)	B _____ (mi)	C _____ (mi)	D _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD082002320

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	~~mw~~ Org EnCoTech InOrg Chemtech	1-1-84
SURFACE WATER	4	Org ENCOTECH InOrg Chemtech	"
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	~~5~~ 5	Org CAL. ANAL. LAB. InOrg Chemtech	"
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
ph temp	MW 1 4.2 (22) ; MW 2 3.65 (22°) ; MW 5 3.5 (21.°) ; MW 8 5.25 (24)
Cond	" 38 ; " 38 ; " 38 ; " 40 mhos

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

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

03 MAPS ☐ YES ☒ NO

04 LOCATION OF MAPS

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

FIELD OBSERVATIONS

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
MS	MSD 082 002320

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	04 SIC CODE
Chloride Metals		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE
Bizar Lick Rd	MS	

05 CITY
Florence

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

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

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

01 NAME	02 D+B NUMBER	04 SIC CODE

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	06 STATE	07 ZIP CODE

05 CITY

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

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

II. CURRENT OPERATOR (Provide if different from owner)

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

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	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

PREVIOUS OPERATORS' PARENT COMPANIES (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

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

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

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

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

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

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

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

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

EPA FORM 2070-13 (7-81)

NUS CORPORATION
NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE
SUITE 20
TUCKER, GEORGIA 30084
(404) 938-7710

JRW 4/29/85

C-586-4-5-72

April 24, 1985

Mr. Jon Johnston
Emergency and Remedial Response Branch
Air and Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Subject: Chloride Metals Corporation
Florence, Mississippi
Draft Site Screening Investigation Report
TDD F4-8406-03

Dear Mr. Johnston:

Enclosed please find six (6) copies of the Draft Site Screening Investigation Report for Chloride Metals Corporation, Florence, Mississippi. The investigation was prepared under the guidelines stated in Technical Directive Document (TDD) F4-8406-03.

If you have any questions or comments, please contact me at (404) 938-7710.

Very truly yours,

Michael D. Profit

Michael D. Profit
Environmental Health Scientist

MDP/lsr

D-586-6-4-5

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

APRIL 23, 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants have migrated offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). Its operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting[1].

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slag waste

from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On November 4, 1976, the BPC issued to Chloride Metals NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804, placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into Indian Creek[1].

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process water exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility[1].

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The wells were constructed during the first week of August, 1980[1].

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional wells were installed by early 1982.

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed and the treatment facilities were secured to prevent further runoff from the site[1].

3.3 Hydrogeology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one

each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only. Also, as noted in Tables 4 and 6, some of the data are reported as estimated values and some on the basis of presumptive evidence of their presence only. Estimated data can be used for

positive indications of the presence of the reported compounds. Concentrations should be considered estimated for both positive results and minimum detection limits.

5.3 Field Measurements

The temperature and pH were recorded for each water sample collected. Water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2.

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site grounds. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900

ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Five organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l), chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of four compounds, one of which is a priority pollutant (See Table 4).

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of beryllium, cadmium, and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of

the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

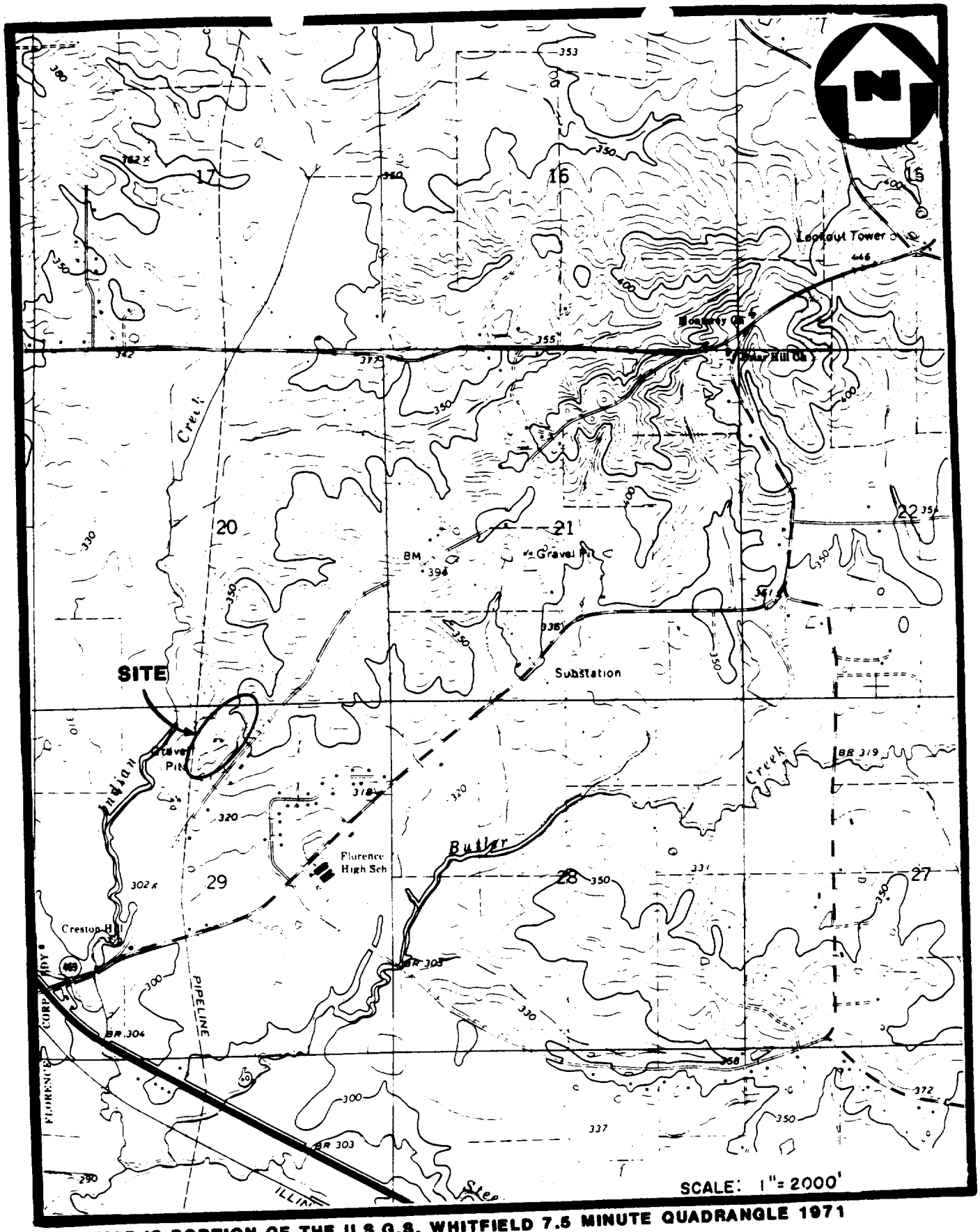
Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].

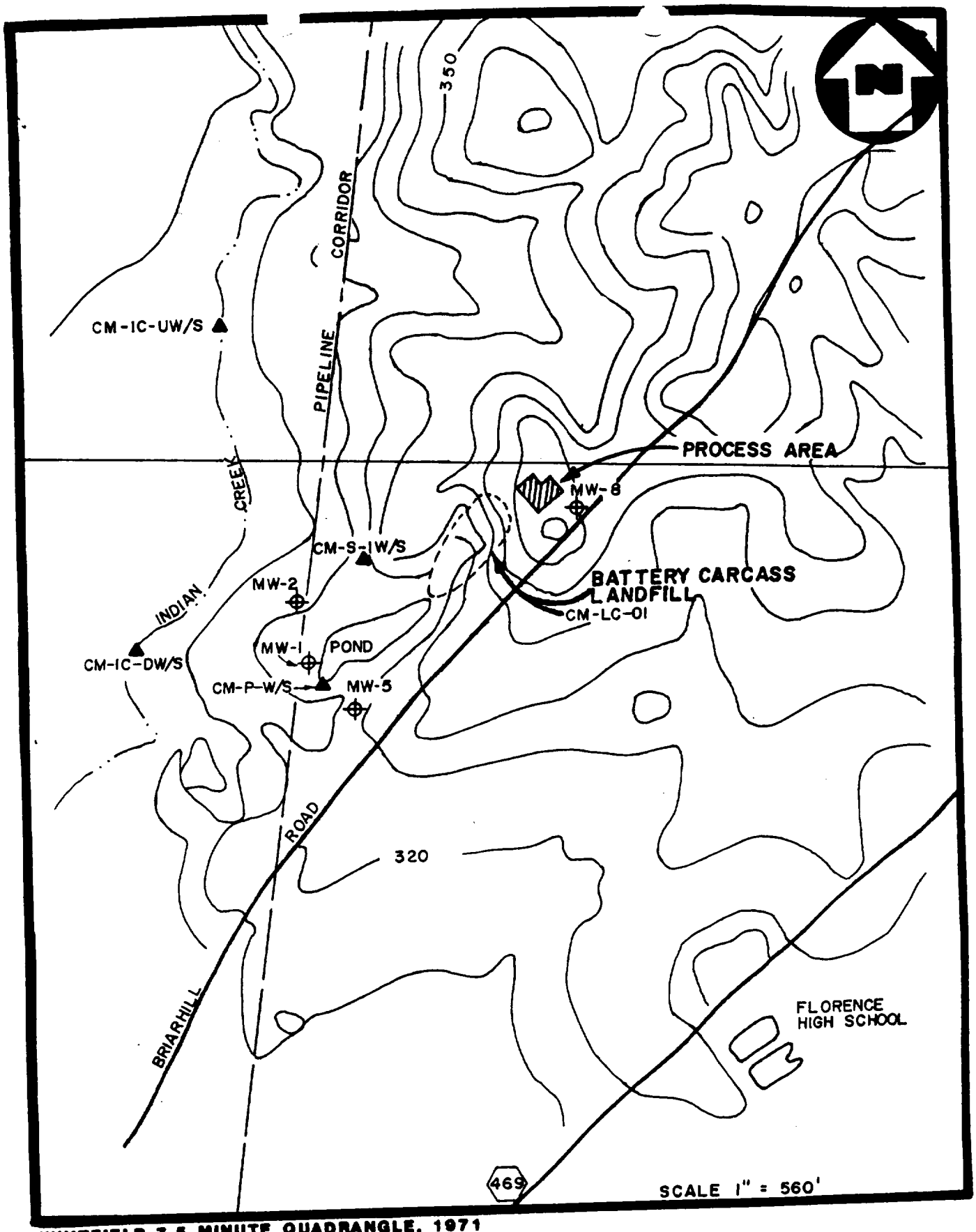


BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION
A Halliburton Company



WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

FIGURE 2

NUS CORPORATION
A Halliburton Company

Table 1
Chloride Metals, Inc.
Sample Code Descriptions

Sample Code	Description
CM-MW-01	Monitoring Well 1 (MW-1)
CM-MW-02	Monitoring Well 2 (MW-2)
CM-MW-05	Monitoring Well 5 (MW-5)
CM-MW-08	Monitoring Well 8 (MW-8)
CM-IC-UW/US	Indian Creek, upstream water/sediment
CM-IC-DW/DS	Indian Creek, downstream water/sediment
CM-P-1W/1S	Onsite pond, water/sediment
CM-S-1W/1S	Onsite spring, water/sediment
CM-LC-01	Battery carcass landfill composite

Table 2
Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp. °C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-84
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Table 3
Chloride Metals, Inc.
Water Samples
Metals Analyses[A]
(Results in ug/l)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Table 4
Chloride Metals, Inc.
Water Samples
Organic Analyses[A]
(Results in ug/l)
August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Purgeable & Miscellaneous Organics								
Methylene Chloride*	4J	3J	3J	4J	3J	2J	2J	2J
Chloroform*	-	2J	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	3J
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	3J	-	-	-	-	-
Di-N-Butylphthalate*	3J	9J	200	5J	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected
NA Not applicable
A This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

Table 5
Chloride Metals, Inc.
Soil and Sediment Samples
Metals Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	8,500	-	13,000	13,000	82,000
Beryllium*	700	-	500	-	-
Cadmium*	-	100	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
Lead*	3,000	9,500	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	320,000	360,000	860,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

B Data reported on wet weight basis

* Priority pollutant

\- Material was analyzed for but not detected.

Table 6
Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	44	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexenol	-	400JN	-	-	-
Cyclohexeneone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecene	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P'-DDT)*	-	-	100J	100J	-

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
B Data reported on dry weight basis
* Priority pollutant
J Estimated value
N Presumptive evidence of presence of material
\- Material was analyzed for but not detected

DRAFT

REFERENCES

1. EPA File, Chloride Metals, Inc., Florence, Mississippi.

2. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1961. Groundwater Resources of Hinds, Madison and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletins 61-2, part II. 146 p.

3. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1964. Groundwater Resources of Hinds, Madison, and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletin 64-1. 38 p.

4. Sams, Jay personal communication, 2-13-85. Mississippi Bureau of Geology.

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

6. Analytical Support Branch Operations and Quality Assurance Manual; U. S. Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982.

DRAFT

APPENDIX A

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
4.2	SU	PH	00400
22	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.10U	MG/L	CYANIDE	00720
3.65	SU	PH	00400
22	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.010	MG/L	CYANIDE	00720
3.5	SU	PH	00400
21	DEG C	TEMPERATURE	00010
38	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
5.25	SU	PH	00400
24	DEG C	TEMPERATURE	00010
40	UMHOS	CONDUCTIVITY	00095

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

117

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
6.55	SU	PH	00400
25	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-8-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
2.8	SU	PH	00400
24	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.010	MG/L	CYANIDE	00720
6	SU	PH	00400
28	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.01U	MG/L	CYANIDE	00720
5.5	SU	PH	00400
26	DEG C	TEMPERATURE	00010

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS/
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
16	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
17	UG/L	BERYLLIUM
75	UG/L	CADMIUM
520	UG/L	COBALT
72	UG/L	CHROMIUM
72	UG/L	COPPER
NA	UG/L	MOLYBDENUM
370	UG/L	NICKEL
200	UG/L	LEAD
20U	UG/L	ANTIMONY
20	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
900	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
41000	UG/L	ALUMINUM
27000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
65	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
23	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
24	UG/L	BERYLLIUM
56	UG/L	CADMIUM
660	UG/L	COBALT
47	UG/L	CHROMIUM
180	UG/L	COPPER
NA	UG/L	MOLYBDENUM
140	UG/L	NICKEL
260	UG/L	LEAD
34	UG/L	ANTIMONY
20	UG/L	SELENIUM
200U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
580	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.48	UG/L	MERCURY
190000	UG/L	ALUMINUM
11000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
62	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
30	UG/L	ARSENIC
NA	UG/L	BORON
280	UG/L	BARIUM
7	UG/L	BERYLLIUM
37	UG/L	CADMIUM
100	UG/L	COBALT
90	UG/L	CHROMIUM
140	UG/L	COPPER
NA	UG/L	MOLYBDENUM
88	UG/L	NICKEL
130	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
310	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.3	UG/L	MERCURY
80000	UG/L	ALUMINUM
2800	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
86	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
1U	UG/L	CADMIUM
50U	UG/L	COBALT
30	UG/L	CHROMIUM
53	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
120	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
29	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
75	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
17000	UG/L	ALUMINUM
92	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
9.4	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
1U	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
76	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
15	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
3800	UG/L	ALUMINUM
580	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
3.6	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
6	UG/L	BERYLLIUM
6.5	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
31	UG/L	LEAD
20U	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
26	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
2400	UG/L	ALUMINUM
2300	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
2	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-8-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
19	UG/L	BERYLLIUM
68	UG/L	CADMIUM
600	UG/L	COBALT
62	UG/L	CHROMIUM
180	UG/L	COPPER
NA	UG/L	MOLYBDENUM
180	UG/L	NICKEL
570	UG/L	LEAD
28	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
910	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
200000	UG/L	ALUMINUM
14000	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
42	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS *
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
10U	UG/L	SILVER
10U	UG/L	ARSENIC
NA	UG/L	BORON
100U	UG/L	BARIUM
5U	UG/L	BERYLLIUM
3.4	UG/L	CADMIUM
50U	UG/L	COBALT
10U	UG/L	CHROMIUM
50U	UG/L	COPPER
NA	UG/L	MOLYBDENUM
40U	UG/L	NICKEL
590	UG/L	LEAD
29	UG/L	ANTIMONY
2U	UG/L	SELENIUM
20U	UG/L	TIN
NA	UG/L	STRONTIUM
NA	UG/L	TELLURIUM
NA	UG/L	TITANIUM
10U	UG/L	THALLIUM
200U	UG/L	VANADIUM
NA	UG/L	YTTRIUM
10U	UG/L	ZINC
NA	UG/L	ZIRCONIUM
0.2U	UG/L	MERCURY
150	UG/L	ALUMINUM
70	UG/L	MANGANESE
NA	MG/L	CALCIUM
NA	MG/L	MAGNESIUM
0.58	MG/L	IRON
NA	MG/L	SODIUM
NA	MG/L	POTASSIUM

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
100	UG/L	CHLOROMETHANE
100	UG/L	BROMOMETHANE
100	UG/L	VINYL CHLORIDE
100	UG/L	CHLOROETHANE
43	UG/L	METHYLENE CHLORIDE
100	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
100	UG/L	1,1-DICHLOROETHANE
100	UG/L	TRANS-1,2-DICHLOROETHENE
100	UG/L	CHLOROFORM
100	UG/L	1,2-DICHLOROETHANE
100	UG/L	1,1,1-TRICHLOROETHANE
100	UG/L	CARBON TETRACHLORIDE
100	UG/L	BROMODICHLOROMETHANE
100	UG/L	1,2-DICHLOROPROPANE
100	UG/L	TRANS-1,3-DICHLOROPROPENE
100	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
100	UG/L	BENZENE
100	UG/L	DIBROMOCHLOROMETHANE
100	UG/L	1,1,2-TRICHLOROETHANE
100	UG/L	CIS-1,3-DICHLOROPROPENE
100	UG/L	2-CHLOROETHYLVINYL ETHER
100	UG/L	BROMOFORM
100	UG/L	1,1,2,2-TETRACHLOROETHANE
100	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
100	UG/L	TOLUENE
100	UG/L	CHLOROBENZENE
100	UG/L	ETHYL BENZENE
100	UG/L	M-XYLENE
100	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
3J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
2J	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
100	UG/L	CHLOROMETHANE
100	UG/L	BROMOMETHANE
100	UG/L	VINYL CHLORIDE
100	UG/L	CHLOROETHANE
3.1	UG/L	METHYLENE CHLORIDE
100	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
100	UG/L	1,1-DICHLOROETHANE
100	UG/L	TRANS-1,2-DICHLOROETHENE
100	UG/L	CHLOROFORM
100	UG/L	1,2-DICHLOROETHANE
100	UG/L	1,1,1-TRICHLOROETHANE
100	UG/L	CARBON TETRACHLORIDE
100	UG/L	BROMODICHLOROMETHANE
100	UG/L	1,2-DICHLOROPROPANE
100	UG/L	TRANS-1,3-DICHLOROPROPENE
100	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
100	UG/L	BENZENE
100	UG/L	DIBROMOCHLOROMETHANE
100	UG/L	1,1,2-TRICHLOROETHANE
100	UG/L	CIS-1,3-DICHLOROPROPENE
100	UG/L	2-CHLOROETHYLVINYL ETHER
100	UG/L	BROMOFORM
100	UG/L	1,1,2,2-TETRACHLOROETHANE
100	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
100	UG/L	TOLUENE
100	UG/L	CHLOROBENZENE
100	UG/L	ETHYL BENZENE
100	UG/L	M-XYLENE
100	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000	UG/L	ACROLEIN
1000	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
4.1	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHB

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
3.1	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLR SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
2J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
21	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NA1-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/L	ACROLEIN
100U	UG/L	ACRYLONITRILE
10U	UG/L	CHLOROMETHANE
10U	UG/L	BROMOMETHANE
10U	UG/L	VINYL CHLORIDE
10U	UG/L	CHLOROETHANE
2J	UG/L	METHYLENE CHLORIDE
10U	UG/L	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
10U	UG/L	1,1-DICHLOROETHANE
10U	UG/L	TRANS-1,2-DICHLOROETHENE
10U	UG/L	CHLOROFORM
10U	UG/L	1,2-DICHLOROETHANE
10U	UG/L	1,1,1-TRICHLOROETHANE
10U	UG/L	CARBON TETRACHLORIDE
10U	UG/L	BROMODICHLOROMETHANE
10U	UG/L	1,2-DICHLOROPROPANE
10U	UG/L	TRANS-1,3-DICHLOROPROPENE
10U	UG/L	TRICHLOROETHENE(TRICHLOROETHYLENE)
10U	UG/L	BENZENE
10U	UG/L	DIBROMOCHLOROMETHANE
10U	UG/L	1,1,2-TRICHLOROETHANE
10U	UG/L	CIS-1,3-DICHLOROPROPENE
10U	UG/L	2-CHLOROETHYLVINYL ETHER
10U	UG/L	BROMOFORM
10U	UG/L	1,1,2,2-TETRACHLOROETHANE
10U	UG/L	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
10U	UG/L	TOLUENE
10U	UG/L	CHLOROBENZENE
10U	UG/L	ETHYL BENZENE
10U	UG/L	M-XYLENE
10U	UG/L	O&P-XYLENE(MIXED)

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
5U	ACETONE
5U	METHYL ETHYL KETONE
5U	CARBON DISULFIDE
5U	METHYL BUTYL KETONE
5U	METHYL ISOBUTYL KETONE
5U	STYRENE
5U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLR DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
50	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
50	ACETONE
50	METHYL ETHYL KETONE
31	CARBON DISULFIDE
50	METHYL BUTYL KETONE
50	METHYL ISOBUTYL KETONE
50	STYRENE
50	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPHOPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
3J	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
9J	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400	UG/L	BENZIDINE
200	UG/L	1,3-DICHLOROBENZENE
200	UG/L	1,4-DICHLOROBENZENE
200	UG/L	1,2-DICHLOROBENZENE
200	UG/L	BIS(2-CHLOROETHYL) ETHER
200	UG/L	HEXACHLOROETHANE
200	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200	UG/L	N-NITROSODI-N-PROPYLAMINE
200	UG/L	NITROBENZENE
200	UG/L	HEXACHLOROBUTADIENE
200	UG/L	1,2,4-TRICHLOROBENZENE
200	UG/L	NAPHTHALENE
200	UG/L	BIS(2-CHLOROETHOXY) METHANE
200	UG/L	ISOPHORONE
200	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200	UG/L	2-CHLORONAPHTHALENE
200	UG/L	ACENAPHTHYLENE
200	UG/L	ACENAPHTHENE
200	UG/L	DIMETHYL PHTHALATE
200	UG/L	2,4-DINITROTOLUENE
200	UG/L	2,6-DINITROTOLUENE
200	UG/L	4-CHLOROPHENYL PHENYL ETHER
200	UG/L	FLUORENE
33	UG/L	DIETHYL PHTHALATE
200	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200	UG/L	HEXACHLOROBENZENE (HCB)
200	UG/L	4-BROMOPHENYL PHENYL ETHER
200	UG/L	PHENANTHRENE
200	UG/L	ANTHRACENE
200	UG/L	DI-N-BUTYLPHTHALATE
200	UG/L	FLUORANTHENE
200	UG/L	PYRENE
200	UG/L	BENZYL BUTYL PHTHALATE
34	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200	UG/L	BENZO(A)ANTHRACENE
200	UG/L	CHRYSENE
200	UG/L	3,3'-DICHLOROBENZIDINE
200	UG/L	DI-N-OCTYLPHTHALATE
200	UG/L	BENZO(B)FLUORANTHENE
200	UG/L	BENZO(K)FLUORANTHENE
200	UG/L	BENZO-A-PYRENE
200	UG/L	INDENO (1,2,3-CD) PYRENE
200	UG/L	DIBENZO(A,H)ANTHRACENE
200	UG/L	BENZO(GHI)PERYLENE
200	UG/L	2-CHLOROPHENOL
200	UG/L	2-NITROPHENOL
200	UG/L	PHENOL
200	UG/L	2,4-DIMETHYLPHENOL
200	UG/L	2,4-DICHLOROPHENOL
200	UG/L	2,4,6-TRICHLOROPHENOL
200	UG/L	4-CHLORO-3-METHYLPHENOL
500	UG/L	2,4-DINITROPHENOL
200	UG/L	2-METHYL-4,6-DINITROPHENOL
200	UG/L	PENTACHLOROPHENOL
500	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: H4-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
20U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
40U	UG/L	BENZIDINE
20U	UG/L	1,3-DICHLOROBENZENE
20U	UG/L	1,4-DICHLOROBENZENE
20U	UG/L	1,2-DICHLOROBENZENE
20U	UG/L	BIS(2-CHLOROETHYL) ETHER
20U	UG/L	HEXACHLOROETHANE
20U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
20U	UG/L	N-NITROSODI-N-PROPYLAMINE
20U	UG/L	NITROBENZENE
20U	UG/L	HEXACHLOROBUTADIENE
20U	UG/L	1,2,4-TRICHLOROBENZENE
20U	UG/L	NAPHTHALENE
20U	UG/L	BIS(2-CHLOROETHOXY) METHANE
20U	UG/L	ISOPHORONE
20U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
20U	UG/L	2-CHLORONAPHTHALENE
20U	UG/L	ACENAPHTHYLENE
20U	UG/L	ACENAPHTHENE
20U	UG/L	DIMETHYL PHTHALATE
20U	UG/L	2,4-DINITROTOLUENE
20U	UG/L	2,6-DINITROTOLUENE
20U	UG/L	4-CHLOROPHENYL PHENYL ETHER
20U	UG/L	FLUORENE
20U	UG/L	DIETHYL PHTHALATE
20U	UG/L	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
20U	UG/L	HEXACHLOROBENZENE (HCB)
20U	UG/L	4-BROMOPHENYL PHENYL ETHER
20U	UG/L	PHENANTHRENE
20U	UG/L	ANTHRACENE
5J	UG/L	DI-N-BUTYLPHTHALATE
20U	UG/L	FLUORANTHENE
20U	UG/L	PYRENE
20U	UG/L	BENZYL BUTYL PHTHALATE
20U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
20U	UG/L	BENZO(A)ANTHRACENE
20U	UG/L	CHRYSENE
20U	UG/L	3,3'-DICHLOROBENZIDINE
20U	UG/L	DI-N-OCTYLPHTHALATE
20U	UG/L	BENZO(B)FLUORANTHENE
20U	UG/L	BENZO(K)FLUORANTHENE
20U	UG/L	BENZO-A-PYRENE
20U	UG/L	INDENO (1,2,3-CD) PYRENE
20U	UG/L	DIBENZO(A,H)ANTHRACENE
20U	UG/L	BENZO(GHI)PERYLENE
20U	UG/L	2-CHLOROPHENOL
20U	UG/L	2-NITROPHENOL
20U	UG/L	PHENOL
20U	UG/L	2,4-DIMETHYLPHENOL
20U	UG/L	2,4-DICHLOROPHENOL
20U	UG/L	2,4,6-TRICHLOROPHENOL
20U	UG/L	4-CHLORO-3-METHYLPHENOL
50U	UG/L	2,4-DINITROPHENOL
20U	UG/L	2-METHYL-4,6-DINITROPHENOL
20U	UG/L	PENTACHLOROPHENOL
50U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
200U	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
200U	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: M01945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400	UG/L	BENZIDINE
200	UG/L	1,3-DICHLOROBENZENE
200	UG/L	1,4-DICHLOROBENZENE
200	UG/L	1,2-DICHLOROBENZENE
200	UG/L	BIS(2-CHLOROETHYL) ETHER
200	UG/L	HEXACHLOROETHANE
200	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200	UG/L	N-NITROSODI-N-PROPYLAMINE
200	UG/L	NITROBENZENE
200	UG/L	HEXACHLOROBUTADIENE
200	UG/L	1,2,4-TRICHLOROBENZENE
200	UG/L	NAPHTHALENE
200	UG/L	BIS(2-CHLOROETHOXY) METHANE
200	UG/L	ISOPHORONE
200	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200	UG/L	2-CHLORONAPHTHALENE
200	UG/L	ACENAPHTHYLENE
200	UG/L	ACENAPHTHENE
200	UG/L	DIMETHYL PHTHALATE
200	UG/L	2,4-DINITROTOLUENE
200	UG/L	2,6-DINITROTOLUENE
200	UG/L	4-CHLOROPHENYL PHENYL ETHER
200	UG/L	FLUORENE
200	UG/L	DIETHYL PHTHALATE
200	UG/L	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
200	UG/L	HEXACHLOROBENZENE (HCB)
200	UG/L	4-BROMOPHENYL PHENYL ETHER
200	UG/L	PHENANTHRENE
200	UG/L	ANTHRACENE
200	UG/L	DI-N-BUTYLPHTHALATE
200	UG/L	FLUORANTHENE
200	UG/L	PYRENE
200	UG/L	BENZYL BUTYL PHTHALATE
200	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200	UG/L	BENZO(A)ANTHRACENE
200	UG/L	CHRYSENE
200	UG/L	3,3'-DICHLOROBENZIDINE
200	UG/L	DI-N-OCTYLPHTHALATE
200	UG/L	BENZO(B)FLUORANTHENE
200	UG/L	BENZO(K)FLUORANTHENE
200	UG/L	BENZO-A-PYRENE
200	UG/L	INDENO (1,2,3-CD) PYRENE
200	UG/L	DIBENZO(A,H)ANTHRACENE
200	UG/L	BENZO(GHI)PERYLENE
200	UG/L	2-CHLOROPHENOL
200	UG/L	2-NITROPHENOL
200	UG/L	PHENOL
200	UG/L	2,4-DIMETHYLPHENOL
200	UG/L	2,4-DICHLOROPHENOL
200	UG/L	2,4,6-TRICHLOROPHENOL
200	UG/L	4-CHLORO-3-METHYLPHENOL
500	UG/L	2,4-DINITROPHENOL
200	UG/L	2-METHYL-4,6-DINITROPHENOL
200	UG/L	PENTACHLOROPHENOL
500	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHW

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/L	N-NITROSODIMETHYLAMINE
200U	UG/L	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
400U	UG/L	BENZIDINE
200U	UG/L	1,3-DICHLOROBENZENE
200U	UG/L	1,4-DICHLOROBENZENE
200U	UG/L	1,2-DICHLOROBENZENE
200U	UG/L	BIS(2-CHLOROETHYL) ETHER
200U	UG/L	HEXACHLOROETHANE
200U	UG/L	BIS(2-CHLOROISOPROPYL) ETHER
200U	UG/L	N-NITROSODI-N-PROPYLAMINE
200U	UG/L	NITROBENZENE
200U	UG/L	HEXACHLOROBUTADIENE
200U	UG/L	1,2,4-TRICHLOROBENZENE
200U	UG/L	NAPHTHALENE
200U	UG/L	BIS(2-CHLOROETHOXY) METHANE
200U	UG/L	ISOPHORONE
200U	UG/L	HEXACHLOROCYCLOPENTADIENE (HCCP)
200U	UG/L	2-CHLORONAPHTHALENE
200U	UG/L	ACENAPHTHYLENE
200U	UG/L	ACENAPHTHENE
200U	UG/L	DIMETHYL PHTHALATE
200U	UG/L	2,4-DINITROTOLUENE
200U	UG/L	2,6-DINITROTOLUENE
200U	UG/L	4-CHLOROPHENYL PHENYL ETHER
200U	UG/L	FLUORENE
200U	UG/L	DIETHYL PHTHALATE
200U	UG/L	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
200U	UG/L	HEXACHLOROBENZENE (HCB)
200U	UG/L	4-BROMOPHENYL PHENYL ETHER
200U	UG/L	PHENANTHRENE
200U	UG/L	ANTHRACENE
200U	UG/L	DI-N-BUTYLPHTHALATE
200U	UG/L	FLUORANTHENE
200U	UG/L	PYRENE
200U	UG/L	BENZYL BUTYL PHTHALATE
200U	UG/L	BIS(2-ETHYLHEXYL) PHTHALATE
200U	UG/L	BENZO(A)ANTHRACENE
200U	UG/L	CHRYSENE
200U	UG/L	3,3'-DICHLOROBENZIDINE
200U	UG/L	DI-N-OCTYLPHTHALATE
200U	UG/L	BENZO(B)FLUORANTHENE
200U	UG/L	BENZO(K)FLUORANTHENE
200U	UG/L	BENZO-A-PYRENE
200U	UG/L	INDENO (1,2,3-CD) PYRENE
200U	UG/L	DIBENZO(A,H)ANTHRACENE
200U	UG/L	BENZO(GHI)PERYLENE
200U	UG/L	2-CHLOROPHENOL
200U	UG/L	2-NITROPHENOL
200U	UG/L	PHENOL
200U	UG/L	2,4-DIMETHYLPHENOL
200U	UG/L	2,4-DICHLOROPHENOL
200U	UG/L	2,4,6-TRICHLOROPHENOL
200U	UG/L	4-CHLORO-3-METHYLPHENOL
500U	UG/L	2,4-DINITROPHENOL
200U	UG/L	2-METHYL-4,6-DINITROPHENOL
200U	UG/L	PENTACHLOROPHENOL
500U	UG/L	4-NITROPHENOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
20J	1 UNKNOWN COMPOUND

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
90J	2 UNKNOWN COMPOUNDS

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
1000	BENZOIC ACID
50	2-METHYLPHENOL
50	4-METHYLPHENOL
1000	2,4,5-TRICHLOROPHENOL
50	ANILINE
200	BENZYL ALCOHOL
500	4-CHLOROANILINE
100	DIBENZOFURAN
200	2-METHYL NAPHTHALENE
1000	2-NITROANILINE
1000	3-NITROANILINE
1000	4-NITROANILINE
200J	1 UNKNOWN COMPOUND

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: R4C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHR

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
NA	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
1000	BENZOIC ACID
50	2-METHYLPHENOL
50	4-METHYLPHENOL
1000	2,4,5-TRICHLOROPHENOL
50	ANILINE
200	BENZYL ALCOHOL
500	4-CHLOROANILINE
100	DIBENZOFURAN
200	2-METHYL NAPHTHALENE
1000	2-NITROANILINE
1000	3-NITROANILINE
1000	4-NITROANILINE
20	BROMOCHLOROCYCLOHEXANE
200J	4 UNKNOWN COMPOUNDS

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/L	COMPOUND NAME
100U	BENZOIC ACID
5U	2-METHYLPHENOL
5U	4-METHYLPHENOL
100U	2,4,5-TRICHLOROPHENOL
5U	ANILINE
20U	BENZYL ALCOHOL
50U	4-CHLOROANILINE
10U	DIBENZOFURAN
20U	2-METHYL NAPHTHALENE
100U	2-NITROANILINE
100U	3-NITROANILINE
100U	4-NITROANILINE
20J	1-UNKNOWN COMPOUND

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4244 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1320
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA118 INORG SAMPLE NO.: MD1939
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.60U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4247 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-02
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1545
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA121 INORG SAMPLE NO.: MD1942
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4246 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-05
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1428
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA120 INORG SAMPLE NO.: MD1941
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.03U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.07U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.07U	UG/L	TOXAPHENE
0.07U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*R-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4242 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-MW-08
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1050
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA116 INORG SAMPLE NO.: MD1937
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4248 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-UW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1450
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA122 INORG SAMPLE NO.: MD1943
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.06U	UG/L	BETA-BHC
0.05U	UG/L	GAMMA-BHC (LINDANE)
0.02U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4251 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-TC-DW
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1130
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA129 INORG SAMPLE NO.: MD1950
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.09U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.04U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.70U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.40U	UG/L	PCB-1221 (AROCLOR 1221)
0.50U	UG/L	PCB-1232 (AROCLOR 1232)
0.40U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.50U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4249 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-8-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0810
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA124 INORG SAMPLE NO.: MD1945
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.03U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.60U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.30U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/06/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE NO.: 84C4250 SAMPLE TYPE: MONWL

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1W
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 0858
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA126 INORG SAMPLE NO.: MD1947
CONTRACT LABORATORY(ORGANIC): ENCOT
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
0.02U	UG/L	ALDRIN
0.02U	UG/L	HEPTACHLOR
0.02U	UG/L	HEPTACHLOR EPOXIDE
0.02U	UG/L	ALPHA-BHC
0.02U	UG/L	BETA-BHC
0.06U	UG/L	GAMMA-BHC (LINDANE)
0.05U	UG/L	DELTA-BHC
0.02U	UG/L	ENDOSULFAN I (ALPHA)
0.02U	UG/L	DIELDRIN
0.08U	UG/L	4,4'-DDT (P,P'-DDT)
0.02U	UG/L	4,4'-DDE (P,P'-DDE)
0.02U	UG/L	4,4'-DDD (P,P'-DDD)
0.03U	UG/L	ENDRIN
0.02U	UG/L	ENDOSULFAN II (BETA)
0.10U	UG/L	ENDOSULFAN SULFATE
0.20U	UG/L	CHLORDANE (TECH. MIXTURE) /1
0.60U	UG/L	PCB-1242 (AROCLOR 1242)
0.10U	UG/L	PCB-1254 (AROCLOR 1254)
0.30U	UG/L	PCB-1221 (AROCLOR 1221)
0.40U	UG/L	PCB-1232 (AROCLOR 1232)
0.30U	UG/L	PCB-1248 (AROCLOR 1248)
0.10U	UG/L	PCB-1260 (AROCLOR 1260)
0.40U	UG/L	PCB-1016 (AROCLOR 1016)
0.06U	UG/L	TOXAPHENE
0.06U	UG/L	ENDRIN ALDEHYDE
NA	UG/L	2,3,7,8 TCDD(DIOXIN)
--	UG/L	CHLORDENE /2
--	UG/L	ALPHA-CHLORDENE /2
--	UG/L	GAMMA-CHLORDENE /2
--	UG/L	1-HYDROXYCHLORDENE /2
--	UG/L	GAMMA-CHLORDANE /2
--	UG/L	TRANS-NONACHLOR /2
--	UG/L	ALPHA-CHLORDANE /2
--	UG/L	CIS-NONACHLOR /2
NA	UG/L	METHOXYCHLOR

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.250	MG/KG	CYANIDE	00721

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	PARAMETER	STORET
0.25U	MG/KG	CYANIDE	00721

01/18/85

SPECIFIED ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/10/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
8.5	MG/KG	BARIUM
0.7	MG/KG	BERYLLIUM
0.05U	MG/KG	CADMIUM
50U	MG/KG	COBALT
10U	MG/KG	CHROMIUM
2.5	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
2U	MG/KG	NICKEL
3	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
1U	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
4	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
320	MG/KG	ALUMINUM
73	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
690	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
5U	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
0.1	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
0.9	MG/KG	CHROMIUM
2.5U	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
2U	MG/KG	NICKEL
9.5	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
1U	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
1U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
3.7	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
360	MG/KG	ALUMINUM
46	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
920	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
1.2	MG/KG	ARSENIC
NA	MG/KG	BORON
13	MG/KG	BARIUM
0.5	MG/KG	BERYLLIUM
8	MG/KG	CADMIUM
5.3	MG/KG	COBALT
3.3	MG/KG	CHROMIUM
13.3	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
3.5	MG/KG	NICKEL
60	MG/KG	LEAD
1U	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
10	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
10	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.22	MG/KG	MERCURY
860	MG/KG	ALUMINUM
6	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
6000	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
0.5U	MG/KG	ARSENIC
NA	MG/KG	BORON
13	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
0.3	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
3.3	MG/KG	CHROMIUM
3.5	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
20	MG/KG	NICKEL
100	MG/KG	LEAD
10	MG/KG	ANTIMONY
0.1U	MG/KG	SELENIUM
10	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
5.3	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
1900	MG/KG	ALUMINUM
20	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
2900	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

01/18/85

METALS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MAW
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: MAW

REMARKS
DATA REPORTED ON WET WEIGHT BASIS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	ELEMENT
0.5U	MG/KG	SILVER
72	MG/KG	ARSENIC
NA	MG/KG	BORON
82	MG/KG	BARIUM
0.25U	MG/KG	BERYLLIUM
4.2	MG/KG	CADMIUM
2.5U	MG/KG	COBALT
2.3	MG/KG	CHROMIUM
45	MG/KG	COPPER
NA	MG/KG	MOLYBDENUM
13	MG/KG	NICKEL
35000	MG/KG	LEAD
10	MG/KG	ANTIMONY
0.6	MG/KG	SELENIUM
2.9	MG/KG	TIN
NA	MG/KG	STRONTIUM
NA	MG/KG	TELLURIUM
NA	MG/KG	TITANIUM
0.5U	MG/KG	THALLIUM
10U	MG/KG	VANADIUM
NA	MG/KG	YTTRIUM
28	MG/KG	ZINC
NA	MG/KG	ZIRCONIUM
0.1U	MG/KG	MERCURY
1100	MG/KG	ALUMINUM
28	MG/KG	MANGANESE
NA	MG/KG	CALCIUM
NA	MG/KG	MAGNESIUM
3400	MG/KG	IRON
NA	MG/KG	SODIUM
NA	MG/KG	POTASSIUM
NA	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L=ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
16	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
1000U	UG/KG	ACROLEIN
1000U	UG/KG	ACRYLONITRILE
200U	UG/KG	CHLOROMETHANE
200U	UG/KG	BROMOMETHANE
200U	UG/KG	VINYL CHLORIDE
200U	UG/KG	CHLOROETHANE
200U	UG/KG	METHYLENE CHLORIDE
200U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
200U	UG/KG	1,1-DICHLOROETHANE
200U	UG/KG	TRANS-1,2-DICHLOROETHENE
200U	UG/KG	CHLOROFORM
200U	UG/KG	1,2-DICHLOROETHANE
200U	UG/KG	1,1,1-TRICHLOROETHANE
200U	UG/KG	CARBON TETRACHLORIDE
200U	UG/KG	BROMODICHLOROMETHANE
200U	UG/KG	1,2-DICHLOROPROPANE
200U	UG/KG	TRANS-1,3-DICHLOROPROPENE
200U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
200U	UG/KG	BENZENE
200U	UG/KG	DIBROMOCHLOROMETHANE
800	UG/KG	1,1,2-TRICHLOROETHANE
200U	UG/KG	CIS-1,3-DICHLOROPROPENE
200U	UG/KG	2-CHLOROETHYLVINYL ETHER
200U	UG/KG	BROMOFORM
200U	UG/KG	1,1,2,2-TETRACHLOROETHANE
200U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
200U	UG/KG	TOLUENE
200U	UG/KG	CHLOROBENZENE
200U	UG/KG	ETHYL BENZENE
200U	UG/KG	M-XYLENE
200U	UG/KG	O&P-XYLENE(MIXED)
19	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
44	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
30	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
72	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
39	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-13
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
30	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB SAMPLE DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ACROLEIN
100U	UG/KG	ACRYLONITRILE
20U	UG/KG	CHLOROMETHANE
20U	UG/KG	BROMOMETHANE
20U	UG/KG	VINYL CHLORIDE
20U	UG/KG	CHLOROETHANE
20U	UG/KG	METHYLENE CHLORIDE
20U	UG/KG	1,1-DICHLOROETHENE(1,1-DICHLOROETHYLENE)
20U	UG/KG	1,1-DICHLOROETHANE
20U	UG/KG	TRANS-1,2-DICHLOROETHENE
20U	UG/KG	CHLOROFORM
20U	UG/KG	1,2-DICHLOROETHANE
20U	UG/KG	1,1,1-TRICHLOROETHANE
20U	UG/KG	CARBON TETRACHLORIDE
20U	UG/KG	BROMODICHLOROMETHANE
20U	UG/KG	1,2-DICHLOROPROPANE
20U	UG/KG	TRANS-1,3-DICHLOROPROPENE
20U	UG/KG	TRICHLOROETHENE(TRICHLOROETHYLENE)
20U	UG/KG	BENZENE
20U	UG/KG	DIBROMOCHLOROMETHANE
20U	UG/KG	1,1,2-TRICHLOROETHANE
20U	UG/KG	CIS-1,3-DICHLOROPROPENE
20U	UG/KG	2-CHLOROETHYLVINYL ETHER
20U	UG/KG	BROMOFORM
20U	UG/KG	1,1,2,2-TETRACHLOROETHANE
20U	UG/KG	TETRACHLOROETHENE(TETRACHLOROETHYLENE)
20U	UG/KG	TOLUENE
20U	UG/KG	CHLOROBENZENE
20U	UG/KG	ETHYL BENZENE
20U	UG/KG	M-XYLENE
20U	UG/KG	O&P-XYLENE(MIXED)
14	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
240	ACETONE
20U	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
20U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
260	ACETONE
87	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
20U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PURGEABLE ORGANICS ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
20U	ACETONE
20U	METHYL ETHYL KETONE
10U	CARBON DISULFIDE
20U	METHYL BUTYL KETONE
20U	METHYL ISOBUTYL KETONE
20U	STYRENE
20U	VINYL ACETATE
NA	DICHLORODIFLUOROMETHANE
NA	FLUOROTRICHLOROMETHANE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
5000	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
5000	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
5000	UG/KG	BENZYL BUTYL PHTHALATE
5000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
5000	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
5000	UG/KG	DI-N-OCTYLPHTHALATE
5000	UG/KG	BENZO(B)FLUORANTHENE
5000	UG/KG	BENZO(K)FLUORANTHENE
5000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
5000	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
16	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
500U	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
500U	UG/KG	BENZIDINE
500U	UG/KG	1,3-DICHLOROBENZENE
500U	UG/KG	1,4-DICHLOROBENZENE
500U	UG/KG	1,2-DICHLOROBENZENE
500U	UG/KG	BIS(2-CHLOROETHYL) ETHER
500U	UG/KG	HEXACHLOROETHANE
500U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
500U	UG/KG	N-NITROSODI-N-PROPYLAMINE
500U	UG/KG	NITROBENZENE
500U	UG/KG	HEXACHLOROBUTADIENE
500U	UG/KG	1,2,4-TRICHLOROBENZENE
500U	UG/KG	NAPHTHALENE
500U	UG/KG	BIS(2-CHLOROETHOXY) METHANE
500U	UG/KG	ISOPHORONE
500U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	UG/KG	2-CHLORONAPHTHALENE
500U	UG/KG	ACENAPHTHYLENE
500U	UG/KG	ACENAPHTHENE
500U	UG/KG	DIMETHYL PHTHALATE
500U	UG/KG	2,4-DINITROTOLUENE
500U	UG/KG	2,6-DINITROTOLUENE
500U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
500U	UG/KG	FLUORENE
500U	UG/KG	DIETHYL PHTHALATE
500U	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
500U	UG/KG	HEXACHLOROBENZENE (HCB)
500U	UG/KG	4-BROMOPHENYL PHENYL ETHER
500U	UG/KG	PHENANTHRENE
500U	UG/KG	ANTHRACENE
500U	UG/KG	DI-N-BUTYLPHTHALATE
500U	UG/KG	FLUORANTHENE
500U	UG/KG	PYRENE
500U	UG/KG	BENZYL BUTYL PHTHALATE
500U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
500U	UG/KG	BENZO(A)ANTHRACENE
500U	UG/KG	CHRYSENE
500U	UG/KG	3,3'-DICHLOROBENZIDINE
500U	UG/KG	DI-N-OCTYLPHTHALATE
500U	UG/KG	BENZO(B)FLUORANTHENE
500U	UG/KG	BENZO(K)FLUORANTHENE
500U	UG/KG	BENZO-A-PYRENE
500U	UG/KG	INDENO (1,2,3-CD) PYRENE
500U	UG/KG	DIBENZO(A,H)ANTHRACENE
500U	UG/KG	BENZO(GHI)PERYLENE
500U	UG/KG	2-CHLOROPHENOL
500U	UG/KG	2-NITROPHENOL
500U	UG/KG	PHENOL
500U	UG/KG	2,4-DIMETHYLPHENOL
500U	UG/KG	2,4-DICHLOROPHENOL
500U	UG/KG	2,4,6-TRICHLOROPHENOL
500U	UG/KG	4-CHLORO-3-METHYLPHENOL
800U	UG/KG	2,4-DINITROPHENOL
500U	UG/KG	2-METHYL-4,6-DINITROPHENOL
500U	UG/KG	PENTACHLOROPHENOL
1800U	UG/KG	4-NITROPHENOL
19	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
5000	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
5000	UG/KG	BENZIDINE
5000	UG/KG	1,3-DICHLOROBENZENE
5000	UG/KG	1,4-DICHLOROBENZENE
5000	UG/KG	1,2-DICHLOROBENZENE
5000	UG/KG	BIS(2-CHLOROETHYL) ETHER
5000	UG/KG	HEXACHLOROETHANE
5000	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
5000	UG/KG	N-NITROSODI-N-PROPYLAMINE
5000	UG/KG	NITROBENZENE
5000	UG/KG	HEXACHLOROBUTADIENE
5000	UG/KG	1,2,4-TRICHLOROBENZENE
5000	UG/KG	NAPHTHALENE
5000	UG/KG	BIS(2-CHLOROETHOXY) METHANE
5000	UG/KG	ISOPHORONE
5000	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
5000	UG/KG	2-CHLORONAPHTHALENE
5000	UG/KG	ACENAPHTHYLENE
5000	UG/KG	ACENAPHTHENE
5000	UG/KG	DIMETHYL PHTHALATE
5000	UG/KG	2,4-DINITROTOLUENE
5000	UG/KG	2,6-DINITROTOLUENE
5000	UG/KG	4-CHLOROPHENYL PHENYL ETHER
5000	UG/KG	FLUORENE
5000	UG/KG	DIETHYL PHTHALATE
5000	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
5000	UG/KG	HEXACHLOROBENZENE (HCB)
5000	UG/KG	4-BROMOPHENYL PHENYL ETHER
5000	UG/KG	PHENANTHRENE
5000	UG/KG	ANTHRACENE
5000	UG/KG	DI-N-BUTYLPHTHALATE
5000	UG/KG	FLUORANTHENE
5000	UG/KG	PYRENE
5000	UG/KG	BENZYL BUTYL PHTHALATE
5000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
5000	UG/KG	BENZO(A)ANTHRACENE
5000	UG/KG	CHRYSENE
5000	UG/KG	3,3'-DICHLOROBENZIDINE
5000	UG/KG	DI-N-OCTYLPHTHALATE
5000	UG/KG	BENZO(B)FLUORANTHENE
5000	UG/KG	BENZO(K)FLUORANTHENE
5000	UG/KG	BENZO-A-PYRENE
5000	UG/KG	INDENO (1,2,3-CD) PYRENE
5000	UG/KG	DIBENZO(A,H)ANTHRACENE
5000	UG/KG	BENZO(GHI)PERYLENE
5000	UG/KG	2-CHLOROPHENOL
5000	UG/KG	2-NITROPHENOL
5000	UG/KG	PHENOL
5000	UG/KG	2,4-DIMETHYLPHENOL
5000	UG/KG	2,4-DICHLOROPHENOL
5000	UG/KG	2,4,6-TRICHLOROPHENOL
5000	UG/KG	4-CHLORO-3-METHYLPHENOL
8000	UG/KG	2,4-DINITROPHENOL
5000	UG/KG	2-METHYL-4,6-DINITROPHENOL
5000	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
39	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
500U	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
500U	UG/KG	BENZIDINE
500U	UG/KG	1,3-DICHLOROBENZENE
500U	UG/KG	1,4-DICHLOROBENZENE
500U	UG/KG	1,2-DICHLOROBENZENE
500U	UG/KG	BIS(2-CHLOROETHYL) ETHER
500U	UG/KG	HEXACHLOROETHANE
500U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
500U	UG/KG	N-NITROSODI-N-PROPYLAMINE
500U	UG/KG	NITROBENZENE
500U	UG/KG	HEXACHLOROBUTADIENE
500U	UG/KG	1,2,4-TRICHLOROBENZENE
500U	UG/KG	NAPHTHALENE
500U	UG/KG	BIS(2-CHLOROETHOXY) METHANE
500U	UG/KG	ISOPHORONE
500U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	UG/KG	2-CHLORONAPHTHALENE
500U	UG/KG	ACENAPHTHYLENE
500U	UG/KG	ACENAPHTHENE
500U	UG/KG	DIMETHYL PHTHALATE
500U	UG/KG	2,4-DINITROTOLUENE
500U	UG/KG	2,6-DINITROTOLUENE
500U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
500U	UG/KG	FLUORENE
500U	UG/KG	DIETHYL PHTHALATE
500U	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
500U	UG/KG	HEXACHLOROBENZENE (HCB)
500U	UG/KG	4-BROMOPHENYL PHENYL ETHER
500U	UG/KG	PHENANTHRENE
500U	UG/KG	ANTHRACENE
500U	UG/KG	DI-N-BUTYLPHTHALATE
500U	UG/KG	FLUORANTHENE
500U	UG/KG	PYRENE
500U	UG/KG	BENZYL BUTYL PHTHALATE
500U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
500U	UG/KG	BENZO(A)ANTHRACENE
500U	UG/KG	CHRYSENE
500U	UG/KG	3,3'-DICHLOROBENZIDINE
500U	UG/KG	DI-N-OCTYLPHTHALATE
500U	UG/KG	BENZO(B)FLUORANTHENE
500U	UG/KG	BENZO(K)FLUORANTHENE
500U	UG/KG	BENZO-A-PYRENE
500U	UG/KG	INDENO (1,2,3-CD) PYRENE
500U	UG/KG	DIBENZO(A,H)ANTHRACENE
500U	UG/KG	BENZO(GHI)PERYLENE
500U	UG/KG	2-CHLOROPHENOL
500U	UG/KG	2-NITROPHENOL
500U	UG/KG	PHENOL
500U	UG/KG	2,4-DIMETHYLPHENOL
500U	UG/KG	2,4-DICHLOROPHENOL
500U	UG/KG	2,4,6-TRICHLOROPHENOL
500U	UG/KG	4-CHLORO-3-METHYLPHENOL
800U	UG/KG	2,4-DINITROPHENOL
500U	UG/KG	2-METHYL-4,6-DINITROPHENOL
500U	UG/KG	PENTACHLOROPHENOL
1800U	UG/KG	4-NITROPHENOL
30	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
NA	UG/KG	N-NITROSODIMETHYLAMINE
500U	UG/KG	1,2-DIPHENYLHYDRAZINE/AZOBENZENE
500U	UG/KG	BENZIDINE
500U	UG/KG	1,3-DICHLOROBENZENE
500U	UG/KG	1,4-DICHLOROBENZENE
500U	UG/KG	1,2-DICHLOROBENZENE
500U	UG/KG	BIS(2-CHLOROETHYL) ETHER
500U	UG/KG	HEXACHLOROETHANE
500U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
500U	UG/KG	N-NITROSODI-N-PROPYLAMINE
500U	UG/KG	NITROBENZENE
500U	UG/KG	HEXACHLOROBUTADIENE
500U	UG/KG	1,2,4-TRICHLOROBENZENE
500U	UG/KG	NAPHTHALENE
500U	UG/KG	BIS(2-CHLOROETHOXY) METHANE
500U	UG/KG	ISOPHORONE
500U	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
500U	UG/KG	2-CHLORONAPHTHALENE
500U	UG/KG	ACENAPHTHYLENE
500U	UG/KG	ACENAPHTHENE
500U	UG/KG	DIMETHYL PHTHALATE
500U	UG/KG	2,4-DINITROTOLUENE
500U	UG/KG	2,6-DINITROTOLUENE
500U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
500U	UG/KG	FLUORENE
500U	UG/KG	DIETHYL PHTHALATE
500U	UG/KG	N-NITROSODIPHENLYAMINE/DIPHENYLAMINE
500U	UG/KG	HEXACHLOROBENZENE (HCB)
500U	UG/KG	4-BROMOPHENYL PHENYL ETHER
200J	UG/KG	PHENANTHRENE
500U	UG/KG	ANTHRACENE
500U	UG/KG	DI-N-BUTYLPHTHALATE
200J	UG/KG	FLUORANTHENE
500U	UG/KG	PYRENE
200J	UG/KG	BENZYL BUTYL PHTHALATE
2100	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
500U	UG/KG	BENZO(A)ANTHRACENE
200J	UG/KG	CHRYSENE
500U	UG/KG	3,3'-DICHLOROBENZIDINE
1900	UG/KG	DI-N-OCTYLPHTHALATE
200J	UG/KG	BENZO(B)FLUORANTHENE
200J	UG/KG	BENZO(K)FLUORANTHENE
200J	UG/KG	BENZO-A-PYRENE
500U	UG/KG	INDENO (1,2,3-CD) PYRENE
200J	UG/KG	DIBENZO(A,H)ANTHRACENE
500U	UG/KG	BENZO(GHI)PERYLENE
500U	UG/KG	2-CHLOROPHENOL
500U	UG/KG	2-NITROPHENOL
500U	UG/KG	PHENOL
500U	UG/KG	2,4-DIMETHYLPHENOL
500U	UG/KG	2,4-DICHLOROPHENOL
500U	UG/KG	2,4,6-TRICHLOROPHENOL
500U	UG/KG	4-CHLORO-3-METHYLPHENOL
800U	UG/KG	2,4-DINITROPHENOL
500U	UG/KG	2-METHYL-4,6-DINITROPHENOL
500U	UG/KG	PENTACHLOROPHENOL
18000	UG/KG	4-NITROPHENOL
14	%	MOISTURE

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
18000U	BENZOIC ACID
200U	2-METHYLPHENOL
200U	4-METHYLPHENOL
200U	2,4,5-TRICHLOROPHENOL
200U	ANILINE
200U	BENZYL ALCOHOL
1000U	4-CHLOROANILINE
100U	DIBENZOFURAN
200U	2-METHYL NAPHTHALENE
1800U	2-NITROANILINE
1400U	3-NITROANILINE
2000U	4-NITROANILINE
800JN	OXABICYCLOHEPTANE
500JN	BROMOPENTAFLUOROBENZENE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: B4C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
18000	BENZOIC ACID
2000U	2-METHYLPHENOL
2000U	4-METHYLPHENOL
20000U	2,4,5-TRICHLOROPHENOL
2000U	ANILINE
2000U	BENZYL ALCOHOL
10000U	4-CHLOROANILINE
1000U	DIBENZOFURAN
2000U	2-METHYL NAPHTHALENE
18000U	2-NITROANILINE
14000U	3-NITROANILINE
20000U	4-NITROANILINE
700JN	OXIBICYCLOHEPTANE
500JN	BROMOPENTAFLUOROBENZENE
400JN	CYCLOHEXENEOL

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-18
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
1800U	BENZOIC ACID
200U	2-METHYLPHENOL
200U	4-METHYLPHENOL
2000U	2,4,5-TRICHLOROPHENOL
200U	ANILINE
200U	BENZYL ALCOHOL
1000U	4-CHLOROANILINE
100U	DIBENZOFURAN
200U	2-METHYL NAPHTHALENE
1800U	2-NITROANILINE
1400U	3-NITROANILINE
2000U	4-NITROANILINE
600JN	BENZODIOXOLONE
500JN	BROMOPENTAFLUOROBENZENE
300JN	CYCLOHEXENEONE
2000JN	OCTADECENE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: M01948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
2000U	BENZOIC ACID
2000U	2-METHYLPHENOL
18000U	4-METHYLPHENOL
2000U	2,4,5-TRICHLOROPHENOL
2000U	ANILINE
2000U	BENZYL ALCOHOL
10000U	4-CHLOROANILINE
1000U	DIBENZOFURAN
2000U	2-METHYL NAPHTHALENE
18000U	2-NITROANILINE
14000U	3-NITROANILINE
20000U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 EXTRACTABLE ORGANIC ANALYSIS, MISC
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE,/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST:
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLH DATA VERIFIED BY: CHR

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS IN: UG/KG	COMPOUND NAME
18000U	BENZOIC ACID
2000U	2-METHYLPHENOL
2000U	4-METHYLPHENOL
2000U	2,4,5-TRICHLOROPHENOL
2000U	ANILINE
2000U	BENZYL ALCOHOL
10000U	4-CHLOROANILINE
1000U	DIBENZOFURAN
2000U	2-METHYL NAPHTHALENE
18000U	2-NITROANILINE
14000U	3-NITROANILINE
20000U	4-NITROANILINE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: R4C4254 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-US
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 1710
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA123 INORG SAMPLE NO.: MD1944
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
1000U	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
1000U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
1000U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
1000U	UG/KG	PCB-1242 (AROCLOR 1242)
1000U	UG/KG	PCB-1254 (AROCLOR 1254)
1000U	UG/KG	PCB-1221 (AROCLOR 1221)
1000U	UG/KG	PCB-1232 (AROCLOR 1232)
1000U	UG/KG	PCB-1248 (AROCLOR 1248)
1000U	UG/KG	PCB-1260 (AROCLOR 1260)
1000U	UG/KG	PCB-1016 (AROCLOR 1016)
2000U	UG/KG	TOXAPHENE
1000U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
16	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4258 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-IC-DS
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1140
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA130 INORG SAMPLE NO.: MD1951
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100U	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
200U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
19	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-FSO,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4255 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-S-1S
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0820
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA125 INORG SAMPLE NO.: MD1946
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100J	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
400U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
39	%	MOISTURE

****

FOOTNOTES
*A=AVERAGE VALUE *NA=NOT ANALYZED *NAI=INTERFERENCES
*J=ESTIMATED VALUE *N=PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K=ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U=MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS
THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4256 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS INC.
CITY: FLORENCE STATE: MS

STATION I.D.: CM-P-15
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/08/84 0905
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA127 INORG SAMPLE NO.: MD1948
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND	
100U	UG/KG	ALDRIN	
100U	UG/KG	HEPTACHLOR	
100U	UG/KG	HEPTACHLOR EPOXIDE	
100U	UG/KG	ALPHA-BHC	
100U	UG/KG	BETA-BHC	
100U	UG/KG	GAMMA-BHC (LINDANE)	
100U	UG/KG	DELTA-BHC	
100U	UG/KG	ENDOSULFAN I (ALPHA)	
100U	UG/KG	DIELDRIN	
100J	UG/KG	4,4'-DDT (P,P'-DDT)	
100U	UG/KG	4,4'-DDE (P,P'-DDE)	
100U	UG/KG	4,4'-DDD (P,P'-DDD)	
100U	UG/KG	ENDRIN	
100U	UG/KG	ENDOSULFAN II (BETA)	
100U	UG/KG	ENDOSULFAN SULFATE	
100U	UG/KG	CHLORDANE (TECH. MIXTURE)	/1
100U	UG/KG	PCB-1242 (AROCLOR 1242)	
100U	UG/KG	PCB-1254 (AROCLOR 1254)	
100U	UG/KG	PCB-1221 (AROCLOR 1221)	
100U	UG/KG	PCB-1232 (AROCLOR 1232)	
100U	UG/KG	PCB-1248 (AROCLOR 1248)	
100U	UG/KG	PCB-1260 (AROCLOR 1260)	
100U	UG/KG	PCB-1016 (AROCLOR 1016)	
200U	UG/KG	TOXAPHENE	
100U	UG/KG	ENDRIN ALDEHYDE	
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)	
--	UG/KG	CHLORDENE	/2
--	UG/KG	ALPHA-CHLORDENE	/2
--	UG/KG	GAMMA-CHLORDENE	/2
--	UG/KG	1-HYDROXYCHLORDENE	/2
--	UG/KG	GAMMA-CHLORDANE	/2
--	UG/KG	TRANS-NONACHLOR	/2
--	UG/KG	ALPHA-CHLORDANE	/2
--	UG/KG	CIS-NONACHLOR	/2
NA	UG/KG	METHOXYCHLOR	
30	%	MOISTURE	

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD,REG IV
ATHENS GEORGIA

02/07/85 PESTICIDES/PCB'S AND OTHER CHLORINATED COMPOUNDS
DATA REPORTING SHEET
SEDIMENT/SOIL/SLUDGE(DRY WT)

SAMPLE NO.: 84C4257 SAMPLE TYPE: SEDIM

PROJECT NO.: 84-201 PROGRAM ELEMENT: NSF
SOURCE: CHLORIDE METALS
CITY: FLORENCE STATE: MS

STATION I.D.: CM-LC-01
STORET STATION NO:

SAMPLE COLLECTION: START DATE/TIME 08/09/84 1020
SAMPLE COLLECTION: STOP DATE/TIME 00/00/00

COLLECTED BY: J SMITH RECEIVED FROM:
SAMPLE REC'D: DATE/TIME 00/00/00 REC'D BY:
SEALED:

CHEMIST: MCD
ANALYTICAL METHOD:

CASE NO.: 2837 ORG SAMPLE NO: DA128 INORG SAMPLE NO.: MD1949
CONTRACT LABORATORY(ORGANIC): CAL ANAL LAB
CONTRACT LABORATORY(INORGANIC): CHEMTECH

REMARK:
REMARK:

SAMPLE LOG VERIFIED BY: PLB DATA VERIFIED BY: CHH

REMARKS
THIS DATA HAS NOT BEEN SUBJECTED TO A QC REVIEW.
DATA SHOULD BE LIMITED TO SITE SCREENING.

*****ANALYTICAL RESULTS*****

RESULTS	UNITS	COMPOUND
100U	UG/KG	ALDRIN
100U	UG/KG	HEPTACHLOR
100U	UG/KG	HEPTACHLOR EPOXIDE
100U	UG/KG	ALPHA-BHC
100U	UG/KG	BETA-BHC
100U	UG/KG	GAMMA-BHC (LINDANE)
100U	UG/KG	DELTA-BHC
100U	UG/KG	ENDOSULFAN I (ALPHA)
100U	UG/KG	DIELDRIN
100U	UG/KG	4,4'-DDT (P,P'-DDT)
100U	UG/KG	4,4'-DDE (P,P'-DDE)
100U	UG/KG	4,4'-DDD (P,P'-DDD)
100U	UG/KG	ENDRIN
100U	UG/KG	ENDOSULFAN II (BETA)
100U	UG/KG	ENDOSULFAN SULFATE
100U	UG/KG	CHLORDANE (TECH. MIXTURE) /1
100U	UG/KG	PCB-1242 (AROCLOR 1242)
100U	UG/KG	PCB-1254 (AROCLOR 1254)
100U	UG/KG	PCB-1221 (AROCLOR 1221)
100U	UG/KG	PCB-1232 (AROCLOR 1232)
100U	UG/KG	PCB-1248 (AROCLOR 1248)
100U	UG/KG	PCB-1260 (AROCLOR 1260)
100U	UG/KG	PCB-1016 (AROCLOR 1016)
400U	UG/KG	TOXAPHENE
100U	UG/KG	ENDRIN ALDEHYDE
NA	UG/KG	2,3,7,8 TCDD(DIOXIN)
--	UG/KG	CHLORDENE /2
--	UG/KG	ALPHA-CHLORDENE /2
--	UG/KG	GAMMA-CHLORDENE /2
--	UG/KG	1-HYDROXYCHLORDENE /2
--	UG/KG	GAMMA-CHLORDANE /2
--	UG/KG	TRANS-NONACHLOR /2
--	UG/KG	ALPHA-CHLORDANE /2
--	UG/KG	CIS-NONACHLOR /2
NA	UG/KG	METHOXYCHLOR
14	%	MOISTURE

****

FOOTNOTES
*A-AVERAGE VALUE *NA-NOT ANALYZED *NAI-INTERFERENCES
*J-ESTIMATED VALUE *N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
*K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN
*U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED, THE NUMBER IS THE MINIMUM DETECTION LIMIT.
1. WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS.
2. CONSTITUENTS OR METABOLITES OF TECHNICAL CHLORDANE.

D-586-6-4-5

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

APRIL 23, 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

DRAFT

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants ~~have~~ had migrated offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). ~~Its~~ Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting[1].

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slag waste

from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On November 4, 1976, the BPC issued ~~to Chloride Metals~~ NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804, to Chloride Metals placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into Indian Creek[1].

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process waste water exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility[1].

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The wells were constructed during the first week of August, 1980[1].

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed by early 1982.

Text should discuss which of the wells sampled were upgradient of waste and which were downgradient.
(see next page)

Was groundwater flow-direction established? - If so mention in report

DRAFT

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed and the treatment facilities were secured to prevent further runoff from the site(1). Explain remedial activity accomplished here.

3.3 Hydrogeology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard.

Is there a unfocal unsaturated layer above the Catahoula? If so, where in depth does this formation begin?

Any info on depth of Mint Spring Sand and dom well drawing from this aquifer.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

What is depth of Cockfield Formation

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one

each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only. Also, as noted in Tables 4 and 6, some of the data are reported as estimated values and some on the basis of presumptive evidence of their presence only. Estimated data can be used for

Why not?

positive indications of the presence of the reported compounds. Concentrations should be considered estimated for both positive results and minimum detection limits.

5.3 Field Measurements

The temperature and pH were recorded for each water sample collected. Water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2. Was conductivity measured?

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site.grounds. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900

ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Four ~~Five~~ organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l), chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of ~~four~~ three compounds, one of which is a priority pollutant (See Table 4).

check Table 5. Beryllium was [illegible] µg/kg in sample CM-RC-US.

DRAFT

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of beryllium, cadmium, and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of

the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.
Is there any explanation for presence of PAH's?

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

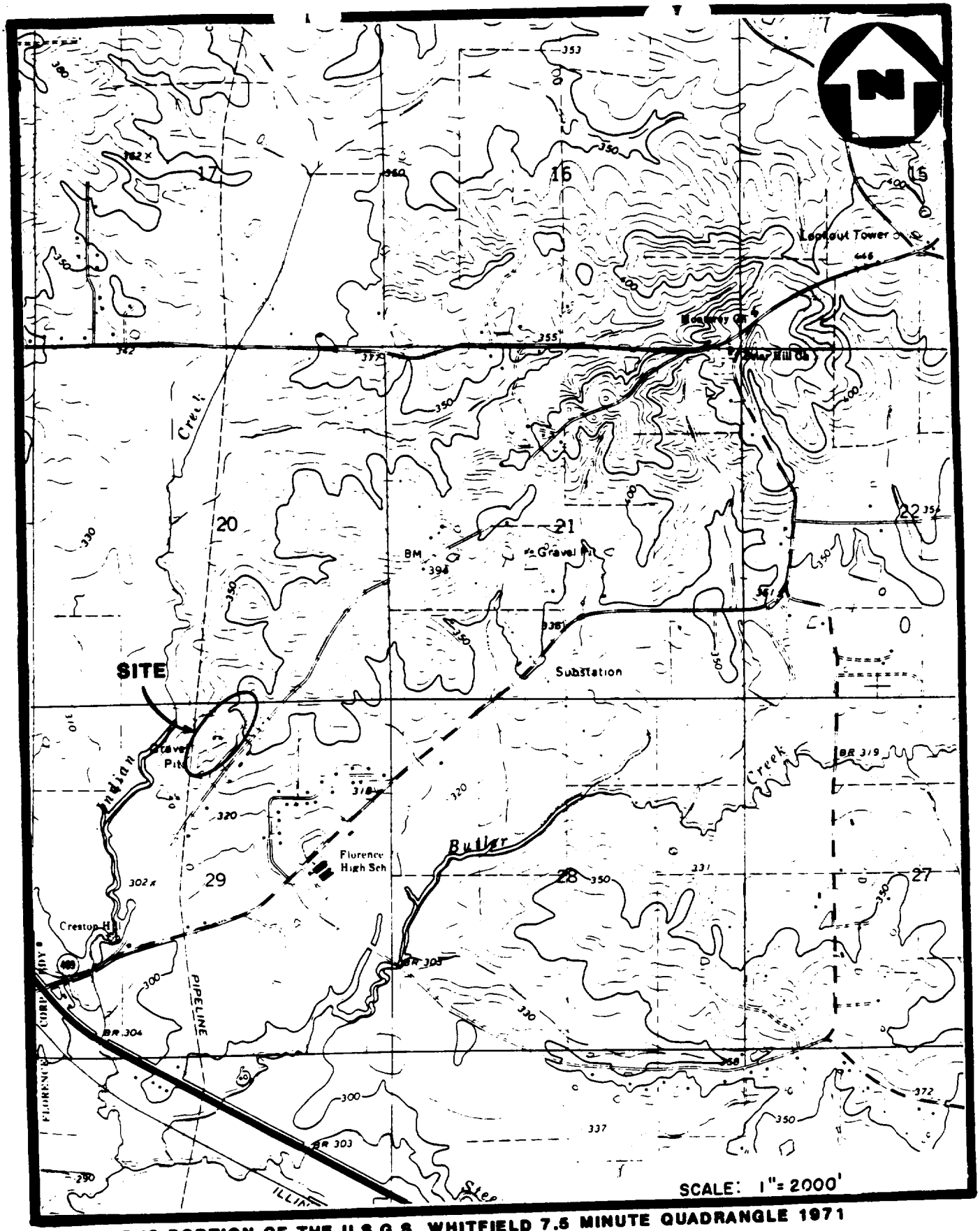
Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].

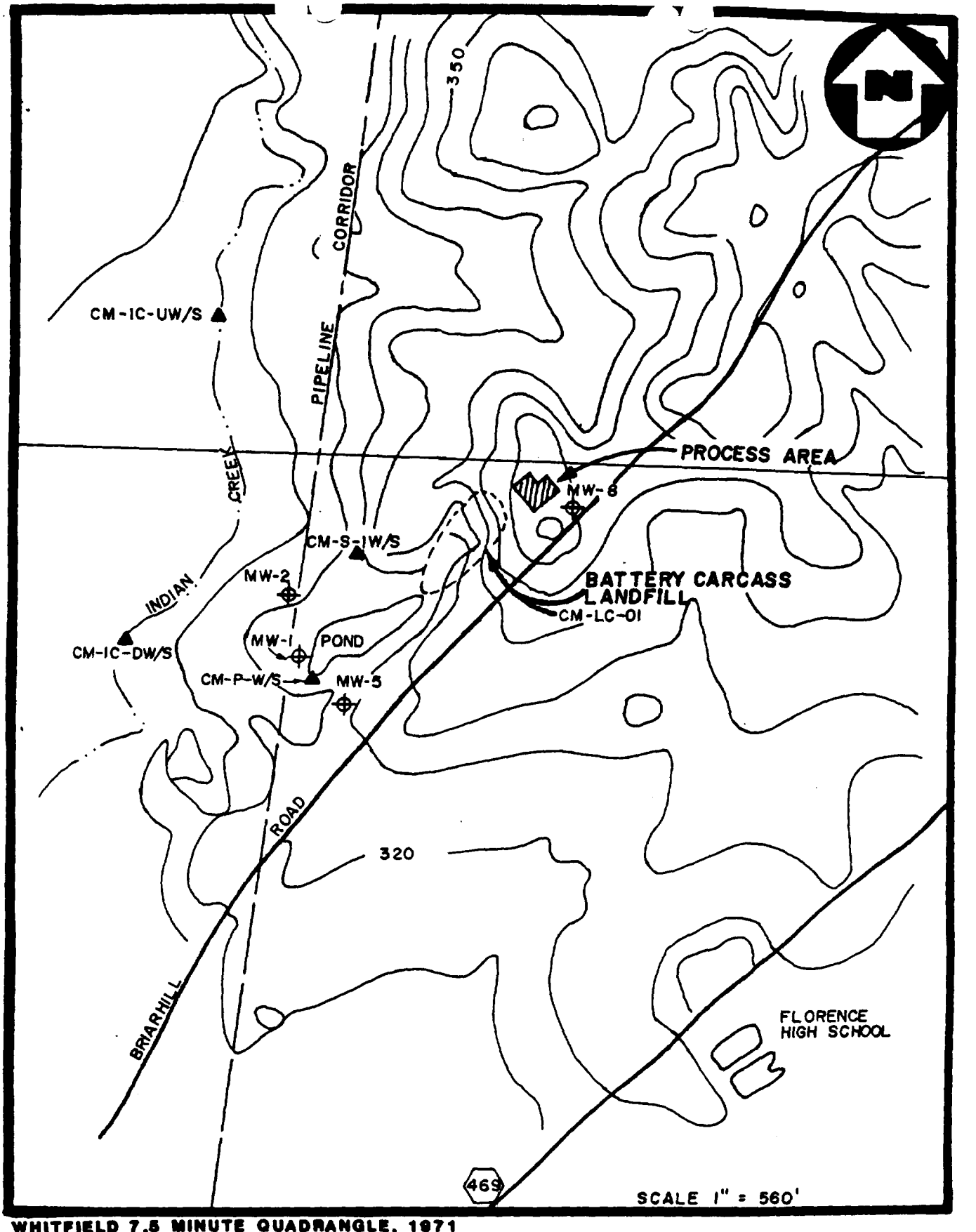


BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION
A Halliburton Company



WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

FIGURE 2

NUS CORPORATION
A Halliburton Company

Table 1
Chloride Metals, Inc.
Sample Code Descriptions

Sample Code	Description
CM-MW-01	Monitoring Well 1 (MW-1)
CM-MW-02	Monitoring Well 2 (MW-2)
CM-MW-05	Monitoring Well 5 (MW-5)
CM-MW-08	Monitoring Well 8 (MW-8)
CM-IC-UW/US	Indian Creek, upstream water/sediment
CM-IC-DW/DS	Indian Creek, downstream water/sediment
CM-P-1W/1S	Onsite pond, water/sediment
CM-S-1W/1S	Onsite spring, water/sediment
CM-LC-01	Battery carcass landfill composite

Table 2
Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp. °C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-84
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Table 3
Chloride Metals, Inc.
Water Samples
Metals Analyses[A]
(Results in ug/l)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Table 4
Chloride Metals, Inc.
Water Samples
Organic Analyses[A]
(Results in ug/l)
August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Purgeable & Miscellaneous Organics								
Methylene Chloride*	4J	3J	3J	4J	3J	2J	2J	2J
Chloroform*	-	2J	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	3J
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	3J	-	-	-	-	-
Di-N-Butylphthalate*	3J	9J	200	5J	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected
NA Not applicable
A This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

Table 5
Chloride Metals, Inc.
Soil and Sediment Samples
Metals Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	8,500	-	13,000	13,000	82,000
Beryllium*	700	-	500	-	-
Cadmium*	-	100	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
Lead*	3,000	9,500	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	320,000	360,000	860,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

B Data reported on wet weight basis

* Priority pollutant

\- Material was analyzed for but not detected.

Table 6
Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	44	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexenol	-	400JN	-	-	-
Cyclohexeneone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecene	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P'-DDT)*	-	-	100J	100J	-

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
B Data reported on dry weight basis
* Priority pollutant
J Estimated value
N Presumptive evidence of presence of material
\- Material was analyzed for but not detected

DRAFT

REFERENCES

1. EPA File, Chloride Metals, Inc., Florence, Mississippi.

2. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1961. Groundwater Resources of Hinds, Madison and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletins 61-2, part II. 146 p.

3. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1964. Groundwater Resources of Hinds, Madison, and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletin 64-1. 38 p.

4. Sams, Jay personal communication, 2-13-85. Mississippi Bureau of Geology.

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

6. Analytical Support Branch Operations and Quality Assurance Manual; U. S. Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982.

D-586-6-4-5

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

APRIL 23, 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

DRAFT

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants have mig~~rated~~ had offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). ~~Its~~ Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting[1].

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses~~,~~ and slag waste

I don't believe they are called Blast furnaces

from the blast furnaces were disposed of in the pond. The region surrounding the site is ~~heavily forested~~ and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade ~~its~~ wastewater treatment facilities. On November 4, 1976, the BPC issued to Chloride Metals NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804, placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH ~~level~~ into Indian Creek(1).

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process water exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility(1).

Stand for combined!

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility ~~of~~ groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The ~~wells~~ were constructed during the first week of August, 1980(1).

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed by early 1982.

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed, and the treatment facilities were secured to prevent further runoff from the site(1).

3.3 Hydrogeology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one

each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only. Also, as noted in Tables 4 and 6, some of the data are reported as estimated values and some on the basis of presumptive evidence of their presence only. Estimated data can be used for

positive indications of the presence of the reported compounds. Concentrations should be considered estimated for both positive results and minimum detection limits.

5.3 Field Measurements

The temperature and pH were recorded for each water sample collected. Water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2.

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site grounds. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900

ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Four ~~Five~~ organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l), chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of four compounds, one of which is a priority pollutant (See Table 4).

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of beryllium, cadmium, and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of

the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

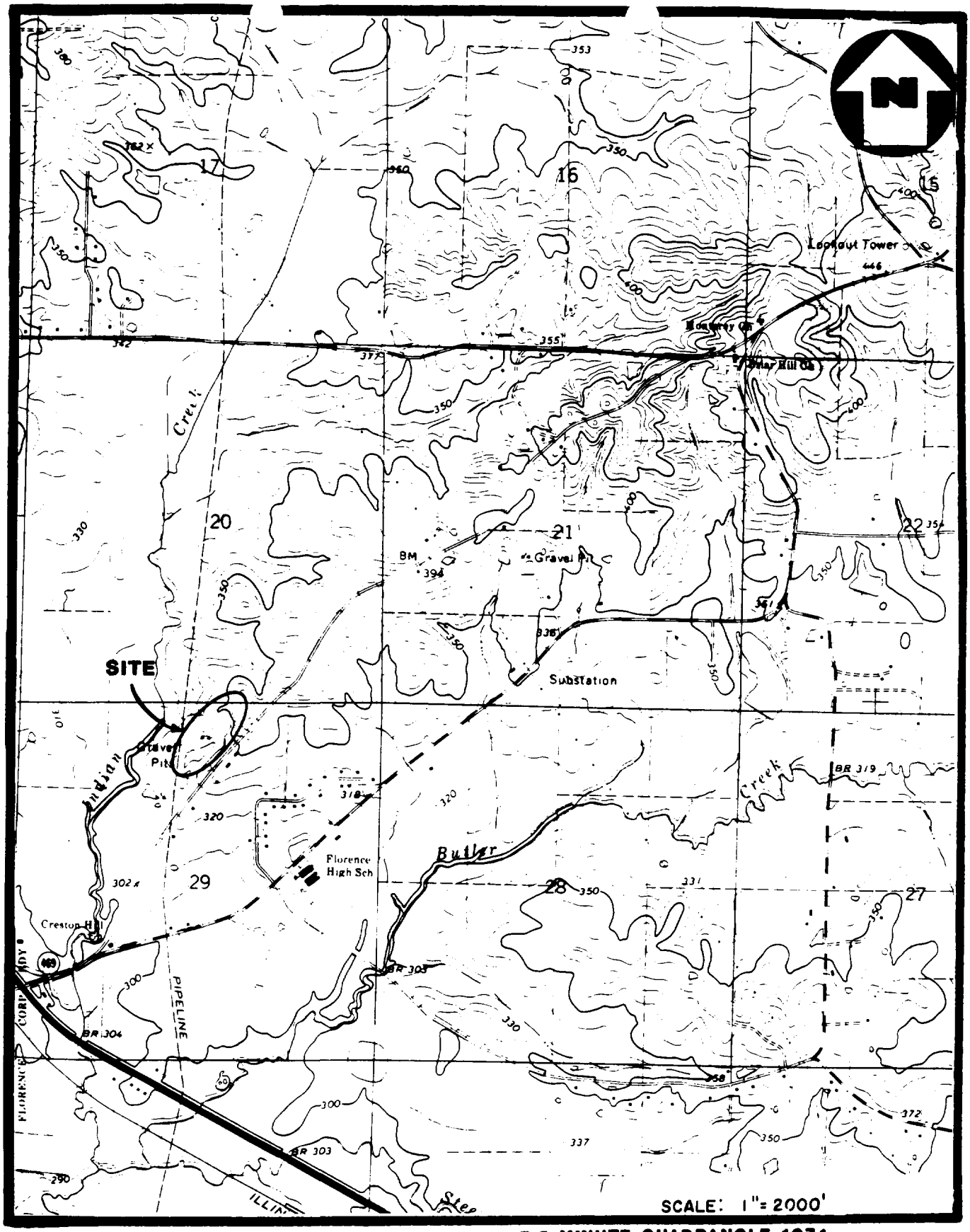
Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].



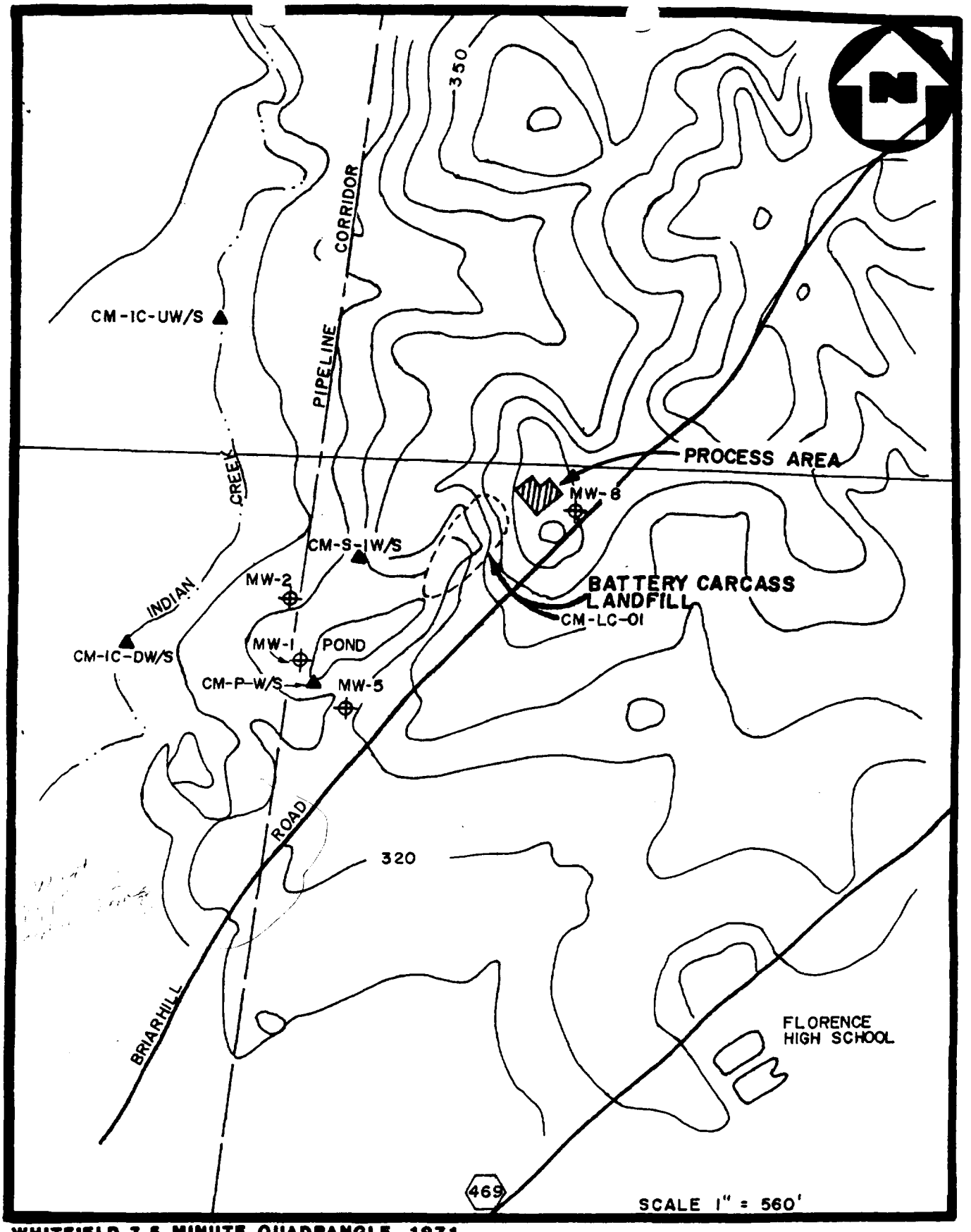
BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION

A Halliburton Company



WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

FIGURE 2

NUS CORPORATION
A Halliburton Company

Table 1
Chloride Metals, Inc.
Sample Code Descriptions

Sample Code	Description
CM-MW-01	Monitoring Well 1 (MW-1)
CM-MW-02	Monitoring Well 2 (MW-2)
CM-MW-05	Monitoring Well 5 (MW-5)
CM-MW-08	Monitoring Well 8 (MW-8)
CM-IC-UW/US	Indian Creek, upstream water/sediment
CM-IC-DW/DS	Indian Creek, downstream water/sediment
CM-P-1W/1S	Onsite pond, water/sediment
CM-S-1W/1S	Onsite spring, water/sediment
CM-LC-01	Battery carcass landfill composite

Table 2
Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp. °C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-8
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Table 3
Chloride Metals, Inc.
Water Samples
Metals Analyses[A]
(Results in ug/l)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Table 4

Chloride Metals, Inc.

Water Samples

Organic Analyses[A]

(Results in ug/l)

August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Purgeable & Miscellaneous Organics								
Methylene Chloride*	4J	3J	3J	4J	3J	2J	2J	2J
Chloroform*	-	2J	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	3J
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	3J	-	-	-	-	-
Di-N-Butylphthalate*	3J	9J	200	5J	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected
NA Not applicable
A This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

Table 5
Chloride Metals, Inc.
Soil and Sediment Samples
Metals Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	8,500	-	13,000	13,000	82,000
Beryllium*	700	-	500	-	-
Cadmium*	-	100	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
Lead*	3,000	9,500	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	320,000	360,000	860,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

B Data reported on wet weight basis

* Priority pollutant

\- Material was analyzed for but not detected.

Table 6
Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses(A,B)
(Results in ug/kg)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	44	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexenol	-	400JN	-	-	-
Cyclohexeneone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecene	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P'-DDT)*	-	-	100J	100J	-

A This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
B Data reported on dry weight basis
* Priority pollutant
J Estimated value
N Presumptive evidence of presence of material
\- Material was analyzed for but not detected

DRAFT

REFERENCES

1. EPA File, Chloride Metals, Inc., Florence, Mississippi.

2. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1961. Groundwater Resources of Hinds, Madison and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletins 61-2, part II. 146 p.

3. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1964. Groundwater Resources of Hinds, Madison, and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletin 64-1. 38 p.

4. Sams, Jay personal communication, 2-13-85. Mississippi Bureau of Geology.

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

6. Analytical Support Branch Operations and Quality Assurance Manual; U. S. Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982.

ROUTING AND TRANSMITTAL SL.

Date 05/31/85

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Michael Profit		
2. NUS		
3.		
4.		
5.		

RECEIVED
MAY 31 1985
NUS CORPORATION
REGION IV

SENT TO

Action		File		Note and Return	
Approval		For Clearance		Per Conversation	
As Requested		For Correction		Prepare Reply	
Circulate		For Your Information		See Me	
Comment		Investigate		Signature	
Coordination		Justify			

REMARKS

Please review comments in accompanying text of your chloride metals draft investigation report. Make the changes/corrections as indicated and return to me for final distribution no later than June 17.

If there are any questions, please call.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Richard Fernandez	Phone No. 881-2234

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆U.S.G.P.O. 1983-421-529/320

D-586-6-4-5

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

June 1
~~APRIL 23,~~ 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

DRAFT

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants ~~have~~ had migrated offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). ~~Its~~ Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting(1).

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slag waste

from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On November 4, 1976, the BPC issued ~~to Chloride Metals~~ NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804, to Chloride Metals placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into Indian Creek[1].

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process waste water exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility[1].

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The wells were constructed during the first week of August, 1980[1].

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed by early 1982.

Text should discuss which of the wells sampled were upgradient of waste and which were downgradient. (see next page)

Was groundwater flow direction established? If so mention in report

DRAFT

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed and the ~~treatment facilities were secured to prevent further runoff from the site~~ following cleanup activities were scheduled:(1). Explain remedial activity accomplished here.

Geology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard. At the site, the ~~Catahoula occurs directly~~ clay and siltstone of the Catahoula Formation occurs at the surface.

Is there a surficial unsaturated layer above the Catahoula? If so, where in depth does this formation begin?

Any info on depth of Mint Spring Sand and ~~does~~ well drawing from this aquifer.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, occurs at depths of 170 to 250 feet below land surface and is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

What is depth of Cockfield Formation

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer. ~~Depths to the top of the Cockfield are in excess of 800 feet~~ The top of the Cockfield occurs in excess of 800 feet below ground ~~see~~ surface.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one

each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only. Also, as noted in Tables 4 and 6, some of the data are reported as estimated values and some on the basis of presumptive evidence of their presence only. Estimated data can be used for

Why not?

positive indications of the presence of the reported compounds. Concentrations should be considered estimated for both positive results and minimum detection limits.

5.3 Field Measurements

The temperature, and pH were recorded for each water sample collected. Conductivity, Water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2. Was conductivity measured?

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site. grounds. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900

ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Five organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l), chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of four compounds, one of which is a priority pollutant (See Table 4).

check Table 5. Beryllium was 3 ug/kg in sample CM-IC-US.

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of beryllium, cadmium, and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of

the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.
Is there any explanation for presence of PAH's?

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].

UNSCANNABLE

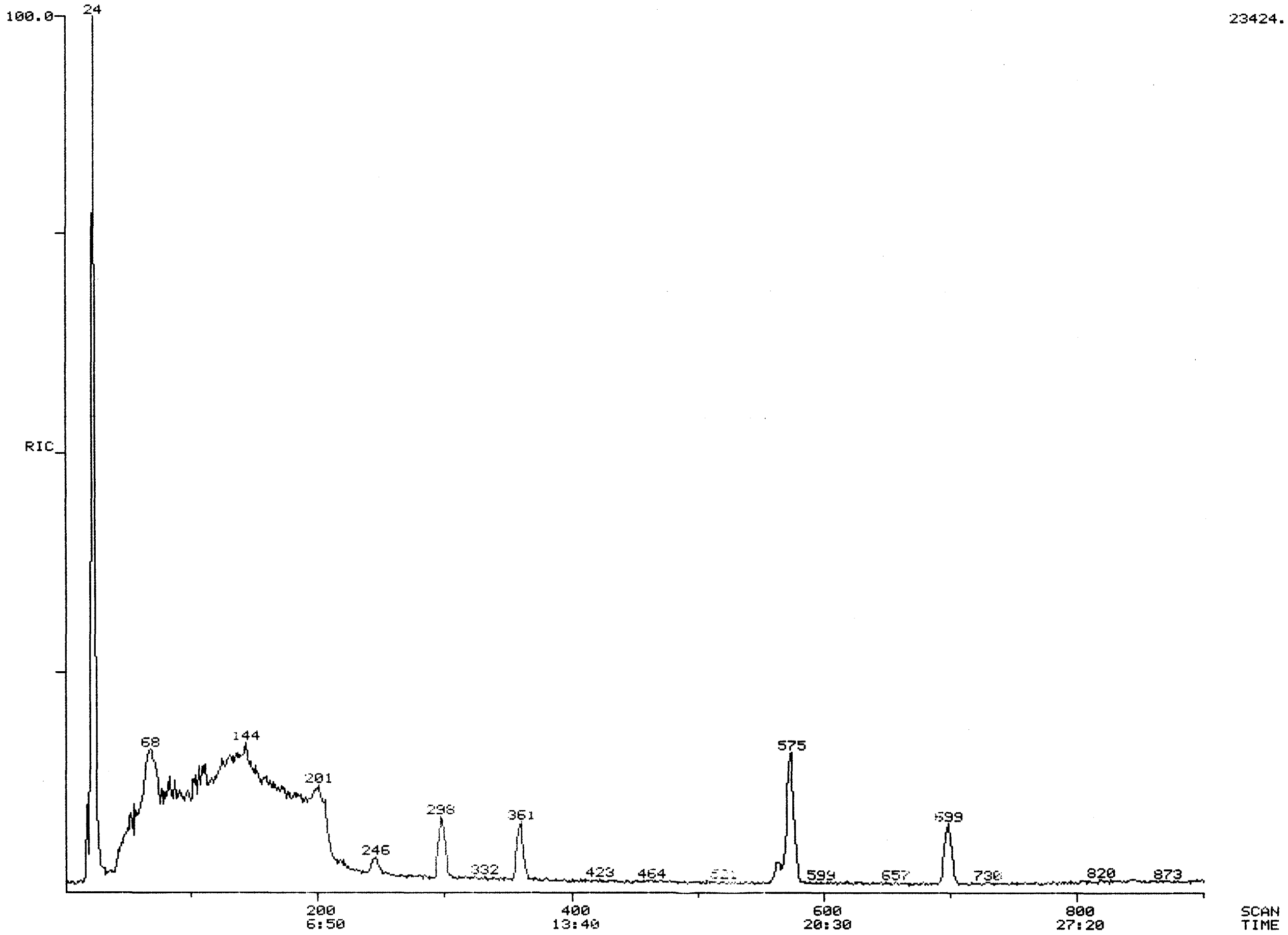
MEDIA

(PHOTOGRAPHS)

RIC
08/20/84 22:13:00
SAMPLE:

DATA: T7577V

SCANS 1 TO 900



FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: T7577V

DATA: T7577V.TI
08/20/84 22:13:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	2-BROMO-1-CHLOROPROPANE (INTERNAL STANDARD)
2	CHLORMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLORETHANE
6	METHYLENE CHLORIDE
7	1,1-DICHLORETHENE
8	BROMOCHLOROMETHANE (SURROGATE)
9	1,1-DICHLOROETHANE
10	TRANS-1,2-DICHLOROETHENE
11	CHLOROFORM
12	1,2-DICHLORETHANE
13	1,1,1-TRICHLORETHANE
14	CARBON TETRACHLORIDE
15	BROMODICHLOROMETHANE
16	1,2-DICHLOROPROPANE
17	TRANS-1,3-DICHLOROPROPENE
18	TRICHLOROETHENE
19	BENZENE
20	DIBROMOCHLOROMETHANE
21	1,1,2-TRICHLOROETHANE
22	CIS-1,3-DICHLORPROPENE
23	2-CHLOROVINYL ETHER
24	BROMOFORM
25	1,1,2,2-TETRACHLOROETHANE
26	TETRACHLOROETHENE
27	1,4-DICHLOROBUTANE (SURROGATE)
28	TOLUENE
29	CHLORBENZENE
30	ETHYL BENZENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
1	77	574	19:37	1	1.000	A BB	5932.	40.000 UG/L	29.3
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	200	6:50	1	0.348	A BB	612.	2.524 UG/L	1.8
7	NOT FOUND								
8	128	298	10:11	1	0.519	A BB	1097.	51.953 UG/L	38.0
9	NOT FOUND								
10	NOT FOUND								
11	83	360	12:18	1	0.627	A BB	3197.	10.296 UG/L	7.5
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	55	699	23:53	1	1.218	A BB	4096.	31.730 UG/L	23.2
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: 2121 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUV

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	571	575	857	268	1	1	1	0
	COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTITATED							
4	99	107	840	12	4	1	0	0
	COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTITATED							
5	132	140	818	5	5	1	0	0
6	198	201	998	158	6	1	1	0
8	296	298	997	646	8	1	1	0
11	358	361	999	739	11	1	1	0
27	694	699	993	592	27	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 7
DATA PROCESSING OF T7577V COMPLETED ON 8/20/84 22:58:11

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -10 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUV

REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	572	572	945	261	1	1	1	0
6	198	199	1000	490	6	1	1	0
8	296	296	992	642	8	1	1	0
11	358	357	997	713	11	1	1	0
19	528	529	1000	145	19	1	1	0
27	696	696	990	566	27	1	1	0
28	729	728	998	416	28	1	1	0
						**		
COMPOUND PASSED REVERSE SEARCH BUT WAS BELOW MINIMUM AREA FOR ION QUANTITATED								
30	834	831	833	15	30	3	0	0

NUMBER OF COMPOUNDS IDENTIFIED 8
DATA PROCESSING OF T7573V COMPLETED ON 8/21/84 12:44:14

UNKNOWN SAMPLE QUANTITATION OWA REVERSE SEARCH STATUS REPORT

THE INTERNAL STANDARD AREA HAS A DIFFERENCE OF: -8 % OF THE LAST STANDARD RUN
COMPOUNDS QUANTITATED BY INTERNAL STANDARD USING PARAMETERS IN LIBRARYUV

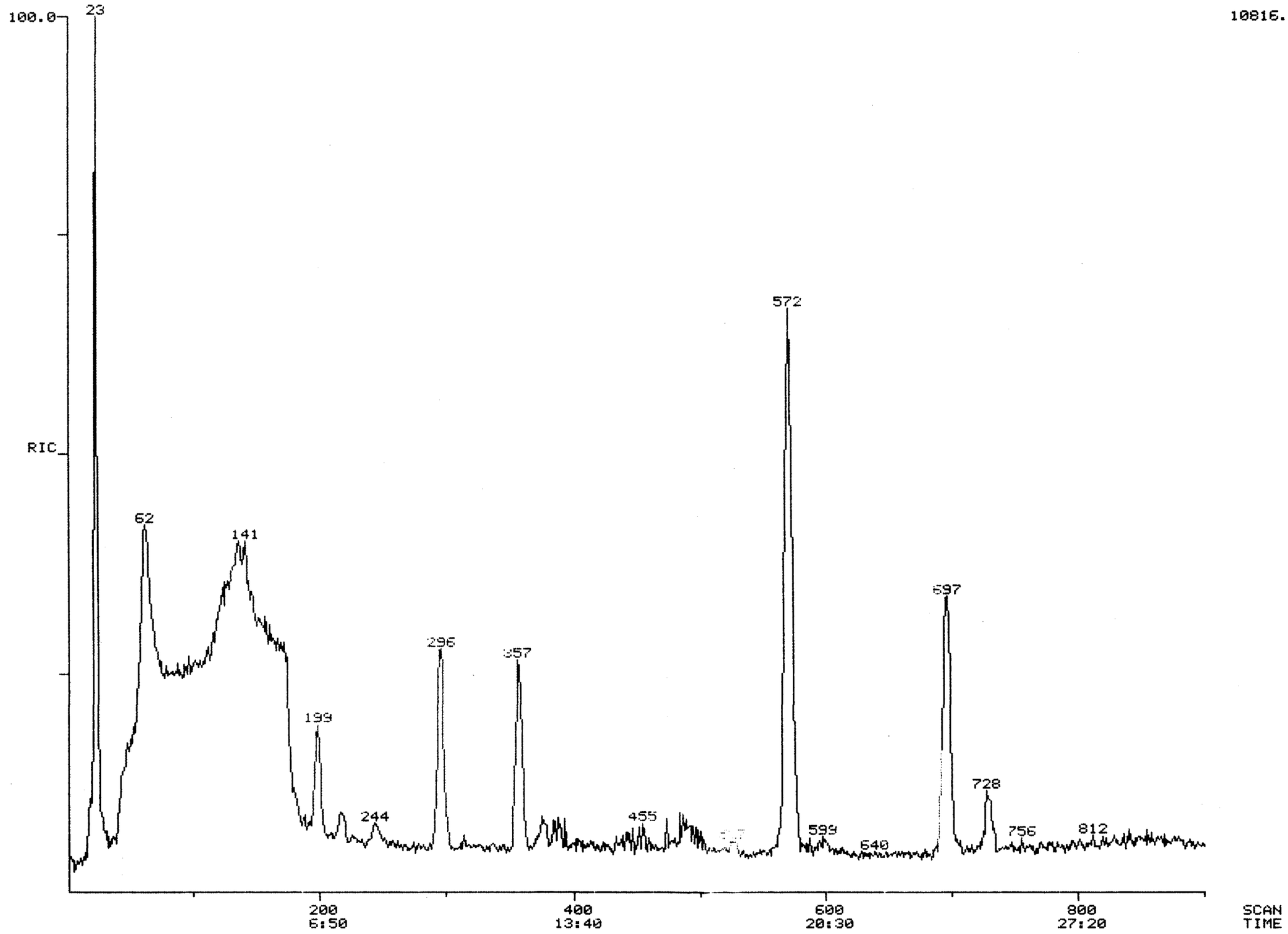
REPORT ENTRY NO.	EXPECTED SCAN	BEST SCAN	FIT	PURITY	LIBRARY ENTRY NO.	PEAKS FOUND	PEAKS QUANT	SATURATED PEAKS
1	572	571	899	261	1	1	1	0
6	198	198	1000	379	6	1	1	0
8	296	296	994	636	8	1	1	0
11	358	358	996	725	11	1	1	0
19	528	528	962	250	19	1	1	0
27	696	696	993	567	27	1	1	0
28	729	729	860	244	28	1	1	0

NUMBER OF COMPOUNDS IDENTIFIED 7
DATA PROCESSING OF T7581V COMPLETED ON 8/21/84 14:25:19

RIC
08/21/84 11:56:00
SAMPLE:

DATA: T7573V

SCANS 1 TO 900



FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: T7573V

DATA: T7573V.TI
08/21/84 11:56:00
SAMPLE:
SUBMITTED BY: ANALYST: SHEKAR

AMOUNT=AREA(HGHT) * REF. AMNT/(REF. AREA(HGHT)* RESP. FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	2-BROMO-1-CHLOROPROPANE (INTERNAL STANDARD)
2	CHLORMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLORETHANE
6	METHYLENE CHLORIDE
7	1,1-DICHLORETHENE
8	BROMOCHLOROMETHANE (SURROGATE)
9	1,1-DICHLOROETHANE
10	TRANS-1,2-DICHLOROETHENE
11	CHLOROFORM
12	1,2-DICHLORETHANE
13	1,1,1-TRICHLORETHANE
14	CARBON TETRACHLORIDE
15	BROMODICHLOROMETHANE
16	1,2-DICHLOROPROPANE
17	TRANS-1,3-DICHLOROPROPENE
18	TRICHLOROETHENE
19	BENZENE
20	DIBROMOCHLOROMETHANE
21	1,1,2-TRICHLOROETHANE
22	CIS-1,3-DICHLORPROPENE
23	2-CHLOROVINYL ETHER
24	BROMOFORM
25	1,1,2,2-TETRACHLOROETHANE
26	TETRACHLOROETHENE
27	1,4-DICHLOROBUTANE (SURROGATE)
28	TOLUENE
29	CHLORBENZENE
30	ETHYL BENZENE

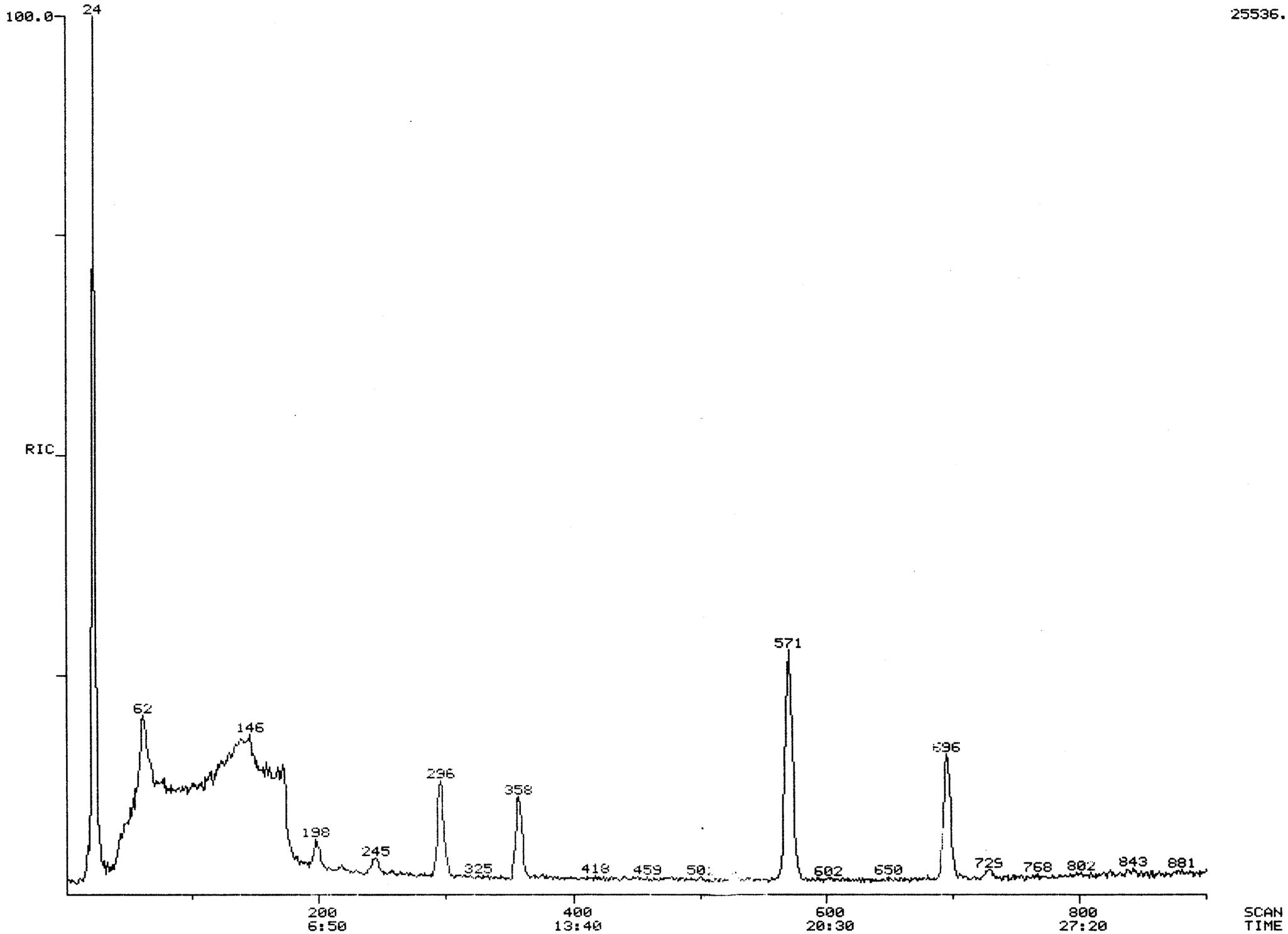
NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
1	77	571	19:31	1	1.000	A BB	9666.	40.000 UG/L	29.8
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	198	6:46	1	0.347	A BB	1339.	3.553 UG/L	2.6
7	NOT FOUND								
8	128	295	10:05	1	0.517	A BB	1522.	36.987 UG/L	27.6
9	NOT FOUND								
10	NOT FOUND								
11	83	357	12:12	1	0.625	A BB	4718.	10.189 UG/L	7.6
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	78	528	18:02	1	0.925	A BB	379.	0.256 UG/L	0.1
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	55	697	23:49	1	1.221	A BB	7180.	41.570 UG/L	31.0
28	92	728	24:52	1	1.275	A BB	970.	1.330 UG/L	0.9
29	NOT FOUND								
30	NOT FOUND								

RIC
08/21/84 13:09:00
SAMPLE:

DATA: T7581V

SCANS 1 TO 900



FINNIGAN ORGANICS IN WATER ANALYZER
QUANTITATION REPORT FILE: T7581V

DATA: T7581V.TI
08/21/84 13:09:00
SAMPLE:
SUBMITTED BY: ANALYST:

AMOUNT=AREA(HGHT) * REF.AMNT/(REF.AREA(HGHT)* RESP.FACT)
RESP. FAC. FROM LIBRARY ENTRY

NO	NAME
1	2-BROMO-1-CHLOROPROPANE (INTERNAL STANDARD)
2	CHLORMETHANE
3	BROMOMETHANE
4	VINYL CHLORIDE
5	CHLORETHANE
6	METHYLENE CHLORIDE
7	1,1-DICHLORETHENE
8	BROMOCHLOROMETHANE (SURROGATE)
9	1,1-DICHLOROETHANE
10	TRANS-1,2-DICHLOROETHENE
11	CHLOROFORM
12	1,2-DICHLORETHANE
13	1,1,1-TRICHLORETHANE
14	CARBON TETRACHLORIDE
15	BROMODICHLOROMETHANE
16	1,2-DICHLOROPROPANE
17	TRANS-1,3-DICHLOROPROPENE
18	TRICHLOROETHENE
19	BENZENE
20	DIBROMOCHLOROMETHANE
21	1,1,2-TRICHLOROETHANE
22	CIS-1,3-DICHLORPROPENE
23	2-CHLOROVINYL ETHER
24	BROMOFORM
25	1,1,2,2-TETRACHLOROETHANE
26	TETRACHLOROETHENE
27	1,4-DICHLOROBUTANE (SURROGATE)
28	TOLUENE
29	CHLORBENZENE
30	ETHYL BENZENE

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
1	77	571	19:31	1	1.000	A BB	9881.	40.000 UG/L	29.1
2	NOT FOUND								
3	NOT FOUND								
4	NOT FOUND								
5	NOT FOUND								
6	84	198	6:46	1	0.347	A BB	735.	1.908 UG/L	1.3
7	NOT FOUND								
8	128	296	10:07	1	0.518	A BB	1723.	40.961 UG/L	29.8
9	NOT FOUND								
10	NOT FOUND								
11	83	357	12:12	1	0.625	A BB	4878.	10.306 UG/L	7.5
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								

NO	M/E	SCAN	TIME	REF	RRT	METH	AREA(HGHT)	AMOUNT	%TO
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	78	528	18:02	1	0.925	A BB	728.	0.482 UG/L	0.3
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	55	696	23:47	1	1.219	A BB	7627.	43.200 UG/L	31.4
28	92	729	24:54	1	1.277	A BB	359.	0.482 UG/L	0.3
29	NOT FOUND								
30	NOT FOUND								

ROUTING AND TRANSMITTAL SLIP

Date 05/01/85

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. George Hayden		
2. Deputy Director, WMD		
3.		
4. Rich R		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate	■	For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
R Fenaffuto	Phone No. x 2234

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ U.S.G.P.O.: 1983-421-529/320

REGION IV

PEER REVIEW CLEARANCE FORM

Route To: Finger, Knight, Guinyard, Harlow **Date Transmitted:** May 1, 1985

Return To: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV. **Date Returned:** May 16, 198

Peer Review Originator (Panel Member): Thomas W. Devine, Director, WASTE MGMT. DIV.

Project Title: SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Project Manager: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV.

Originator's Instructions: Please review and return within 10 working days of transmittal date. Review for technical accuracy and policy implications. Suggest alternate conclusio as appropriate.

Information Copies Sent To:

Signature (Panel Member)	Date Received	Date Cleared	Concur	Non-concur

Reviewing Officials	Date Received	Date Review Completed	Reviewer's Signature
1.			
2.			
3.			
4.			
5.			

Reviewing Panel Member's Comments:

REGION IV

PEER REVIEW CLEARANCE FORM

Route To: Finger, Knight, Guinyard, Harlow Date Transmitted: May 1, 1985

Return To: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV. Date Returned: May 16, 1985

Peer Review Originator (Panel Member): Thomas W. Devine, Director, WASTE MGMT. DIV.

Project Title: SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Project Manager: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV.

Originator's Instructions: Please review and return within 10 working days of transmittal date. Review for technical accuracy and policy implications. Suggest alternate conclusions as appropriate.

Information Copies Sent To:

Signature (Panel Member)	Date Received	Date Cleared	Concur	Non-concur
Wade Knight	5-3-85	5-10-85	✓	

Reviewing Officials	Date Received	Date Review Completed	Reviewer's Signature
1.			
2.			
3.			
4.			
5.			

Reviewing Panel Member's Comments: No Comments

MAY 2 1985

REGION IV

PEER REVIEW CLEARANCE FORM

Route To: Finger, Knight, Guinyard, Harlow **Date Transmitted:** May 1, 1985

Return To: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV. **Date Returned:** May 16, 1985

Peer Review Originator (Panel Member): Thomas W. Devine, Director, WASTE MGMT. DIV.

Project Title: SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Project Manager: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV.

Originator's Instructions: Please review and return within 10 working days of transmittal date. Review for technical accuracy and policy implications. Suggest alternate conclusions as appropriate.

Information Copies Sent To:

Signature (Panel Member)	Date Received	Date Cleared	Concur	Non-concur

Reviewing Officials	Date Received	Date Review Completed	Reviewer's Signature
1.			
2.			
3.			
4.			
5.			

Reviewing Panel Member's Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: MAY 15 1985

SUBJECT: Peer Review: Chloride Metals Corporation, Florence, Mississippi

FROM: Director
Water Management Division

TO: Thomas Devine, Director
Waste Management Division

The subject report has been reviewed by my staff and based on their recommendation I am concurring in the peer review process. The comments in the attached memo are offered to assist your staff in evaluating the impact on groundwater at this site.

Bruce Barrett

Bruce Barrett

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: MAY 15 1985

SUBJECT: Peer Review: Chloride Metals Corporation, Florence, Mississippi

FROM: Hydrologist,
Groundwater Section

TO: Rich Ferrazzuolo, Project Officer
Inspection and Compliance Section

The subject report has been reviewed and I offer the following comments:

The data collected during this investigation conclusively demonstrates contamination of the groundwater as a result of this company's activities. Cadmium was detected in three (3) of the four (4) monitor wells above the drinking water standard of 10ppb. Chromium was detected in all four (4) wells and at concentrations exceeding the MCL in two (2) of those wells. Lead was also detected in all four (4) wells and at a concentration exceeding the MCL in all four (4). Other metals such as mercury and arsenic were also detected in two (2) or three (3) wells, but at concentrations below the MCL. Lead appears to be the metal of most concern since it occurred in all wells at concentrations well above the MCL.

disregard reference to MCL since data for metals quantitative values was not QA'd
Telecon with Gail Mitchell 05/30/85

The report does not provide any information on the proximity of drinking water wells to the site. Evaluation of this information will be important in determining the threat to public health.

Further investigation should be conducted. A thorough evaluation of all existing data for this site is needed to determine, if possible, groundwater flow direction and estimated velocity. A survey of groundwater users downgradient including depth of wells, screened interval and location is necessary. Additional wells may be required to evaluate the extent of contamination. Source of the contaminants needs to be more accurately defined.

RAF

If I can be of further assistance, let me know.

Gail

Gail Mitchell

Also Sect 5.3 wondered why conductivity was not monitored RAF

EPA Form 1320-6 (Rev. 3-76)

REGION IV

PEER REVIEW CLEARANCE FORM

Route To: Finger, Knight, Guinyard, Harlow **Date Transmitted:** May 1, 1985

Return To: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV. **Date Returned:** May 16, 198

Peer Review Originator (Panel Member): Thomas W. Devine, Director, WASTE MGMT. DIV.

Project Title: SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Project Manager: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV.

Originator's Instructions: Please review and return within 10 working days of transmittal date. Review for technical accuracy and policy implications. Suggest alternate conclusion as appropriate.

Information Copies Sent To:

Signature (Panel Member)	Date Received	Date Cleared	Concur	Non-concur
Bruce Barnett			✓	

Reviewing Officials	Date Received	Date Review Completed	Reviewer's Signature
1. Gail Mitchell	5/3	5/9	Gail Mitchell
2.			
3.			
4.			
5.			

Reviewing Panel Member's Comments:

ROUTING AND TRANSMITTAL SLIP Date May 1

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Jerry Finsey		
2. Director, ESD		
3. Athens, GA		
4. ~~Mike Carter Tom~~		
5. Pat Homan		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
[redacted]	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

6 - R. Ferrazzuolo
Waste Mgt. Div.

Comments due by 5/15

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
R Ferrazzuolo	Phone No. FTS 257-2234

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

☆ U.S.G.P.O. 1983-421-529/320

REGION IV

PEER REVIEW CLEARANCE FORM

Route To: Finger, Knight, Guinyard, Harlow **Date Transmitted:** May 1, 1985

Return To: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV. **Date Returned:** May 16, 198

Peer Review Originator (Panel Member): Thomas W. Devine, Director, WASTE MGMT. DIV.

Project Title: SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Project Manager: Richard Ferrazzuolo, ICS, ERRB, WASTE MGMT. DIV.

Originator's Instructions: Please review and return within 10 working days of transmittal date. Review for technical accuracy and policy implications. Suggest alternate conclusio as appropriate.

Information Copies Sent To:

Signature (Panel Member)	Date Received	Date Cleared	Concur	Non-concur
Billy H. Adams for James H. Finger	5/7/85	5/13/85	X - See Comments	

Reviewing Officials	Date Received	Date Review Completed	Reviewer's Signature
1. Ken Barry	5/8/85	5/9/85	Ken Barry
2. [illegible]	5/10/85	5/13/85	[illegible]
3.			
4.			
5.			

Reviewing Panel Member's Comments:

Peer Review Comments - Ken Barry

0.32 Site History

- Reference: "Lead, zinc, and pH in the process water exceeded permitted levels." Should this read "process wastewater"?

- Reference: "...the treatment facilities were secured to prevent further runoff..." What did this involve?

06.2 Monitoring Well 2 - Sample CM-MW-02

- Text says five organic compounds were detected but table 4 only lists four.

06.8 On-site Spring - Samples CM-S-1S/1W

- Was sediment allowed to settle after hole was dug and allowed to fill with water when sampling the spring?

- Text says four organic compounds were detected but table 4 only lists three.

- Text says that the concentration of beryllium at CM-S-1S was the highest detected (500 ug/kg) but beryllium was detected at a higher concentration at CM-1C-US (700 ug/kg) according to table 5 and Section 6.5.

07.2 Organics

- In reference to the detection of polynuclear aromatic hydrocarbons in the landfill composite sample (CM-CC-01), is it known if Chloride Metals Corp. (or present company) was involved in asphalt paving, wood preserving, etc?

NUS CORPORATION
FIT REGION IV
SITE SCREENING STUDY FORM FOR
CHLORIDE METALS
FLORENCE, MISSISSIPPI
Revision 0
Account # 4TFA04PA00
Program Element:

TDD No. F4-8406-03 Contract Lab Case No.: 2837 ESD Project No.: 84-201

FIT Project Manager: Johnny Smith Date: July ~~10-11~~ 11-12, 1984

SITE INFORMATION

Site Name: Chloride Metals Street: Briarhill Road

City: Florence County: Rankin State: Mississippi

Site Owner: Chloride Metals

Site Mgr.: Frank Barnett Phone No.: 813-248-3161 Address: 3507 S. 50th St., P. O. Box 1124, Tampa, Florida

Purpose of Study:
FIT has been tasked to collect environmental (soil/sediment and water) samples on and around the site. Samples will be used to verify and characterize contaminants, if any, on or migrating from the site.

Site Sketch Attached: X Yes _____ No

SITE BACKGROUND

Site Description (including Waste Types and Dispositions):
Chloride Metals of Florence, Mississippi, is a secondary lead plant involved in the recovery of lead scrap from spent automotive batteries. The process consists of sawing the tops off the batteries and emptying the cases of acid in the battery cutting building, separating and chipping rubber or plastic components and further lead removal in the MA 31 machine, and smelting the lead in the furnace for casting into lead "pigs." Process wastewater is generated from the acid dumped from the batteries, saw cooling water, and from the MA 31 which uses water as the transporting and cleaning medium. Cooling water is used for the furnace and for cooling casings. Runoff from the process area also is contaminated due to fugitive dust from the smelting operation.

METHODOLOGY

All sample collection, sample preservation and chain-of-custody procedures used during this

938 7710

investigation will be in accordance with the standard operating procedures as specified in the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980. All laboratory analyses and quality assurance procedures used during this investigation will be in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982 or as specified by the existing United States Environmental Protection Agency standard procedures and protocols for the contract analytical laboratory program.

SAMPLING REQUIREMENTS

No. Water Samples: 8 No. Soil/Sediment Samples: 5 Other: ____

Split Samples Requested?: X Yes ____ No.

Sample Information:

Station	Type*	Cyanide	VOA	Metals	Ext Organics	Other
TOTALS:						
CM-ICU-1W	W	1	2	1	1	
CM-ICD-2W	W	1	2	1	1	
CM-HP-3W	W	1	2	1	1	
CM-SW-4W	W	1	2	1	1	
CM-ICU-1S	W	1	2	1	1	
CM-ICD-2S	S	1	1	1	1	
CM-HP-3S	S	1	1	1	1	
CM-SW-4S	S	1	1	1	1	
CM-DUW-1	W	1	2	1	1	
CM-SUW-2	W	1	2	1	1	
CM-DDW-3	W	1	2	1	1	
CM-SDW-4	W	1	2	1	1	
CM-CBL-1	S	1	1	1	1	

* W - water; S - soil/sediment

LABORATORY RESOURCE REQUIREMENTS

Anticipated Date(s) of Sample Delivery: July 13, 1984

Analytical Needs:

Analysis	Water Samples		
Organics (Priority Pollutant Scan):	8	5	13
Organics (Other: ___):	8	0	8
Metals/CN (All):	8	5	13
Inorganics (Specified ___):	8	0	8
Other:	0	0	0
TOTALS:	8	5	13

PERSONNEL REQUIREMENTS

FIT Field Personnel: Johnny Smith, Tom Duffey, Ken Perry

Total Estimated Project Manhours: 500

REGULATORY COORDINATION

EPA Project Officer: Ken Richardson Phone No. 404/881-2234 Location: Atlanta

ESD Contact: M. D. Lair Phone No. 404/546-3117 Location: Athens, Georgia

State Project Officer: Chuck Estes Phone No. 601-961-5070 Location: Jackson, MS

Local Agency Contact: _____ Phone No. _____ Location: _____

PROJECT SCHEDULE:

Site Screening Study Form Transmittal Date: 6/21/84

Field Study Date: week of 7/9/84

STUDY FORM APPROVALS:

TDD No.: F4-8406-03 Site Name: Chloride Metals

Murray Warner, P.E.
FIT IV Manager

Date 06/20/84

M. D. Lair
EPA/ESD Hazardous Waste Coordinator

Date

HWS/RCRA EQUIPMENT LIST

Name Johnny Smith
Study CHLORIDE METALS
Date 7-6-84
Vehicle(s) –

Program Element NSF
Project No. 84-201
Account No. 4 TFA 04 PA 00
Florence, Miss

Soil

- Shovel
- Post Hole Digger
- Stainless Steel Spoons
- Stainless Steel Scoop
- Stainless Steel Pans
- Aluminum Pans
- Auger (Specify type)
  - Head (Size 2" or 4")
  - Extensions (Pins)
  - Handle
  - Push Head (Stainless Steel)
  - Push Tube (2" Shelby)

Sediment/Waste

- Stainless Steel Spoons
- Stainless Steel Scoops[3]
- Stainless Steel Pans
- Aluminum Pans
- Ponar Dredge (Stainless Steel)
- Glass Tubes
- Bacon Bomb Sampler
- Profile Tubes

Pumps

- Peristaltic (Master Flex)[6]
- Bladder
- Submersible
  - 2" Johnson Keck
  - 3" 110 V
  - 4" 220 V
- Centrifugal[8]
- Generator

Water

- Stainless Steel Bucket
- D.O. Dunker (Teflon Lined)
- Nansen Bottle
- Bailers - Stainless Steel
  - 1"
  - 2"
- Bailers - Teflon
  - 2"
  - 4"
- Well Casing - Stainless Steel
  - 2" (Sand Point)
  - 2 1/2" (Blunt/Wire Screen)
- Well Screen - Stainless Steel
  - Sand Point
  - Blunt/Wire Screen[1]
- Teflon Vacuum Inserts[2]
- 5 Gallon Sample Jars
- Teflon Stirring Rod
- Electric Water Level Indicator

Drums

- Remote Opening Equipment
  - Bung[4]
  - Piercer[5]
- Glass Tubes
- Brass Bung Tools

Essentials

- 12 Volt Batteries
- Cables (List Types)
- Ice Chests (List Types)
- Tubing (Specify Length)
  - Teflon
  - Tygon
  - Silastic (Size)
- Tape
  - Nylon (Fiber)
  - Duct
  - Electrical
  - Masking

R[illegible]nts/Liquids

MQ water
Distilled Water
Acetone
Preservatives
- H_2SO_4
- HNO_3
- Zinc Acetate
- NaOH
- Other (Specify)

*Safety Equipment/Meters

Safety Glasses/Goggles/Face Shield
Respiratory Protection
- Full Face Respirator -MSA Ultra Twin

Canisters (List Type)
-
-
-
- SCBA (Extra Tanks) MSA 401
- Escape Pack (Robert Shaw)

Gloves (Specify Number)
- Surgical (Latex)
- Butyl Rubber
- PVC
- Neoprene Rubber
- Coated Cotton Work Glove
- Leather

Disposable Coveralls (List Size)
- Tyvek - Level D
- Tyvek - Syrannex Level C

Splash Apron - Butyl Rubber - Level B
Splash Suit (Yellow) Level B
Moon Suite - Level A
Disposable Booties
Rubber Boot Covers (List Size)
*Rubber Boots/Hard Hat
Sprayer/Distilled Water
Explosion Meter
- Model 260-O_2-LEL
- Model 40-LEL
- Model 2A-LEL

Photo Ionizer - HNU
O_2 Meter
MSA Detector Tubes and Pump
- Sulfide Tubes
- Cyanide Tubes

Geiger Counter
Metal Detector
pH Meter and Buffer
pH Paper (Litmus)
Conductivity Meter

S[illegible]e Containers

Water

Gallon Glass
- Bio Assay 12
- Preserved (Thio)
- Unpreserved

Pint Glass
- Metals 12
- Phenol

VOA Vials[9]
- Chlorinated Sample 24
- Non-Chlorinated Sample HCL

1/2 Gallon Plastic
Pint Plastic 20

Soil/Sediment

Quart Glass
4 Ounce Glass (VOA - Oven Dried)
Pint Plastic

Concentrated Waste/Sludge

4 Ounce Glass (Oven Dried)
8 oz. Glass (Oven Dried) 12

Additional Containers

Miscellaneous

Topo/Quad/Aerial Photo
Compass
Calibrated Bucket
Graduated Cyclinder (500 ml)
Surveying Equipment (Level, Rod, Transit, Etc.)
Stainless Steel Scoop Bracket
Conduit Pipe
Teflon Vacuum Insert
Steel Tape
Rope (Specify Length)
- Bailer
- Dredge

Soap/Buckets/Brushes
Boat
Jumper Cables
Electric Extension Cord
Gas Can
Pipettes
- Glass or Disposable

Wadders
*Camera
*Film (List Type)
*Stopwatch
*Junk Box
*Safety Equipment (Personal)
*Tools
*Tags/Seals/Custody Sheets
Machete
Box of Aluminum Foil
Plastic Bags (Specify Size)
Garbage Bags
Metal Sample Cans with Clips
- Gallon
- Quart

Vermiculite
Hand Radio Set
Charger (Radio Set)
Flashlight
12V Flood Lights
Flourescent Paint
Safety Harness

NOTES:

1. Teflon O-rings and stainless steel clamps, extra wire screen if equipment list calls for blunt well screens.
2. Teflon vacuum inserts for use with Masterflex pump and glass gallon.
3. Scoop bracket and conduit pipe might be required; see Miscellaneous equipment.
4. Steel bracket, chuck, pneumatic drill, air hose, nitrogen air tank, regulator. Specify number of air tanks needed.
5. Steel bracket and belt, piercers, hydraulic hose and pump.
6. Electric cables, tubing, 12 volt batteries.
7. Nitrogen air tank, regulator, air and discharge hoses. Note: Make sure that accessories above are compatible with pump.
8. Stainless steel pipe and hoses.
9. See SOP for methods of preservation.

* Indicates items for which field crew team leader is responsible.

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSD 082002320

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
CHLORIDE METALS	BRIARHILL RD.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
FLORENCE	MS		RANKIN	121	03

09 COORDINATES LATITUDE	LONGITUDE	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)
08 10 84	☐ ACTIVE ☐ INACTIVE	1972 / 1982 — UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR NUS CORP. (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.
JOHNNY SMITH	PROJECT OFFICER	NUS	(404) 938-7710

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
KEN RICHARDSON		EPA	404 881-2930 ~~(404) 938-7710~~ JSS
JAN ROGERS		EPA	404 881-3231 ~~(404) 938-7710~~ JSS
MIKE HOFMAN		EPA	( )
WILLIE SMITHERMAN	ENVIRO. CONSULTANT	NUS	(404) 938-7710
DOUG MUNSON	FIELD TECH	NUS	(404) 938-7710

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
FRANK BARNETT	Prod Mgr	3507 30th St. South P.O. 485, TAMPA, FLA 33601	(813) 248-3161
J. T. MORGAN	PLANT MGR.	P.O. 38 BRIAR HILL RD	(601) 845-2281
RESOURCE CONSULTANT			( )
WAYNE McCOY	SENIOR ASSOCIATE	P.O. 498 BRENTWOOD, TN. 37027	(615) 373-5040
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	08-08/09/84	08- Misty off and on, Cloudy Clear and Hot 09

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
KEN RICHARDSON	EPA	(404) 881-2930

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (MONTH DAY YEAR)
JOHNNY SMITH	FIT	NUS	404-938-7710	8 20 84

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
MS	MSD082002320

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 _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

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

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

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

V. FEEDSTOCKS (See Appendix for CAS Numbers)

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

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

Field Observations and Log Book
Miss. DNR Files NVS - Files
EPA - Files

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD082002320

II. HAZARDOUS CONDITIONS AND INCIDENTS

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

Sampled for potential Ground water contamination

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

possible runoff from site into Indian Creek

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

Unknown

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

Unknown

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

Thousands ~~tot~~ of open battery carcas lying in the open landfill

01 ☒ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 28 acres (Acres)
02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Landfill has the potential of being contaminated.

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

~~Potentially~~ JSS 8-20-84

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

Unknown

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

Unknown

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☒ OBSERVED (DATE: 8-8-84) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION
around the spring there is dead vegetation and small tree's.

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

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

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: 8-8-84) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: UNKNOWN
04 NARRATIVE DESCRIPTION
On a heavy Rain the Landfill Runoff into the pond could cause a heavy runoff from spillway into the creek

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

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

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

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

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

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

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSD082002320

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				
☐ 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		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ 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

_____ (Acres)

07 COMMENTS

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.

Open Landfill and Runoff could present to a potential problem

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE ☐ YES ☐ NO

02 COMMENTS

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

Field Observations

EPA FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
MS	MSD 082002370

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. _____ (mi)
B. _____ (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)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)
☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER _____

03 DISTANCE TO NEAREST DRINKING WATER WELL _____ (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
_____ (ft)	_____	_____ (ft)	_____ (gpd)	☐ YES ☐ NO

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

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
	☐	_____ (mi)
	☐	_____ (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. _____ NO. OF PERSONS	B. _____ NO. OF PERSONS	C. _____ NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION _____ (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE _____

04 DISTANCE TO NEAREST OFF-SITE BUILDING _____ (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)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD 082002320

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	
_____ (ft)	_____ (ft)	_____	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
_____ (in)	_____ (in)	_____ %		_____ %

09 FLOOD POTENTIAL	10
SITE IS IN _____ YEAR FLOODPLAIN	☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)		12 DISTANCE TO CRITICAL HABITAT (of endangered species)
ESTUARINE	OTHER	_____ (mi)
A _____ (mi)	B. _____ (mi)	ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AG LAND
A _____ (mi)	B. _____ (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
MS	MSD082002320

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	4	~~mwH~~ Org EnvCoTech InOrg Chemtech	1-1-84
SURFACE WATER	4	Org EnvCoTech InOrg Chemtech	"
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	~~5~~ 5	Org Cal. Analy. Lab. InOrg Chemtech	"
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH temp	MW 1 4.2 22 ; MW 2 3.65 22° ; MW 5 3.5 21.° ; MW 8 5.25 24
Cond	" 38 ; " 38 ; " 38 ; " 40 mhos

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF NUS
Name of organization or individual

03 MAPS ☐ YES ☒ NO

04 LOCATION OF MAPS

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

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

FIELD OBSERVATIONS

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
MS	MSD 082 002 320

II. CURRENT OWNER(S)

01 NAME: Chloride Metals	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.): Bizar Lick Rd	04 SIC CODE		
05 CITY: Florence	06 STATE: MS	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	
01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
12 CITY	13 STATE	14 ZIP CODE	
08 NAME	09 D+B NUMBER		
10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE		
12 CITY	13 STATE	14 ZIP CODE	

III. PREVIOUS OWNER(S) (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	

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. CURRENT OPERATOR (Provide if different from owner)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER				

III. PREVIOUS OPERATOR(S) (List most recent first. Provide only if different from owner)			PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)		
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				
01 NAME		02 D+B NUMBER	10 NAME		11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD				

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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

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

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

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

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

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

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

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

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 FORM 2070-13 (7-81)

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☐ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

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

ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET N.E.
ATLANTA GA 30308

TELECOPIER REQUEST
REGION IV

TO: FRANK WOLLE - FTS 557-3110
PHONE: FAX # 557-2643
LOCATION: EPIC, VINT HILL FARMS STAT., WARRE

CONFIRMATION

FROM: Ron W. Joyner - ERRB X22
SUBJECT: Aerial Overflight of Chloride Metal
PHONE: 881-2234 FTS 257-2234

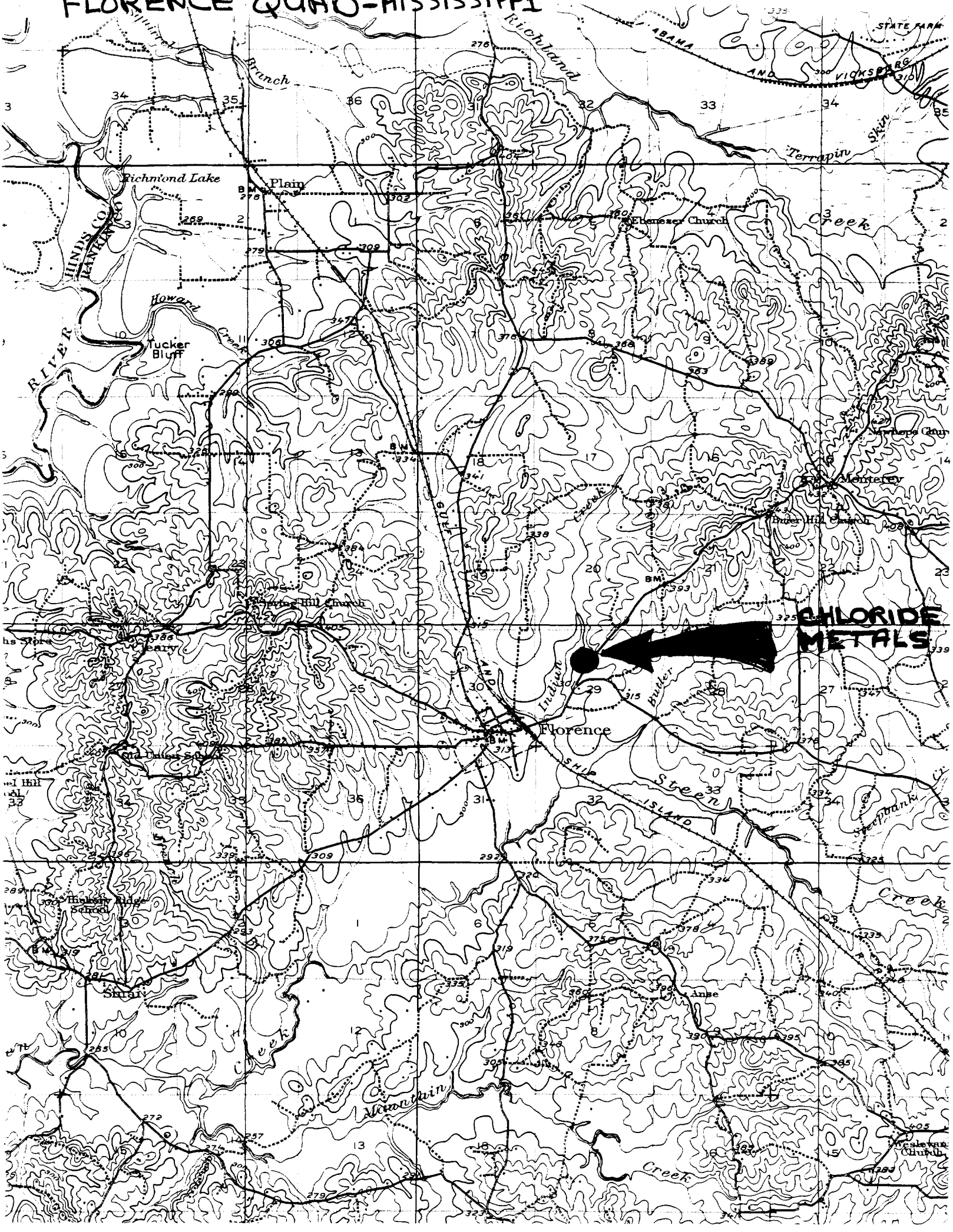
NUMBER OF PAGES TO FOLLOW: 3

DATE SENT:

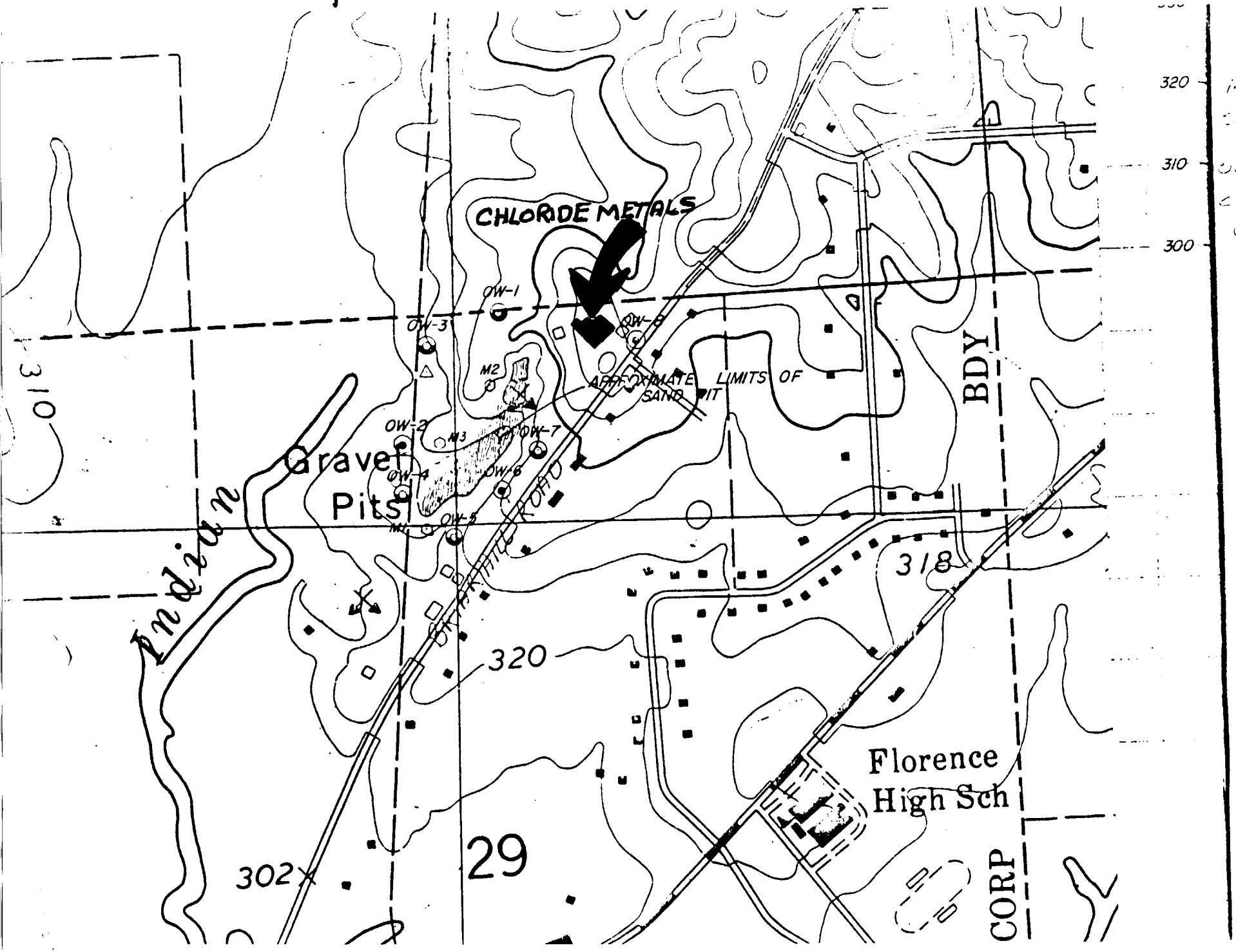
MAGNAFAX CONFIRM
DATE 7/20/84
TIME 8:30
OPERATOR KC

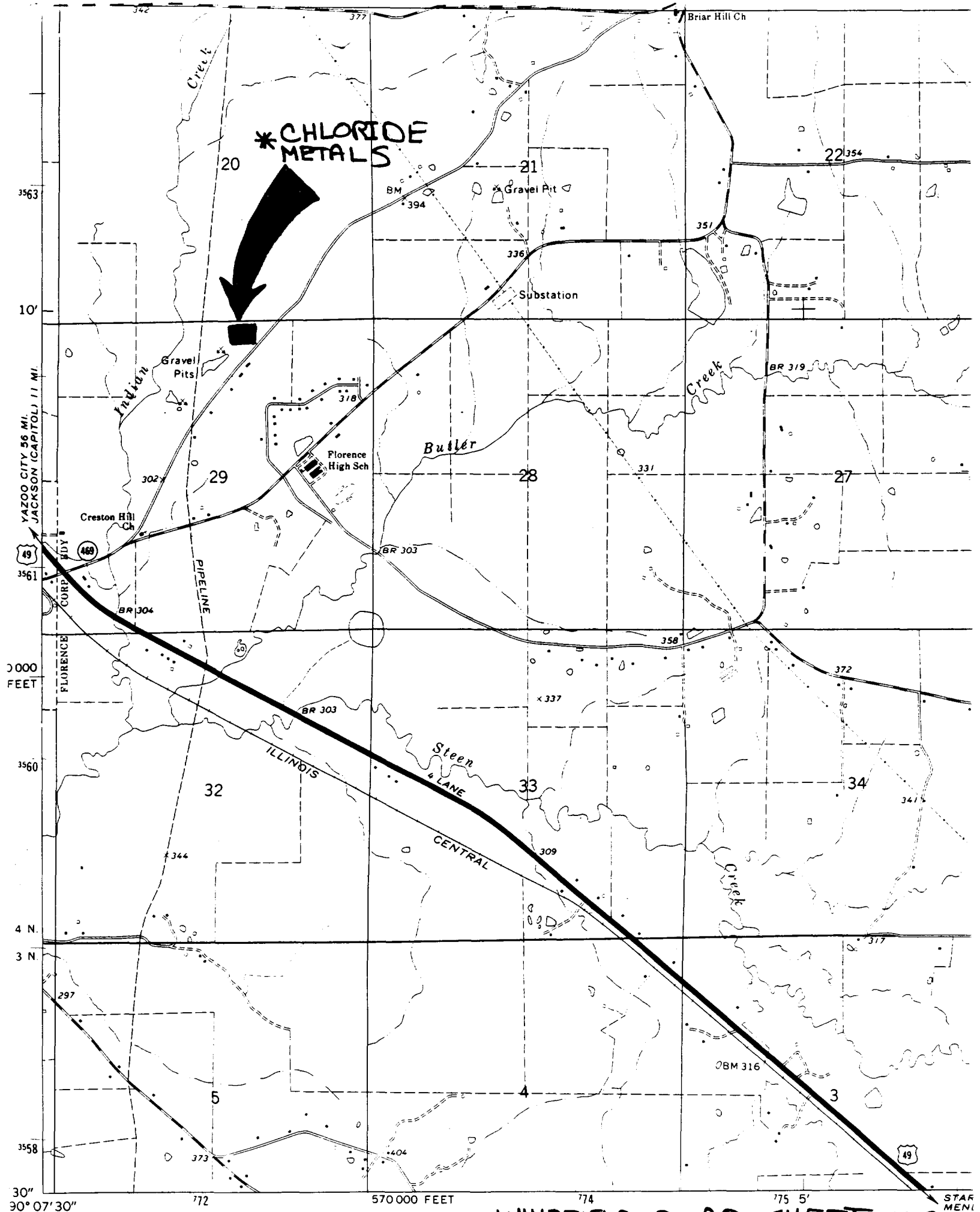
PANAFAX- MACHINE-257-4702, CONFIRMATION-257-2785
3M(AUTO) MACHINE-257-4486, CONFIRMATION-257-2176
DEX(AUTO) 4100- MACHINE-257-2175, CONFIRMATION-257-2176

FLORENCE QUAD-MISSISSIPPI



FLORENCE, MISSISSIPPI





Mapped, edited, and published by the Geological Survey

...TING AND TRANSMITTAL SLIP

Dat 7-16-84

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. George Moein		
2.		
3.		
4.		
5.		

✓	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate		For Your Information		See Me
	Comment		Investigate		Signature
	Coordination		Justify		

REMARKS

During my inspection of Chloride Metals, Florence, MS on 7-11-84, I noticed that conditions on this site may merit consideration for an emergency response. There are thousands upon thousand of auto battery casings littering the area around the surface impoundment & runoff would likely enter Indian Creek.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Ron W. Joyner	Phone No.

5041-102

☆ U.S. GPO: 1980—341-529/20

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: IV

SITE NUMBER (to be assigned by Hq):

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

I. SITE IDENTIFICATION

A. SITE NAME: Chloride Metals

B. STREET (or other identifier): Briarhill Road

C. CITY: Florence

D. STATE: MS

E. ZIP CODE:

F. COUNTY NAME: Rankin

G. SITE OPERATOR INFORMATION

1. NAME: Chloride Metals

2. TELEPHONE NUMBER:

3. STREET:

4. CITY:

5. STATE:

6. ZIP CODE:

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

1. NAME:

2. TELEPHONE NUMBER:

3. CITY:

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION: Abandoned lead smelter and battery "busting" Facility. OPERATION 1972-1982

J. TYPE OF OWNERSHIP

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

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

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

B. APPARENT SERIOUSNESS OF PROBLEM

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

C. PREPARER INFORMATION

1. NAME: Ron W. Joyner

2. TELEPHONE NUMBER: FTS 257-2234

3. DATE (*mo., day, & yr.*): 7-12-84

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: Ron W. Joyner

2. TITLE: Environmental Scientist/Hydrogeologist

3. ORGANIZATION: U.S. EPA, ERRB, JCS

4. TELEPHONE NO. (*area code & no.*): 257-2234

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Ken Richardson	U.S. EPA	257-2234
Chuck Estes	Mississippi DNR	601/961-5171

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

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Frank Barnett	Production Mgr. 813/248-3161	Chloride Inc.
		3507 South 50th Street
		P.O. Box 1124
		Tampa, FLA 33601
J.T. Morgan	Plant Foreman	601/845-2281

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

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

E. TRANSPORTER/HAULER INFORMATION

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

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

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
7-12-84	9:00 AM	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

VERY HOT 98° Partly cloudy.

IV. SAMPLING INFORMATION

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

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

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

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continue On Page 3

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS
   - [x] a. GROUND
   - [ ] b. AERIAL
2. PHOTOS IN CUSTODY OF: Ron W. Joyner

D. SITE MAPPED?

- [ ] YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

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

V. SITE INFORMATION

A. SITE STATUS

- [ ] 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)
- [x] 2. INACTIVE (Those sites which no longer receive wastes.)
- [ ] 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

- [ ] 1. NO
- [ ] 2. YES (specify generator's four-digit SIC Code): _____

C. AREA OF SITE (in acres)

≈8

D. ARE THERE BUILDINGS ON THE SITE?

- [ ] 1. NO
- [x] 2. YES (specify): Production Bldgs.

VI. CHARACTERIZATION OF SITE ACTIVITY

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

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

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

- [ ] 1. STORAGE
- [ ] 2. INCINERATION
- [ ] 3. LANDFILL
- [x] 4. SURFACE IMPOUNDMENT
- [ ] 5. DEEP WELL
- [ ] 6. CHEM/BIO/PHYS TREATMENT
- [ ] 7. LANDFARM
- [x] 8. OPEN DUMP
- [ ] 9. TRANSPORTER
- [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

- [x] 1. LIQUID
- [x] 2. SOLID
- [ ] 3. SLUDGE
- [ ] 4. GAS

B. WASTE CHARACTERISTICS

- [x] 1. CORROSIVE
- [ ] 2. IGNITABLE
- [ ] 3. RADIOACTIVE
- [ ] 4. HIGHLY VOLATILE
- [x] 5. TOXIC
- [ ] 6. REACTIVE
- [x] 7. INERT
- [ ] 8. FLAMMABLE
- [ ] 9. OTHER (specify):

C. WASTE CATEGORIES

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

 Continue On Reverse

Continued From Front

VII. WASTE RELATED INFORMATION *(continued)*

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

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

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

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

VIII. HAZARD DESCRIPTION

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

☐ A. HUMAN HEALTH HAZARDS

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued)*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

Documented in data analysis.

☐ G. CONTAMINATION OF SURFACE WATER

 Continue On Reverse

Continued From Front

VIII. HAZARD DESCRIPTION *(continued)*

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☑ L. CONTAMINATION OF SOIL

Documented lead contamination.

☐ M. PROPERTY DAMAGE

 Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

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

Surface impoundment noted on-site.

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☒ U. OTHER *(specify)*:

During my site inspection, I noticed a large open sand pit that Chloride had dumped battery casings into. About 300' feet downgradient from the pit there was a 3 acre surface impoundment. The impoundment had thousands of battery casings and scattered lead plates littered the area. Runoff from the site enters Indian Creek, ≈ 1200' from the site.

IX. POPULATION DIRECTLY AFFECTED BY SITE

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

X. WATER AND HYDROLOGICAL DATA

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

G. TYPE OF DRINKING WATER SUPPLY

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

☐ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

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

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

I. RECEIVING WATER

1. NAME: Indian Creek

☐ 2. SEWERS ☑ 3. STREAMS/RIVERS

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

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

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

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

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

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

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

XIII. SOIL PERMEABILITY

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

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

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

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

J. OTHER GEOLOGICAL DATA

 Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

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

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

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

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

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

NUS CORPORATION

NORTH LAKE SQUARE OFFICE PARK
1726 MONTREAL CIRCLE
SUITE 20
TUCKER, GEORGIA 30084
(404) 938-7710

June 18, 1984
C-586-6-4-38

Mr. Frank Bartlett
Chloride Metals
3507 S. 50th Street
P. O. Box 1124
Tampa, Florida 33601

Subject: Chloride Metals; Florence, Mississippi
TDD No. F4-8406-03

Dear Mr. Bartlett:

The NUS Corporation will be conducting a site screening study at the Chloride Metals Florence, Mississippi Site, TDD No. F4-8406-03, on Wednesday and Thursday, July 11 and 12, 1984. Mr. Ken Richardson of the Environmental Protection Agency has informed me that you have granted verbal permission for access to the property in a phone conversation.

Both water and soil samples will be collected during the sampling study. The NUS Corporation will split samples with you at your request. However, both the sampling bottles and the subsequent chemical analyses will be your responsibility.

Any questions concerning the study should be directed to Johnny Smith at 404/938-7710 or Wally Jones of the United States Environmental Protection Agency, 404/881-2234.

The following people will be at your facility:
Johnny Smith - NUS Corporation
Ken Perry - NUS Corporation
Tom Duffey - NUS Corporation
Ken Richardson - United States Environmental Protection Agency
Ron Joyner - United States Environmental Protection Agency

Your cooperation is appreciated.

Sincerely,

Johnny S. Smith
Environmental Consultant

cc: Wally Jones, EPA
Ken Richardson, EPA
Chuck Estes, MSDNR

JSS/lsr

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. 1528

I. GENERAL INFORMATION: Facility Name Chloride Metals
County Code Rankin NPDES Permit No.
Discharge No. Date Requested
Sample Point Identification #4, monitoring well
Requested By Chuck Estes Data To Chuck Estes
Type of Sample: Grab ( ) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny, cool Collected By Chuck Estes
Where Taken Monitoring well #4, southwest of facility

	Type	Parameters	Preservative	Date	Time
1.	Water	As, Cd, Pb	5 ml HNO_3	11-16-83	1240
2.	Water	Sulfate, Specific		11-16-83	1240
3.		Conductivity			
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	(X)	3.28	CW	11-16-83
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By FK Badelle Date 11-16-83 Time 1605
Recorded By Dorothy Lewis Date Sent to State Office 12-15-83

Analysis	Computer Code	Request	Result		Analyst	Date Measured
BOD_5	(000310)	( )		mg/l		*
COD	(000340)	( )		mg/l		
TOC	(000680)	( )		mg/l		
Suspended Solids	(099000)	( )		mg/l		
TKN	(000625)	( )		mg/l		
Ammonia-N	(000610)	( )		mg/l		
Fecal Coliform(1)	(074055)	( )		colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )		colonies/100 ml		*
Total Phosphorus	(000665)	( )		mg/l		
Oil and Grease(1)	(000550)	( )		mg/l		
Oil and Grease(2)	(000550)	( )		mg/l		
Chlorides	(099016)	( )		mg/l		
Phenol	(032730)	( )		mg/l		
Total Chromium	(001034)	( )		mg/l		
Hex. Chromium	(001032)	( )		mg/l		
Zinc	(001092)	( )		mg/l		
Copper	(001042)	( )		mg/l		
Lead	(017501)	(X)	0.89	mg/l	MDP	12-5-83
Cyanide	(000722)	( )		mg/l		
Conductivity		(X)	1400	umhos	DK	11-17-83
Sulfate		(X)	103	mg/l	DK	11-18-83
Cadmium		(X)	< 0.01	mg/l	MPD	12-6--83
Arsenic		(X)	<10.0n	ug/l	MDP	12-9-83
		( )				
		( )				
		( )				
		( )				
		( )				
		( )				

Remarks

*Date of Test Initiation

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

Lab Bench No. 1527

I. GENERAL INFORMATION: Facility Name Chloride Metals
County Code Rankin NPDES Permit No.
Discharge No. Date Requested
Sample Point Identification Spring, southwest of plant
Requested By Chuck Estes Data To Chuck Estews
Type of Sample: Grab ( ) Composite (Flow) (Time) Other ( )

II. SAMPLE IDENTIFICATION:
Environment Condition Sunny, cool Collected By Chuck Estes
Where Taken 4" pipe in spring area

	Type	Parameters	Preservative	Date	Time
1.	Water	As, Cd, Pb	5 ml HNO_3	11-16-83	250
2.	Water	Sulfate, Specific		11-16-83	250
3.		Conductivity			
4.					
5.					

III. FIELD:

Analysis	Computer Code	Request	Results	Analyst	Date
pH	(000400)	(x)	3.31	CF	11-16-83
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE: Bus ( ) RO Vehicle ( ) Other ( )

V. LABORATORY: Received By FK Badelle Date 11-16-83 Time 1605
Recorded By Dorothy Lewis Date Sent to State Office 12-14-83

Analysis	Computer Code	Request	Result		Analyst	Date Measured
BOD_5	(000310)	( )		mg/l		*
COD	(000340)	( )		mg/l		
TOC	(000680)	( )		mg/l		
Suspended Solids	(099000)	( )		mg/l		
TKN	(000625)	( )		mg/l		
Ammonia-N	(000610)	( )		mg/l		
Fecal Coliform(1)	(074055)	( )		colonies/100 ml		*
Fecal Coliform(2)	(074055)	( )		colonies/100 ml		*
Total Phosphorus	(000665)	( )		mg/l		
Oil and Grease(1)	(000550)	( )		mg/l		
Oil and Grease(2)	(000550)	( )		mg/l		
Chlorides	(099016)	( )		mg/l		
Phenol	(032730)	( )		mg/l		
Total Chromium	(001034)	( )		mg/l		
Hex. Chromium	(001032)	( )		mg/l		
Zinc	(001092)	( )		mg/l		
Copper	(001042)	( )		mg/l		
Lead	(017501)	(x)	2.19	mg/l	MDP	12-7-83
Cyanide	(000722)	( )		mg/l		
Conductivity		(X)	5300	umhos	DK	11-17-83
Sulfate		(X)	111	mg/l	DK	11-18-83
Cadmium		(X)	0.10	mg/l	MDP	12-6-83
Arsenic		(X)	<10.0	ug/l	MDP	12-9-83
		( )				
		( )				
		( )				
		( )				
		( )				
		( )				

Remarks

*Date of Test Initiation

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7571	CM-S-1W	Lead	0.5 ppm
T7572	CM-S-1W	Cyanide	<0.02 ppm
T7573	CM-S-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Spring)	Acrolein	<100
		Acrylonitrile	<100
	pH=2.8	Benzene	<5
		Bis (Chloromethyl) ether	<10
	T=24°C	Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7575	CM-P-1W	Lead	0.4 ppm
T7576	CM-P-1W	Cyanide	<0.02 ppm
T7577	CM-P-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Pond)	Acrolein	<100
		Acrylonitrile	<100
		Benzene	<5
	pH=6.0	Bis (Chloromethyl) ether	<10
		Bromoform	<10
	T=28°C	Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7584	CM-LC-01	Lead	13,460.0 ppm
T7584	CM-LC-01	Cyanide	<0.02 ppm

(Landfill composite)

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by:
Sold by:

Date Sampled: 8/9/84	Date Received: 8/13/83	Date Due:	Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7579	CM-IC-UW	Lead	<0.1 ppm
T7580	CM-IC-UW	Cyanide	<0.02 ppm
T7581	CM-IC-UW	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Indian Creek - upstream) pH=6.55 T=25°C	Acrolein	<100
		Acrylonitrile	<100
		Benzene	<5
		Bis (Chloromethyl) ether	<10
		Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7582	CM-BS-01	Lead	10.0 ppm
T7582	CM-BS-01	Cyanide	<0.02 ppm

(Background soil)

Chloride Incorporated

Chloride Metals

3507 50th Street South
P.O. Box 485
Tampa, Florida 33601
Phone (813) 248-3161

March 1983

MAR 2 - REC'D

Charles Estes, PE
Division of Solid Waste Management
Mississippi Department of
Natural Resources
P. O. Box 10385
Jackson, MS 39209

RE: Groundwater Monitoring

Dear Mr. Estes:

Please find the enclosed results of the groundwater sampling conducted on January 5th, 6th, and 7th, 1983. Samples will be taken in April for the 2nd Quarter and the results will be forwarded to you when I receive them.

If I can be of further assistance, please contact me at (813) 248-3161.

Very truly yours,

CHLORIDE METALS

Grady Curl

Grady Curl
Engineer

Enclosure

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615-373-6040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22734 - Chloride Observation Well No. 1

RCI Sample Number	22734				
Date Collected	1/6/83				
Time Collected	1000				
Date Received	1/10/83				
Acidity (mg/l as $CaCO_3$), dissolved	21				
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	78				
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.41				
Oil and Grease					
pH (pH units)	6.3				
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,110				
Suspended Solids					
Total Dissolved Solids	1,880				
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	<0.1				
Arsenic, dissolved	<0.002				
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.02				
Chromium					
Copper					
Iron, dissolved	<0.02				
Lead, dissolved	0.033				
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	200				
Zinc, dissolved	0.25				
Antimony, dissolved	<0.02				
Tin, dissolved	<0.1				
Conductivity, umhos/cm @ 25°C	2,140				

All units are in mg/l unless otherwise noted.

Mary McC.

RESOURCE CONSULTANTS inc
environmental engineers and scientists
O. BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22735 - Chloride Observation Well No. 2

RCI Sample Number	22735				
Date Collected	1/6/83				
Time Collected	1100				
Date Received	1/10/83				
Acidity (mg/l as $CaCO_3$), dissolved	97				
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	51				
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.14				
Oil and Grease					
pH (pH units)	4.2				
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	985				
Suspended Solids					
Total Dissolved Solids	1,510				
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	11.4				
Arsenic, dissolved	<0.002				
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.06				
Chromium					
Copper					
Iron, dissolved	0.29				
Lead, dissolved	0.095				
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	111				
Zinc, dissolved	0.47				
Antimony, dissolved	<0.02				
Tin, dissolved	<0.1				
Conductivity, umhos/cm @ 25°C	1,800				

All units are in mg/l unless otherwise noted.

RESOURCE CONSULTANTS inc
environmental engineers and scientists
D. BOX 488 • TWO MARYLAND FARMS • SUITE 340
RENTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22736 - Chloride Observation Well No. 3

CI Sample Number	22736				
ate Collected	1/6/83				
ime Collected	1200				
ate Received	1/10/83				
cidity (mg/l as $CaCO_3$), dissolved	61				
lkalinity (mg/l as $CaCO_3$)					
OD, 5-day, 20°C					
hlorides, dissolved	300				
OD					
yanide					
luorides					
BAS					
itrogen - Ammonia.					
itrogen - Total Kjeldahl					
itrogen - Nitrite, Nitrate, diss.	0.08				
il and Grease					
H (pH units)	4.1				
henols					
hosphate - Ortho					
hosphate - Total					
ulfates, dissolved	815				
uspended Solids					
otal Dissolved Solids	1,850				
otal Solids					
urbidity (NTU)					
luminum, dissolved	4.6				
rsenic, dissolved	<0.002				
arium					
eryllium					
alcium					
admium, dissolved	0.01				
hromium					
opper					
on, dissolved	0.07				
ead, dissolved	0.10				
agnesium					
anganese					
ercury					
ickel					
otassium					
lenium					
ver					
dium, dissolved	340				
nc, dissolved	0.10				
timony, dissolved	<0.02				
it., dissolved	<0.1				
onductivity, umhos/cm @ 25°C	2,430				

All units are in mg/l unless otherwise noted.

SOURCE CONSULTANTS inc.
environmental engineers and scientists
BOX 488 • TWO MARYLAND FARMS • SUITE 340
ALTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

escription: RCI No. 22737 - Chloride Observation WELL NO. 4

CI Sample Number	22737				
ate Collected	1/6/83				
ime Collected	1300				
ate Received	1/10/83				
cidity (mg/l as $CaCO_3$), dissolved	597				
lkalinity (mg/l as $CaCO_3$)					
OD, 5-day, 20°C					
hlorides , dissolved	114				
OD					
yanide					
uorides					
BAS					
itrogen - Ammonia					
itrogen - Total Kjeldahl					
itrogen - Nitrite, Nitrate , diss.	0.47				
l and Grease					
l (pH units)	3.7				
henols					
hosphate - Ortho					
hosphate - Total					
lfates , dissolved	1,620				
uspended Solids					
otal Dissolved Solids	2,850				
otal Solids					
urbidity (NTU)					
uminum , dissolved	87				
rsenic , dissolved	<0.002				
rium					
eryllium					
alcium					
admium , dissolved	0.16				
hromium					
opper					
on , dissolved	9.4				
ead , dissolved	0.56				
agnesium					
anganese					
ercury					
ckel					
otassium					
lenium					
ver					
dium , dissolved	210				
nc , dissolved	0.62				
ntimony, dissolved	<0.02				
in, dissolved	<0.1				
ductivity, umhos/cm @ 25°C	3,080				

All units are in mg/l unless otherwise noted.

ESOURCE CONSULTANTS inc
environmental engineers and scientists
BOX 498 • TWO MARYLAND FARMS • SUITE 340
NTWOOD, TENNESSEE 37027 • 615 373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

escription: RCI No. 22738 - Chloride Observation Well No. 5

CI Sample Number	22738				
ate Collected	1/6/83				
ime Collected	1400				
ate Received	1/10/83				
cidity (mg/l as $CaCO_3$), dissolved	481				
lkalinity (mg/l as $CaCO_3$)					
OD, 5-day, 20°C					
hlorides, dissolved	102				
OD					
vanide					
uorides					
BAS					
itrogen - Ammonia					
itrogen - Total Kjeldahl					
itrogen - Nitrite, Nitrate, diss.	0.50				
l and Grease					
l (pH units)	3.4				
henols					
hosphate - Ortho					
hosphate - Total					
ilfates, dissolved	1,580				
spended Solids					
otal Dissolved Solids	2,660				
otal Solids					
rbidity (NTU)					
uminum, dissolved	63				
senic, dissolved	<0.002				
rium					
ryllium					
alcium					
dmium, dissolved	0.10				
hromium					
opper					
, dissolved	3.9				
ad, dissolved	0.24				
agnesium					
anese					
ercury					
ckel					
otassi					
lenium					
lver					
dium, dissolved	160				
nc, dissolved	0.42				
timony, dissolved	<0.02				
, dissolved	<0.1				
nductivity, umhos/cm @ 25°C	2,960				

ll units are in mg/l unless otherwise noted.

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P. O. BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD, TENNESSEE 37027 • 615-373-6040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22739 - Chloride Observation Well No. 6

RCI Sample Number	22739				
Date Collected	1/6/83				
Time Collected	1500				
Date Received	1/10/83				
Acidity (mg/l as $CaCO_3$), dissolved	728				
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	143				
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	3.7				
Oil and Grease					
pH (pH units)	3.1				
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,270				
Suspended Solids					
Total Dissolved Solids	2,230				
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	88				
Arsenic, dissolved	<0.002				
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.30				
Chromium					
Copper					
Iron, dissolved	29.4				
Lead, dissolved	0.60				
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	160				
Zinc, dissolved	1.10				
Antimony, dissolved	<0.02				
Tin, dissolved	<0.1				
Conductivity, umhos/cm @ 25°C	3,000				

All units are in mg/l unless otherwise noted.

ESOURCE
ONSULTANTS inc.
environmental engineers and scientists
) BOX 488 • TWO MARYLAND FARMS • SUITE 340
ENTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

escription: RCI No. 22740 - Chloride Observation Well No. 7

CI Sample Number	22740				
ate Collected	1/6/83				
ime Collected	1600				
ate Received	1/10/83				
cidity (mg/l as $CaCO_3$), dissolved	1,750				
lkalinity (mg/l as $CaCO_3$)					
OD, 5-day, 20°C					
hlorides, dissolved	141				
OD					
yanide					
luorides					
BAS					
itrogen - Ammonia					
itrogen - Total Kjeldahl					
itrogen - Nitrite, Nitrate, diss.	4.4				
il and Grease					
H (pH units)	3.4				
henols					
hosphate - Ortho					
hosphate - Total					
ulfates, dissolved	2,060				
uspended Solids					
otal Dissolved Solids	3,500				
otal Solids					
urbidity (NTU)					
luminum, dissolved	297				
rsenic, dissolved	<0.002				
arium					
eryllium					
alcium					
admium, dissolved	0.52				
hromium					
opper					
on, dissolved	6.[illegible]				
ead, dissolved	0.23				
agnesium					
anganese					
ercury					
ickel					
[illegible]					
ilver					
odium, dissolved	105				
inc, dissolved	1.23				
ntimony, dissolved	<0.02				
in, dissolved	<0.1				
onductivity, umhos/cm @ 25°C	2,790				

All units are in mg/l unless otherwise noted.

RESOURCE CONSULTANTS inc.
environmental engineers and scientists
P.O. BOX 498 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22741 - Chloride Observation Well No. 8

RCI Sample Number	22741				
Date Collected	1/5/83				
Time Collected	1300				
Date Received	1/10/83				
Acidity (mg/l as $CaCO_3$), dissolved	6				
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	13				
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.04				
Oil and Grease					
pH (pH units)	6.5				
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	17				
Suspended Solids					
Total Dissolved Solids	118				
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	<0.1				
Arsenic, dissolved	<0.002				
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	<0.005				
Chromium					
Copper					
Iron, dissolved	0.03				
Lead, dissolved	<0.001				
Magnesium					
Manganese					
Mercury					
Nickel					
Selenium					
Silver					
Sodium, dissolved	12				
Zinc, dissolved	<0.005				
Antimony, dissolved	<0.02				
Tin, dissolved	<0.1				
Conductivity, umhos/cm @ 25°C	111				

All units are in mg/l unless otherwise noted.

SOURCE CONSULTANTS inc.
environmental engineers and scientists
P.O. BOX 488 • TWO MARYLAND FARMS • SUITE 240
BRENTWOOD, TENNESSEE 37027 • 615-373-5040

RCI # 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 22742 - Spring near Chloride Well No. 3

RCI Sample Number	22742				
Date Collected	1/5/83				
Time Collected	1500				
Date Received	1/10/83				
Acidity (mg/l as $CaCO_3$), dissolved	3,670				
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	1,250				
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	1.27				
Oil and Grease					
pH (pH units)	3.3				
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	6,240				
Suspended Solids					
Total Dissolved Solids	10,900				
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	590				
Arsenic, dissolved	<0.01				
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.69				
Chromium					
Copper					
Iron, dissolved	33				
Lead, dissolved	1.0				
Magnesium					
Manganese					
Mercury					
Nickel					
[illegible]ium					
Selenium					
Silver					
Sodium, dissolved	940				
Zinc, dissolved	1.94				
Antimony, dissolved	<0.02				
Tin, dissolved	<0.1				
Conductivity, umhos/cm @ 25°C	9,700				

All units are in mg/l unless otherwise noted.

SITE DATA

EPA ID NO.: MSD082002320 SHEET 01

(ACTION : *_* - FOR DATA ENTRY USE ONLY)

SF ID: *__* *__* *__*
__ *__*

SITE NAME: CHLORIDE METALS
STREET: BRIAR HILL RD
CITY: FLORENCE
CNTY NAME: RANKIN
LATITUDE: 32/10/00.0 LONGITUDE: 089/07/00.0

SOURCE: H
CONG. DIST.: 03
ST: MS ZIP: 39073-____
CNTY CODE: 121

SOURCE COUNTS (NOT UPDATABLE)

NOTIS:	1
STS:	0
HWDMS:	1
COMPOSITE:	0
OTHER:	0

NATL PRIORITY: N

HRS: *___._*

HRS DATE (YY/MM): *__/__*

RESPONSE TERMINATION (CHECK ONE IF APPLICABLE): PENDING *_* NO FURTHER ACTION *_*

ENFORCEMENT DISPOSITION (CHECK ANY THAT APPLY): NO VIABLE RESPONSIBLE PARTY *_* VOLUNTARY RESPONSE *_*
ENFORCED RESPONSE *_* COST RECOVERY *_*

EVENTS

	(ACTION - FOR DATE ENTRY USE ONLY)	EVENT TYPE	DATE (YY/MM) STARTED	DATE (YY/MM) COMPLETED	CONDUCTED BY EPA	STATE	RESP/PARTY	OTHER	COUNTS
EVENTS	*_*	(X) SITE DISCOVERY (SD)		80/08					
	_	(X) PRELIMINARY ASSESSMENT (PA)		82/09					
	_	SITE INVESTIGATION (SI)	*__/__*	*__/__*	*_*	*_*			
	_	REMEDIAL ACTION (RD)	*__/__*	*__/__*	*_*	*_*	*_*	*_*	*__*
	_	REMOVAL ACTION (RV)	*__/__*	*__/__*					*__*
ENFORCE EVENTS	*_*	ENFORCEMENT INVESTIGATION (EI)	*__/__*	*__/__*	*_*	*_*		*_*	
	_	ADMINISTRATIVE ORDER (AO)	*__/__*	*__/__*	*_*	*_*		*_*	
	_	JUDICIAL ACTION (JA)	*__/__*	*__/__*	*_*	*_*		*_*	

SITE NAME: CHLORIDE METALS

ALIAS AND ALIAS LOCATION DATA
****

ALIAS (ACTION *_* - FOR DATA ENTRY USE ONLY)

SEQ. NO.: *__* ALIAS NAME: *_____* SOURCE: *_*

ALIAS LOCATION (ACTION *_* - FOR DATA ENTRY USE ONLY)

CONTIGUOUS PORTION OF SITE: *_*

STREET: *_____* CONG. DIST.: *__*

CITY: *_____* ST: *__* ZIP: *_____-____*

CNTY NAME: *_____* CNTY CODE: *___*

LATITUDE: *__/__/__._* LONGITUDE: *___/__/__._*

ALIAS (ACTION *_* - FOR DATA ENTRY USE ONLY)

SEQ. NO.: *__* ALIAS NAME: *_____* SOURCE: *_*

ALIAS LOCATION (ACTION *_* - FOR DATA ENTRY USE ONLY)

CONTIGUOUS PORTION OF SITE: *_*

STREET: *_____* CONG. DIST.: *__*

CITY: *_____* ST: *__* ZIP: *_____-____*

CNTY NAME: *_____* CNTY CODE: *___*

LATITUDE: *__/__/__._* LONGITUDE: *___/__/__._*

EPA ID NO.: MSD082002320 SHEET 03

SITE NAME: CHLORIDE METALS

SITE COMMENTS
****

(ACTION - FOR DATA ENTRY USE ONLY)	COMMENT NUMBER	COMMENT
_	001	DISPOSAL OF BATTERY CARCASSES FROM LEAD REFINING OPERATION. 1972 TO
_	002	1980, PERIOD REPORTED FOR ON SUPERFUND.
_	003	RURAL RANKIN COUNTY MISSISSIPPI. AN OLD BARROW PIT ON SITE WAS USED
_	004	FOR APPROX. EIGHT YEARS TO LAND FILL AND DISPOSE OF PLANT REFUSE, OLD
_	005	AUTOMOBILE BATTERY CASES, AND FURNACE SLAGS. LDFL NO LONGER IN ACTIVE
_	006	USE. DATES OF WASTE HANDLING 1972 TO 1980.
_	007	CONTACT: FRANK BARNETT, PRODUCTION MGR. (813) 248-3161.
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*
_	*__*	*_____*

EPA ID NO.: MSD082002320 SHEET 04

SITE NAME: CHLORIDE METALS

REGIONAL ENTRIES
****

(ACTION - FOR DATA ENTRY USE ONLY)	ENTRY CODE	DESCRIPTION	DATE1 (YY/MM/DD)	DATE2 (YY/MM/DD)	DATE3 (YY/MM/DD)	FREE FIELD
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *
_	*___.__*	*	*	*	*	*
		*	* __/__/__ *	__/__/__ *	__/__/__ *	_____ *

CONCEPTUAL DESIGN
ENGINEERING REPORT

FOR

CHLORIDE METALS
Florence, Mississippi

RCI #2787 February 1982

CONCEPTUAL DESIGN
ENGINEERING REPORT
FOR
CHLORIDE METALS
Florence, Mississippi

RESOURCE CONSULTANTS

RCI #2787

February 1982

RESOURCE CONSULTANTS
environmental engineers and scientists

February 12, 1982

Mr. Jerry W. Cain, P.E.
Assistant Coordinator
Industrial Wastewater Control Section
Bureau of Pollution Control
2380 Highway 80 West
P. O. Box 10385
Jackson, Mississippi 39209

Re: Chloride Metals, Florence, Mississippi
Conceptual Design Engineering Report

Dear Jerry:

Please find enclosed four copies of the referenced engineering report for the wastewater treatment system at the Chloride Metals, Florence, Mississippi plant. The report contains the data and proposed treatment schemes as we defined them in our meeting of January 26, 1982. Once you have reviewed the report and we have received your comments, we will begin to prepare the detail plans and specifications for the project. As always, we welcome any input that you might wish to provide about what you would like to see at the facility.

During our meeting of January 26 you were interested in knowing what flow volume would be coming from this proposed treatment facility. Based on our analysis, it appears that during dry weather operating conditions, the normal flow from the facility will not exceed 30,000 gallons per day. During rainfall days in which up to one inch occurs in a 24-hour period, it is possible that as much as 75,000 gallons per day of treated wastewater could be discharged from the facility.

After you have had a chance to review the report, if you have any questions, please do not hesitate to call me.

Sincerely,

RESOURCE CONSULTANTS, INC.

Jack Waggener, P.E.
Vice President

JEW:df
enclosures

cc: Mr. Frank Barnett
Mr. David Berry

P.O. Box 498 • Two Maryland F[illegible] • Suite 340 • Brentwood, Tennessee 37027 • 615-373-5040
[illegible]

TABLE OF CONTENTS

		Page No.
I.	Introduction	1
II.	Wastewater Characterization and Existing Treatment Facilities	4
III.	Treatability	9
IV.	Treatment Alternatives	
	Alternative A: Batch Treatment System with Lime Addition	13
	Alternative B: Batch Treatment System with NaOH Addition	15

List of Tables

Table 1.	Effluent from pressure filter at wastewater treatment plant.	5
Table 2.	Analyses of bi-weekly samples of the existing treatment plant effluent, April to October, 1981.	7
Table 3.	Characterization of treated wastewater in settling lagoon #1 from a typical secondary lead plant	10
Table 4.	Capital and O & M costs for Alternative A: Batch treatment system with lime addition.	17
Table 5.	Capital and O & M cost for Alternative B: Batch treatment system with NaOH addition.	19

List of Figures

Figure 1.	Plant layout at Chloride Metals, Florence, MS	2
Figure 2.	Characteristic lead removal from secondary lead plant wastewater in relation to pH endpoint.	11
Figure 3.	Characteristic arsenic removal from secondary lead plant wastewater in relation to pH endpoint.	12
Figure 4.	Alternative A: Batch treatment system with lime addition. Chloride Metals, Florence, MS	14
Figure 5.	Alternative B: Batch treatment system with NaOH addition. Chloride Metals, Florence, MS	18

1. Introduction

Chloride Metals of Florence, Mississippi, is a secondary lead plant involved in the recovery of lead scrap from spent automotive batteries. The process consists of sawing the tops off the batteries and emptying the cases of acid in the battery cutting building, separating and chipping rubber or plastic components and further lead removal in the MA 31 machine, and smelting the lead in the furnace for casting into lead "pigs." Process wastewater is generated from the acid dumped from the batteries, saw cooling water, and from the MA 31 which uses water as the transporting and cleaning medium. Cooling water is used for the furnace and for cooling castings. Runoff from the process area also is contaminated due to fugitive dust from the smelting operation.

Currently, the process and cooling wastewater is treated in a system designed to settle the insoluble lead oxides, to adjust the pH with sodium hydroxide in order to precipitate the soluble lead, and to filter the effluent. A plant layout is shown schematically in Figure 1. This facility is now undersized hydraulically and requires upgrading to produce a wastewater in compliance with the EPA and State standards.

From a federal standpoint, a secondary lead plant falls within the Non-ferrous Metals Manufacturing Point Source Category. As projected on October 30, 1981, the standards for this category should be proposed in August, 1982, and finalized in November, 1983. When the proposed standards are published, they will be based on the technology EPA has identified as Best Available Technology (BAT) Economically Achievable. From recent informal conversations with the EPA Project Officer for this point source category, it is understood that BAT will probably consist of lime addition, settling, and filtration.

The requirement of the Mississippi Industrial Wastewater Control Section is that Chloride Metals upgrade the existing wastewater treatment facilities to the BAT level. In a November 4, 1981, meeting, a tentative agreement was made concerning the standards to be issued in the final NPDES permit. The values are:

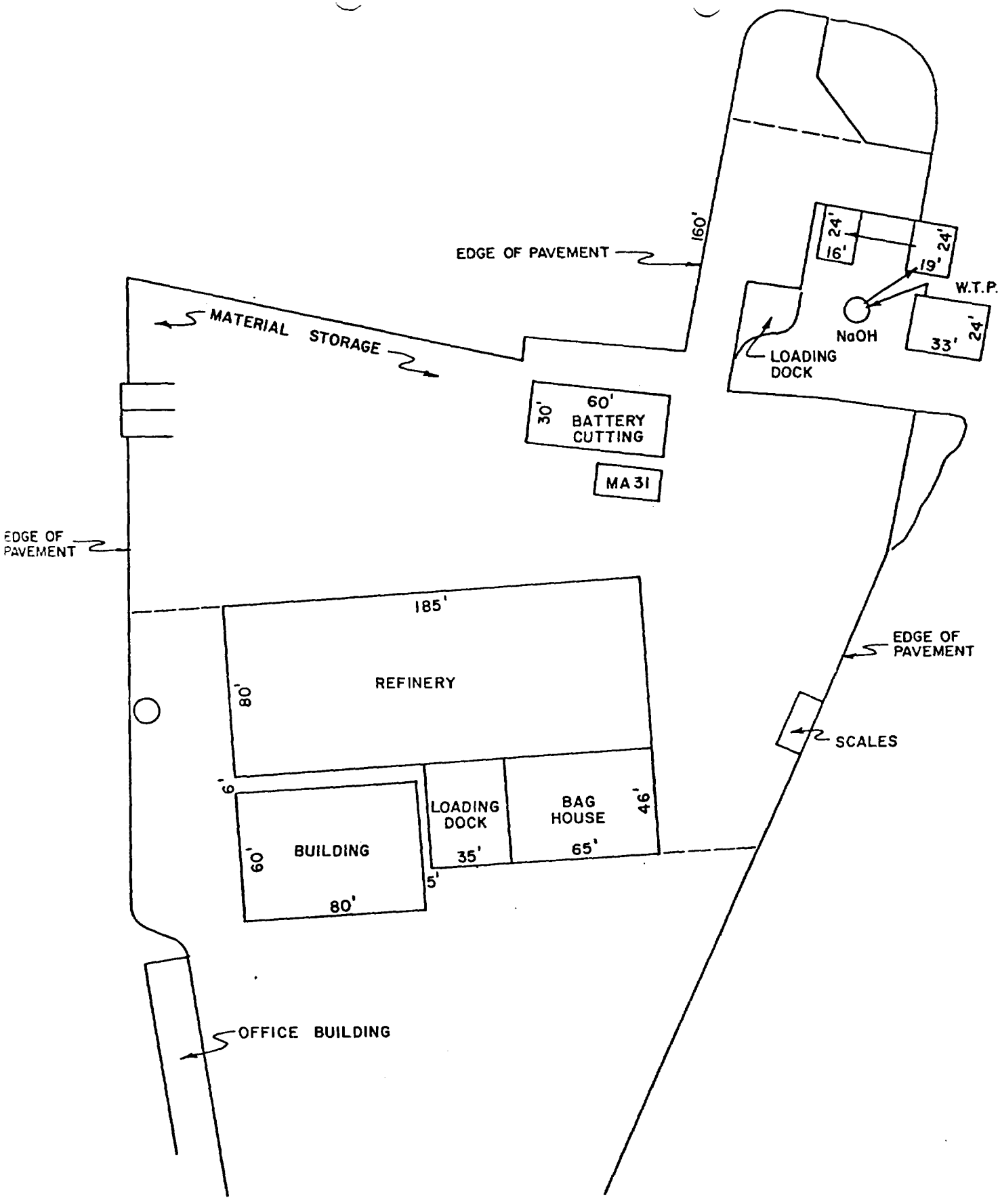


Figure 1. Plant layout at Chloride Metals, Florence, Mississippi

RESOURCE CONSULTANTS

Parameter	Daily Average	Daily Maximum
Antimony	2.0 mg/l	3.0 mg/l
Arsenic	1.0 mg/l	1.5 mg/l
Cadmium	0.3 mg/l	0.6 mg/l
Copper	0.4 mg/l	0.8 mg/l
Lead	0.5 mg/l	1.0 mg/l
Zinc	0.5 mg/l	1.0 mg/l
Suspended Solids	30 mg/l	45 mg/l
pH	6.0 to 9.0	

In addition, a tentative compliance schedule was established:

Date	Milestone
February 1, 1982	Complete Conceptual Engineering Report
March 1, 1982	Bureau Complete Review/Approval
June 1, 1982	Submit Detailed Plans and Specifications
July 1, 1982	Bureau Complete Review/Approval
September 1, 1982	Initiate Construction
September 1, 1983	Complete Construction and Initiate Start-Up

The purpose of this report is to outline the bases for design criteria for an upgraded facility capable of meeting state and federal discharge standards. To this end, wastewater characterization data, existing treatability data, rainfall data, and design parameters are presented. Process/cooling wastewaters and site runoff will be treated.

II. Wastewater Characterization and Existing Treatment Facilities

Wastewater from a secondary lead plant is essentially dilute sulfuric acid (4-10%) with varying concentrations of antimony, arsenic, iron, lead, and zinc. The pH is very low, and the buffering capacity and sulfate concentrations are very high. Since lead is not very soluble in sulfuric acid, it appears largely as insoluble lead oxide with some dissolved lead. The other metals originate from the spent battery acid and the alloy process.

At the existing treatment facilities, wastewater is collected in a settling basin (24' x 33') where the lead oxides settle and are recovered for use in the smelter. The wastewater then flows to a small mixing tank for pH adjustment with NaOH. Settling of the precipitates occurs in a second (19' x 24') and third (16' x 24') settling tank. The supernatant is pumped through a small duplex filter system and discharged to the creek. The sludge is periodically removed from the settling tanks and filter system for reuse in the furnace.

Table 1 shows the analyses of the treated, filtered effluent on two occasions. From a grab sample collected on June 12, 1980, the low pH of 3.3 indicates that caustic addition was inoperative or insufficient at the time. To be effective, the pH control system must consistently increase the pH to 8.5 to 9.5 where lead hydroxide solubility is minimum. (Since lead is amphoteric, it re-dissolves at high pH's.) The low pH of this sample explains why most of the heavy metals were dissolved and not retained by the filter. Of consequence are the concentrations of antimony, cadmium, copper, iron, lead, nickel, and zinc.

A continuous, eight-hour, composite sample of the effluent was collected on January 28, 1981, in conjunction with the consolidated permit application submission. This sample represents a full operating day at Chloride Metals. From the analyses in Table 1, the metals of concern are antimony, arsenic, and lead. The pH was quite high - 12.0 - on this sample, perhaps partially explaining the lead concentration of 1.6 mg/l since the suspended solids concentration was low. From the auxiliary analyses conducted, it is apparent

Table 1. Effluent from pressure filter at wastewater treatment plant. Chloride Metals, Florence, Mississippi.

Parameter	6/12/80 Total	6/12/80 Dissolved	1/28/81 0900-1700
pH (pH units)	3.3		12.0
Suspended Solids	41		24
Nitrogen-Nitrite, Nitrate	1.7		0.018
Nitrogen-Nitrite	0.008		
Antimony	2.6	1.5	10.2
Arsenic	0.03	0.03	5.2
Cadmium	2.3	2.2	0.120
Chromium	0.19	0.19	0.04
Copper	2.52	2.51	0.13
Iron	16.9	14.2	3.14
Lead	8.4	7.9	1.6
Nickel	1.04	0.90	0.37
Zinc	7.8	7.8	0.363
BOD			11
Chloride			480
COD			26
Color (Pt. Cobalt)			20
Cyanide			0.045
Fluoride			0.56
MBAS			0.07
Nitrogen-Ammonia			4.3
Nitrogen-Total Kjeldahl			4.3
Oil & Grease			2 (avg.)
Phenols			0.002

Parameter	1/28/81 0900-1700
Phosphate-Total	2.3
Sulfate	32,000
Sulfide	<0.05
TOC	13
Total Dissolved Solids	40,170
Aluminum	16.9
Barium	0.363
Beryllium	<0.002
Cobalt	<0.05
Magnesium	0.598
Manganese	0.048
Mercury	<0.0002
Molybdenum	<0.2
Selenium	<0.05
Silver	0.03
Sodium	13,000
Thallium	<0.01
Tin	<0.01
Titanium	<0.2

All units are mg/l unless otherwise noted.

RESOURCE CONSULTANTS Inc.

that the high dissolved solids concentration was attributable to sulfates, from sulfuric acid, and sodium, from caustic addition. No other parameters had significant concentrations.

Recent, bi-weekly sampling from April to October, 1981, has resulted in the effluent data presented in Table 2. To summarize the findings of 55 points:

Parameter (mg/l)	Mean	Median	Maximum	Minimum
TSS	43	24	214	1
Cu	0.30	0.03	0.70	0.01
Pb	0.72	0.54	3.36	0.007
Zn	0.10	0.05	0.70	0.01

In general, the plant has operated well when pH adjustment was adequately controlled and when the plant was not hydraulically overloaded.

Table 2. Analyses of bi-weekly samples of the existing treatment plant effluent, April to October, 1981. Chloride Metals, Florence, Mississippi.

Date	TSS	Zinc	Copper	Lead	pH
4/2/81	107	0.04	0.04	0.116	8.5
4/9/81	132	0.06	0.03	0.127	8.6
4/14/81	121	0.08	0.03	0.112	8.5
4/16/81	191	0.06	0.03	0.126	8.3
4/21/81	214	0.03	0.03	0.125	9.2
4/23/81	152	0.05	0.03	0.104	9.0
4/28/81	172	0.07	0.03	0.04	9.0
4/30/81	140	0.06	0.03	0.108	8.6
5/5/81	106	0.05	0.03	0.122	9.0
5/7/81	122	0.04	0.03	0.123	8.7
5/12/81	1	0.05	0.01	0.87	9.1
5/14/81	1	0.05	0.01	0.99	8.5
5/19/81	1	0.05	0.01	1.01	8.5
5/21/81	39	0.14	0.01	3.36	10.4
5/26/81	23	0.08	0.01	1.69	9.5
5/28/81	1	0.05	0.01	0.60	8.8
6/2/81	1	0.06	0.01	0.06	8.9
6/4/81	1	0.08	0.01	0.60	8.8
6/9/81	1	0.05	0.01	0.70	9.8
6/11/81	11	0.05	0.01	0.56	7.3
6/16/81	24	0.05	0.01	0.50	10.2
6/18/81	1	0.07	0.01	1.39	9.3
6/23/81	7	0.06	0.01	0.54	9.6
6/25/81	41	0.04	0.04	0.38	9.2
6/30/81	27	0.05	0.01	0.60	9.7
7/2/81	7	0.04	0.15	0.524	3.7
7/9/81	5	0.01	0.01	0.007	8.0
7/9/81	1	0.01	0.01	0.007	8.1
7/14/81	15	0.05	0.07	0.799	3.4
7/16/81	22	0.09	0.04	1.87	3.9
7/21/81	3	0.01	0.01	0.262	6.9
7/23/81	24	0.04	0.01	0.445	5.4
7/28/81	74	0.02	0.02	1.78	9.4
7/30/81	21	0.02	0.01	0.514	6.4
8/4/81	5	0.04	0.02	1.87	7.1
8/6/81	46	0.01	0.01	0.007	8.2
8/11/81	9	0.01	0.01	0.021	8.3
8/13/81	44	0.01	0.03	1.222	10.3
8/18/81	29	0.01	0.03	1.304	11.3
8/20/81	52	0.01	0.03	1.389	9.1
8/25/81	44	0.01	0.03	1.228	10.5
8/27/81	30	0.01	0.03	0.506	10.9
8/28/81	13	0.06	0.02	0.228	9.7

TABLE 2 (Cont.)

9/1/81	28	0.28	0.60	0.336	8.7
9/3/81	1	0.04	0.02	0.090	8.4
9/8/81	24	0.30	0.17	0.756	8.0
9/10/81	29	0.70	0.47	1.442	7.5
9/15/81	23	0.20	0.67	1.812	8.0
9/17/81	34	0.18	0.56	1.409	8.1
9/22/81	5	0.03	0.03	0.104	8.5
9/25/81	10	0.54	0.42	1.034	7.5
9/29/81	26	0.23	0.70	1.445	8.2
10/1/81	19	0.39	0.31	0.566	7.8
10/6/81	81	0.69	0.069	1.302	8.0
10/8/81	13	0.22	0.17	0.131	7.8

III. Treatability

Since all secondary lead plants produce a similar wastewater, some typical treatability data are presented to illustrate the expected effectiveness of pH adjustment and clarification. For example, Table 3 shows actual treated effluent quality for a midwestern secondary lead plant on days when the pH was maintained within the desired range. With adequate settling time, good suspended solids removal can be realized. As the residual lead concentration varied from 0.1 to 0.48 mg/l,the residual antimony varied between 1.7 and 3.1 mg/l, cadmium between 0.15 and 0.25 mg/l, copper between 0.13 and 0.32 mg/l, and zinc between 0.37 and 0.62 mg/l.

Figures 2 and 3 were taken from an engineering treatability study performed on the wastewater of another secondary lead plant. They demonstrate how lead and arsenic are removed at different pH levels using lime addition and also the effects of whether or not the water to be treated is concentrated or highly diluted. The waters in question at the Chloride plant are more closely represented by the concentrated battery breaking wastewater shown in these graphs. It is important to note that these tests are laboratory, bench-type which will normally be more efficient than actual field conditions. Arsenic was removed to a level of about 0.7 mg/l. The graph showing lead removal explicity demonstrates the amphoteric characteristic of lead precipitation. In designing a wastewater treatment facility for a secondary lead facility, it is imperative that the water be maintained between pH 8.5 and 9.5.

TABLE 3. Characterization of treated wastewater in settling lagoon #1 from a typical secondary lead plant.

Parameter[a]	3/20/80	5/8/80	5/9/80
pH (pH units)	8.5	8.5	8.55
Suspended Solids	18	20	14
Sulfate	5,000	8,600	8,650
Antimony	1.7	2.6	3.1
Cadmium	0.15	0.25	0.20
Copper	0.13	0.32	0.28
Lead	0.10	0.42	0.48
Zinc	0.40	0.62	0.37

[a]All units are mg/l unless otherwise noted.

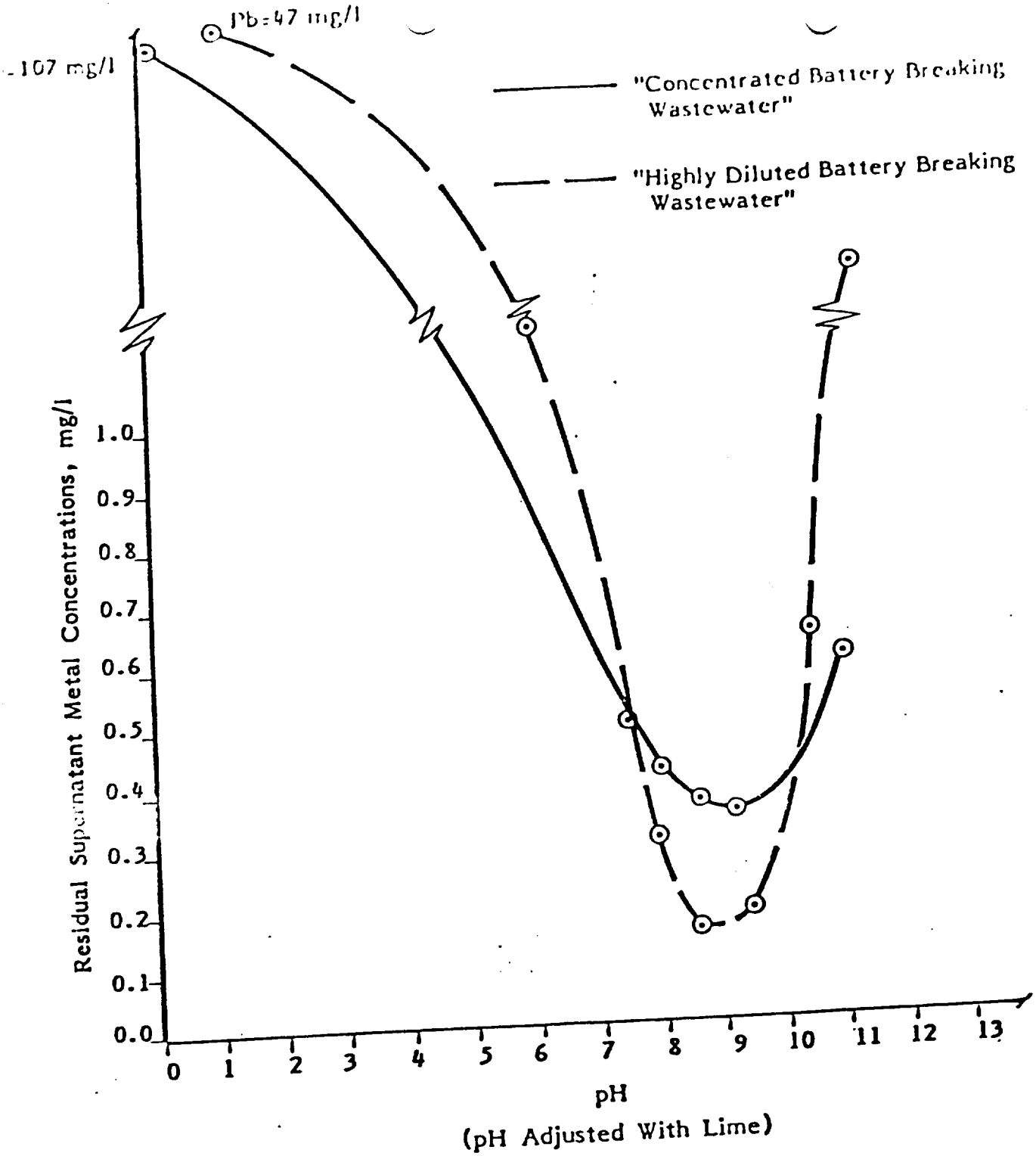


Figure 2. Characteristic lead removal from secondary lead plant wastewater in relation to pH endpoint.

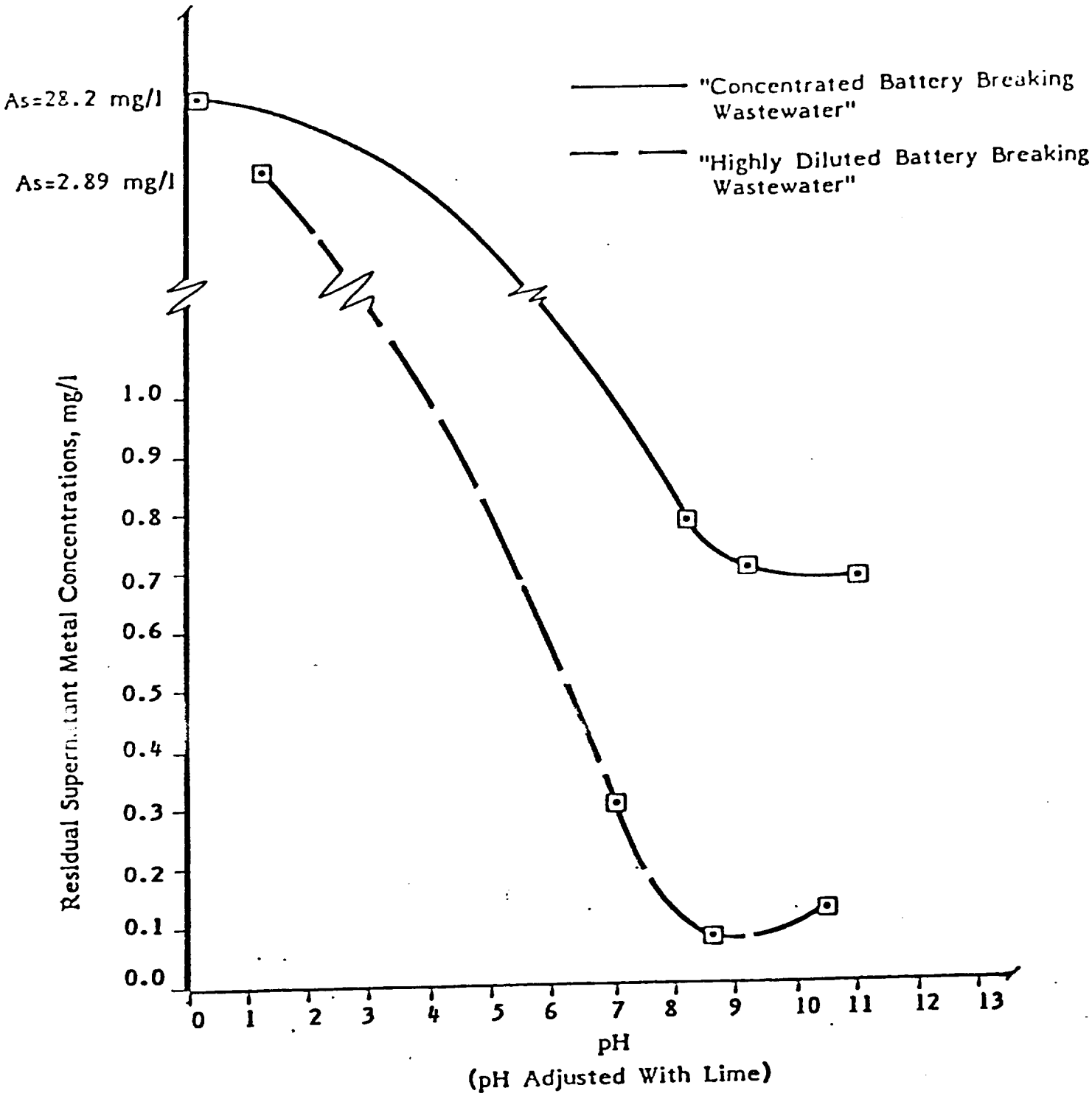


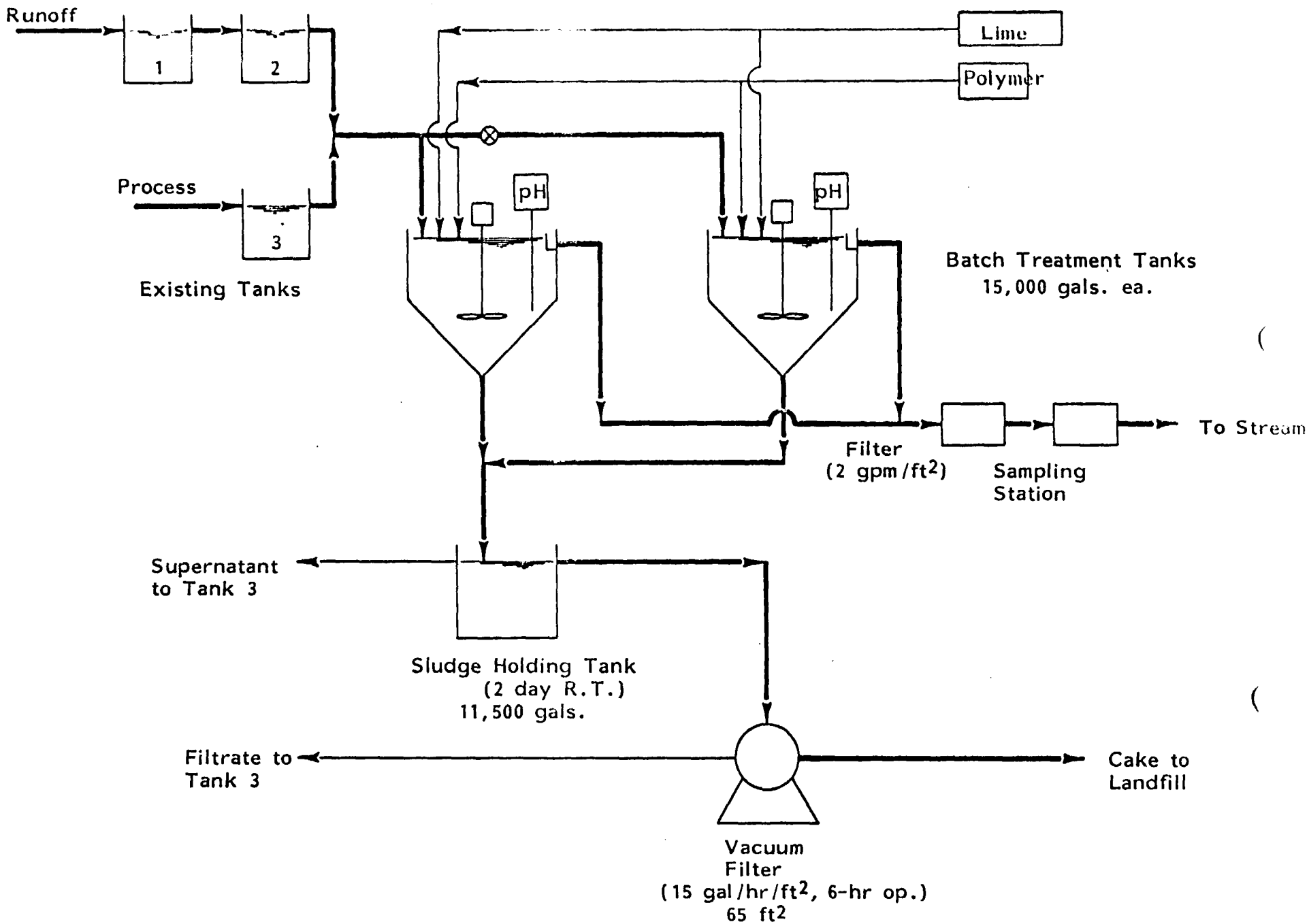
Figure. 3. Characteristic arsenic removal from secondary lead plant wastewater in relation to pH endpoint.

SOURCE CONSULTANTS

IV. Treatment Alternatives

In sizing treatment facilities for Chloride Metals, the flow criteria were based on a process/cooling water flow of 20,000 gpd, a one-inch, 24-hour runoff flow, and a normal eight-hour operating day. Rain falling within the area indicated on Figure 1 by the dashed lines, the edge of pavement, and dimensioned rooftops will be directed by curbing to the existing 33' x 24' and 19' x 24' tanks. This total area is approximately 1.7 acres. The system will be designed to treat the first one inch of runoff in a 24-hour period and to divert any additional runoff prior to its entering the storage tanks. The majority of contaminants will be contained in the initial runoff. The volume of runoff to be collected is 46,500 gallons in 24 hours. One-inch rainfalls rarely occur more often than two days in a row, according to a best estimate by Alvin Hong of the Jackson Weather Service, and on a 10-year average, a one-inch rain or more occurs only 20 days each year. The existing tanks 1 and 2 (33' x 24' and 19 x 24') have a volume of 57,500 gallons. If one-inch rains occur two days in a row, an excess volume of runoff of 35,500 gallons will result by the second day. Therefore, in order to be able to store two days' worth of runoff, the treatment plant must begin treating runoff on the first day of rain.

The flow requirements for a batch treatment system are 20,000 gallons of process/cooling water in a 24-hour period and 35,500 gallons of runoff in a 48-hour period. Therefore, a total of 37,750 gallons must be treated in the first 24 hours of a one-inch rainfall, assuming a second day of one-inch rain could occur. With two 15,000-gallon batch tanks, Chloride Metals must treat an average of 1.3 process/cooling water batches per day and 2.5 batches per one-inch rainfall day. Runoff water will be collected in existing tanks 1 and 2 and daily process/ cooling water in tank 3 (16' x 24'); easily setteable lead oxides will be recovered from these tanks. The physical condition of these tanks will be improved. One of the following two alternatives will be selected for final design and construction.



RESOURCE CONSULTANTS

Figure 4. Alternative A: Batch treatment system with lime addition.
Chloride Metals, Florence, Mississippi

Alternative A: Batch Treatment System with Lime Addition

Figure 4 shows a process schematic drawing of Alternative A. The batch tanks will be filled with either process/cooling wastewaters and/or runoff. From a storage silo, lime will be metered into the batch tank to adjust the pH to 8.5 to 9.5. Subsequently, polymer can be added to coagulate the particles and enhance settling. Following sedimentation, the supernatant will be decanted through a multimedia filter designed for a 2 gpm/ft^2 filtration rate to an effluent flow-monitoring/sampling station and then to the stream. The hydroxide sludge, approximately 15% by volume, from the batch clarifiers will be transferred to a sludge holding tank sized to hold two days' volume of sludge. The supernatant will be returned to the head of the plant. The sludge will be dewatered on a vacuum filter designed for a six-hour-per-day operation. The cake must be properly disposed in a landfill and the filtrate returned to the head of the plant.

The capital costs for Alternative A are detailed in Table 4 to include site modifications and new equipment, except the existing storage tanks, installed by a general contractor. A total construction cost of $540,000 has been estimated. The approximated operational and maintenance costs of $184,000 per year include amortization, chemicals, manpower, maintenance, and power.

Alternative B: Batch Treatment System with NaOH Addition

Figure 5 illustrates Alternative B which has the same flow constraints as Alternative A. The primary difference is the addition of NaOH instead of lime for pH adjustment. The existing NaOH storage tank can be utilized in conjunction with new metering equipment and instrumentation. Since slightly less sludge (about 10% by volume) will be produced by using NaOH, all the sludge handling facilities can be somewhat similar. The sludge thickener can effectively reduce the volume by 50%. Due to the fluffy nature of caustic sludge, a conditioning step prior to vacuum filtration will be necessary.

The overall cost for this system is itemized in Table 5 to total $450,000. The main difference in costs between the two alternatives is attributable to the lime storage/metering equipment. Operational and maintenance costs for Alternative B were estimated to be $212,500 per year. The significant comparison is between the cost of lime and the cost of NaOH. Using lime will save almost $50,000 per year over the use of caustic. Manpower and power costs would be essentially equal for both options.

Table 4. Capital and O & M Costs for Alternative A: Batch treatment system with lime addition. Chloride Metals, Florence, Mississippi.

Construction Cost Based on General Contractor's Installation of New Equipment	$540,000	
		Cost/Year
Capital Costs Amortized Over 10 Years:		
$540,000 x 0.1993 at 15% Interest		$107,600
Chemical Costs:		
Lime ($105/day) (300 days/yr)	$ 31,500	
Polymer (530 lb/yr) ($3/lb)	1,600	
Manpower:		
($6/hr) (4 hr/day) (280 days/yr) (2 overhead) +($6/hr) (8 hr/day) (20 days/yr) (2 overhead)	15,400	
Maintenance: 4% Capital	21,600	
Power (60 HP) (0.746 Kwh/HP-hr) (8 hr/day) (300 days/yr) ($0.06/Kwh)	6,400	
Total Direct Operating Expense		$ 76,500
TOTAL		$184,100

RESOURCE CONSULTANTS

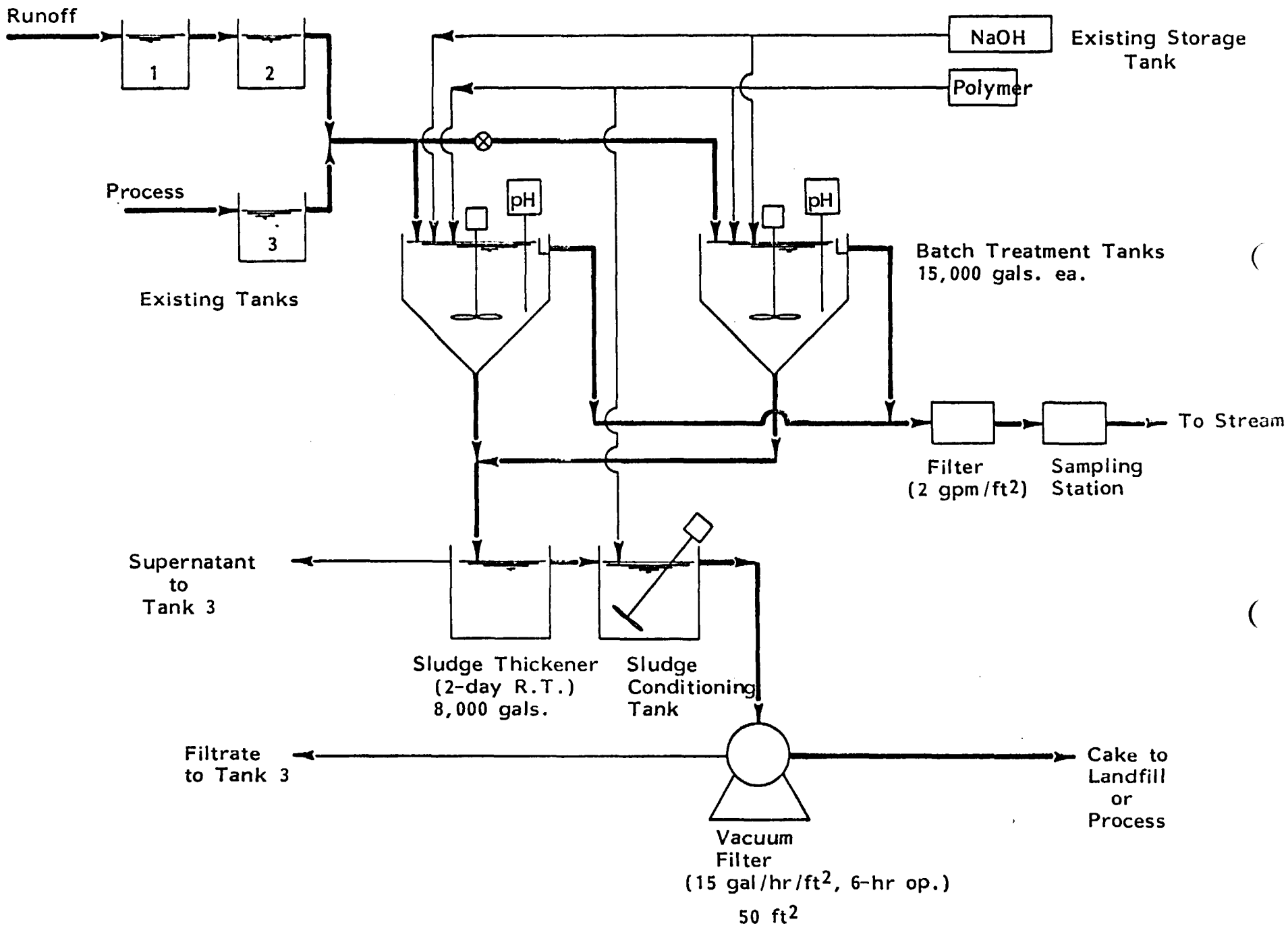


Figure 5. Alternative B: Batch treatment system with NaOH addition.

RESOURCE CONSULTANTS

Table 5. Capital and O & M Costs for Alternative B: Batch treatment system with NaOH addition. Chloride Metals, Florence, Mississippi.

Construction Cost Based on General Contractor's Installation of New Equipment		$450,000
		Cost/Year
Capital Costs Amortized Over 10 Years:		
$450,000 x 0.1993 at 15% Interest		$ 89,700
Chemical Costs:		
NaOH ($270/day) (300 days/yr)	$ 81,000	
Polymer (530 lb/yr) ($3/lb)	1,600	
Manpower:		
($6/hr) (4 hr/day) (280 days/yr) (2 overhead) +($6/hr) (8 hr/day) (20 days/yr) (2 overhead)	15,400	
Maintenance: 4% Capital	18,000	
Power (60 HP) (0.746 Kwh/HP-hr) (8 hr/day) (300 days/yr) ($0.06/Kwh)	6,400	
Total Direct Operating Expense		$122,400
TOTAL		$212,100

RESOURCE CONSULTANTS

RESOURCE CONSULTANTS
environmental engineers and scientists

RECEIVED
DEC 03 1981
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

November 25, 1981

Mr. Jerry W. Cain, P.E.
Industrial Wastewater Control Section
Bureau of Pollution Control
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, MS 39209

RE: Data-Groundwater Study
Chloride Metals, Florence

Dear Mr. Cain:

Pursuant to our recent telephone conversations, the enclosed materials constitute the data from the groundwater study at Chloride Metals in Florence. The analytical reports present the chemical data from the various monitoring points. The plans prepared by Geologic Associates show the well locations, piezometric gradient and concentration contours for various constituents.

As we have previously agreed, we do not propose to collect additional samples until after you have evaluated the data obtained to date. After you and your associates have reviewed the enclosed materials, the parties involved need to agree upon the activities to be undertaken in the next phase of the study.

If you have any questions regarding the enclosed, please advise.

Very truly yours,

RESOURCE CONSULTANTS, INC.

V. Wayne McCoy

V. Wayne McCoy, P.E.
Principal

VWM/jd
enclosures

cc: Mr. Frank Barnett
Mr. David Berry
Mr. Ed Wilson

P. O. Box 498 • [illegible] • Brentwood, Tennessee 37027 • 615-373-5[illegible]

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P.O. BOX 4[illegible] • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 370[illegible] • 615 373 5040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI # 19771 - Mississippi Well - CMM 1
RCI # 19772 - Mississippi Well - CMM 2
RCI # 19773 - Mississippi Well - CMM 3

RCI Sample Number	19771	19772	19773		
Date Collected	9/29/81	9/29/81	9/29/81		
Time Collected	1405	1140	1335		
Date Received	9/30/81	9/30/81	9/30/81		

Acidity (mg/l as $CaCO_3$), dissolved	4,020	4,610	100		
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	160	198	25		
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.15	0.82	<0.03		
Oil and Grease					
pH (pH units)	3.3	3.2	5.8		
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	6,900	6,000	37		
Suspended Solids					
Total Dissolved Solids	10,820	10,580	138		
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	580	590	<0.1		
Arsenic, dissolved	<0.002	<0.002	<0.002		
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.64	1.17	<0.005		
Chromium					
Copper					
Iron, dissolved	89	85	0.50		
Lead, dissolved	0.66	0.82	0.002		
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	320	270	35		
Zinc, dissolved	3.1	3.3	0.16		
Antimony, dissolved	<0.01	0.06	<0.01		
Tin, dissolved	<0.4	<0.4	<0.4		

All units are in mg/l unless otherwise noted.

J. Wayne M[illegible]

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 388 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 6040

ANALYTICAL REPORT

TO: Same

Description: RCI # 19767 - Chloride Observation Well No. 1
RCI # 19769 - Chloride Observation Well No. 2
RCI # 19768 - Chloride OBservation Well No. 3
RCI # 19770 - Chloride Observation Well No. 4
RCI # 19766 - Chloride Observation Well No. 5

RCI Sample Number	19767	19769	19768	19770	19766
Date Collected	9/29/81	9/29/81	9/29/81	9/29/81	9/29/81
Time Collected	1440	1525	1500	1550	1053
Date Received	9/30/81	9/30/81	9/30/81	9/30/81	9/30/81

Acidity (mg/l as $CaCO_3$), dissolved	40	110	120	350	750
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	154	55	486	72	99
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.19	<0.03	0.03	<0.03	<0.03
Oil and Grease					
pH (pH units)	6.2	5.0	4.6	4.1	4.0
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,300	1,030	810	1,600	1,800
Suspended Solids					
Total Dissolved Solids	2,522	1,792	2,186	2,454	2,940
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	0.2	6.2	5.3	36	94
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.03	0.12	<0.005	0.12	0.12
Chromium					
Copper					
Iron, dissolved	0.07	<0.02	4.44	14	43
Lead, dissolved	0.021	0.019	0.045	0.24	0.37
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	400	160	500	175	160
Zinc, dissolved	0.15	0.38	0.04	0.58	0.61
Antimony, dissolved	<0.01	<0.01	<0.01	<0.01	<0.01
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	<0.4

All units are in mg/l unless otherwise noted.

D. Wayne McCoy
Oct. 15 1981

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 988 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 5040

ANALYTICAL REPORT

RCI # 2646

Florence, MS

TO: Same

Description: RCI # 19765 - Chloride Observation Well No. 6
RCI # 19764 - Chloride Observation Well No. 7
RCI # 19763 - Chloride Observation Well No. 8
RCI # 19774 - Spring near Chloride Well No. 3

RCI Sample Number	19765	19764	19763	19774	
Date Collected	9/29/81	9/29/81	9/29/81	9/29/81	
Time Collected	1030	0945	0855	1115	
Date Received	9/30/81	9/30/81	9/30/81	9/30/81	

Acidity (mg/l as $CaCO_3$), dissolved	1,110	3,700	9	1,870	
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	263	365	28	660	
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.08	3.0	0.12	1.02	
Oil and Grease					
pH (pH units)	3.8	3.5	7.0	2.8	
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,900	5,400	48	2,100	
Suspended Solids					
Total Dissolved Solids	3,060	8,760	248	4,286	
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	144	540	<0.1	200	
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.31	1.18	<0.005	0.49	
Chromium					
Copper					
Iron, dissolved	88	86	<0.02	14	
Lead, dissolved	0.46	0.80	0.002	0.74	
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	230	270	74	540	
Zinc, dissolved	1.19	3.18	0.10	1.08	
Antimony, dissolved	<0.01	<0.01	<0.01	<0.01	
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	

All units are in mg/l unless otherwise noted.

D. Wayne McCoy

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 6040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 20019 - Chloride Observation Well No. 1
" " 20020 - " " " " 2
" " 20021 - " " " " 3
" " 20022 - " " " " 4
" " 20023 - " " " " 5

RCI Sample Number	20019	20020	20021	20022	20023
Date Collected	10/21/81	10/21/81	10/21/81	10/21/81	10/21/81
Time Collected	1510	1300	1340	1235	1005
Date Received	10/22/81	10/22/81	10/22/81	10/22/81	10/22/81

Acidity (mg/l as $CaCO_3$), dissolved	43	280	120	540	950
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	210	84	530	120	130
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.11	0.09	0.17	0.86	0.03
Oil and Grease					
pH (pH units)	5.6	4.4	4.4	3.9	3.9
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,700	2,200	990	2,100	1,800
Suspended Solids					
Total Dissolved Solids	2,820	3,480	2,330	3,620	3,650
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	< 0.1	33	7.6	64	138
Arsenic, dissolved	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.03	0.23	0.008	0.20	0.14
Chromium					
Copper					
Iron, dissolved	0.04	0.31	4.4	23	43
Lead, dissolved	0.035	0.052	0.046	0.50	0.21
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	370	150	500	220	230
Zinc, dissolved	0.19	0.81	0.04	0.88	0.69
Antimony, dissolved	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tin, dissolved	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Conductivity, umhos/cm @ 25°C	3,330	3,620	3,500	3,870	3,840

All units are in mg/l unless otherwise noted.

W. Wayne McCon

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 5040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 20024 - Chloride Observation Well No. 6
" " 20025 - " " " " 7
" " 20026 - " " " " 8
" " 20027 - Spring near Chloride Well No. 3

RCI Sample Number	20024	20025	20026	20027
Date Collected	10/21/81	10/21/81	10/21/81	10/21/81
Time Collected	1035	1140	1555	1400
Date Received	10/22/81	10/22/81	10/22/81	10/22/81

Acidity (mg/l as $CaCO_3$), dissolved	1,300	2,800	30	2,800
Alkalinity (mg/l as $CaCO_3$)				
BOD, 5-day, 20°C				
Chlorides, dissolved	200	370	17	970
COD				
Cyanide				
Fluorides				
MBAS				
Nitrogen - Ammonia				
Nitrogen - Total Kjeldahl				
Nitrogen - Nitrite, Nitrate, diss.	0.13	4.6	0.05	0.98
Oil and Grease				
pH (pH units)	3.6	3.5	6.5	3.3
Phenols				
Phosphate - Ortho				
Phosphate - Total				
Sulfates, dissolved	2,200	3,800	30	4,300
Suspended Solids				
Total Dissolved Solids	3,660	6,780	122	8,230
Total Solids				
Turbidity (NTU)				
Aluminum, dissolved	171	473	0.1	463
Arsenic, dissolved	< 0.002	< 0.002	0.011	< 0.002
Barium				
Beryllium				
Calcium				
Cadmium, dissolved	0.37	1.03	< 0.005	0.74
Chromium				
Copper				
Iron, dissolved	90	38	0.03	38
Lead, dissolved	0.54	0.20	< 0.001	1.13
Magnesium				
Manganese				
Mercury				
Nickel				
Potassium				
Selenium				
Silver				
Sodium, dissolved	230	240	24	740
Zinc, dissolved	1.32	2.29	0.03	1.87
Antimony, dissolved	< 0.01	< 0.01	< 0.01	< 0.01
Tin, dissolved	< 0.4	< 0.4	< 0.4	< 0.4
Conductivity, umhos/cm @ 25°C	4,300	5,500	200	9,000

All units are in mg/l unless otherwise noted.

N. Wayne McCoy

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

March 10, 1981

Mr. Jack McMillan
State Board of Health
P. O. Box 1700
Jackson, Mississippi 39205

Dear Mr. McMillan:

Re: Chloride Metals, Inc.
Rankin County

Please review the enclosed document entitled "Groundwater Contamination Study Plan, Florence Smeltor" for adequacy and applicability. Please submit written comments by March 20, 1981 to this Bureau.

We would appreciate your prompt cooperation in this matter. If you have any questions, please contact me at 961-5122.

Respectfully,

Jerry W. Cain
Industrial Wastewater Control Section

JWC:els
Attachments

Sincerely,

David E. Lee, P.E.
Environmental Engineer
Solid Waste Management Branch

DEL/cs

cc: Mr. Bobby Redding

RESOURCE CONSULTANTS
environmental engineers and scientists

February 19, 1981

Mr. Frank L. Barnett, Production Manager
Chloride Metals
3507 South Fiftieth Street
P. O. Box 488
Tampa, FL 33601

RE: Groundwater Contamination Study Plan
Florence Smelter
Florence, Mississippi

Dear Mr. Barnett:

Pursuant to the agreements made on January 29, 1981, with the Bureau of Pollution Control, Mississippi Commission on Natural Resources, and the amended order subsequently issued by the Commission, this letter and attachments constitute our proposed study plan for evaluating the impact of the existing landfill site at the Florence Smelter upon the groundwater regime under and in the vicinity of the Florence Smelter. The investigation as proposed is directed toward determining if leachate is emanating from the existing landfill site, the vertical and horizontal extent of any groundwater contamination, and the direction in which any leachate might be migrating.

Shallow wells under 30'

It is currently anticipated that any leachate emanating from the landfill site impacts primarily the near surface aquifer which is contained within unconsolidated terrace stream deposits. It appears that this aquifer is "perched" upon the underlying Catahoula Formation; thus, we propose to drill eight exploratory borings into this near surface aquifer and install groundwater monitoring devices in each of the borings. These eight wells will typically be less than 30 feet deep and will be designed to facilitate the recovery of groundwater samples in addition to allowing monitoring of the groundwater levels. A schematic of the proposed well design is attached as Figure 1. The wells will be located around the perimeter of the landfill site; Figure 2 shows the approximate locations of these eight wells. The locations have been determined in coordination with the wells previously drilled by the Mississippi Department of Natural Resources.

4 additional wells to delineate plume

After defining the groundwater gradients and evaluating analytically the groundwater characteristics, four additional shallow wells will be located down gradient from the landfill site enabling us to further delineate the areal extent of any contaminated leachate plume. These four additional wells will be designed similarly to those previously described. A hypothetical leachate plume and possible locations of these wells are depicted on Figure 3.

Although we believe that the Catahoula Formation forms an effective vertical barrier to the downward migration of leachate issuing from the landfill, we additionally propose to install four wells to a depth of approximately 120 feet in order to determine if there has been contamination of this underlying aquifer.

RESOURCE CONSULTANTS
environmental engineers and scientists

As part of the drilling program, soil samples, including drive samples and Shelby tube samples, will be collected and subjected to laboratory testing. Laboratory analyses will include Atterberg limit determinations, grain size analyses, and permeability testing.

This project has been discussed with representatives of the Mississippi Bureau of Geology and we propose to have geophysical logging of the borings performed by the Bureau of Geology. Additionally, the study will utilize available published geologic and geophysical data that has been developed by the State of Mississippi.

During the course of the study groundwater samples from each well will be collected and analyzed at least three times. Appendix A lists the parameters for which the groundwater samples will be analyzed.

We currently project that the drilling and well installation phase of this proposed study can be completed within eight weeks following approval of the study plan. The groundwater table monitoring, groundwater sample collection and analyses, and data evaluation will require a period of approximately eight weeks subsequent to completion of the drilling and well installation phase. Our summary report which will include data development and presentation, and our conclusions and recommendations will be completed within approximately six weeks after completion of the groundwater monitoring phase. Thus, from initiation of the project to completion of the final report will require a period of approximately six months.

We are available at your convenience to further discuss and review the proposed study plan as outlined in this letter. Of course, upon your authorization, we are prepared to further review this matter with the Mississippi Bureau of Pollution Control. It is my considered opinion that the study plan as detailed in this letter accurately addresses the requirements of the amended order issued by the Mississippi Commission on Natural Resources. Further, I am confident that the study itself will assess the impact of the existing landfill site upon the groundwater regime under and in the vicinity of the existing landfill site and will allow the development of methods for correcting problems that might be identified and quantified. If you have any questions or comments regarding the study plan as herein detailed, please advise.

Very truly yours,

RESOURCE CONSULTANTS, INC.

V. Wayne McCoy

V. Wayne McCoy, P.E.
Senior Associate

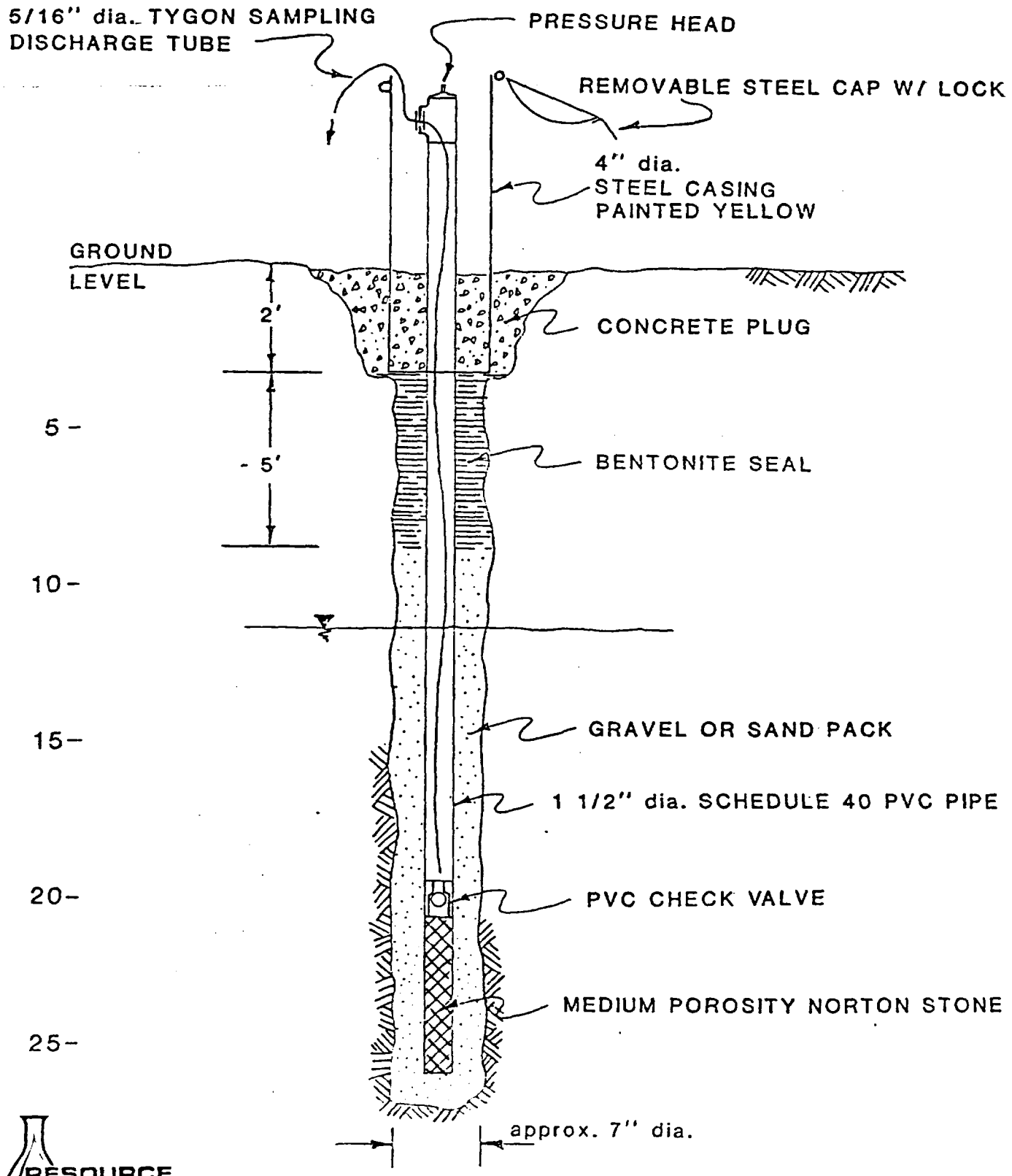
VWM/jd

Enclosures

P.O. Box 498 • Two Maryland Farms • Suite 340 • Brentwood, Tennessee 37027 • 615-373-5040
a tennessee corporation

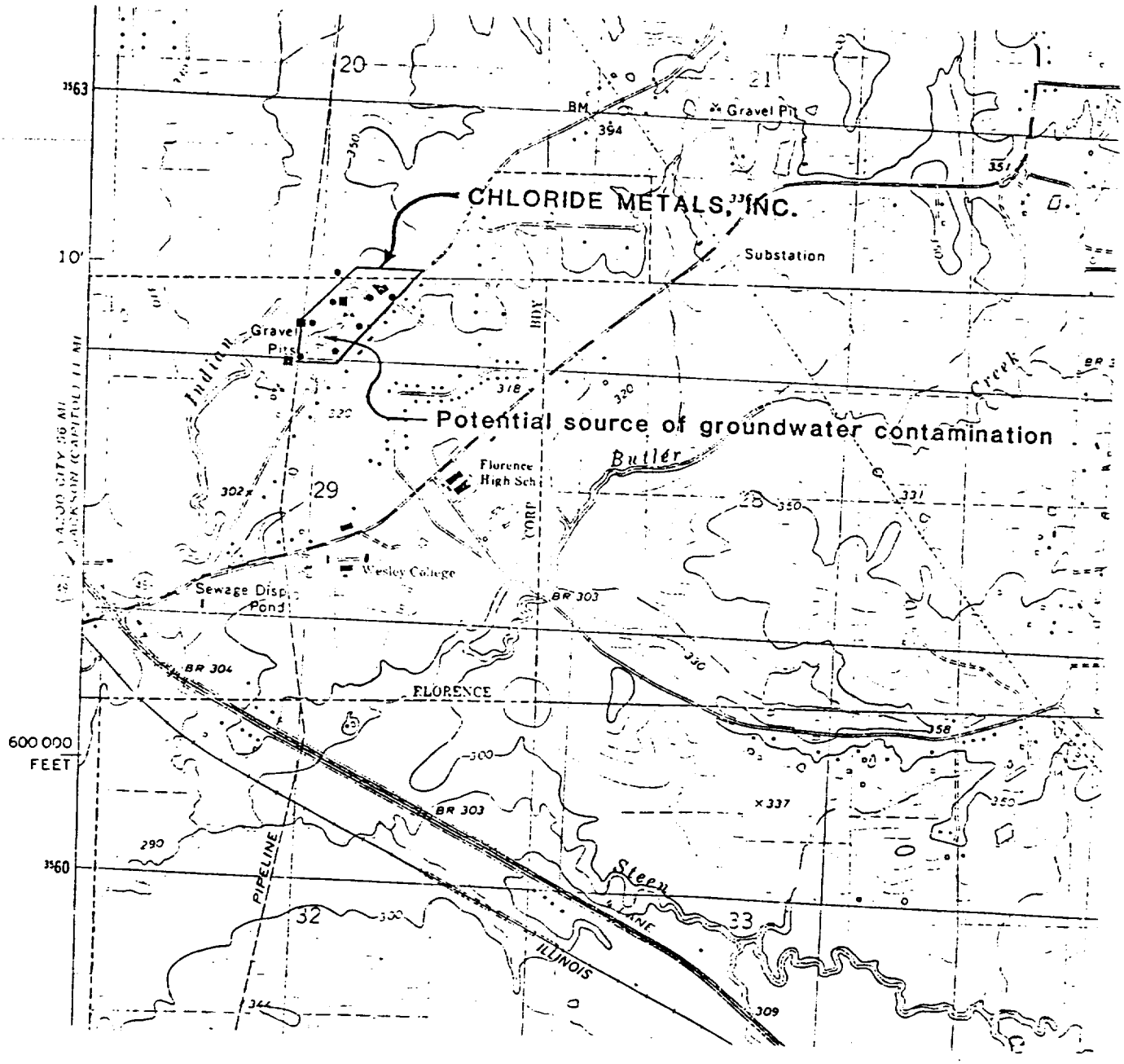
Fig. 1

Typical Groundwater Monitoring Sampling Well



RESOURCE CONSULTANTS INC

Fig. 2



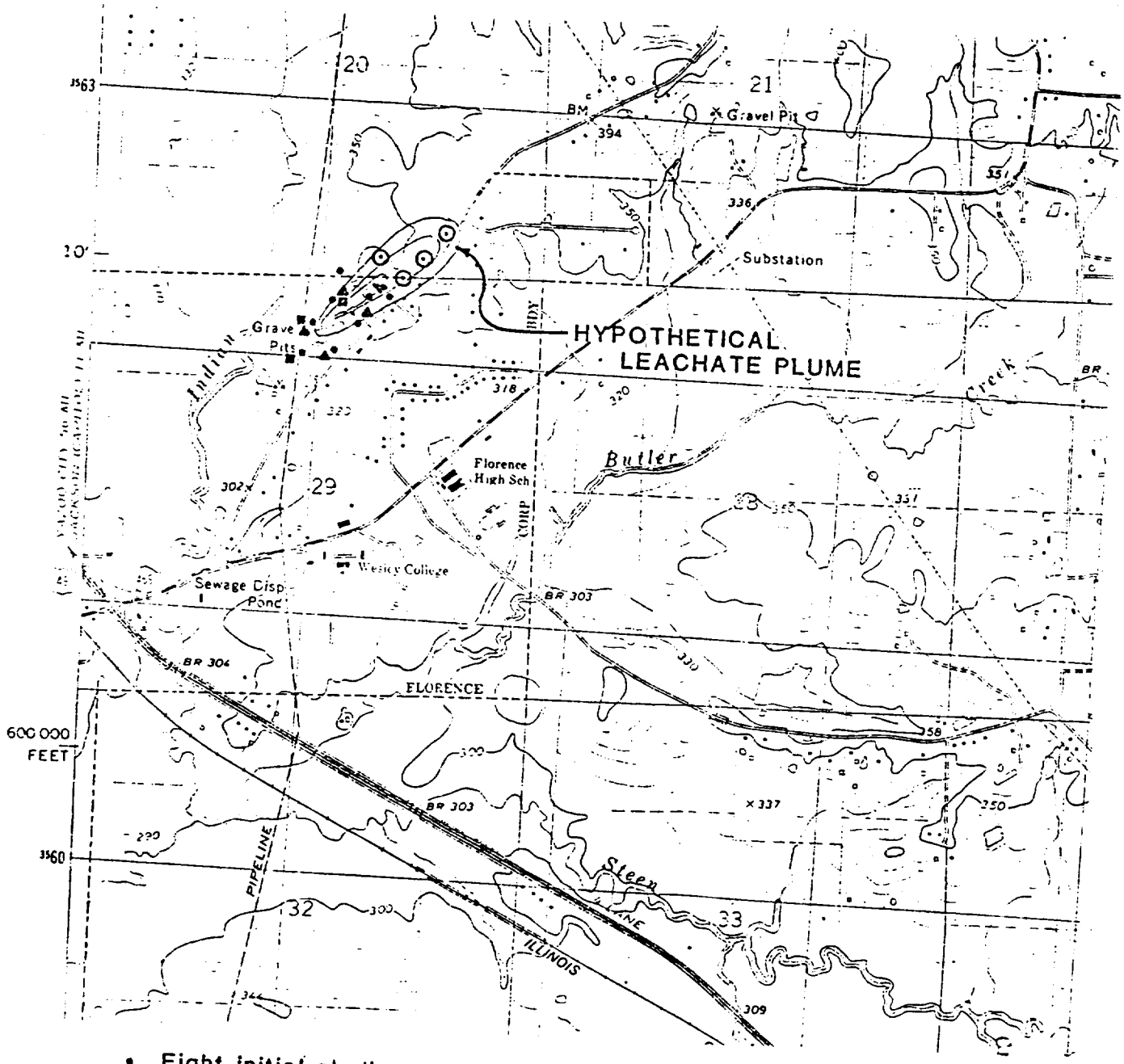
- Eight initial shallow groundwater monitoring wells
- Wells installed by Mississippi Dept. of Natural Resources

NOTE: All well locations approximate

SCALE: 1" equals 2000'

RESOURCE CONSULTANTS, INC.

Fig. 3



- Eight initial shallow groundwater monitoring wells
- ⊙ Four subsequent groundwater monitoring wells ← APPEARS TO BE LOCATED UP DIP
- ▲ Deep aquifer groundwater monitoring wells
- ■ Wells installed by Mississippi Dept. of Natural Resources

NOTE: All well locations approximate

SCALE: 1" equals 2000'

RESOURCE CONSULTANTS, INC.

APPENDIX A

GROUNDWATER SAMPLE ANALYTICAL PROGRAM

CHLORIDE METALS
Florence, Mississippi

pH

Total Dissolved Solids

Dissolved Sulfate

Dissolved Chloride

Dissolved NO_3 and NO_2

Dissolved Sodium

Dissolved Aluminum

Dissolved Antimony

Dissolved Arsenic

Dissolved Cadmium

Dissolved Iron

Dissolved Lead

Dissolved Tin

Dissolved Zinc

RESOURCE CONSULTANTS

CHLORIDE METALS

NPDES PERMIT NUMBER MS0033804

EVALUATION AND RECOMMENDATIONS

Jerry W. Cain
July 16, 1980

CHLORIDE METALS

NPDES PERMIT NUMBER MS0033804

EVALUATION AND RECOMMENDATIONS

Jerry W. Cain

ABSTRACT

An extensive series of site and laboratory investigations were performed to evaluate Chloride Metals' potential to detrimentally impact Indian Creek. Additionally, Chloride Metals' compliance with their NPDES permit was determined. Chloride Metals was found to have at least three potentially hazardous discharges including their Discharge Serial No. 001 (process water), plant runoff, and holding pond.

Bioassays were performed on Discharge Serial No. 001. The 96 hr. LC_{50} for Bluegills was found to be 23%. The 24 hr. LC_{50} for Daphnia was found to be less than 10%. Concentrations in excess of acceptable limits were found to exist in Discharge Serial No. 001 for the parameters of zinc, lead, antimony, nitrite, arsenic and pH. The holding pond was found to have lead concentrations in excess of 5.0 mg/l. Plant runoff was found to have lead concentrations in excess of 130 mg/l.

The facility was found to be out of compliance with its NPDES permit. Additionally, a number of parameters which were found to be present in significant quantities were not found in their permit. Therefore, it was recommended that Chloride's permit be modified to reflect actual conditions at the facility. Also, the recommendation was made that major modifications be made in the operation and maintenance of both the wastewater treatment facility and the plant as a whole.

CONTENTS

SECTION		
	ABSTRACT	ii
	CONTENTS	iii
I.	CONCLUSIONS	iv
II.	RECOMMENDATIONS	v
III.	ATTACHMENT 1 - PERMIT ANALYSIS	1
IV.	ATTACHMENT 2 - ANALYSIS OF ENFORCEMENT DATA - 1980	5
V.	ATTACHMENT 3 - ACTION MEMORANDUM	7
VI.	ATTACHMENT 4 - RAW DATA COMPILATION	8
VII.	ATTACHMENT 5 - GRAPHICAL REPRESENTATION OF DISCHARGE MONITORING DATA - 1979	13
VIII.	ATTACHMENT 6 - FILE HISTORY	17

CONCLUSIONS

1. Discharge 001 as it is presently composed is a highly toxic discharge.

2. The discharge from Holding Pond presents a high potential for significant pollution of waters of the State of Mississippi.

3. The stormwater runoff from the facility is highly contaminated with Lead and presents the potential for significant pollution of waters of the State.

4. The wastewater treatment facility as it is presently instituted and operated has not met Water Quality Criteria or its effluent limitations.

5. The battery carcass storage area presents a potential for pollution of waters of the State.

6. The existing permit does not reflect conditions at the plant and should be modified.

RECOMMENDATIONS

1. The permit for Chloride Metals should be modified to reflect the following limitations for a total facility discharge.

Parameter	Kg/Day Ave.	Lbs/Day Max.	Other Units Ave.	Other Units Max.	Sample Type	Freq.
Total Antimony	*	*	0.5 mg/l	1.0 mg/l	1/7	8-Hr. Comp.
TSS	*	*	30 mg/l	60 mg/l	1/7	8-Hr. Comp.
Total Zinc	*	*	0.5 mg/l	1.0 mg/l	1/7	8-Hr. Comp.
Total Lead	*	*	0.5 mg/l	1.0 mg/l	1/7	8-Hr. Comp.
Total Copper	*	*	0.5 mg/l	1.0 mg/l	1/7	8-Hr. Comp.
Nitrite as N	*	*	2.5 mg/l	5.0 mg/l	1/7	8-Hr. Comp.
Nitrate as N	*	*	45.0 mg/l	90.0 mg/l	1/7	8-Hr. Comp.
Total Arsenic	*	*	0.057 mg/l	0.130 mg/l	1/7	8-Hr. Comp.
Total Cadmium	*	*	0.3 mg/l	0.6 mg/l	1/7	8-Hr. Comp.
pH	Range of 6.0 to 8.5					

2. All materials and products stored at the facility including, but not limited to battery cans, hard lead, soft lead, antimony and smelter waste should be stored in enclosed covered structures.

3. The wastewater in the Holding Pond should be chemically treated for lead removal under Bureau supervision and discharged. Once this is performed, the remaining hazardous sludge should be disposed of in a manner acceptable to the State Board of Health and this Bureau. Additionally, the remaining buried and abandoned battery carcasses should be removed from the Pond area and properly disposed of.

4. The industry should submit to the Bureau a plan for the proper disposal of further battery carcasses.

5. Major engineering studies should be instituted for the development, design and construction of a wastewater treatment facility to achieve the limitations set forth in No. 1 above.

*Mass units will be based on the specific concentration times 8.34 times a flow which is to be determined.

ATTACHMENT 1

CHLORIDE METALS PERMIT ANALYSIS

I. Permit Limits:

Parameter	Kg/Day Daily Avg.	(lbs/Day) Daily Max.	Other Units Daily Avg.	Other Units Daily Max	Frequency
Flow	-	-	-	-	Daily
TSS	0.79 (1.75)	1.58 (3.50)	30 mg/l	60 mg/l	1/7
T, ZN	0.014 (0.03)	0.028 (0.06)	0.5 mg/l	1.0 mg/l	1/7
T, Pb	0.014 (0.03)	0.028 (0.06)	0.5 mg/l	1.0 mg/l	1/7
T, CU	0.014 (0.03)	0.028 (0.06)	0.5 mg/l	1.0 mg/l	1/7
pH	Range of 6.0 to 9.0 S. U.				Daily

II. Discussion:

A. Limited Parameters - Compliance

Discharge limitations placed on Serial No. 001 for total zinc and total copper are attainable with present 'Degree of Treatment' as is exhibited by industry's DMR's for the months of June, July, August and September of 1979.

Review of DMR's and MBPC compliance data indicate that Chloride did not consistently achieve compliance with present limitations on total suspended solids and total lead during the calendar year of 1979. However, both parameters should be attainable with their present technology if properly operated and maintained as is exhibited by the July and August DMR's which followed staff action.

It should be noted at this time that the foregoing "compliance" statements deal with concentrations only. No realistic analysis can be made for mass limitation since the industry does not have a flow measuring device. The flow in the past has been, in this writer's opinion, grossly underestimated.

B. Limited Parameters - Validity 1/

1/ Note: Reference material from the EPA publication 'Quality Criteria for Water'

The major parameter of concern at this facility is total lead. The total lead limit is the most consistently violated. Additionally, the degree of violation is the greatest with total lead.

Most trained observers know the general dangers associated with lead, but for the purpose of review, the following data is provided:

1. Short Term Effects:

The acute toxicity (24, 48, 96hr TL_{50}) of lead compounds is generally relatively high for medium to highly hard waters. However, the acute toxicity greatly increases as hardness decreases. As is shown by Table 1 (attached) for Bluegills. Mississippi generally has soft waters. Obviously if the permittee discharges at the present limitations, there is little danger of a fish kill and the limit of 0.5 mg/l may seem excessive. However, the EPA recommends one hundredth of the 96-hour LC_{50} value, using the receiving or comparable water as the diluent and soluble lead measurements for sensitive fresh water resident species. Assuming 0.0 mg/l dissolved lead in the receiving waters which is very conservative and soft water, the effluent limit would be .01 times 23.8 mg/l or .238 mg/l or approximately one half of the actual existing limitation.

2. Long Term Effects:

Of much greater concern is the long term effects of relatively low residual concentrations of lead. As we know, lead is bioaccumlative. Concentrations of lead of .03 mg/l with a three week exposure period has been shown to result in significant reproductive impairment in Daphnia magna with a hardness of 45 mg/l $CaCo_3$. Additionally, Davies and Everhart (1973) showed that the 96-hour LC_{50} for Rainbow Trout, Salmo Gairdneri, in hard water (alkalinity 243 mg/l) for total lead was 471 mg/l and the highest mean continuous flow concentration that did not have an adverse effect on survival, growth, and reproduction was 0.12 and 0.36 mg/l. In summary, lead in very low concentrations has been demonstrated to have significant detrimental effects on the aquatic environment.

C. Unlimited Discharges -

1. Rainfall Runoff:

The Bureau has collected and analyzed runoff from the facilities plant grounds. The total lead concentrations ranged from 132 mg/l to 142 mg/l. Obviously, with the foregoing discussion in mind, these concentrations are totally unacceptable. It is the opinion of this writer that the Bureau should attempt to have facility reduce the levels of lead in their runoff by one of the later to be discussed alternatives.

2. Holding Pond:

Bureau investigations have revealed the following information on this discharge.

(1) On at least three separate occasions a significant discharge of wastewater has been observed.

(2) The permit does not allow for this discharge.

(3) Total lead concentrations are in excess of 4.0 mg/l.

(4) Virtually no biological activity exists in the pond itself.

(5) The pond exists on an abandoned "borrow" pit.

(6) A significant portion of the "borrow" pit has been used for the disposal of old battery carcasses.

Based on the foregoing, the following conclusions may be drawn:

(1) The pond's discharge is in fact contaminated wastewater ergo a violation of NPDES regulations.

(2) Some substance in the pond is inhibiting and/or exerting a toxic effect on the natural aquatic biota.

TABLE 1

Acute Toxicity (24, 48, 96hr TL_{50}) Values

Species	Size	Compound	Exposure Time (hr)	Concentration mg/l	pH	Alk.	Hardness
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	24	25.9 Pb	7.5	18	20
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	48	24.5 Pb	7.5	18	20
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	96	23.8 Pb	7.5	18	20
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	24	482 Pb	8.2	300	360
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	48	468 Pb	8.2	300	360
Bluegills	1-2g/fish 1.5-2.5 in./fish	$PbCl_2$	96	442 Pb	8.2	300	360

ANALYSIS OF ENFORCEMENT DATA COLLECTED AT CHLORIDE METALS DURING 1980

I. Discharge 001:

Table 1

Parameter	Permit Limitations BPC** Ave.	BPC** Max.	Permit** Ave.	Permit** Max.	Deviation** Ave.	Deviation** Max.
Pb,T	2.7	5.2	.5	1.0	2.2	4.2
Cu,T	.36	0.70	.5	1.0	/	/
Zn,T	.56	.98	.5	1.0	.06	/
*TSS	47.5	63	30	60	17.5	3.0
pH	N/A	11.6	N/A	9.0	N/A	2.6

*Based on two samples. All other based on four samples collected between March 13, 1980, to April 17, 1980. A grab sample collected March 13, 1980, not included.

**Units - mg/l

Table 2 Non-Permit Parameters (April 17, 1980)

Parameter	sb,T	$SO_4^=$	Cl^-	NO_2^-	$NO_3^=$
Concentration mg/l	62	21,033	1211	4000	51.2

A. Permit Limitations

Average values based on four composite samples. Due to the lack of a flow monitoring device mass unit analysis could not be performed.

As is obvious by the data in Table 1, the enforcement sampling indicates that Chloride Metals is not in compliance with their permit limitations on Total Lead, Total Zinc, Total Suspended Solids and pH. This follows a verbal statement made to Chloride on March 13, 1980, that enforcement sampling would be commenced and that the results of the sampling would determine what action would be taken by the Bureau against Chloride. Additionally, a copy of the March 11, 1980, memorandum (Attachment 3) was given to Mr. North, Plant Manager.

B. Non-Permitted Parameters

1. Nitrate-Nitrite

The nitrate and nitrite concentrations of the April 17, 1980, sample of Outfall Serial Number 001 were 51.2 and 4000 mg/l, respectively. It is a well documented fact of the toxicity of Nitrite bearing wastewaters. Nitrites in very low concentrations exhibit acute toxicity on warm water fishes. The EPA in 'Quality Criteria for Water' recommended a Nitrite Nitrogen concentration at or below 5 mg/l for protection of fresh water fish. The EPA in 'Quality Criteria for Water' recommends Nitrate Nitrogen concentrations at or below 90 mg/l for protection of warm water fish. A comparison of the data with the EPA recommendations indicate that there is a problem with nitrites at the facility.

2. Antimony

From Table 2 one finds that the total Antimony concentration of Discharge Serial Number 002 was 62 mg/l. Both the Merck Index, Ninth Edition, and The Dangerous Properties of Industrial Materials handbook list Antimony as highly toxic. The consolidated permit regulations require that the maximum total Antimony limit be 1.0 mg/l.

Notification-Level, not permit limits

3. Arsenic

The permittee's recent file application lists Arsenic in the .30 mg/l range. The toxicity of this parameter is well known. Therefore, no discussion will be offered here. The EPA recommends 57 and 130 micro grams per liter on average and maximums, respectively, for protection of fresh water aquatic life.

II. Holding Pond

Table 3 - Summary of Data on Holding Pond

Parameter	Pb,T	Zn,T	pH	sb,T
Concentration (mg/l avg.)	5.02	0.38	4.2-5.0	0.53

Table 3 summarizes the parameters found in significant quantities. The parameters of major concern are Lead and pH. Obviously, from discussions found elsewhere in this document, the Lead concentration is much too high and must be reduced prior to discharge.

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 354-2550

MEMORANDUM

To: File, Bill Barnett

From: Jerry W. Cain

Subject: Chloride Metals - Florence, Rankin County
NPDES Permit No. MS0033804

Date: March 11, 1980

I met with Mr. North, plant manager, and Steve Myers on this date and discussed this industry's noncompliance. Mr. North committed verbally to the following:

1. Install totalizer type flow meter.
2. Begin analyzing waste treatment system for O & M problems.
3. Correct reporting procedure on DMR's.
4. Has begun sampling on more frequent basis.
5. To install pH probe on final effluent.
6. To correct sampling procedures.

Action procedure by BPC:

1. Began enforcement sampling routine on both wastewater discharge and pond on back of property. Samples requested by phone to CRO for 2nd and 4th week in March and 2nd and 4th week in April.
2. May allow 60 days "grace" to optimize waste treatment system based on written evidence of forward and timely progress by industry and samples.
3. Pond action dependant on samples, preliminary opinion is immediate action necessary.
4. If industry fails to comply with foregoing, enforcement action is indicated based on 1979 DMR's alone.
5. State Board of Health notified this date of possible hazard from pond and landfill.

JWC:ls

ATTACHMENT 4

RAW DATA COMPILATION

CHLORIDE METALS

DATA COMPILATION - CHLORIDE METALS
DISCHARGE 001
COMPLIANCE MONITORING

mg/l

Date	Pb,T	Cu,T	Zn,T	TSS	pH	Cr,T	Cr,VI	Cn,T	Cn,Ox.	Alk.	Sb,T	Sn,T	$SO_4^{=}$	Cl^-	NO_2^-	$NO_3^=$	Acidity
*3/27/80	3.3	.7	.98	63	7.0	/	/	/	/	/	/	/	/	/	/	/	/
**3/13/80	6.2	1.0	.54	/	5.6	.05	< .01	/	/	/	/	/	/	/	/	/	/
*3/14/80	5.2	.6	.98	/	11.5	.05	.01	/	/	/	/	/	/	/	/	/	/
4/2/80	.75	.01	.16	/	6.0	/	/	/	/	/	/	/	/	/	/	/	< .01
4/17/80	1.56	.14	.17	32	11.6	/	/	/	/	513	62.0	.06	21,033	1211	4000	51.2	0

* - Composite

** - Grab

/ - Not Analyzed

DATA COMPILATION - CHLORIDE METALS
HOLDING POND
COMPLIANCE MONITORING
GRAB SAMPLES

mg/l

Date	Pb,T	Cu,T	Zn,T	TSS	pH	Cr,T	Cr,VI	Cn,T	Cn,Ox.	Alk.	Sb,T	Sn,T	$SO_4^{=}$	Cl^-	NO_2^-	$NO_3^{=}$	Acidity
3/13/80	4.3	<.05	.32	/	5.0	0.05	<.01	/	/	/	/	/	/	/	/	/	/
3/19/80	4.95	.06	.31	/	/	0.05	<.01	<.02	<.02	/	/	/	/	/	/	/	13.9
3/27/80	5.35	/	/	/	/	/	/	/	/	/	.09	/	/	/	/	/	/
4/3/80	5.69	.02	.72	/	4.2	/	/	/	/	/	0.4	.01	313	49.1	/	/	/
4/17/80	4.82	.03	.15	/	4.3	/	/	/	/	17	1.1	.01	241	55.2	.063	.63	22.8

/ - Not Analyzed

DATA COMPILATION - CHLORIDE METALS
PLANT RUN-OFF
MARCH 13, 1980

LOCATION	TOTAL LEAD, MG/L
Run-off from Coke Yard	132.0
Pb Storage Area Next to Lox Tank	142.0
Parking Lot Near Smelter	140.0

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM

TO: Jerry Cain
FROM: Henry Folmar
SUBJECT: Chloride Metal Bioassay
DATE: June 11, 1980

Beginning May 28, 1980 I conducted a 96 hour static bioassay on Chloride Metals using bluegill 31-61 mm in length. The 96 hour LC_{50} was determined to 23%. Fish died within 10 seconds when placed in the 100% and 56% effluent solutions. A preliminary range finding test with Daphnia indicated a 24 hour LC_{50} below 10%.

Test results are tabulated below and plotted on the attached graph.

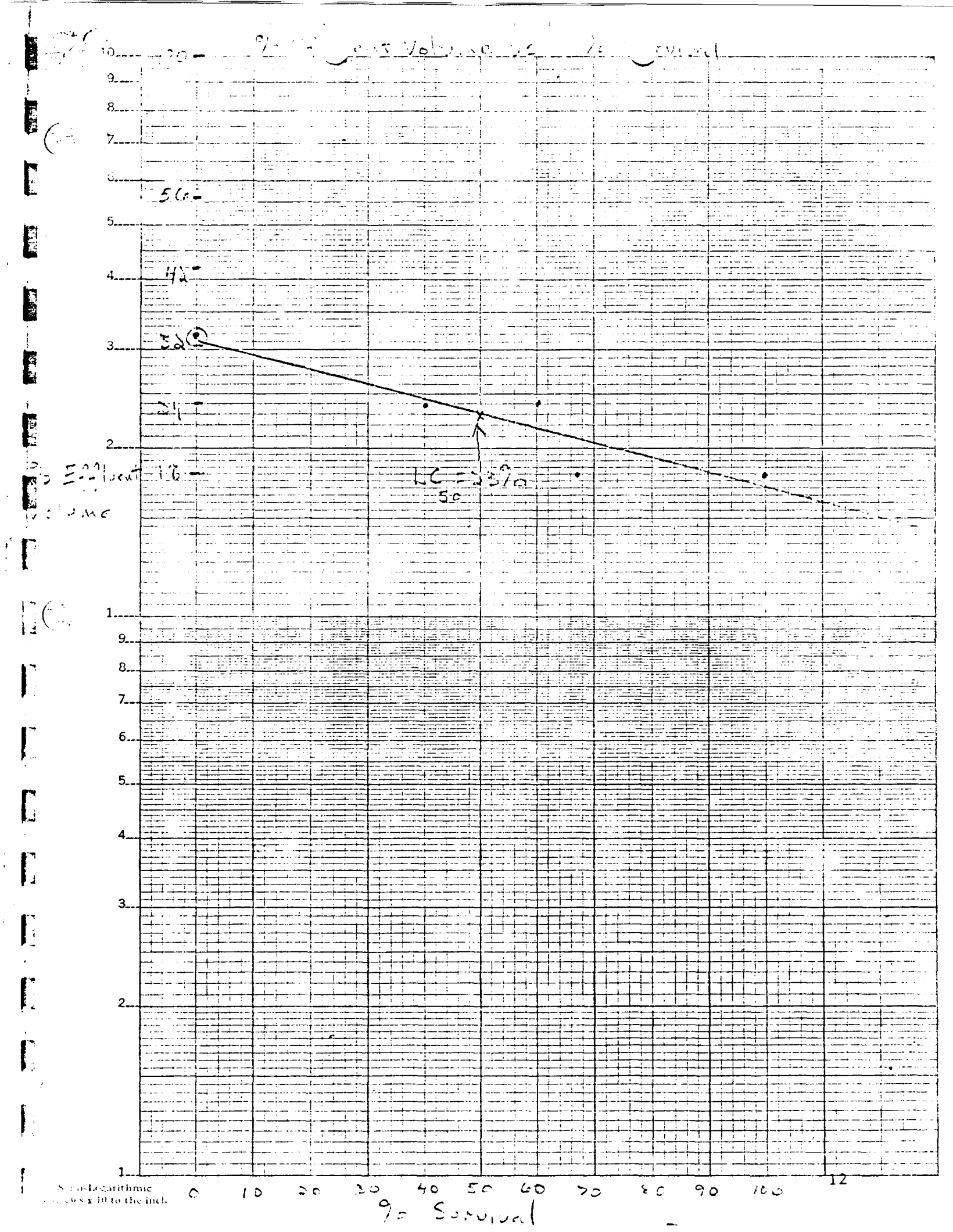
Effluent Concentration (%)	Percent Survival
0	100
18	100
24	60
32	0
42	0
56	0
0	100
18	67
24	40
32	0
42	0
56	0

Results of water analysis: (100% effluent)

Chlorides	867 mg/l
Sulfide	<0.01 mg/l
Sulfates	42,500 mg/l
Nitrite	10.5 mg/l
Nitrates	11.4 mg/l
Alkalinity	34 mg/l as $CaCO_3$
Hardness	392 mg/l as $CaCO_3$
Zinc	0.11 mg/l
Copper	0.12 mg/l
Cadmium	0.16 mg/l

Total Ammonia Nitrogen	% Effluent	0 hours	96 hours
mg/l	0	0	<0.1
	18	0.8	0.4
	32	1.7	1.4
	56	2.4	2.6

HF:dl



% Effluent Volume
% Survival
LC50 = 23%
0
10
20
30
40
50
60
70
80
90
100

ATTACHMENT 5

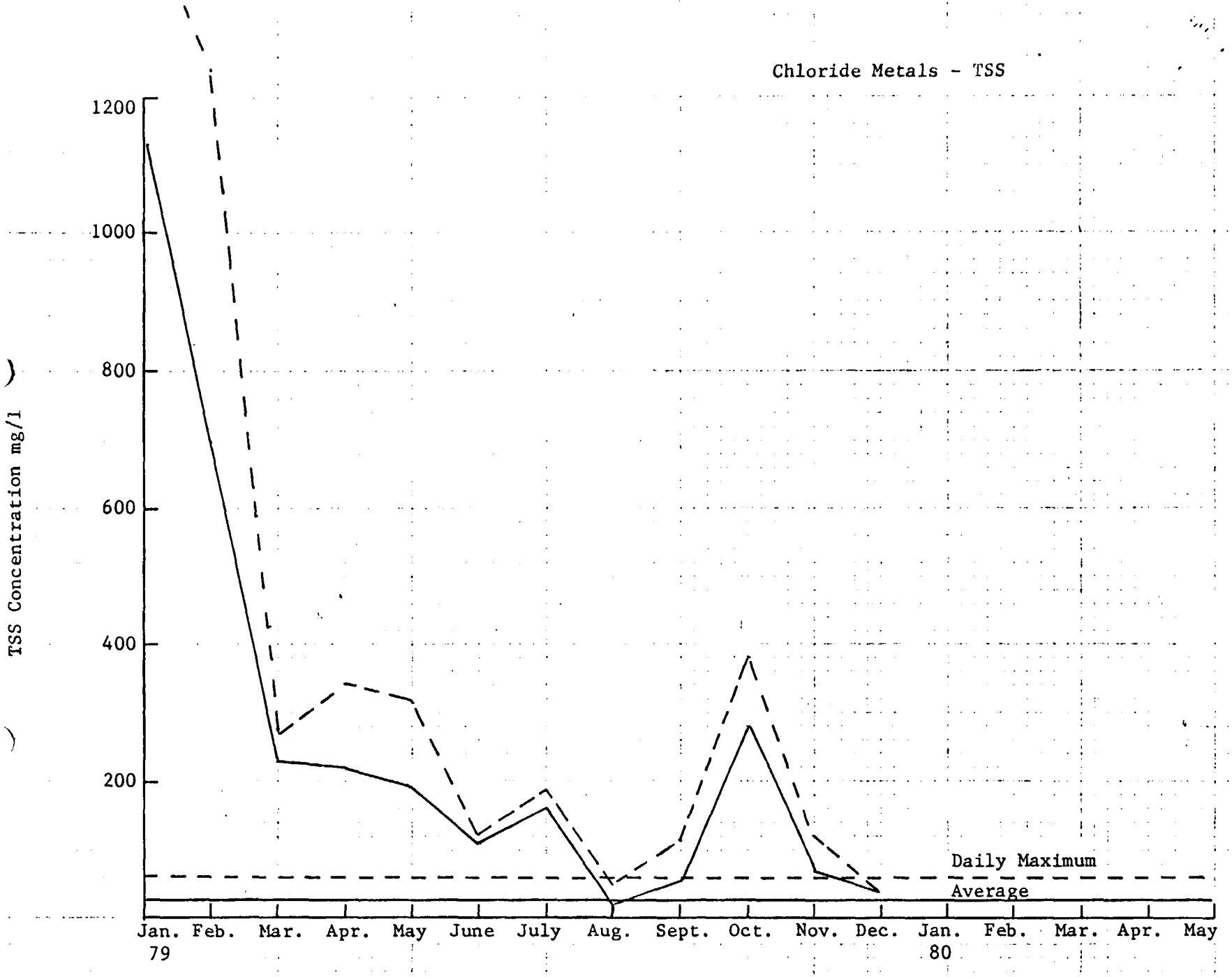
GRAPHICAL REPRESENTATION

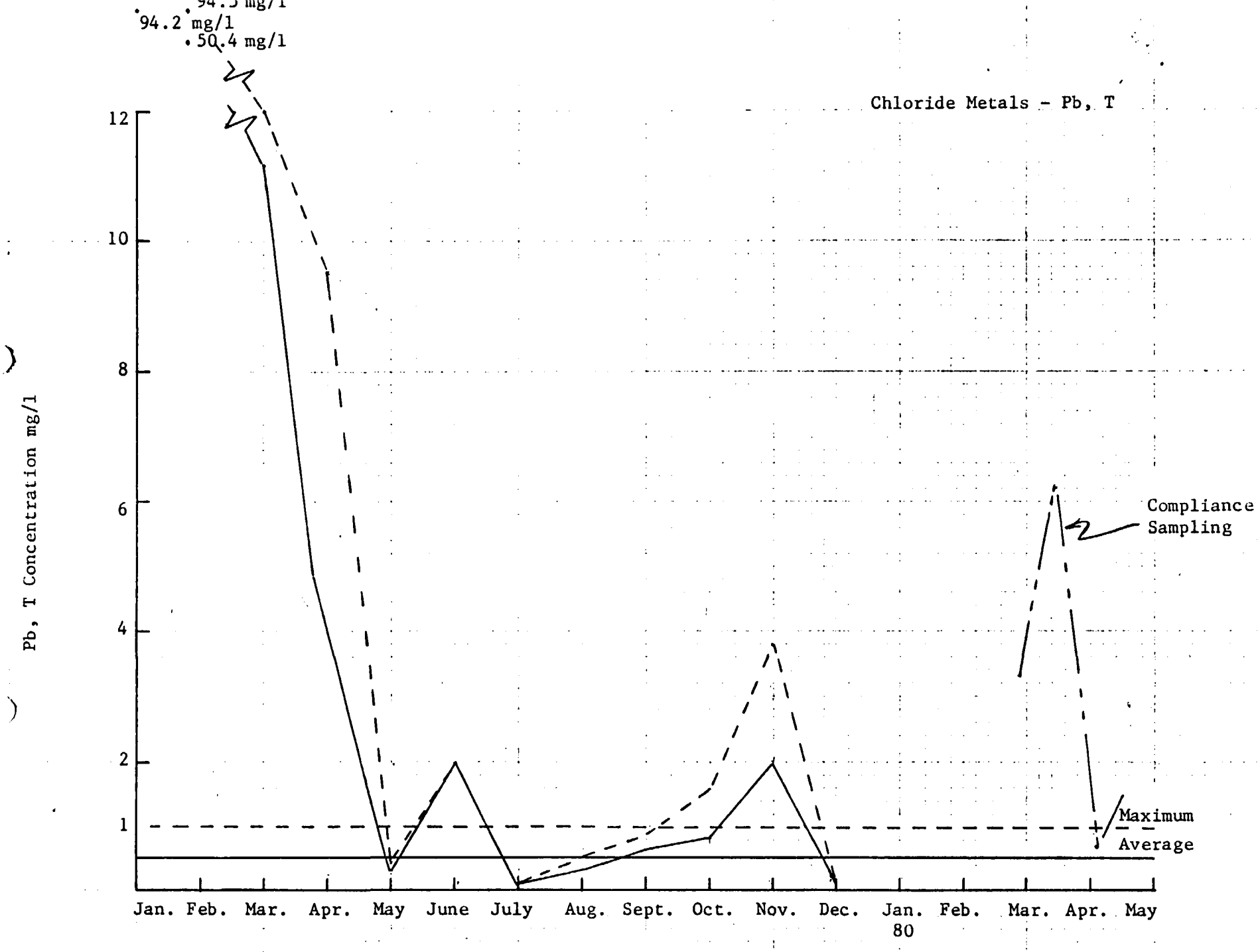
OF

1979

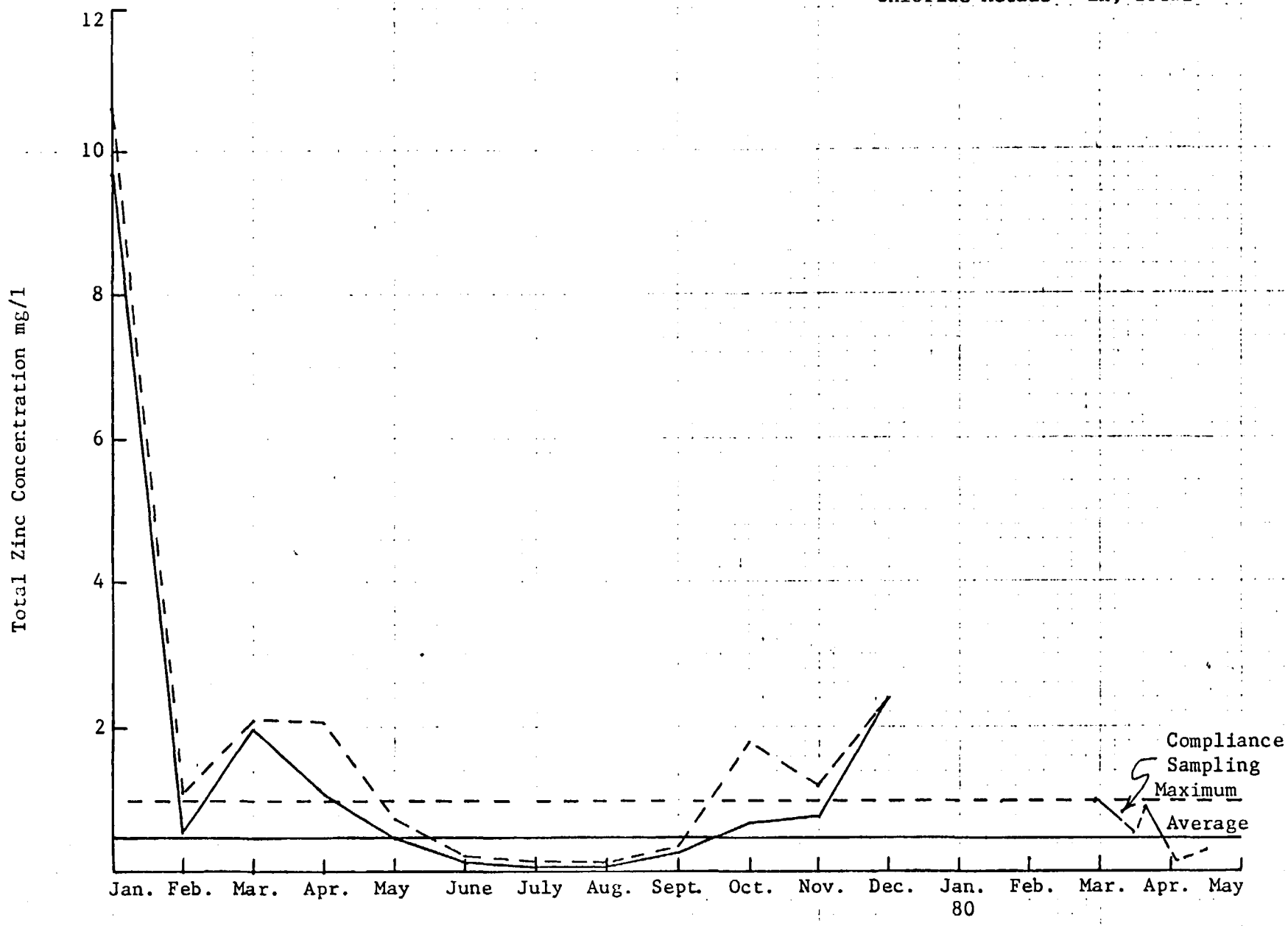
DISCHARGE MONITORING DATA

FOR CHLORIDE METALS

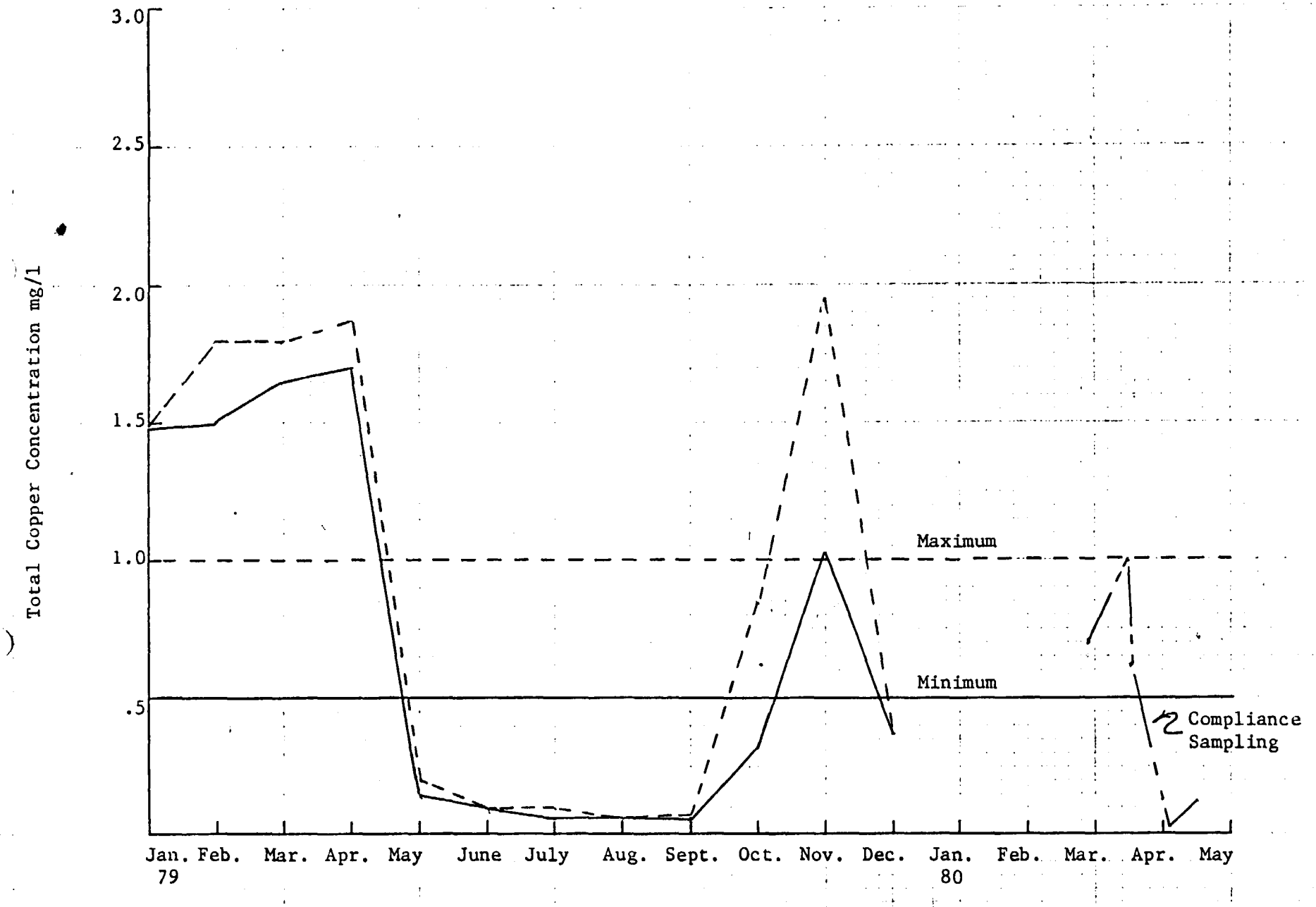

Chloride Metals - TSS
TSS Concentration mg/l
1200
1000
800
600
400
200
Daily Maximum
Average
Jan. 79
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
Jan. 80
Feb.
Mar.
Apr.
May


Chloride Metals - Pb, T
94.5 mg/l
94.2 mg/l
50.4 mg/l
Pb, T Concentration mg/l
12
10
8
6
4
2
1
Compliance Sampling
Maximum
Average
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
Jan. 80
Feb.
Mar.
Apr.
May

Chloride Metals - Zn, Total



Chloride Metals - Copper, Total



ATTACHMENT 6

FILE HISTORY

CHLORIDE METALS

FILE HISTORY - CHLORIDE METALS

June 15, 1976	Staff notified State Board of Health of possible ground water contamination.
August 10, 1976	Commission Order No. 290-76 issued to Chloride Metals requiring the following: 1. Chloride Metals must cease use of ammonia for neutralization by September 30, 1976. 2. By December 15, 1976, Waste Abatement Plan would be submitted to Bureau of Pollution Control. 3. By June 30, 1977, construction would be completed on the wastewater treatment plant.
November 4, 1976	Bureau of Pollution Control issued Chloride Metals NPDES Permit No. MS0033804.
December 8, 1976	Chloride submitted Waste Abatement Plan to Bureau of Pollution Control.
December 14, 1976	Bureau of Pollution Control gave Chloride Metals concurrence to construct.
December 12, 1977	Chloride Metals notified Bureau of Pollution Control that they had achieved effluent limitations during the month of September but was unable to consistently attain compliance with permit.
September 19, 1978	Chloride Metals notified Bureau of compliance with permit except for TSS.
1979 -	Chloride Metals was unable to attain compliance with their NPDES Permit during most of 1979. A number of reasons were given by the company, but the dominant factor appeared to be the failure of the diatomaceous earth filter to consistently operate.
April, 1979 -	Chloride visited as a result of a fish kill on Steens Creek. No determination could be made at the time.
March 13, 1980	Bureau of Pollution Control staff inspected Chloride. Additionally, State Board of Health personnel accompanied Bureau of Pollution Control. Samples were collected at five locations. It was decided that enforcement sampling should begin.

March 19, 1980	Enforcement sampling.
March 27, 1980	Enforcement sampling.
April 3, 1980	Enforcement sampling.
April 17, 1980	Enforcement sampling.

EPA Notification of Hazardous Waste Site

United States Environmental Protection Agency
Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies.

810608

MSS 000 001 009

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Chloride Incorporated
Street: 5200 W. Kennedy Blvd.
City: Tampa State: FL Zip Code: 33609

B Site Location:

Enter the common name (if known) and actual location of the site.

Name of Site: Chloride Metals Division
Street: Briar Hill Rd.
City: Florence County: Rankin State: MS Zip Code: 39073

MSD 082 0 02320

C Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Barnett Frank - Production Manager
Phone: 813-248-3161

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1972 To (Year): 1980

E Waste Type: Choose the option you prefer to complete

Option I: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☐ Other (Specify)

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

D008

RECEIVED EPA/REGION IV JUN 8 12 29 PM '81 ENFORCEMENT DIVISION

00285

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

Notification of Hazardous Waste Site **Side Two**

F Waste Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount C

cubic feet ~~Est. 800,000~~ 1,000,000

gallons

Total Facility Area

square feet

acres ~~Est.~~ 6 A

G Known, Suspected or Likely Releases to the Environment:

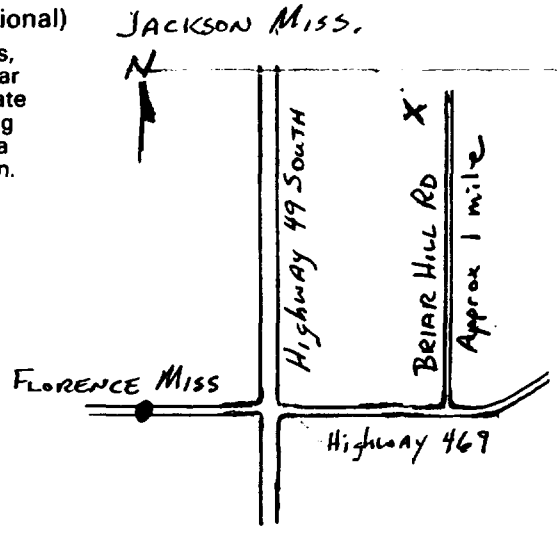
Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☒ Likely ☐ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.



I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

The site is a secondary lead smelting plant located in rural Rankin County Mississippi. An old barrow pit on sit was used for approximately eight (8) years to land fill and dispose of plant refuse, old automobile battery cases, and furnace slags. The landfill is no longer in active use.

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required to notify check "Other".

Name Chloride Metals Division

Street Briar Hill Road

City Florence State MS Zip Code 39073

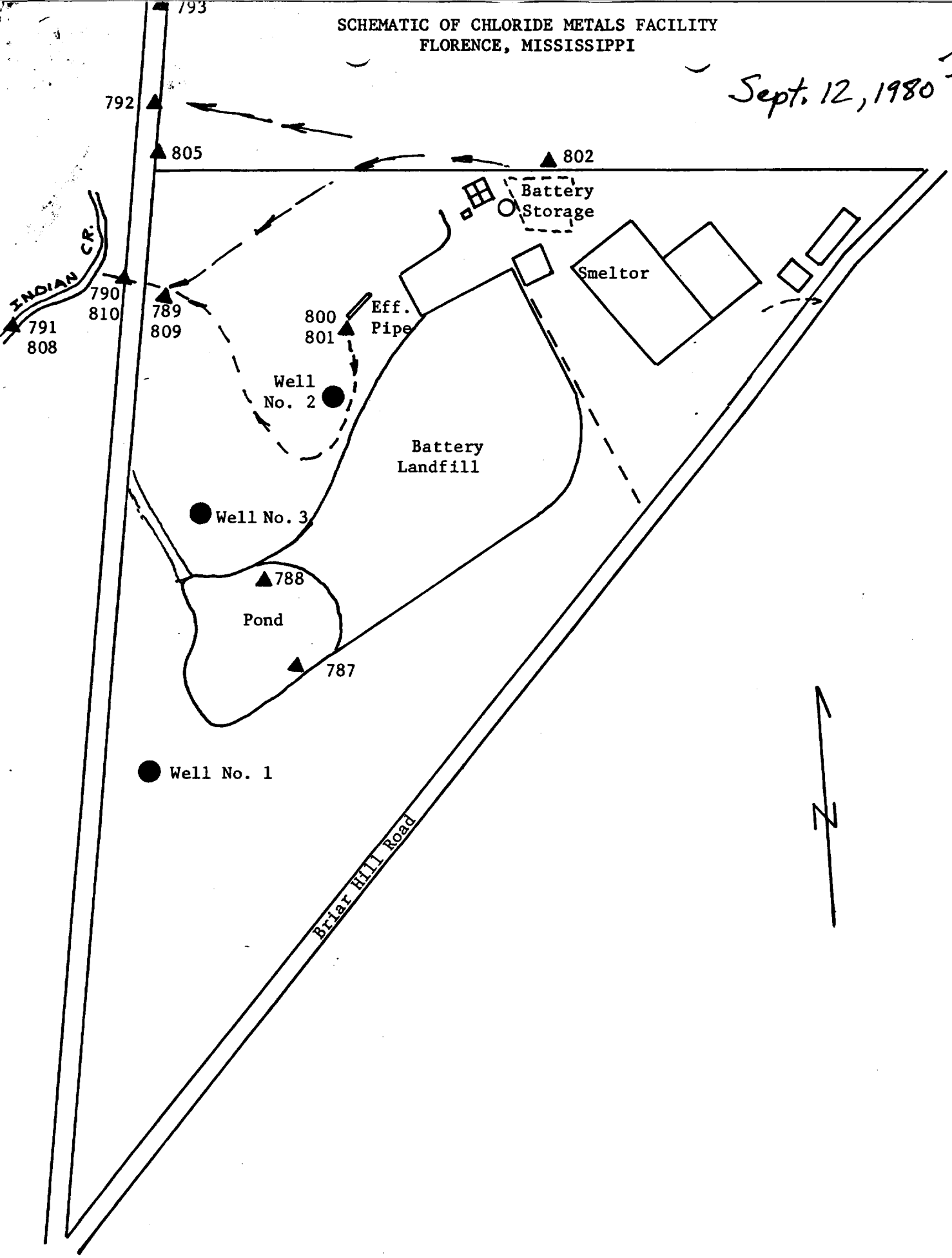
Signature F. L. Barnett Date 3 June 1981

F. L. Barnett

☒ Owner, Present
☐ Owner, Past
☐ Transporter
☐ Operator, Present
☐ Operator, Past
☐ Other

SCHEMATIC OF CHLORIDE METALS FACILITY
FLORENCE, MISSISSIPPI

Sept. 12, 1980 file



DATA COMPILATION FOR GROUND WATERWELL

NUMBER 1

Parameter	LBN, 900*	LBN 899	LBN 898	LBN 897
Chlorides (mg/l)	776	2284	2327	2284
Zn,T (mg/l)	1.2	2.2	2.5	2.2
Pb,T	0.26	0.53	0.58	0.47
NO_2-N (mg/l)	0.004			
Acidity (mg/l)	3700	3822	3836	3836
NO_3-N (mg/l)	0.94			
SO_4 = (mg/l)	7100	6400	7400	7400
Sb,T (mg/l)	0.26	0.45	0.51	0.38
Cd,T (mg/l)	0.13	0.22	0.23	0.22
As,T (mg/l)	< .02	< .02	< .02	< .02
pH (SU)		4.0	4.0	4.0
SN,T (mg/l)	1.0			

* Composite

DATA COMPILATION FOR GROUND WATERWELL

NUMBER 2

Parameter	LBN 904*	LBN 903	LBN 902	LBN 901
Chlorides	991	776	646	733
Zn,T (mg/l)	2.8	2.3	2.4	2.6
Pb,T (mg/l)	0.69	0.58	0.58	0.58
NO_2-N (mg/l)	0.005			
Acidity (mg/l)	3800	3290	3262	3346
NO_3-N (mg/l)	2.74	2.74	2.76	3.94
SO_4 = (mg/l)	4675	4700	4500	4500
Sb,T (mg/l)	0.38	0.26	0.26	0.26
Cd,T (mg/l)	0.30	0.27	0.28	0.29
As,T (mg/l)	0.02	< .02	< .02	< .02
pH (SU)		3.8	3.8	3.8
SN,T (mg/l)	1.0			

* Composite

DATA COMPILATION FOR GROUNDWATER WELL
NUMBER 3

PARAMETER	LBN.908*	LBN.907	LBN.906	LBN.905
Chlorides (mg/l	33.2			
Zn,T (mg/l)	0.39	0.37	0.36	0.57
Pb,T (mg/l)	0.04	<.04	<.04	<.04
NO_2-N (mg/l)	0.007			
Acidity (mg/l)	96			
NO_3-N (mg/l)	0.37			
$SO_4^=$ (mg/l)	964	1279	1072	865
Sb,T (mg/l)	0.14	0.14	0.80	.02
Cd,T (mg/l)	<.01	<.01	<.01	<.01
As,T (mg/l)	<.02	<.02	<.02	<.02
pH S.U.		5.1	5.1	5.2

*Composite

DATA COMPILATION CHLORIDE METALS

SEDIMENT SAMPLES

Lab Bench Number	ZN,T (mg/Kg)	Pb,T (mg/Kg)	Sb,T (mg/Kg)	Fe,T (mg/Kg)	Cd,T (mg/Kg)	As,T (mg/Kg)
787	27.9	3,372.8	193.0	11,541.1	0.99	70.6
788	37.9	2,381.9	149.0	32,190.6	0.99	308.6
789	148.3	3,846.5	908.8	21,160.9	32.6	3,856
809	13.0	1,580.0	340.0	5,800	1.0	105.0
790	286.3	3,346.2	921.9	20,234.9	56.3	7,206
810	14.8	19.7	15.8	6,800	1.0	19.0
791	6.9	19.9	44.8	5,146	< 1.0	43.8
792	23.3	139.7	60.8	72,398	1.0	17.2
793	17.9	24.9	104.8	319,361	1.0	33.9
800	20,947.6	14,962.6	3,700.7	74,404	588	1,296
802	149.2	97,255.4	1,002.4	104,415	4.0	5,072
806	5.0	138.9	29.2	855	1.0	1.0

787 - Southeast Corner of Pond

788 - Northwest Corner of Pond

789 - Ditch Below Chloride Effluent - Surface Sample

809 - Ditch Below Chloride Effluent - 1 Foot Depth

790 - Ditch 50 Yards Below - Near Pipeline Surface Sample

810 - Ditch 50 Yards Below - Near Pipeline - 1 Foot Depth

791 - Indian Creek Below Chloride Effluent

792 - Dead Area Along Pipeline

793 - ¼ Mile Above First Dead Area - Dead Area

800 - Sludge From Effluent Ditch 2 Feet Below Pipe

802 - Soil Sample North of Plant

DATA COMPILATION OF WATER SAMPLES - CHLORIDE METALS

Parameter	Trt. Plant Eff. II LBN 599	SE Corner Pond LBN 600	Spring Below Plant LBN 805	Eff. Ditch LBN 801	Indian Cr. White PPT. LBN 808	Runoff Decaping LBN 804
pH (su)	8.9	3.8				0.71
TSS (mg/1)	47	6.5	274		8500	
Chlorides (mg/1)	867	57.5	49.5		263	
Zn,T (mg/1)	0.07	0.11	0.21	0.09	2.4	
Cu,T (mg/1)	0.12	0.02				
Pb,T (mg/1)	0.68	3.94	0.75	0.25	20.1	
Sn,T (mg/1)	1.9	< 1.0				
As,T (mg/1)	1.5	< .01	0.62	91	0.7	
Sb,T (mg/1)	22.3	.45	0.60	1156	14.2	
NO_2-N (mg/1)	10.5	0.002	0.29		0.006	
Acidity (mg/1)	0.0	29				24,000
Sulfide (mg/1)	< 0.01	< 0.01				
SO_4 = (mg/1)	42,500	229	733			22,000
Alk. (mg/1)	145	17				
NO_3-N (mg/1)	11.4	.03	2.4		8.7	
Cd,T (mg/1)	0.16	0.02	0.01	0.03	0.30	
Fe, T (mg/1)			8.29	.85	16.8	
Hardness,T (mg/1)			.80			
Conductance			2300		2300	
Al,T (mg/1)			8.1		1400	

Date 5/27/80

DATA COMPILATION CHLORIDE METAL
SMELTOR SLAG

PARAMETER	LBN.803
Zn,T	606 mg/Kg
Cu,T	134 mg/Kg
Pb,T	2762 mg/Kg
$SO_4^=$	23,600 mg/l
As,T	722 mg/Kg
Sb,T	481 mg/Kg
Cd,T	4.8 mg/Kg
Fe,T	64,491 mg/Kg
Sn,T	1590 mg/Kg

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P.O. BOX 498 • 110 WESTWOOD PLACE
WESTWOOD TENNESSEE 37027 • 615-373-5040

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description:
RCI No. 25928 - Chloride Observation Well No. 1
RCI No. 25929 - Chloride Observation Well No. 2
RCI No. 25930 - Chloride Observation Well No. 3
RCI No. 25931 - Chloride Observation Well No. 4
RCI No. 25932 - Chloride Observation Well No. 5

RCI Sample Number	25928	25929	25930	25931	25932
Date Collected	4/2/84	4/2/84	4/2/84	4/2/84	4/2/84
Time Collected					
Date Received	4/3/84	4/3/84	4/3/84	4/3/84	4/3/84
Acidity (mg/l as $CaCO_3$), dissolved	[illegible]	690	[illegible]		
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	79	69	200	[illegible]	[illegible]
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.47	0.13	0.43	[illegible]	[illegible]
Oil and Grease					
pH (pH units) Lab	3.8	3.6	4.8	[illegible]	[illegible]
pH (pH units) Field pH*	3.89	3.57	4.14	[illegible]	[illegible]
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,000	2,010	710	760	[illegible]
Suspended Solids					
Total Dissolved Solids	1,830	3,640	1,590	1,350	2,110
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	5.3	105	3.6	30.4	[illegible]
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.12	0.16	<0.005	0.07	[illegible]
Chromium					
Copper					
Iron, dissolved	0.48	4.2	0.06	3.8	[illegible]
Lead, dissolved	0.42	0.28	0.16	0.21	[illegible]
Magnesium					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	240	200	340	150	[illegible]
Zinc, dissolved	0.73	0.94	0.12	0.35	[illegible]
Antimony, dissolved	<0.005	<0.005	<0.005	<0.005	[illegible]
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	[illegible]
Conductivity, umhos/cm @ 25°C	2,160	3,460	2,210	1,670	[illegible]

All units are in mg/l unless otherwise noted.
* Reported by Client

RESOURCE CONSULTANTS inc.
environmental engineers and scientists
P.O. BOX 498 • 110 WESTWOOD PLACE
BRENTWOOD TENNESSEE 37027 • 615-373-5040

ANALYTICAL REPORT

TO: Chloride Metals, Inc.

Description:
RCI No. 25933 - Chloride Observation Well No. 6
RCI No. 25934 - Chloride Observation Well No. 7
RCI No. 25935 - Chloride Observation Well No. 8
RCI No. 25937 - Spring near Chloride Well No. 3
RCI No. 25936 - Pond

RCI Sample Number	25933	25934	25935	25937	25936
Date Collected	4/2/84	4/2/84	4/2/84	4/2/84	4/2/84
Time Collected					
Date Received	4/3/84	4/3/84	4/3/84	4/3/84	4/3/84
Acidity (mg/l as $CaCO_3$), dissolved	660	2,350	16	1,460	[illegible]
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	96	220	26	840	5
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.59	7.8	0.06	0.77	0.02
Oil and Grease					
pH (pH units) Lab	3.7	3.6	6.4	3.0	7.8
~~Phenol~~ pH Field*	3.4	3.15	4.83	2.92	7.65
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,100	2,820	13	2,890	84
Suspended Solids					
Total Dissolved Solids	1,870	4,600	164	5,530	388
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	86	390	<0.1	206	<0.1
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.23	0.76	<0.005	0.24	<0.005
Chromium					
Copper					
Iron, dissolved	54	10.8	<0.02	58	0.05
Lead, dissolved	0.45	0.53	0.008	0.95	0.17
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	140	210	17	840	42
Zinc, dissolved	0.89	1.95	0.09	0.94	0.007
Antimony, dissolved	<0.005	<0.005	<0.005	<0.005	0.016
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	<0.4
Conductivity, umhos/cm @ 25°C	2,160	3,270	162	6,000	2[illegible]

All units are in mg/l unless otherwise noted.

* Reported by Client

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P.O. BOX [illegible] · TWO MARYLAND FARMS · SUITE 340
BRENTWOOD TENNESSEE 370[illegible] · 615 371-[illegible]

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description:
RCI No. 24917 - Chloride Observation Well No. 1
RCI No. 24918 - Chloride Observation Well No. 2
RCI No. 24919 - Chloride Observation Well No. 3
RCI No. 24920 - Chloride Observation Well No. 4
RCI No. 24921 - Chloride Observation Well No. 5

RCI Sample Number	24917	24918	24919	24[illegible]	[illegible]
Date Collected	11/16/83	11/16/83	11/16/83	11/[illegible]	[illegible]
Time Collected					
Date Received	11/21/83	11/21/83	11/21/[illegible]	[illegible]	[illegible]

Acidity (mg/l as $CaCO_3$), dissolved	79	28[illegible]	12[illegible]	[illegible]	[illegible]
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	74	61	228	98	1[illegible]
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.95	0.21	0.12	0.[illegible]	[illegible]
Oil and Grease					
pH (pH units) Lab	3.8	3.9	3.8	3.5	3.3
~~Rxxxdx~~ pH, Field*	4.4	4.3	4.4	4.5	[illegible]
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	960	1160	1520	800	1790
Suspended Solids					
Total Dissolved Solids	1820	1900	2650	1530	2870
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	5.9	34	11.3	29	110
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.11	0.09	0.005	0.09	0.13
Chromium					
Copper					
Iron, dissolved	0.26	1.23	0.36	1.76	5.6
Lead, dissolved	0.3[illegible]	2.0	0.16	[illegible]	[illegible]
Magnesium					
[illegible]					
[illegible]					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	210	140	490	160	170
Zinc, dissolved	0.68	3.2	0.18	0.4[illegible]	[illegible]
[illegible], dissolved	<0.005	<[illegible]	<0.005	<0.[illegible]	
[illegible]	<0.[illegible]		<0.[illegible]	[illegible]	
[illegible] umhos/cm	2130	2160	3320	1990	[illegible]

[illegible] are in mg/l unless otherwise noted.

[illegible] by client

RESOURCE CONSULTANTS

ANALYTICAL REPORT

Description:
RCI No. 24922 - Chloride Observation Well No. 6
RCI No. 24923 - Chloride Observation Well No. 7
RCI No. 24924 - Chloride Observation Well No. 8
RCI No. 24926 - Spring near Chloride Well No. 3
RCI No. 24925 - Pond

RCI Sample Number	24922	24923	24924	24926	24925
Date Collected	11/16/83	11/16/83	11/16/83	11/16/83	[illegible]
Time Collected					
Date Received	11/21/83	11/21/83	11/21/83	11/21/83	[illegible]

Acidity (mg/l as $CaCO_3$), dissolved	850	3260	22	2280	6
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	113	390	17	950	9
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	1.10	10.9	0.17	0.06	< 0.01
Oil and Grease					
pH (pH units), Lab	3.0	3.2	5.8	3.0	8.4
~~XXXXXX~~ pH, Field*	4.7	3.5	5.5	3.5	7.5
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1270	4240	15	3700	144
Suspended Solids					
Total Dissolved Solids	2200	6600	116	7640	450
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	107	520	< 0.1	304	2.2
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.01	[illegible]
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.30	1.12	<0.005	0.29	<0.005
Chromium					
Copper					
Iron, dissolved	19.9	11.6	<0.02	150	0.11
Lead, dissolved	0.57	0.38	0.002	1.0	0.15
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	170	260	15	1050	160
Zinc, dissolved	1.12	2.64	0.09	1.50	0.009
Antimony, dissolved	< 0.005	<0.005	<0.005	<0.005	0.046
Tin, dissolved	<0.3	<0.3	<0.3	<0.3	< 0.3
Conductivity, umhos/cm	2800	4880	122	8060	710

All units are in mg/l unless otherwise noted.

* Reported by client

J. Wayne McCoy Dec. 7, 1983

RECEIVED
JUL 01 RECD
DEPT OF NAT RESOURCE
BUREAU OF POLLUTION CONTROL

Chloride Incorporated

Chloride Metals
3507 50th Street South
P.O. Box 485
Tampa, Florida 33601
Phone (813) 248-3161

CHLORIDE

28 June 1983

Mr. Charles Estes, PE
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

Enclosed please find the 2nd Quarter Groundwater Analysis for the Florence Mississippi Smelter Site. The Third Quarter results will be forwarded to you when they have been received and reviewed by me.

Sincerely,

CHLORIDE METALS

Grady E. Curl
Engineer

GEC/pls

Enclosure

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P.O. BOX 498 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615/373-5040

RCI No. 2646
Florence, MS

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 23699 - Chloride Observation Well No. 1
RCI No. 23700 - Chloride Observation Well No. 2
RCI No. 23701 - Chloride Observation Well No. 3
RCI No. 23702 - Chloride Observation Well No. 4
RCI No. 23703 - Chloride Observation Well No. 5

RCI Sample Number	23699	23700	23701	23702	23703
Date Collected	4/22/83	4/22/83	4/22/83	4/22/83	4/22/83
Time Collected					
Date Received	4/28/83	4/28/83	4/28/83	4/28/83	4/28/83
Acidity (mg/l as $CaCO_3$), dissolved	93	176	43	250	460
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	98	57	45	104	92
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.92	0.12	0.23	0.63	0.57
Oil and Grease					
pH (pH units), Lab.	4.0	3.7	4.5	3.5	3.2
pH, Field *	4.65	4.15	4.9	4.25	4.1
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	2,200	1,030	251	1,140	1,420
Suspended Solids					
Total Dissolved Solids	3,740	2,300	460	1,690	2,200
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	5.7	3.7	0.1	20	70
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.22	0.11	<0.005	0.07	0.08
Chromium					
Copper					
Iron, dissolved	0.13	1.37	0.03	[illegible]	[illegible]
Lead, dissolved	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Magnesium					
[illegible]					
[illegible]					
[illegible]					
[illegible]					
[illegible] dissolved	530	180	110	190	[illegible]
[illegible] dissolved	[illegible]	0.49	0.04	0.39	[illegible]
[illegible] dissolved	<0.01	<0.01	<0.01	<0.01	<0.01
[illegible]	<0.2	<0.2	<0.2	<0.2	[illegible]
[illegible] umhos/cm	3,070	1,920	640	[illegible]	[illegible]
[illegible]					

[illegible] unless otherwise noted.

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 498 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 5040

ANALYTICAL REPORT

TO: Mr. Grady Curl
Chloride Metals

Description: RCI No. 23704 - Chloride Observation Well No. 6
RCI No. 23705 - Chloride Observation Well No. 7
RCI No. 23706 - Chloride Observation Well No. 8
RCI No. 23698 - Spring near Chloride Well No. 3
RCI No. 23697 - Pond

RCI Sample Number	23704	23705	23706	23698	23697
Date Collected	4/22/83	4/22/83	4/22/83	4/22/83	4/22/83
Time Collected					
Date Received	4/28/83	4/28/83	4/28/83	4/28/83	4/28/83
Acidity (mg/l as $CaCO_3$), dissolved	590	1,220	20	2,190	7
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	103	167	12	120	4
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	1.6	13	0.59	1.15	0.18
Oil and Grease					
pH (pH units), Lab	2.9	3.1	5.1	3.1	6.1
~~Phenols~~ pH, Field*	3.85	3.75	5.65	3.65	6.75
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,150	1,380	19	3,600	78
Suspended Solids					
Total Dissolved Solids	1,630	2,430	126	10,200	180
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	60	185	<0.1	560	0.5
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.20	0.35	<0.005	0.70	0.011
Chromium					
Copper					
Iron, dissolved	8.7	2.3	<0.03	[illegible]	[illegible]
Lead, dissolved	0.46	[illegible]	[illegible]	[illegible]	[illegible]
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	120	120	14	1,100	32
Zinc, dissolved	0.71	0.86	0.03	1.82	0.03
Antimony, dissolved	<0.01	<0.01	<0.01	0.04	0.02
Tin, dissolved	<0.2	<0.2	<0.2	<0.2	<0.2
Conductivity, umhos/cm	2,370	2,200	99	6,800	244

All units are in mg/l unless otherwise noted.

[illegible] 5/3/[illegible]

Oct. 30, 1984

Mr. Charles Estes, P.E.
Division of Solid Waste Management
Mississippi Department of Natural Resources
P.O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

The attached analytical data indicates the results of our sampling at the Chloride Metals Site in Florence, MS on August 8, 1984. As the data shows, the only material found above detection limits was lead. From the data it does not appear that the lead is moving through the soil in any significant quantities toward the pond or off-site. Analysis of groundwater samples taken on the same date for the FIT site screening study could either confirm or contradict this assessment. The low pH (2.8) detected in the "spring" area at the rear of the property is possibly responsible for some dead vegetation at that location.

Based on these analytical results, we do not feel that an emergency cleanup action is warranted at this time. Additional results which will be made available in about six weeks in the FIT site screening study could prove this conclusion premature. We have sent a copy of the results to Mr. Frank Barnett of Chloride, Inc. and have directed him to stay in consultation with the State of Mississippi and EPA when the additional information is available.

Please keep me informed of any further developments at this site. If you have additional questions, please contact me at (404) 881-2930.

Sincerely,

Jan B Rogers /for

Michael A. Norman
Project Officer

Chloride Metals site

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7571	CM-S-1W	Lead	0.5 ppm
T7572	CM-S-1W	Cyanide	<0.02 ppm
T7573	CM-S-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Spring)	Acrolein	<100
		Acrylonitrile	<100
	pH=2.8	Benzene	<5
		Bis (Chloromethyl) ether	<10
	T=24°C	Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7575	CM-P-1W	Lead	0.4 ppm
T7576	CM-P-1W	Cyanide	<0.02 ppm
T7577	CM-P-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Pond)	Acrolein	<100
		Acrylonitrile	<100
		Benzene	<5
	pH= 6.0	Bis (Chloromethyl) ether	<10
	T= 28°C	Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7584	CM-LC-01	Lead	13,460.0 ppm
T7584	CM-LC-01	Cyanide	<0.02 ppm

(Landfill Composite)

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7579	CM-IC-UW	Lead	<0.1 ppm
T7580	CM-IC-UW	Cyanide	<0.02 ppm
T7581	CM-IC-UW	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Indian Creek-upstream) pH=6.55 T=25.0°C	Acrolein	<100
		Acrylonitrile	<100
		Benzene	<5
		Bis (Chloromethyl) ether	<10
		Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7582	CM-BS-01	Lead	10.0 ppm
T7582	CM-BS-01	Cyanide	<0.02 ppm

(Background soil)

KWR 6/18/84

JUN 01 1984

4AW-ER

MS site for FIT site screening study

Mr. Frank Barnett
Production Manager
Chloride Inc.
3507 South 50th Street
P.O. Box 1124
Tampa, FL 33601
(813) 248-3161

Dear Mr. Barnett

This letter is to confirm the pending site inspection at the Chloride Metals Division (MSD082002320) site scheduled in a telephone conversation of May 30, 1984 with Ken Richardson of my staff. The site inspection will be conducted during the week of July 9, 1984 by personnel from EPA Region IV's Field Investigation Team (FIT) and Environmental Services Division Team (ESD). Someone from FIT or ESD will contact you prior to the actual site visit to make final arrangements and note any changes.

The persons that will be present to this on-site inspection are as follows: Johnny Smith (NUS), Tom Duffey (NUS), State personnel and an EPA representative.

Plans have been made to take samples at the site. If you desire split samples, you will be required to furnish your own containers.

Thank you for your cooperation and assistance in this inspection. If you have any questions, please call Ken Richardson at 404/881-2234.

Sincerely yours,

Walton Jones
RCRA §3012 Project Officer
Investigation & Compliance Section

KWR 5/31/84

cc: Doug Lair, ESD, Athens
Murray Warner, NUS
Ron Joyner, EPA Project Officer
Jack McMillan, Director of Solid Waste Management

KRICHARDSON:lge:5/31/84:2234:Lex No:(14)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: JUN 19 [illegible]

SUBJECT: Approval of FIT Site Screening Form, Chloride Metals, Florence, Mississippi
ESD Project #84-201

FROM: Chief, Hazardous Waste Section
Engineering Support Branch

TO: Jack Stonebraker, FIT DPO
ERRB, AWMD

The subject site screening form is approved. A signed copy of the form is being returned directly to FIT by copy of this memo.

M. D. Lair, P.E.

cc: Murray Warner/FIT
Tom Bennett

EPA Form 1320-6 (Rev. 3-76)

BRIEF SUMMARY ON CHLORIDE METALS

The first inspection of Chloride Metals, by the State Board of Health personnel, during the year of 1980, occurred on March 13. The inspector accompanied personnel from the Bureau of Pollution Control. An inspection was made of the plant buildings and grounds, the waste water treatment system, and the plant disposal site. At this time, samples were taken including samples from plant run-off and the waste water treatment lagoon.

After sampling, the disposal site, an abandoned gravel pit containing waster at its lower end was inspected. Used battery containers and slag waste from the facilities blast furnaces are disposed in the pit. The battery cases are supposed to be cleaned before disposal, but it was noted by the inspectors that many of the battery containers are not cleaned before disposal occurs.

After this inspection, the Bureau of Pollution Control started enforcement sampling. This sampling continued throughout the month of March 1980 and into the month of April. Analysis of the samples taken showed high concentrations of lead, zinc, and sulfates.

On July 28, 1980, a meeting was held to discuss the possibiltiy of groundwater contamination stemming from Chloride Metals. Attending the meeting were personnel from the Bureau of Polluion Control, the Division of Solid Waste, and the Bureau of Geology. Decisions were made to install monitoring wells on Chloride Metal property to determine if groundwater contamination had occurred and to what extent.

Later during the week of July 28th, personnel from the Division of Solid Waste accompanied the Bureau of Geology to the Chloride Metal disposal site. A hand auger was used to determine water table levels.

During the week of August 4 through August 8, 1980, personnel from the Bureau of Geology installed and developed three monitoring wells at Chloride Metals. Samples were taken from the wells on August 8, 1980. The wells were pumped at a continuous flor rate for one hour each. The pH and water temperature were monitored throughout the pumping.

Samples were pulled from each well at twenty minute intervals. Portions of each well sampling were composited and then divided between the Bureau of Pollution Control and the State Board of Health. The composites shall be analyzed by the two agencies laboratories. The remainder of the samples shall be run, if necessary, by the Bureau of Pollution Control Lab.

The analyses shall be interpreted by the various agencies involved; and from the presence or absence of contaminants, the need for further monitoring will be established. If enforcement is needed, action will be taken.

SAMPLE RESULTS

CHLORIDE METALS - MONITORING WELL #1

Analysis	Results - ppm			
	10:35	10:55	11:15	Composite
Chlorides	2284	2327	2284	776
Sulfates	7400	7400	6400	7100
Zn	2.2	2.5	2.2	1.2
Pb	0.47	0.58	0.53	0.26
Sb	0.38	0.51	0.45	0.26
Cd	0.22	0.23	0.22	0.13
Acidity	3835	3836	3822	3700
Nitrites				0.004
Nitrates				0.94

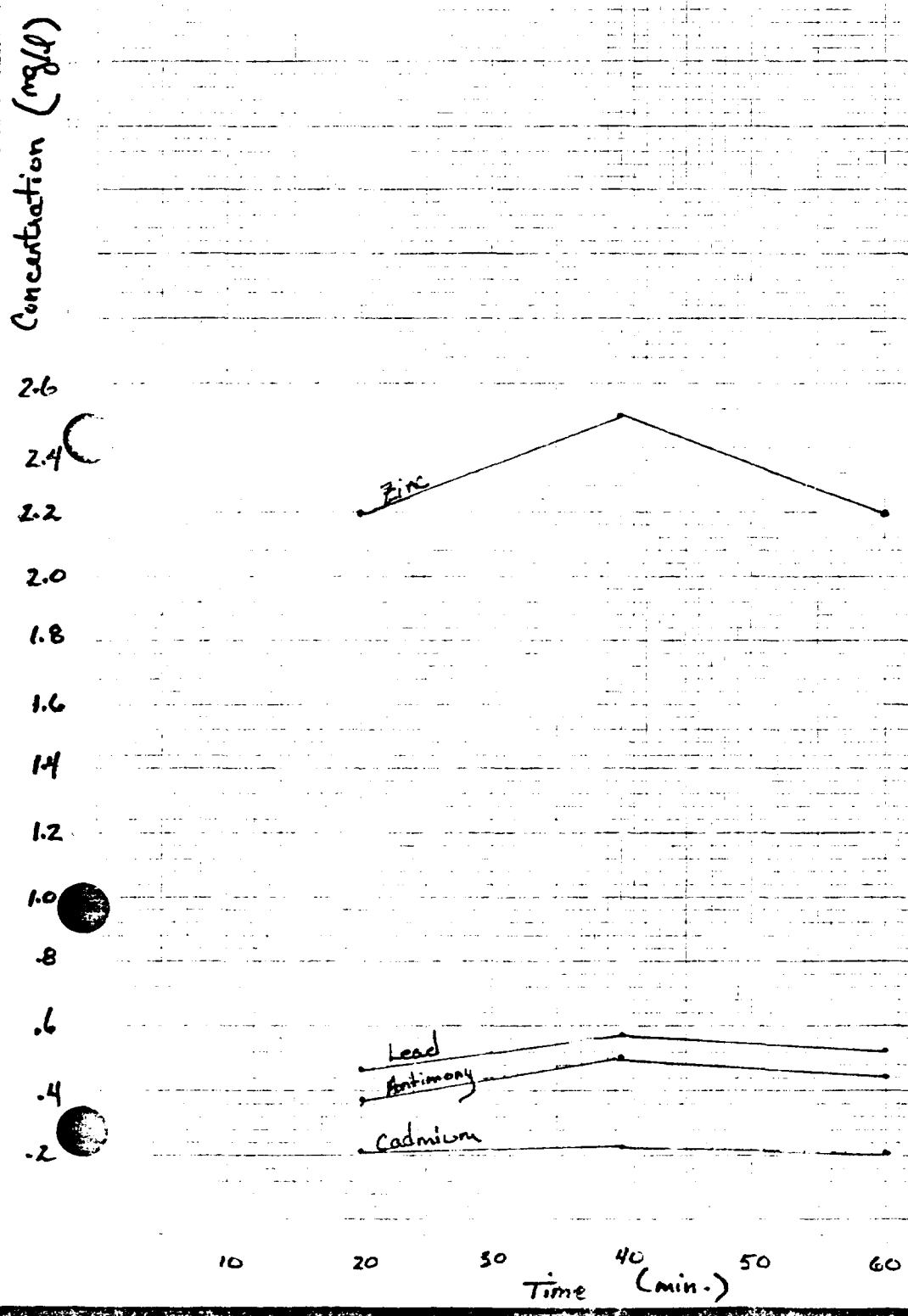
CHLORIDE METALS - MONITORING WELL #2

Analysis	Results - ppm			
	1:05	1;25	1;45	Composite
Chlorides	733	646	776	991
Sulfates	4500	4500	4700	4675
Zn	2.6	2.4	2.3	2.8
Pb	0.58	0.58	0.58	0.69
Sb	0.26	0.26	0.26	0.38
Cd	0.29	0.28	0.27	0.30
Acidity	3346	3262	3290	3800
Nitrites				0.005
Nitrates	3.94	2.76	2.74	2.74

CHLORIDE METALS - MONITORING WELL #3

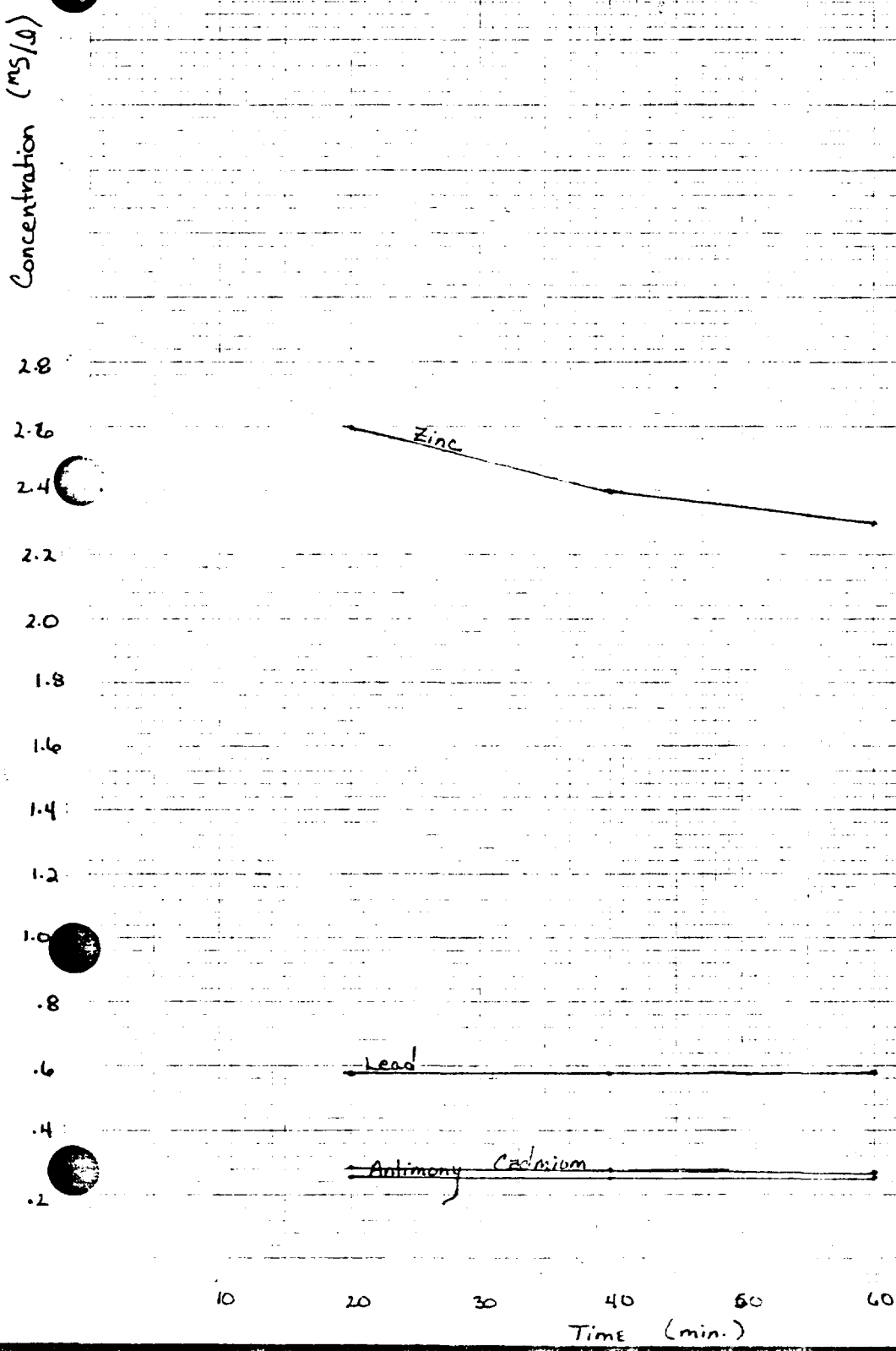
Analysis	Results - ppm			
	2:50	3:10	3:30	Composite
Chlorides				33.2
Sulfates	825	1072	1279	964
Zn	0.57	0.36	0.37	0.39
Pb	< 0.04	< 0.04	0.04	0.04
Sb	0.02	0.80	0.14	0.14
Cd	< 0.01	< 0.01	< 0.01	< 0.01
Acidity				96
Nitrites				0.007
Nitrates				0.37

hloride Metals - M1 Hea metals



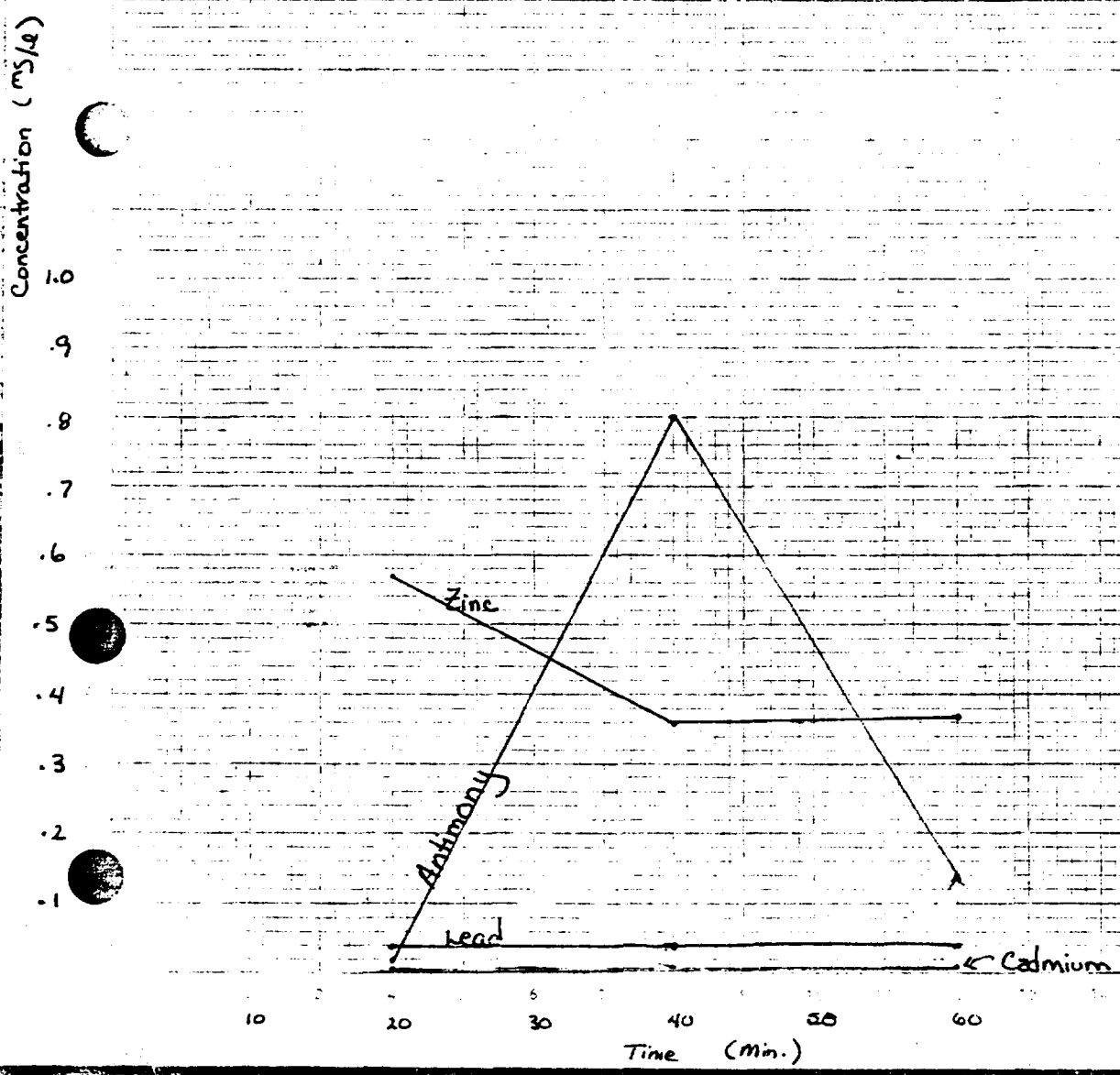
Element	Time		
	10:[illegible]	[illegible]	[illegible]:15
Zn	2.2	2.5	2.2
Pb	0.47	0.58	0.53
Cd	0.38	0.[illegible]	0.45
Co	0.22	0.23	0.27

Chloride Metals - M2 Heavy Metals

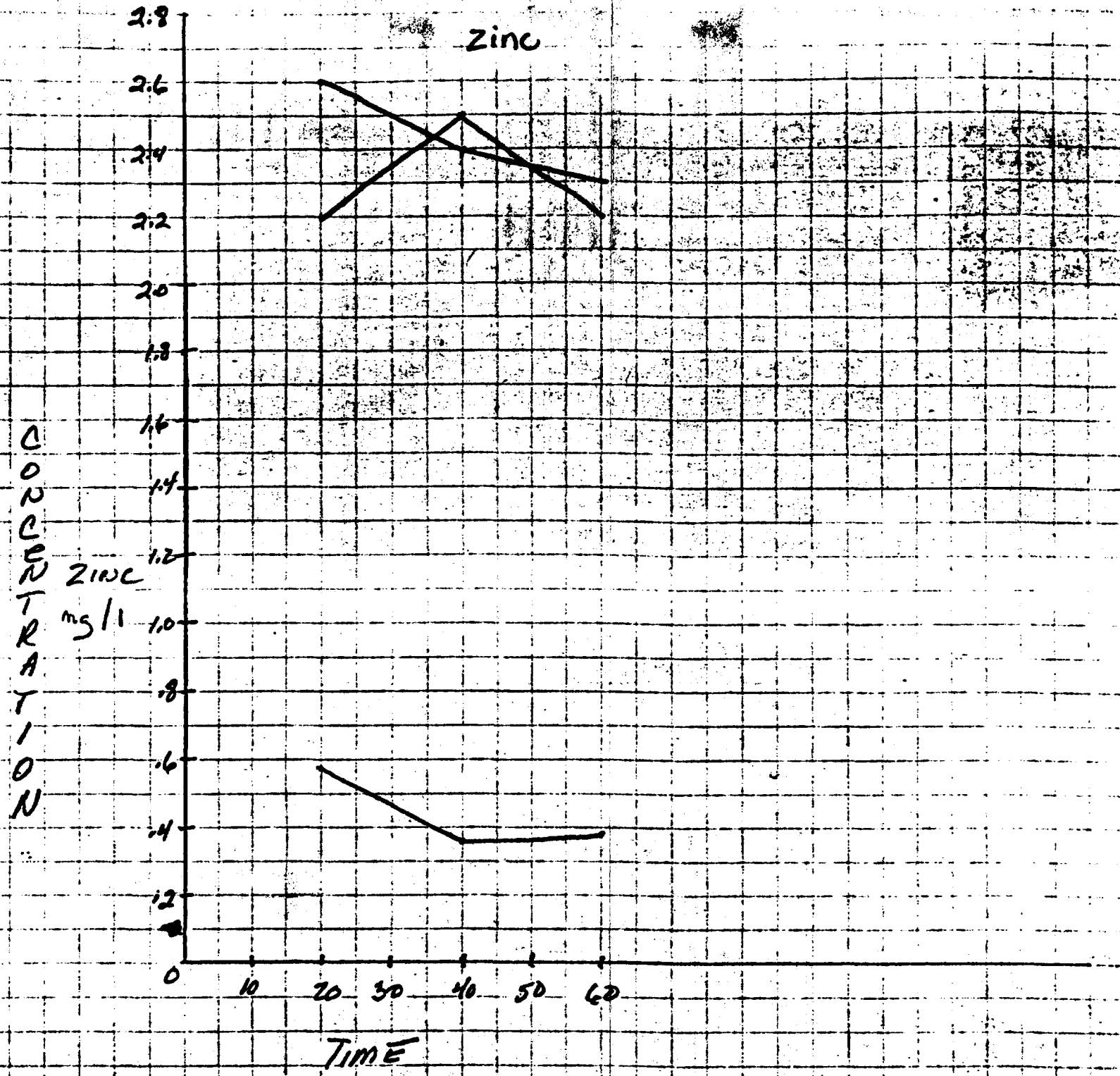


metal	Time		
	[illegible]	[illegible]	[illegible]
Zn	2.6	2.4	[illegible]
Pb	0.58	0.58	[illegible]
Sb	[illegible]	0.26	0.26
Cd	0.09	0.08	[illegible]

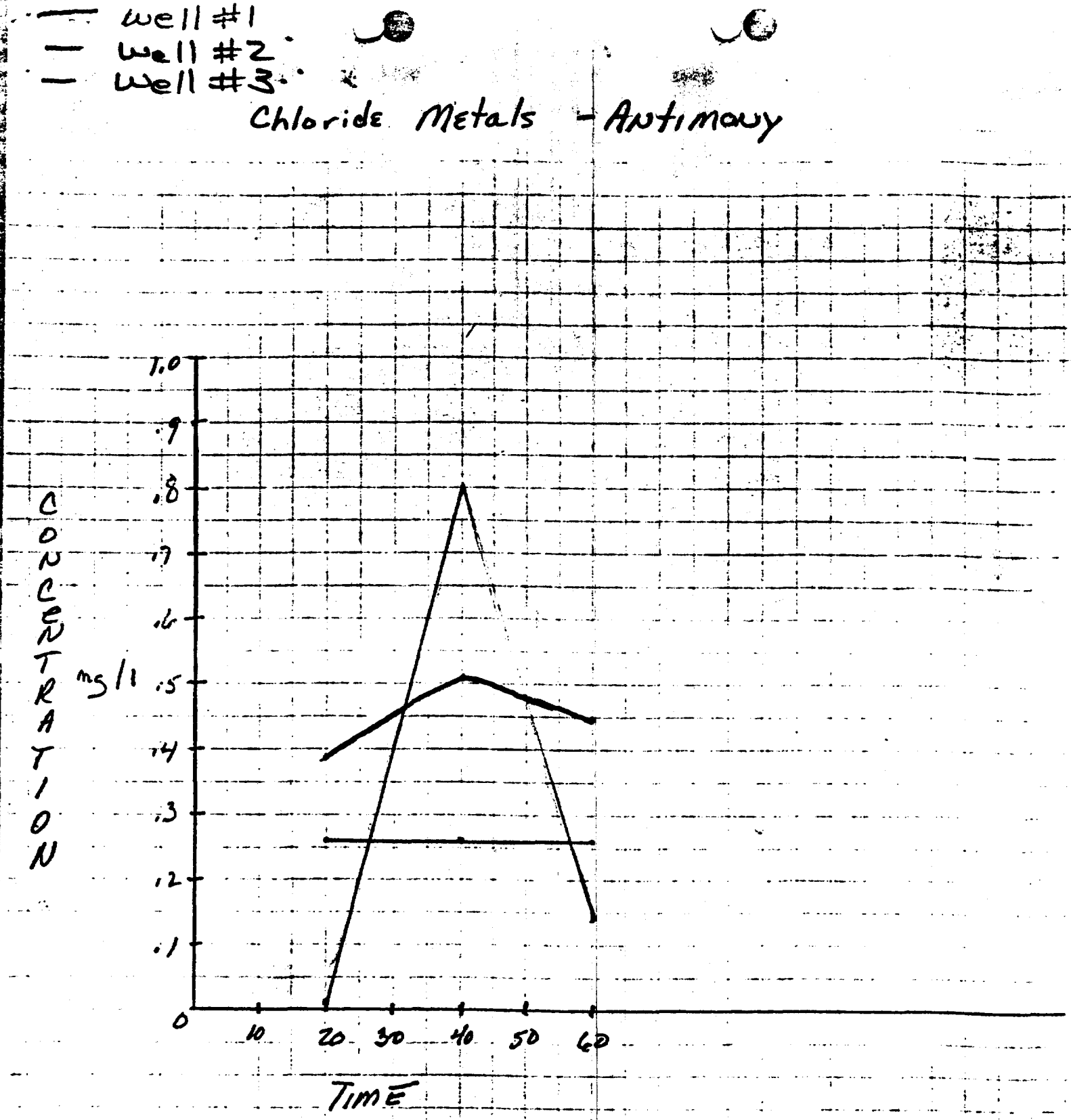
Chloride Metals - M3 Heavy Metals



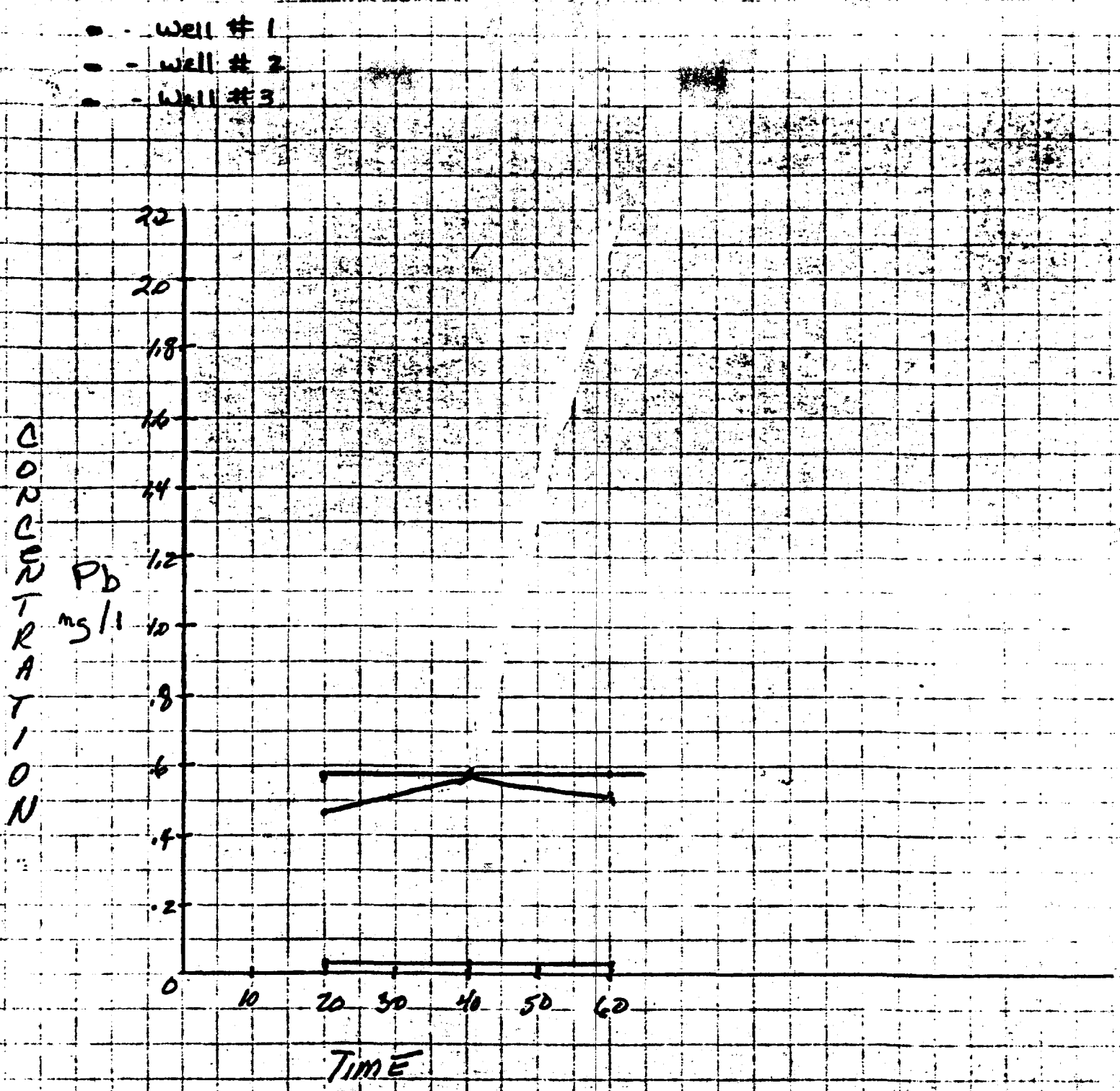
Chloride Metals



- WELL #1
- WELL #2
- WELL #3

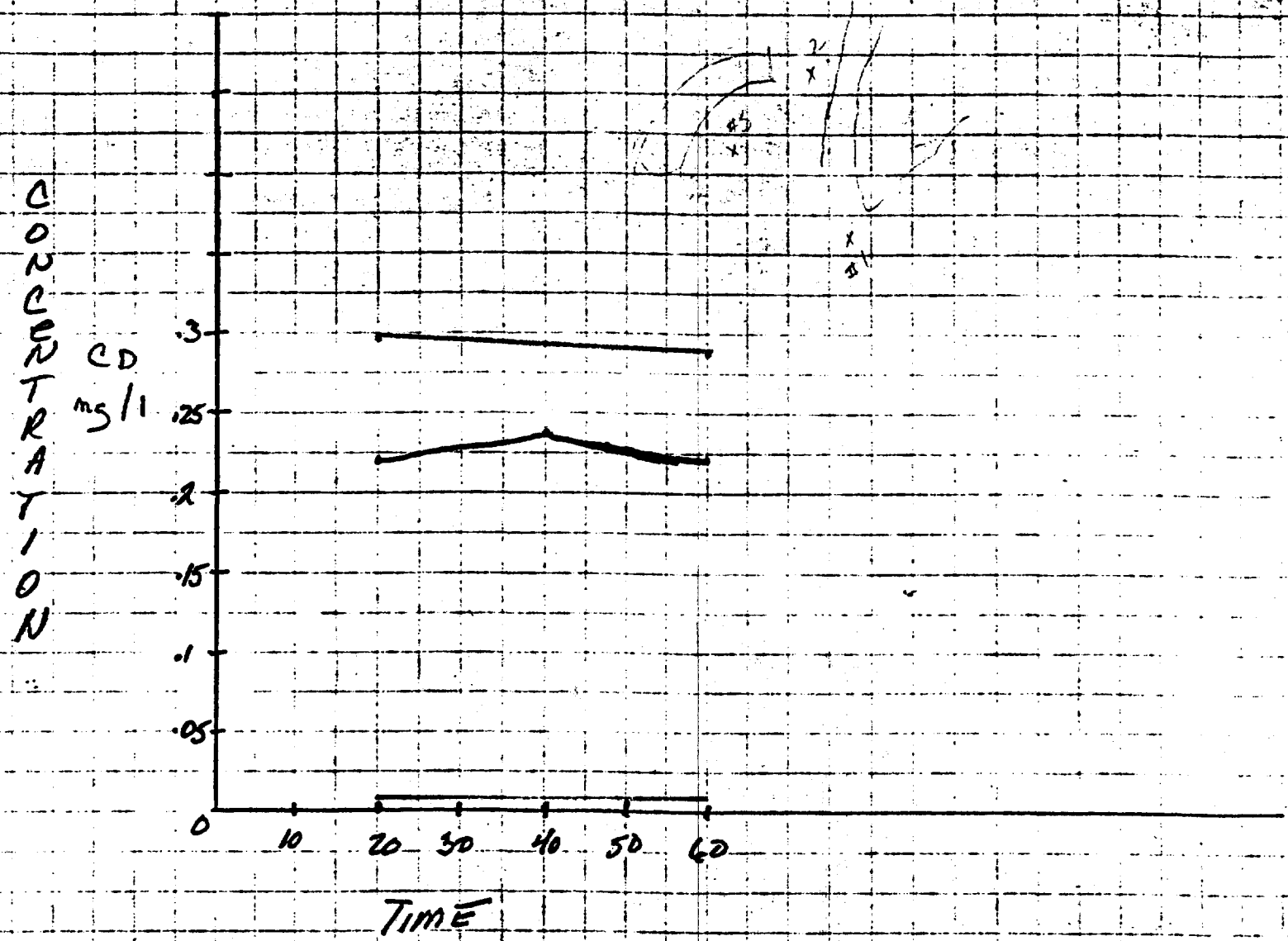

well #1
well #2
well #3
Chloride Metals - Antimony
CONCENTRATION mg/l
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
10
20
30
40
50
60
TIME

Chloride Metals - Pb



CHLORIDE METHES

CADMIUM



well #3
well #2
well #1

Chloride Incorporated

Chloride Metals

3507 50th Street South
P.O. Box 485
Tampa, Florida 33601
Phone (813) 248-3161

5 November 1982

CHLORIDE
RECEIVED
NOV 1 ~ REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Charles Chisholm
Mississippi Department of Natural Resources
Bureau of Pollution Control
South Port Mall
Ellis Avenue
Jackson, MS 39205

Dear Mr. Chisholm:

This letter is to inform The Mississippi Department of Natural Resources, Bureau of Pollution Control that Chloride Battery Division has announced the temporary closing of our Metals Plant in Florence. This plant's temporary closing is due to continued downturn in demand for secondary lead and high operating costs. We evision that this plant will remain closed while the current economic conditions prevail and the secondary lead industry remains depressed. The phase down of operations has begun and we expect the last week of production to be 15 November 1982. Our oxide conversion facility will continue to operate at the smelter location. The Florence Battery Plant is not affected by the temporary shutdown of the smelter.

During the past year Chloride Metals has proceeded with the wastewater treatment system engineering and design with progress reports to the Department. The construction of improved stormwater controls to prevent contaminate contact in the process areas was completed. We have had unforeseen cost overruns on engineering design and construction. In February of this year our consulting firm estimated the cost of a BAT system for the Florence Facility to be $450,000 to $540,000. In August the final engineering specifications and project manual was completed. Copies were also sent to Mr. Jerry Cain. The updated cost estimate is now $700,000. Quite frankly, we do not have the capital available to invest at this facility due to the present economic market conditions. At a future date, when the market improves and we can justify the capital expenditure, we plan to reopen the smelter plant and begin construction on the new wastewater treatment plant.

On 1 July 1982, we were issued NPDES Permit No. MS0033804 with a schedule of compliance. We plan to re-evaluate the Florence Smelter every six months to determine when the plant will reopen. We request that the "B" Schedule of Compliance be modified to reflect our plant closure time:

Item 1.a) Deleted, not applicable because of plant closure.

1.b) On 1 April 1984, or before smelter plant production resumes at a later date, the permitter shall have completed construction of the modifications to their wastewater treatment plant.

1.c) Within 60 days after startup the permitter shall have attained compliance with all of the conditions of this permit.

Also, we request that Section "C" Monitoring and Reporting be suspended until operation is resumed.

The present wastewater treatment system will be deactivated and secured after final smelter production is completed. Our planned schedule of clean up is as follows:

1. Clean and wash down all exterior of smelter yard paved area.

2. Treat all wastewater thru present system.

3. Clean out all oxides from concrete tanks.

4. Ship all remaining scrap lead and oxide to Columbus Smelter for recycle smelting.

5. Fill all concrete tanks with clean sand to prevent refilling with rain water.

6. Clean out and deactivate caustic neutralizing system to prevent possible accidental spills and cold weather damage to system.

7. Cap and seal the drain systems in the smelter building and battery cutting area to prevent reuse and rain water entry.

8. During water treatment shutdown all lead will be stored inside buildings to prevent rain water contamination from runoff.

We hope this plan meets your approval. I assure you every reasonable effort will be made to prevent contaminated runoff during the temporary closure of the smelter.

Let me take this opportunity to thank you and your department for the assistance extended to us in this matter. If you have any questions, please contact me.

Very truly yours,

CHLORIDE METALS

F. L. Barnett

F. L. Barnett
Production Manager

cc: Jerry W. Cain
[redacted]
David Berry

March 25, 1981

Mr. Jerry Cain
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Cain:

RE: Chloride Metals, Inc.

A portion of our staff has reviewed the chloride groundwater study plan dated February 19 and offer the following comments.

1. Deep wells should be located only after adequate study to insure they are not drilled through contaminated soil or aquifer which could contaminate the lower aquifer via the bore hole.

2. An attempt should be made to locate a valid background shallow monitoring well. An off-site location may be necessary.

3. The typical well schematic enclosed only shows the lower five feet as collection area. Since the contaminated area is near the proposed wells, contaminants may not have adequate opportunity to mix within the aquifer to the lower levels. Therefore, screening of the upper levels of the aquifer should be considered.

4. Consideration should be given to sampling springheads in the area, if available. These would offer an inexpensive sampling point.

5. Consider adding acidity to the list of parameters to be analyzed.

If you have questions regarding our comments, please feel free to call on us.

June 9, 1981

Mr. Jerry W. Cain
Industrial Wastewater Control Section
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Cain:

We have reviewed the revisions to Chloride's groundwater contamination study plan and have no comments. However, we request that we be advised of dates of on-site meetings with the firm, so that we may remain informed of progress on this matter.

Sincerely,

David E. Lee

David E. Lee, P. E.
Environmental Engineer
Solid Waste Management Branch

DEL/cs

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

May 27, 1981

Mr. Jack McMillan
State Board of Health
P. O. Box 1700
Jackson, Mississippi 39205

Dear Mr. McMillan:

Re: Chloride Metals, Inc.

Please review the enclosed revisions to Chloride's Groundwater Contamination Study Plan for adequacy and applicability. Additionally, please offer any comments regarding your impending requirement for Chloride to submit a "2B" application.

We intend to have an on site meeting with Chloride and their representatives in the near future. Therefore, please expedite your comments as much as is possible. If you have any questions, please contact me.

Respectfully,

Jerry W. Cain
Industrial Wastewater Control Section

JWC:ls
Enclosures

RECEIVED
JUN 8 '81

RESOURCE CONSULTANTS
environmental engineers and scientists

May 5, 1981

MAY 11 1981

Mr. Jerry W. Cain
Industrial Wastewater Control Section
Bureau of Pollution Control
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, MS 39209

RE: Groundwater Contamination Study Plan
Chloride Metals
Florence Smelter

Dear Mr. Cain:

By your letter dated April 7, 1981, to Mr. Frank L. Barnett, Chloride Metals, you listed the combined comments of the Bureau of Pollution Control, Bureau of Geology and the State Board of Health to the previously submitted groundwater contamination study plan for the Florence Smelter. I have been authorized by Mr. Barnett of Chloride Metals to make this response to the comments presented in your letter of April 7, 1981. You and I discussed this matter at length by telephone on April 23, 1981, and this letter shall serve to formalize the agreements we verbally reached. For the sake of brevity and clarity, the responses to your comments of April 7, 1981, shall be made in the same order and are as follows:

1. The exact locations of the eight shallow groundwater monitoring wells have not been finalized, and we are agreeable to relocating any or all of these eight wells as might be appropriate for more fully achieving the objectives of the groundwater contamination study. This objective can probably be more adequately achieved if representatives of Chloride Metals and officials of the Bureau of Pollution Control meet on site prior to drilling for the purpose of finalizing the location of the eight shallow monitoring wells. Of course, if any of the eight shallow wells is to be located off-site it will be necessary for Chloride Metals to obtain appropriate entry rights; therefore, time within which to achieve such entry rights will be required. In the event entry rights cannot be obtained, it will be necessary to alter the well locations accordingly.

2. It is agreed that the hydrostatic data obtained from the eight shallow wells should be used in effectively locating the four deep monitoring wells. It is agreeable and desirable that representatives of Chloride Metals meet with appropriate representatives of the Bureau after obtaining the hydrostatic data on the shallow wells in an effort to locate the deep wells such that all parties are in agreement. Certainly, as you and I discussed, it is desirable that this coordinated effort be accomplished in such a fashion to minimize any drill rig down time.

P.O. Box 498 • Two Maryland Farms • Suite 340 • Brentwood, Tennessee 37027 • 615-373-5040
a tennessee corporation

3. We proposed to advance the borings using hollow stem augers or by wash-boring using potable water as a drilling fluid. If necessary, drilling mud will be used during the drilling operations. A degradeable type of drilling mud will be used so that water sampling of the Lower Catahoula Aquifer will not be affected. Further, each well will be installed and bentonite seals will be placed immediately upon completion of the drilling operation. The annular space between the casing and the soil will be grouted with neat cement or filled with bentonite. The terrace alluvium will be cased during well installation.

4. An effort will be made to locate a valid background shallow monitoring well. It is my opinion that if the eight shallow monitoring wells are properly located, at least one of the wells will serve as a valid background shallow monitoring well.

5. The shallow monitoring wells will be screened as necessary in order to effectively accomplish the objectives of the groundwater contamination study. Such screening will be based upon the data obtained from the geophysical logging of the shallow wells and will be consistent with agreements that might be reached with the Bureau representatives who are present during the well drilling operations.

6. Consideration will be given to sampling springs in the landfill area. However, at this time we know of the existence of no such springs and would appreciate any such information that might be available to you. A spring, to be an appropriate monitoring point, should be prennial, and it is our impression that any springs in the area would probably be wet weather springs and not conducive to long term groundwater monitoring.

7. We will add acidity to the groundwater sample analytical program as you requested.

I trust this letter serves as an adequate response to your comments of April 7, 1981. We shall be looking forward to hearing from you in order that we might schedule an on-site visit for the purpose of finally locating the eight shallow groundwater monitoring wells. If you or your associates have any further comments or questions, please advise.

Very truly yours,

RESOURCE CONSULTANTS, INC.

V. Wayne McCoy

V. Wayne McCoy, P.E.
Principal

VWM/jd

cc: Mr. Frank L. Barnett
Mr. David Berry, Plant Manager
Mr. L. E. Wilson
Mr. Steven W. Rimmer, Attorney

10/24/84

4AW-ER

Mr. Frank Barnett
Production Manager
Chloride, Inc.
3507 South 50th Street
P.O. Box 1124
Tampa, FL 33601

Dear Mr. Barnett:

The attached analytical data indicates the results of our sampling at the Chloride Metals Division Site in Florence, MS on August 8, 1984. The only material found above detection limits was lead. From the data it does not appear that the lead is moving through the soil in any significant quantities toward the pond or off-site. The low pH (2.8) detected in the "spring" area at the rear of the property is possibly responsible for the dead vegetation at that location.

Based on these analytical results, we do not feel that an emergency cleanup action is warranted at this time. Additional results which will be provided in the FIT site screening study could prove this conclusion premature. It is recommended, however, that any action taken at the site ensure that the lead is not able to migrate through the soil and spread off-site. Possible courses of action to prevent movement might include complete removal of the lead or capping the lead-containing soil with an impermeable barrier. These considerations should be made when addressing an overall solution to the site which should be done when additional FIT data becomes available and in consultation with the State of Mississippi and EPA.

Thank you for your cooperation in our sampling efforts. If you have any questions, please contact me at (404) 881-2930.

Sincerely,

Michael A. Norman
Project Officer

JUN 01 1984

4AN-ER

Mr. Frank Barnett
Production Manager
Chloride, Inc.
3507 South 50th Street
P.O. Box 1124
Tampa, FL 33601
(813) 248-3161

Dear Mr. Barnett:

This letter is to confirm the pending site inspection at the Chloride Metals Division (MSD082002320) site scheduled in a telephone conversation of May 30, 1984 with Ken Richardson of my staff. The site inspection will be conducted during the week of July 9, 1984 by personnel from EPA Region IV's Field Investigation Team (FIT) and Environmental Services Division Team (ESD). Someone from FIT or ESD will contact you prior to the actual site visit to make final arrangements and note any changes.

The persons that will be present fo this on-site inspection are as follows: Johnny Smith (NUS), Tom Duffey (NUS), State personnel and an EPA representative.

Plans have been made to take samples at the site. If you desire split samples, you will be required to furnish your own containers.

Thank you for your cooperation and assistance in this inspection. If you have any questions, please call Ken Richardson at 404/881-2234.

Sincerely yours,

Walton Jones
RCRA §3012 Project Officer
INvestigation & Compliance Section

cc: Doug Lair, ESD, Athens
Murray Warner, NUS
Ron Joyner, EPA Project Officer
Jack McMillan, Director of Solid Waste Management

KRICHARDSON:lge:5/31/84:2234:Lex No:(14)

4AW-ER

Mr. J.C. Brown
Olin Corp.
P.O. Box 248
Charleston, TN 37310
(615) 336-4000

Dear Mr. Brown:

This letter is to confirm the pending site inspection at the Olin Chemicals Group Leland Plant (MSD007035843) site scheduled in a telephone conversation of May 30, 1984, with Ken Richardson of my staff. The site inspection will be conducted during the week of July 9, 1984 by personnel from EPA Region IV's Field Investigation Team (FIT) and Environmental Services Division Team (ESD). Someone from FIT or ESD will contact you prior to the actual site visit to make final arrangements and note any changes.

The persons that will be present for this on-site inspection are as follows: Johnny Smith, Tom Duffey(NUS), State personnel and an EPA representative.

Plans have been made to take samples at the site. If you desire split samples, you will be required to furnish your own containers.

Thank you for your cooperation and assistance in this inspection. If you have any questions, please call Ken Richardson at 404/881-2234.

Sincerely yours,

Walton Jones
RCRA §3012 Project Officer
Investigation & Compliance Section

cc: Doug Lair, ESD, Athens
Murray Warner, NUS
Ron Joyner, EPA Project Officer
Jack McMillan, Director, Division of Solid Waste Management

KRICHARDSON:lge:5/31/84:2234:Lex No(13)

Ron Joiner :

May 9, 1984

The attached information is summary of the data in the Chloride Metals File.

Back in 1980 the facility was under a Commission order to correct the runoff from the process area and upgrade the treatment system. An attached copy of the proposal to do this is enclosed. This was thought to be the reason for the groundwater problem as well as the disposed battery carcasses adjacent to the plant. Evidently because they were under a Commission order, the site was never scored for Superfund.

In November of 1982 the part of the facility that dealt with the old batteries closed and still remains closed. We continued watching the groundwater monitoring results to see if a change in water quality could be detected after ceasing operation. No change has been detected. Two sets of wells were installed at the site. One set by the State and one set later by the facility in 1982.

We would like to begin a process to reach a determination of how bad the situation at the site is and what should be done. The first step seems to be to have the site scored and get EPA involved with us in working towards a resolution of the problems at the site.

The results of analyses in November, 1983 and March, 1984 are being sent to us. We will send you a copy of this as soon as we get it. Also, I realized that

A map indicating the location of the new wells installed in 1982 was not in the file. Chloride Metals will send us a copy of this map and we will forward a copy on to you.

Thanks,
Chuck Estes

1431

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

February 9, 1990

Mr. Brian Farrier
Site Investigation & Support Branch
Waste Management Division
U.S. EPA - Region IV
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Re: **Chloride Metals**
Florence, Mississippi
MSD082002320

Dear Mr. Farrier:

Enclosed is a preliminary reassessment (PAR) report for the above referenced site. If you have any questions about the report, please contact Mr. Michael Slack at (601) 961-5217.

Sincerely,

Jim Hardage

Jim Hardage
Hazardous Waste Division

JH:MS=25
Enclosure

Approved NFRAP
BSJ 2/27/90
Administrative Order
issued 11/20/89

A
PRELIMINARY ASSESSMENT REASSESSMENT(PAR)
REPORT FOR
CHLORIDE METALS
MSD082002320
FLORENCE, MISSISSIPPI

PREPARED FOR:

Brian Farrier
Site Investigation and Support Branch
Waste Management Division - Region IV
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, GA 30365

PREPARED BY:

Michael Slack
Hazardous Waste Division
Mississippi Bureau of Pollution Control (BPC)
P. O. Box 10385
Jackson, Mississippi 39289-0385

REVIEWED AND EDITED BY:

Jim Hardage (BPC)

February 8, 1990

This Preliminary Assessment Reassessment (PAR) Report Includes:

1. Introduction

2. Background

3. Site Description

4. Sampling History

5. Waste Description/Containment

6. Geology/Hydrology

7. The Aquifer of Concern

8. Precipitation

9. Surface Water

10. Sensitive Environments

11. Conclusions and Recommendations

12. Appendix

    (a) HRS II Checklist

    (b) References (1 to 25)

Introduction

The following report is a preliminary assessment reassessment (PAR) of Chloride Metals in Florence, Mississippi. The original preliminary assessment was performed by the State in September, 1982.

County Code:	121
Congressional District:	03
Coordinates:	Latitude: 32° 09' 55" Longitude: 90° 06' 52"
Location:	NW1/4 NE1/4 S29 T4N R2E
Directions to Site:	Chloride Metals (now GNB, Inc.) is reached by traveling south of Jackson on Highway 49 about 11 miles to the Highway 469 exit. Turn left onto Highway 469 and travel about 0.2 to one mile north to northeast. Turn left on Briarhill Road and travel about 0.8 of a mile. Chloride Metals, Incorporated is adjacent to the road on the left side.
Contact Official:	Frank Barnett Director of Environmental Affairs GNB Incorporated P. O. Box 2165 Joy Road Columbus, Georgia 31902
Corporate Headquarters:	GNB Incorporated P. O. Box 64100 St. Paul, MN 55164-0100 Telephone: (612) 681-5100

Background

Chloride Metals began operation in 1972. The facility's operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting (Reference 1).

In November, 1976, Chloride Metals was issued a NPDES permit for discharge of treated wastewater containing lead, copper, and zinc into Indian Creek. The wastewater treatment collection system was designed to settle the insoluble lead oxides, to adjust the pH with sodium hydroxide in order to precipitate the soluble lead, and to filter the effluent. A modification of the company's NPDES permit was issued

in July, 1982, to reflect the discharge of antimony and arsenic. The smelting operation was shut down in November of the same year. During the facility's lead smelting operation, the company had a history of air emission problems as a result of significant lead emissions (References 1, 16, and 25).

In 1980, pursuant to RCRA, Chloride Metals filed a notification for treatment of hazardous wastewater and storage of possible hazardous substances in a waste pile. In 1984, the Mississippi Bureau of Pollution Control (BPC) withdrew Chloride Metals from RCRA interim status (Reference 4).

In 1981, Chloride Metals filed a CERCLA notification with EPA for on-site disposal of possible hazardous substances (Reference 3).

In 1988, GNB purchased the Chloride Metals facility and Chloride Automotive Batteries, both of which are located in Florence, Mississippi (Reference 1).

Currently, GNB has an air emission permit issued by the BPC for the facility's lead oxide process. The permit expires July 1, 1992. As a result of environmental problems at the facility, GNB is currently under an administrative order issued on November 20, 1989, by the Mississippi Department of Environmental Quality (Reference 17 and 25).

Site Description

Chloride Metals consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the on-site pond where battery carcasses were landfilled; and an on-site pond. Wastewater, battery carcasses, and slag waste from blast furnaces were disposed of in the pond. The battery landfill and the pond are both located in an old gravel pit that existed before the facility. Also, wastewater was discharged from the wastewater treatment collection system into a small ditch which empties into Indian Creek (Reference 2 and 10).

The region surrounding the site is heavily forrested. Several residences are located along Briarhill Road, which borders the southeast side of the site. Indian Creek flows in a southerly direction approximately 1000 feet west of the facility (References 2, 9, and 10).

Sampling History

In March, 1980, the Mississippi State Board of Health and the BPC inspected the plant and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated noncompliance with the NPDES permit. Lead, zinc, and the pH in the process wastewater exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic, were found in significant quantities. The BPC recommended that the facility's wastewater treatment procedures

be upgraded and that the NPDES permit be modified to reflect more accurately the actual conditions at the facility (Reference 1 and 10).

In July, 1980, the BPC and the Mississippi Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three on-site monitoring wells to determine whether or not contamination had occurred. The wells were constructed during the first week of August, 1980 (see Reference 13 for sampling results) (Reference 1 and 10).

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed (see Reference 14 for sampling results) (Reference 1 and 10).

In August, 1984, EPA emergency response personnel and FIT sampled the Chloride Metals site. Preliminary results indicated that only one substance, lead, was above detection limits. Based on these results it did not appear that lead was moving through the soil in any significant quantities toward the pond or off-site. Therefore, EPA did not feel that an emergency cleanup action was warranted at that time. EPA stated, however, that additional analytical data from the FIT investigation would be available at a later date and would either confirm or contradict the initial assessment (see Reference 15 for the preliminary results).

In June, 1985, the NUS Corporation submitted the FIT Site Screening Investigation (SSI) report on Chloride Metals. The following is a list of what the investigation consisted of:

1) Collection of four (4) groundwater samples from monitoring wells positioned around the perimeter of the site.

2) Four (4) surface water and sediment samples were collected, two (2) from Indian Creek and one each from the on-site pond and on-site spring area.

3) One (1) composite soil sample was collected from the battery carcass landfill surface.

4) The samples were analyzed for:

    a) purgeable (volatile) organics
    b) extractable and miscellaneous organics
    c) pesticides, PCBs, and other chlorinated compounds
    d) metals
    e) cyanide.

The following tables condensed from the SSI report show the sampling results. Sample codes, presentations of analytical results by station, and a brief description of the sample locations are provided in Reference 16.

Chloride Metals, Inc.
Soil and Sediment Samples
Metals Analyses[a,b]
Results in ug/kg (ppb)
August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	5,500	-	13,000	13,000	52,000
Beryllium*	700	-	300	-	-
Cadmium*	-	300	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
Lead*	3,000	9,300	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	120,000	360,000	560,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
b Data reported on wet weight basis.
* Priority pollutant
\- Material was analyzed for but not detected.

Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses[a,b]
Results in ug/kg (ppb)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	66	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexanol	-	400JN	-	-	-
Cyclohexanone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecane	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P-DDT)*	-	-	100J	100J	-

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
b Data reported on dry weight basis.
* Priority pollutant
J Estimated value
N Presumptive evidence of presence of material.
\- Material was analyzed for but not detected.

Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-IW	CM-P-IW
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp.°C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Conductivity (umhos/cm)	38	38	38	40	-	-	-	-
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-84
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Chloride Metals, Inc.
Water Samples
Metals Analyses[a]
Results in ug/l (ppb)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-IW	CM-P-IW
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Chloride Metals, Inc.
Water Samples
Organic Analyses[a]
Results in ug/l (ppb)
August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-IW	CM-P-IW
Purgeable & Miscellaneous Organics								
Methylene Chloride*	43	33	33	43	33	23	23	23
Chloroform*	-	23	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	33
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	33	-	-	-	-	-
Di-N-Butylphthalate*	33	93	200	53	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected.
NA Not applicable
a This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

In August, 1988, monitor wells at the site were sampled by the GNB consultant. The results revealed the presence of lead and cadmium above drinking water standards, and laboratory pH ranges from 3.5 to 5.6 (References 1, 17, and 18).

Waste Description/Containment

According to site visits in 1980 by the BPC, slag waste from the facility's blast furnaces and battery carcasses were disposed of in the old gravel pit. The battery cases were supposed to be cleaned before disposal; however, it was noted by the inspectors that many of the discarded battery containers were not cleaned and therefore acidic residues flowed into the gravel pit instead of the wastewater treatment system. The wastewater treatment system did not have enough freeboard, thus allowing overflow wastewater containing acid and possibly heavy metals to flow into the gravel pit. It was estimated that five million battery carcasses were disposed of in the gravel pit (Reference 1).

Past site visits also revealed that materials, including lead and red phosphorus used in the plant processes, and antimony, removed from the lead during the smelting process, were stored outside the plant process buildings. No explanations were given by the plant manager concerning what happened to the materials pile when it became too large to be stored in such a fashion (Reference 1).

Containment of the materials pile was unsound. The materials were unconsolidated, uncovered, and thus exposed to the environment, and had no diversion system. The gravel pit was also uncovered and had no diversion system.

The hazardous substances of concern are lead, copper, zinc, arsenic, antimony, chromium, and cadmium, all of which are inorganic priority pollutants (see Reference 16 for additional substances).

The total quantity of hazardous substances at the site, including the the waste pile, the pond, the battery landfill, and the wastewater treatment system, is not known, so the maximum waste quantity ($>$ 2500 cubic yards) is assumed. The physical states of the hazardous substances at the time of storage and/or disposal were solids, liquids, and sludges. Arsenic, lead, copper and chromium have a severe toxicity and are highly persistent.

Geology/Hydrology

The stratigraphic units below the site in descending order from the youngest (surficial) unit to the oldest fresh waterbearing unit are as follows: Terrace Deposits, Catahoula Formation, Vicksburg Group (Undifferentiated), Forrest Hill Formation, Jackson Group (Yazoo Clay Formation and Moody's Branch Formation), Cockfield Formation, Cook Mountain Formation, and Kosciusko Formation.

The site and surrounding area is developed on a stream terrace deposit which is underlain by the Catahoula Formation. The terrace deposit is approximately 12 to 20 feet thick and is lithogically characterized by an admixture of consolidated sand, silt, and clay (Reference 10 and 11).

The Catahoula Formation, which outcrops along the northeastern property line of the site, is lithologically characterized by sand, sandstone, siltstone, and clay. Sands are present primarily in lenses and discontinuous beds that grade laterally and vertically to silt and clay. Geophysical logs in proximity to the site and other information indicates that the Catahoula Formation extends to a depth of approximately 120 feet below the land surface. The upper part (upper 50 feet) of the Catahoula consists of sand, sandstone, and silty clay which grades downward through a dense siltstone and a clay layer with a minimum thickness of approximately 50 feet. Underlying the clay layer is a sand layer approximately 20 feet in thickness (References 2, 5, 11, and 12).

Samples obtained from observation wells on-site (see Sampling History section) indicate groundwater contamination in the terrace deposits and upper sand lenses of the Catahoula (upper 50 feet). Boring logs and other information indicate that any percolation downward from contaminated shallow groundwater would probably be restricted by the clay layer mentioned above. A computer printout from the U.S.G.S. WATSTORE data base indicates 7 domestic private wells completed in the Catahoula within a three-mile radius of the site. The shallowest of these wells is screened at a depth of approximately 50 feet below the land surface. The average hydraulic conductivity of the Catahoula is approximately 1×10^{-5} cm/s (References 2, 11, and 19). The dip of the base of the Catahoula averages 33 ft/mi (6.2 m/km) with the direction of water movement to the south (Reference 20).

The formations of the Vicksburg Group (Undifferentiated) are composed of discontinuous interbedded marls, limestones, and sands. The lower formations of the Vicksburg Group and the underlying Forrest Hill Formation are referred to as the Oligocene aquifer system. The Forrest Hill Formation consists of clay, silt, and irregular sand beds. Geophysical logs of wells in proximity to the site indicate that the Forrest Hill Formation, i.e., the base of the Oligocene aquifer system, extends to a depth of approximately 240 feet below the land surface. The top beds of the Vicksburg Group and the underlying Yazoo Clay effectively isolates the Oligocene aquifer system from other aquifers (References 12, 21, and 22).

The computer printout from U.S.G.S. data base indicates that approximately 40 domestic private wells are completed in the Vicksburg Group Formation and the Forrest Hill Formation (Oligocene aquifer system) within a three-mile radius of the site. The average hydraulic conductivity of the Oligocene aquifer system is approximately 30 ft/mi (5.6 m/km) (References 19, 20, and 21).

The Jackson Group consists of the Yazoo Clay Formation and the Moody's Branch Formation. The Yazoo Clay Formation, which consists of blue-green, fossiliferous, calcareous clay, is a confining bed several hundred feet thick. The average hydraulic conductivity of the Yazoo Clay is approximately 1×10^{-7} cm/s (References 8 and 12). The Moody Branch, which underlies the Yazoo Clay, is generally not an aquifer and consists of a 15 to 40 foot sequence of glauconitic, fossiliferous marl and sand. Geophysical logs of wells in proximity to the site and other information indicate that the Jackson Group extends to a depth of approximately 700 feet below the land surface (Reference 10 and 12).

The Cockfield is an important source of water supply in Rankin County. This formation consists of sand, shale and lignite. The water bearing beds consist of fine-grained, micaceous sand. Geophysical logs of wells in proximity to the site and other information indicate that the base of the Cockfield extends to approximately 1,050 feet below the land surface (Reference 12 and 20).

The Cockfield dips to the southwest approximately 20 ft/mi (3.8 m/km) with water movement from east to west. Hydraulic characteristics determined from 12 aquifer tests revealed transmissivities ranging from 1,300 to 7,300 $(ft^3/d)/ft$ (120 to 680 $m^3/d/m$) and hydraulic conductivities ranging from 23 to 100 $(ft^3/d)ft^2$ (7.0 to $30(m^3/d)/m^2$. The underlying Cook Mountain Formation and the overlying Yazoo Clay are confining units for the Cockfield (Reference 20 and 21). The Kosciusko (Sparta Sand) directly underlies the Cook Mountain.

The Aquifer of Concern

The Cockfield aquifer is the aquifer of concern (AOC). The Cockfield aquifer provides drinking water for approximately 5704 people within the three-mile radius of the site. This is based on 8 public water supply wells and 9 domestic private wells located and identified on the U.S.G.S. data base printout. Two additional public water supply wells (Southern Rankin WA #2 - #P089, #P0101) occur in the deeper Sparta Sand. According to the Mississippi State Department of Health, Division of Water Supply, the water from these deeper wells is blended with the water from public water supply well #P055 (Southern Rankin WA #2) located in the Cockfield (Reference 7 and 19).

The depth from the hazardous substances to the water-bearing unit of the AOC is approximately 650 feet, assuming the vertical extent of groundwater contamination is approximately 50 feet below the land surface (see Geology/Hydrology Section). The public water supply wells and domestic private wells in the AOC are screened from approximately 840 feet below the land surface to a maximum depth of approximately 1,000 feet. No other drinking water source is presently available. The least permeable continuous layer between the hazardous substances (lowest point of contamination) and the Cockfield is the Yazoo Clay. The Yazoo Clay is several hundred feet thick with a relative permeability of 1×10^{-7} cm/s (Reference 8 and 19).

The nearest well in the AOC is a public water supply well for the city of Florence. It is located approximately 740 feet northwest of the site. This well is identified as U.S.G.S. #P099 on the topographic map (Reference 9) and the U.S.G.S. data base printout (Reference 19). This well is screened at a maximum depth of approximately 917 feet below the land surface (Reference 9 and 19).

Precipitation

A humid-subtropical climate prevails over southwest-central Mississippi. Mean annual precipitation in the area is approximately 51 inches or 1295 mm. December is the wettest month with an average precipitation of more than 5 inches (130 mm), and October is the driest with more than 2 inches (50 mm). The mean annual relative humidity is 70 percent (Reference 20).

The mean annual lake evaporation for the area is approximately 45 inches. The net annual precipitation of the area is about 6 inches. The 1-year, 24-hour rainfall is approximately 3.8 inches (Reference 8).

Surface Water

Chloride Metals is located part way up a large ridge which plunges southwest into a large floodplain created by the Indian, Butler, and Steen Creeks (Reference 2 and 9).

The nearest perennial downslope surface water is identified on the topographic map as Indian Creek. Indian Creek flows in a southerly direction approximately 1,000 feet west of the facility. A ditch, located on-site, flows in a westerly direction adjacent to the wastewater collection system and empties into Indian Creek (Reference 2 and 9).

Lead was detected in soil and sediment samples and water samples taken from the on-site ditch. Lead was also detected in stream sediment samples taken from Indian Creek, with the downstream sample containing three (3) times the level of the upstream sample. Concentrations were highest in the samples collected from the on-site ditch (see Reference 16).

The three-mile migration pathway begins in Indian Creek approximately 800 feet west of the on-site pond. This is the most downstream point of documented sediment contamination. From this point Indian Creek flows in a southerly direction for approximately 7700 stream feet before it intersects Steen Creek. From this intersection, Steen Creek flows in a southwesterly direction. The three-mile migration pathway ends in Steen Creek approximately 8140 stream feet southwest of the intersection of Indian Creek with Steen Creek (Reference 9).

According to the Mississippi Bureau of Land and Water Resources, there are no surface water intakes along the three-mile migration pathway. It is assumed that Indian Creek and Steen Creek are used for recreational purposes such as fishing, boating, and swimming (Reference 6).

Environmental Concerns

There are no critical habitats of federal endangered species or national wildlife refuges within one mile of the site along the surface water migration pathway (Reference 24).

Topographic maps of the Chloride Metals site and the surrounding area indicate no wetlands along the migration pathway (Reference 9).

Conclusions and Recommendations

The Bureau of Pollution Control recommends that no further remedial action be planned for the site under CERCLA. However, as previously stated, GNB is presently under Administrative Order No. 1677-89 issued by the Mississippi Department of Environmental Quality for further site assessment and remediation.

REFERENCES

1. Information on Chloride Metals, from the Mississippi Bureau of Pollution Control, Hazardous Waste Division (BPC, HWD) files.

2. Locations and Sketch Maps of Chloride Metals, From BPC, HWD files.

3. Potential Hazardous Waste Site Preliminary Assessment of Chloride Metals, Florence, Mississippi, Prepared by Jim Hardage of Mississippi BPC, September 24, 1982.

4. Chloride Metals, RCRA Notification Forms 3510-1, 3510-3, and 8700-13.

5. Drillers Logs of Water Wells near Chloride Metals from the Mississippi Bureau of Land and Water Resources.

6. Information on Groundwater and Surface Water Use from the Mississippi Bureau of Land and Water Resources.

7. Information on Public Water Supply Wells in Florence, Mississippi, from the Water Supply Division, Mississippi State Department of Health.

8. EPA HRS Guidance Manual

9. Topographic Maps of Chloride Metals:

   Whitfield Quadrangle 7.5 Minute Series,
   Florence Quadrangle 7.5 Minute Series,
   Whites 7.5 Minute Series,
   Star Quadrangle 7.5 Minute Series.

10. Rankin County Geology and Mineral Resources, Bulletin 115, Mississippi Geological Economic and Topographical Survey, Jackson, Mississippi, 1971.

11. Mississippi Geological Survey, Information on Groundwater Monitoring Wells at Chloride Metals, Florence, Mississippi, August, 1980.

12. Geophysical Logs of Water Wells near Chloride Metals, Florence, Mississippi.

13. Sampling Results at Chloride Metals, Mississippi State Board of Health and Mississippi BPC, August, 1980.

14. Chloride Metals Sampling Results Submitted by Resource Consultants to the BPC, Hazardous Waste Division (HWD), November 25, 1981.

15. Letter and Analytical Data Submitted to the Mississippi BPC from EPA Regarding Chloride Metals, October 31, 1984.

16. Site Screening Investigation (SSI) Report, Chloride Metals Corporation, Florence, Mississippi, NUS Corporation, June 17, 1985, pp. 1-11 (i.e., Tables).

17. Letter and Administrative Order No. 1677-89 Issued by the Mississippi Department of Environmental Quality to GNB, November 20, 1989.

18. Letter and Analytical Data Submitted by GNB Inc., to Mississippi BPC Regarding Sampling Conducted at Chloride Metals Site in August, 1988.

19. Printout from U.S. Geological Survey Data Base of All Wells within A Three-mile Radius and Four-mile Radius of Chloride Metals.

20. Water for Municipal and Industrial Development in Hinds, Madison, and Rankin Counties, Mississippi, A Cooperative Study Sponsored by the U.S. Geological Survey and the Mississippi Research and Development Center, 1979, Jackson, Mississippi, pp. 3, 8, 10, 11, 12, 62-74.

21. Characterization of Aquifers Designated as Potential Drinking Water Sources in Mississippi, Water - Resources Investigations Open - File Report 81-550, Jackson, Mississippi, 1982, pp. 21-29.

22. Sources for Water Supplies in Mississippi, A Cooperative Study Sponsored by the U.S. Geological Survey and the Mississippi Research and Development Center, Jackson, Mississippi, Revised 1986, p. 36.

23. Integrated Risk Information System (IRIS).

24. U.S. Fish and Wildlife Service, Vicksburg Office, Species List; U.S. Fish and Wildlife Service, Jackson, Office, Topographic Maps Indicating Sensitive Environments.

25. Information on Chloride Metals, from Mississippi BPC, Air Division Files.

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

CHLORIDE METALS
EPA SITE NUMBER MSD082002320
FLORENCE
RANKIN COUNTY, MS
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY MICHAEL T SLACK
OF MS BPC
ON 01/23/90

DATE OF THIS REPORT: 01/24/90
DATE OF LAST MODIFICATION: 01/24/90

GROUND WATER ROUTE SCORE	:	29.93
SURFACE WATER ROUTE SCORE	:	10.91
AIR ROUTE SCORE	:	0.00
MIGRATION SCORE	:	18.42

AOC = Cockfield
Assuming a Maximum
Waste Quantity (> 2500 yd^3).

M.S.

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0
2. ROUTE CHARACTERISTICS			
DEPTH TO WATER TABLE	700 FEET		
DEPTH TO BOTTOM OF WASTE	50 FEET		
DEPTH TO AQUIFER OF CONCERN	650 FEET	0	0
PRECIPITATION	51.0 INCHES		
EVAPORATION	45.0 INCHES		
NET PRECIPITATION	6.0 INCHES	2	2
PERMEABILITY	1.0X10-7 CM/SEC	0	0
PHYSICAL STATE		3	3
TOTAL ROUTE CHARACTERISTICS SCORE:			5
3. CONTAINMENT		3	3
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:ARSENIC			18
WASTE QUANTITY CUBIC YDS	2501		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	2501 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
GROUND WATER USE		3	9
DISTANCE TO NEAREST WELL	730 FEET		
AND	MATRIX VALUE	35	35
TOTAL POPULATION SERVED	5704 PERSONS		
NUMBER OF HOUSES	9		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	1492		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			44

GROUND WATER ROUTE SCORE (Sgw) = 29.93

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	YES	45	45
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER			
SITE WITHIN CLOSED BASIN			
FACILITY SLOPE			
INTERVENING SLOPE			
24-HOUR RAINFALL			
DISTANCE TO DOWN-SLOPE WATER			
PHYSICAL STATE			
TOTAL ROUTE CHARACTERISTICS SCORE:			N/A
3. CONTAINMENT			N/A
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:LEAD			18
WASTE QUANTITY CUBIC YDS	2501		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	2501 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
SURFACE WATER USE		2	6
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	NONE		
FRESH-WATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	> 3 MILES		
AND	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			6

SURFACE WATER ROUTE SCORE (Ssw) = 10.91

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0

2. WASTE CHARACTERISTICS

REACTIVITY:

MATRIX VALUE

INCOMPATIBILITY

TOXICITY

WASTE QUANTITY CUBIC YARDS
DRUMS
GALLONS
TONS

TOTAL

TOTAL WASTE CHARACTERISTICS SCORE: N/A

3. TARGETS

POPULATION WITHIN 4-MILE RADIUS
- 0 to 0.25 mile
- 0 to 0.50 mile
- 0 to 1.0 mile
- 0 to 4.0 miles

DISTANCE TO SENSITIVE ENVIRONMENTS
- COASTAL WETLANDS
- FRESH-WATER WETLANDS
- CRITICAL HABITAT

DISTANCE TO LAND USES
- COMMERCIAL/INDUSTRIAL
- PARK/FOREST/RESIDENTIAL
- AGRICULTURAL LAND
- PRIME FARMLAND
- HISTORIC SITE WITHIN VIEW?

TOTAL TARGETS SCORE: N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: CHLORIDE METALS
AS OF 01/24/90

GROUND WATER ROUTE SCORE

ROUTE CHARACTERISTICS		5
CONTAINMENT	X	3
WASTE CHARACTERISTICS	X	26
TARGETS	X	44

= 17160 /57,330 X 100 = 29.93 = S_{gw}

SURFACE WATER ROUTE SCORE

OBSERVED RELEASE		45
WASTE CHARACTERISTICS	X	26
TARGETS	X	6

= 7020 /64,350 X 100 = 10.91 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE 0 /35,100 X 100 = 0.00 = S_{air}

SUMMARY OF MIGRATION SCORE CALCULATIONS

	S	S^2
GROUND WATER ROUTE SCORE (S_{gw})	29.93	895.80
SURFACE WATER ROUTE SCORE (S_{sw})	10.91	119.03
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S^2_{gw} + S^2_{sw} + S^2_{air}$		1014.83
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}$		31.86
$S_M = \sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}/1.73$		18.42

HAZARD RANKING SYSTEM SCORING SUMMARY

FOR

CHLORIDE METALS (FLORENCE)
EPA SITE NUMBER MSD082002320
FLORENCE
RANKIN COUNTY, MS
EPA REGION: 4

SCORE STATUS: IN PREPARATION

SCORED BY MICHAEL T SLACK
OF MS BPC
ON 02/09/90

DATE OF THIS REPORT: 02/09/90
DATE OF LAST MODIFICATION: 02/09/90

GROUND WATER ROUTE SCORE	:	28.57
SURFACE WATER ROUTE SCORE	:	10.91
AIR ROUTE SCORE	:	0.00
MIGRATION SCORE	:	17.68

AOC - Catahoula
Assuming a Maximum
Waste Quantity (> 2500 yd^3).
M.R.

HRS GROUND WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	YES	45	45
2. ROUTE CHARACTERISTICS			
DEPTH TO WATER TABLE			
DEPTH TO BOTTOM OF WASTE			
DEPTH TO AQUIFER OF CONCERN			
PRECIPITATION			
EVAPORATION			
NET PRECIPITATION			
PERMEABILITY			
PHYSICAL STATE			
TOTAL ROUTE CHARACTERISTICS SCORE:			N/A
3. CONTAINMENT			N/A
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:ARSENIC			18
WASTE QUANTITY CUBIC YDS	2501		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	2501 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
GROUND WATER USE		2	6
DISTANCE TO NEAREST WELL	3700 FEET		
AND	MATRIX VALUE	8	8
TOTAL POPULATION SERVED	27 PERSONS		
NUMBER OF HOUSES	7		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			14

GROUND WATER ROUTE SCORE (Sgw) = 28.57

HRS SURFACE WATER ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	YES	45	45
2. ROUTE CHARACTERISTICS			
SITE LOCATED IN SURFACE WATER			
SITE WITHIN CLOSED BASIN			
FACILITY SLOPE			
INTERVENING SLOPE			
24-HOUR RAINFALL			
DISTANCE TO DOWN-SLOPE WATER			
PHYSICAL STATE			
TOTAL ROUTE CHARACTERISTICS SCORE:			N/A
3. CONTAINMENT			N/A
4. WASTE CHARACTERISTICS			
TOXICITY/PERSISTENCE:LEAD			18
WASTE QUANTITY CUBIC YDS	2501		
DRUMS	0		
GALLONS	0		
TONS	0		
TOTAL	2501 CU. YDS	8	8
TOTAL WASTE CHARACTERISTICS SCORE:			26
5. TARGETS			
SURFACE WATER USE		2	6
DISTANCE TO SENSITIVE ENVIRONMENTS		0	0
COASTAL WETLANDS	NONE		
FRESH-WATER WETLANDS	NONE		
CRITICAL HABITAT	NONE		
DISTANCE TO STATIC WATER	> 3 MILES		
DISTANCE TO WATER SUPPLY INTAKE	> 3 MILES		
AND	MATRIX VALUE	0	0
TOTAL POPULATION SERVED	0		
NUMBER OF HOUSES	0		
NUMBER OF PERSONS	0		
NUMBER OF CONNECTIONS	0		
NUMBER OF IRRIGATED ACRES	0		
TOTAL TARGETS SCORE:			6

SURFACE WATER ROUTE SCORE (Ssw) = 10.91

HRS AIR ROUTE SCORE

CATEGORY/FACTOR	RAW DATA	ASN. VALUE	SCORE
1. OBSERVED RELEASE	NO	0	0

2. WASTE CHARACTERISTICS

REACTIVITY:

MATRIX VALUE

INCOMPATIBILITY

TOXICITY

WASTE QUANTITY CUBIC YARDS
DRUMS
GALLONS
TONS

TOTAL

TOTAL WASTE CHARACTERISTICS SCORE: N/A

3. TARGETS

POPULATION WITHIN 4-MILE RADIUS
- 0 to 0.25 mile
- 0 to 0.50 mile
- 0 to 1.0 mile
- 0 to 4.0 miles

DISTANCE TO SENSITIVE ENVIRONMENTS
- COASTAL WETLANDS
- FRESH-WATER WETLANDS
- CRITICAL HABITAT

DISTANCE TO LAND USES
- COMMERCIAL/INDUSTRIAL
- PARK/FOREST/RESIDENTIAL
- AGRICULTURAL LAND
- PRIME FARMLAND
- HISTORIC SITE WITHIN VIEW?

TOTAL TARGETS SCORE: N/A

AIR ROUTE SCORE (Sa) = 0.00

HAZARD RANKING SYSTEM SCORING CALCULATIONS
FOR
SITE: CHLORIDE METALS (FLORENCE)
AS OF 02/09/90

GROUND WATER ROUTE SCORE

OBSERVED RELEASE		45
WASTE CHARACTERISTICS	X	26
TARGETS	X	14

= 16380 /57,330 X 100 = 28.57 = S_{gw}

SURFACE WATER ROUTE SCORE

OBSERVED RELEASE		45
WASTE CHARACTERISTICS	X	26
TARGETS	X	6

= 7020 /64,350 X 100 = 10.91 = S_{sw}

AIR ROUTE SCORE

OBSERVED RELEASE 0 /35,100 X 100 = 0.00 = S_{air}

SUMMARY OF MIGRATION SCORE CALCULATIONS

	S	S^2
GROUND WATER ROUTE SCORE (S_{gw})	28.57	816.24
SURFACE WATER ROUTE SCORE (S_{sw})	10.91	119.03
AIR ROUTE SCORE (S_{air})	0.00	0.00
$S^2_{gw} + S^2_{sw} + S^2_{air}$		935.27
$\sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}$		30.58
$S_M = \sqrt{(S^2_{gw} + S^2_{sw} + S^2_{air})}/1.73$		17.68

APPENDIX

APPENDIX A

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site Name: Chloride Metals

City, County, State: Florence, Rankin, Mississippi

EPA ID No.: MSD082002320

Person responsible for form: Michael Slack, Bureau of Pollution Control, Jackson, Mississippi 39289-0385

Date: February 8, 1990

Air Pathway

Describe any potential air emission source onsite: During the facility's lead smelting operation, the company had a history of air emission problems (lead). Presently, GNB (current owner) has an air emission permit issued by the Mississippi BPC for the facility's lead oxide process. This process involves melting lead and converting it to lead oxide.

Identify any sensitive environments within 4 miles: Numerous residences are located along Briarhill Road, which borders the southeast side of the site. The town of Florence is located approximately 1.5 miles southwest of the site.

Identify the maximally exposed individual (nearest residence or regularly occupied building workers do count): The nearest residence is located on Briarhill Road approximately 300 feet southeast of the facility.

Groundwater Pathway

Identify any areas of karst terrain: N/A

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: Overlying aquifer units to the AOC in ascending order are the Forrest Hill Formation and the Vicksburg Group (Undifferentiated), which are referred to as the Oligocene aquifer system, and the Catahoula Formation. Approximately forty (40) domestic private wells are completed in the Oligocene aquifer system (40 x 3.8 =152) within the three-mile radius from the site. Approximately seven (7) domestic private wells are completed in the Catahoula Formation (7 x 3.8 = 27) within the three-mile radius from the site.

Do significant targets exist between 3 and 4 miles from the site? Yes
There are three (3) public water supply wells and approximately ten (10) domestic private wells completed in the AOC between 3 and 4 miles from the site that serve an estimated population of 3169.

Is the AOC a sole source aquifer according to Safe Drinking Water Act: (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flager County, Florida)

No

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway?
The migration pathway begins in Indian Creek approximately 800 feet west of the on-site pond. This is the most downstream point of documented contamination. From this point Indian Creek flows in a southerly direction for approximately 7700 stream feet before it enters Steen Creek. Steen Creek, from this intersection, flows in a southwesterly direction. The 15-mile migration pathway ends in Steen Creek approximately 13.54 stream miles southwest of the intersection of Indian Creek and Steen Creek.

According to the Mississippi Bureau of Land and Water Resources, Jackson, Mississippi, there are no surface water intakes along the extended migration pathway.

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway?

It is assumed that Indian Creek and Steen Creek are used for recreational purposes (fishing, boating, swimming).

According to the topo maps there are some wetlands along steen Creek. These wetlands are greater than 10 stream miles from the beginning point of the migration pathway.

There are no critical habitats of federal endangered species, or national wildlife refuges along the extended pathway. Other sensitive environments listed in Table 2-18 of the Proposed Revised HRS Manual but not shown on the topo maps were not addressed.

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher?
Yes

Is the site accessible to non-employees (workers do not count)? Yes

Are there residences, schools, or daycare centers onsite or in close proximity?
Yes. Several Residences are located along Briarhill Road, which borders the southeast side of the site.

Are there barriers to travel (e.g., a river) within one mile? Yes. Indian Creek, which flows in a southerly direction approximately 1000 feet west of the facility, is a barrier to travel.

APPENDIX B

T

May 88

CHLORIDE METALS CORPORATION

Florence, Mississippi

Site Description

The plant was located on Briarhill Road, one-half (½) mile north of State Highway 469 in Florence, Rankin County, Mississippi. Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting.

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slug waste from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1,000 feet to the west of the site.

CHLORIDE METALS CORPORATION

Florence, Mississippi

Site History

1972	Began battery cracking and lead recovery operations. Wastewater, battery carcasses and slug wastes were disposed in an onsite pond.
8/76	BPC issued an order to Chloride Metals to upgrade its wastewater treatment facilities due to possible groundwater contamination concerns of the Board of Health.
3/80	Board of Health and the BPC inspected the plant and samples were taken. The results indicated noncompliance with the current NPDES permit. Lead, zinc and pH in the process wasterwater exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of Lead. Also, antimony, nitrite and arsenic were found in significant quantities.
7/80	BPC ordered three (3) onsite monitoring wells to determine whether contamination had occurred in the groundwater.
1/81	BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater. Eight (8) additional monitoring wells were installed by early 1982.
7/82	A modified NPDES permit was issued.
11/82	The smelter was shut down.
2/84	Permit Board formally terminates interim status for facility.
8/84	Site Screening Investigation by NUS.
8/86	Submitted closure plan for "closure in place" and waiting for BOPC comments.
8/88	Monitor wells sampled to verify contamination. The parameters lead, cadmium, and pH indicated areas of concern from the results.

CHLORIDE METALS

FLORENCE, MISSISSIPPI

SAMPLING EVENT ON AUGUST 16, 1988

OW - 4	OW - 5	OW - 6
Lead - 0.21 mg/l	Lead - 0.013 mg/l	Lead - 0.028 mg/l
Field pH - 4.0	Field pH - 4.1	Field pH - 3.6
Cadmium - 0.054 mg/l	Cadmium - 0.047 mg/l	Cadmium - 0.06 mg/l

OW - 7	OW - 8 (upgradient)
Lead - 0.044 mg/l	Lead - 0.005 mg/l
Field pH - 3.7	Field pH - 4.9
Cadmium - 0.55 mg/l	Cadmium - 0.004 mg/l

	MCL
Lead	- 0.05 mg/l
Cadmium	- 0.01 mg/l

JT:mes8

BRIEF SUMMARY ON CHLORIDE METALS

The first inspection of Chloride Metals, by the State Board of Health personnel, during the year of 1980, occurred on March 13. The inspector accompanied personnel from the Bureau of Pollution Control. An inspection was made of the plant buildings and grounds, the waste water treatment system, and the plant disposal site. At this time, samples were taken including samples from plant run-off and the waste water treatment lagoon.

After sampling, the disposal site, an abandoned gravel pit containing waster at its lower end was inspected. Used battery containers and slag waste from the facilities blast furnaces are disposed in the pit. The battery cases are supposed to be cleaned before disposal, but it was noted by the inspectors that many of the battery containers are not cleaned before disposal occurs.

After this inspection, the Bureau of Pollution Control started enforcement sampling. This sampling continued throughout the month of March 1980 and into the month of April. Analysis of the samples taken showed high concentrations of lead, zinc, and sulfates.

On July 28, 1980, a meeting was held to discuss the possibiltiy of groundwater contamination stemming from Chloride Metals. Attending the meeting were personnel from the Bureau of Polluion Control, the Division of Solid Waste, and the Bureau of Geology. Decisions were made to install monitoring wells on Chloride Metal property to determine if groundwater contamination had occurred and to what extent.

Later during the week of July 28th, personnel from the Division of Solid Waste accompanied the Bureau of Geology to the Chloride Metal disposal site. A hand auger was used to determine water table levels.

During the week of August 4 through August 8, 1980, personnel from the Bureau of Geology installed and developed three monitoring wells at Chloride Metals. Samples were taken from the wells on August 8, 1980. The wells were pumped at a continuous flor rate for one hour each. The pH and water temperature were monitored throughout the pumping.

Samples were pulled from each well at twenty minute intervals. Portions of each well sampling were composited and then divided between the Bureau of Pollution Control and the State Board of Health. The composites shall be analyzed by the two agencies laboratories. The remainder of the samples shall be run, if necessary, by the Bureau of Pollution Control Lab.

The analyses shall be interpreted by the various agencies involved; and from the presence or absence of contaminants, the need for further monitoring will be established. If enforcement is needed, action will be taken.

INDUSTRIAL WASTE DISPOSAL INVENTORY

County Rankin
Date 9-17-79

NAME OF PERSON COMPLETING FORM: F. Clark

NAME OF INDUSTRY: Chloride Metals

LOCATION (Complete Address): P. O. Box 372
Florence, Ms. 39073

CHARACTERISTICS OF WASTE (Check one):

Liquid x
Solid x
Semi-Solid

VOLUME OF WASTE PER DAY (Fill in appropriate blank):

Pounds 40,000-50,000 a month
Gallons
Yards
Other

WASTE DISPOSED: On Site x
Off Site

COMPLETE THE FOLLOWING:

Type of Site: Landfill x for solid
Lagoon
Land Spreading
Other unnamed tributory for liquid
Explain: approved by Air and Water

Site Operated by Whom: Name Chloride Metals

Address same as above

Location of Site: Township 4N
Range 2E
Section 20
Quarter Section

Rankin

FORM NO. MHW-101-A

HAZARDOUS WASTE INSPECTION FORM
(Complete Legibly)

INSPECTION BY Freddie A. Roberts
DATE OF INSPECTION 12-17 1946 TIME 1:45 a.m./p.m.

PART I - INSTALLATION DATA

1-INSTALLATION E.P.A. I.D. NO. M/S/D/0/8/2/0/0/2/3/2/0/

2-NAME OF INSTALLATION Chloride metal, Dive Chloride, Inc.

3-IF SUBSIDIARY, NAME OF PARENT CO.

4-INSTALLATION MAILING ADDRESS Briar Hill Rd

Florence	MS	39073	845-2281
City	State	Zip Code	Phone Number

5-LOCATION OF INSTALLATION PO. BOX 373
Street

Florence	MS	39073	845-2281
City	State	Zip Code	Phone Number

6-INSTALLATION CONTACT PERSON Mr. David Berry

TITLE Plant Manager 845-2281
Phone #/Extention

7-SIC CODE FOR PRINCIPLE PRODUCTS (4-DIGIT NO.)

a. 3341
b. 3565
c.
d.
e.
f.

8-IN-HOUSE WASTE TREATMENT CAPABILITIES

On-Site Waste Treatment X Yes ____ No
POTW Discharge X Yes ____ No - Domestic Sewage
NPDES No. MS0033804 To Be Built By __/__/__

9-AIR POLLUTION CONTROL DEVICES X Yes ____ No Operating under Commission Order

Permit No. Type(s) Wet scrubber Griffin Envir reverse air, Griffen Pulse jet, wheelabrator shacker, + Mikro pul jet Venturie wet scrubber
To Be Built ____ Yes ____ No By __/__/__

PART II - WASTE DATA

1-GENERATOR Chloride SPECIFIC WASTE Rubber Cases

2-DESCRIBE PROCESS PRODUCING WASTE Battery ~~Salt~~ Saw

3-MONTHLY WASTE PRODUCTION 30,000 lbs.

4-WASTE COMPOSITION:

SPECIFIC GRAVITY _____

Ph RANGE ___ MAX. ___ MIN. ___

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a.	
b.	
c.	
d.	

ON-SITE WASTE: ____ LAGOON ____ LANDFILL X STORAGE ____ TREATMENT ____ DISPOSAL ____ RECYCLING ____ INCINERATION ____ DEEP WELL INJECTION ____ SEWER ____ LAND SPREADING

WASTE IS: ____ LIQUID X SOLID ____ SLUDGE
% LIQUID _____ % SOLID 100

5-ON-SITE STORAGE (CHECK ONE) pit or will put in a concrete box

a. Method used: ____ Drums X Tank ____ Lagoon ____ Other
b. Typical length of time waste stored: ____ day ____ week 1 month ____ year
c. Typical volume of waste stored: 30,000 lbs. monthly

6-ANALYSIS OF COMPOSITION IS: ____ theoretical ____ laboratory X estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ____ ignitable ____ corrosive ____ toxic ____ reactive ____ other (explain)

8-PROJECTED X INCREASE ____ DECREASE IN VOLUME, USING 1974 AS BASE.

9.WASTE IS SENT OFF-SITE TO BE: will be

____ Incinerated ____ Treated X Landspread/Filled ____ Stored ____ UIC

10-HAZARDOUS WASTE TRANSPORTER

NAME Chemical Waste Management EPA I.D. NO. /////////////
ADDRESS P.O. Box 55 (Street) Emelle (City) Ala (State) 35459 (Zip Code)

11-TYPE OF TRANSPORT VEHICLE(S) Do not know yet PHONE NO. _____

12-WASTE WILL BE TRANSPORTED IN " " " "

13-HAZARDOUS WASTE WILL BE DELIVERED TO: Chemical Waste Management
P.O. Box 55 (Address) Emelle, Ala (Phone No.)

14-WASTE WILL BE: ____ STORED ____ TREATED X DISPOSED ____ INCINERATED ____ UIC

15-DISPOSER E.P.A. I.D. NO. /////////////

16-COMMENTS:

PART II - WASTE DATA

1-GENERATOR Chloride SPECIFIC WASTE Plastics

2-DESCRIBE PROCESS PRODUCING WASTE Battery Saw

3-MONTHLY WASTE PRODUCTION 45,000 lbs.

4-WASTE COMPOSITION:

SPECIFIC GRAVITY _____

Ph RANGE ___ MAX. ___ MIN. ___

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a.	
b.	
c.	
d.	

ON-SITE WASTE: ____ LAGOON ____ LANDFILL X STORAGE ____ TREATMENT ____ DISPOSAL ____ RECYCLING ____ INCINERATION ____ DEEP WELL INJECTION ____ SEWER ____ LAND SPREADING

WASTE IS: ____ LIQUID X SOLID ____ SLUDGE
% LIQUID _____ % SOLID 100

5-ON-SITE STORAGE (CHECK ONE)

a. Method used: ____ Drums ____ Tank ____ Lagoon X Other Construct Storage Bin
b. Typical length of time waste stored: ____ day ____ week 1 month ____ year
c. Typical volume of waste stored: 45,000 lbs monthly

6-ANALYSIS OF COMPOSITION IS: ____ theoretical ____ laboratory X estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ____ ignitable ____ corrosive ____ toxic ____ reactive ____ other (explain)

8-PROJECTED X INCREASE ____ DECREASE IN VOLUME, USING 1974 AS BASE.

9.WASTE IS SENT OFF-SITE TO BE:

____ Incinerated ____ Treated ____ Landspread/Filled ____ Stored ____ UIC Recycled

10-HAZARDOUS WASTE TRANSPORTER

NAME Have not found a buyer EPA I.D. NO. / / / / / / / / / / / / /
ADDRESS _____
Street City State Zip Code

11-TYPE OF TRANSPORT VEHICLE(S) _____ PHONE NO. _____

12-WASTE WILL BE TRANSPORTED IN _____

13-HAZARDOUS WASTE WILL BE DELIVERED TO: have not found buyer
Address Phone No.

14-WASTE WILL BE: ____ STORED X TREATED ____ DISPOSED ____ INCINERATED ____ UIC Recycled

15-DISPOSER E.P.A. I.D. NO. / / / / / / / / / / / / /

16-COMMENTS: will in to all if non Haz.

PART II - WASTE DATA

1-GENERATOR Chloride SPECIFIC WASTE Waste water

2-DESCRIBE PROCESS PRODUCING WASTE ~~Water~~ Cutting of batteries, washing corrosion

3-MONTHLY WASTE PRODUCTION 20,000 gal/day or ~~336,000~~ 3,336,000 lbs.

4-WASTE COMPOSITION:

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a. see back sheet	
b.	
c.	
d.	

SPECIFIC GRAVITY _____

Ph RANGE ___ MAX. ___ MIN. ___

ON-SITE WASTE: X 3 LAGOON in ground ___ LANDFILL ___ STORAGE X TREATMENT ___ DISPOSAL ___ RECYCLING ___ INCINERATION ___ DEEP WELL INJECTION ___ SEWER ___ LAND SPREADING

WASTE IS: X LIQUID ___ SOLID ___ SLUDGE

% LIQUID 100 % SOLID ___

5-ON-SITE STORAGE (CHECK ONE)

a. Method used: ___ Drums X Tank ___ Lagoon X Other Concrete in ground concrete tank

b. Typical length of time waste stored: 0 day ___ week ___ month ___ year Continuous

c. Typical volume of waste stored: 0 monthly

6-ANALYSIS OF COMPOSITION IS: ___ theoretical X laboratory ___ estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ___ ignitable ___ corrosive ___ toxic ___ reactive ___ other (explain)

8-PROJECTED X INCREASE ___ DECREASE IN VOLUME, USING 1974 AS BASE.

9.WASTE IS SENT OFF-SITE TO BE: N/A

___ Incinerated ___ Treated ___ Landspread/Filled ___ Stored ___ UIC

10-HAZARDOUS WASTE TRANSPORTER

NAME N/A EPA I.D. NO. /////////////

ADDRESS _____

Street City State Zip Code

11-TYPE OF TRANSPORT VEHICLE(S) _____ PHONE NO. _____

12-WASTE WILL BE TRANSPORTED IN _____

13-HAZARDOUS WASTE WILL BE DELIVERED TO: N/A

Address Phone No.

14-WASTE WILL BE: ___ STORED ___ TREATED ___ DISPOSED ___ INCINERATED ___ UIC

15-DISPOSER E.P.A. I.D. NO. /////////////

16-COMMENTS: will apply for E.P.A. Permit

(over)

PART II - WASTE DATA

1-GENERATOR Chloride SPECIFIC WASTE Sludge - impoundment or waste treatment

2-DESCRIBE PROCESS PRODUCING WASTE waste water treatment

3-MONTHLY WASTE PRODUCTION 2,400 lbs.

4-WASTE COMPOSITION:

SPECIFIC GRAVITY _____

Ph RANGE ___ MAX. ___ MIN. ___

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a.	
b.	
c.	
d.	

ON-SITE WASTE: ____ LAGOON ____ LANDFILL ____ STORAGE ____ TREATMENT ____ DISPOSAL
X RECYCLING ____ INCINERATION ____ DEEP WELL INJECTION ____ SEWER
____ LAND SPREADING

WASTE IS: ____ LIQUID ____ SOLID X SLUDGE
% LIQUID 20 % SOLID 80

5-ON-SITE STORAGE (CHECK ONE)

a. Method used: ____ Drums ____ Tank X Lagoon ____ Other (In ground Concrete Tank)
b. Typical length of time waste stored: ____ day ____ week ____ month 3 years
c. Typical volume of waste stored: 2,400 lbs. monthly

6-ANALYSIS OF COMPOSITION IS: ____ theoretical ____ laboratory X estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ____ ignitable ____ corrosive ____ toxic ____ reactive ____ other (explain)

8-PROJECTED ____ INCREASE ____ DECREASE IN VOLUME, USING 1974 AS BASE. Stable

9.WASTE IS SENT OFF-SITE TO BE: N/A

____ Incinerated ____ Treated ____ Landspread/Filled ____ Stored ____ UIC

10-HAZARDOUS WASTE TRANSPORTER

NAME N/A EPA I.D. NO. / / / / / / / / / / / / /
ADDRESS _____
Street City State Zip Code

11-TYPE OF TRANSPORT VEHICLE(S) _____ PHONE NO. _____

12-WASTE WILL BE TRANSPORTED IN _____

13-HAZARDOUS WASTE WILL BE DELIVERED TO: N/A
Address Phone No.

14-WASTE WILL BE: ____ STORED ____ TREATED ____ DISPOSED ____ INCINERATED ____ UIC

15-DISPOSER E.P.A. I.D. NO. / / / / / / / / / / / / /

16-COMMENTS:

PART II - WASTE DATA

1-GENERATOR Chloride SPECIFIC WASTE Slag

2-DESCRIBE PROCESS PRODUCING WASTE Blast Furnace

3-MONTHLY WASTE PRODUCTION 275,000 lbs.

4-WASTE COMPOSITION:

SPECIFIC GRAVITY _____

Ph RANGE ___ MAX. ___ MIN. ___

COMPONENT	AVERAGE CONCENTRATION WT % or ppm
a.	
b.	
c.	
d.	

ON-SITE WASTE: ____ LAGOON ____ LANDFILL X STORAGE bin ____ TREATMENT ____ DISPOSAL ____ RECYCLING ____ INCINERATION ____ DEEP WELL INJECTION ____ SEWER ____ LAND SPREADING

WASTE IS: ____ LIQUID X SOLID ____ SLUDGE
% LIQUID _____ % SOLID 100

5-ON-SITE STORAGE (CHECK ONE) concrete bin

a. Method used: ____ Drums X Tank ____ Lagoon ____ Other
b. Typical length of time waste stored: ____ day ____ week <1 month ____ year
c. Typical volume of waste stored: ____ monthly 275,000 lbs.

6-ANALYSIS OF COMPOSITION IS: ____ theoretical ____ laboratory X estimate (if available, attach copy of analysis)

7-HAZARDOUS PROPERTIES OF WASTE: ____ ignitable ____ corrosive ____ toxic ____ reactive ____ other (explain)

8-PROJECTED X INCREASE ____ DECREASE IN VOLUME, USING 1974 AS BASE.

9.WASTE IS SENT OFF-SITE TO BE:

____ Incinerated ____ Treated X Landspread will be Filled ____ Stored ____ UIC

10-HAZARDOUS WASTE TRANSPORTER

NAME Chemical Waste Management EPA I.D. NO. 1 1 1 1 1 1 1 1 1 1 1 1
ADDRESS P.O. Box 55 Emelle Ala 35459
Street City State Zip Code

11-TYPE OF TRANSPORT VEHICLE(S) Do not know yet PHONE NO. _____

12-WASTE WILL BE TRANSPORTED IN Do not know yet

13-HAZARDOUS WASTE WILL BE DELIVERED TO: Chemical Waste Management
P.O. Box 55 Emelle Ala 35459
Address Phone No.

14-WASTE WILL BE: ____ STORED ____ TREATED X DISPOSED ____ INCINERATED ____ UIC

15-DISPOSER E.P.A. I.D. NO. 1 1 1 1 1 1 1 1 1 1 1 1

16-COMMENTS:

10-HAZARDOUS WASTE PRODUCED OR EXPECTED TO BE PRODUCED (Include wastes reclaimed, recycled, treated, stored, or disposed of)

WASTE DESCRIPTION	EPA CODE NO.	AMOUNT OF WASTE GENERATED/MONTH
a. Slag	D002	275,000 lbs
b. Battery Carcasses - Plastic		45,000 lbs
c. " " - Rubber		30,000 lbs
d. Waste water	D008	3,336,000 lbs
e. " " sludge		2,400 lbs
f.		
g.		
h.		

11-IS ANY PORTION OF THE WASTE TREATED BEFORE DISPOSAL? X Yes ____ No

12-IS ANY PORTION OF THE WASTE SALVAGED OR RECYCLED? ____ Yes X No

Waste	% Recycled

13-IS ANY PORTION OF THE WASTE STORED? X Yes ____ No

14-ATTACH FLOW DIAGRAMS OF CHEMICAL PROCESSES INCLUDING WASTE FLOW OUTPUTS (IF AVAILABLE).

15-IS THERE A CURRENTLY USED OR ABANDONED LANDFILL, DUMP, OR LAGOON ON THE PLANT PROPERTY? X Yes ____ No

16-IF YES, WHERE IS IT LOCATED? ____

17-INDUSTRIAL WASTES DISPOSED OF AT THE SITE:*

WASTE	VOLUME/MONTH	TYPE OF DISPOSAL
Battery Carcass Storage	45,000 lbs	Plastic - sell
	30,000 lbs Lead outer cases	All other waste will out off
slag	275,000 lbs	to Chemical Waste Management

*Attach additional sheet if necessary.

SPECIAL WASTE SURVEY FORM

MISSISSIPPI STATE BOARD OF HEALTH

M.S.B.H. Use
Class
S. I. C. 3691
Ad. info. re.

Please Type or Print:

1. County in which industry is located: Rankin

2. Name of industry: Chloride-Connrex - SELCO Division

3. Address of industry: County Line Road

4. Product(s) manufactured: Lead

5. Person completing form: (a) Name Howard Sherlock

   (b) Title Division Engineer (c) Organization SELCO

6. Volume of waste generated (express in cubic feet and include solids or sludge from wastewater treatment or air pollution control equipment, and all other solid wastes and liquid wastes being disposed of on land.)

   (a) Average daily 200 (b) Maximum daily 230

7. Normal periods of operation of the industry: (a) Hours/day 24

   (b) Days/week 5 (c) Weeks/month 4 (d) Months/year 12

8. Composition of the waste see item 15

9. Other characteristics (a) Percent water _____ (b) Specific gravity unknown

   (c) Solubility in water (ambient air temperature range) 0

10. Present disposal site: (a) Owner Chloride-Connrex

    (b) Location Plant site

11. Distance to present disposal site: 0.1 miles.

12. Annual disposal cost: $25,000.00.

13. Is any portion of the waste treated before disposal? [x] yes [ ] no
    If yes, describe this process in Item No. 15.

14. Is any portion of the waste salvaged or recycled? [x] yes [ ] no
    If yes, describe this operation in Item No. 15.

15. On an attached sheet, briefly describe the raw materials utilized, the manufacturing process, the source and composition of any solids resulting from air pollution control and wastewater treatment processes, and the source and composition of any other solid wastes generated. Attach any chemical analyses, if available, of any wastes whose final disposition is land disposal.

CHLORIDE CONNREX SELCO DIV.

ITEM 15

We recover lead from junk lead and acid batteries in a blast furnace. We generate four types of solid waste and one type of liquid waste.

Two of the types of solid waste are fume collected in a baghouse and sludge collected in scrubber sump. These two waste products contain a high percentage of lead and are recycled through the blast furnace in order to recover this lead. Neither of these two types of solid waste are disposed of on a land fill.

A third type of solid waste is the discarded battery containers. These are first thoroughly washed to remove any trace of lead compounds or acid before being disposed of on a land fill on our own property adjacent to the plant.

The fourth type of solid waste is slag from the blast furnace. The principle components and their percentages are Si O_2 30%. CAO 18.6%, FEO 21.9%, and FES 28.8%. There are trace amounts of lead, bismuth, aluminum, etc. This slag is also disposed of on the same land fill.

The liquid waste is weak acid from the spent batteries. This liquid is approximately 5% H_2SO_4, which is neutralized with ammonia before being disposed of in a pond on our own property. This pond has no overflow and the excess water is disposed of by perculation. This pond is monitored between 6.5 and 8.0.

Chloride Corporation
P.O. Box 1124
Tampa, Florida

SPECIAL WASTE SURVEY FORM

MISSISSIPPI STATE BOARD OF HEALTH

M.S.B.H. Use	
Class	
S. I. C.	3691
Ad. info. re.	

Please Type or Print:

1. County in which industry is located: _____

2. Name of industry: CONTRACT BATTERY MFG

3. Address of industry: ELLIS AVE FLORENCE MISS.

4. Product(s) manufactured: _____

5. Person completing form: (a) Name L. W. HAHN

   (b) Title CHIEF ENGR (c) Organization _____

6. Volume of waste generated (express in cubic feet and include solids or sludge from wastewater treatment or air pollution control equipment, and all other solid wastes and liquid wastes being disposed of on land.)

   (a) Average daily _____ (b) Maximum daily _____

7. Normal periods of operation of the industry: (a) Hours/day _____

   (b) Days/week _____ (c) Weeks/month _____ (d) Months/year _____

8. Composition of the waste INFORMATION GIVEN TO CORPS OF ENGINEERS & AIR & WATER COMMISSION

9. Other characteristics (a) Percent water _____ (b) Specific gravity _____

   (c) Solubility in water (ambient air temperature range) _____

10. Present disposal site: (a) Owner _____

    (b) Location _____

11. Distance to present disposal site: _____ miles.

12. Annual disposal cost: _____.

13. Is any portion of the waste treated before disposal? ☐ yes ☐ no
    If yes, describe this process in Item No. 15.

14. Is any portion of the waste salvaged or recycled? ☐ yes ☐ no
    If yes, describe this operation in Item No. 15.

15. On an attached sheet, briefly describe the raw materials utilized, the manufacturing process, the source and composition of any solids resulting from air pollution control and wastewater treatment processes, and the source and composition of any other solid wastes generated. Attach any chemical analyses, if available, of any wastes whose final disposition is land disposal.

MISSISSIPPI
STATE BOARD OF HEALTH
2423 NORTH STATE STREET, P. O. BOX 1700
JACKSON, MISSISSIPPI 39205

ALTON B. COBB, M.D., M.P.H.
STATE HEALTH OFFICER

M E M O R A N D U M

Inter-Office

To: Jack McMillan

From: Lisa Lowe Lisa Lowe

Subject: Chloride Metals, Incorporated

Date: March 20, 1980

On the morning of March 13, 1980, I accompanied Jerry Cain and another inspector, both from the Bureau of Pollution Control on an inspection of Chloride Metals, near Florence, Ms. The purpose of the inspection was to discuss their NPDES permit, to take a composite sample from the waste treatment lagoon, to take samples from leachates found on plant property, and to inspect the plant disposal conditions.

The plant manager conducted us on a tour of Chloride Metals that included plant buildings, grounds, and treatment lagoon. During the tour, samples were collected by the Bureau of Pollution Control at places where surface water discharges were noticed. After the tour, the composite sampler was set-up.

The Chloride Metal disposal site, an old barrow pit, located adjacent to the plant (on plant property) was inspected by the three of us. The plant manager did not accompany us on this inspection, but we told him we were goin to walk arount the site. During this inspection, four pictures of the Chloride Metal disposal site were taken and samples were taken from the pont located at the end of the barrow pit. Water from the pond was discharging into a drainage area that elads into a nearby creek.

My observations pertinent to this inspection are as follows:

1. Raw materials (including lead and red phosphorus) used in the plant processes are stored outside the plant buildings, exposing them to the environment (i.e., wind, rain, sun). Because of this, the ground is liberally strewn with small particles of lead. These particles are allowed to collect and run-off from the blacktop areas of the plant into drainage areas. These drainage areas include sewage drains, waste water treatment system, and rain water run-off streams that feed into nearby ditches.

2. Antimony, removed from the lead during the smelting process, is allowed to be stockpiled outside the plant process buildings. No explanations were given by the plant manager concerning what happens to the pile when it becomes too large to be stored in such a fashion.

(Antimony is toxic via oral and inhalation routes.)

3. Sodium hydroxide, NaOH, used at the treatment lagoon to bring the pH up to the NPDES permit level, is not being stored correctly. No provisions are made regarding spill control.

4. The Disposal Site:
   a. Old battery cases (polyethylene?) are disposed of in an old barrow pit behind the facility. These cases are supposed to be washed before they are disposed of. However, many times the cases are not turned properly so that wash water will be able to effectively cleaned. These cases go directly into the pit including those cleaned and those not cleaned. This means that acid residues and water/acid residues go into the pit instead of into the waste water treatment collection system.
   b. The waste water collection system drains do not have enough free-board and waste water containing acid is allowed to flow into the pit.
   c. The pH is the pit pont (near the end of the disposal site area) ranged between 5 and 5.2. This pit drains into a nearby creek.

I do not believe that this disposal would meet the requirements of a sanitary landfill. We should work in conjuction with the Bureau of Pollution Control to keep a close watch on Chloride Metals.

File

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

July 24, 1980

RECEIVED
JUL 2 '80
Bureau Of Environmental Health

Mr. Alvin Bicker
Geological Survey
Northwest Street
Jackson, Mississippi

Dear Mr. Bicker:

Re: Chloride Metals
Rankin County

Reference is made to our discussions and subsequent visit to Chloride Metals, Rankin County. The Bureau of Pollution Control suspects that the disposal of 5 million battery carcasses in a borrow pit on the plant property, as well as other operations at the facility, may have contaminated subsurface waters of the State with heavy metals.

We desire to sample the underground strata that would most logically be affected by this operation; therefore, we request your expertise and assistance in locating the affected strata and providing no more than three wells to the strata which will allow us to sample the strata prior to August 20, 1980, and at sometime in the future.

We will attempt to obtain the necessary permission from adjoining property owners and we expect to pay for all materials utilized by your agency in providing these wells. To that end we would appreciate your providing us with the following information:

1. An approximate date by which you could begin drilling these wells.

2. An approximate date by which we can expect to be able to take our samples.

3. The approximate cost of materials for this project.

Please feel free to contact me on this project as I will be obtaining rights of entry, etc., on this particular phase of this investigation. Again we appreicate your assistance and please contact me at anytime regarding this matter.

RECEIVED
JUL 30 '80
DIV. S.W.M. & W.C.

Very truly yours,

John W. Harper
Chief of Law Enforcement

JWH:els
cc: Colonel Charlie Blalock
Mr. Joe Brown, State Board of Health ← This copy for

David

MEMORANDUM

Inter-Office

TO: J. W. Green

FROM: C. W. Stover CWS

SUBJ: Groundwater Pollution Investigation

DATE: July 23, 1980

On July 21, 1980, I made a visual inspection of the Chloride Battery reprocessing plant near Florence, Rankin County. I was accompanied on this trip by John Malanchak, Bureau of Geology, and Bob Rogers, Bureau of Pollution Control. The purpose of this inspection was in answer to a request by Mr. John Harper, Bureau of Pollution Control, that this Bureau assist them in determining if any groundwater pollution was present in or around the chloride battery plant as a result of the plant operations.

Mr. Rogers conducted us on a walk tour around and through the plant grounds and pointed out evidence of surface contamination. He expressed a concern that heavy metals from discarded batteries could be contaminating the ground water and also that a potential low ph condition in the near surface ground water could possibly endanger a gas pipeline near the plant discard area.

My observations and comments pertinent to this inspection are as follows:

1. The plant is located in the NW¼, NE¼, Section 29, T. 4 N., R. 2 E., Whitfield Quadrangle.

2. An abandoned "gravel pit" containing standing water is used as a disposal area for discarded batteries and plant slag.

3. A gas pipeline runs along the western boundary of the plant. This north-south pipeline cuts Section 29 approximately in half.

RECEIVED
JUL 25 '80

4. Possible surface contamination was evident in the form of dead trees and other vegetation on the plant property as well as the pipeline right of way.

5. Mr. Rogers pointed out a location on the pipeline property where batteries had been discarded. Most of those batteries had been picked up and moved onto plant property prior to our inspection, but the vegetation is now dead.

6. Waste water is being discharged from a plant treatment pond into a small ditch which crosses the pipeline property and empties into Indian Creek a few feet west of the pipeline.

7. Topography - The Chloride Battery plant is located part way up a large ridge which plunges southwest into a large flood plain created by the Indian, Butler and Steen Creeks and the Pearl River. Two abandoned "gravel pits" are located near the plant and the larger of the two is being utilized as a dumping area by the plant. A black top road cuts the center of the ridge and runs along the southeast boundary of the plant property. Several homes are located along the road near or adjacent to the plant property. A water well and a water tower is located along the road, uphill, and only a short distance from the plant area.

8. Geology - John Malanchak pointed out the general geology of this area. We observed several exposures of Catahoula sandstone underlain by Catahoula clay in the road cuts, and Catahoula clay in the discharge ditch and Indian Creek bottom. Much of the plant area is located on terrace deposits of an unknown thickness. Terrace deposits extend downhill from the plant area and intersect the alluvial deposits of the flood plain. An electric log of a water well located in this quarter section and at the approximate same elevation would indicate that the Catahoula clays would extend to at least 90-100 feet down before the first significant sand is encountered.

After our inspection John Malanchak proceeded to an appointment in Hattiesburg and Bob Rogers and I went to the Bureau of Pollution Control office to talk with Mr. John Harper. I voiced an opinion to both Mr. Rogers and Mr. Harper that I did not believe the possible surface contamination to be a threat to any community water supply in this area due to the apparent thickness of the Catahoula clay. This should not eliminate collecting and testing samples of local water supplies. I further suggested that any ground water contamination would probably be shallow and restricted to the terrace deposits and possibly the alluvium at lower elevations. We discussed the possibility of this Bureau assisting the Bureau of Pollution Control by drilling and installing shallow monitor wells to test groundwater quality. Mr. Harper stated that he would write Mr. Bicker a letter requesting assistance from this Bureau.

Assuming that this Bureau might become involved in this field project a recommended procedure would be:

1. Drill one hole into the Catahoula of sufficient depth to verify the thickness of the clay. If near surface Catahoula sands are encountered, a monitor well may be necessary here. If the Catahoula is predominately clay of sufficient thickness, we can proceed with a shallow monitoring system.

2. Drill a minimum of three holes to the Terrace-Catahoula contact. Install and develop a four inch PVC with screen well in each. One of the holes should be as near as possible to the pipeline.

3. Determine as accurately as possible the piezometric surface of the water within the terrace deposits.

4. Pump or bail sample the wells to satisfy the requirements of the Pollution Control and/or Board of Health representatives.

5. No well should be drilled on a location where visible or suspected surface contamination may be present.

6. A suitable driller's log with samples should be maintained in each hole drilled regardless of the depth.

7. An electric log should be made on each hole drilled of sufficient depth to facilitate this operation.

8. All holes and wells should be accurately located and plotted in order to provide good horizontal and vertical controls.

CWS:sa

cc: Alvin R. Bicker, Jr.
John Malanchak

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

MEMORANDUM

TO: Sam Mabry

FROM: David Lee

SUBJECT: Meeting with Chloride Officials

DATE: January 29, 1982

On January 26, 1982, Cindy Rich, Jerry Cain and I met with two officials of Chloride, Inc., of Florence and Tampa, Florida, and Mr. Jack Waggener of Resource Consultants. The purpose was to discuss possible approaches to rectifying existing problems at the site.

Jerry Cain began by stating that we had all concurred that a general site clean-up would be needed, directed mainly at surface contamination. Mr. Waggener described their intended approach. All contamination sources would be curbed or otherwise routed so that all rainfall runoff from a contaminated "source" area would be diverted to the new wastewater treatment facility. This will be an NPDES facility with no earthen impoundments. Sludge from treatment will be stored for a short time until disposed. It is possible they might try to declare the sludge as non-hazardous, since lime-stabilized sludges are sometimes quite stable.

Metal-storage areas will be covered to eliminate this source of runoff. The areas included in the runoff collection system include the office building, unloading area, cutting area, and battery storage area.

Contaminated dirt removal was mentioned briefly, but company officials felt that runoff control was more urgent and indicated dirt removal will be discussed later.

Since this is a "major" facility, the question of Part B submitted was discussed briefly. I indicated that the Part B would be delayed until a decision can be made as to the applicability of RCRA to the renovated facility. Further information on the plant design will be forthcoming.

DL:hdb

May 24, 1982

Mr. David Berry
Chloride Metals
P. O. Box 398
Florence, Mississippi 39073

Dear Mr. Berry:

As requested by Mr. Jerry Cain of our office, we have reviewed the "Conceptual Design Engineering Report for Chloride Metals" as related to hazardous waste requirements. The following items should be considered in the final design plans:

1. Construction of curbing around the facility should ensure containment of runoff from the waste slag pile.

2. Improvements to the two in-ground open tanks should protect against groundwater contamination. This could be achieved by an underdrain system or liner. Specifications for all tank construction should be included for our review.

3. Disposal and storage of the wastewater treatment sludge should be addressed in more detail.

As you are aware, Part B of your application for a hazardous waste facility permit is due September 4, 1982. Should Chloride Metals decide to close out and completely remove the waste slag pile and not store any further waste slag or wastewater treatment sludge at the facility, the company may elect to not submit a Part B. This would mean that when a total of 2,200 pounds of hazardous waste is accumulated at the facility, the waste must be disposed of within 90 days to avoid the storage requirements.

Should you have any questions, please contact our office.

Sincerely,

Charles Estes, P. E.
Division of Solid Waste Management

CE:hdb
cc: Mr. Jerry Cain, Bureau of Pollution Control

Chloride Metals
3507 50th Street South
P.O. Box 488
Tampa, Florida 33601
Phone (813) 248-3161

CHLORIDE

RECEIVED
AUG 16 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

13 August 1982

Mr. Charles Estes, P.E.
Division of Solid Waste Management
Mississippi Dept. of Natural Resources
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

On 2 July 1982, the Chloride Metals Lead Smelter Water Treatment Facility was issued an NPDES Permit to Operate.

The treatment sludge is recycled to the smelter as a raw material feed stock within 90 days of generation which exempts the facility from the RCRA Part B requirements for treatment.

Slag generated that does not pass the EP toxicity test is being disposed of within 90 days after 2200 pounds is accumulated at the site which also exempts the facility from the RCRA Part B requirements for storage.

Since these two operations qualify for exemption status, we will not submit Part B of the RCRA Application to treat, store or dispose of hazardous waste.

Very truly yours,

CHLORIDE METALS

Grady Curl

Grady Curl
Engineer

GC/pls

8 September 1982

Chloride Metals
3507 50th Street South
P.O. Box 488
Tampa, Florida 33601
Phone (813) 248-3161

CHLORIDE

Mr. Charles Estes P.E.
Division of Solid Waste Management
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, Mississippi 39209

Re: EPA - I.D. No. MSD082002320

Dear Mr. Estes:

This is to confirm your conversation with our engineer regarding our Florence Plant site. Since we are exempt from the RCRA - Part B permit and financial requirements, I request that our RCRA - Part A application be changed from treatment and storage status to generator and transporter status only. I understand that as a generator and transporter I must still comply with the generator and transporter sections of the RCRA standards.

I would like to thank you for your assistance in this matter given to our engineer, Grady Curl. If you have any questions, please contact Grady Curl, Engineer, Tampa or David Berry, Plant Manager, Florence.

Sincerely,

CHLORIDE METALS

Homer H. Woodruff, Jr.
Vice President

RECEIVED
SEP 13 REC'D
DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

cc: Mr. Charles H. Chisholm, Director
Mr. Charles R. Jeter, Regional Administrator

Chuc

Chloride Incorporated

Chloride Metals

3507 50th Street South
P.O. Box 485
Tampa, Florida 33601
Phone (813) 248-3161

CHLORIDE

RECEIVED

NOV 1 ~ REC'D

DEPT OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

November 1982

Mr. Charles Chisholm
Mississippi Department of Natural Resources
Bureau of Pollution Control
South Port Mall
Ellis Avenue
Jackson, MS 39205

Dear Mr. Chisholm:

This letter is to inform The Mississippi Department of Natural Resources, Bureau of Pollution Control that Chloride Battery Division has announced the temporary closing of our Metals Plant in Florence. This plant's temporary closing is due to continued downturn in demand for secondary lead and high operating costs. We evision that this plant will remain closed while the current economic conditions prevail and the secondary lead industry remains depressed. The phase down of operations has begun and we expect the last week of production to be 15 November 1982. Our oxide conversion facility will continue to operate at the smelter location. The Florence Battery Plant is not affected by the temporary shutdown of the smelter.

During the past year Chloride Metals has proceeded with the wastewater treatment system engineering and design with progress reports to the Department. The construction of improved stormwater controls to prevent contaminate contact in the process areas was completed. We have had unforeseen cost overruns on engineering design and construction. In February of this year our consulting firm estimated the cost of a BAT system for the Florence Facility to be $450,000 to $540,000. In August the final engineering specifications and project manual was completed. Copies were also sent to Mr. Jerry Cain. The updated cost estimate is now $700,000. Quite frankly, we do not have the capital available to invest at this facility due to the present economic market conditions. At a future date, when the market improves and we can justify the capital expenditure, we plan to reopen the smelter plant and begin construction on the new wastewater treatment plant.

On 1 July 1982, we were issued NPDES Permit No. MS0033804 with a schedule of compliance. We plan to re-evaluate the Florence Smelter every six months to determine when the plant will reopen. We request that the "B" Schedule of Compliance be modified to reflect our plant closure time:

Item 1.a) Deleted, not applicable because of plant closure.

1.b) On 1 April 1984, or before smelter plant production resumes at a later date, the permitter shall have completed construction of the modifications to their wastewater treatment plant.

1.c) Within 60 days after startup the permitter shall have attained compliance with all of the conditions of this permit.

Also, we request that Section "C" Monitoring and Reporting be suspended until operation is resumed.

The present wastewater treatment system will be deactivated and secured after final smelter production is completed. Our planned schedule of clean up is as follows:

1. Clean and wash down all exterior of smelter yard paved area.

2. Treat all wastewater thru present system.

3. Clean out all oxides from concrete tanks.

4. Ship all remaining scrap lead and oxide to Columbus Smelter for recycle smelting.

5. Fill all concrete tanks with clean sand to prevent refilling with rain water.

6. Clean out and deactivate caustic neutralizing system to prevent possible accidental spills and cold weather damage to system.

7. Cap and seal the drain systems in the smelter building and battery cutting area to prevent reuse and rain water entry.

8. During water treatment shutdown all lead will be stored inside buildings to prevent rain water contamination from runoff.

We hope this plan meets your approval. I assure you every reasonable effort will be made to prevent contaminated runoff during the temporary closure of the smelter.

Let me take this opportunity to thank you and your department for the assistance extended to us in this matter. If you have any questions, please contact me.

Very truly yours,

CHLORIDE METALS

F. L. Barnett

F. L. Barnett
Production Manager

cc: Jerry W. Cain
Charles Estes
David Berry

FILE COPY

December 5, 1987

Mr. David Perry
Chloride Metals
P. O. Box [illegible]
Florence, Mississippi 39077

Dear Mr. Perry:

Re: Withdrawal of Interim Status

The attached public notice for withdrawal of interim status has been sent as part of an effort to formally close our files on this activity for your firm. You may have received a letter indicating that interim status had been withdrawn. However, EPA procedures dictate that a formal public notice be issued for all such withdrawals.

If no comments are received on this proposed action, this will finalize the interim status withdrawal for your facility. Please feel free to contact us if you have any questions.

Sincerely,

David C. Lee, P. E., Coordinator
Hazardous Waste Section

[illegible]
Attachment

FILE COPY

February 27, 1984

Mr. David Berry
Chloride Metals, Inc.
P. O. Box 372
Florence, Mississippi 39073

Part B called

Dear Mr. Berry:

Re: Withdrawal of Interim Status
MSD082002320

On February 14, 1984, the Pollution Control Permit Board formally terminated interim status under the Resource Conservation and Recovery Act for your facility. This action was taken subsequent to the proposed intent to withdraw interim status publicly advertised at an earlier date.

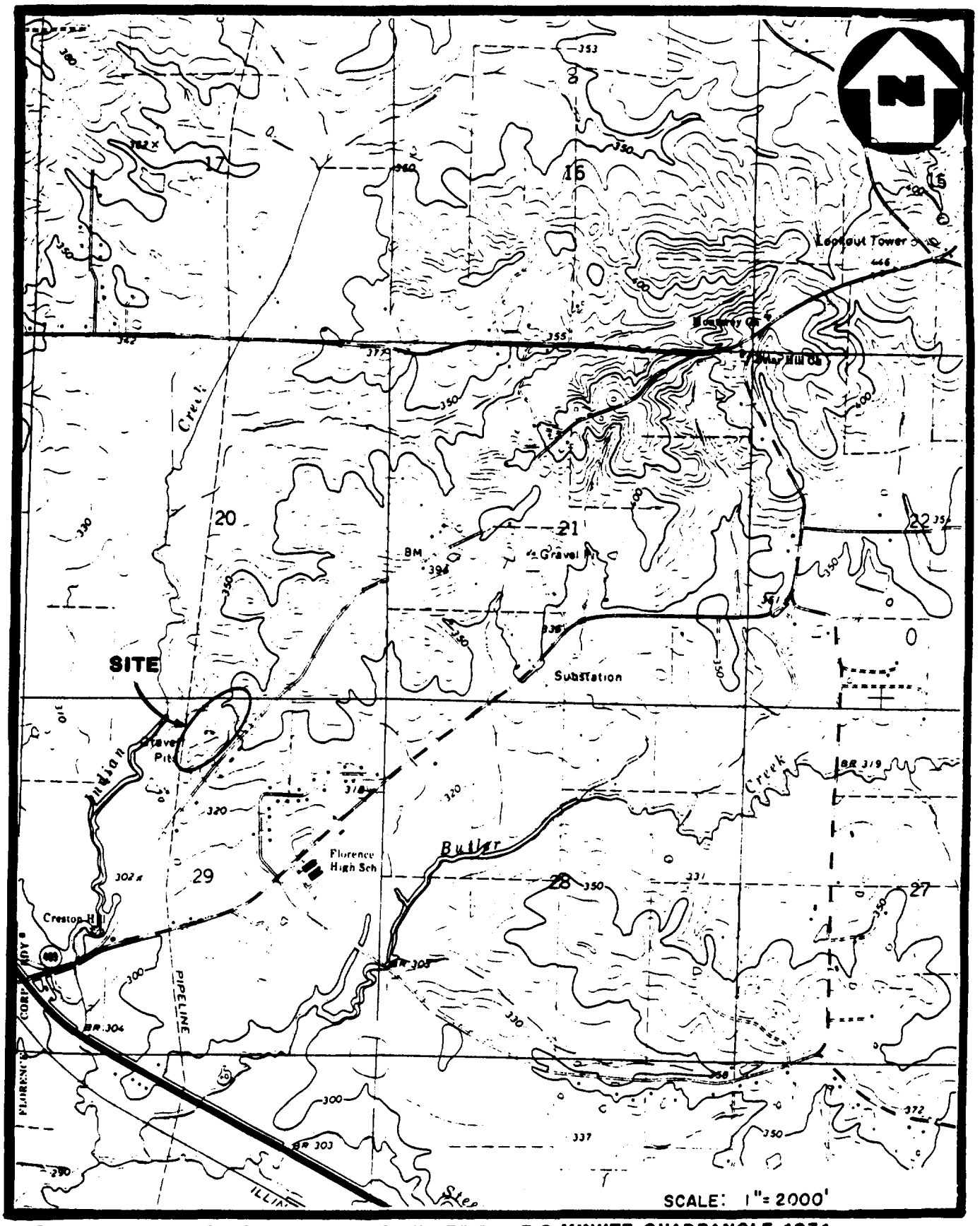
Please feel free to contact me if you have any questions on this matter.

Sincerely,

David E. Lee, P. E.
Coordinator, Hazardous Waste Section

DEL:cl
cc: Mr. James H. Scarbrough, EPA - Region IV

8

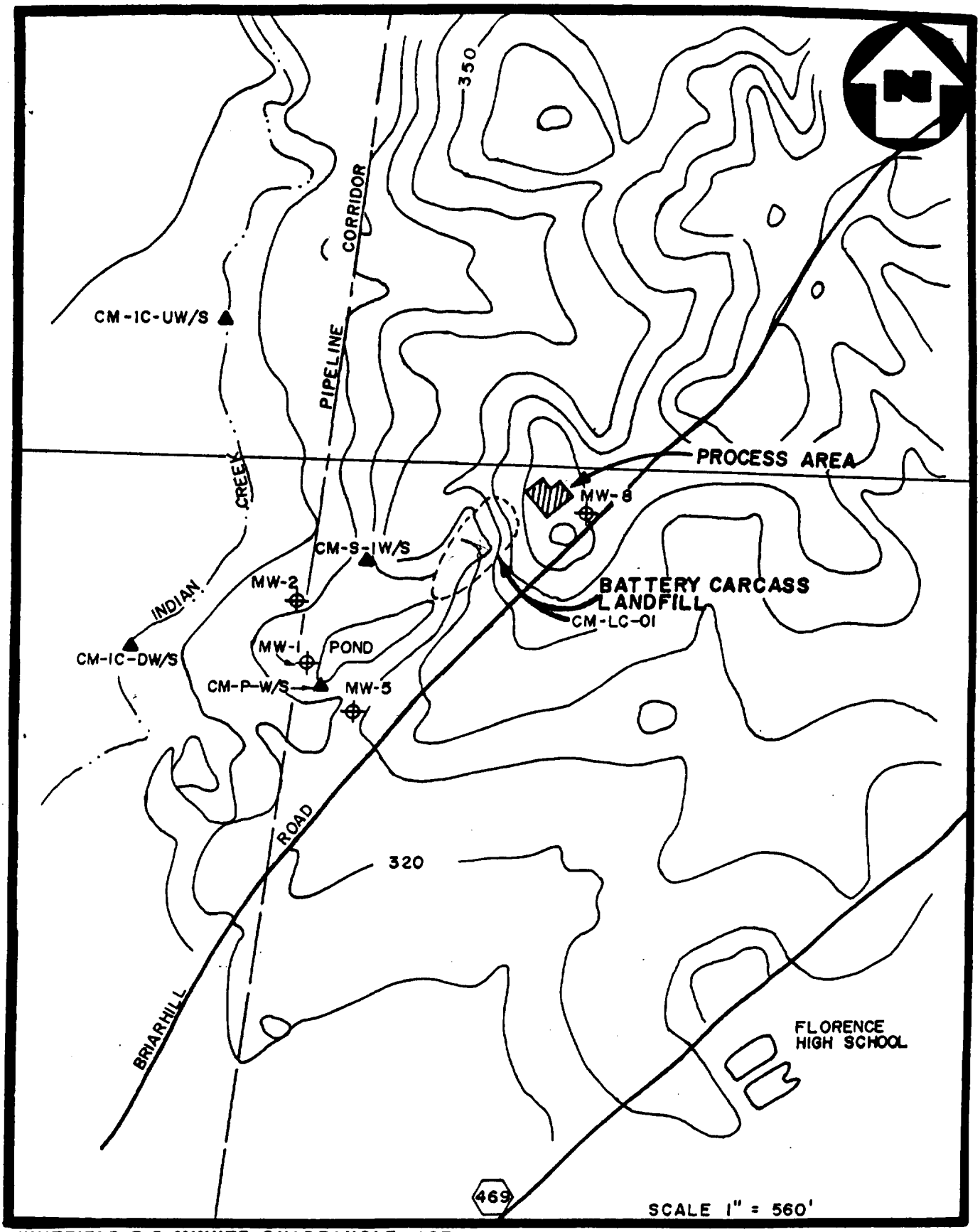


BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION
A Halliburton Company

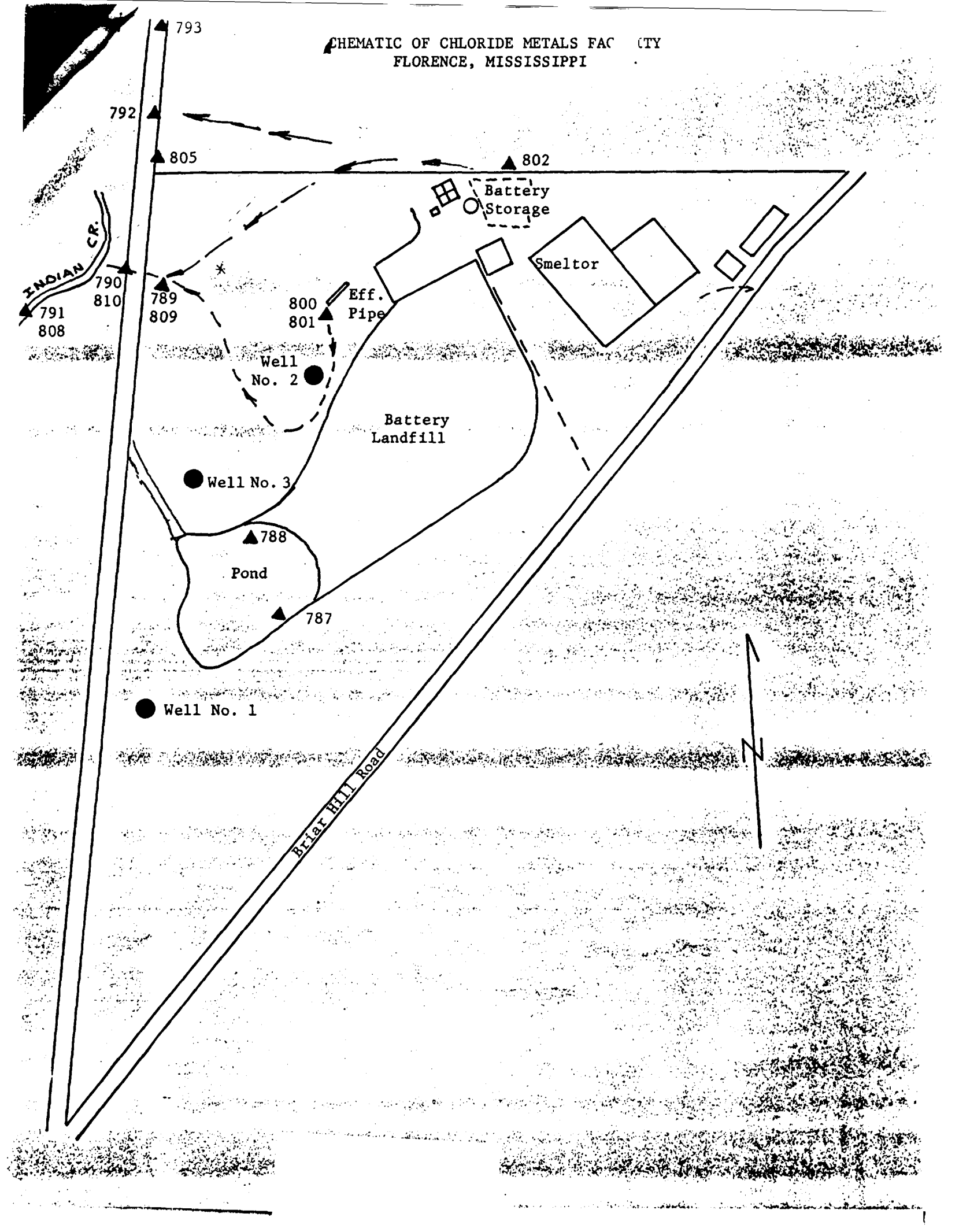


WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

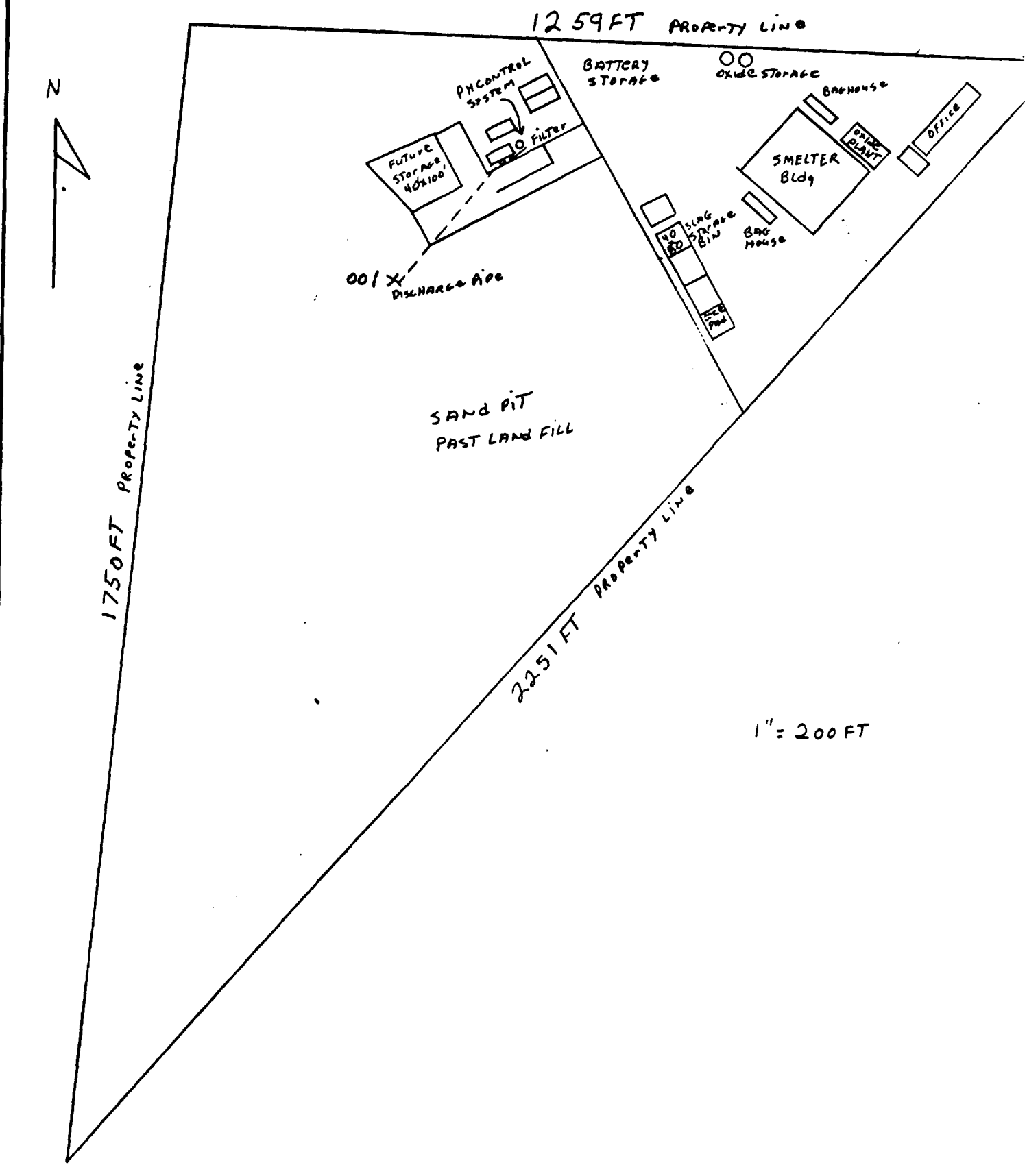
FIGURE 2

NUS CORPORATION
A Halliburton Company


CHEMATIC OF CHLORIDE METALS FAC CTY
FLORENCE, MISSISSIPPI
793
792
805
802
Battery
Storage
Smeltor
INDIAN CR.
790
810
789
809
791
808
800
801
Eff.
Pipe
Well
No. 2
Battery
Landfill
Well No. 3
788
Pond
787
Well No. 1
Briar Hill Road
N

Continued from page 4.

V. FACILITY DRAWING *(see page 4)*



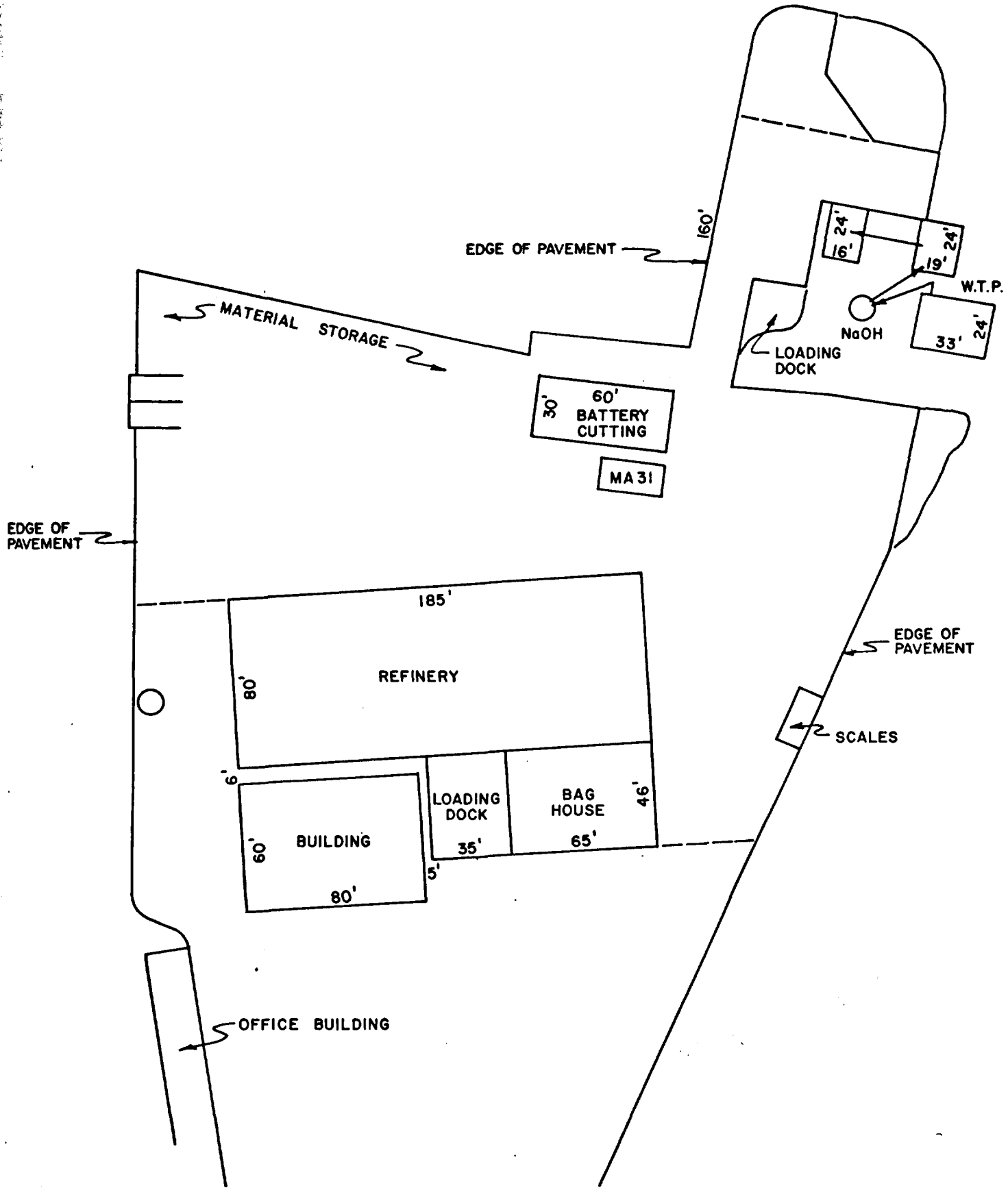


Figure 1. Plant layout at Chloride Metals, Florence, Mississippi

RESOURCE CONSULTANTS INC

3

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by Hq)

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME

MSD082002320 RANKIN
CHLORIDE METALS DIV
BRIAR HILL RD
FLORENCE MS 39073
BARNETT, FRANK, PRODUCTI* 8132483161

B. STREET *(or other identifier)*

E

E. ZIP CODE

F. COUNTY NAME

2. TELEPHONE NUMBER

☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

"103-C NOTIFICATION" DATE: 810608
SAM MABRY OR JIM HARDAGE
PHONE: 601-961-5156

K. DATE IDENTIFIED *(mo., day, & yr.)*

2. TELEPHONE NUMBER

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED *(low priority)*

See comments on back

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Jim Hardage	601 961-5171	9-24-82

III. SITE INFORMATION

A. SITE STATUS

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

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

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

B. IS GENERATOR ON SITE?

☐ 1. NO ☑ 2. YES *(specify generator's four-digit SIC Code):* 3341

C. AREA OF SITE *(in acres)*

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.-min.-sec.)*
2. LONGITUDE *(deg.-min.-sec.)*

E. ARE THERE BUILDINGS ON THE SITE?

☑ 1. NO ☐ 2. YES *(specify):*

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

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

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

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

Disposal of battery carcasses from lead refining operation, 1972 - 80 (period reported for on Superfund notification).

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [✓] 2 LIQUID [✓] 3. SOLID [ ] 4 SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1 UNKNOWN [✓] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4 RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[✓] 6 TOXIC [ ] 7 REACTIVE [ ] 8 INERT [ ] 9 FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

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

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

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

 Continue On Page 3

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

lead

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER	Possible			
8. CONTAMINATION OF SURFACE WATER	Possible			
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	Possible			
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUIDS	Possible			
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

 Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE. See comments below

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT (specify):
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [x] 7. RCRA STORER
- [x] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER (specify):

B. IN COMPLIANCE?

- [ ] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number):

VIII. PAST REGULATORY ACTIONS

- [ ] A. NONE
- [x] B. YES (summarize below)

See comments below

IX. INSPECTION ACTIVITY (past or on-going)

- [ ] A. NONE
- [x] B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

- [ ] A. NONE
- [ ] B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
See comments below			

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

Ron -

The company was under Dept. of Natural Resources (DNR) commission order to perform a gw study and submit the results to DNR.

They are now under a compliance schedule for the installation of a wastewater treatment system (existing sustem is inadequate, i.e.. too small).

Remedial action will consist of draining / treating the inactive pond / old battery disposal area. If you need more info contact: Andy Kromis, RCRA Branch, EPA Jerry Cain, Industrial Control Section, DNR, 761 5122 OR me.

4

Please print or type in the unshaded areas only
(fill-in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No.

FORM 1 GENERAL

EPA

ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F M S D 0 8 2 0

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

D 3 2 7 7

RECEIVED

PLEASE PLACE LABEL IN THIS SPACE

NOV 19 4 35 PM '8

ENFORCEMENT

GENERAL INSTR

If a preprinted label has b
it in the designated space.
ation carefully; if any of
through it and enter the
appropriate fill-in area be
the preprinted data is abs
left of the label space i
that should appear), plea
proper fill-in area(s) be
complete and correct, you
Items I, III, V, and VI
must be completed regar
items if no label has bee
the instructions for de
tions and for the legal
which this data is collectec

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you an questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box i If the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "r is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—face

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed* include a concentrated animal feeding operation o aquatic animal production facility which results in discharge to waters of the U.S.? (FORM 2B)
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X			D. Is this a proposed facility *(other than those describe in A or B above)* which will result in a discharge t waters of the U.S.? (FORM 2D)
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial c municipal effluent below the lowermost stratum cor taining, within one quarter mile of the well bor underground sources of drinking water? (FORM 4)
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for sp cial processes such as mining of sulfur by the Frasc process, solution mining of minerals, in situ combu tion of fossil fuel, or recovery of geothermal energy (FORM 4)
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which NOT one of the 28 industrial categories listed in th instructions and which will potentially emit 250 tor per year of any air pollutant regulated under the Clea Air Act and may affect or be located in an attainmer area? (FORM 5)

III. NAME OF FACILITY

1 SKIP C H L O R I D E M E T A L S

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 B E R R Y D A V I D P L A N T M A N A G E R	6 0 1 / 8 4 5 / 2 2 8

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX

3 P O B O X 3 7 2

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 F L O R E N C E	M S	3 9 0 7 3

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

5 B R I A R H I L L R O A D

B. COUNTY NAME

R A N K I N

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY (if kno
6 F L O R E N C E	M S	3 9 0 7 3	

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
3341 (specify) Secondary Non-ferrous metals	(specify)

C. THIRD	D. FOURTH
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: CHLORIDE INCORPORATED

B. Is the name listed in Item VIII-A also the owner? ☐ YES ☐ NO

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL, S = STATE, P = PRIVATE, M = PUBLIC (other than federal or state), O = OTHER (specify)
P (specify) CORPORATION

D. PHONE (area code & no.): A 813 248 3161

E. STREET OR P.O. BOX: 3507 SOUTH 50TH STREET

F. CITY OR TOWN: B TAMPA

G. STATE: FL

H. ZIP CODE: 33601

IX. INDIAN LAND

Is the facility located on Indian lands? ☐ YES ☒ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water): 9 N MS0033804	D. PSD (Air Emissions from Proposed Sources): 9 P
B. UIC (Underground Injection of Fluids): 9 U	E. OTHER (specify): 9 (specify)
C. RCRA (Hazardous Wastes): R	E. OTHER (specify): 9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property bounderies. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

SECONDARY LEAD SMELTING & REFINING

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the 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.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Homer H. Woodruff, Jr. Vice President	Homer H. Woodruff Jr.	18 Nov. 1980

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only
(fill–in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

(This information is required under Section 3005 of RCRA.)

I. EPA I.D. NUMBER

F M S D 0 8 2 0 0 2 3 2 0

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below *(mark one box only)* to indicate whether this is the first application you are submitting for your facility revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facili EPA I.D. Number in Item I above.

A. FIRST APPLICATION *(place an "X" below and provide the appropriate date)*

[X] 1. EXISTING FACILITY *(See instructions for definition of "existing" facility. Complete item below.)*

[ ] 2. NEW FACILITY *(Complete item below.*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C	YR.	MO.	DAY
8	7 2	0 8	2 2

FOR NEW FACILI PROVIDE THE DA *(yr., mo., & day)* OP TION BEGAN OR EXPECTED TO BE

YR.	MO.	DAY

B. REVISED APPLICATION *(place an "X" below and complete Item I above)*

[ ] 1. FACILITY HAS INTERIM STATUS

[ ] 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES – CODES AND DESIGN CAPACITIES

A. PROCESS CODE – Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided entering codes. If more lines are needed, enter the code*(s)* in the space provided. If a process will be used that is not included in the list of codes below, t describe the process *(including its design capacity)* in the space provided on the form *(Item III-C).*

B. PROCESS DESIGN CAPACITY – For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.
2. UNIT OF MEASURE – For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR GALLONS PER HOUR OR LITERS PER HOUR
OTHER *(Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT MEAS COD
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	
LITERS	L	TONS PER HOUR	D	HECTARE-METER	
CUBIC YARDS	Y	METRIC TONS PER HOUR	W	ACRES	
CUBIC METERS	C	GALLONS PER HOUR	E	HECTARES	
GALLONS PER DAY	U	LITERS PER HOUR	H		

EXAMPLE FOR COMPLETING ITEM III *(shown in line numbers X-1 and X-2 below):* A facility has two storage tanks, one tank can hold 200 gallons and other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

C DUP 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. 1. AMOUNT	B. 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S 0 2	600	G		5				
X-2	T 0 3	20	E		6				
1	T 0 1	20,000	U		7				
2	S 0 3	4,000	Y		8				
3					9				
4					10				

Continued from the front.

III. PROCESSES *(continued)*

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES *(code "T04")*. FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER — Enter the four—digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four—digit number*(s)* from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY — For each **listed waste** entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each **characteristic** or **toxic contaminant** entered in column A estimate the total annual quantity of all the non—listed waste*(s)* that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:
   For listed hazardous waste: For each **listed** hazardous waste entered in column A select the code*(s)* from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
   For non—listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code*(s)* from the list of process codes contained in Item III to indicate **all** the processes that will be used to store, treat, and/or dispose of all the non—listed hazardous wastes that possess that characteristic or toxic contaminant.
   Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code*(s)*.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV *(shown in line numbers X-1, X-2, X-3, and X-4 below)* — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non—listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. *(enter code)*	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE *(enter code)*	D. PROCESSES 1. PROCESS CODES *(enter)*	D. PROCESSES 2. PROCESS DESCRIPTION *(if a code is not entered in D(1))*
X-1	K054	900	P	T03 D80	
X-2	D002	400	P	T03 D80	
X-3	D001	100	P	T03 D80	
X-4	D002				*included with above*

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
W	W DUP DUP

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)	D. PROCESSES 2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	D008	1,600	T	S03	Slag
2	D002	15,620	T	T01	Waste Water
3	D008				Same as above
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WAST (continued)

E. USE THIS SPACE TO LIST ADDITIONA ROCESS CODES FROM ITEM D(1) ON PAG

EPA I.D. NO. *(enter from page 1)*

S												T/A	C
F	M	S	D	0	8	2	0	0	2	3	2	0	6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility *(see instructions for more detail).*

VI. PHOTOGRAPHS

All existing facilities must include photographs *(aerial or ground—level)* that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas *(see instructions for more detail).*

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
32 10 000	090 07 000

VIII. FACILITY OWNER

[X] A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER	2. PHONE NO. *(area code & no.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. OWNER 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.

A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
Homer H. Woodruff, Jr.	Homer H. Woodruff	18 Nov. 1980

X. OPERATOR 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.

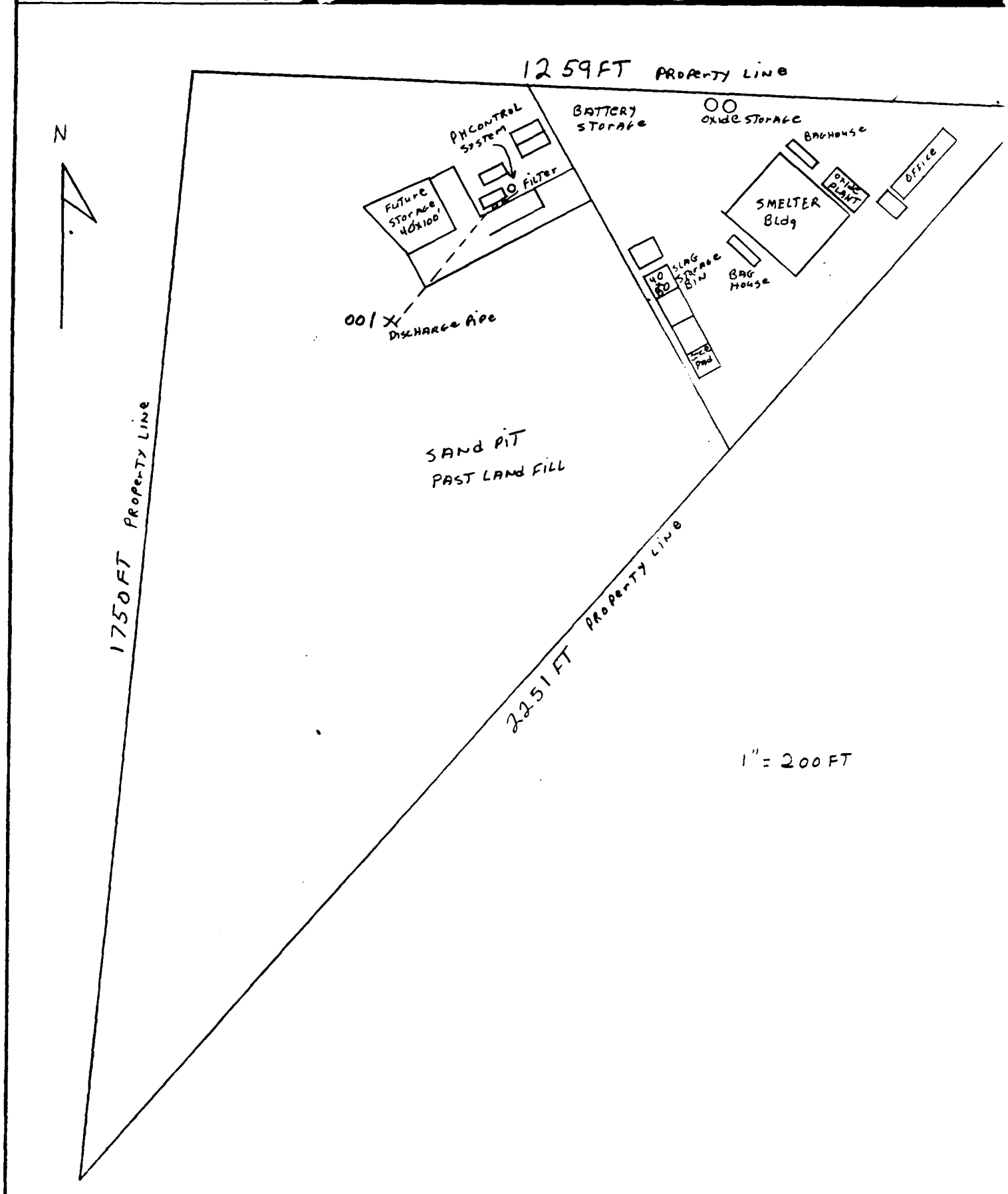
A. NAME *(print or type)*	B. SIGNATURE	C. DATE SIGNED
David Berry	David M. Berry	11/17/80

 CONTINUE ON PAGE

Continued from page 4.

Form Approved OMB No. 158-S80004

V. FACILITY DRAWING *(see page 4)*



5

D. Lee

RECEIVED MAR 01 REC'D DEPT OF NATURAL RESOURCE BUREAU OF POLLUTION CONTROL

Please print or type with ELITE type (12 characters per inch)

EPA — U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE REPORT

PLEASE PLACE LABEL IN THIS SPACE

I. TYPE OF HAZARDOUS WASTE REPORT

PART A: GENERATOR ANNUAL REPORT

THIS REPORT IS FOR THE YEAR ENDING DEC 31 1981

PART B: FACILITY ANNUAL REPORT

THIS REPORT FOR YEAR ENDING

PART C: UNMANIFESTED WASTE REPORT

THIS REPORT IS FOR A WASTE RECEIVED (day, mo., & yr.) - - 19

INSTRUCTIONS: You may have received a preprinted label attached to the front of this pamphlet; affix it in the designated space above. If any 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 correct, leave Sections II, III, and IV below blank. If you did not receive a preprinted label, complete all sections. "Installation" means a site where hazardous waste is generated, treated, stored, or disposed of. Please refer to the specific instructions for generators or facilities before completing this form. The information requested herein is required by law (Section 3002/3004 of the Resource Conservation and Recovery Act.

II. INSTALLATION'S EPA I.D. NUMBER

FMSD082CC232C 1

III. NAME OF INSTALLATION

CHLORIDE METALS

IV. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: P. O. BOX 398

CITY OR TOWN: FLORENCE ST.: MS ZIP CODE: 39073

V. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: BRIARHILL ROAD

CITY OR TOWN: FLORENCE ST.: MS ZIP CODE: 39073

VI. INSTALLATION CONTACT

NAME (last and first): BERRY, DAVID M. PHONE NO. (area code & no.): 601-845-2491

VII. TRANSPORTATION SERVICES USED (for Part A reports only)

List the EPA Identification Numbers for those transporters whose services were used during the reporting year represented by this report.

BFI WASTE SYSTEMS - MSD 062640610

VIII. COST ESTIMATES FOR FACILITIES (for Part B reports only)

A. COST ESTIMATE FOR FACILITY CLOSURE: $ 193,350

B. COST ESTIMATE FOR POST CLOSURE MONITORING AND MAINTENANCE (disposal facilities only): $

IX. 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.

A. PRINT OR TYPE NAME	B. SIGNATURE	C. DATE SIGNED
DAVID M. BERRY	David M. Berry	2/26/82

EPA Form 8700-13 (5-80)

Please print or type with ELITE type (12 characters/inch).

GSA No. 12345 XX
Form Approved OMB No. 1[illegible]

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERATOR ANNUAL REPORT – PART A
(Collected under the authority of Section 3002 of RCRA)

FOR OFFICIAL USE ONLY (Items 1 and 2)

1. DATE RECEIVED: – – 19

2. TYPE OF REPORT:

X. GENERATOR'S EPA I.D. NO.: GMS 0820023 20

XI. FACILITY'S EPA I.D. NO.: LAD000618298

XII. FACILITY NAME (specify): BFI CHEMICAL SERVICES

XIII. FACILITY ADDRESS (street or P.O. box, city, state, & zip code):
P.O. BOX 473
LIVINGSTON, LA. 70454

XIV. WASTE IDENTIFICATION

LINE NUMBER	A. DESCRIPTION OF WASTE	B. DOT HAZARD CLASS	C. EPA HAZARDOUS WASTE NUMBER (see instructions)	D. AMOUNT OF WASTE	UNIT OF MEASURE
1	NCS-FURNACE SLAG CRM POISON	B	K069	252.68	T
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

XV. COMMENTS (enter information by line number – see instructions)

EPA Form 8700-13A (5-80)

BILLING CODE 6560-01-C

PAGE 2 OF 2

6

MISSISSIPPI BOARD OF WATER COMMISSIONERS

Elec Log RANKIN P39 4-11-64

WATER WELL DRILLERS LOG

CODED

17 yrs.

Date: 4-11, 1964, Driller: James McNeal (Name) County Rankin

(1) Owner of Land: Smith - Vick (Name)

Jackson (Address)

(2) Location: ___ ¼, ___ ¼, Sec 29 4N R 2E,

1 miles East, of Florence
(distance) (direction) (Nearest Town)

(3) Topography: ✓ (Hilly) (Flat) (Level)

(4) Purpose of Well: Subdivision (Domestic Irrigation Municipal, Industrial, Other)

Information upon completion of well:

(1) Diameter 4" x 2½" inches.

(2) Total Depth 1063' feet.

(3) Water Level 165' feet below top of ground.

(4) Cased to 904, Size 4" x 2½"

(5) Screen: Size 2½ .008, Length 30'.

(6) Were any formations sealed against pollution?

___ yes, ✓ no.

If YES depth of formation ___

Why ___

Drillers Remarks: ___

Description & Color of Materials Sand, Clay, Red Clay, Shell, etc.	Thickness Feet	Depth Feet
Surface Soil	10	10
Sand	25	35
Blue Shale	75	110
Sand Sh Stks	10	120
Sand Shells Shale	26	146
Lime	29	175
Grey Sdy Sh	39	214
Grey Sh-Lignite	42	256
Grey Sh	486	742
Grey Sdy Sh	97	839
Grey Sh	61	900
Rock	1	901
Sand-Sh-Stks	40	941
Sand	54	995
Grey Sh	8	1003
Sand	12	1015
Sand Sh Stks	28	1043
Grey Sh	20	1063
16 Jts 4"	336	
4" x 2½ Swedge - Collar	3	
	339	
27 Jts - 2½	565	
	904	
1-10' 2½" SSS	10	
	914	
3 Jts 2½"	46	
	960	
2-10' 2½" 007-SSS	20	
	980	
1-2½" Tail Pipe		
& BPV	10	
	990	

Well No.

CODED

(Use Back Side)

RECEIVED JUL 14 1964 MISS. BOARD OF WATER COMM.

Mail this copy to Board of Water Commissioners 429 Miss. St. Jackson, Miss.

RANKIN
P67
6-11-63

MISSISSIPPI BOARD OF WATER COMMISSIONERS

WATER WELL DRILLERS LOG

CODED

Date: 6-11-63, 19____, Driller: James McNees (Name) County: Rankin

(1) Owner of Land: R.E. Weathersby (Name)
Florence Miss (Address)

(2) Location: ____¼, ____¼, Sec 21 T 4 R 2
4 miles (distance) East (direction), of Florence (Nearest Town)

(3) Topography: ✓ (Hilly) (Flat) (Level)

(4) Purpose of Well: Domestic (Domestic Irrigation Municipal, Industrial, Other)

Information upon completion of well:

(1) Diameter 2" inches.

(2) Total Depth 259 feet.

(3) Water Level 66 feet below top of ground.

(4) Cased to 188', Size 2"

(5) Screen: Size NONE, Length ____

(6) Were any formations sealed against pollution?

____ yes, ✓ no.

If YES depth of formation ____

Why ____

Drillers Remarks: ____

Description & Color of Materials Sand, Clay, Red Clay, Shell, etc.	Thickness Feet	Depth Feet
Surface soil	20	20
Blue shale	30	50
Sand	7	57
Grey shale	100	157
Rock shells	26	183
Lime Rock	4	187
Sand	8	195
Grey shale	64	259
8 Jts 2"	168	
1 - 2"	17	
1 Nipple 2"	3	
	188	

CODED

(Use Back Side)

Well No.

Mail this copy to Board of Water Commissioners 429 Miss. St. Jackson. Miss

Rankin
P47
12-66

MISSISSIPPI BOARD OF WATER COMMISSIONERS

F1

WATER WELL DRILLERS LOG

CODED

Date: 12-21-, 19 66, Driller: Layne-Central Co. County Rankin
(Name)

(1) Owner of Land: Town of Florence
(Name)
Florence, Mississippi
(Address)

(2) Location: ____ ¼, ____ ¼, Sec. 30 T 4 R 2,
____ miles ____, of ____,
(distance) (direction) (Nearest Town)

(3) Topography: ____
(Hilly) (Flat) (Level)

(4) Purpose of Well: Municipal
(Domestic Irrigation Municipal, Industrial, Other)

Information upon completion of well:

(1) Diameter 8" inches.

(2) Total Depth 960 feet.

(3) Water Level 133 feet below top of ground.

(4) Cased to 914', Size 8",

(5) Screen: Size 6", Length 41'.

(6) Were any formations sealed against pollution?

x yes, ____ no.

If YES depth of formation 914',

Why required

Drillers Remarks: ____

Description & Color of Materials Sand, Clay, Red Clay, Shell, etc.	Thickness Feet	Depth Feet
Top Soil	2	2
Yellow Clay	21	23
White Sand	34	57
Hard Blue Clay	46	103
Sandy Clay	27	130
Rock	3	133
Clay	2	135
Lime Rock	6	141
Sand	1	142
Rock	1	143
Hard Lime	37	180
Sandy Clay	10	190
Shale	190	380
Sandy Shale	20	400
Shale	260	660
Sandy Shale	80	740
Fine Sand, Streaks Shale	119	859
Shale, Streaks of Sand	88	947
Fine Sand	23	970
Gummy Shale	28	998
Shale	64	1062

CODED

(Use Back Side)

Well No.

Mail this copy to Board of Water Commissioners 429 Miss. St. Jackson, Miss

ELOG # 350

RANKIN
P75
1-11-72

MISSISSIPPI
BOARD OF WATER COMMISSIONERS
416 North State Street
Jackson, Mississippi 39201

CODED

WATER WELL DRILLERS LOG

1-11- 1972 Singer-Layne Central Div. Rankin
date well completed — firm name — county well located

LANDOWNER: Town of Florence
Florence, Miss.
(mailing address)

WELL LOCATION:
sec. 30 T 4 N R 2 E

miles (distance) (direction) of (nearest town)

WELL PURPOSE: Municipal
(home, irrigation, municipal, industrial)

WELL COMPLETION DATA:

(1) diameter (inches) 12"

(2) total depth (feet) 991'

(3) static water level (feet) 118' below top of ground.

(4) casing Steel (material), 922' (depth),
12" (size) and 61' of 6" If telescope see back.

(5) screen 50' (length), 922' (depth to top)
6" (size), Stainless Steel (material) Blank
and 10' of 6"

(6) pump 30 (HP) 200 (yield gpm)
Electric (type power)

(7) electric log yes (yes or no)
Miss. Geo. Survey (organization running log)

(8) how well bottom plugged Valve

DRILLERS REMARKS:

description of formations encountered	from	to
Clay + Stuff of Sand	0	40
Gummy Clay	40	124
Rock	124	125
Clay	125	127
Rock	127	128
Clay	128	132
Rock	132	133
Fine Sand, Clay Stuff	133	220
Clay & Stuff of Sand	220	240
Blue Clay	240	325
Sand + Clay	325	341
Blue Clay	341	390
Sandy Shale	390	455
Blue Clay	455	615
Shale	615	685
Sand	685	693
Sandy Shale	693	797
Shale	797	835
Sandy Shale	835	876
Fine Sand + Stuff of Shale	876	988
Sandy Shale	988	991

CODED

JAN 26 1972
MISS. BD. OF WATER COMM.

RANKIN
P99
1-15-80
E log # 521

MISSISSIPPI
BOARD OF WATER COMMISSIONERS
416 North State Street
Jackson, Mississippi 39201

CODED

WATER WELL DRILLERS LOG

1-15 1980 Layne-Central Company Rankin
date well completed — firm name — county well located

LANDOWNER: Well #4
Town of Florence
Florence, Mississippi
(mailing address)

WELL LOCATION:
sec. 20 T 4 N ~~S~~ R 2 E ~~W~~

_____ miles _____ of _____
(distance) (direction) (nearest town)

WELL PURPOSE: Municipal
(home, irrigation, municipal, industrial)

WELL COMPLETION DATA:

(1) diameter (inches) 18"
(2) total depth (feet) 1023'
(3) static water level (feet) 224' below ~~above~~ top of ground.
(4) casing Steel (material), 970' (depth),
10" (size) + 64' of 6" if telescope see back.
(5) screen 40' (length), 970' (depth to top)
6" (size), Stainless Steel (material)
(6) pump 60 HP (HP) 250 (yield gpm)
Electric (type power)
(7) electric log Yes (yes or no)
Layne Central Co. (organization running log)
(8) how well bottom plugged Valve

DRILLERS REMARKS:

description of formations encountered	from	to
Top Soil	0'	2'
Hard Red Clay	2'	17'
Red Sand	17'	51'
Hard Lime + Soft Strks	51'	61'
Hard Blue Clay	61'	115'
Coarse Sand + Lignite Strks	115'	193
Hard Shale + Lime Strks	193'	360
Hard Shale	360'	520
Sandy Shale	520'	545
Hard Shale	545'	705
Sandy Shale	705'	750
Sand + Shale Strks	[illegible]	[illegible]
Sandy Clay	[illegible]	[illegible]
Sand (Extra Fi[illegible]	[illegible]	1017
Hard Shale	1017'	1022

CODED

970
64
906

SEP 30 1981
RECEIVE

970
40
1010

RANKIN MISSISSIPPI BOARD OF WATER COMMISSIONERS

P36

11-10-62

WATER WELL DRILLERS LOG

CODED

Rankin

Date: 11-10-, 1962, Driller: James McNees County Hinds
(Name)

(1) Owner of Land Florence High School
(Name)

Florence Miss
(Address)

(2) Location NW ¼, NE ¼, Sec 29 T 4 N R 2 E,

1 miles North, of Florence,
(distance) (direction) (Nearest Town)

(3) Topography: ✓
(Hilly) (Flat) (Level)

(4) Purpose of Well: School
(Domestic Irrigation Municipal, Industrial, Other)

Information upon completion of well:

(1) Diameter 4" x 2" inches.

(2) Total Depth 308 feet.

(3) Water Level 12 feet below top of ground.

(4) Cased to 106', Size 4",

(5) Screen: Size 2" .010, Length 10.

(6) Were any formations sealed against pollution?

____ yes, ✓ no.

If YES depth of formation ____,

Why ____

Drillers Remarks: ____

Description & Color of Materials (Sand, Clay, Red Clay, Shell, etc.)	Thickness Feet	Depth Feet
Surface soil	10	10
Sand	20	30
Grey Shale	20	10
Sand	29	12
Grey Shale	9	13
Rock-Sh Strks	36	17
Grey Shale	66	24
Grey Sdy Sh	9	24
Grey Shale	60	30
5 Jts 4"	105'	
1-4" x 2" Swedge	1	
	106	
1-2" .010 SS Screen	10	
	126	
1-2" Tail Pipe	4	
	130	
1-2" Nip. Collar & BP ✓	1	
	131	

CODED

FILED
NOV 14 1962
MISS. BOARD OF WATER COMM.

(Use Back Side)

Well No.

Mail this copy to Board of Water Commissioners 429 Miss. St. Jackson, Mi

FORM BLW-NC-1

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
MAR 11 1996
Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:
County: Rankin
Date Received: 03-11-96
Permit No: MS-GW-0.2171
Quad Map: Florence
Water Management Dist:
Hydrologic River Basin: 03180002

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Town of Florence (Name) 64-0440386 (S/S or Tax ID No.)

P.O. Box 187 (Address), Florence (City or Town), Mississippi 39073 (State and Zip)

(601) 845-2462 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SW ¼ of SE ¼ of Section 30, Township 4N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .167 million gallons per day, diverted/withdrawn at a maximum rate of 200 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary Florence Water Service Area

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) No) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Cockfield aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1971
(2) Depth drilled 985 feet
(3) Type of completion
(4) Surface elevation 300 feet

(b) **Screen data:**
(1) Depth to bottom +979 feet
(2) Length 60 f
(3) Diameter 6" inch
(4) Type SS
(5) Slot inches

(c) **Casing data:**
(1) Length(s) feet; Diameter(s) 12 & 6 inches
(2) Type

(d) **Pump data:**
(1) Type & Size
(2) Capacity 200 gpm
(3) No. stages
(4) Setting depth feet

Well Driller Layne Central Company
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWN-SHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____;
Other crops ( ) acres.

2. If for MUNICIPAL use: (a) Present population 1,111, (based on 19 80 Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
.170 19 90 ; .174 19 95 ; .177 ~~19~~ 2000 ; .180 ~~19~~ 2005

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____;
rate of release____; location of release point in reference to diversion point
(show location on map)
(b) Explain any change in quality of water to be released:

4. If for RECREATIONAL use: Explain how water will be used

5. If for FISH CULTURE use: (a) Explain in detail how water will be used
(b) Number of times reservoir will be emptied and filled annually:

6. If for ANY OTHER use: (a) Explain in detail

REMARKS

List below the name and address of person to be contacted for additional information, if required.

Town of Florence
(Name)
P.O. Box 187
(Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

Hale F Kimrel
(Signature)

Subscribed and sworn to before me this 5 day of March 19, 86, at Florence,
County of Rankin, Mississippi. My commission expires 9-12-86

Dora B. Brisher Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
MAR 11 1986
Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:	
County:	Rankin
Date Received:	3-11-86
Permit No:	MS-GW-0217
Quad Map:	Florence
Water Management Dist:	
Hydrologic River Basin:	03180002

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Town of Florence (Name) 64-0440386 (S/S or Tax ID No.)

P.O. Box 187 (Address), Florence (City or Town), Mississippi 39073 (State and Zip)

(601) 845-2462 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

NE ¼ of NW ¼ of Section 25, Township 4N, Range 1E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .091 million gallons per day, diverted/withdrawn at a maximum rate of 254 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary Florence Water Service Area

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) No) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Cockfield aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 3/80
(2) Depth drilled 10/3 feet
(3) Type of completion Gravel Wall
(4) Surface elevation 390 feet

(b) **Screen data:**
(1) Depth to bottom 1007 feet
(2) Length 40 ft
(3) Diameter 6" inc
(4) Type SS
(5) Slot .020 inches

(c) **Casing data:**
(1) Length(s) 960 feet: Diameter(s) 10" inches
(2) Type Steel

(d) **Pump data:**
(1) Type & Size 6" Vertical Turbine
(2) Capacity 254 @ 60 psi gpm
(3) No. stages 17
(4) Setting depth 403' 8" feet

Well Driller Layne Central Company (Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWN-SHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____;
Other crops (____) ____ acres.

2. If for MUNICIPAL use: (a) Present population 1,111, (based on 19 80 Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
.093 19 90; .096 19 95; .099 ~~19~~ 2000; .101 ~~19~~ 2005.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____;
rate of release____; location of release point in reference to diversion point ____ (show location on map)
(b) Explain any change in quality of water to be released: ____

4. If for RECREATIONAL use: Explain how water will be used ____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used ____
(b) Number of times reservoir will be emptied and filled annually: ____

6. If for ANY OTHER use: (a) Explain in detail ____

REMARKS ____

List below the name and address of person to be contacted for additional information, if required.

Town of Florence (Name)
P.O. Box 187 (Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

Hale F. Bonner (Signature)

Subscribed and sworn to before me this 5 day of March 19, 86, at Florence,
County of Rankin, Mississippi. My commission expires 9-12-86

Doris B. Brister Notary Public

FORM BLW-NC-1

RECEIVED
MAR 11 1996
Department of Natural Resources
Bureau of Land & Water Resources

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

For Office Use Only:
County: Rankin
Date Received: 03-11-96
Permit No: MS-SW-02173
Quad Map: Richfield
Water Management Dist:
Hydrologic River Basin: 03180002

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Town of Florence (Name) 64-0440386 (S.S or Tax ID No.)

P.O. Box 187 (Address), Florence (City or Town), Mississippi 39073 (State and Zip)

(601) 845-2462 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SE ¼ of SW ¼ of Section 20, Township 4 N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .167 million gallons per day, diverted/withdrawn at a maximum rate of 280 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary Florence Water Service Area

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) No) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Cockfield aquifer(s)
2. Description of water well:

(a) **Well data:**
- (1) Date well completed 3/80
- (2) Depth drilled 1023 feet
- (3) Type of completion Gravel Wall
- (4) Surface elevation 300 feet

(b) **Screen data:**
- (1) Depth to bottom 1017 feet
- (2) Length 40
- (3) Diameter 6" inches
- (4) Type SS
- (5) Slot .30 inches

(c) **Casing data:**
- (1) Length(s) 970 feet; Diameter(s) 10" inches
- (2) Type Steel

(d) **Pump data:**
- (1) Type & Size 6" Vertical Turbine
- (2) Capacity 280 gpm
- (3) No. stages 17
- (4) Setting depth 370 feet

Well Driller Layne Central Company (Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWN-SHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____; Other crops (____) ____ acres.

2. If for MUNICIPAL use: (a) Present population 1,111, (based on 19 80 Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
.170 19 90; .174 19 95; .177 ~~19~~ 2000; .180 ~~19~~ 2005.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____; rate of release ____; location of release point in reference to diversion point ____ (show location on map)
(b) Explain any change in quality of water to be released: ____

4. If for RECREATIONAL use: Explain how water will be used ____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used ____
(b) Number of times reservoir will be emptied and filled annually: ____

6. If for ANY OTHER use: (a) Explain in detail ____

REMARKS ____

List below the name and address of person to be contacted for additional information, if required.

Town of Florence (Name)
P.O. Box 187 (Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

Hale T Benson (Signature)

Subscribed and sworn to before me this 5 day of March 19, 86, at Florence, County of Rankin, Mississippi. My commission expires 9-12-86

Doris B. Brister Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
MAR 11 1996
Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:
County: Rankin
Date Received: 03-11-96
Permit No: MS-GW-03174
Quad Map: Florence
Water Management Dist:
Hydrologic River Basin: 03180002

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Town of Florence (Name) 64-0440386 (S/S or Tax ID No.)

P.O. Box 187 (Address), Florence (City or Town), Mississippi 39073 (State and Zip)

(601) 845-2462 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SW ¼ of SE ¼ of Section 30, Township 4N, Range 2E, County Rankin

3. Volume of water diverted/withdrawn:

(1) _____ acre feet per year, diverted/withdrawn at a maximum rate of _____ gallons per minute; or

(2) .167 million gallons per day, diverted/withdrawn at a maximum rate of 150 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary Florence Water Service Area

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) No) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Cockfield aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1966
(2) Depth drilled 955 feet
(3) Type of completion
(4) Surface elevation 310 feet

(b) **Screen data:**
(1) Depth to bottom feet
(2) Length 41
(3) Diameter 6 inches
(4) Type
(5) Slot inches

(c) **Casing data:**
(1) Length(s) feet; Diameter(s) 8" inches
(2) Type

(d) **Pump data:**
(1) Type & Size
(2) Capacity 150 gpm
(3) No. stages
(4) Setting depth feet

Well Driller Layne Central
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____;
Other crops ( ) acres.

2. If for MUNICIPAL use: (a) Present population 1,111 (based on 19 80 Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
.170 19 90 ; .174 19 95 ; .177 ~~19~~ 2000; .180 ~~19~~ 2005.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____;
rate of release____; location of release point in reference to diversion point
(show location on map)
(b) Explain any change in quality of water to be released:

4. If for RECREATIONAL use: Explain how water will be used

5. If for FISH CULTURE use: (a) Explain in detail how water will be used
(b) Number of times reservoir will be emptied and filled annually:

6. If for ANY OTHER use: (a) Explain in detail

REMARKS

List below the name and address of person to be contacted for additional information, if required.

Town of Florence
(Name)
P.O. Box 187
(Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

Hal Thomas
(Signature)

Subscribed and sworn to before me this 5 day of March 19, 86, at Florence,
County of Rankin, Mississippi. My commission expires 9.12.86
Doris B. Brister Notary Public

FORM BLW-NC-1

Well #1

RECEIVED

FEB 13 1986

Department of Natural Resources
Bureau of Land & Water Resources

RETURN COMPLETED FORM TO:
Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

For Office Use Only:	
County:	Rankin
Date Received:	2-13-86
Permit No:	MS-GW-0176
Quad Map:	
Water Management Dist:	
Hydrologic River Basin:	

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Southern Rankin Water Association, Inc. (Name) 64-0595931 (S/S or Tax ID No.)

Route 6, Box 162-C (Address), Jackson (City or Town), Mississippi 39208 (State and Zip)

(601) 939-5370 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other Rural Water Association (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

NE ¼ of SE ¼ of Section 8, Township 4 N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .18 million gallons per day, diverted/withdrawn at a maximum rate of 125 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary _____

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) _____) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: _____ aquifer(s
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1969
(2) Depth drilled 948 feet
(3) Type of completion Natural
(4) Surface elevation ±360 feet

(b) **Screen data:**
(1) Depth to bottom 946 ge
(2) Length 42 fee
(3) Diameter 6" inches
(4) Type SS
(5) Slot .08 inches

(c) **Casing data:**
(1) Length(s) 851'-8" 52'-6" feet; Diameter(s) 8 & 6 inches
(2) Type Welded Steel

(d) **Pump data:**
(1) Type & Size Vertical Turbine - 8" (2) Capacity 122 GPM @ 60 PSI gpm
(3) No. stages 15 (4) Setting depth 309 feet

Well Driller Layne Central Company
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice_____; Cotton_____; Corn_____; Pasture_____; Truck_____;
Other crops (_____) _____ acres.

2. If for MUNICIPAL use: (a) Present population _____, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
_____19____; _____19____; _____19____; _____19____.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____
rate of release_____; location of release point in reference to diversion point _____
(show location on map)
(b) Explain any change in quality of water to be released: _____

4. If for RECREATIONAL use: Explain how water will be used _____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used _____
(b) Number of times reservoir will be emptied and filled annually: _____

6. If for ANY OTHER use: (a) Explain in detail This is one of four wells supplying water to approximately 868 families

REMARKS _____

List below the name and address of person to be contacted for additional information, if required.

Hugh Heflin
(Name)
P.O. Box 91
(Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

N.E. Smith
(Signature)

Subscribed and sworn to before me this 11th day of Feb 1986, at Pearl, Ms
County of Rankin, Mississippi. My commission expires [illegible]

Angela L Bailey Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

well #2

For Office Use Only:	
County:	Rankin
Date Received:	2-12-96
Permit No:	MS 6W-2172
Quad Map:	
Water Management Dist:	
Hydrologic River Basin:	

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Southern Rankin Water Association, Inc. (Name) — 64-0595931 (S/S or Tax ID No.)

Route 6, Box 162-C (Address), Jackson (City or Town), Mississippi 39208 (State and Zip)

(601) 939-5370 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other Rural Water Association (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SE ¼ of NW¼ of Section 18, Township 4 N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .58 million gallons per day, diverted/withdrawn at a maximum rate of 400 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary _____

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) _____) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number_____, dated_____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream:_____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift_____ft. Maximum capacity _____ gpm

(b) Storage reservoir_____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool_____acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: _____ aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1983
(2) Depth drilled 1407 feet
(3) Type of completion Gravel Wall
(4) Surface elevation ±353 feet

(b) **Screen data:**
(1) Depth to bottom 1300 feet
(2) Length 50 ft
(3) Diameter 8" inches
(4) Type SS
(5) Slot .030 inches

(c) **Casing data:**
(1) Length(s) 1245 feet; Diameter(s) 12" inches
(2) Type Welded Steel

(d) **Pump data:**
(1) Type & Size Vertical Turbine - 8" (2) Capacity 400 GPM @ 60 PSI gpm
(3) No. stages 18 (4) Setting depth 320 feet

Well Driller Layne Central Company
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWN-SHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice_____; Cotton_____; Corn_____; Pasture_____; Truck_____;
Other crops (_____) _____ acres.

2. If for MUNICIPAL use: (a) Present population _____, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
_____19____; _____19____; _____19____; _____19____.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year _____
rate of release_____; location of release point in reference to diversion point _____
(show location on map)
(b) Explain any change in quality of water to be released: _____

4. If for RECREATIONAL use: Explain how water will be used _____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used _____
(b) Number of times reservoir will be emptied and filled annually: _____

6. If for ANY OTHER use: (a) Explain in detail This well is one of four wells supplying water to approximately 868 families

REMARKS _____

List below the name and address of person to be contacted for additional information, if required.

Hugh Heflin
(Name)
P.O. Box 91
(Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

R. L. Smith
(Signature)

Subscribed and sworn to before me this 11th day of Feb 19,86, at Pearl MS.
County of Rankin, Mississippi. My commission expires _____

Angela L Bailey Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:
Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
FEB 13 1996
Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:	
County:	Rankin
Date Received:	2-13-96
Permit No:	MS-GW-81743
Quad Map:	
Water Management Dist:	
Hydrologic River Basin:	

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Southern Rankin Water Association, Inc. (Name) 64-0595931 (S/S or Tax ID No.)

Route 6, Box 162-C (Address), Jackson (City or Town), Mississippi 39208 (State and Zip)

(601) 939-5370 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; irrigation; recreation; livestock water; fish culture; industrial;

Other Rural Water Association (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SW ¼ of SW ¼ of Section 18, Township 4 N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .18 million gallons per day, diverted/withdrawn at a maximum rate of 125 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary _____

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) _____) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: _____ aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed ±1966
(2) Depth drilled 892 feet
(3) Type of completion Natural
(4) Surface elevation ±335 feet

(b) **Screen data:**
(1) Depth to bottom 892 feet
(2) Length 50 feet
(3) Diameter 4" inches
(4) Type _____
(5) Slot _____ inches

(c) **Casing data:**
(1) Length(s) 400'-6" x 442'-4" feet; Diameter(s) 6 & 4 inches
(2) Type Steel

(d) **Pump data:**
(1) Type & Size Sub
(2) Capacity 125 gpm
(3) No. stages _____
(4) Setting depth _____ feet

Well Driller _____ (Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice_____; Cotton_____; Corn_____; Pasture_____; Truck_____;
Other crops (_____) _____ acres.

2. If for MUNICIPAL use: (a) Present population _____, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
_____19____; _____19____; _____19____; _____19____.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____
rate of release_____; location of release point in reference to diversion point _____ (show location on map)
(b) Explain any change in quality of water to be released: _____

4. If for RECREATIONAL use: Explain how water will be used _____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used _____
(b) Number of times reservoir will be emptied and filled annually: _____

6. If for ANY OTHER use: (a) Explain in detail This well is one of four wells supplying water to approximately 868 families.

REMARKS _____

List below the name and address of person to be contacted for additional information, if required.

Hugh Heflin (Name)
P.O. Box 91 (Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

M. F. Smith (Signature)

Subscribed and sworn to before me this 11th day of Feb 19,86, at Pearl, Ms.
County of Rankin, Mississippi. My commission expires _____

Angela L. Bailey Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:
Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
FEB 13 1986
Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:	
County:	Rankin
Date Received:	2-13-86
Permit No:	MS-GW-01744
Quad Map:	
Water Management Dist:	
Hydrologic River Basin:	

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Southern Rankin Water Association, Inc. (Name) 64-0595931 (S/S or Tax ID No.)

Route 6, Box 162-C (Address), Jackson (City or Town), Mississippi 39208 (State and Zip)

(601) 939-5370 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; irrigation; recreation; livestock water; fish culture; industrial;

Other Rural Water Association (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

SW ¼ of SW ¼ of Section 18, Township 4N, Range 2E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .27 million gallons per day, diverted/withdrawn at a maximum rate of 185 gallons per minute.

4. Description of lands on which water will be used:

(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary _____

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) _____) Describe the nature and amount of any additional supply _____

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number_____, dated_____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream:_____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift_____ft. Maximum capacity _____gpm

(b) Storage reservoir_____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool_____acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: _____ aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1976
(2) Depth drilled 1375 feet
(3) Type of completion Gravel Wall
(4) Surface elevation +335 feet

(b) **Screen data:**
(1) Depth to bottom 1295 feet
(2) Length 40 feet
(3) Diameter 6" inches
(4) Type SS
(5) Slot .014 inches

(c) **Casing data:**
(1) Length(s) 1245 feet; Diameter(s) 10 inches
(2) Type Welded Steel

(d) **Pump data:**
(1) Type & Size Vertical Turbine - 8"
(2) Capacity 190 GPM @ 10 PSI gpm
(3) No. stages 14
(4) Setting depth 328 feet

Well Driller Griner Drilling Service
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice_____; Cotton_____; Corn_____; Pasture_____; Truck_____;
Other crops (_____) _____ acres.

2. If for MUNICIPAL use: (a) Present population _____, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
_____19____;_____19____;_____19____;_____19____.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____
rate of release_____; location of release point in reference to diversion point _____
(show location on map)
(b) Explain any change in quality of water to be released: _____

4. If for RECREATIONAL use: Explain how water will be used _____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used _____
(b) Number of times reservoir will be emptied and filled annually: _____

6. If for ANY OTHER use: (a) Explain in detail This well is one of four wells supplying water to approximately 868 families

REMARKS _____

List below the name and address of person to be contacted for additional information, if required.

Hugh Heflin
(Name)
P.O. Box 91
(Address)
Florence, Mississippi 39073

The accompanying map is hereby declared a part of this application.

T. L. Smith
(Signature)

Subscribed and sworn to before me this 11th day of Feb 19,84, at Pearl, MS.
County of Rankin, Mississippi. My commission expires _____

Angela L. Bailey Notary Public

My Commission Expires July 27, [illegible]

FORM BLW-NC-1

RECEIVED

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

Department of Natural Resources
Bureau of Land & Water Resources

For Office Use Only:	
County:	Rankin
Date Received:	[illegible]
Permit No:	[illegible]
Quad Map:	Whitfield
Water Management Dist:	
Hydrologic River Basin:	03180002

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Monterey Water Association (Name) 64 6038011 (S/S or Tax ID No.)

Rt. 1, (Address) Florence (City or Town) MS 39073 (State and Zip)

(601) 939-2126 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

NE ¼ of NW ¼ of Section 23, Township 4 N, Range 2 E, County Rankin

3. Volume of water diverted/withdrawn:

(1) _____ acre feet per year, diverted/withdrawn at a maximum rate of _____ gallons per minute; or

(2) 0.58 million gallons per day, diverted/withdrawn at a maximum rate of 401 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary Monterey Water Association

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) N/A) Describe the nature and amount of any additional supply N/A

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Coscfield aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed 1976
(2) Depth drilled 1070 feet
(3) Type of completion Gravel Pack
(4) Surface elevation 410 feet

(b) **Screen data:**
(1) Depth to bottom 1038 feet
(2) Length 45 et
(3) Diameter 8" nes
(4) Type SS Continuous Wrapped
(5) Slot 0.014 inches

(c) **Casing data:**
(1) Length(s) 988 feet; Diameter(s) 12" inches
(2) Type Welded Black Steel

(d) **Pump data:**
(1) Type & Size Layne Vert. Turbine
(2) Capacity 401 @65psi gpm
(3) No. stages 15
(4) Setting depth 450 feet

Well Driller Layne-Central, Jackson, MS
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____;
Other crops (____) ____ acres.

2. If for MUNICIPAL use: (a) Present population 1575 (Based on 492 Meters @ 3.2 per house, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
116,000 19 91 ; 161,500 19 96 ; 212,500 19 2001 ; 272,000 19 2006

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____
rate of release____; location of release point in reference to diversion point ____
(show location on map)
(b) Explain any change in quality of water to be released: ____

4. If for RECREATIONAL use: Explain how water will be used ____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used ____
(b) Number of times reservoir will be emptied and filled annually: ____

6. If for ANY OTHER use: (a) Explain in detail ____

REMARKS ____

List below the name and address of person to be contacted for additional information, if required.

Earl N. Hudson, Sr.
(Name)
Rt. 1, Box 237
(Address)
Florence, MS 39073

The accompanying map is hereby declared a part of this application.

Earl N. Hudson Sr.
(Signature)

Subscribed and sworn to before me this 22nd day of Jan., 19, 86, at Richland
County of Rankin, Mississippi. My commission expires ____
Ginger Shelley Notary Public

FORM BLW-NC-1

RETURN COMPLETED FORM TO:

Bureau of Land and Water Resources
P.O. Box 10631
Jackson, Mississippi 39209
Telephone (601) 961-5200

RECEIVED
FEB 7 1986
Bureau of Land & Water Resources

For Office Use Only:	
County:	
Date Received:	
Permit No:	
Quad Map:	Richfield
Water Management Dist:	
Hydrologic River Basin:	0218000

NOTICE OF CLAIM FOR CONTINUED USE OF SURFACE/GROUND WATERS FOR BENEFICIAL USE

Pursuant to the laws of the State of Mississippi, namely §51-3-5 (2) or (3), as amended, I, the landowner, _____

Monterey Water Association (Name) 64 6038011 (S.S or Tax ID No.)

Rt. 1, (Address) Florence (City or Town) MS 39073 (State and Zip)

(601) 939-2126 (Telephone Number), do hereby file claim for the continued use of: (circle one)

surface water *ground water* for the following beneficial use: (circle one or more)

municipal; *irrigation;* *recreation;* *livestock water;* *fish culture;* *industrial;*

Other _____ (Specify)

1. Name & Address of agent or applicant if different from landowner.

_____ (Name), _____ (S/S or Tax ID No.), _____ (Address)

_____ (City or Town), _____ (State and Zip), ( ) _____ (Telephone Number)

2. Location of point of diversion/withdrawal (include location map with claim)

NE ¼ of SE ¼ of Section 15, Township 04N, Range 02E, County Rankin

3. Volume of water diverted/withdrawn:

(1)_____ acre feet per year, diverted/withdrawn at a maximum rate of _____gallons per minute; or

(2) .060 million gallons per day, diverted/withdrawn at a maximum rate of 350 gallons per minute.

4. Description of lands on which water will be used:
(a) Copy legal description of property upon which water is to be used (may be copied word for word from your deed).

Attach separate sheet if necessary See other Application

(b) Has the above described land any water right or source of water supply other than that herein applied for?

(Water Rights Number(s) N/A) Describe the nature and amount of any additional supply N/A

SECTION A (to be completed if source of water is from surface supply)

1. Prior water rights permit/license number _____, dated _____

2. Source of supply is _____ which drains into _____

_____ which drains into _____

3. Description of diversion works:

(a) Water obtained directly from stream: _____ (Name)

Pump _____ (Size and type) Power Unit _____ (Size and type)

Lift _____ ft. Maximum capacity _____ gpm

(b) Storage reservoir _____ (Name)

Height of dam _____ feet. Surface area at normal pool _____ acres

Storage capacity at normal pool _____ acre feet

SECTION B (to be completed if source of water is from underground supply)

1. Source of supply: Coscfield aquifer(s)
2. Description of water well:

(a) **Well data:**
(1) Date well completed Jan., 1982
(2) Depth drilled 1059 feet
(3) Type of completion Grave Pack
(4) Surface elevation 380 feet

(b) **Screen data:**
(1) Depth to bottom 1054 feet
(2) Length 40 '
(3) Diameter 6" in.
(4) Type Stainless Steel
(5) Slot .016 inches

(c) **Casing data:**
(1) Length(s) 1008 feet; Diameter(s) 10" inches
(2) Type Black Steel

(d) **Pump data:**
(1) Type & Size 8" Vertical Turbine (2) Capacity 350 gpm
(3) No. stages 18 (4) Setting depth 392 feet

Well Driller Griner Drilling Co. Columbia, MS
(Name of Company)

WATER USE DATA

1. IRRIGATION use: (a) Show number of acres to be irrigated by 40-acre blocks:

TOWNSHIP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

(b) List the acres to be irrigated: Rice____; Cotton____; Corn____; Pasture____; Truck____;
Other crops (____) ____ acres.

2. If for MUNICIPAL use: (a) Present population ____, (based on 19____ Census)
(b) Estimated average daily consumption during periods of maximum use at the end of each five-year period in next twenty years:
____ 19____; ____ 19____; ____ 19____; ____ 19____.

3. If for INDUSTRIAL use: (a) If water is to be released into a watercourse, indicate: Amount released each year ____; rate of release ____; location of release point in reference to diversion point ____
(show location on map)
(b) Explain any change in quality of water to be released: ____

4. If for RECREATIONAL use: Explain how water will be used ____

5. If for FISH CULTURE use: (a) Explain in detail how water will be used ____
(b) Number of times reservoir will be emptied and filled annually: ____

6. If for ANY OTHER use: (a) Explain in detail ____

REMARKS ____

List below the name and address of person to be contacted for additional information, if required.

Earl N. Hudson, Sr.
(Name)
Rt. 1, Box 237
(Address)
Florence, MS 39073

The accompanying map is hereby declared a part of this application.

Earl N. Hudson Sr.
(Signature)

Subscribed and sworn to before me this 22nd day of Jan 19, 84, at Richland, County of Rankin, Mississippi. My commission expires My Commission Expires Aug. 18, 1989

Notary Public

8

Data Sheet Report Summary
Mississippi State Department of Health
Division of Water Supply

PWS ID	Name of System	Wells	Connections	Consecutive
** County Code: 60				
0600001	BELEN WATER ASSOCIATION	1	45	N
0600002	BIG FIELD WATER ASSOCIATION	1	25	N
0600003	TOWN OF CROWDER	2	322	N
0600004	DARLING WATER ASSOCIATION	1	90	N
0600005	TOWN OF FALCON	2	96	N
0600006	TOWN OF LAMBERT	3	725	N
0600007	CITY OF MARKS	1	1100	N
0600008	TOWN OF SLEDGE	2	246	N
0600009	NORFLEET UTILITIES, INC	1	40	N
0600010	SOUTH QUITMAN-S LAMBERT UTL	0	137	Y
0600012	SOUTH LAKE WATER ASSOCIATION	1	265	N
0600013	SOUTH QUITMAN-N TUTWILER UTL	0	113	Y
0600016	WEST LAMBERT WATER ASSOCIATION	0	130	Y
0600017	BIRDIE WATER ASSOCIATION	1	153	N
0600018	SOUTH QUITMAN CO UTL	0	95	Y
** County Code: 61				
0610001	ACL WATER ASSOCIATION #1	1	365	N
0610003	CITY OF BRANDON	3	2077	N
0610007	EVERGREEN WATER ASSOCIATION	1	494	N
0610008	FANNIN WATER ASSN-NORTH	1	157	N
0610009	TOWN OF FLORENCE	4	641	N
0610010	TOWN OF FLOWOOD	3	276	N
0610011	GREENFIELD WATER ASSOCIATION	1	300	N
0610012	LANGFORD WATER ASSOCIATION	3	625	N
0610013	LEESBURG WATER ASSOCIATION	3	872	N
0610014	FLOWOOD-LUCKNEY	1	203	N
0610015	PINEY WOODS COUNTRY LIFE SCH	1	46	N
0610016	MONTEREY WATER ASSN-WEST	1	326	N
0610017	CITY OF PEARL	6	6054	N
0610018	TOWN OF PELAHATCHIE	2	603	N
0610019	PISGAH WATER ASSOCIATION	1	278	N
0610021	VILLAGE OF PUCKETT	2	155	N
0610022	CLEARY WATER SEWER & FIRE DEPT	2	568	N
0610023	CITY OF RICHLAND W & S DEPT	3	1466	N
0610024	SOUTHERN RANKIN W/A #2-PLAIN	2	735	N
0610025	SE RANKIN WATER ASSN-JOHNS	3	513	N
0610026	SW RANKIN WATER ASSOCIATION #1	1	574	N
0610027	STAR WATER COMPANY	1	264	N
0610028	TAYLORSVILLE W/A #1	1	437	N
0610029	THOMASVILLE WATER ASSOCIATION	1	188	N
0610030	UNION WATER ASSOCIATION	1	143	N
0610031	WASHINGTON WATER ASSOCIATION	1	122	N
0610032	MS STATE HOSPITAL-WHITFIELD	5	1207	N
0610034	BIERDEMAN RENTALS	1	90	N
0610035	PRVWSD-HIGHWAY 43	3	169	N
0610036	PRVWSD-PELAHATCHIE BAY	4	1646	N
0610037	CLEVELAND'S TRAILER PARK	3	135	N

Data Sheet Report Summary
Mississippi State Department of Health
Division of Water Supply

PWS ID	Name of System	Wells	Connections	Consecutive
0610038	ROBINHOOD LAKE RESORT #1	1	182	N
√ 0610040	SW RANKIN WATER ASSOCIATION #2	2	537	N
0610041	ACL WATER ASSOCIATION #2	2	310	N
0610042	CITY OF BRANDON-WEST BRANDON	4	2093	N
0610043	RANKIN UTL CO-CASTLEWOODS	2	663	N
0610044	NORANCO UTILITIES	2	915	N
0610049	SE RANKIN WATER ASSN-CATO	2	385	N
0610051	MONTEBEY WATER ASSN-EAST	1	256	N
√ 0610052	SOUTHERN RANKIN W/A #1 MONT RD	1	175	N
0610073	LANG'S TRAILER PARK	1	20	N
0610075	NORTH FLOWOOD WELL	1	295	N
0610080	ROBINHOOD LAKE RESORT #2	1	352	N
0610081	CENTRAL RANKIN WATER ASSN	2	663	N
0610083	FANNIN WATER ASSN-SOUTH	1	315	N
0610086	THOMASVILLE W/A # 2	2	99	N
0610087	RICHLAND SYSTEMS, INC	1	51	N
0610088	ALPINE TRAILER PARK	1	35	N
0610089	RANKIN CO CORRECTIONS FACILITY	2	8	N
0610090	TAYLORSVILLE W/A #2	1	100	N
** County Code: 62				
0620001	C & C WATER ASSOCIATION	2	454	N
0620002	CITY OF FOREST	7	2030	N
0620003	H & H WATER SYSTEM, INC	2	884	N
0620004	HIGH HILL WATER ASSOCIATION	1	140	N
0620005	HOMESTEAD WATER ASSOCIATION	2	300	N
0620006	HOMEWOOD WATER ASSOCIATION	2	482	N
0620007	L & F WATER ASSOCIATION	2	385	N
0620008	LAKE WATER WORKS	2	229	N
0620009	CITY OF MORTON	3	2000	N
0620010	SEBASTOPOL WATER ASSOCIATION	3	1235	N
0620011	STEELE-RINGGOLD W/A #1	2	660	N
0620023	STEELE-RINGGOLD WATER ASSN #2	2	590	N
** County Code: 63				
0630001	TOWN OF ANGUILLA	2	313	N
0630002	TOWN OF CARY	1	330	N
0630003	DELTA CITY WATER ASSOCIATION	1	87	N
0630004	CITY OF ROLLING FORK	3	890	N
0630005	PANTHER BURN CO PLANTATION	1	35	N
0630007	LITTLE PANTHER S/D WATER ASSN.	1	38	N
0630036	LAMENSDORF SUBDIVISION	1	12	N
0630037	TRUELIGHT REDEVELOPMENT GROUP	1	152	N
** County Code: 64				
0640001	BOGGAN RIDGE WATER ASSOCIATION	1	406	N
0640002	TOWN OF BRAXTON	1	230	N
0640003	D'LO WATER & SEWER	2	210	N
640004	HARRISVILLE WATER ASSN #1	1	255	N

9

HAZARD RANKING SYSTEM

DATA COLLECTION AND DOCUMENTATION TECHNIQUES FOR HRS SCORING O HAZARDOUS WASTE SITES

DECEMBER, 1988

In Cooperation With

U.S. Environmental Protection Age
Investigations and Compliance U
Region V

Prepared by

[illegible]ration
[illegible] Divisio

10

OVERSIZED

DOCUMENT

11

Rankin County Geology and Mineral Resources

WILBUR T. BAUGHMAN

THOMAS E. McCUTCHEON

ALVIN R. BICKER, JR.

THEO H. DINKINS, JR.

THAD N. SHOWS

BULLETIN 115

MISSISSIPPI GEOLOGICAL, ECONOMIC AND TOPOGRAPHICAL SURVEY

WILLIAM HALSELL MOORE
Director and State Geologist

JACKSON, MISSISSIPPI
1971

PRICE $3.00

dian. Several other rail lines serve the Metropolitan City of Jackson which is adjacent to the heavily populated area on the west central fringe of the County.

Three commercial air lines serve Rankin County and the Jackson Metropolitan Area through the Jackson Municipal Airport located in west central Rankin County just east of the City of Jackson. This airport is owned by the City of Jackson and is one of the most modern in the United States today.

Climate

Climatological data for Rankin County was compiled from United States Weather Bureau reports for the 10-year period from June 1, 1960 through May 30, 1970. Measurements used were taken at the recording station in Pelahatchie, except for a small number of months at random during this period of time. Measurements taken at the recording station at the Jackson Municipal Airport in Rankin County were used for these months. Climatological data is shown on Table 1. Rankin County enjoys a temporate climate with long, humid summers and short, mild winters. The average winter temperature for the 10-year period compiled was 46.5 degrees, average summer temperature was 79.1 degrees and the average annual temperature was 63.8 degrees. Absolute maximum temperature recorded at the recording station was 103 degrees in June 1963 and the lowest temperature recorded was 3 degrees below zero in January 1962. The average annual precipitation for the 10-year period was fairly well distributed with the spring months, particularly March, having the heaviest rainfall and the fall months, particularly October, having the lightest rainfall. Figure 2 shows Rankin County had an average annual rainfall of approximately 52 inches in the 25-year period from 1931 through 1955. Precipitation extremes ranged from none in October 1961 to 13.49 inches in April 1964. Time loss due to adverse weather conditions is extremely low. Below freezing temperature and snowfall is uncommon. Temperatures approaching 100 degrees are common in summer and early fall.

Table 1.

Normal, Monthly, Seasonal, and Annual Temperature and Precipitation in Rankin County, Mississippi*

Month	Temperature			Precipitation		
	Average	Absolute maximum	Absolute minimum	Average	Absolute maximum	Absolute minimum
	F°	F°	F°	Inches	Inches	Inches
December	47.3	81	4	6.28	9.76	3.37
January	44.4	79	-3	4.98	9.53	1.35
February	47.9	83	11	4.92	10.04	2.60
Winter	46.5	83	-3	16.18	22.27	11.47
March	55.9	88	20	5.41	11.50	1.07
April	66.4	91	30	4.96	13.49	1.05
May	72.0	95	38	3.57	9.61	.20
Spring	64.8	95	20	13.94	23.61	6.13
June	77.5	103	46	3.18	8.75	.72
July	80.4	102	52	4.88	6.42	2.35
August	79.5	100	53	4.02	9.71	1.41
Summer	79.1	103	46	12.08	14.29	8.28
September	74.2	101	35	3.14	5.31	1.66
October	64.7	98	24	2.04	6.37	0.00
November	55.7	85	17	3.90	10.08	.98
Fall	64.9	101	17	9.08	16.10	6.45
Year	63.8	103	-3	51.28	67.37	37.16

*Average temperature and precipitation based on a 10 year record; compiled from available recordings in U. S. Department of Commerce, Weather Bureau, "Climatological Data," June, 1960, through May, 1970.

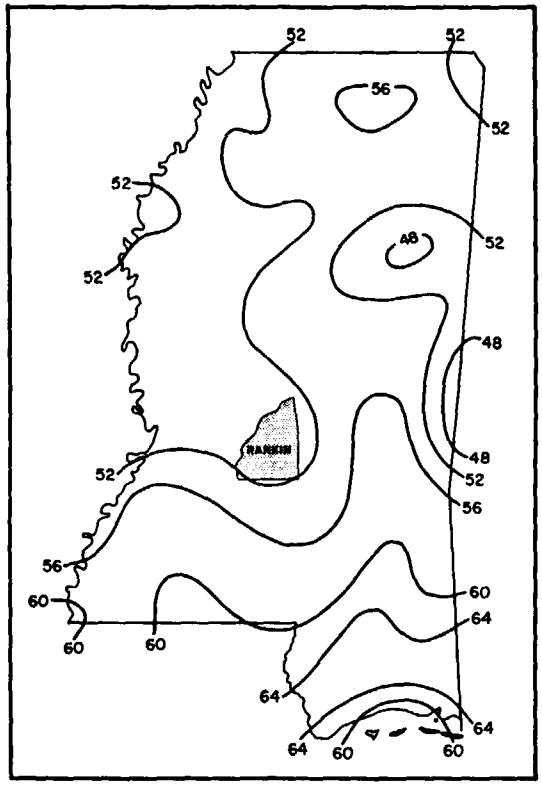


Figure 2.—Mean annual precipitation, in inches. Extracted from U. S. Weather Bureau, 1959, "Climates of the States." Based on 25 year period 1931-55.

Population

The 1960 census listed a population of 34,322 for Rankin County. Of this total 10,784 were white males, 10,720 were white females, 6286 were non-white males and 6532 were non-white females. The 1970 preliminary census report lists a population of 43,200, which is an increase of 8878 or 25.9% over the 1960 census. The 1920 census listed 20,153 or slightly less than half the 1970 preliminary figure. Population density for Rankin County, using the 1970 preliminary data, is 54 per square mile.

At the time of this writing Brandon, the County seat, and Pelahatchie are the only incorporated towns having a total population of 1000 inhabitants or more within its corporate limits. The 1970 preliminary census report lists Brandon (pop. 2677) and Pelahatchie (pop. 1259). No data has been released by the U. S. Census on the other 3 incorporated towns in the County, however, the Rankin County Chamber of Commerce reports their population at the time of this writing to be as follows: Florence (pop. 397), Flowood (pop. 344) and Puckett (pop. 321). The densely populated Pearl-McLaurin area has an incorporation petition in court. The Chamber of Commerce reports the population of this area to be approximately 21,000. Plain, another densely populated area between Jackson and Florence, has a population of approximately 4900 as reported by the Chamber of Commerce. Small communities and villages include Cato, Clarksburg, Cleary, Crossgates, Cross Roads, Fannin, Goshen Springs, Greenfield, Gulde, Johns, Lakeland, Langford, Leesburg, Luckney, Monterey, Pearson, Piney Woods, Pisgah, Rankin, Rock Hill, Rufus, Sand Hill, Sherwood Forest, Shiloh, Star, Thomasville, Value, Whites and Whitfield.

Culture and Industry

The 1960 census listed 10,935 as the total work force in Rankin County. This total included 7087 employed males, 259 unemployed males, 3435 employed females and 146 unemployed females.

Rankin County is divided into two primary cultural patterns, industrial and agricultural. Agricultural areas include all rural areas. Industrial areas are primarily those in close proximity to the metropolitan area of the City of Jackson, which

exposed in the County includes sediments deposited in marine and non-marine environments. Surface strata in Rankin County include an array of lithologies such as: clay, sand, silt, siltstone, sandstone, marl and limestone. Generally the strata dip south-southwest, however, due to the influence of the Jackson Dome, dip has been altered around it so that the strata dip in all directions off the dome. The aggregate thickness of exposed strata in the County is in excess of 1200 feet. The youngest strata are exposed in southern Rankin County at higher elevations. The oldest strata crop out under the alluvium of the Pearl River on the Jackson Dome and will be discussed in the subsurface stratigraphy section.

In a considerable part of Rankin County, bedrock is covered by surficial materials of alluvium, colluvium, terraces and soils. These materials are of the Pleistocene and Recent Series of the Quarternary System.

Figure 5 is a generalized section of strata exposed on the surface in Rankin County. The areal extent of these strata is shown on the Geologic Map, Plate 1. Locations of test holes drilled and cored relative to the study for this report are shown in Figure 6.

SYSTEM	SERIES	GROUP	STRATIGRAPHIC UNIT	THICKNESS feet	LITHOLOGIC CHARACTER
QUATERNARY	RECENT		Alluvium	0-45	Sand, fine-to very coarse-grained; gravel, silt and clay with some organic material.
	PLEISTOCENE		Pre-loess Terrace deposits	0-156	Sand, fine-to coarse-grained. Scattered gravel locally, mostly pebble size. Occasional clay lenses. Sands weather to orange-red. Some silicified wood at or near base in some localities.
			Citronelle formation	0-110	Sand, fine-to coarse-grained, with abundant chert and quartz gravel. Ferruginous sandstone and siltstone present at base in some localities.
TERTIARY	MIOCENE		Catahoula formation	Up to 420	Clay, gray, buff, purple and green, silty to very silty. Silt, light-gray to white and buff, locally indurated to form siltstones. Sand, gray to white, kaolinitic, very fine-to coarse-grained, locally indurated, particularly on or near surface, forming sandstone ledges.
	OLIGOCENE	VICKSBURG	Bucatunna clay	20-70	Dark-gray, finely carbonaceous, occasionally pyritiferous clay and finely micaceous clay with thin silt and sand laminae. Rare fossil fragments and glauconite near base. Weathers to chocolate brown.
			Byram marl	8-22	Gray-green, glauconitic, fossiliferous, clayey, silty to occasionally slightly sandy marl.
			Glendon limestone	15-50	Light-gray to gray, fossiliferous, glauconitic limestone. Occasionally slightly sandy. Alternating beds of gray-green, fossiliferous, glauconitic marl. Limestone beds vary from less than 1 foot thick to 4 feet thick.
			Mint Spring marl	6-30	Gray-green, fine-to coarse-grained, glauconitic, fossiliferous sand and sandy marl. Occasionally clayey.
			Forest Hill formation	65-210	Very fine-to fine-grained, silty sand. Silty, carbonaceous clay. Thin beds of lignite. Thinly laminated on outcrop.
	EOCENE	JACKSON	Yazoo formation	340-460	Blue-green, fossiliferous, calcareous clay. Weathers to green-to-yellow-tan. Very tiny near base. Upper few feet occasionally non-calcareous.

Figure 5 - Generalized section of exposed strata in Rankin County.

Figure 26 —Gravel pit in Citronelle formation in NW 4, Sec. 32, T. 3 N., R. 4 E. May 1, 1971.

PRE-LOESS TERRACE DEPOSITS

In adjoining Hinds County, Moore[6] designated sand and gravel deposits excepting Citronelle, and the sands and gravels found in present-day stream beds and alluvial plains as pre-loess terrace deposits. He considered them to be Pleistocene in age. The term has since been used by Bicker[7] in describing similar deposits in adjoining Claiborne and Copiah Counties. The writer used the term in the same manner in Rankin County.

The pre-loess terrace deposits consist of fine- to coarse-grained sand, locally containing small amounts of gravel, mostly pebble size, and occasional clay lenses are found overlying all formations observed in surface outcrops in the County. The sands are commonly stained orange-red to buff. Gravels are generally finer than those found in the Citronelle and are composed of chert and quartz. Clays are red, pink, yellow, orange, occasionally white and purple and occur in discontinuous lenses in the sands and gravels.

In general, the writer attempted to map only those terrace deposits of significant areal extent and in excess of 10 to 15 feet in thickness. Exceptions were made in the case of the lower stream terraces which were mapped primarily from exposures

along roadcuts. Many lower stream terraces were inferred in inaccessible areas from observations made of those observed along roads and represent probable terraces. Many of these lower terraces are quite small in areal extent and in numerous instances are less than 10 feet thick and thus insignificant.

The largest and most significant high terrace deposits were observed: On Ware Hill, located in Secs. 19 and 30, T. 6 N., R. 5 E.; approximately 3 miles north of Pelahatchie in Secs. 10, 11 and 15., T. 6 N., R. 5 E.; in the Fannin Community, primarily in Secs. 25 and 26, T. 7 N., R. 3 E.; at Goshen Springs in Secs. 5 and 6, T. 7 N., R. 4 E.; at Red Hill in Secs. 15, 16, 20 and 21, T. 5 N., R. 2 E.; 1.5 miles northeast of Luckney in Sec. 24, T. 6 N., R. 2 E.; in the vicinity and south of Cleary in T. 4 N., R. 1 E.; in the Monterey area near the center of T. 4 N., R. 2 E. Numerous other less extensive and thinner high terrace deposits are present in the County and may be noted on the Geologic Map, Plate 1.

Local, sometimes extensive deposits of colluvium effectively mask otherwise observable bedrock-terrace contacts in the County. One such area is found in southeastern Rankin County in the Puckett area. Another such area is in southwest Rankin in T. 3 N., R. 1 E. Contacts of the stream terrace and Catahoula are arbitrarily drawn in these areas and do not necessarily represent the true contact.

A test hole drilled by the Mississippi State Highway Dept., on Red Hill in 1964, at an elevation of 450 feet in SW 4, SW 4, NW 4, Sec. 21, T. 5 N., R. 2 E., penetrated 110 feet of terrace materials overlying Yazoo clay. Figure 27 shows portion of extensively mined terrace sands in Red Hill sand pit. Test hole AG-38 near center S 2, Sec. 19, T. 6 N., R. 5 E., on Ware Hill, penetrated 92 feet of terrace materials overlying Yazoo clay and AG-47, NW 4, SW 4, NW 4, Sec. 25, T. 7 N., R. 3 E., in Fannin community penetrated 157 feet of terrace materials overlying Yazoo clay. The deposits penetrated in these holes were composed of fine- to coarse-grained sand with thin lenses of white and pink clay.

The Cook Mountain-Cockfield contact is transitional. Vertical and lateral facies changes in depositional environment cause these formations to thin or thicken at the expense of the other.

The top of the Cook Mountain in this report is picked on a general increase of light brownish-gray finely lignitic or carbonaceous clays below the fine- and medium-grained sands of the basal Cockfield.

The lower part of the Cook Mountain consists of a sequence of interbedded brownish-gray slightly calcareous sparingly lignitic or carbonaceous fossiliferous glauconitic clays and light-gray and pale-gray silty occasionally slightly sandy chalks, marls and limestones.

Cockfield Formation

The Cockfield formation is a sequence of sands, silts and clays with a few thin beds of lignite. As stated previously, the Cook Mountain-Cockfield contact is transitional, and as such thick Cockfield sections tend to be complemented by thin Cook Mountain sequences. The Cockfield varies from 200 feet to a maximum of 330 feet in thickness.

Cockfield clays are light-gray to gray, usually silty and variably sandy and micaceous and lignitic or carbonaceous. The sands range from very fine- to medium-grained and are generally argillaceous or clayey and variously lignitic or carbonaceous and micaceous. The silts are clayey variably micaceous and usually contain finely disseminated lignitic or carbonaceous material.

The top of the Cockfield is picked on the appearance in cuttings, of lignitic or carbonaceous clays, silts or sands below the calcareous to limy glauconitic fossiliferous sandy marls of the Moodys Branch.

Moodys Branch Formation

The Moodys Branch consists of a 15 to 40 foot sequence of light-green to greenish-gray calcareous fossiliferous clayey glauconitic conglomeritic sands and pale-gray and pale-green fossiliferous sandy glauconitic marls. The abundance of glauconite in this formation is responsible for the characteristic green color.

In some wells, the marls of the Moodys Branch directly overlie lignitic or carbonaceous strata of the Cockfield formation and the regional disconformity between the Cockfield (upper Claiborne) and Moodys Branch (basal Jackson) is apparent. In other wells, a thin sequence of variably silty clays exists between strata of definite (readily identifiable) Claiborne and Jackson ages. The lack of cored contacts and the usual poor quality of the cuttings prevent any satisfactory resolution of this problem.

The contact of the Moodys Branch is gradational into the overlying calcareous clays of the Yazoo formation. Because of the rock-unit classification used in this report, the top of the Moodys Branch is placed at that point where the lithology of the sediments becomes predominantly sand.

Oil and Gas Possibilities

Oil and gas have been tested or produced from sediments ranging from Eocene (basal Wilcox) to Jurassic (basal Smackover) in age. Deep Jurassic zones capable of producing vast quantities of hydrocarbons are the current exploration objectives.

Non-commercial quantities of oil and gas have been tested from basal Wilcox sands on the flanks of the Jackson Field in Rankin County. While Rankin County is considered to be north of the more favorable areas for oil and gas production from the Wilcox, basal Wilcox sands should be considered in any future drilling programs in the immediate vicinity of the Jackson Dome.

The porous reefal carbonate complex of the Jackson Field, once productive of vast quantities of gas, is now used primarily for gas storage. Hydrocarbons, in commercial quantities may still remain untapped in isolated structural and stratigraphic traps on the flanks of the Jackson Dome.

Side wall core samples have recovered oil stained sands from the Eutaw formation in Puckett Field, but no commercial production has been established from the formation within the County.

Sands of the Tuscaloosa, Washita-Fredericksburg, Paluxy and Mooringsport formations have produced oil and gas in the Puckett Field. Presently, the Rankin County segment of the field produces from Washita-Fredericksburg, Paluxy and Mooringsport pools.

SYSTEM	SERIES	GROUP	STRATIGRAPHIC UNIT	THICKNESS feet	WATER RESOURCES
QUATERNARY	RECENT		Alluvium	0-45	Generally not an aquifer. A potential aquifer along the Pearl R. [illegible] the larger streams. Poor quality water is typical from this aquifer.
	PLEISTOCENE		Terrace deposits	0-156	Generally not an aquifer. A few domestic wells per completed in this aquifer.
			Citronelle formation	0-11	[illegible]
	MIOCENE		Catahoula formation	Up to 421	An important aquifer in the southern part of Rankin County. A large [illegible] domestic wells are completed in this aquifer. A few large wells [illegible] at Pinelands. Most of the wells are less than 400 feet deep. Water is [illegible]
TERTIARY	OLIGOCENE	VICKSBURG	Bucatunna clay	20-70	Generally not an aquifer. The Mint Spring [illegible]
			Byram marl	8-22	A number of domestic wells are completed in this aquifer. [illegible]
			Glendon limestone	15-50	[illegible]
			Mint Spring marl	0-3	[illegible]
			Forest Hill formation	[illegible]	Supplies a number of domestic [illegible] wells in [illegible] part. Water is [illegible]. Large wells are not common in this aquifer. [illegible] water is poor and [illegible] water is commonly encountered at [illegible] feet.
	EOCENE	JACKSON	Yazoo formation	18-46	Not an aquifer.
			Moodys Branch formation	[illegible]	Generally not an aquifer. A few domestic wells are completed in this aquifer.
		CLAIBORNE	Cockfield formation	[illegible]	An important aquifer throughout Rankin County. Numerous wells [illegible] in this part. Wells are completed in this aquifer. Large wells are [illegible] wells are [illegible] in the northern part. Water is [illegible] in this aquifer.
			Cook Mountain formation	0-22	Not an aquifer.
			Cockfield formation	[illegible]	An important aquifer in Rankin County. A large number of domestic wells [illegible] and a public water supply in the [illegible] Water is generally good.
			Cane Creek formation	[illegible]	Not an aquifer.
			Sparta formation	[illegible]	Generally not an aquifer. Water from a few wells. Water is [illegible] mineralization and excessive fluorides.
			Tallahatta formation: Hatchetigbee	0-20	Not an aquifer.
			Tallahatta formation: Meridian Mill	[illegible]	A potential aquifer in the northern half of Rankin County. No wells have been completed in this aquifer.
		WILCOX	Hatchetigbee	[illegible]	A potential aquifer in the northern half of Rankin County. No wells have been completed in this aquifer.

Table 1.—Stratigraphic column and water resources in Rankin County.

Minor aquifers include the Mint Spring marl, Forest Hill, Terrace and Alluvial deposits. The central part of the County is underlain by the Mint Spring marl and Forest Hill aquifers which supply a number of domestic water wells. Terrace deposits blanket the entire County and in some locations contain sands capable of supplying domestic wells. Alluvial deposits are located along the major streams and the thickness may be up to 45 feet along the Pearl River.

Fresh water is available in the northern part of Rankin County to a depth of about 2,900 feet and in the southern part to about 1,500 feet (Fig. 1). Fresh water is defined as water containing less than 1,000 mg/1 (milligrams per liter) of dissolved solids. Wells range in depth from shallow, less than 100 feet to 1,250 feet deep (Fig. 2, Table 2).

Table 2.—Records of wells in Rankin County.

Well No.: Numbers correspond to those on well-location maps (Pleistocene wells) and pumping test tables.

Elevation: Elevations determined mostly from topographic maps, supplemented by contour intervals of [illegible] feet.

Majority of wells are rotary drilled.

Use of Well: D, Domestic; I, Industrial; P, Irrigation; N, None; O, Observation; P, Public Supply; S, Stock; T, Test.

Water Level: M, Measured; R, Reported.

Remarks: F, Chemical Analysis; O, Observation well; P, Pumping test.

Method of Lift: A, Air; Lift; C, Cylinder; F, Natural Flow; [illegible]; N, None; P, Piston; T, Turbine; S, Submersible; B, Bucket.

Well No.	Owner	Year Drilled	Depth (feet)	Casing Diameter (inches)	Water Bearing Unit	Elev. of land surface datum (feet)	Water Level: Above (+) or below land surface (feet)	Water Level: Date of Measurement	Method of Lift	Use	Yield: Gallons per Minute	Yield: Date	Remarks
A1	Pearl River Valley Water Supply District, Highway 43 well	1965	502	10	Cockfield	310	7.4	270	[illegible]	P	750	275	F, P
A4	Pisgah Water Association	1968	382	8	Cockfield	385	45.4	270	[illegible]	P	54	1968	O, P
B1	Coy Strawhacker	1969	535	2	Kosciusko	330	183	[illegible]	A	[illegible]	[illegible]	1969	
B3	Loyd Denson	1968	304	2	Cockfield	335	80	1968	A	[illegible]	[illegible]	1968	
C1	Fannin Community water System	1966	1,202	8	Kosciusko	400	247.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
C2	Pisgah Fire Dept. Lodge	1966	600	4.2	Cockfield	393	36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
C3	Jack Lawrence	1967	580	4.2	Cockfield	322	90	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
C5	John C. McIntyre	1963	631	2	Cockfield	335	132	1963	[illegible]	[illegible]	[illegible]	[illegible]	
D1	B. F. Little	1966	505	4.2	Cockfield	365	100	1966	[illegible]	P	20	266	
D3	Pisgah Elementary School	1964	555	6.2	Cockfield	393	50.m	1970	[illegible]	P	30	270	
E1	Lessburg Water Association	1968	832	10	Kosciusko	378	52	369	[illegible]	P	[illegible]	1968	
E2	Dixie Water Association	1967	952	5	Kosciusko	475	34	367	[illegible]	P	[illegible]	1967	

Table 4.—Aquifer and well characteristics determined from pumping tests.

Map no.	Water	Depth of well (ft)	Aquifer thickness (ft)	Aquifer characteristics: Transmissivity (gallons per day per foot)	Aquifer characteristics: Permeability (gallons per day per square foot)	Aquifer characteristics: Storage	Yields: Capacity of the pumped wells (gpm)	Remarks
				ACADIA AQUIFER				
[illegible]	Pines Woods School	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	
				FLOWOOD AQUIFER				
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible] Test
	Star Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible] Test
				[illegible] AQUIFER				
	Pearl River Valley Water Supply District	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	
	Jackson Municipal Airport	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible] Test
[illegible]	Pearl River Valley Water Supply District	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	
	Town of [illegible] Chamberlain	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] Test
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] Test
[illegible]	[illegible] Water Assn.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Girl Scouts of America							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	
[illegible]	[illegible] Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible] Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Southern Railway						[illegible]	
	Water Tower	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	
				[illegible] AQUIFER				
[illegible]	[illegible] Relaxatorium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Metropolitan Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Metropolitan Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Metropolitan Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	Metropolitan Water [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

levels was 346 feet below the ground in the A. C. L. Water Association Well (S6). A number of wells have deep water levels in the vicinity of heavy pumpage in a small geographic area. Most of the water levels are below 100 feet in the deeper stream valleys and the average depth would probably be near 200-225 feet. One disadvantage in developing Kosciusko wells is the increase in pumping cost for deep water levels.

Quality of Water

The quality of water is good for most purposes from the Kosciusko. Most of the water is used without any treatment and the quality is acceptable for most uses. The water is generally soft, calcium or sodium-bicarbonate type with low to medium mineralization. The ph of the water is generally above 8.0 in central Rankin County. Table 3 includes a number of analyses of water from the Kosciusko aquifer.

Colored water of varying degrees is a characteristic of the water at some locations. Highly colored water was reported in a test hole for the Natchez Trace Parkway, T. 7 N., R. 2 E., on the west side of the Pearl River. A domestic well (B1) completed in the Kosciusko aquifer yields white water in the vicinity of Ratliff. There is a tendency to condemn an entire area because of one well that yields colored water. A number of the wells in the Flowood, Pearl and Plain area yield water that is slightly colored to dark colored.

Excessive iron content may be a problem in some wells particularly in the northern part of the County.

Cockfield Aquifer

The Cockfield aquifer is an important source of water supply in Rankin County. Numerous domestic, industrial and some municipal wells utilize the Cockfield aquifer throughout the County. This aquifer is the most widely used in Rankin County.

The top of the Cockfield is 80 feet at Ratliff in the north and is 910 feet near Piney Woods in the south. The top of the Cockfield is 320 feet at Pelahatchie and is 142 feet at Pearl (K19). The Cockfield is slightly below the surface at Flowood. The shallow depth in the Flowood area reflects the uplift of the

Jackson Dome. The structure map compiled by Baughman may be used to locate the top of the Cockfield at a particular location.

Thickness of the entire unit averages 300-350 feet across the County. Individual sands may be 70-100 feet in thickness. The sands are present at various positions within the unit but generally are thicker near the base. The entire thickness should be penetrated before deciding on which zone to screen.

The Cockfield aquifer is composed of sand, sandy clay, and clay. The sand is generally fine-grained except at some locations in the north. Medium- to coarse-grained sand was collected from test hole AG-38, north of Pelahatchie. The sand is typically fine-grained in the south and southeastern part of Rankin County. The formation includes beds of lignite and the sand contains disseminated lignite at particular locations.

Well yields range up to about 1,000 gpm from this aquifer. Wells capable of yielding 1,000 to 1,500 gpm are possible at a number of locations in the north and central part of the County. Smaller yields are common in the southern part and the aquifer is poor at a number of locations. A well (P1) completed in the Cockfield at Florence yields 195 gpm and is considered to be a high yielding well for that area. Well yields of 100-300 gpm are typical from Cockfield wells in the south. Larger yields may be possible at some locations. Recently, two industrial wells were completed in the Cockfield aquifer near Thomasville. The wells had a specific capacity of 10 gpm per foot or better.

Water levels range from less than 100 feet to more than 325 feet below ground surface. Most water levels are below 100 feet and are deeper at higher elevations. A well at Camp Wahi (M5) had a water level in 1969 of 326 feet below ground level. The shallower water levels would be in the deeper stream valleys.

Quality of Water

The water from the Cockfield aquifer is of good quality for general use. Minor water treatment is required at some locations in the northern part of the County. Excessive iron and low ph is the common water quality complaint across this area.

Most of the water is soft, calcium or sodium-bicarbonate with low to moderate dissolved solids. The ph varies from low acidic near the outcrop to high ph in the central and southern part of Rankin County.

e1

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Geology
P. O. Box 5348
Jackson, Mississippi 39216
(601) 354-6228

August 12, 1980

Mr. John Harper
Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

Dear Mr. Harper:

REFERENCE: Chloride Metals Monitoring Wells

During the week of August 4 through August 8, 1980, personnel from this agency installed and developed three ground-water monitoring wells at the Chloride Metals plant site near Florence, Mississippi. The monitoring system partially surrounds a small 1/2 acre pond located near the center of the upper 1/4th of Section 29, Township 4 North, Range 2 East.

The monitoring system implemented at Chloride Metals is known as a "detective monitoring system". This system establishes the presence or absence of contaminants and the need for further monitoring. Further monitoring, "interpretative monitoring", will determine the extent of damage and prescribe remedial action.

The site is developed on a stream terrace deposit which is underlain by the Miocene Catahoula Formation. The terrace deposit is approximately 12 to 20 feet thick. This deposit is lithologically characterized by an admixture of unconsolidated sand, silt, and clay. The near-surface Catahoula Formation, which outcrops along the northeastern property line, is lithologically characterized by sand, sandstone, siltstone, and clay.

Each well was drilled through the terrace deposit and into the underlying Catahoula Formation. The borings are bottomed out in a dense siltstone interbedded with clay. Surface waters will percolate downward to the sand-siltstone contact and move laterally. The monitor wells are screened at this contact. The annulus of each well was carefully packed with pea-sized gravel. The gravel pack is to insure that low permeable materials above the screen do not collapse around the screen and hamper well pumpage. Above the gravel pack is a 1 to 2 foot thick sand plug. Above the sand plug is an approximate 2 to 3 foot thick cement grout which has a non-shrinkable characteristic during its curing period. The non-shrinkable grout assures that the annulus is sealed off to possible surface contaminants that may move down the annulus

of the hole to the ground water. A 3' X 3' X 4" Class 1 cement pad is placed around each monitor well. (See well design platts for each well.)

Chloride Metals - Well Development

Well development procedures performed on the three (3) Chloride Metals monitor wells were designed to remove the finer material from the water producing zone, thereby, cleaning out or opening up passages in the formation so that water could enter the wells more freely. Four (4) specific objectives of the development phase were:

1. Remove all residual drilling fluids and cuttings from the wells.

2. Clean or unclog any fine material or mud from the well screens which may have occurred during installation.

3. Increase porosity and permeability of the natural formation in the vicinity of the well by removing those fines smaller than the screen slot openings.

4. Stabilize the sand formation around the gravel pack so that the wells would yield water free of sand.

The same development techniques were used on three wells. After completion of drilling and well/gravel pack installation on each well, an open ended 3/4 inch pipe was lowered to the bottom of the well. Clean water was pumped down the 3/4 inch pipe forcing the residual drilling fluids and cuttings to the surface. Pumping continued under low pressure until clean water was being discharged from the well. The 3/4 inch pipe was then removed from the well. A jetting tool, constructed of a short piece of capped 3/4 inch pipe with 4 X 3/16 inch holes drilled at right angles, was then attached to the 3/4 inch pipe and lowered back into the well. Clean water was pumped down the jet pipe, under pressures of 75 to 200 PSI, while it was slowly rotated, lowered and raised opposite the screen. This jetting procedure lasted approximately 40 to 60 minutes or until the water discharge was clear. A hand pump (Pitcher Pump) was then lowered into the well and a procedure of alternate pumping and jetting was continued for another 30 to 40 minutes. After this phase of development the jetting tools and pump were removed. A grout seal was placed in the annulus of the hole and the well was allowed to stablize for approximately 24 hours.

To further develop and also to determine approximate sustained rates of pumping for one or more hours, each well was pumped with a small submersible pump powered by a portable generator. This procedure was as follows:

1. The static water level and depth to the bottom of the well was determined by the tape measurements.

2. A submersible pump was lowered by wire line to the bottom of the well. The pump intake was approximately 2-3 feet off the bottom. A 3/4" garden hose was used as the discharge column.

3. The well was pumped at open discharge (no valve restriction) for several minutes until the pump broke suction and then the pump was shut off in order for the well to partially recover. This procedure was repeated several times producing 15 to 20 gallons at approximately 6-7 gallons per minute per session.

4. The well was then pumped at varying flow rates. A valve at the end of the discharge hose was used to control rate of flow and flow rate was determined by using a stop watch and a 5 gallon bucket. Using a trial and error method a flow rate was determined at which the well would support sustained pumping for one or more hours. (CM-M1 - 2 GPM, CM-M2 - 1 GPM, CM-M3 - 0.5-0.8 GPM).

5. The well was then pumped at the predetermined rate for 60 minutes. During the pump session the water became very clear after approximately 10 to 15 minutes of pumping. Water samples showed no evidence of sand or suspended particles.

6. The well was allowed to recover for at least 24 hours and was again pumped for 60 minutes. During the pump session water samples were collected at intervals of 20, 40 and 60 minutes by representatives of the Bureau of Pollution Control and the State Board of Health for testing purposes.

No attempt has been made to establish specific hydrologic parameters of the aquifer. Since elevations and locations of the well have not been established, direction of ground-water flow cannot be determined.

Sincerely,

John E. Malanchak

John E. Malanchak
Environmental Geologist

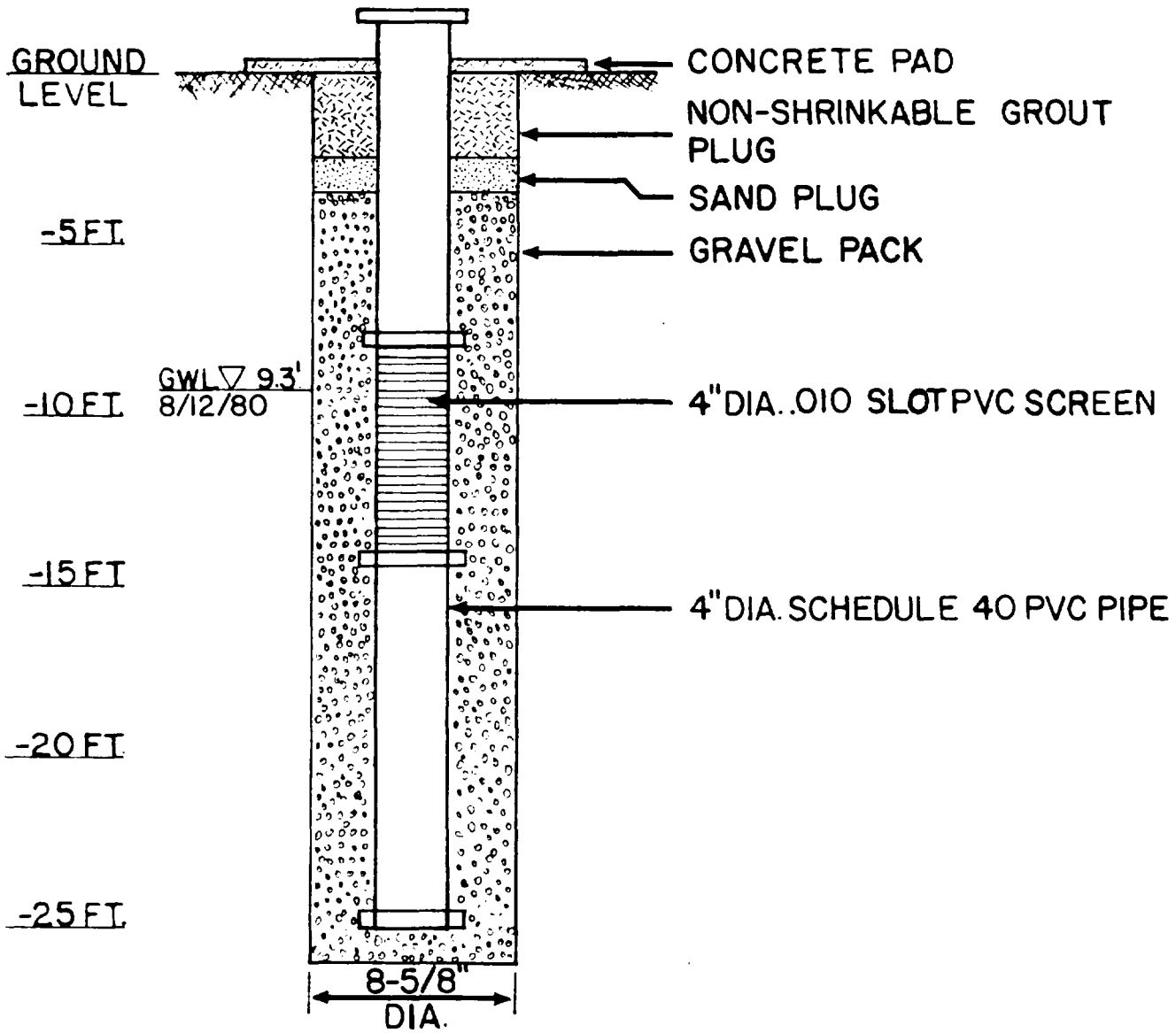
Curtis Stover ARB

Curtis Stover
Environmental Geologist

JEM/CT:sa
cc: Alvin R. Bicker, Jr.
Jack McMillan

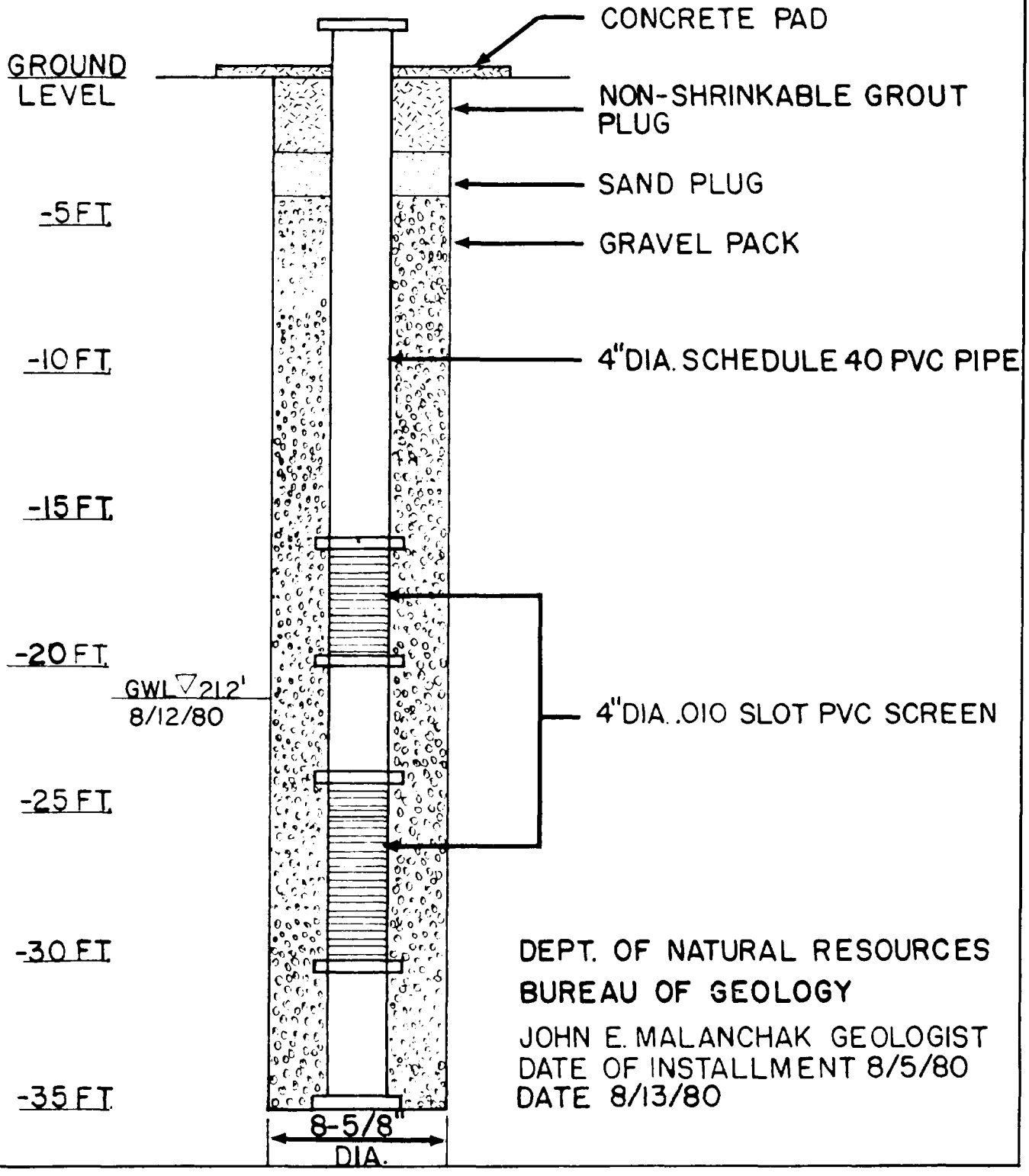
Enclosures

WELL DESIGN
CHLORIDE METALS M-1



DEPT. OF NATURAL RESOURCES
BUREAU OF GEOLOGY
JOHN E. MALANCHAK GEOLOGIST
DATE OF INSTALLMENT 8/4/80
DATE 8/12/80

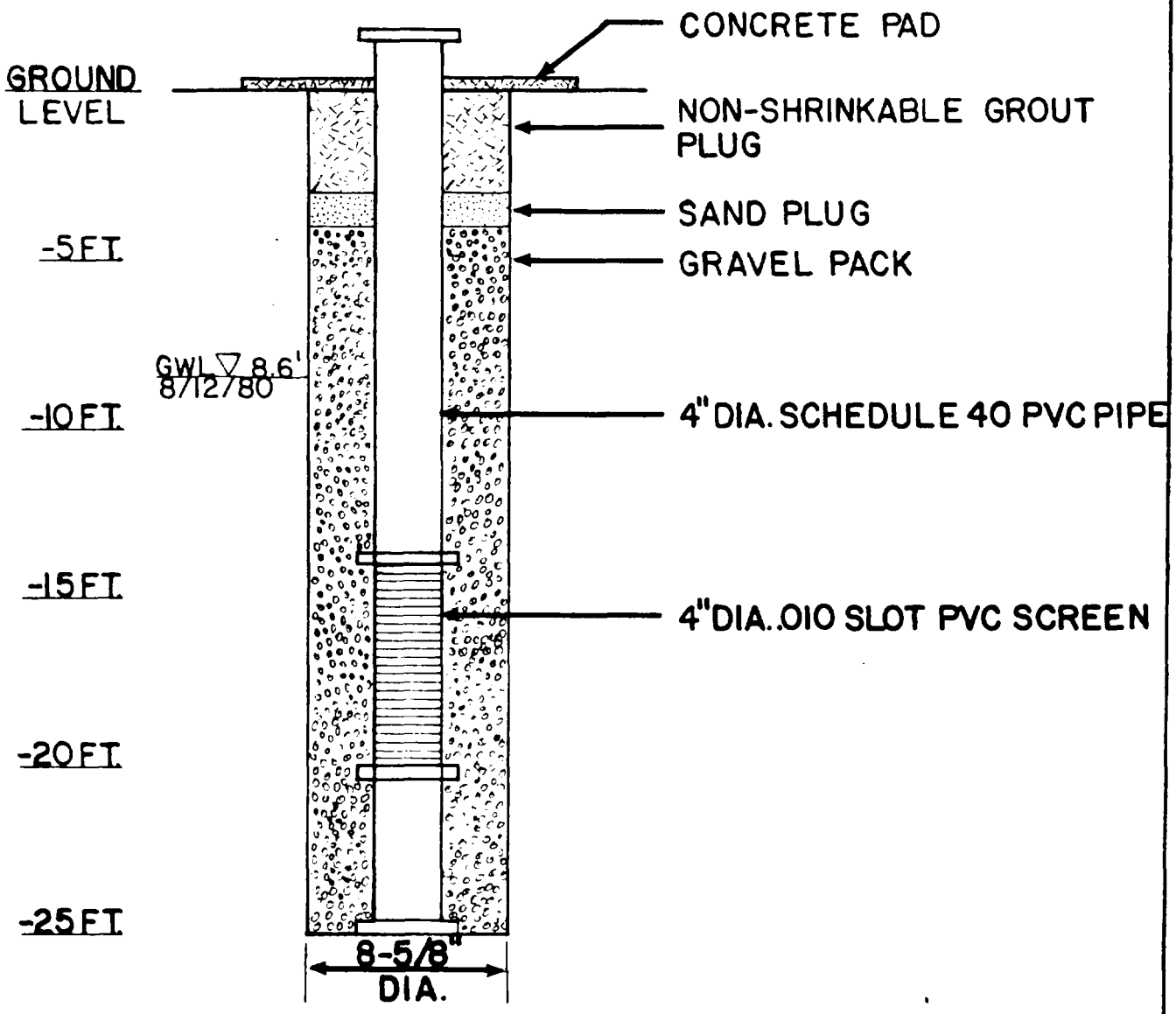
WELL DESIGN
CHLORIDE METALS M-2



DEPT. OF NATURAL RESOURCES
BUREAU OF GEOLOGY

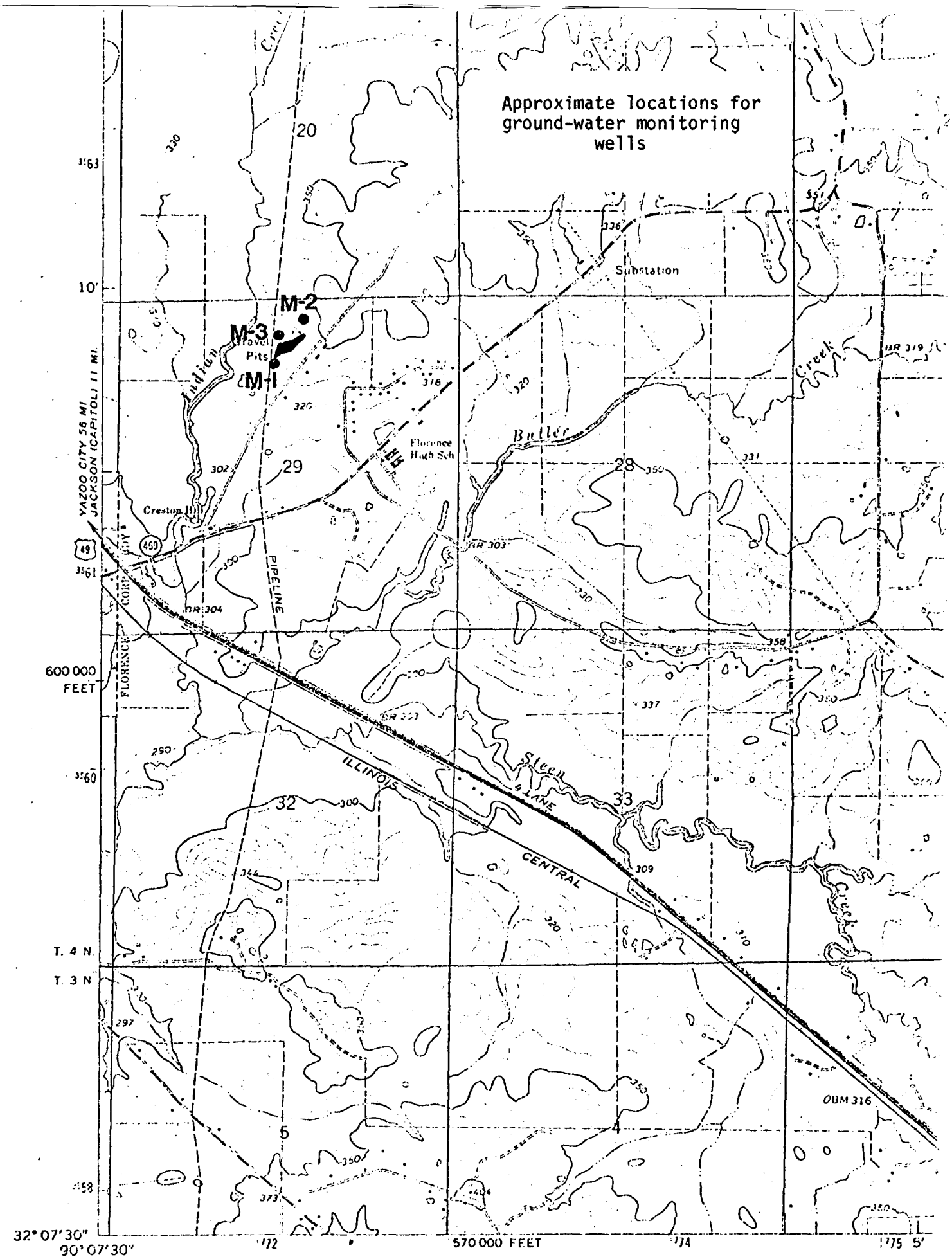
JOHN E. MALANCHAK GEOLOGIST
DATE OF INSTALLMENT 8/5/80
DATE 8/13/80

WELL DESIGN
CHLORIDE METALS M-3



DEPT. OF NATURAL RESOURCES
BUREAU OF GEOLOGY
JOHN E. MALANCHAK GEOLOGIST
DATE OF INSTALLMENT 8/6/80
DATE 8/12/80

Approximate location of monitoring wells @ Chloride Metals



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1968-69. Field checked 1971

(WHITES) 20-3 II SW

MN

GN

Form 2525-NWa Rev. 3-75

MISSISSIPPI GEOLOGICAL SURVEY

BORING LOG

HOLE NUMBER: Chloride Metals M-1 COUNTY: Rankin

LOCATION: SE¼, NE¼, NW¼, Section 29, Township 4 North, Range 2 East

SURFACE ELEVATION: Approximately 320 feet DATE: August 4, 1980

ELEC. LOG: Yes TOTAL DEPTH: 27 feet

DRILLED BY: J. Bradshaw, R. Tarbutton GEOLOGIST: J. Malanchak

REMARKS: Monitoring system requested by Bureau of Pollution

DEPTH	DESCRIPTION
0' - 2'	Sand, orangish-brown, medium-grained, silty.
2' - 6'	Silt, brown to tan, mottled, clayey, slightly carbonaceous.
' - 10'	Sand, clean, medium-grained.
10' - 12'	Sand, tan, medium-grained, silty, clayey.
12' - 17'	Clay, tan to gray, sandy, moderate-to stiff.
17' - 20'	Sand, light-tan, medium-grained.
20' - 22'	Clay, gray, stiff.
22' - 27'	Siltstone, dark-gray, thin streaks of clay.

Note: Elevations and locations are estimated from the Whitfield 7½' topographic map. Exact elevations and locations are going to be surveyed in by the Mississippi State Board of Health.

Form 2525-NWa Rev. 3-75

MISSISSIPPI GEOLOGICAL SURVEY

BORING LOG

HOLE NUMBER: Chloride Metals M-2 COUNTY: Rankin

LOCATION: NW¼, NW¼, NE¼, Section 29, Township 4 North, Range 2 East

SURFACE ELEVATION: Approximately 330 feet DATE: August 5, 1980

ELEC. LOG: Yes TOTAL DEPTH: 45 feet

DRILLED BY: J. Bradshaw, B. Kimbrough GEOLOGIST: J. Malanchak

REMARKS: Monitoring system requested by Bureau of Pollution

DEPTH	DESCRIPTION
0' - 2'	Sand, tan, silty.
2' - 12'	Clay, tan to gray, streaks of sand.
12' - 20'	Sand, tan, medium-grained, silty.
20' - 24'	Clay, gray, streaks of sand.
24' - 30'	Sand, gray, streaks of clay.
30' - 38'	Sand, tan to white, medium-grained, streaks of silty clay.
38' - 43'	Clay, gray, moderate-to-stiff.
43' - 45'	Siltstone, dark-gray, thin streaks of clay.

Note: Elevations and locations are estimated from the Whitfield 7½' topographic map. Exact elevations and locations are going to be surveyed in by the Mississippi State Board of Health.

Form 2525-NWa Rev. 3-75

MISSISSIPPI GEOLOGICAL SURVEY

BORING LOG

HOLE NUMBER: Chloride Metals M-3 COUNTY: Rankin

LOCATION: NE¼, NE¼, NW¼, Section 29, Township 4 North, Range 2 East

SURFACE ELEVATION: Aβproximately 320 feet DATE: August 6, 1980

ELEC. LOG: Yes TOTAL DEPTH: 30 feet

DRILLED BY: J. Bradshaw, R. Tarbutton GEOLOGIST: J. Malanchak

REMARKS: Monitoring system requested by Bureau of Pollution

DEPTH	DESCRIPTION
0' - 4'	Silt, orangish-brown, sandy, clayey.
4' - 12'	Clay, gray, soft-to medium, sandy.
12' - 20'	Sand, light-gray, medium-grained, clayey; limonitic staining from 18' to 20'.
20' - 30'	Siltstone, dark-gray, thin streaks of clay.

Note: Elevations and locations are estimated from the Whitfield 7½' topographic map. Exact elevations and locations are going to be surveyed in by the Mississippi State Board of Health.

13

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

I. GENERAL INFORMATION

County Code [illegible]
NPDES Permit No. [illegible]
Discharge No. [illegible]
Facility Name [illegible]
Sample Point Identification [illegible]
Requested By [illegible]
Type of Sample: Grab ( ) Composite (Flow) (Time X) Other ( )

Date Requested [illegible]
Lab Bench No. [illegible]
Data To [illegible]

II. SAMPLE IDENTIFICATION

Where Taken [illegible]
Condition of Sample Environment [illegible]
Collected By [illegible]

	Type	Parameter	Date	Time
1.	Composite	Pb Zn Sb As Cd Hg	[illegible]	
2.	Composite	[illegible]	[illegible]	
3.				
4.				
5.				

III. FIELD

Analysis	Computer Code	Request	Result	Analyst	Date Measured
pH	(000400)	( )	≤ 5.2		
D.O.	(000300)	( )	N/A		
Temperature	(000010)	( )	N/A		
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE

To Lab: Bus ( ) Regional Office Vehicle ( ) Other ( )

V. LABORATORY

Received By
Recorded By
Date
Date Sent To State Office
Time

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
Total Solids	(099002)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform	(074055)	( )	colonies/100 ml		*
Total Phosphates	(000650)	( )	mg/l		
Oil and Grease	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Turbidity	(000070)	( )	Jackson Units		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
Toxaphene	(039400)	( )	mg/l		
DDT	(039370)	( )	mg/l		
Conductance	(099019)	( )	Micromhos/cm		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks

*Date of Test Initiation

BUREAU OF POLLUTION CONTROL

SAMPLE REQUEST FORM

I. GENERAL INFORMATION

County Code [illegible]
NPDES Permit No. [illegible]
Discharge No.
Facility Name [illegible]
Sample Point Identification [illegible] Monitoring Well # 2
Requested By [illegible]
Type of Sample: Grab ( ) Composite (Flow) (Time X) Other ( )

Date Requested [illegible] 90
Lab Bench No.
Data To [illegible]

II. SAMPLE IDENTIFICATION

Where Taken Well #2 (3 Samples 20 [illegible] apart)
Condition of Sample Environment
Collected By [illegible]

	Type	Parameter	Date	Time
1.	Composite	Pb, Zn, Cb, As, Cd, Hexd	8-8-90	
2.	Composite	[illegible]	8-8-90	
3.				
4.				
5.				

III. FIELD

Analysis	Computer Code	Request	Result	Analyst	Date Measured
pH	(000400)	( )	≤ 5.2		
D.O.	(000300)	( )			
Temperature	(000010)	( )			
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE

To Lab: Bus ( ) Regional Office Vehicle ( ) Other ( )

V. LABORATORY

Received By
Recorded By
Date
Date Sent To State Office
Time

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
Total Solids	(099002)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform	(074055)	( )	colonies/100 ml		*
Total Phosphates	(000650)	( )	mg/l		
Oil and Grease	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Turbidity	(000070)	( )	Jackson Units		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
Toxaphene	(039400)	( )	mg/l		
DDT	(039370)	( )	mg/l		
Conductance	(099019)	( )	Micromhos/cm		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks

*Date of Test Initiation

BUREAU OF POLLUTION CONTROL
SAMPLE REQUEST FORM

I. GENERAL INFORMATION

County Code [illegible]
NPDES Permit No. [illegible]
Discharge No.
Facility Name [illegible]
Sample Point Identification [illegible]
Requested By
Type of Sample: Grab ( ) Composite (Flow) (Time ✓) Other ( )

Date Requested [illegible]
Lab Bench No.
Data To [illegible]

II. SAMPLE IDENTIFICATION

Where Taken [illegible]
Condition of Sample Environment
Collected By [illegible]

	Type	Parameter	Date	Time
1.	[illegible]	[illegible]	[illegible]	
2.	[illegible]	[illegible]	[illegible]	
3.				
4.				
5.				

III. FIELD

Analysis	Computer Code	Request	Result	Analyst	Date Measured
pH	(000400)	( )	5.8		
D.O.	(000300)	( )			
Temperature	(000010)	( )	N/A		
Residual Chlorine	(050060)	( )			
Flow	(074060)	( )			

IV. TRANSPORTATION OF SAMPLE

To Lab: Bus ( ) Regional Office Vehicle ( ) Other ( )

V. LABORATORY

Received By Date Time
Recorded By Date Sent To State Office

Analysis	Computer Code	Request	Result	Analyst	Date Measured
BOD_5	(000310)	( )	mg/l		*
COD	(000340)	( )	mg/l		
TOC	(000680)	( )	mg/l		
Suspended Solids	(099000)	( )	mg/l		
Total Solids	(099002)	( )	mg/l		
TKN	(000625)	( )	mg/l		
Ammonia-N	(000610)	( )	mg/l		
Fecal Coliform	(074055)	( )	colonies/100 ml		*
Total Phosphates	(000650)	( )	mg/l		
Oil and Grease	(000550)	( )	mg/l		
Chlorides	(099016)	( )	mg/l		
Turbidity	(000070)	( )	Jackson Units		
Phenol	(032730)	( )	mg/l		
Total Chromium	(001034)	( )	mg/l		
Hex. Chromium	(001032)	( )	mg/l		
Zinc	(001092)	( )	mg/l		
Copper	(001042)	( )	mg/l		
Lead	(017501)	( )	mg/l		
Cyanide	(000722)	( )	mg/l		
Toxaphene	(039400)	( )	mg/l		
DDT	(039370)	( )	mg/l		
Conductance	(099019)	( )	Micromhos/cm		
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			
		( )			

Remarks

*Date of Test Initiation

MISSISSIPPI STATE BOARD OF HEALTH

REPORT OF PHYSICAL AND CHEMICAL WATER ANALYSIS

Owner U - 1 (1) Location

County Date Well Constructed Depth

Pump Capacity Casing Size Screen Size

Screen Length Static Level Drawdown

Protection Source of Well Data

Collected by Date Collected Date Analyzed

PHYSICAL CHARACTERISTICS

Turbidity Color

Temperature Odor

CHEMICAL CHARACTERISTICS

pH	≤ 5.2	Free Carbon Dioxide	151 mg/1
Alkalinity (P) as $CaCO_3$	0 mg/1	Iron as Fe	0.95 mg/1
Alkalinity (Total) as $CaCO_3$	11 mg/1	Magnesium as Mg	mg/1
Chloride as Cl	~ 81,000 mg/1	Manganese as Mn	mg/1
Sulfate as SO_4	1 mg/1	Calcium as Ca	mg/1
Fluoride as F	mg/1	Sodium as Na / Potassium as K	mg/1
Nitrogen as NO_2	mg/1	Silica as SiO_2	mg/1
Nitrogen as NO_3	mg/1	Total Dissolved Residue	mg/1
Nitrogen as NH_3	mg/1	Total Hardness as $CaCO_3$	4000 mg/1

REMARKS:

RECEIVED
OCT 17 '80
DIV. SWR & W.C.
BY CS

MISSISSIPPI STATE BOARD OF HEALTH

REPORT OF PHYSICAL AND CHEMICAL WATER ANALYSIS

Owner CF- M 3 (3) Location

County Date Well Constructed Depth

Pump Capacity Casing Size Screen Size

Screen Length Static Level Drawdown

Protection Source of Well Data

Collected by Date Collected Date Analyzed

PHYSICAL CHARACTERISTICS

Turbidity Color

Temperature Odor

CHEMICAL CHARACTERISTICS

	5.8	Free Carbon Dioxide	186 mg/1
Alkalinity (P) as $CaCO_3$	0 mg/1	Iron as Fe	* ~16 mg/1
Alkalinity (Total) as $CaCO_3$	54 mg/1	Magnesium as Mg	mg/1
Chloride as Cl	56 mg/1	Manganese as Mn	mg/1
Sulfate as SO_4	mg/1	Calcium as Ca	mg/1
Fluoride as F	mg/1	Sodium as Na / Potassium as K	mg/1
Nitrogen as NO_2	mg/1	Silica as SiO_2	mg/1
Nitrogen as NO_3	mg/1	Total Dissolved Residue	mg/1
Nitrogen as NH_3	mg/1	Total Hardness as $CaCO_3$	840 mg/1

REMARKS:

* [illegible]

MISSISSIPPI STATE BOARD OF HEALTH

REPORT OF PHYSICAL AND CHEMICAL WATER ANALYSIS

Owner Cl- 1112 (2) Location

County Date Well Constructed Depth

Pump Capacity Casing Size Screen Size

Screen Length Static Level Drawdown

Protection Source of Well Data

Collected by Date Collected Date Analyzed

PHYSICAL CHARACTERISTICS

Turbidity Color

Temperature Odor

CHEMICAL CHARACTERISTICS

pH	≤5.2	Free Carbon Dioxide	124 mg/1
Alkalinity (P) as $CaCO_3$	0 mg/1	Iron as Fe	0.9 mg/1
Alkalinity (Total) as $CaCO_3$	9 mg/1	Magnesium as Mg	mg/1
Chloride as Cl	1500 mg/1	Manganese as Mn	mg/1
Sulfate as SO_4	[illegible] mg/1	Calcium as Ca	mg/1
Fluoride as F	mg/1	Sodium as Na / Potassium as K	mg/1
Nitrogen as NO_2	mg/1	Silica as SiO_2	mg/1
Nitrogen as NO_3	mg/1	Total Dissolved Residue	mg/1
Nitrogen as NH_3	mg/1	Total Hardness as $CaCO_3$	540 mg/1

REMARKS:

WAQC 010

WAQC 106

M EL STATE INFORMATION SYSTEM
WATER QUALITY COMPLIANCE SUBSYSTEM
CHEMICAL OR RADIOLOGICAL ANALYSIS INPUT FORM

PUBLIC WATER SYSTEM NAME AND ADDRESS: Chlmide Battery MS

PWS ID: 0

TRANSACTION CODE: 03

MS

1-9 ABOVE	CONTAMINANT ID	CONTAMINANT NAME	ANALYSIS METHOD	ANALYSIS RESULTS	ANALYSIS DECIMALS	ANALYSIS DATE MO.	DAY	YR	28-46 BELOW	SAMPLE ANALYZED BY:
DUP	1005	Arsenic	103	<0003	3	02	21	80	DUP	
DUP	1010	Barium	101						DUP	
DUP	1015	Cadmium	101	0003	3	09	11	86	DUP	
DUP	1020	Chromium	101						DUP	
DUP	1025	Fluoride	107						DUP	
DUP	1030	Lead	103	0004	4	09	11	86	DUP	
DUP	1035	Mercury	103						DUP	
DUP	1040	Nitrate (as N)	105						DUP	
DUP	1045	Selenium	103	<0003	3	02	28	80	DUP	
DUP	1050	Silver	101						DUP	

LOCATION CODE	LOCATION NAME	SAMPLE DATE MO	DAY	YR.	SAMPLE TYPE	TIME	LAB ID	LAB NAME	SAMPLE COLLECTED BY.
					D		00001	Public Health Lab.	

PREPARED BY _____ DATE / /

APPROVED BY _____ DATE / /

SAMPLE TYPE KEY

C - CHECK SAMPLE
D - REGULAR DISTRIBUTION SAMPLE
P - PLANT TAP SAMPLE
R - RAW WATER SAMPLE
S - SPECIAL SAMPLE

WAQC 010

M EL STATE INFORMATION SYSTEM
WATER QUALITY COMPLIANCE SUBSYSTEM
CHEMICAL OR RADIOLOGICAL ANALYSIS INPUT FORM

WAQC 106

PUBLIC WATER SYSTEM NAME AND ADDRESS: Chemile Battery M2

PWS ID: 0

TRANSACTION CODE: 03

MS

1-9 ABOVE	CONTAMINANT ID.	CONTAMINANT NAME	ANALYSIS METHOD	ANALYSIS RESULTS	DECIMALS	ANALYSIS DATE MO.	DAY	YR.	28-46 BELOW	SAMPLE ANALYZED BY:
DUP	1005	Arsenic	103	0007P	1	08	28	80	DUP	
DUP	1010	Barium	101						DUP	
DUP	1015	Cadmium	101	0006	3	09	11	80	DUP	
DUP	1020	Chromium	101						DUP	
DUP	1025	Fluoride	107						DUP	
DUP	1030	Lead	103	0009	3	09	11	80	DUP	
DUP	1035	Mercury	103						DUP	
DUP	1040	Nitrate (as N)	105						DUP	
DUP	1045	Selenium	103	<0003	3	08	28	80	DUP	
DUP	1050	Silver	101						DUP	

Zn 0323 09 1280

LOCATION CODE	LOCATION NAME	SAMPLE DATE MO	DAY	YR.	SAMPLE	TIME	LAB ID	LAB NAME	SAMPLE COLLECTED BY:
					D		0001	Public Health Lab.	

PREPARED BY _____ DATE / /

APPROVED BY _____ DATE / /

SAMPLE TYPE CODE
- C - CHECK SAMPLE
- D - REGULAR DISTRIBUTION SAMPLE
- P - PLANT TAP SAMPLE
- R - RAW WATER SAMPLE
- S - SPECIAL SAMPLE

WAQC 010

M EL STATE INFORMATION SYSTEM

WATER QUALITY COMPLIANCE SUBSYSTEM

CHEMICAL OR RADIOLOGICAL ANALYSIS INPUT FORM

WAQC 106

PUBLIC WATER SYSTEM NAME AND ADDRESS

Chloride Battery M I

PWS ID	TRANSACTION CODE	MS
0	Ø3	

1-9 ABOVE	CONTAMINANT ID	CONTAMINANT NAME	ANALYSIS METHOD	ANALYSIS RESULTS	DECIMALS	ANALYSIS DATE MO. DAY YR.	28-46 BELOW	SAMPLE ANALYZED BY:
DUP	1005	Arsenic	103	0009	1	08 28 80	DUP	
DUP	1010	Barium	101				DUP	
DUP	1015	Cadmium	101	0052	2	09 11 80	DUP	
DUP	1020	Chromium	101				DUP	
DUP	1025	Fluoride	107				DUP	
DUP	1030	Lead	103	0074	2	09 11 80	DUP	
DUP	1035	Mercury	103				DUP	
DUP	1040	Nitrate (as N)	105				DUP	
DUP	1045	Selenium	103	<0003	3	08 28 80	DUP	
DUP	1050	Silver	101				DUP	
	Zn			0202	2	09 12 80		

LOCATION CODE	LOCATION NAME	SAMPLE DATE MO. DAY YR.	SAMPLE TYPE	SAMPLE TIME	LAB ID	LAB NAME	SAMPLE COLLECTED BY
			D		00001	Public Health Lab.	

PREPARED BY _____ DATE / /

APPROVED BY _____ DATE / /

SAMPLE TYPE KEY

- C - CHECK SAMPLE
- D - REGULAR DISTRIBUTION SAMPLE
- P - PLANT TAP SAMPLE
- R - RAW WATER SAMPLE
- S - SPECIAL SAMPLE

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 354-2550

TO: Mr. Joe Brown, Jack McMillian, Lisa Lowe, David Lee: State Board of Health; Mr. Alvin Bicker, Bureau of Geology; Mr. Charles Branch; Barry Royals, John Harper, Bill Barnett

FROM: Jerry W. Cain

SUBJECT: Chloride Metals, Florence, MS

DATE: September 12, 1980

The Bureau of Pollution Control intends to discuss at our office the situation existing at Chloride Metals on September 18, 1980, at 10:00 a.m. We respectfully request that you review the attached information and attend the meeting.

Thank you for your cooperation on this matter.

JWC:jm

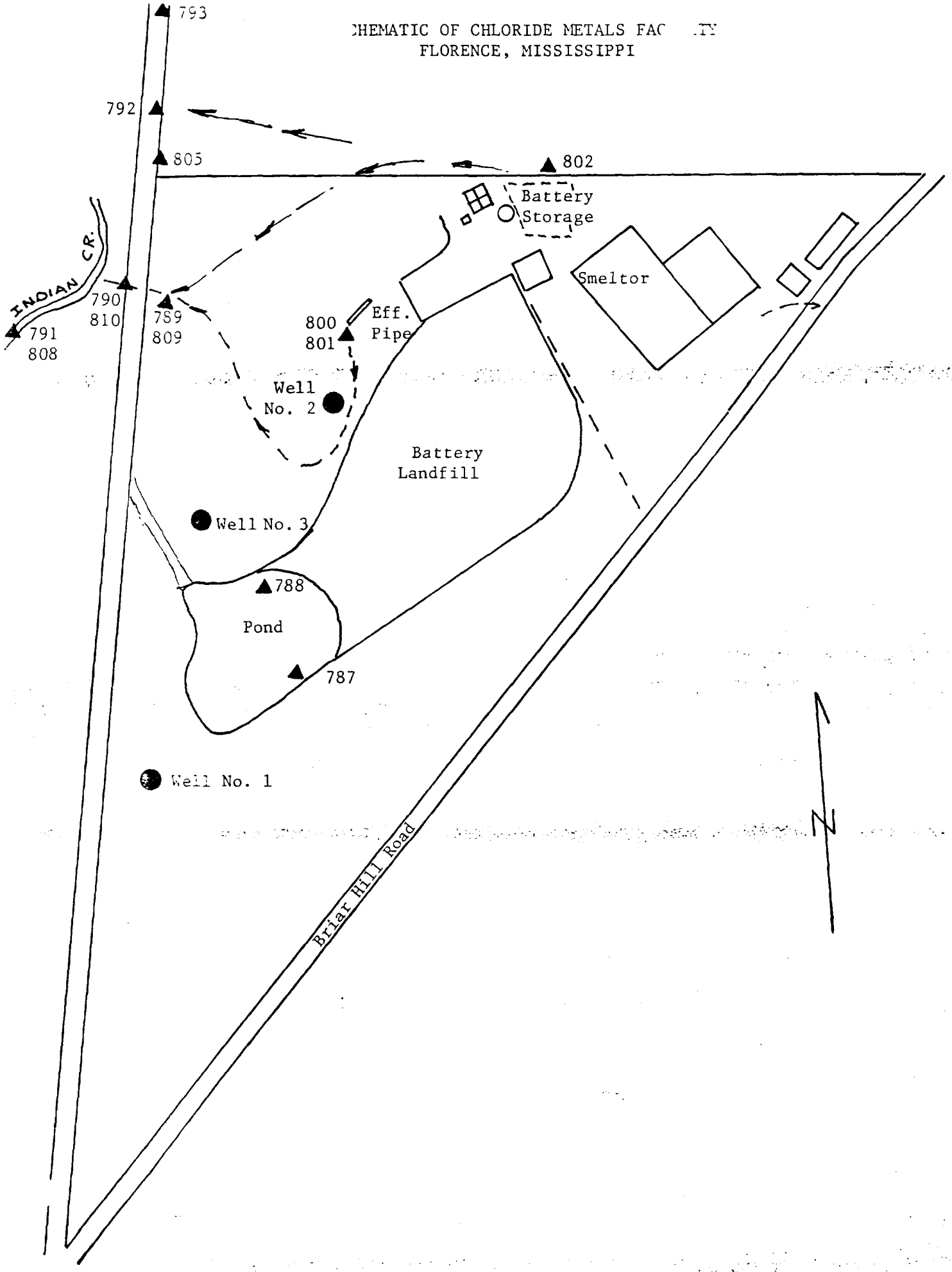
RECEIVED

SEP 16 '80

DIV SWM & HC

BY AS

CHEMATIC OF CHLORIDE METALS FAC .TY
FLORENCE, MISSISSIPPI



DATA COMPILATION FOR GROUND WATERWELL

NUMBER 1

Parameter	LBN, 900*	LBN 899	LBN 898	LBN 897
Chlorides (mg/l)	776	2284	2327	2284
Zn,T (mg/l)	1.2	2.2	2.5	2.2
Pb,T	0.26	0.53	0.58	0.47
NO_2-N (mg/l)	0.004			
Acidity (mg/l)	3700	3822	3836	3836
NO_3-N (mg/l)	0.94			
SO_4 = (mg/l)	7100	6400	7400	7400
Sb,T (mg/l)	0.26	0.45	0.51	0.38
Cd,T (mg/l)	0.13	0.22	0.23	0.22
As,T (mg/l)	$<$ .02	$<$ .02	$<$ .02	$<$ .02
pH (SU)		4.0	4.0	4.0
SN,T (mg/l)	1.0			

* Composite

DATA COMPILATION FOR GROUND WATERWELL

NUMBER 2

Parameter	LBN 904*	LBN 903	LBN 902	LBN 901
Chlorides	991	776	646	733
Zn,T (mg/l)	2.8	2.3	2.4	2.6
Pb,T (mg/l)	0.69	0.58	0.58	0.58
NO_2-N (mg/l)	0.005			
Acidity (mg/l)	3800	3290	3262	3346
NO_3-N (mg/l)	2.74	2.74	2.76	3.94
SO_4 = (mg/l)	4675	4700	4500	4500
Sb,T (mg/l)	0.38	0.26	0.26	0.26
Cd,T (mg/l)	0.30	0.27	0.28	0.29
As,T (mg/l)	0.02	< .02	< .02	< .02
pH (SU)		3.8	3.8	3.8
SN,T (mg/l)	1.0			

* Composite

DATA COMPILATION FOR GROUNDWATER WELL
NUMBER 3

PARAMETER	LBN.908*	LBN.907	LBN.906	LBN.905
Chlorides (mg/l	33.2			
Zn,T (mg/l)	0.39	0.37	0.36	0.57
Pb,T (mg/l)	0.04	<.04	<.04	<.04
NO_2-N (mg/l)	0.007			
Acidity (mg/l)	96			
NO_3-N (mg/l)	0.37			
$SO_4^=$ (mg/l)	964	1279	1072	865
Sb,T (mg/l)	0.14	0.14	0.80	.02
Cd,T (mg/l)	<.01	<.01	<.01	<.01
As,T (mg/l)	<.02	<.02	<.02	<.02
pH S.U.		5.1	5.1	5.2

*Composite

DATA COMPILATION CHLORIDE METALS

SEDIMENT SAMPLES

Lab Bench Number	ZN,T (mg/Kg)	Pb,T (mg/Kg)	Sb,T (mg/Kg)	Fe,T (mg/Kg)	Cd,T (mg/Kg)	As,T (mg/Kg)
787	27.9	3,372.8	193.0	11,541.1	0.99	70.6
788	37.9	2,381.9	149.0	32,190.6	0.99	308.6
789	148.3	3,846.5	908.8	21,160.9	32.6	3,856
809	13.0	1,580.0	340.0	5,800	1.0	105.0
790	286.3	3,346.2	921.9	20,234.9	56.3	7,206
810	14.8	19.7	15.8	6,800	1.0	19.0
791	6.9	19.9	44.8	5,146	< 1.0	43.8
792	23.3	139.7	60.8	72,398	1.0	17.2
793	17.9	24.9	104.8	319,361	1.0	33.9
800	20,947.6	14,962.6	3,700.7	74,404	588	1,296
802	149.2	97,255.4	1,002.4	104,415	4.0	5,072
806	5.0	138.9	29.2	855	1.0	1.0

787 - Southeast Corner of Pond

788 - Northwest Corner of Pond

789 - Ditch Below Chloride Effluent - Surface Sample

809 - Ditch Below Chloride Effluent - 1 Foot Depth

790 - Ditch 50 Yards Below - Near Pipeline Surface Sample

810 - Ditch 50 Yards Below - Near Pipeline - 1 Foot Depth

791 - Indian Creek Below Chloride Effluent

792 - Dead Area Along Pipeline

793 - ¼ Mile Above First Dead Area - Dead Area

800 - Sludge From Effluent Ditch 2 Feet Below Pipe

802 - Soil Sample North of Plant

DATA COMPILATION OF WATER SAMPLES - CHLORIDE METALS

Parameter	Trt. Plant Eff. II LBN 599	SE Corner Pond LBN 600	Spring Below Plant LBN 805	Eff. Ditch LBN 801	Indian Cr. White PPT. LBN 808	Runoff Decaping LBN 804
pH (su)	8.9	3.8				0.71
TSS (mg/l)	47	6.5	274		8500	
Chlorides (mg/l)	867	57.5	49.5		263	
Zn,T (mg/l)	0.07	0.11	0.21	0.09	2.4	
Cu,T (mg/l)	0.12	0.02				
Pb,T (mg/l)	0.68	3.94	0.75	0.25	20.1	
Sn,T (mg/l)	1.9	< 1.0				
As,T (mg/l)	1.5	< .01	0.62	91	0.7	
Sb,T (mg/l)	22.3	.45	0.60	1156	14.2	
NO_2-N (mg/l)	10.5	0.002	0.29		0.006	
Acidity (mg/l)	0.0	29				24,000
Sulfide (mg/l)	< 0.01	< 0.01				
SO_4 = (mg/l)	42,500	229	733			22,000
Alk. (mg/l)	145	17				
NO_3-N (mg/l)	11.4	.03	2.4		8.7	
Cd,T (mg/l)	0.16	0.02	0.01	0.03	0.30	
Fe, T (mg/l)			8.29	.85	16.8	
Hardness,T (mg/l)			.80			
Conductance			2300		2300	
Al,T (mg/l)			8.1		1400	

Date 5/27/80

DATA COMPILATION CHLORIDE METAL
SMELTOR SLAG

PARAMETER	LBN.803
Zn,T	606 mg/Kg
Cu,T	134 mg/Kg
Pb,T	2762 mg/Kg
$SO_4^=$	23,600 mg/l
As,T	722 mg/Kg
Sb,T	481 mg/Kg
Cd,T	4.8 mg/Kg
Fe,T	64,491 mg/Kg
Sn,T	1590 mg/Kg

RESOURCE CONSULTANTS
environmental engineers and scientists

RECEIVED
DEC 01 1981
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

November 25, 1981

Mr. Jerry W. Cain, P.E.
Industrial Wastewater Control Section
Bureau of Pollution Control
Mississippi Department of Natural Resources
P. O. Box 10385
Jackson, MS 39209

RE: Data-Groundwater Study
Chloride Metals, Florence

Dear Mr. Cain:

Pursuant to our recent telephone conversations, the enclosed materials constitute the data from the groundwater study at Chloride Metals in Florence. The analytical reports present the chemical data from the various monitoring points. The plans prepared by Geologic Associates show the well locations, piezometric gradient and concentration contours for various constituents.

As we have previously agreed, we do not propose to collect additional samples until after you have evaluated the data obtained to date. After you and your associates have reviewed the enclosed materials, the parties involved need to agree upon the activities to be undertaken in the next phase of the study.

If you have any questions regarding the enclosed, please advise.

Very truly yours,

RESOURCE CONSULTANTS, INC.

V. Wayne McCoy

V. Wayne McCoy, P.E.
Principal

VWM/jd
enclosures

cc: Mr. Frank Barnett
Mr. David Berry
Mr. Ed Wilson

P.O. Box 498 • Two Maryland Farms • Suite 340 • Brentwood, Tennessee 37027 • 615-373-5040
a tennessee corporation

RESOURCE CONSULTANTS inc
environmental engineers and scientists
BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD, TENNESSEE 37027 • 615 373 5040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI # 19771 - Mississippi Well - CMM 1
RCI # 19772 - Mississippi Well - CMM 2
RCI # 19773 - Mississippi Well - CMM 3

RCI Sample Number	19771	19772	19773		
Date Collected	9/29/81	9/29/81	9/29/81		
Time Collected	1405	1140	1335		
Date Received	9/30/81	9/30/81	9/30/81		

Acidity (mg/l as $CaCO_3$), dissolved	4,020	4,610	100		
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	160	198	25		
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, dissolved	0.15	0.82	<0.03		
Oil and Grease					
pH (pH units)	3.3	3.2	5.8		
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	6,900	6,000	37		
Suspended Solids					
Total Dissolved Solids	10,820	10,580	138		
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	580	590	<0.1		
Arsenic, dissolved	<0.002	<0.002	<0.002		
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.64	1.17	<0.005		
Chromium					
Copper					
Iron, dissolved	89	85	0.50		
Lead, dissolved	0.66	0.82	0.002		
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	320	270	35		
Zinc, dissolved	3.1	3.3	0.16		
Antimony, dissolved	<0.01	0.06	<0.01		
Tin, dissolved	<0.4	<0.4	<0.4		

All units are in mg/l unless otherwise noted.

J. Wayne McCoy
[illegible] 1981

RESOURCE CONSULTANTS inc
environmental engineers and scientists
P.O. BOX 488 • TWO MARYLAND FARMS • SUITE 340
BRENTWOOD TENNESSEE 37027 • 615 373 5040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 20024 - Chloride Observation Well No. 6
" " 20025 - " " " " 7
" " 20026 - " " " " 8
" " 20027 - Spring near Chloride Well No. 3

RCI Sample Number	20024	20025	20026	20027	
Date Collected	10/21/81	10/21/81	10/21/81	10/21/81	
Time Collected	1035	1140	1555	1400	
Date Received	10/22/81	10/22/81	10/22/81	10/22/81	

Acidity (mg/l as $CaCO_3$), dissolved	1,300	2,800	30	2,800	
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	200	370	17	970	
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.13	4.6	0.05	0.98	
Oil and Grease					
pH (pH units)	3.6	3.5	6.5	3.3	
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	2,200	3,800	30	4,300	
Suspended Solids					
Total Dissolved Solids	3,660	6,780	122	8,230	
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	171	473	0.1	463	
Arsenic, dissolved	< 0.002	< 0.002	0.011	< 0.002	
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.37	1.03	< 0.005	0.74	
Chromium					
Copper					
Iron, dissolved	90	38	0.03	38	
Lead, dissolved	0.54	0.20	< 0.001	1.13	
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	230	240	24	740	
Zinc, dissolved	1.32	2.29	0.03	1.87	
Antimony, dissolved	< 0.01	< 0.01	< 0.01	< 0.01	
Tin, dissolved	< 0.4	< 0.4	< 0.4	< 0.4	
Conductivity, umhos/cm @ 25°C	4,300	5,500	200	9,000	

All units are in mg/l unless otherwise noted.

V. Hanne McCoy

RCI No. 2646
Florence, MS
Page 1 of 2

RESOURCE CONSULTANTS inc
environmental engineers and scientists
PO BOX 488 · TWO MARYLAND FARMS · SUITE 340
BRENTWOOD TENNESSEE 37027 · 615 373 5040

ANALYTICAL REPORT

TO: Mr. Frank L. Barnett
Chloride Metals
P. O. Box 488
Tampa, FL 33601

Description: RCI No. 20019 - Chloride Observation Well No. 1
" " 20020 - " " " " 2
" " 20021 - " " " " 3
" " 20022 - " " " " 4
" " 20023 - " " " " 5

RCI Sample Number	20019	20020	20021	20022	20023
Date Collected	10/21/81	10/21/81	10/21/81	10/21/81	10/21/81
Time Collected	1510	1300	1340	1235	1005
Date Received	10/22/81	10/22/81	10/22/81	10/22/81	10/22/81

Acidity (mg/l as $CaCO_3$), dissolved	43	280	120	540	950
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	210	84	530	120	130
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.11	0.09	0.17	0.86	0.03
Oil and Grease					
pH (pH units)	5.6	4.4	4.4	3.9	3.9
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,700	2,200	990	2,100	1,800
Suspended Solids					
Total Dissolved Solids	2,820	3,480	2,330	3,620	3,650
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	< 0.1	33	7.6	64	138
Arsenic, dissolved	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.03	0.23	0.008	0.20	0.14
Chromium					
Copper					
Iron, dissolved	0.04	0.31	4.4	23	43
Lead, dissolved	0.035	0.052	0.046	0.50	0.21
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	370	150	500	220	230
Zinc, dissolved	0.19	0.81	0.04	0.88	0.69
Antimony, dissolved	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Tin, dissolved	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Conductivity, umhos/cm @ 25°C	3,330	3,620	3,500	3,870	3,840

All units are in mg/l unless otherwise noted.

V. Harmon McCoy

RESOURCE CONSULTANTS, INC.
environmental engineers and scientists
TWO MARYLAND FARMS, SUITE 340
BRENTWOOD, TENNESSEE 37027 · 615 373 5040

ANALYTICAL REPORT

RCI # 2646

Florence, MS

TO: Same

Description: RCI # 19765 - Chloride Observation Well No. 6
RCI # 19764 - Chloride Observation Well No. 7
RCI # 19763 - Chloride Observation Well No. 8
RCI # 19774 - Spring near Chloride Well No. 3

RCI Sample Number	19765	19764	19763	19774	
Date Collected	9/29/81	9/29/81	9/29/81	9/29/81	
Time Collected	1030	0945	0855	1115	
Date Received	9/30/81	9/30/81	9/30/81	9/30/81	

Acidity (mg/l as $CaCO_3$), dissolved	1,110	3,700	9	1,870	
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	263	365	28	660	
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.08	3.0	0.12	1.02	
Oil and Grease					
pH (pH units)	3.8	3.5	7.0	2.8	
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,900	5,400	48	2,100	
Suspended Solids					
Total Dissolved Solids	3,060	8,760	248	4,286	
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	144	540	<0.1	200	
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.31	1.18	<0.005	0.49	
Chromium					
Copper					
Iron, dissolved	88	86	<0.02	14	
Lead, dissolved	0.46	0.80	0.002	0.74	
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	230	270	74	540	
Zinc, dissolved	1.19	3.18	0.10	1.08	
Antimony, dissolved	<0.01	<0.01	<0.01	<0.01	
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	

All units are in mg/l unless otherwise noted.

D. Wayne McCoy

RESOURCE CONSULTANTS inc
environmental engineers and scientists
[illegible] 4HR · TWO MARYLAND FARMS · SUITE 340
[illegible] WOOD TENNESSEE 37027 · 815 373 5040

ANALYTICAL REPORT

TO: Same

Description: RCI # 19767 - Chloride Observation Well No. 1
RCI # 19769 - Chloride Observation Well No. 2
RCI # 19768 - Chloride OBservation Well No. 3
RCI # 19770 - Chloride Observation Well No. 4
RCI # 19766 - Chloride Observation Well No. 5

RCI Sample Number	19767	19769	19768	19770	19766
Date Collected	9/29/81	9/29/81	9/29/81	9/29/81	9/29/81
Time Collected	1440	1525	1500	1550	1053
Date Received	9/30/81	9/30/81	9/30/81	9/30/81	9/30/81

Acidity (mg/l as $CaCO_3$), dissolved	40	110	120	350	750
Alkalinity (mg/l as $CaCO_3$)					
BOD, 5-day, 20°C					
Chlorides, dissolved	154	55	486	72	99
COD					
Cyanide					
Fluorides					
MBAS					
Nitrogen - Ammonia					
Nitrogen - Total Kjeldahl					
Nitrogen - Nitrite, Nitrate, diss.	0.19	<0.03	0.03	<0.03	<0.03
Oil and Grease					
pH (pH units)	6.2	5.0	4.6	4.1	4.0
Phenols					
Phosphate - Ortho					
Phosphate - Total					
Sulfates, dissolved	1,300	1,030	810	1,600	1,800
Suspended Solids					
Total Dissolved Solids	2,522	1,792	2,186	2,454	2,940
Total Solids					
Turbidity (NTU)					
Aluminum, dissolved	0.2	6.2	5.3	36	94
Arsenic, dissolved	<0.002	<0.002	<0.002	<0.002	<0.002
Barium					
Beryllium					
Calcium					
Cadmium, dissolved	0.03	0.12	<0.005	0.12	0.12
Chromium					
Copper					
Iron, dissolved	0.07	<0.02	4.44	14	43
Lead, dissolved	0.021	0.019	0.045	0.24	0.37
Magnesium					
Manganese					
Mercury					
Nickel					
Potassium					
Selenium					
Silver					
Sodium, dissolved	400	160	500	175	180
Zinc, dissolved	0.15	0.38	0.04	0.58	0.61
Antimony, dissolved	<0.01	<0.01	<0.01	<0.01	<0.01
Tin, dissolved	<0.4	<0.4	<0.4	<0.4	<0.4

All units are in mg/l unless otherwise noted.

D. Wayne McCoy
Oct. 13 1981

15

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

Mr. Charles Estes, P.E.
Division of Solid Waste Management
Mississippi Department of Natural Resources
P.O. Box 10385
Jackson, MS 39209

Dear Mr. Estes:

The attached analytical data indicates the results of our sampling at the Chloride Metals Site in Florence, MS on August 8, 1984. As the data shows, the only material found above detection limits was lead. From the data it does not appear that the lead is moving throuh the soil in any significant quantities toward the pond or off-site. Analysis of groundwater samples taken on the same date for the FIT site screening study could either confirm or contradict this assessment. The low pH (2.8) detected in the "spring" area at the rear of the property is possibly responsible for some dead vegetation at that location.

Based on these analytical results, we do not feel that an emergency cleanup action is warranted at this time. Additional results which will be made available in about six weeks in the FIT site screening study could prove this conclusion premature. We have sent a copy of the results to Mr. Frank Barnett of Chloride, Inc. and have directed him to stay in consultation with the State of Mississippi and EPA when the additional information is available.

Please keep me informed of any further developments at this site. If you have additional questions, please contact me at (404) 881-2930.

Sincerely,

Jan B Rogers / for

Michael A. Norman
Project Officer

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by:
Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7582	CM-BS-01	Lead	10.0 ppm
T7582	CM-BS-01	Cyanide	<0.02 ppm

(Background soil)

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7579	CM-IC-UW	Lead	<0.1 ppm
T7580	CM-IC-UW	Cyanide	<0.02 ppm
T7581	CM-IC-UW	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Indian Creek-upstream) pH=6.55 T=25°C	Acrolein	<100
		Acrylonitrile	<100
		Benzene	<5
		Bis (Chloromethyl) ether	<10
		Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by:
Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7584	CM-LC-01	Lead	13,460.0 ppm
T7584	CM-LC-01	Cyanide	<0.02 ppm

(Landfill composite)

PROJECT: Weston-SPER PROJECT No.:

ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7575	CM-P-1W	Lead	0.4 ppm
T7576	CM-P-1W	Cyanide	<0.02 ppm
T7577	CM-P-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Pond)	Acrolein	<100
	pH=6.0	Acrylonitrile	<100
	T=28°C	Benzene	<5
		Bis (Chloromethyl) ether	<10
		Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

PROJECT: Weston-SPER PROJECT No.:
ATTN: NAME
ADDRESS
CITY AND STATE ZIP

****

Sample Description Type (water-soil-tissue): water 40 ml Sampled by: Sold by:

Date Sampled: 8/9/84 Date Received: 8/13/83 Date Due: Date Promised:

****

P.O. No. Date Completed:

****

ABI Number	Station	Test Required	Detection limit (milligrams per liter)
T7571	CM-S-1W	Lead	0.5 ppm
T7572	CM-S-1W	Cyanide	<0.02 ppm
T7573	CM-S-1W	GC/MS FRACTION-VOLATILE COMPOUNDS	
	(Spring)	Acrolein	<100
		Acrylonitrile	<100
	pH=2.8	Benzene	<5
	T=24°C	Bis (Chloromethyl) ether	<10
		Bromoform	<10
		Carbon tetrachloride	<5
		Chlorobenzene	<5
		Chlorodi-bromomethane	<5
		Chloroethane	<10
		2-Chloroethylvinyl ether	<10
		Chloroform	<5
		Dichlorobromomethane	<5
		Dichlorodifluoromethane	Not determined
		1,1-Dichloroethane	<5
		1,2-Dichloroethane	<1
		1,1-Dichloroethylene	<5
		1,2-Dichloropropane	<10
		1,2-Dichloropropylene	<10
		Ethylbenzene	<5
		Methyl bromide	<10
		Methyl chloride	<10
		Methylene chloride	<5
		1,1,2,2-Tetrachloroethane	<10
		Tetrachloroethylene	<5
		Toluene	<5
		1,2-Trans-Dichloroethylene	<5
		1,1,1-Trichloroethane	<5
		1,1,2-Trichloroethane	<5
		Trichloroethylene	<5
		Trichlorofluoromethane	Not determined
		Vinyl chloride	<10

16

NUS CORPORATION
A Halliburton Company

R-586-6-5-2

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

PROJECT FOR PERFORMANCE OF REMEDIAL RESPONSE ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCE FACILITIES—ZONE 1

NUS CORPORATION
SUPERFUND DIVISION

R-586-6-5-2

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

Prepared Under
TDD NO. F4-8406-03
CONTRACT NO. 68-01-6699

FOR THE

AIR AND WASTE MANAGEMENT DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

Revision 0

JUNE 17, 1985

NUS CORPORATION
SUPERFUND DIVISION

Prepared By	Reviewed By	Approved By
Michael Profit	Philip Blackwell Assistant Regional Project Manager	Murray Warner, P.E. Regional Project Manager

NOTICE

The information in this document has been funded wholly by the United States Environmental Protection Agency (EPA) under Contract Number 68-01-6699 and is considered proprietary to the EPA.

This information is not to be released to third parties without the expressed written consent of the EPA or the NUS Corporation.

SITE SCREENING INVESTIGATION REPORT
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI
TDD No. F4-8406-03

1.0 INTRODUCTION

At the request of the U. S. Environmental Protection Agency (USEPA), Air and Waste Management Division, the Region IV Field Investigation Team (FIT) of NUS Corporation conducted a site screening investigation at the Chloride Metals facility in Florence, Mississippi on August 8 and 9, 1984. The investigation was conducted by Johnny Smith, Project Manager, Willie Smitherman, and Doug Munson in accordance with the guidelines stated in Technical Directive Document (TDD) F4-8406-03. NUS personnel were accompanied onsite by Jan Rogers, Mike Norman and Ken Richardson of USEPA.

2.0 OBJECTIVE

The objective of this site screening investigation was to collect water, soil, and sediment samples from onsite and offsite locations in an effort to gather data that would indicate the presence of onsite contamination, if any, and to determine whether contaminants had migrated offsite.

3.0 SITE CHARACTERIZATION

3.1 Site Description

In 1972, Chloride Metals began its battery cracking and lead recovery operations in Florence, Mississippi. The plant was located on Briarhill Road, 1/2 mile north of State Highway 469 in Florence, Rankin County, Mississippi (see Figure 1). Facility operations consisted of sawing the tops off spent automobile batteries, emptying the cases of acid, chipping away the plastic and rubber components, and smelting the scrap lead in a furnace for casting[1].

The site consisted of a process area where the battery cutting, lead smelting, and wastewater treatment were performed; a barren area between the process area and the onsite pond where battery carcasses were landfilled; and an onsite pond formed from an abandoned gravel pit. Wastewater, battery carcasses, and slag waste from the blast furnaces were disposed of in the pond. The region surrounding the site is heavily forested and Indian Creek flows 1000 feet to the west of the site.

3.2 Site History

On June 15, 1976, the staff of the Mississippi State Board of Health notified the Board of the possibility of groundwater contamination at the Chloride Metals facility. In August, 1976, the Mississippi Bureau of Pollution Control (BPC) issued an order requiring Chloride Metals to upgrade its wastewater treatment facilities. On November 4, 1976, the BPC issued NPDES (National Pollution Discharge Elimination System) Permit No. MS0033804 to Chloride Metals, placing limits on the discharge of total suspended solids (TSS), zinc, lead, copper, and pH level into Indian Creek[1].

In March, 1980, the State Board of Health and the BPC inspected the plant buildings and grounds, the wastewater treatment system, and the plant disposal site. Environmental samples were collected, the results of which indicated non-compliance with the NPDES permit. Lead, zinc, and pH in the process wastewater exceeded permitted levels. The holding pond and plant runoff were found to have an excessive concentration of lead. Also, a number of parameters not covered in the permit, including antimony, nitrite, and arsenic were found in significant quantities. It was recommended that the plant's wastewater treatment procedures be upgraded and that its NPDES permit be modified to reflect more accurately the actual conditions at the facility[1].

In July, 1980, the BPC, the Division of Solid Waste, and the Bureau of Geology met to discuss the possibility of groundwater contamination at the site. A decision was made to install three onsite monitoring wells to determine whether contamination had occurred. The wells were constructed during the first week of August, 1980[1].

In January, 1981, the BPC ordered Chloride Metals to evaluate the impact of their operations on the groundwater under and in the vicinity of the site. As a result, eight additional monitoring wells were installed by early 1982. Because regional groundwater flow is generally to the west or southwest, it is presumed that monitoring well MW-8 is the only upgradient well at the site.

On July 1, 1982, the BPC issued Chloride Metals modified NPDES Permit No. MS0033804, specifying a schedule of compliance to achieve upgraded standards of operation. In November, 1982, Chloride Metals asked for relief from some of the provisions of the permit as it had decided to discontinue its smelter operations. On November 15, 1982, the smelter was closed and the following cleanup activities were scheduled:

1. Clean and wash down all exterior of smelter yard paved area.
2. Treat all wastewater through present system.
3. Clean out all oxides from concrete tanks.
4. Ship all remaining scrap lead and oxide to Columbus Smelter for recycle smelting.
5. Fill all concrete tanks with clean sand to prevent refilling with rainwater.
6. Clean out and deactivate caustic neutralizing system to prevent possible accidental spills and cold weather damage to system.
7. Cap and seal the drain systems in the smelter building and battery cutting area to prevent reuse and rainwater entry.
8. During water treatment shutdown all lead will be stored inside buildings to prevent rainwater contamination from runoff[1].

3.3 Hydrogeology

The site occurs within the outcrop area of the Catahoula Sandstone, a Miocene-age formation consisting of sandstone, siltstone, sand, and clay. In the vicinity of Florence, the Catahoula is approximately 100 feet thick and serves as an aquifer for domestic wells, although the water has a high iron content and is moderately hard. At the site, the clay and siltstone of the Catahoula Formation occurs at the surface.

Underlying the Catahoula is the Vicksburg Formation, an Oligocene-age sequence of limestones marls, lignitic clay, and sand. The lower sand member, referred to as the Mint Springs Sand, occurs at depths of 170 to 250 feet below land surface and is the dominant domestic well supply in the Florence area. The Mint Springs is known for its good quality water in quantities sufficient for domestic use.

Lignitic shale and thin beds of fine sand comprise the Forest Hills Sand, which underlies the Mint Springs. This Oligocene-age aquifer is the agricultural water supply around Florence due to its capability to produce higher yields. Historically, the towns of Terry and Florence tapped the Forest Hills for municipal supplies, but it is reported that the city of Florence now utilizes the Cockfield Formation, a high-yielding, deeper, regional artesian aquifer. The top of the Cockfield occurs in excess of 800 feet below ground surface.

4.0 SCOPE OF INVESTIGATION

The investigation consisted of collecting four groundwater samples from monitoring wells positioned around the perimeter of the site. Four surface water and sediment samples were collected, two from Indian Creek and one each from the onsite pond and an onsite spring area. One composite soil sample was collected from the battery carcass landfill surface. Sample codes and a brief description of the sample locations are provided in Table 1. The samples were analyzed for: (1) purgeable (volatile) organics; (2) extractable and miscellaneous organics; (3) pesticides, PCBs, and other chlorinated compounds; (4) metals; and (5) cyanide.

5.0 DATA COLLECTION AND ANALYSES

5.1 Analytical Laboratories

Laboratory analyses for samples collected from the Chloride Metals Site were conducted by laboratories under contract with EPA in the Contract Laboratory Program (CLP). Organic analyses of water samples were performed by Environmental Control Technology Corporation (Encotech), Ann Arbor, Michigan. Organic analyses of soil and sediment samples were performed by California Analytical Laboratories, Inc. (CAL), West Sacramento, California. Inorganic

analyses of water, soil, and sediment samples were performed by Chemtech Consulting Group, Ltd. (Chemtech), New York, New York.

5.2 Data Quality

Tables 3 through 6 represent the results of the laboratory analyses by sample station for compounds detected above minimum detection limits. The complete results, including compounds analyzed for but not detected, are presented in Appendix A.

The results of the laboratory analyses were not subject to quality assurance reviews as set forth in the Quality Assurance Program of the Environmental Services Division (ESD), USEPA, Athens, Georgia. Consequently, these results should be used for site screening purposes only.

5.3 Field Measurements

The temperature and pH were recorded for each water sample collected. Conductivity, water depth and well-construction specifics were recorded for each of the monitoring wells sampled. These data are presented in Table 2.

5.4 Duplicate Samples

Duplicate samples were collected at sample stations CM-IC-UW, CM-S-1W, CM-P-1W/1S, and CM-LC-01 for the EPA Emergency Response Team (ERT) and released to ERT representatives Jan Rogers and Mike Norman. A duplicate sample was collected at station CM-LC-01 and released to Mississippi Department of Natural Resources representative Jim Hardage. Duplicate samples were collected at stations CM-LC-01 and CM-IC-DW and delivered to the Environmental Services Division, USEPA, Athens, Georgia for the Quality Assurance Program.

6.0 PRESENTATION OF ANALYTICAL RESULTS BY STATION

6.1 Monitoring Well 1 (MW-1) - Sample CM-MW-01

Samples were collected from four of the eleven monitoring wells positioned around the site. Water sample CM-MW-01 was collected from Monitoring Well 1 (MW-1), a state-installed well, located 1,000 feet southwest and downhill from the process area, midway between the pipeline corridor and the onsite pond (see Figure 2).

The analytical results detected the presence of eight inorganic priority pollutants (see Table 3). They are: arsenic (16 ug/l), beryllium (17 ug/l), cadmium (75 ug/l), copper (72 ug/l), chromium (72 ug/l), lead (200 ug/l), nickel (370 ug/l), and zinc (900 ug/l). Three organic compounds were detected, two of which are priority pollutants (see Table 4).

6.2 Monitoring Well 2 - Sample CM-MW-02

Water sample CM-MW-02 was collected from Monitoring Well 2 (MW-2), a company-installed well, located 1000 feet southwest and downhill from the process area, and 200 feet northwest of the onsite pond (see Figure 2).

Analytical results revealed the presence of ten inorganic priority pollutants (see Table 3). They are: arsenic (23 ug/l), beryllium (24 ug/l), cadmium (56 ug/l), chromium (47 ug/l), copper (180 ug/l), nickel (140 ug/l), lead (260 ug/l), antimony (34 ug/l), zinc (580 ug/l), and mercury (.48 ug/l). Antimony, a metal typically associated with lead processing, was found in no other monitoring well sampled. Five organic compounds were detected, three of which are priority pollutants (see Table 4).

6.3 Monitoring Well 5 - Sample CM-MW-05

Water sample CM-MW-05 was collected from Monitoring Well 5 (MW-5), a company-installed well, located 1100 feet south-southwest and downhill from the process area, 150 feet southeast of the onsite pond, midway between the pond and Briarhill Road (see Figure 2).

The analytical results revealed the presence of nine inorganic priority pollutants (see Table 3). They are: arsenic (30 ug/l), beryllium (7 ug/l), cadmium (37 ug/l), chromium (90 ug/l), copper (140 ug/l), nickel (88 ug/l), lead (130 ug/l), zinc (310 ug/l), and mercury (.3 ug/l). Five organic compounds were detected, four of which are priority pollutants (see Table 4).

6.4 Monitoring Well 8 - Sample CM-MW-08

Water sample CM-MW-08 was collected from Monitoring Well 8 (MW-8), a company-installed well, located 100 feet east and slightly downhill from the process area and approximately 100 feet west of Briarhill Road (see Figure 2).

Analytical results revealed the presence of four inorganic priority pollutants: chromium (30 ug/l), copper (53 ug/l), lead (120 ug/l), and zinc (75 ug/l) (see Table 3). Two organic compounds, both priority pollutants, were detected (see Table 4).

6.5 Indian Creek Upstream - Samples CM-IC-UW/US

Water sample CM-IC-UW and sediment sample CM-IC-US were collected from Indian Creek, 500 feet upstream of the site (see Figure 2).

Analytical results from water sample CM-IC-UW showed the presence of two inorganic priority pollutants, lead (76 ug/l), and zinc (15 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Analytical results from sediment sample CM-IC-US revealed the presence of three inorganic priority pollutants, beryllium (700 ug/kg), lead (3,000 ug/kg), and zinc (4,000 ug/kg) (see Table 5). Three organic compounds were detected, none of which are priority pollutants (see Table 6).

6.6 Indian Creek Downstream - Samples CM-IC-DW/DS

Water sample CM-IC-DW and sediment sample CM-IC-DS were collected from Indian Creek 800 feet west of the onsite pond (see Figure 2).

The analytical results of water sample CM-IC-DW revealed the presence of four inorganic priority pollutants. They are: beryllium (6 ug/l), cadmium (6.5 ug/l), lead (31 ug/l), and zinc (26 ug/l) (see Table 3). One organic compound, a priority pollutant, was detected (see Table 4).

Results of the inorganic analyses of sediment sample CM-IC-DS revealed the presence of four priority pollutants. They are: cadmium (100 ug/kg), chromium (900 ug/kg), lead (9,500 ug/kg), and zinc (3,700 ug/kg) (see Table 5). Four organic compounds, none of which are priority pollutants, were detected (see Table 6).

6.7 Onsite Pond - Samples CM-P-1W/1S

Water sample CM-P-1W and sediment sample CM-P-1S were collected from the south bank of the onsite pond, located at the base of the battery carcass landfill (see Figure 2).

Results from the inorganic analyses of water sample CM-P-1W revealed the presence of three priority pollutants. They are: beryllium (3.4 ug/l), lead (590 ug/l), and antimony (29 ug/l) (see Table 3). Organic analyses revealed the presence of three compounds, one of which is a priority pollutant (see Table 4).

Analytical results of sediment sample CM-P-1S revealed the presence of five inorganic priority pollutants. They are: cadmium (300 ug/kg), chromium (3,300 ug/kg), copper (3,500 ug/kg), lead (100,000 ug/kg), and zinc (5,300 ug/kg) (see Table 5). One organic compound, a priority pollutant, was detected (see Table 6).

6.8 Onsite Spring - Samples CM-S-1S/1W

Water sample CM-S-1W and sediment sample CM-S-1S were collected from an onsite spring area, located about 900 feet due west and downhill from the process area 50 feet east of the pipeline corridor (see Figure 2). The samples were obtained by first digging a hole in the saturated soil and allowing it to fill.

The analytical results from water sample CM-S-1W showed the presence of eight inorganic priority pollutants. They are: beryllium (19 ug/l), cadmium (68 ug/l),

chromium (62 ug/l), copper (180 ug/l), nickel (180 ug/l), lead (570 ug/l), antimony (28 ug/l), and zinc (910 ug/l) (see Table 3). Organic analyses revealed the presence of four compounds, one of which is a priority pollutant (See Table 4).

Laboratory analyses of sediment sample CM-S-1S revealed the presence of nine priority pollutants (see Table 5). They are: arsenic (1,200 ug/kg), beryllium (500 ug/kg), cadmium (8,000 ug/kg), chromium (3,300 ug/kg), copper (13,300 ug/kg), nickel (3,500 ug/kg), lead (60,000 ug/kg), zinc (10,000 ug/kg), and mercury (220 ug/kg). The concentrations of cadmium and mercury were the highest detected. Organic analyses revealed the presence of ten compounds, four of which are priority pollutants (see Table 6).

6.9 Landfill Composite - Sample CM-LC-01

Soil sample CM-LC-01 was collected as a composite from the surface of the battery carcass landfill, located between the process area and the onsite pond (see Figure 2).

The results of the inorganic analyses of soil sample CM-LC-01 revealed the presence of eight priority pollutants (see Table 5). They are: arsenic (72,000 ug/kg), cadmium (4,200 ug/kg), chromium (2,300 ug/kg), copper (43,000 ug/kg), nickel (13,000 ug/kg), lead (35,000,000 ug/kg), zinc (28,000 ug/kg), and selenium (600 ug/kg). The concentrations of arsenic, copper, nickel, lead, zinc, and selenium were the highest detected. Organic analyses revealed the presence of ten compounds, all of which are priority pollutants (see Table 6).

7.0 SUMMARY OF ANALYTICAL RESULTS

7.1 Inorganics

In November, 1976, Chloride Metals was awarded a permit to discharge limited quantities of lead, copper, and zinc into Indian Creek. Later, its permit was modified to reflect the discharge of antimony and arsenic as well. The following discussion will center on these five priority pollutants.

Lead was detected in each onsite soil or sediment sample, with the highest concentration detected in the landfill composite. It was also detected in each of the stream sediment samples collected, with the downstream sample containing three times the level of the upstream. Lead was also detected in both onsite surface water samples, in each of the four monitoring wells sampled, and in both stream samples. Concentrations were highest in the onsite surface water. The upstream water sample was found to have more than twice the lead concentration of the downstream sample.

Arsenic was found onsite in the sediment sample collected at the spring and in the battery carcass landfill, but was not detected in either stream sediment sample. Arsenic was detected in three onsite monitoring wells, but remained undetected in either of the onsite surface water samples. It was not detected in either of the stream water samples.

Antimony was undetected in the onsite soil and sediment samples and in the offsite stream sediment samples; however, it was detected in both onsite surface water samples and in one onsite monitoring well.

Copper was detected in each onsite soil or sediment sample, but was undetected in either stream sediment sample. It was detected in each of the monitoring wells sampled and in one onsite surface water sample, but was undetected in either stream water sample.

Zinc was found in each of the onsite soil or sediment samples, the highest concentration appearing in the landfill composite. It was also detected in both stream sediment samples, with a slightly higher concentration found upstream. Zinc was detected in each of the four monitoring wells sampled (PVC construction), in one of the onsite surface water samples, and in both stream water samples.

7.2 Organics

A number of compounds classified as polynuclear aromatic hydrocarbons (PAH) were detected in landfill composite soil sample CM-LC-01. They are phenanthrene, fluoranthene, chrysene, benzo (b) fluoranthene, benzo (k)

fluoranthene, benzo (a) pyrene and dibenzo (a, h) anthracene. These compounds are associated with asphalt paving, wood preserving processes where creosote is used, and other processes where coal tar derivatives are used. They would not be expected to be associated with the operations conducted at Chloride Metals.

The detection of plasticizers di-n-butylphthalate in monitoring wells 1, 2, 5, and 8, and diethylphthalate and bis (2-ethylhexyl) phthalate in MW-5 may be due to their PVC construction. Bis (2-ethylhexyl) phthalate was also detected in the landfill composite, possibly due to the battery carcass disposal.

Sediment sample CM-S-1S, taken from the onsite spring area, was found to contain ten miscellaneous organic compounds, but their connection, if any, to onsite operations is unclear.

8.0 METHODOLOGY

All sample collection, sample preservation, and chain-of-custody procedures used during this investigation were in accordance with the standard operating procedures as specified in Sections 3, 4, and 6 of the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft); United States Environmental Protection Agency, Region IV, Environmental Services Division, August 29, 1980 and all revisions to the SOP addressed in the following correspondences:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions [4]

All laboratory analyses and laboratory quality assurance procedures used during this investigation were in accordance with standard procedures and protocols as specified in the Analytical Support Branch Operations and Quality Assurance Manual; United States Environmental Protection Agency, Region IV, Environmental Services Division; April 1982, or as specified by the existing United States Environmental Protection Agency Standard procedures and protocols for the contract analytical laboratory program [5].

REFERENCES

1. EPA File, Chloride Metals, Inc., Florence, Mississippi.

2. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1961. Groundwater Resources of Hinds, Madison and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletins 61-2, part II. 146 p.

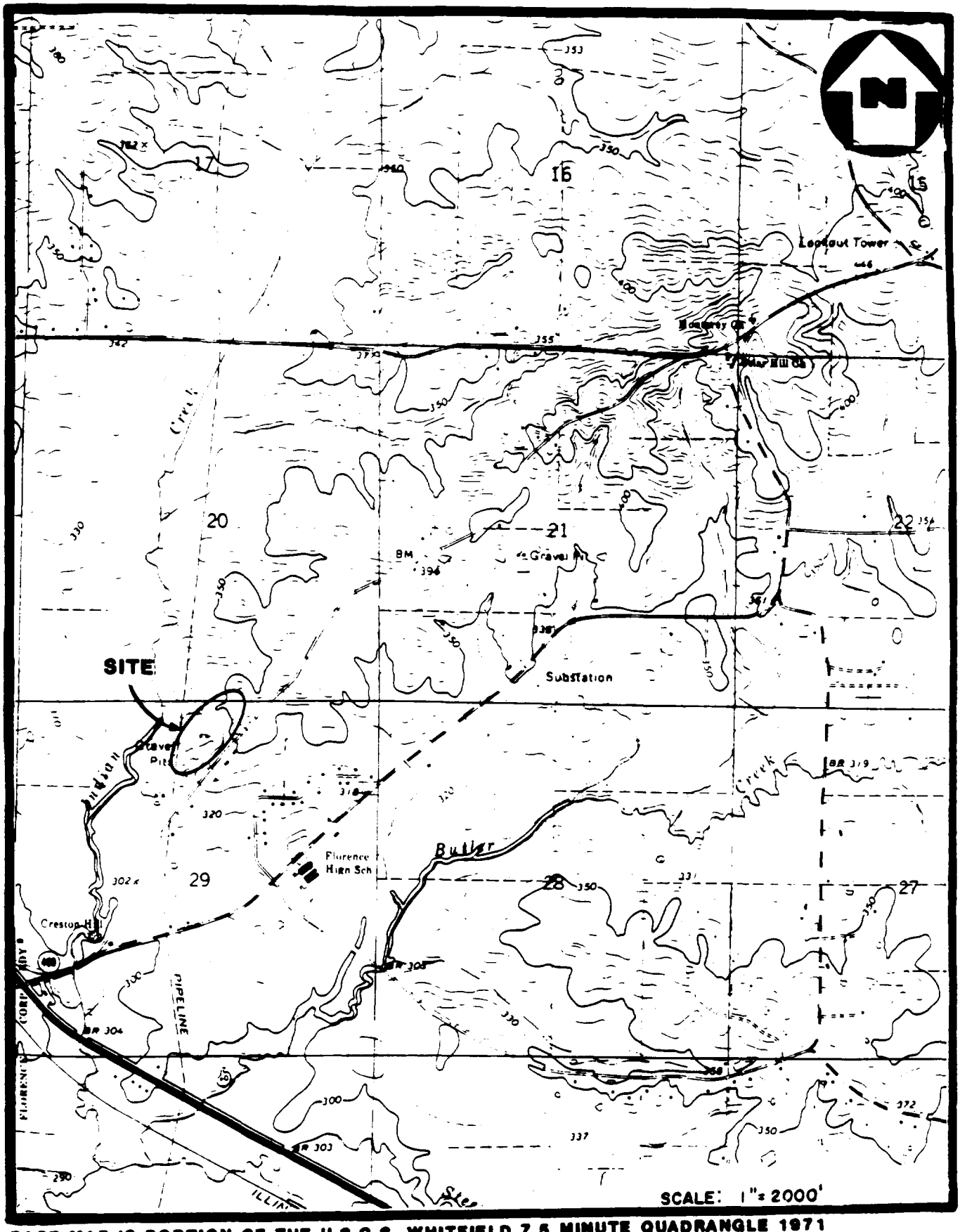
3. Harvey, E. J., Callahan, J. A., and Wasson, B. E., 1964. Groundwater Resources of Hinds, Madison, and Rankin Counties, Mississippi. Mississippi Board of Water Commissioners Bulletin 64-1. 38 p.

4. Sams, Jay personal communication, 2-13-85. Mississippi Bureau of Geology.

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

6. Analytical Support Branch Operations and Quality Assurance Manual; U. S. Environmental Protection Agency, Region IV, Environmental Services Division; April, 1982.

7. Baughman, W.T., McCutcheon, T.E., Bicker, A.R., Jr., Dinkins, T.H., Jr., and Shows, T.N., 1971. Rankin County geology and mineral resources. Mississippi Bureau of Geology Bulletin 115.

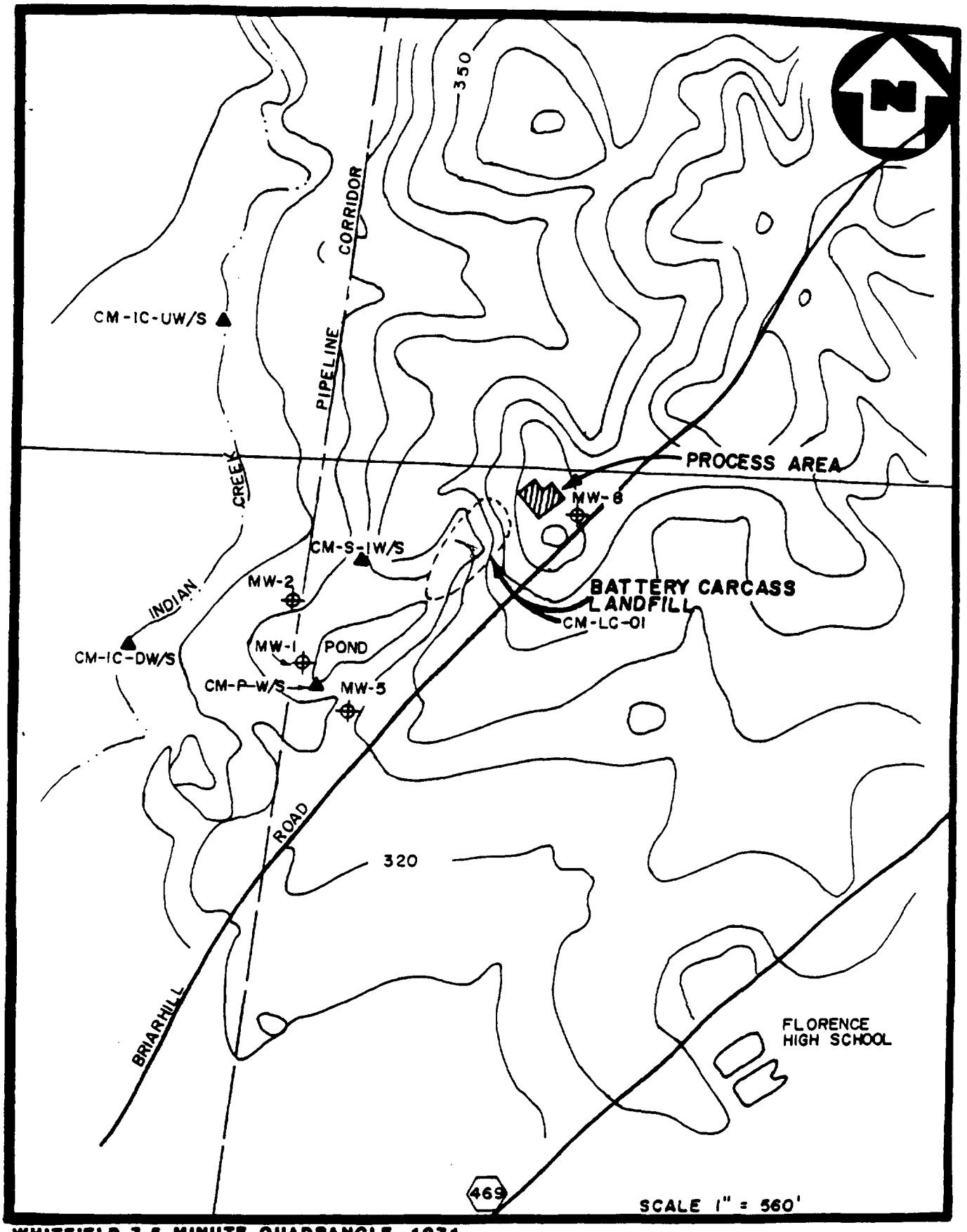


BASE MAP IS PORTION OF THE U.S.G.S. WHITFIELD 7.5 MINUTE QUADRANGLE 1971

SITE LOCATION MAP
CHLORIDE METALS CORPORATION
FLORENCE, MISSISSIPPI

FIGURE 1

NUS CORPORATION
A Halliburton Company



WHITFIELD 7.5 MINUTE QUADRANGLE, 1971

SAMPLE LOCATION MAP
CHLORIDE METALS
FLORENCE, MISSISSIPPI

FIGURE 2

NUS CORPORATION
A Halliburton Company

Table 1
Chloride Metals, Inc.
Sample Code Descriptions

Sample Code	Description
CM-MW-01	Monitoring Well 1 (MW-1)
CM-MW-02	Monitoring Well 2 (MW-2)
CM-MW-05	Monitoring Well 5 (MW-5)
CM-MW-08	Monitoring Well 8 (MW-8)
CM-IC-UW/US	Indian Creek, upstream water/sediment
CM-IC-DW/DS	Indian Creek, downstream water/sediment
CM-P-1W/1S	Onsite pond, water/sediment
CM-S-1W/1S	Onsite spring, water/sediment
CM-LC-01	Battery carcass landfill composite

Table 2
Chloride Metals, Inc.
Field Measurements
August 8-9, 1984

Sample Code	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
Medium	Water	Water	Water	Water	Water	Water	Water	Water
Temp. °C	22	22	21	24	25	26	24	28
pH (S.U.)	4.2	3.65	3.5	5.25	6.55	5.5	2.8	6.0
Conductivity (umhos/cm)	38	38	38	40	-	-	-	-
Well Construction (type)	PVC	PVC	PVC	PVC	NA	NA	NA	NA
Well Diameter (inches)	1.5	1.5	1.5	1.5	NA	NA	NA	NA
Well Depth (feet)	39	27	32	61	NA	NA	NA	NA
Water Depth (feet)	26	11	16	47	NA	NA	NA	NA
Date	8-8-84	8-8-84	8-8-84	8-8-84	8-8-84	8-9-84	8-9-84	8-9-84
Time	1320	1545	1428	1050	1650	1130	0810	0858

NA Not applicable

Table 3
Chloride Metals, Inc.
Water Samples
Metals Analyses[a]
Results in ug/l (ppb)
August 8-9, 1984

Element	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Arsenic*	16	23	30	-	-	-	-	-
Barium	-	-	280	-	-	-	-	-
Beryllium*	17	24	7	-	-	6	19	-
Cadmium*	75	56	37	-	-	6.5	68	3.4
Cobalt	520	660	100	-	-	-	600	-
Chromium*	72	47	90	30	-	-	62	-
Copper*	72	180	140	53	-	-	180	-
Nickel*	370	140	88	-	-	-	180	-
Lead*	200	260	130	120	76	31	570	590
Antimony*	-	34	-	-	-	-	28	29
Tin	-	-	-	29	-	-	-	-
Zinc*	900	580	310	75	15	26	910	-
Mercury*	-	.48	.3	-	-	-	-	-
Aluminum	41,000	130,000	80,000	17,000	3,800	2,400	200,000	350
Manganese	27,000	11,000	2,800	92	580	2,300	14,000	70
Iron	65,000	62,000	86,000	9,400	3,600	2,000	42,000	580

* Priority pollutant
\- Material was analyzed for but not detected.
a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

Table 4

Chloride Metals, Inc.

Water Samples

Organic Analyses[a]

Results in ug/l (ppb)

August 8-9, 1984

Compound	CM-MW-01	CM-MW-02	CM-MW-05	CM-MW-08	CM-IC-UW	CM-IC-DW	CM-S-1W	CM-P-1W
Purgeable & Miscellaneous Organics								
Methylene Chloride*	4J	3J	3J	4J	3J	2J	2J	2J
Chloroform*	-	2J	-	-	-	-	-	-
Carbon Disulfide	-	-	-	-	-	-	-	3J
Extractable & Miscellaneous Organics								
Diethyl Phthalate*	-	-	3J	-	-	-	-	-
Di-N-Butylphthalate*	3J	9J	200	5J	-	-	-	-
Bis (2-Ethylhexyl) Phthalate*	-	-	34	-	-	-	-	-
Bromochlorocyclohexane	-	-	-	-	-	-	20	-
1 Unknown Compound	20J	NA	200J	NA	NA	NA	NA	20J
2 Unknown Compounds	NA	90J	NA	NA	NA	NA	200J	NA
4 Unknown Compounds	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides, PCBs & Other Chlorinated Compounds								
None detected								

* Priority pollutant
J Estimated value
\- Material was analyzed for but not detected.
NA Not applicable
a This data has not been subject to Quality Control review. Data should be used for site screening purposes only.

Table 5

Chloride Metals, Inc.

Soil and Sediment Samples

Metals Analyses[a,b]

Results in ug/kg (ppb)

August 8-9, 1984

Element	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Arsenic*	-	-	1,200	-	72,000
Barium	8,500	-	13,000	13,000	82,000
Beryllium*	700	-	500	-	-
Cadmium*	-	100	8,000	300	4,200
Cobalt	2,500	-	5,300	-	-
Chromium*	-	900	3,300	3,300	2,300
Copper*	-	-	13,300	3,500	43,000
Nickel*	-	-	3,500	-	13,000
,ad*	3,000	9,500	60,000	100,000	35,000,000
Zinc*	4,000	3,700	10,000	5,300	28,000
Mercury*	-	-	220	-	-
Aluminum	320,000	360,000	860,000	1,700,000	1,100,000
Manganese	73,000	46,000	6,000	20,000	28,000
Iron	690,000	920,000	6,000,000	2,900,000	3,400,000
Selenium*	-	-	-	-	600
Tin	-	-	-	-	2,900

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.

b Data reported on wet weight basis.

* Priority pollutant

\- Material was analyzed for but not detected.

Table 6
Chloride Metals, Inc.
Soil & Sediment Samples
Organic Analyses[a,b]
Results in ug/kg (ppb)
August 8-9, 1984

Compound	CM-IC-US	CM-IC-DS	CM-S-1S	CM-P-1S	CM-LC-01
Purgeable and Miscellaneous Organics					
Methylene Chloride*	-	-	44	-	-
1,1,2-Trichloroethane	-	800	-	-	-
Tetrachloroethylene*	-	-	30	-	-
Toluene*	-	-	72	-	-
Acetone	240	-	260	-	-
Methyl Ethyl Ketone	-	-	87	-	-
Extractable & Miscellaneous Organics					
Phenanthrene*	-	-	-	-	200J
Fluoranthene*	-	-	-	-	200J
Benzyl Butyl Phthalate*	-	-	-	-	200J
Chrysene*	-	-	-	-	200J
Benzo (B) Fluoranthene*	-	-	-	-	200J
Benzo (K) Fluoranthene*	-	-	-	-	200J
Benzo-A-Pyrene*	-	-	-	-	200J
Dibenzo (A,H) Anthracene*	-	-	-	-	200J
Bis(2-Ethylhexyl) Phthalate*	-	-	-	-	2100
Di-N-Octylphthalate*	-	-	-	-	1900
Oxabicycloheptane	800JN	700JN	-	-	-
Bromopentafluorobenzene	500JN	500JN	500JN	-	-
Cyclohexenol	-	400JN	-	-	-
Cyclohexeneone	-	-	300JN	-	-
Benzodioxolone	-	-	600JN	-	-
Octadecene	-	-	2000JN	-	-
Pesticides, PCBs & Other Chlorinated Compounds					
4,4-DDT (P,P'-DDT)*	-	-	100J	100J	-

a This data has not been subjected to Quality Control review. Data should be used for site screening purposes only.
b Data reported on dry weight basis.
* Priority pollutant
J Estimated value
Presumptive evidence of presence of material.
\- Material was analyzed for but not detected.

L1

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

November 20, 1989

CERTIFIED MAIL NO. P 962 285 072

Mr. Frank Barnett
Director of Environmental Affairs
GNB Incorporated
P.O. Box 2165
Joy Road
Columbus, Georgia 31902

Dear Mr. Barnett:

Enclosed is Administrative Order No. 1677-89, which has been issued by the Mississippi Department of Environmental Quality as a result of certain environmental problems regarding your landfill facility on Briarhill Road in Rankin County. Your cooperation in carrying out the provisions of this order is encouraged.

As you know, appeals can be taken in accordance with State law.

If you have any questions in this matter, please contact Mr. John Taylor at telephone #601/961-5171.

Sincerely,

Charles H. Chisolm
Bureau Director

CHC:mh

Enclosure

BEFORE THE MISSISSIPPI COMMISSION
ON ENVIRONMENTAL QUALITY

IN THE MATTER OF:

MISSISSIPPI COMMISSION ON
ENVIRONMENTAL QUALITY

COMPLAINANT

ORDER NO. [illegible] 89

GNB, INCORPORATED
(GNB)

RESPONDENT

ADMINISTRATIVE ORDER

Under the authority of Section 49-2-13, Mississippi Code of 1972, the above styled cause came on this date for consideration and the Executive Director, having considered the same, and being desirous of obtaining a Consent Order without any evidentiary or legal hearing and without making any adjudication of fact or law, finds as follows:

1.

The provisions of the laws of this State govern the disposal of solid waste and the pollution of the waters of the State, as more particularly set forth in Section 17-17-1, et seq, and Section 49-17-1, et seq, Mississippi Code of 1972; and, the rules and regulations of the Mississippi Commission on Environmental Quality.

2.

GNB, Inc. (GNB) owns and maintains the Chloride Metals - Florence, Mississippi facility landfill located on Briarhill Road in Rankin County, Mississippi.

3.

A Site Screening Investigation Report dated June 17, 1985, revealed the presence of arsenic, beryllium, cadmium, copper, chromium, lead, nickel, zinc, and possibly Di-N-Butylphthalate, Bis(2-Ethylhexyl)Phthalate and Bromochlorocycloxene in the groundwater onsite.

A sampling event on August 6, 1988, revealed the presence of lead and cadmium above drinking water standards and that the laboratory pH ranged from 3.5 to 5.6.

FINDINGS CONSIDERED, the Executive Director orders that Respondent shall develop, submit, and upon Bureau approval, execute the work outlined below to further delineate the extent of the existing contamination at the subject landfill site.

IT IS, THEREFORE, AGREED that the Respondent, GNB, shall execute the following activities on or before the dates specified:

A. Within ninety (90) days from the effective date of this Order, submit a workplan and schedule that addresses delineation of the existing soil and groundwater contamination, closure of the subject landfill site and remediation plans with cleanup levels. The workplan shall provide for a report that will describe all activities associated with this proposed workplan.

B. Within thirty (30) days of receipt of written approval, commence, according to the approved schedule, all activities in the approved workplan.

C. Complete execution of all activities in the approved workplan according to the approved schedule.

IT IS FURTHER ORDERED AND ADJUDGED that Respondent, if aggrieved by this Order, shall file a sworn petition with this Commission in a timely manner as provided by Section 49-17-41, Mississippi Code Annotated (1972), in which Respondent shall set forth the grounds and reasons for said complaint and shall ask for a hearing thereon.

SO ORDERED, this the 20th day of November, 1989, by the Executive Director of the Mississippi Commission on Environmental Quality.

MISSISSIPPI COMMISSION ON
ENVIRONMENTAL QUALITY

BY: J. T. Palmer, Jr.
J. T. PALMER, JR.
EXECUTIVE DIRECTOR

81

GNB Incorporated Metals Division

P.O. Box 2165
Joy Road
Columbus, GA 31902
Telephone (404) 689-1701

RECEIVED
OCT 17 1988
Dept. of Natural Resources
Bureau of Pollution Control

11 October 1988

Certified Mail

Mr. Trey Fleming
Mississippi Dept. of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, Ms. 39209

Dear Mr. Fleming:

On August 16, 1988, eight monitor wells located at our Florence Miss. site were sampled and subsequently analyzed. This was performed in accordance with our Ground Water Monitoring Plan dated June 1988 and the Departments additional conditions dated July 13, 1988.

Please find enclosed Resource Consultant's Analytical Report. After reviewing the report, it appears that the site is stabilizing and significant improvement is indicated in these analyses.

If you have any questions after you have reviewed the report, please contact me.

Sincerely

Brigitte Bussey

for F. L. Barnett
Director Environmental Affairs

FLB/bb

cc: Charles Barry
James Palmer
Mike Sappington

RESOURCE CONSULTANTS
environmental engineers and scientists

SEP 1988
RECEIVED
CHLORIDE
TECH SERVICES

Mr. Frank Barnett
GNB, Inc.
P. O. Box 2165
Columbus, GA 31902

12 Sept 88
RCI Project No. 7603

ANALYTICAL REPORT

Sample Description: Well Sampling at Florence, MS
RCI Sample No. 43625 - Well OW-1
RCI Sample No. 43627 - Well OW-2
RCI Sample No. 43629 - Well OW-3
RCI Sample No. 43631 - Well OW-3 (preserved with NaOH)
RCI Sample No. 43632 - Well OW-3 (collected in glass VOA vial and amber-glass, hexane-washed bottle)

RCI Sample Number	43625	43627	43629	43631	43632
Date Collected	8/16/88	8/16/88	8/16/88	8/16/88	8/16/88
Time Collected	NR	NR	NR	NR	NR
Date Received	8/17/88	8/17/88	8/17/88	8/17/88	8/17/88
Antimony - dissolved			<0.005		
Arsenic - dissolved	<0.002	0.002	0.003		
Beryllium - dissolved			<0.005		
Cadmium - dissolved	0.021	0.026	0.001		
Chromium - dissolved			<0.01		
Copper - dissolved			<0.01		
Lead - dissolved	0.024	0.018	<0.001		
Mercury - dissolved			<0.0002		
Nickel - dissolved			<0.02		
Selenium - dissolved			<0.005		
Silver - dissolved			<0.002		
Thallium - dissolved			<0.002		
Zinc - dissolved			0.06		
Laboratory pH (pH units)	5.1	4.5	4.8		
Total Dissolved Solids	458	396	1,020		
Cyanide				<0.01	
Organic Priority Pollutants*					
Volatiles					<0.010
Acid and Base/Neutral Extractables					
Bis(2-ethylhexyl)phthalate					0.014
Isophorone					0.012
All others					<0.010
Pesticides and PCBs					<0.010

All units are mg/l unless otherwise noted.
*See attached list.
ote: All samples were preserved at 4 deg. C upon collection.

Mary Louise Lewis

7121 CrossRoads Boulevard • P.O. Box 1848 • Brentwood, Tennessee 37024 • 615-373-5040
a tennessee corporation

RESOURCE CONSULTANTS
environmental engineers and scientists

Mr. Frank Barnett
GNB, Inc.
P. O. Box 2165
Columbus, GA 31902

12-Sept-88
RCI Project No. 7603

ANALYTICAL REPORT

Sample Description: Well Sampling at Florence, MS
RCI Sample No. 43633 - Well OW-4
RCI Sample No. 43635 - Well OW-4 (preserved with NaOH)
RCI Sample No. 43636 - Well OW-4 (collected in glass VOA vial and amber-glass, hexane-washed bottle)
RCI Sample No. 43637 - Well OW-5
RCI Sample No. 43639 - Well OW-6

RCI Sample Number	43633	43635	43636	43637	43639
Date Collected	8/16/88	8/16/88	8/16/88	8/16/88	8/16/88
Time Collected	NR	NR	NR	NR	NR
Date Received	8/17/88	8/17/88	8/17/88	8/17/88	8/17/88
Antimony - dissolved	0.009				
Arsenic - dissolved	<0.002			<0.002	0.002
Beryllium - dissolved	<0.005				
Cadmium - dissolved	0.054			0.047	0.060
Chromium - dissolved	<0.01				
Copper - dissolved	0.10				
Lead - dissolved	0.21			0.013	0.028
Mercury - dissolved	<0.0002				
Nickel - dissolved	<0.02				
Selenium - dissolved	<0.005				
Silver - dissolved	<0.002				
Thallium - dissolved	<0.002				
Zinc - dissolved	0.34				
Laboratory pH (pH units)	4.1			4.2	3.7
Total Dissolved Solids	866			632	473
Cyanide		<0.01			
Organic Priority Pollutants*					
Volatiles			<0.010		
Acid and Base/Neutral Extractables			<0.010		
Pesticides and PCBs			<0.010		

All units are mg/l unless otherwise noted.
*See attached list.
Note: All samples were preserved at 4 deg. C upon collection.

Mary Louise Lina

7121 CrossRoads Boulevard • P.O. Box 1848 • Brentwood, Tennessee 37024 • 615-373-5040
a tennessee corporation

RESOURCE CONSULTANTS
environmental engineers and scientists

Mr. Frank Barnett
GNB, Inc.
P. O. Box 2165
Columbus, GA 31902

12-Sept-88
RCI Project No. 7603

ANALYTICAL REPORT

Sample Description: Well Sampling at Florence, MS
RCI Sample No. 43641 - Well OW-7
RCI Sample No. 43643 - Well OW-8
RCI Sample No. 43645 - Well OW-8 (preserved with NaOH)
RCI Sample No. 43646 - Well OW-8 (collected in glass VOA vial and amber-glass, hexane-washed bottle)

RCI Sample Number	43641	43643	43645	43646
Date Collected	8/16/88	8/16/88	8/16/88	8/16/88
Time Collected	NR	NR	NR	NR
Date Received	8/17/88	8/17/88	8/17/88	8/17/88
Antimony - dissolved		<0.005		
Arsenic - dissolved	<0.002	<0.002		
Beryllium - dissolved		<0.005		
Cadmium - dissolved	0.55	0.004		
Chromium - dissolved		<0.01		
Copper - dissolved		<0.01		
Lead - dissolved	0.044	0.005		
Mercury - dissolved		<0.0002		
Nickel - dissolved		<0.02		
Selenium - dissolved		<0.005		
Silver - dissolved		<0.002		
Thallium - dissolved		<0.002		
Zinc - dissolved		0.05		
Laboratory pH (pH units)	3.5	5.6		
Total Dissolved Solids	414	129		
Cyanide			<0.01	
Organic Priority Pollutants*				
Volatiles				<0.010
Acid and Base/Neutral Extractables				<0.010
Pesticides and PCBs				<0.010

All units are mg/l unless otherwise noted.
*See attached list.
Note: All samples were preserved at 4 deg. C upon collection.

Mary Louise Lewis

WELL SAMPLING FIELD DATA

GNB Florence, MS
RCI Project No. 7603

RCI Log No.	Well #	Well Depth (ft.)	Liquid Level* (ft.)	Liquid Depth (ft.)	Liquid Volume in Wells (gallons)	Volume of Liquid Purged (gallons)	Number of Bails	Field pH
43625	OW1	44.0	26.8	17.2	1.58	4.74	32	4.7
43627	OW2	25.0	12.1	12.9	1.18	3.54	24	4.2
43629	OW3	29.0	7.3	21.7	1.99	5.97	40	4.3
43633	OW4	40.0	23.0	17.0	1.56	4.68	32	4.0
43637	OW5	29.0	16.8	12.2	1.12	3.36	23	4.1
43639	OW6	38.0	23.8	14.2	1.30	3.90	26	3.6
43641	OW7	37.5	24.8	12.7	1.17	3.51	24	3.7
43643	OW8	60.5	48.3	12.2	1.12	3.36	23	4.9

Liquid Volume in Well = $\pi r^2 df$

where r = well radius in feet

d = liquid depth in feet

f = factor converting cubic feet to gallons (7.481)

Well Diameter = 1.5 inches

Bailer Volume = 0.15 gallons

*Measured from top of casing.

Date: 8/16/88

Signature: Steve Morgan

Title: Sr. Tech.

RESOURCE CONSULTANTS Inc.

Organic Priority Pollutants

Volatiles
Benzene
Bromoform
Carbon tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-chloroethylvinyl ether
Chloroform
Dichlorobromomethane
Dichlorodifluoromethane
1,1-dichloroethane
1,2-dichloroethane
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropene
Ethylbenzene
Methyl bromide
Methyl chloride
Methylene chloride
1,1,2,2-tetrachloroethane
Tetrachloroethylene
Toluene
1,2-dichloroethylene
1,1,1-trichloroethane
1,1,2-trichloroethane
Trichloroethylene
Vinyl chloride

Acid and Base/Neutral Extractables
2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
P-chloro-m-cresol
Pentachlorophenol
Phenol
2,4,6-trichlorophenol
Acenapthene
Acenaphthtylene
Anthracene
Benzedine
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(a)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Bis-2-chloroethoxymethane
Bis(2-chloroethyl) ether
Bis(2-chloroisopropyl) ether
Bis(2-ethylhexyl) phthalate
4-bromophenyl phenyl ether
Butyl benzyl phthalate
2-chloronapthalene
4-chlorophenyl phenyl ether
Chrysene
Dibenzyl(a,h)anthracene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
2,4-dinitrotoluene
2,6-dinitrotoluene
Di-n-octyl phthalate
1,2-diphenyl-hydrazine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene
N-nitrosodimethylamine
N-nitrosodi-n-propylamine
N-nitrosodiphenylamine
Phenanthrene
Pyrene
1,2,4-trichlorobenzene

Pesticides and PCB's
Aldrin
Alpha BHC
Beta BHC
Gamma BHC
Delta BHC
Chlordane
4,4-DDT
4,4-DDE
4,4-DDD
Dieldrin
Alpha endosulfan
Beta endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlorepoxide
PCB 1242
PCB 1254
PCB 1221
PCB 1232
PCB 1248
PCB 1260
PCB 1016
Toxaphene

RESOURCE CONSULTANTS

19

UNSCANNABLE

MEDIA

(PHOTOGRAPHS)

OVERSIZED

DOCUMENT

20

WATER FOR MUNICIPAL AND INDUSTRIAL DEVELOPMENT

In

Hinds, Madison, and Rankin Counties,

Mississippi

A COOPERATIVE STUDY SPONSORED BY THE
U. S. Geological Survey
and the
Mississippi Research & Development Center
JACKSON, MISSISSIPPI
1979

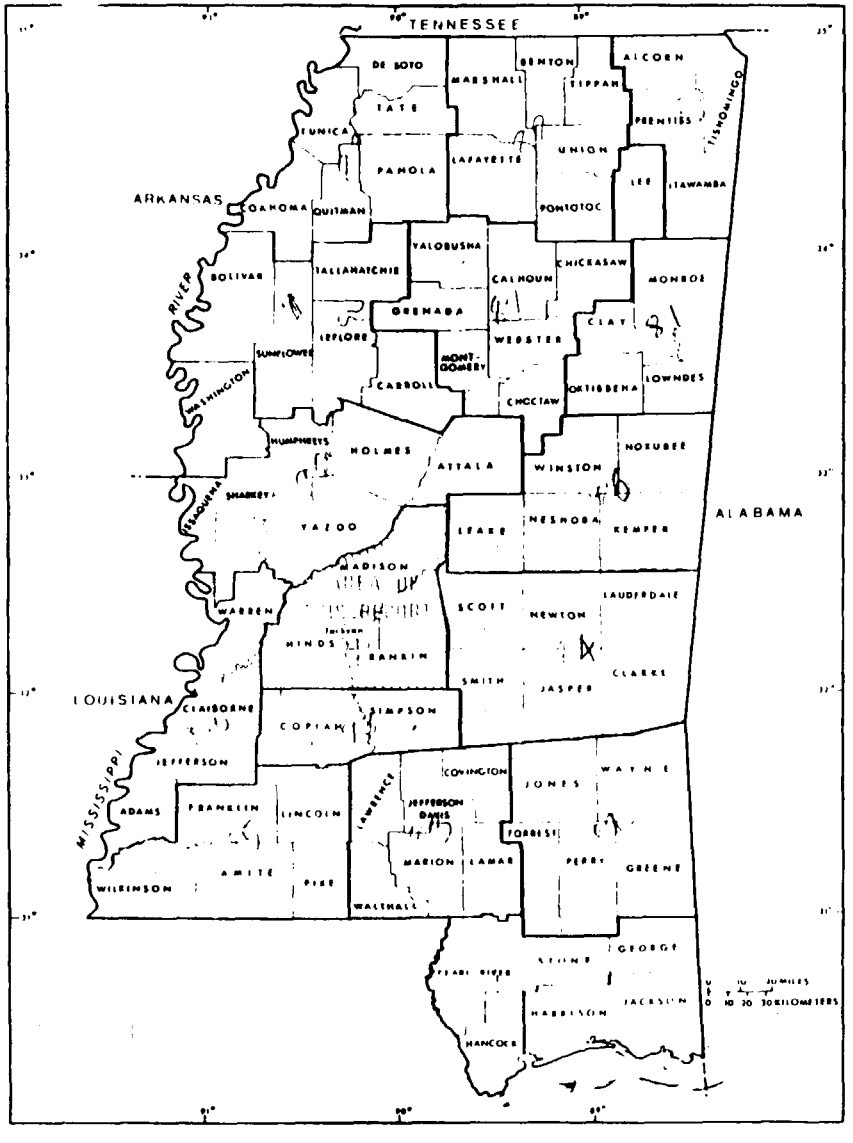


Figure 1. Locations of multicounty water resources investigations and other studies

reports of the U.S. Geological Survey (Speer, Golden, Patterson, and others, 1964; Cushing, Boswell, and Hosman, 1964; Hosman, Lang, Lambert and others, 1968). Low-flow data are given in reports by Thompson and Humphreys (1967), and Tharpe (1975). Flood-frequency data are available (Colson and Hudson, 1976). Water use for the area was compiled by Callahan (1975, 1976).

Location and Population

Hinds, Madison, and Rankin Counties occupy an area of 2,428 mi^2 or 6,289 km^2 in southwest-central Mississippi (fig. 1). The Big Black River bounds Hinds and Madison Counties on the west. Jackson, the major population center in both the area and the state, is approximately 195 mi (314 km) north of New Orleans, La., and 215 mi (346 km) south of Memphis, Tenn.

The 1970 population of the three-county area was 288,643. This represents a 14 percent increase from 1960 to 1970. The Jackson Chamber of Commerce estimated the Jackson population to be 181,500 and the three-county area total of 310,100 in 1974. Municipalities, rural water associations, and companies served a population of 291,530 in 1974.

HYDROLOGIC SETTING

Climate

A humid subtropical climate prevails over southwest-central Mississippi. Mean annual precipitation in the study area is 51 in. or 1295 mm. December is the wettest month with an average precipitation of more than 5 in. (130 mm), and October is the driest with more than 2 in. (50 mm). The mean annual temperature is 18°C (65°F), and the average frost-free period is about 225 days. January is the coldest month while July is the warmest. The mean annual relative humidity is 70 percent. The following tables give the average precipitation and temperature from 40 years of record at Jackson, Miss.

Topography and Drainage

Hinds, Madison, and Rankin Counties lie in four physiographic districts of the Gulf Coastal Plain: the North-Central Plateau, the Jackson Prairie, the Southern Pine Hills, and the Loess Hills (Fenneman, 1938) (fig. 2). The North-Central Plateau in northern Madison County, which is underlain by the Cockfield Formation, has elevations ranging from about 200 to 450 ft (61 to 140 m) above NGVD (National Geodetic Vertical Datum of 1929). The Jackson Prairie underlain by the Yazoo Clay, consists of gently rolling hills with elevations not exceeding 400 ft (120 m) above NGVD. The Southern Pine Hills in Hinds and Rankin Counties form a cuesta in which the Forest Hill Sand is the base and the limestone beds of the Vicksburg Group the top. Miocene and terrace deposits of sand and gravel, also part of this cuesta, crop out south of the Vicksburg Group. Altitudes in the Southern Pine Hills range from about 200 to 500 ft (61 to 150 m). In northwestern and western Hinds County, rough terrain and vertical bluffs characterize the Loess Hills. Loess as much as 20 ft (6 m)

Average annual and monthly precipitation, in inches

Month	In.	Month	In.
Jan.	4.85	July	4.11
Feb.	4.81	Aug.	3.61
Mar.	5.45	Sept.	2.78
Apr.	5.22	Oct.	2.27
May	4.44	Nov.	3.67
June	3.84	Dec.	5.58
Average annual precipitation			50.96

Average annual and monthly temperature, in degrees Fahrenheit

Month	°F	Month	°F
Jan.	48.4	July	81.8
Feb.	50.9	Aug.	81.5
Mar.	57.3	Sept.	76.9
Apr.	65.3	Oct.	66.5
May	72.6	Nov.	55.7
June	79.6	Dec.	49.5
Average annual temperature			65.5

Climatological data from 1936–75, at Jackson, U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service.

Table 1. -- Geologic formations and their water-bearing properties.

System	Series	Group	Formation	Thickness in feet	Physical character	Water-bearing properties
Quaternary	Holocene		Alluvium	0-80	Gravel, sand, and silt.	Furnishes some small domestic water supplies along Pearl River. Thicker deposits along Big Black River may yield up to [illegible] gal/min (gallons per minute) to wells.
	Pleistocene		Loess	0-50	Weathered brown loam.	Not an aquifer in this area.
Tertiary	Pliocene		Citronelle Formation		Gravel, sand and clay.	Supplies some rural wells in a few places in southern Hinds and Rankin Counties.
	Miocene		Catahoula Sandstone	0-400	White sandstone, siltstone, clay, and sand.	Yields as much as 200 gal/min to wells in southern Hinds and Rankin Counties.
	Oligocene	Vicksburg Group	Byram Formation, Marianna Limestone (Mint Spring Marl Member)	0-100+	Limestone, marl, with some clay, and sand.	Mint Spring Marl Member yields small supplies to rural wells southeast of Jackson.
			Forest Hill Sand	0-200+	Lignitic clay, lignite, and thin beds of sand.	Supplies water to many rural water systems in southern Hinds and Rankin Counties. Yields up to 350 gal/min.
	Eocene	Jackson Group	Yazoo Clay	0-500	Fossiliferous clay.	Confining unit.
			Moodys Branch Formation	0-40	Glauconitic, fossiliferous marl and sand.	Yields small supplies to a few rural wells.
		Claiborne Group	Cockfield Formation	0-530	Sand, clay, and lignite.	Yields as much as 650 gal/min to wells in the three counties but little used in Jackson.
			Cook Mountain Formation	100-200	Clay and glauconitic, fossiliferous sandstone and sandy limestone.	Confining unit.
			Sparta Sand	400-1000	Beds of medium-grained sand as much as 100 feet thick interbedded with clay and lignite.	Yields as much as 1,000 gal/min to wells in Jackson and Clinton. Water may be colored southwest of Jackson.
			Cilpha Clay	200-400	Dark-gray to brown fossiliferous clay.	Confining unit in this area.
			Winona Sand and Tallahatta Formation	50-500	Light-gray to green calcareous sand, shale, and clay.	Not an aquifer in this area.
			Meridian Sand Member of Tallahatta Formation	300-450	Fine-to-coarse sand and lignite.	Potential source of water for Madison and northeastern Rankin Counties. Yields over 100 gal/min to a public-supply well in Madison County.
	Paleocene	Wilcox Group	Upper part	1100-2500	Sand and shale, with some lignite	
			Middle part			Not an aquifer in this area.
			Lower part			Potential aquifer in Madison and northeastern Rankin Counties. Not used as an aquifer because of considerable depth.

Outcropping formations

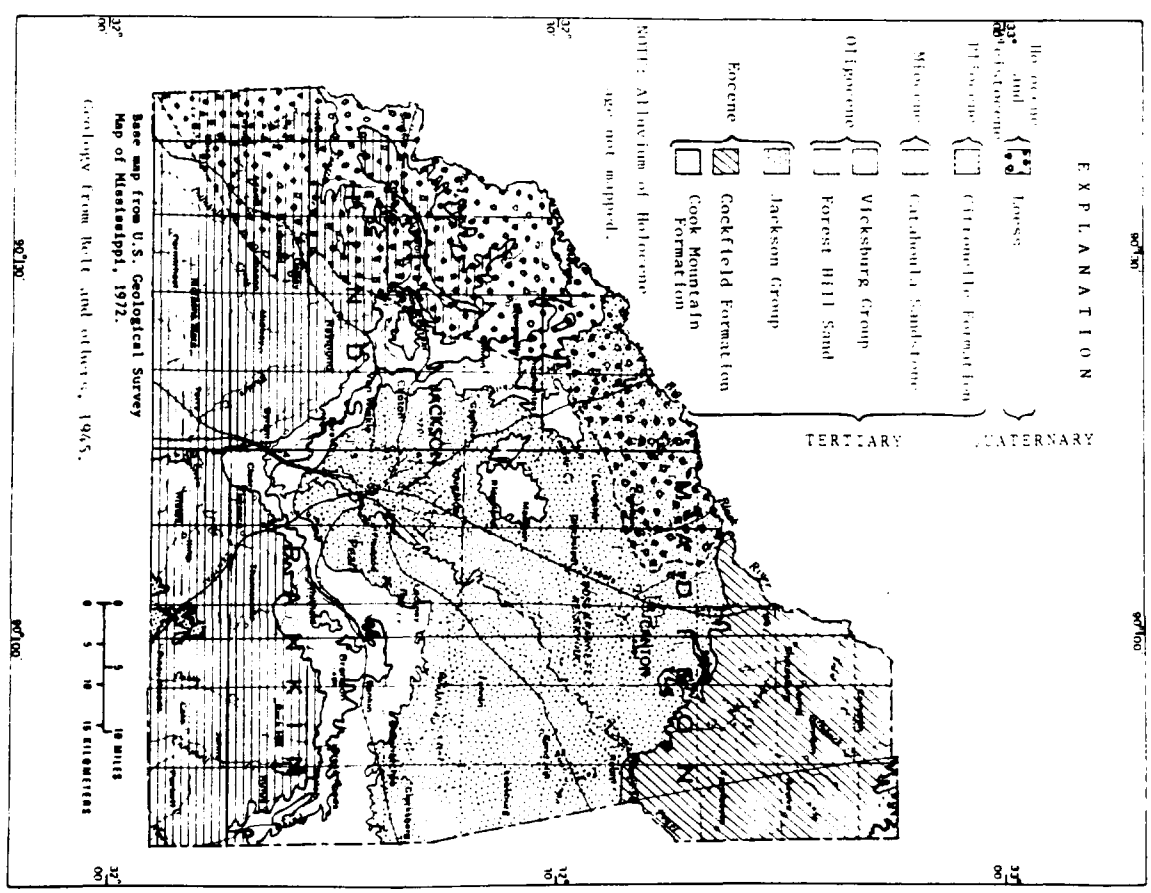


Figure 5. -- Areal geology of the study area

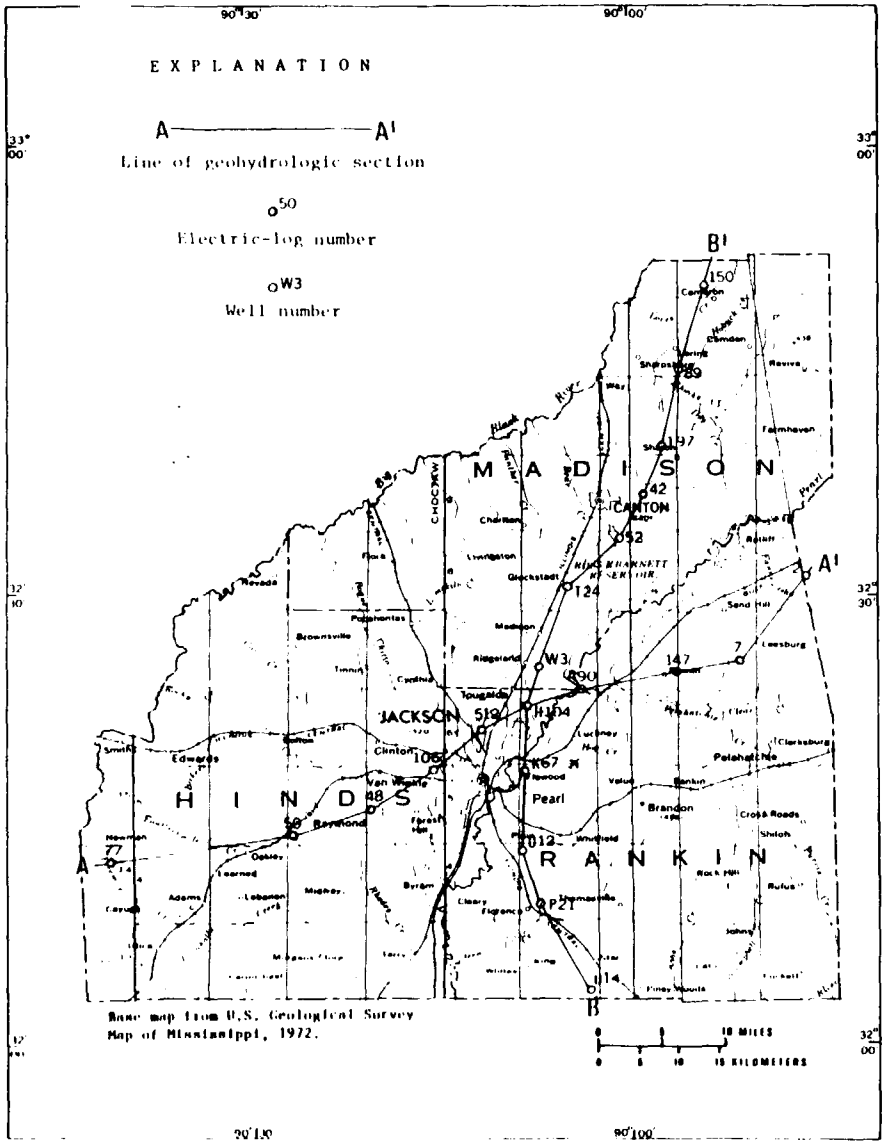


Figure 6 Locations of geohydrologic sections

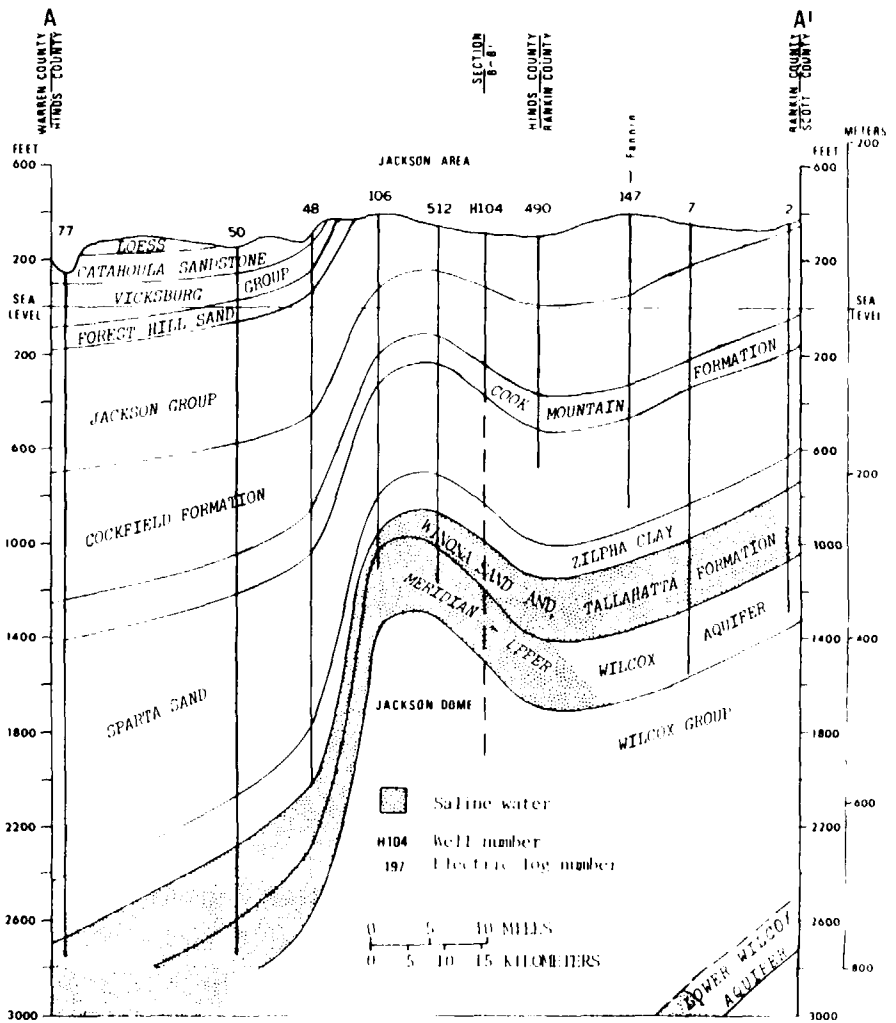


Figure 7 Geohydrologic section A-A' through Hinds and Rankin Counties

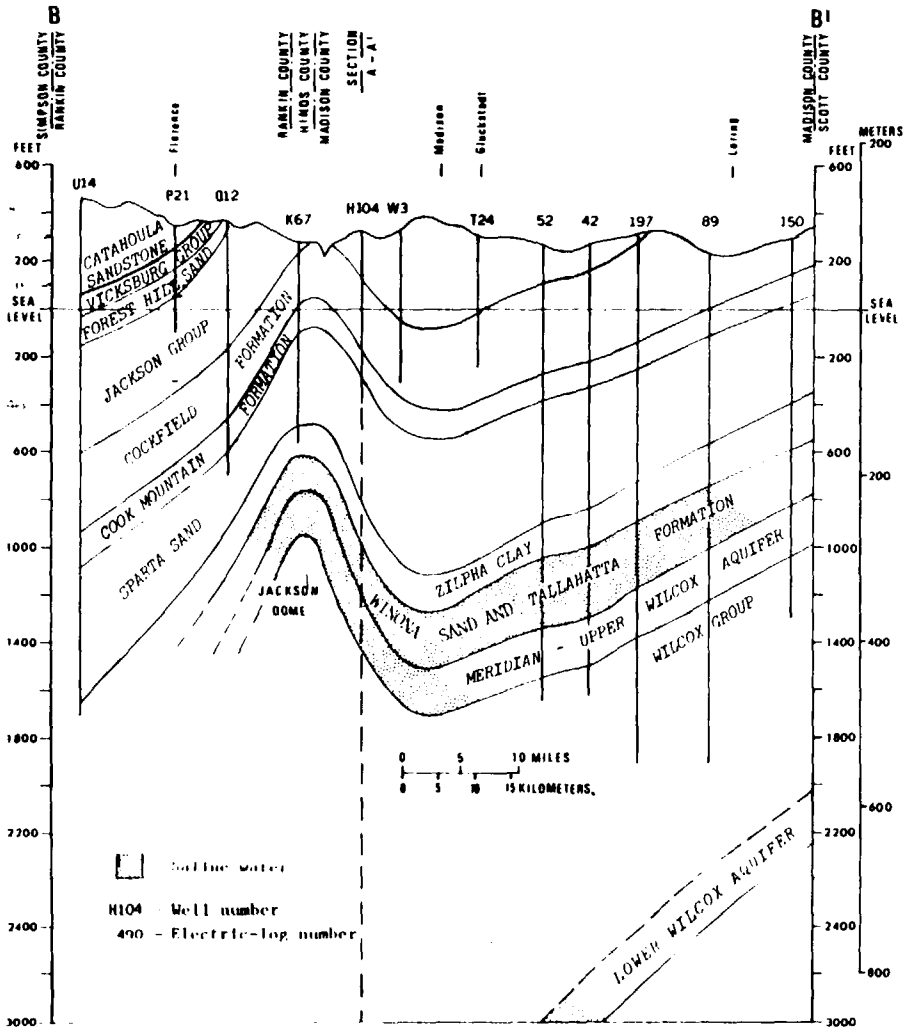


Figure 8. Geohydrologic Section B-B' through Rankin and Madison Counties

Table 2. Pumpage and source of public and industrial water supplies, 1975 (from Callahan, 1975)

Source	Average daily pumpage (thousand gal)	Source(s) of supply: Major	Minor
Hinds County			
Bolton	18	Cockfield Formation	
Clinton	61	Sparta Sand	Cockfield Formation
East Side WA	37	Forest Hill Sand	
Edwards	110	Cockfield Formation	
Grand Bend WA	21	Sparta Sand	
Homewood Manor	31	Sparta Sand	
Hubbard WA	19	Cook Mountain Sand	
Jackson	31,300	Pearl River (Surface water)	Sparta Sand
Kickapoo and Dinsdale WA	78	Cockfield Formation	
Learned	8	Cockfield Formation	
Lockhart WA	8	Cockfield Formation	
Metropolitan Water Company	1,761	Sparta Sand	
Moreno Crossing WA	6	Cook Mountain Sand	
Mt. Olive WA	1,29	Sparta Sand	Cockfield Formation
North Clinton Industrial Park	21	Cockfield Formation	Sparta Sand
North Hinds WA	35	Cockfield Formation	
Oakley Training School	30	Cockfield Formation	Forest Hill Sand
Raymond	198	Cockfield Formation	
Rocky Springs WA	0	Catahoula Sandstone	
South Central WA	18	Forest Hill Sand	
South Terry WA	15	Forest Hill Sand	
St. Dennis WA	16	Sparta Sand	
Terry	55	Forest Hill Sand	
Tougaloo WA	108	Sparta Sand	
University Hospital	410	Sparta Sand	
Utica WA	162	Catahoula Sandstone	
Willowood Dairies	27	Sparta Sand	
Bertman and Moss Dairies	15	Sparta Sand	
Self-supplied industrial	5,195	Sparta Sand	Cockfield Formation
Madison County			
Bear Creek WA	107	Cockfield Formation	
Big Black WA	74	Sparta Sand	
Camden WA	51	Sparta Sand	
Gluckstadt WA	21	Meridian (upper Wilcox Aquifer)	
Canton	1,998	Sparta Sand	
East Madison WA	113	Sparta Sand	
Flora	59	Sparta Sand	
Jackson Park	140	Sparta Sand	
Lake Cavalier	18	Cockfield Formation	
Lake Elmo	11	Cockfield Formation	
Livingston Road WA	11	Cockfield Formation	
Madison	111	Cockfield Formation	
Madison Development Corporation	4	Sparta Sand	
Metropolitan Water District	8	Cockfield Formation	
Pearl River Water District	19	Cockfield Formation	Sparta Sand
Richland Grove WA	18	Cockfield Formation	
Ridgeland	34	Cockfield Formation	Sparta Sand
Tougaloo College	8	Sparta Sand	
Self-supplied industrial	476		
Rankin County			
ACI WA	48	Sparta Sand	
Acre & Clear Road Water Company	38	Cockfield Formation	
Brandon	948	Sparta Sand	
Cleveland Trailer Park	2	Cockfield Formation	
Crystal	75	Cockfield Formation	
Fairgrove WA	25	Cockfield Formation	
Fort Bragg WA	8	Sparta Sand	
Fulton WA	35	Sparta Sand	
Florence	160	Cockfield Formation	
Flowood	58	Sparta Sand	
Greenfield WA	38	Cockfield Formation	
Intershoe Dairy	183	Cockfield Formation	
Langford WA	56	Sparta Sand	
Leesburg WA	50	Sparta Sand	
Metropolitan Water Company	1,903	Sparta Sand	
Miss. Law Training Academy	25	Cockfield Formation	
Monterey WA	22	Cockfield Formation	
National Development	19	Cockfield Formation	
Pearl River Water District	105	Cockfield Formation	
Pelahatchie	192	Sparta Sand	
Pelahatchie Creek Water Company	3	Cockfield Formation	
Piney Woods School	50	Catahoula Sandstone	
Puckett WA	19	Sparta Sand	
Pinehurst WA	59	Sparta Sand	
Lincoln WA	2	Cockfield Formation	
Kosciusko WA	29	Cockfield Formation	Sparta Sand
Richland	13	Sparta Sand	
Riverside Hospital	3	Sparta Sand	
Southeast Rankin WA	87	Cockfield Formation	
Southern Rankin WA	17	Cockfield Formation	Sparta Sand
Southwest Rankin WA	206	Catahoula Sandstone	
Star WA	52	Cockfield Formation	
Tinsley WA	3	Cockfield Formation	
Thomasville WA	0	Cockfield Formation	
Hang[illegible]	1	Cockfield Formation	
Union WA	0	Sparta Sand	
Washington WA	10	Sparta Sand	
Whitfield	29	Cockfield Formation	
Self-supplied industrial	1,158	Cockfield Formation	Sparta Sand

1. Furnished by Jackson
2. Furnished by Clinton
3. Furnished by Brandon
WA Water Association

wells. Hydraulic characteristics from 20 aquifer tests in the area indicate a range of transmissivity from 1,300 to 2,400 $(ft^3/d)/ft$ or (120 to 220 $(m^3/d)/m$) and storage coefficients from 0.00003 to 0.00005 (Newcome, 1971). Specific capacities range from 8 to 26 (gal/min)/ft or 1.7 to 5.5 (L/s)/m. The average hydraulic conductivity (K) from aquifer tests in the area is 60 $(ft^3/d)/ft^2$ or (18 $(m^3/d)/m^2$) (Newcome, 1971). Transmissivity, storage, and hydraulic conductivity data aid in evaluating ground-water supplies at any locality. These data aid in design of proper well spacing to avoid interference with other wells (fig. 16).

Chemical Quality

Water from the Sparta aquifer is a sodium bicarbonate type. These two constituents increase in concentration in a downdip (southwest) direction, and almost wholly account for a net increase in total dissolved solids. Chemical analyses of water from 63 wells tapping the Sparta are given in Table 10 and summarized below. Location of wells with chemical analyses are shown in figure 19.

(Constituents in Milligrams Per Liter)

Constituent or Property	Maximum	Minimum	Mean	Median
Iron (Fe)	3.40	0.00	0.41	0.10
Bicarbonate (HCO_3)	1030	64	237	217
Hardness as $CaCO_3$	200	00	15	4
Dissolved solids	1060	23	288	258
pH	8.9	6.4		8.4
Color (platinum cobalt units)	100	.00	23	17

Median values in the preceding table show that the water is soft, high in pH, low in dissolved solids, and low in iron. However, color in water throughout the Sparta is high locally. Excessive color in water (greater than 75 Platinum-cobalt units) exists south and southwest of Jackson (fig. 22). The color contours shown in figure 22 were drawn based on existing data within and immediately surrounding the study area. Straw-colored water in the Sparta may be a result of water coming in contact with lignite. Two anomalous zones of color concentrations occur in northern Rankin County. Influence of the Jackson Dome on the rate and direction of water movement in the aquifer may partially account for the distribution of the color zones. Water temperature for wells in the Sparta range from 18° to 38°C (64° to 100°F).

Cockfield Formation

Distribution and Character

The Cockfield Formation is exposed at the surface in northern Madison County and along the Pearl River near Jackson (fig. 23). The Cook Mountain and Yazoo Clay are the major confining units for the Cockfield Formation. The Cockfield is underlain by the Cook Mountain Formation (figs. 7 and 8) and over a large part of the area, is overlain by the Yazoo Clay.

The Cockfield is generally between 300 and 400 ft (91 and 120 m) thick but may reach a maximum thickness of 600 ft (180 m) in southwestern Hinds County. Where the Cockfield has been uplifted by the Jackson Dome, its thickness over the dome may be less than 200 ft (61 m). The base of the Cockfield is about 200 ft (61 m) above NGVD in northern Madison County and dips at about 20 ft/mi (3.8 m/km) southwest to about 1,200 ft (370 m) below NGVD in Hinds County. On the flanks of the Jackson Dome the dip is as great as 130 ft/mi (25 m/km).

The Cockfield Formation consists of sand, shale, and lignite. In many respects the formation is similar to the Sparta Sand. The water bearing beds consist of fine-grained, micaceous sand.

Water Supplies

The Cockfield is widely used as a source of ground water for public-supply wells and some industrial wells. Water from the Cockfield aquifer is suitable for most uses without treatment except in northern Madison County where iron concentrations may be high (may exceed 0.3 mg/L). Also, water may be colored in some places.

The heaviest concentration of wells in the Cockfield forms a belt 4 to 6 mi (6 to 10 km) wide surrounding the Jackson Dome (Harvey and others, 1964). The largest single category of water users is suburban areas near Jackson, but many water associations and communities also obtain their water from the Cockfield in southern Madison and most of Rankin Counties. One reason for the increased use is that the Cockfield is shallower than the Sparta Sand and water levels are higher.

About 27 percent of all ground water pumped in the area during 1976 was from the Cockfield.

Water Levels, Well Yields, and Aquifer Characteristics

Ground water in the Cockfield aquifer moves from east to west. Water levels near the eastern

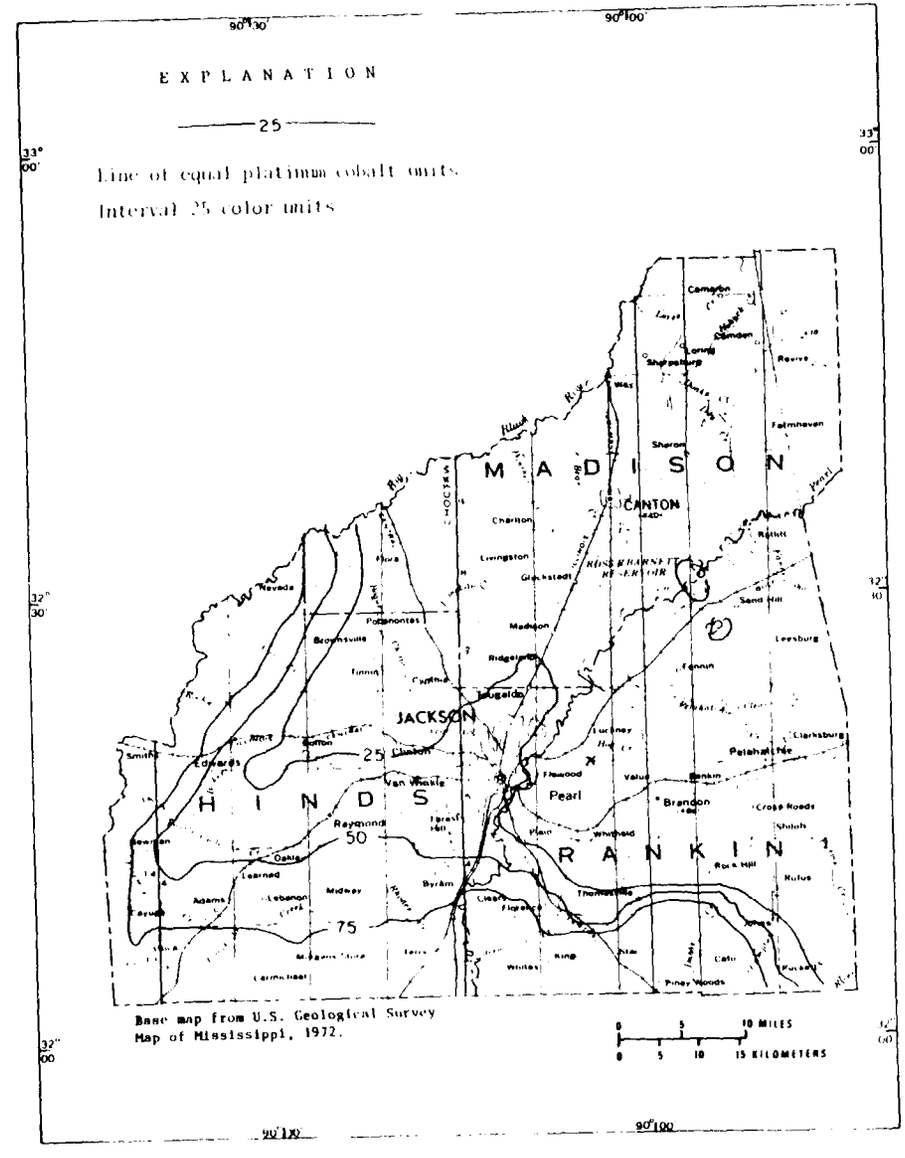


Figure 22. Distribution of color in water from the Sparta aquifer

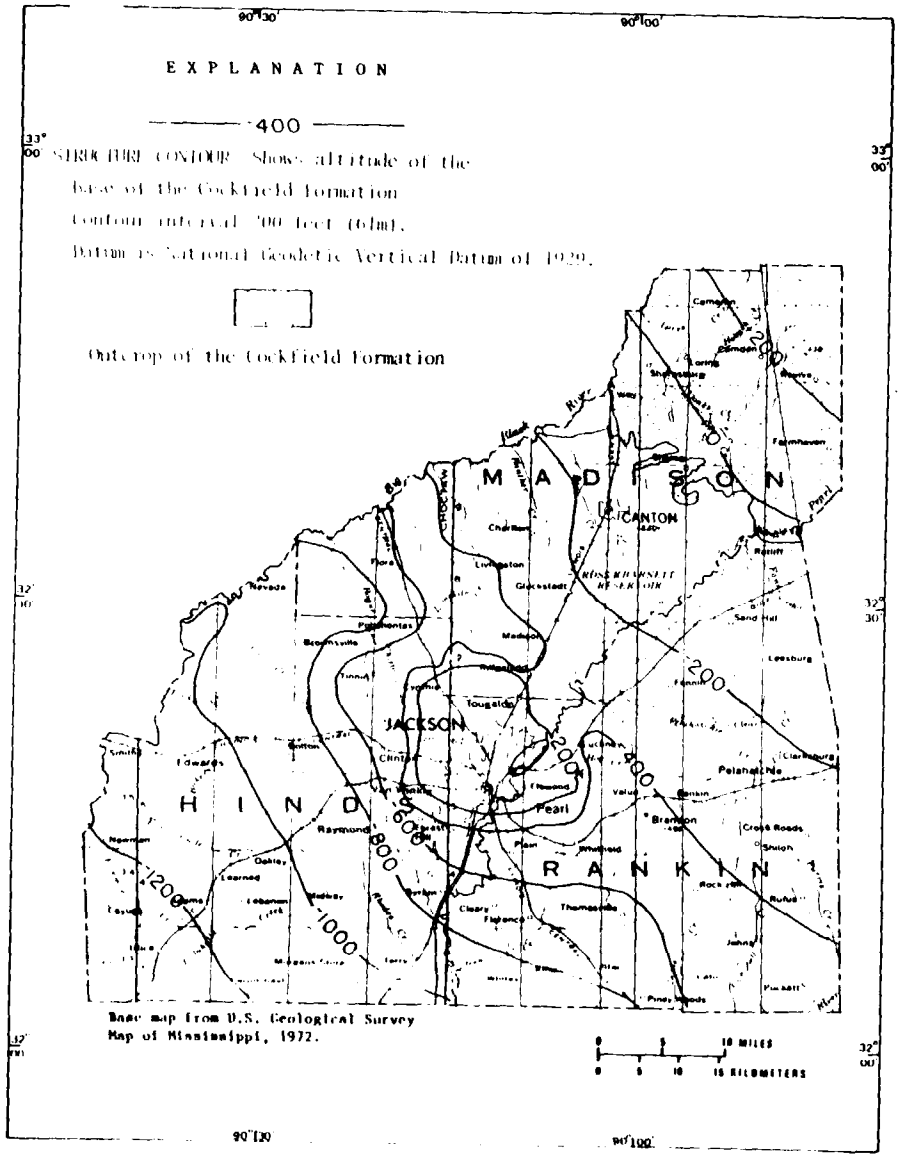


Figure 23 Configuration of the base of the Cockfield Formation

edge of Rankin County are 260 ft (79 m) above NGVD; in western Hinds County water levels are about 100 ft (30 m) above NGVD (fig. 24). The potentiometric high of 180 ft (55 m) above NGVD level near Jackson is caused by recharge to the Cockfield aquifer from the Pearl River where the Cockfield crops out in the river above the Jackson Dome. Steep potentiometric gradients east or northeast of Jackson are caused by increased ground water withdrawals from the Cockfield. West of Jackson a cone of depression that extends to 100 ft (30 m) above NGVD is the result of municipal and industrial pumpage near Clinton. Recent water-level declines in the Cockfield average about 1.5 ft/year (0.5 m/year) (Spiers, 1977a). In one well in Hinds County (Hinds R23, fig. 18) water levels have declined over 2 ft/year (0.6m/year).

The Cockfield aquifer is capable of yielding much more water than is presently being withdrawn. Although the Cockfield is not generally capable of yielding more than 1 Mgal/d (3,800 m^3/d) to individual wells, one well (K164, table 9) in Rankin County is capable of pumping about 1.3 Mgal/d (4,900 m^3/d). Well S003 in Hinds County is the deepest well (1,310 feet or 399 meters) in the Cockfield aquifer in the study area.

Hydraulic characteristics were determined from 12 aquifer tests for the Cockfield. Transmissivities ranged from 1,300 to 7,300 (ft^3/d)/ft (120 to 680 (m^3/d/m) (Newcome, 1971). Storage coefficients ranged from 0.00007 to 0.003 and specific capacities from 4 to 16 (gal/min)/ft or 0.8 to 3.4 (L/s)/m. Hydraulic conductivity (K) ranged from 23 to 100 (ft^3/d)/ft^2 or 7.0 to 3.0 (m^3/d)/m^2 and averaged at 44 (ft^3/d)/ft^2 or (m^3/d)/m^2, somewhat less than the Sparta (from Newcome, 1971). The effects of pumping from the Cockfield and other aquifers in this report can be estimated from the theoretical drawdown graph (fig. 16).

Chemical Quality

The Cockfield aquifer contains a calcium-magnesium bicarbonate type water in the outcrop area. The water becomes a sodium bicarbonate type downdip from the outcrop, also total dissolved solids increase downdip. Chemical analyses of water from 49 wells in the Cockfield aquifer given in table 10 are summarized below. Location of wells with chemical analyses are shown in figure 19.

The concentration of iron in the Cockfield aquifer varies over a wide range. Generally, the lower concentrations of iron occur in the western two-thirds of the area. The higher concentrations (0.3 mg/L or higher) occur near or in the outcrop area in Madison and Rankin Counties and over the Jackson Dome (fig. 25).

(Constituents in Milligrams Per Liter)

Constituents or Property	Maximum	Minimum	Mean	Median
Iron (Fe)	3.40	0.00	0.41	0.15
Bicarbonate (HCO_3)	1340	72	344	269
Hardness as $CaCO_3$	107	00	15	5
Dissolved solids	1320	178	406	368
pH	8.9	7.2		8.3
Color (platinum-cobalt units)	1000	00	106	25

Straw-colored water can be a problem in the Cockfield. North and east of the Jackson Dome little difficulty is experienced in obtaining clear water from the Cockfield. West and south of Jackson, coloring in water is more of a problem (fig. 26). In figure 26, color unit plots were based on available data in the area and adjacent counties. Distribution of color ranges from 0 to over 75 color units. Influence of the Jackson Dome may account for the ellipsoidal rings of color zones near Jackson. Water temperatures for wells in the Cockfield range from 17.7° to 31.6°C (63.9° to 88.9°F).

Forest Hill Sand

Distribution and Character

The Forest Hill Sand is exposed in a continuous belt around the southern flank of the Jackson dome (fig. 27). Outliers occur in southwestern Madison County in the syncline north of the Jackson Dome. South of the outcrop area the formation has been recognized in sample cuttings from wells. The Forest Hill consists of laminated clay, silt, fine cross-bedded sand, and lignite. In the unweathered state the colors of the clay and silt are light to dark blue, brown, and gray. The thickness of the formation ranges from 0 to 220 ft (0 to 67 m), and averages about 100 ft (30 m) figs. 7 and 8). The average dip is 16 ft/mi (3 m/km) southwest from the outcrop. The top of the formation in the outcrop is more than 300 ft (91 m) above NGVD and descends to 100 ft (30 m) below NGVD in southwestern Hinds County (fig. 27).

Water Supplies

The Forest Hill aquifer is not a potentially large source of ground-water supplies. The formation is

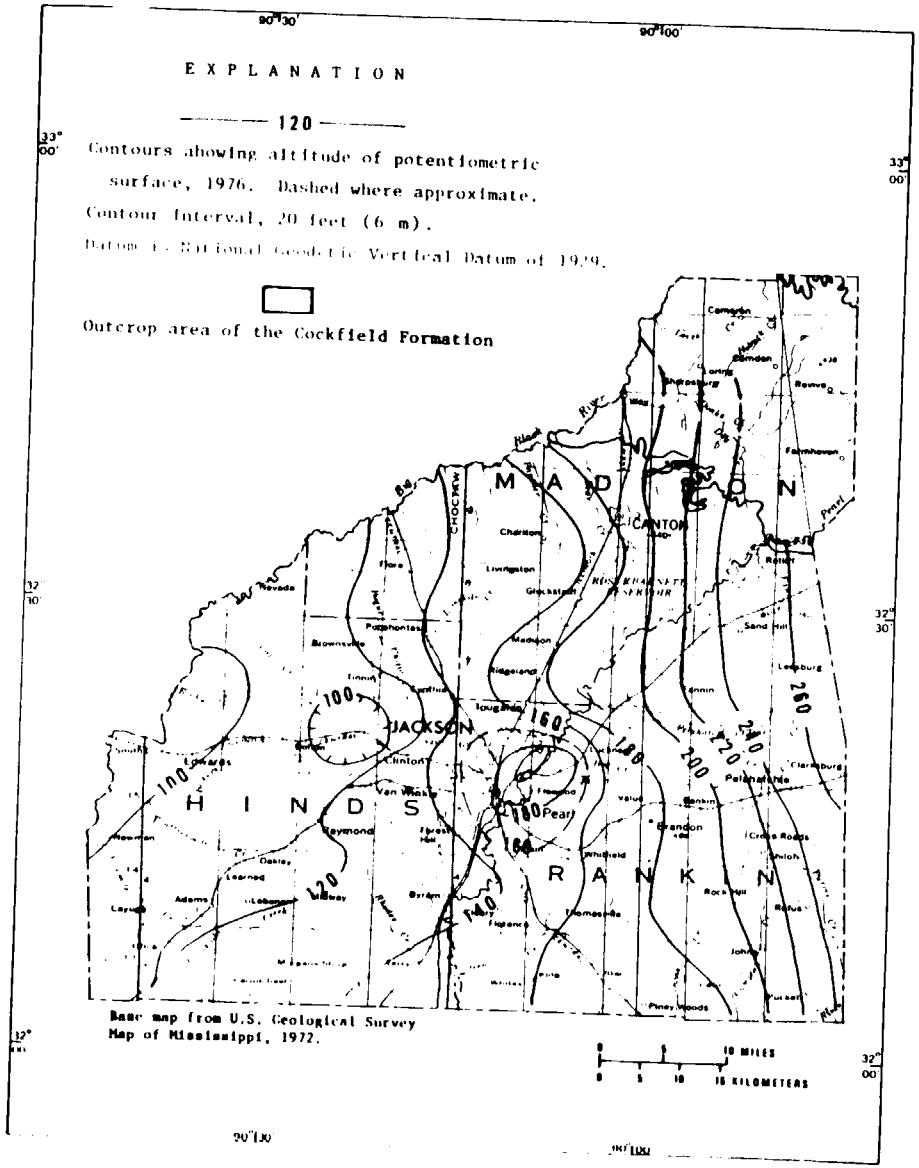


Figure 24 Potentiometric surface of the Cockfield aquifer, 1976

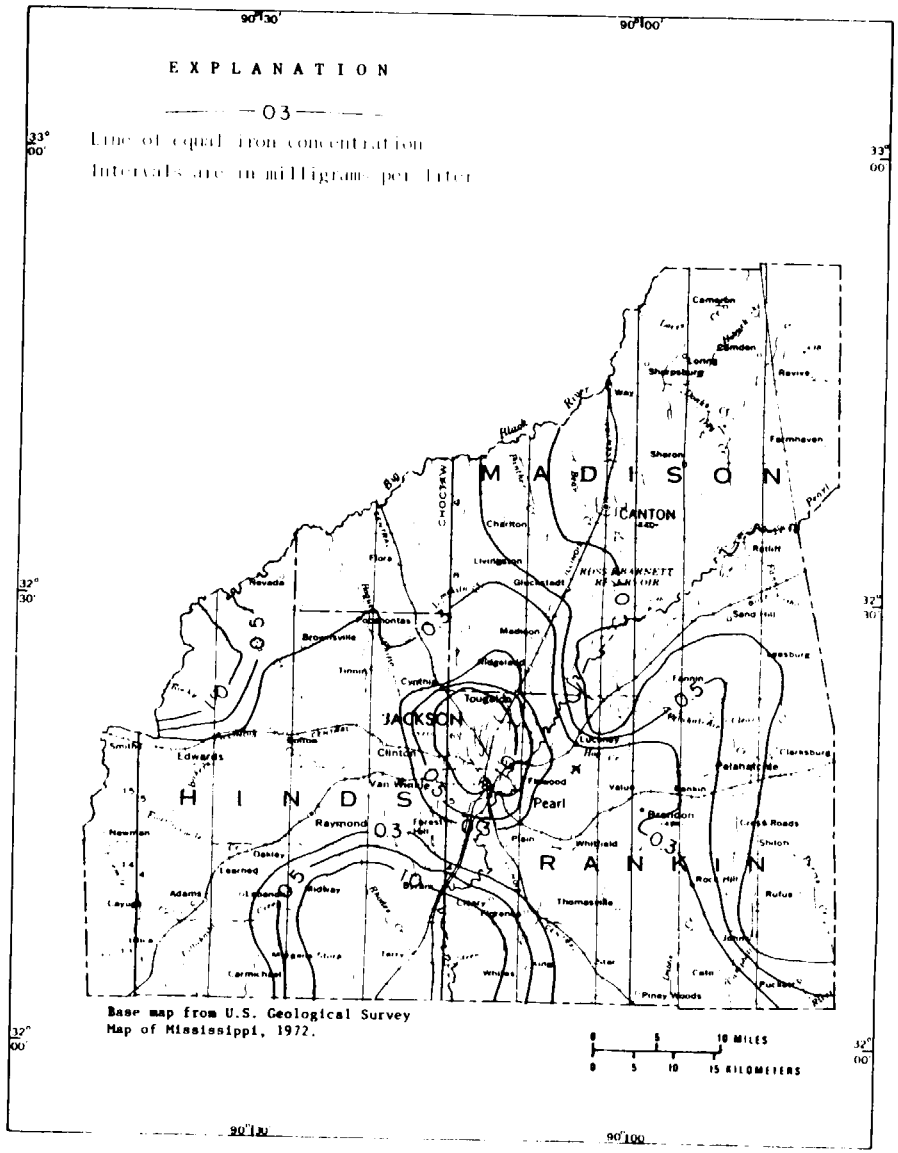


Figure 25 Distribution of iron in water from the Cockfield aquifer

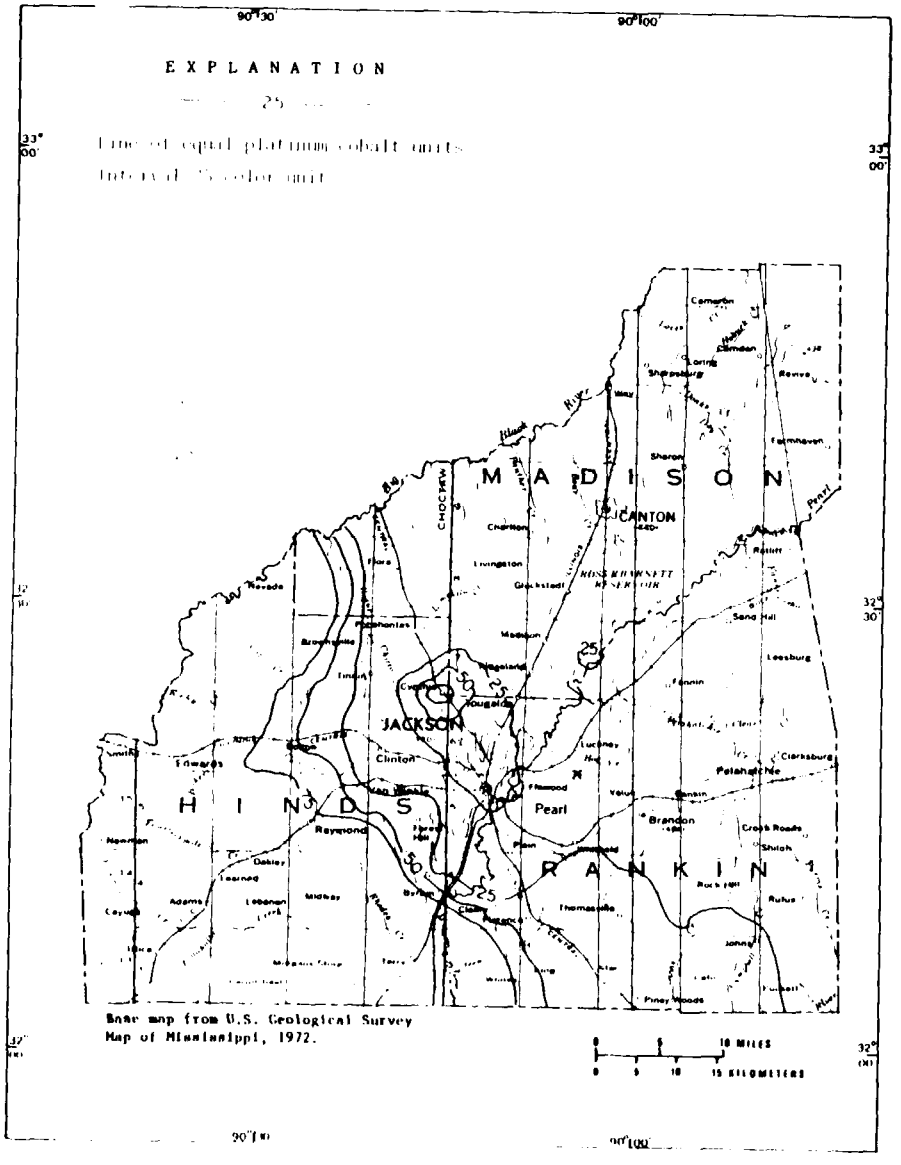


Figure 26 Distribution of color in water from the Cockfield aquifer

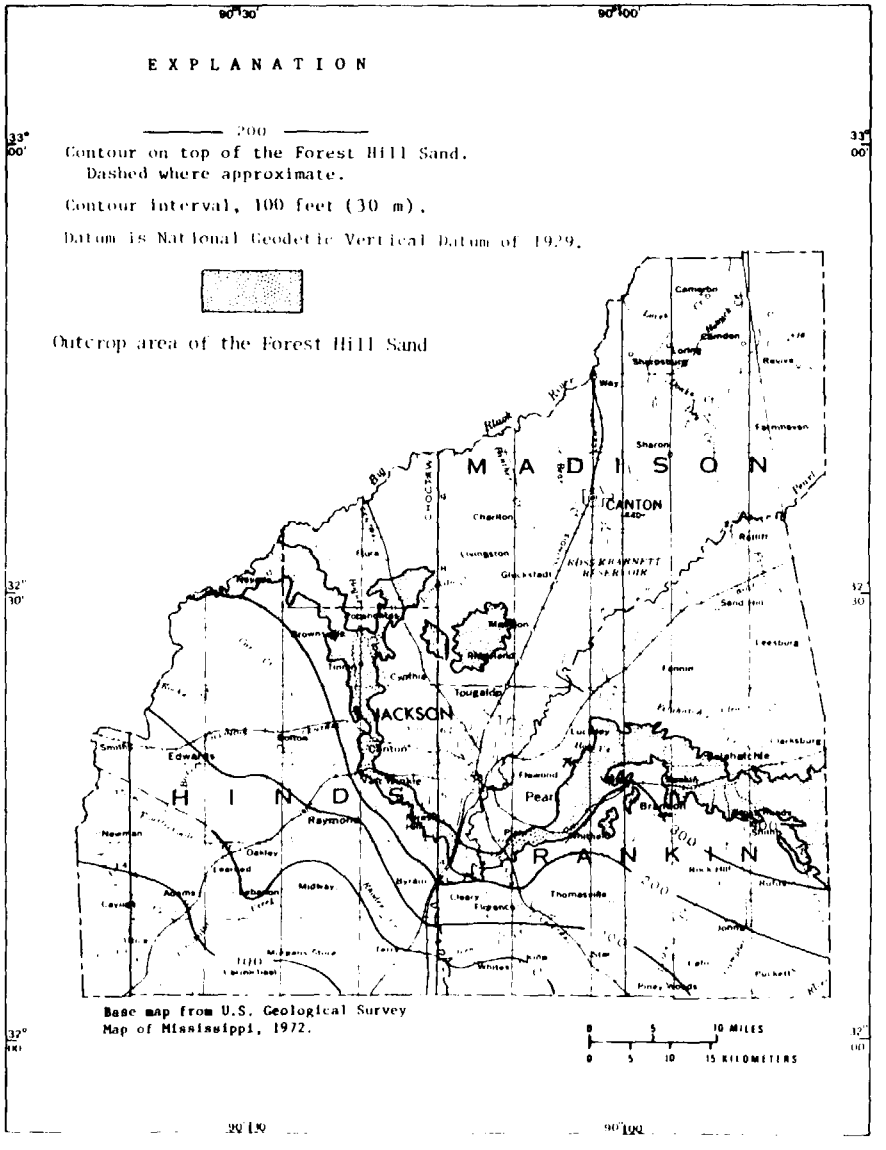


Figure 27 Configuration of the top of the Forest Hill Sand

an impor[illegible] ource for small-capacity wells and supplies w[illegible] for several water associations in southern Hinds and Rankin Counties. Large water supplies are obtained from deep aquifers such as the Cockfield and Sparta.

Water Levels, Well Yields, and Aquifer Characteristics

Wells tapping the Forest Hill aquifer produce adequate quantities of water for small communities and industries. Wells produce generally less than 150 gal/min (9 L/s). However, one well in southern Hinds County (Well V59, table 9) is reported to yield 500 gal/min (32 L/s). Hydraulic characteristics were determined from one pumping test in Rankin County. They are: transmissivity, 120 $(ft^3/d)/ft$ (11 $(m^3/d)/m$); storage coefficient 0.00001; and hydraulic conductivity 3 $(ft^3/d)/ft^2$ or 0.9 $(m^3/d)/m^2$) (Newcome, 1971).

Water levels in the Forest Hill aquifer range from about 360 feet (110 meters) above NGVD in the outcrop area in Rankin County to less than 120 feet (37 meters) above NGVD in western Hinds County (fig. 28). Water moves southwest, downdip, in Rankin County and west toward the big Black River flood plain in Hinds County.

Chemical Quality

As in the other aquifers in this report, water in the Forest Hill is a sodium bicarbonate type. Of nine analyses about one third contained iron greater than 0.3 mg/L. The following table summarizes water-quality data given in table 10.

(Constituents in Milligrams Per Liter)

Constituents or Property	Maximum	Minimum	Mean	Median
Iron (Fe)	2.20	0.00	0.51	0.17
Bicarbonate (HCO_3)	692	154	365	370
Hardness as $CaCO_3$	196	3	32	10
Dissolved solids	791	270	460	385
pH	8.6	7.0		8.3
Color (platinum cobalt units)	320	00	68	41

Median values in the above table for iron and color are high. These two properties vary in concentration from place to place in the Forest Hill, but color may increase downdip from the outcrop area. However, water from the Forest Hill aquifer is generally of good quality and is suitable for most uses after treatment to remove iron.

Catahoula Sandstone

Distribution and Character

The Catahoula Sandstone crops out in an area that covers 800 mi^2 (2,070 km^2) in southern Hinds and Rankin Counties. A large outlier of Catahoula Sandstone at Edwards is the result of downcutting into the Vicksburg Group by the Big Black River, Fourteen Mile and Bakers Creek. Other outliers occur north of the principal outcrop area where they cap the higher hills. The top of the Catahoula Sandstone is eroded in Hinds and Rankin Counties.

The altitude of the base of the Catahoula is 400 ft (120 meters) above NGVD dipping south to 100 ft (30 meters) below NGVD (fig. 29). The dip of the base averages about 33 ft/mi (6.2 m/km) in Rankin County and about 17 ft/mi (3.2 m/km) in Hinds County. The Catahoula is a deltaic deposit that consists of sand, sandy clay, silt, and clay. Thick discontinuous sandstone beds are common in the formation and locally these beds have been cemented into dense quartzite. The thickness of the aquifer varies from a few feet near the northern edge of the outcrop to about 400 ft (120 m) in the southern part of the area.

Water Supplies

The Catahoula aquifer is an important source of ground water for domestic use. Although the formation is the principal source of water for some industrial and public water supplies in southern Hinds and Rankin Counties, large-capacity wells generally obtain water from the Cockfield and Sparta aquifers at greater depths.

The maximum depth for a well tapping the Catahoula aquifer is 490 ft (149 m) (Rankin County). Wells in the Catahoula supply water to the town of Utica in Hinds County. The Catahoula also supplies water to Piney Woods School, South Central Water Association, and some domestic wells. Also, several companies have used the Catahoula for a water supply during test drilling for oil.

Water Levels, Well Yields, and Hydraulic Characteristics

Water levels in the Catahoula aquifer range from 360 ft (110 m) above NGVD in Rankin County to 160 ft (49 m) in Hinds County (fig. 30). The direction of water movement in Rankin County is south and in Hinds County is generally westward.

The largest production reported for a well tapping the Catahoula aquifer in the project area is

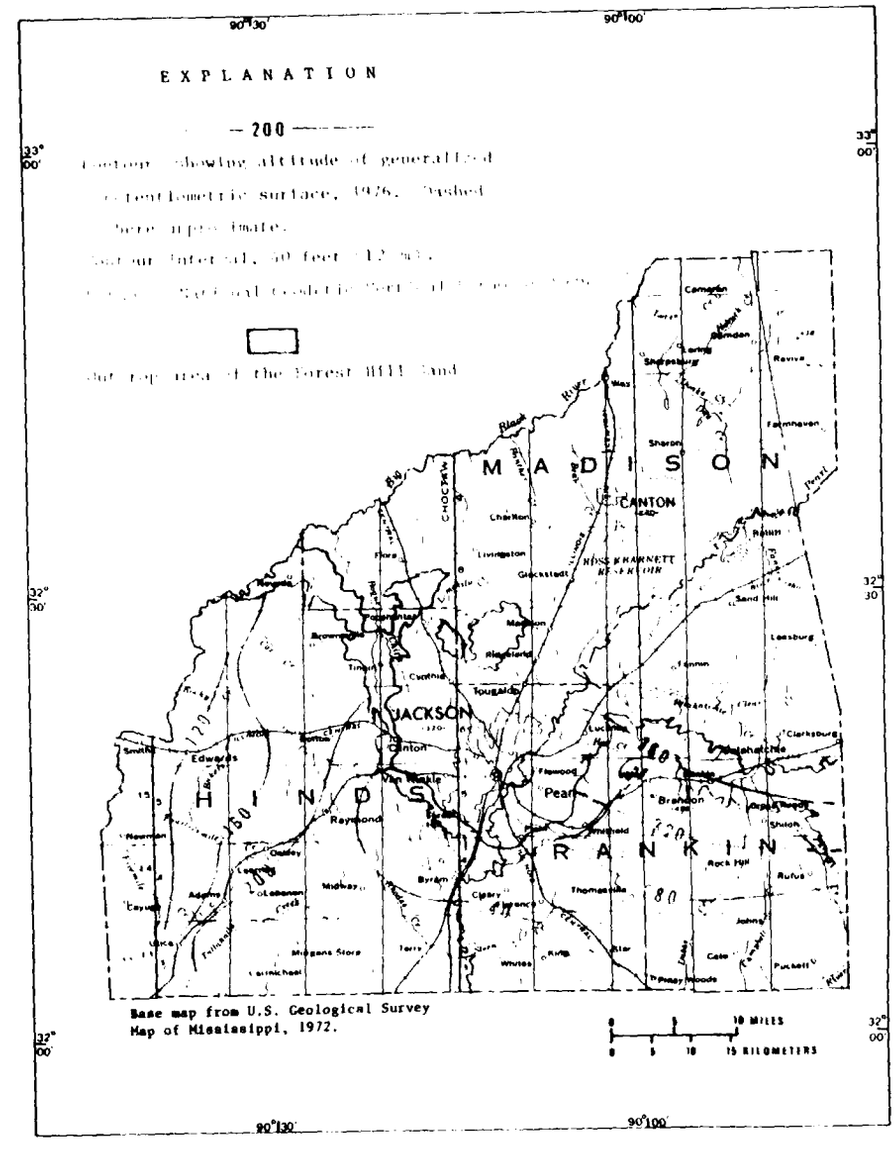


Figure 28. Generalized potentiometric surface of the Forest Hill aquifer, 1976.

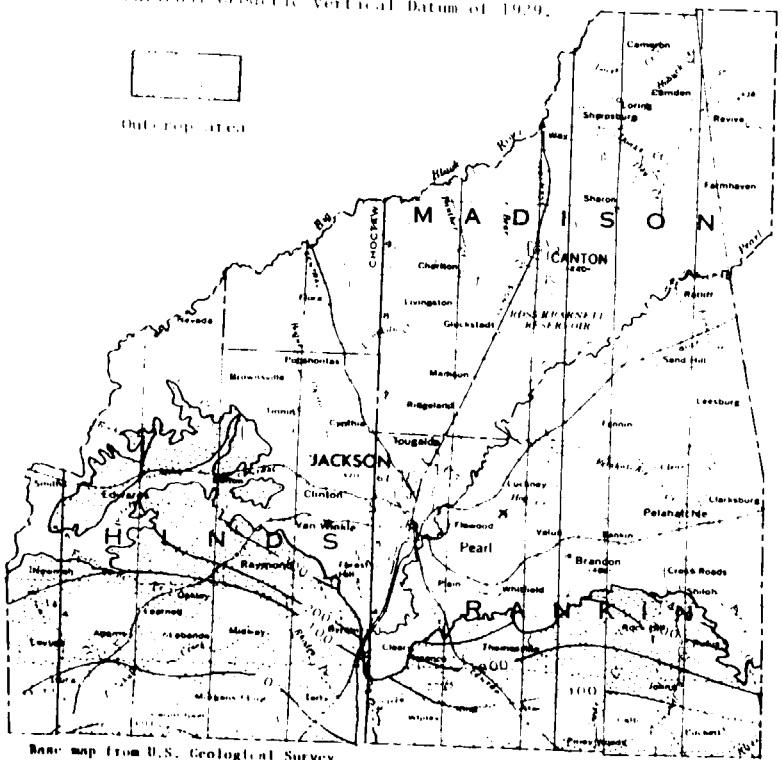
EXPLANATION

Structure contour - Shows altitude of the base of the Catahoula Sandstone.

Contour interval, 100 feet (30 m).

Datum is National Geodetic Vertical Datum of 1929.

Outcrop area



Base map from U.S. Geological Survey Map of Mississippi, 1972.

Figure 29. Configuration of the base of the Catahoula Sandstone

EXPLANATION

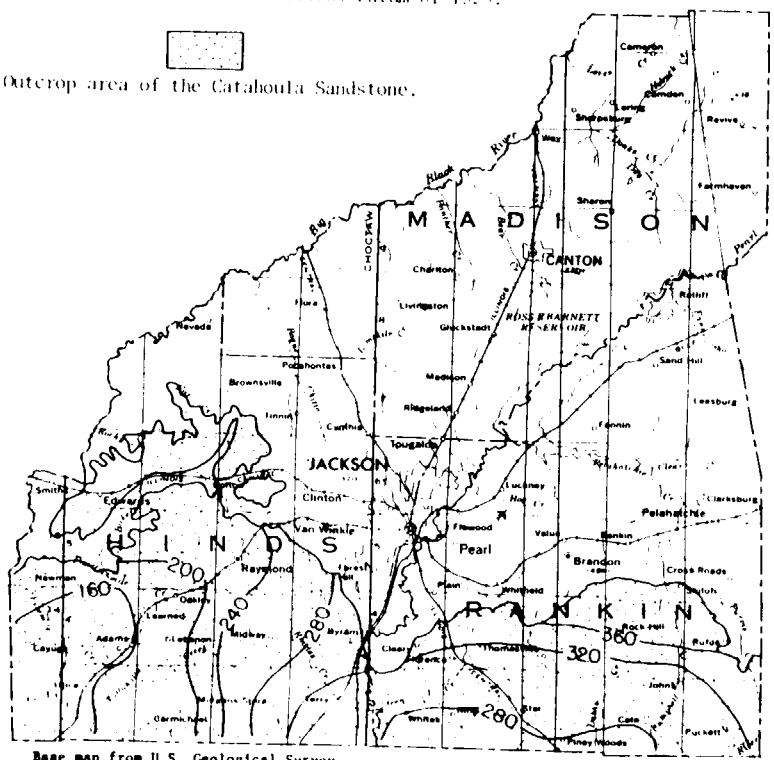
280

POTENTIOMETRIC CONTOUR - Shows altitude at which water level would have stood in tightly cased wells, 1977.

Contour interval 40 feet (12m).

Datum is National Geodetic Vertical Datum of 1929.

Outcrop area of the Catahoula Sandstone.



Base map from U.S. Geological Survey Map of Mississippi, 1972.

Figure 30. Generalized potentiometric surface of the Catahoula aquifer, 1977

180 gal/. 11 L/s) however, the aquifer is probably capable of higher yields in the extreme southern part of the area.

An aquifer test at Utica indicated a transmissivity of 5,000 $(ft^3/s)/ft$ (465 $(m^3/d)/m$) and a storage coefficient of 0.0024. The hydraulic conductivity of the aquifer at this site, 94 $(ft^3/d)/ft^2$ or 29 $(m^3/d)/m^2$, is among the highest determined in the project area (Harvey and others, 1964, p. 31).

Chemical Quality

Five chemical analyses of water from wells tapping the Catahoula aquifer (table 9) are summarized below.

(Constituents in Milligrams Per Liter)

Constituents or Property	Maximum	Minimum	Mean	Median
Iron (Fe)	1.5	0.01	0.56	0.50
Bicarbonate (HCO_3)	678	238	400	342
Hardness as $CaCO_3$	227	6	91	66
Dissolved solids	759	347	510	383
pH	8.7	7.1		7.8
Color (platinum cobalt units)	70	3	25	10

Bicarbonate is the principal anion and sodium is the principal cation, thus making water from the Catahoula a sodium bicarbonate type. The median value of iron is 0.50 mg/L while the median value of pH is 7.8 (alkaline). Three of the five chemical analyses for the Catahoula have iron concentrations greater than 0.3 mg/L. This may indicate the variability of iron concentration and the subsequent problem they could be encountered in water from the Catahoula. Water temperature for wells in the Catahoula range from 19.4° to 20.0°C (66.9° to 68.0°F).

Minor Aquifers

In addition to the major aquifers described here, there are other aquifers that are of some importance to water users in the study area. While most of these aquifers will not yield large quantities of water to wells, some of them are extensive and provide an excellent source for small supplies.

The deepest of the minor aquifers is the lower Wilcox aquifer. The freshwater part of the aquifer occurs in the northeastern part of the area (fig. 31) (Boswell, 1975). The base of the aquifer is about 3,000 ft (910 m) below NGVD near the downdip limit of freshwater. Little is known about the lower Wilcox aquifer in the area, and its considerable depth and limited areal extent (freshwater part) discourage present use of the aquifer.

The most widely used aquifer of the Vicksburg Group is the Mint Spring Marl Member of the Marianna Formation. It is a gray-green, fine-to-coarse, glauconitic sand. Often it is fossiliferous to very fossiliferous. The Mint Spring yields small supplies to rural wells southeast of Jackson. A few chemical analyses of water from the Mint Spring are found in table 10.

The Citronelle Formation is comprised of terrace deposits that form low hills and river terraces along the larger streams and are composed of cross-bedded sand and fine-to-coarse gravel. Thickness usually does not exceed more than 30 ft (9 m) in the area. The Citronelle yields small amounts of water to dug and bored wells in terraces along the larger streams and on the hills in extreme south Hinds and Rankin Counties (Harvey and others, 1964, p. 31).

Alluvium occurs in small amounts in valleys of all the tributary streams and in greater volume in the Big Black and Pearl Rivers. The maximum thickness is about 40 ft (12 m). Deposits consist of silt, sand, and pea gravel. Some domestic wells are constructed in the alluvium along the river valleys and furnish sufficient water for domestic and stock supplies. Some wells in the alluvium may yield 50 gal/min (3 L/s) or more. However, chemical analyses of water from the alluvium indicate it is a hard calcium magnesium bicarbonate type (table 10) and may not be suitable for many industrial uses.

SUMMARY OF WATER SUPPLY POTENTIAL

Additional surface-water supplies of a chemical quality suitable for many uses are available in Hinds, Madison, and Rankin Counties. The Pearl River (Ross Barnett Reservoir included) and the Big Black River are the largest potential sources of water supply in the area. Based on a drawdown of 2 ft (0.61 m) the Ross Barnett Reservoir can furnish a minimum of 186 Mgal/d (704,000 m^3/d) for 5 consecutive months during the dry season. Also, several tributaries to the Pearl and Big Black Rivers are suitable for most uses after treatment.

Although the average runoff contributed by the area to the various river basins is 1,990 Mgal/d (87 m^3/s) many streams cannot furnish large supplies during extended periods of deficient rainfall. Low-flow yields of many streams are generally less than 0.05 $(ft^3/s)/mi^2$, or 0.3 $(L/s)/km^2$. Streams draining the Vicksburg Group and Jackson Group have some of the lowest sustained yields

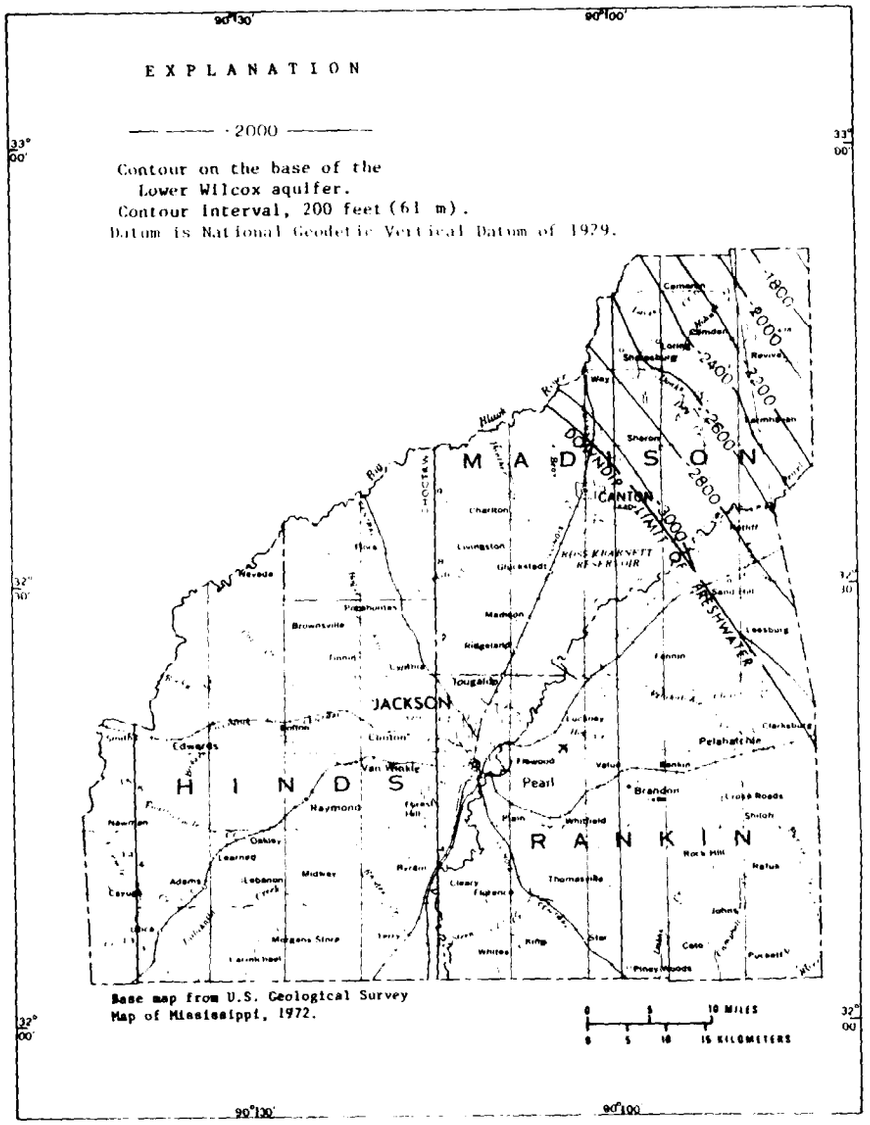


Figure 31. Configuration of the base of the lower Wilcox aquifer

1e

PROPERTY OF MICHAEL T. [illegible]

CHARACTERIZATION OF AQUIFERS DESIGNATED AS POTENTIAL DRINKING-WATER SOURCES IN MISSISSIPPI

U. S. GEOLOGICAL SURVEY
WATER RESOURCES INVESTIGATIONS
OPEN-FILE REPORT 81-550

Prepared in cooperation with the
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL

Oligocene Aquifer System

The Oligocene aquifer system crops out in a band across the state from northern Warren County in the west to northern Wayne County in the east. Figures 12 and 13 show the structure contours on the base and top of the aquifer system, respectively. The formations dip to the south at approximately 30 ft/mi and range in thickness from less than 100 to more than 200 feet (fig. 14). The Oligocene aquifer system consists of the Byram, Glendon, Marianna, and Mint Spring Formations of the Vicksburg Group, and the underlying Forest Hill Formation. The formations of Vicksburg Group are composed of discontinuous interbedded marls, limestones, and sands. The Forest Hill Formation contains clay, silt, and irregular sand beds. To the east, the aquifers thin and the Forest Hill changes lithologically to a clay known as the Red Bluff Formation. Sand beds in the Oligocene aquifers range from 20 to 80 feet thick, but water is produced from solution channels in limestone beds as well as the sands.

Water levels in the Oligocene aquifers are at or near the surface in the outcrop area and slope downdip (fig. 15). In much of the downdip area, water levels are declining at 0.5 to 2.0 ft/yr. Recharge to the Oligocene aquifers is from rainfall on the outcrop. The overlying Bucatunna Formation and underlying Yazoo Clay effectively isolate the Oligocene aquifers from recharge by other aquifers.

Hydraulic data from aquifer tests are sparse and characteristics vary widely. Four tests indicate transmissivities ranging from 120 to 3,300 ft^2/d, hydraulic conductivities ranging from 3 to 60 ft/d, and specific capacities ranging from 1.5 to 12 (gal/min)/ft of drawdown (Gandl, 1979).

Most wells in the Oligocene aquifers are domestic and irrigation wells, because more abundant water supplies are available from deeper or shallower aquifers. The highest yielding well produces 300 gal/min.

Water from the Oligocene aquifers is a soft sodium-bicarbonate type, but it may be high in iron, color, and fluoride. The downdip limits of fresh, slightly saline, and moderately saline water are shown in figure 12; however, in the southeast the formations become so thin and clayey that they are not considered to be aquifers.

Bentonite, glauconite, and scattered lignite are found in the Oligocene aquifers and, if mined, would be mined in the outcrop area.

Cockfield Aquifer

The Cockfield aquifer crops out in a diagonal band from Bolivar County in the northwest to Clarke County in the southeast (fig. 16). In the northwest it is overlain by the Mississippi River Valley alluvial aquifer. It also crops out along the Pearl River near Jackson in Hinds County. The top of the Cockfield (fig. 17) is deeply eroded where it is overlain by the alluvial aquifer. The Cockfield dips to the southwest at 20 to 30 ft/mi. It is thickest in the northwest and downdip to the west (fig. 18). To the southeast the formation thins; it becomes more

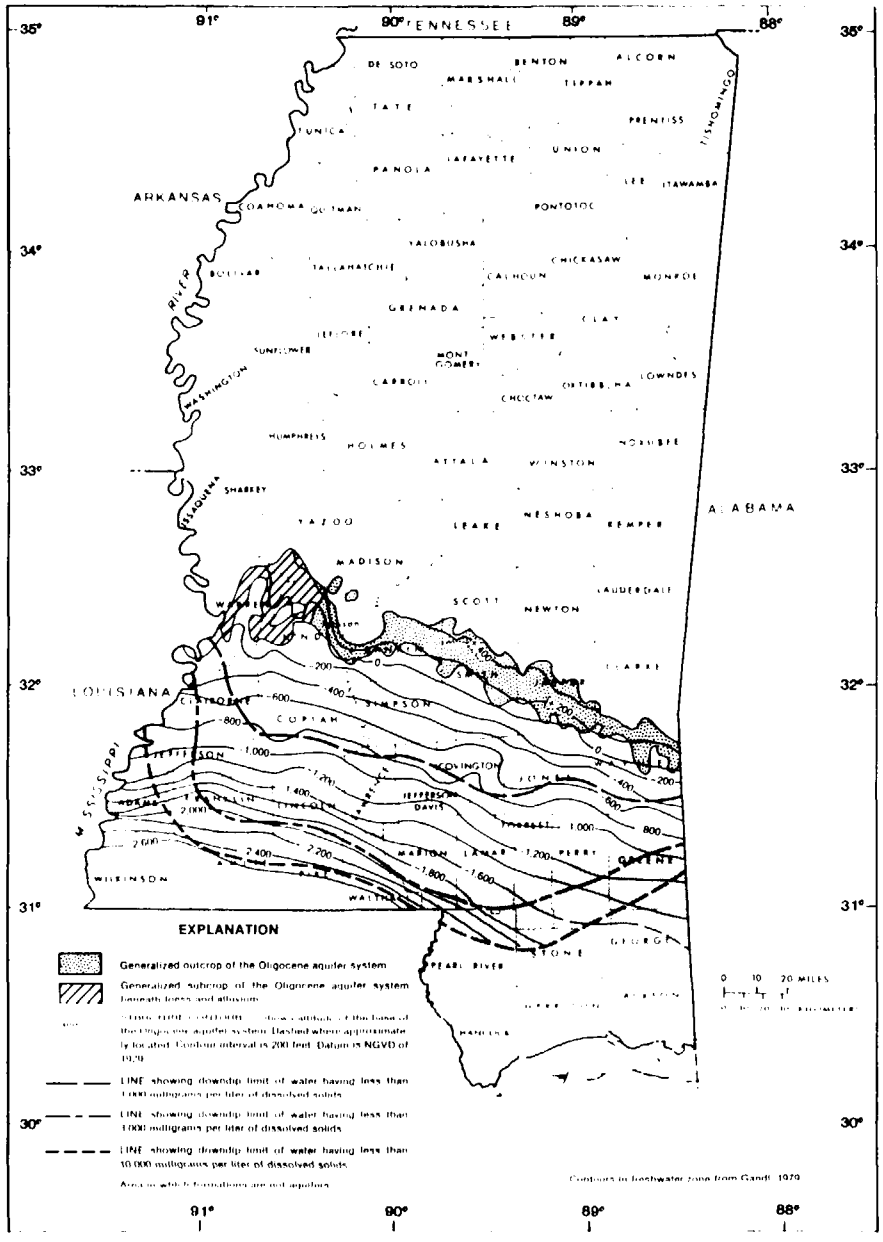


Figure 12 Configuration of the base of the Oligocene aquifer system

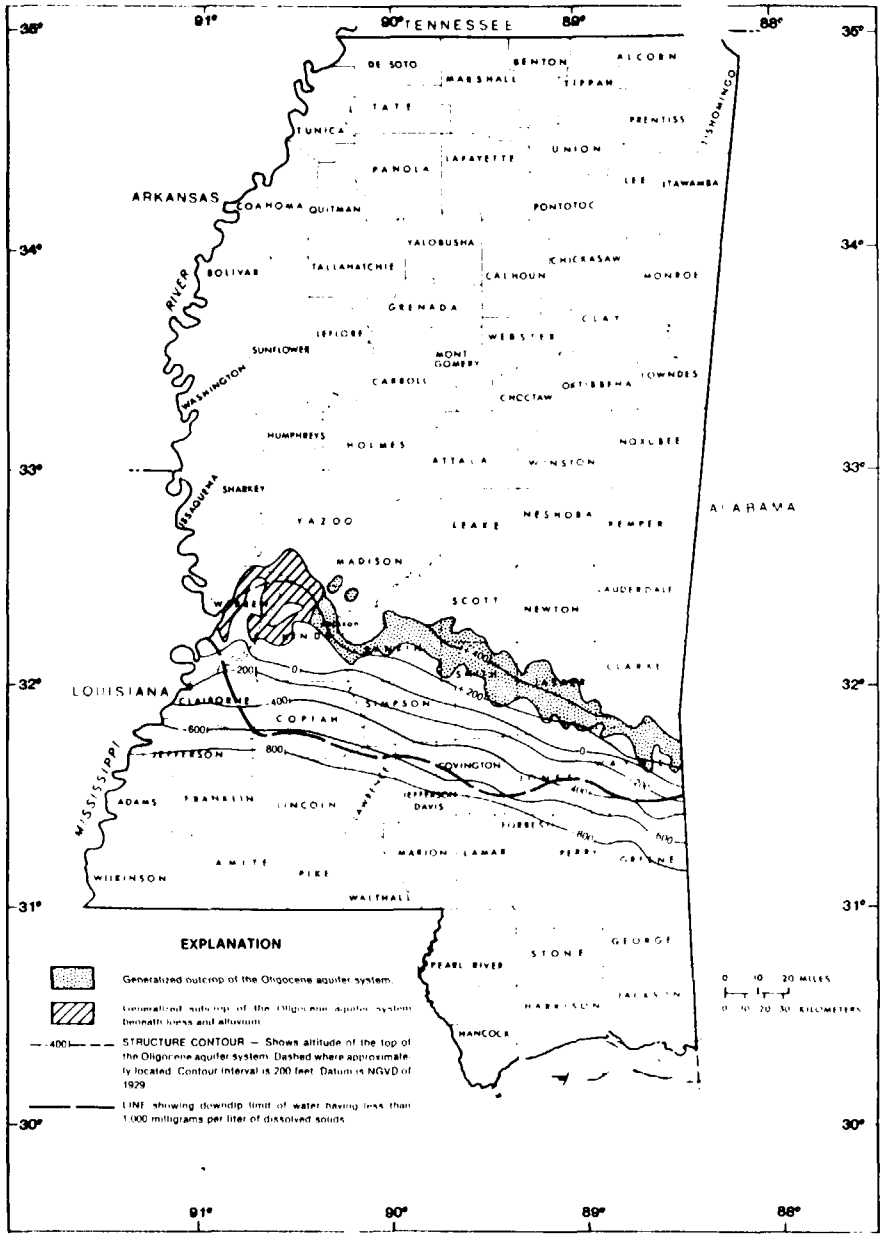


Figure 13 Configuration of the top of the Oligocene aquifer system.

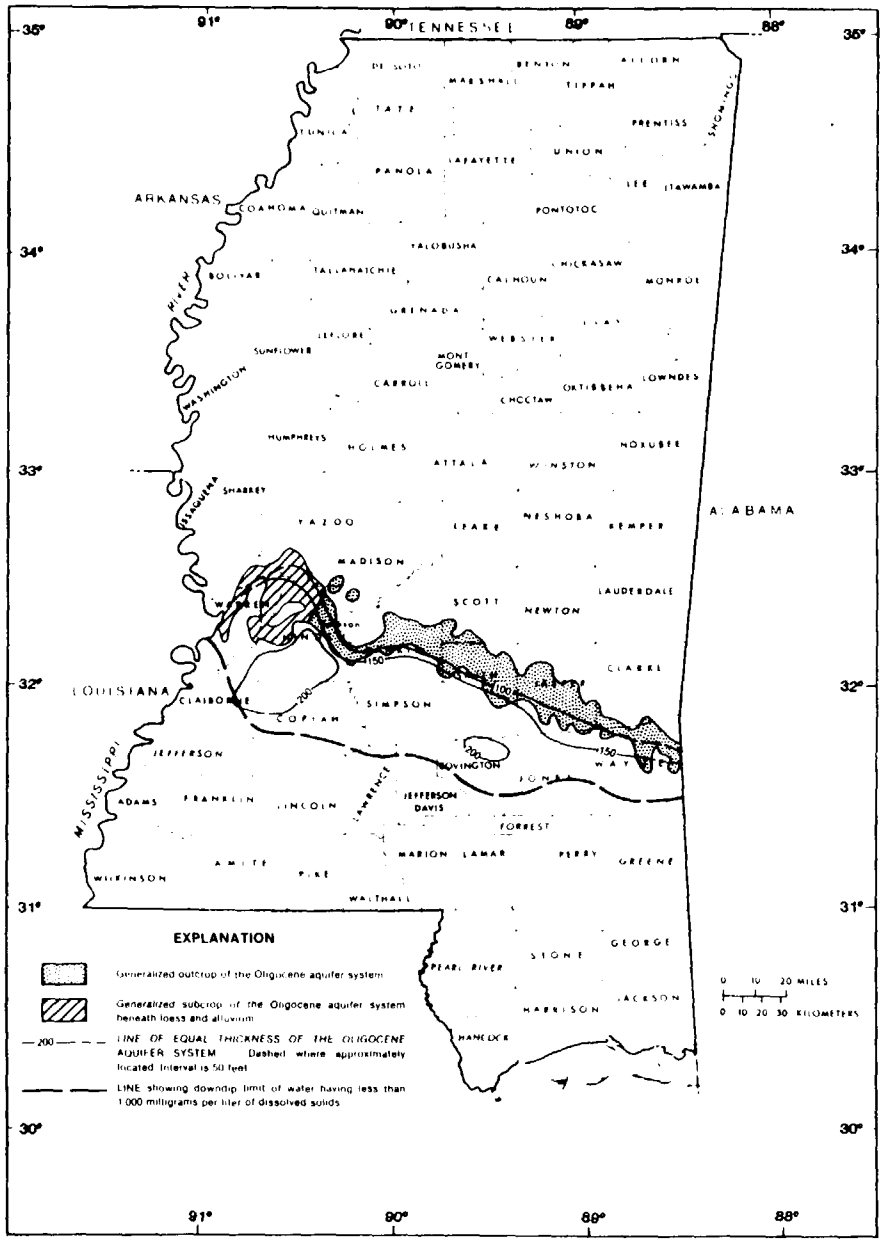


Figure 14. — Thickness of the Oligocene aquifer system.

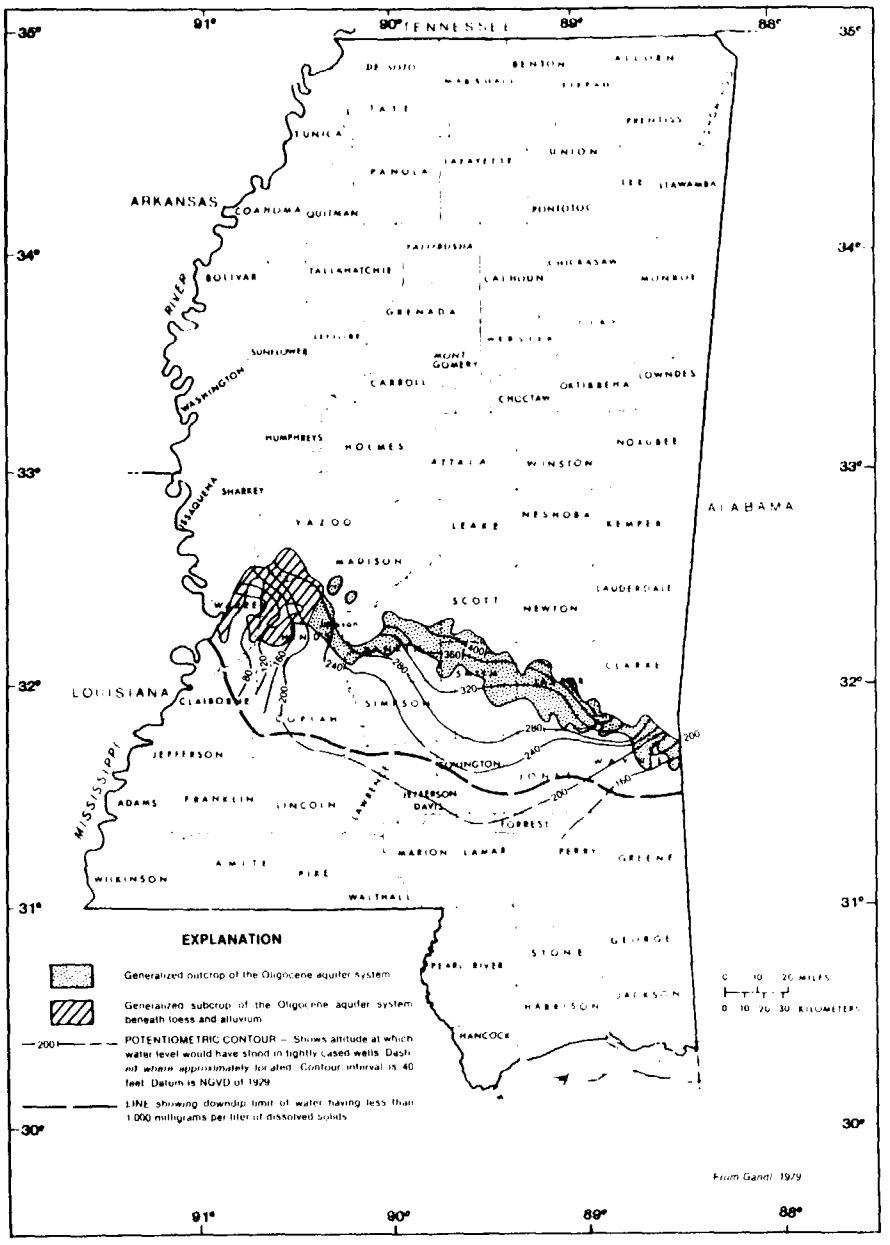


Figure 15. — Potentiometric surface of the Oligocene aquifer system.

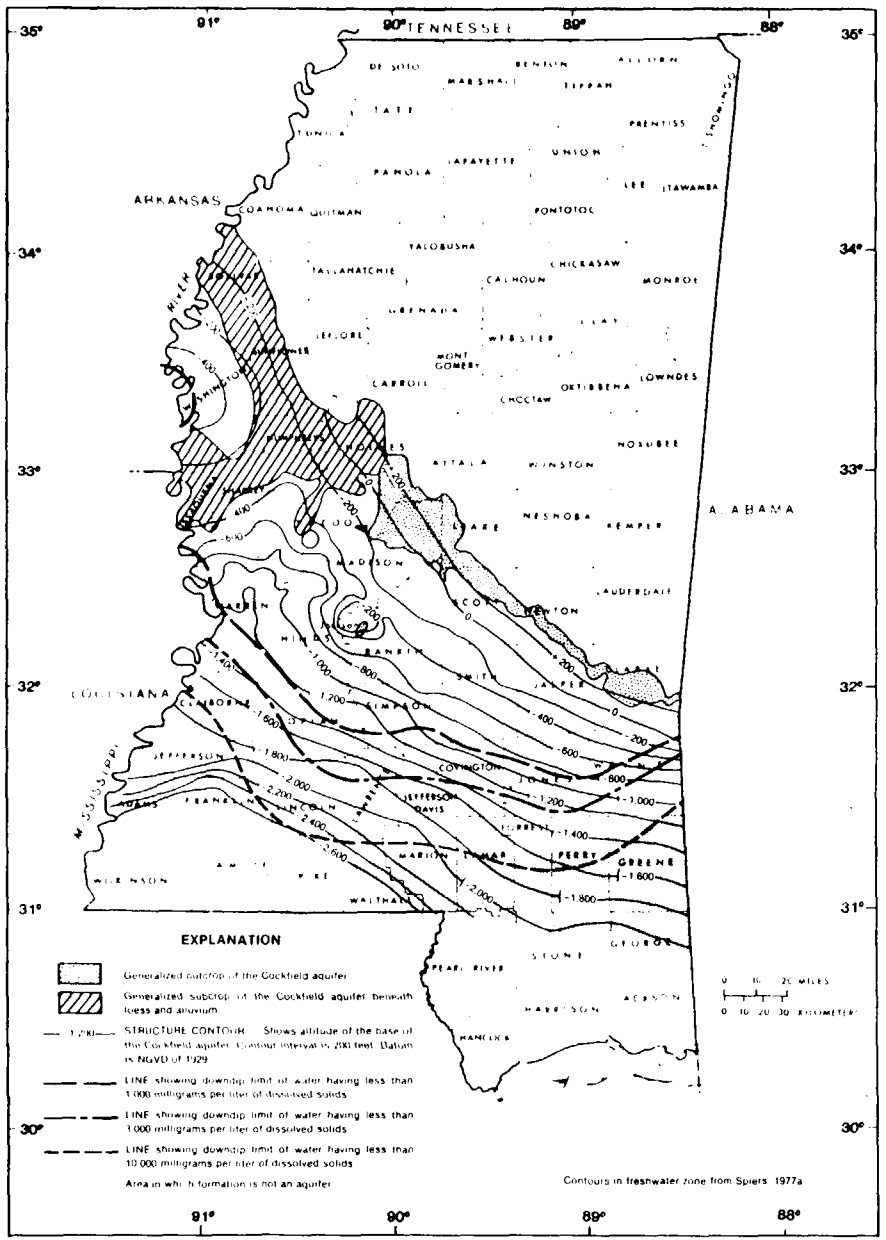


Figure 16. — Configuration of the base of the Cockfield aquifer.

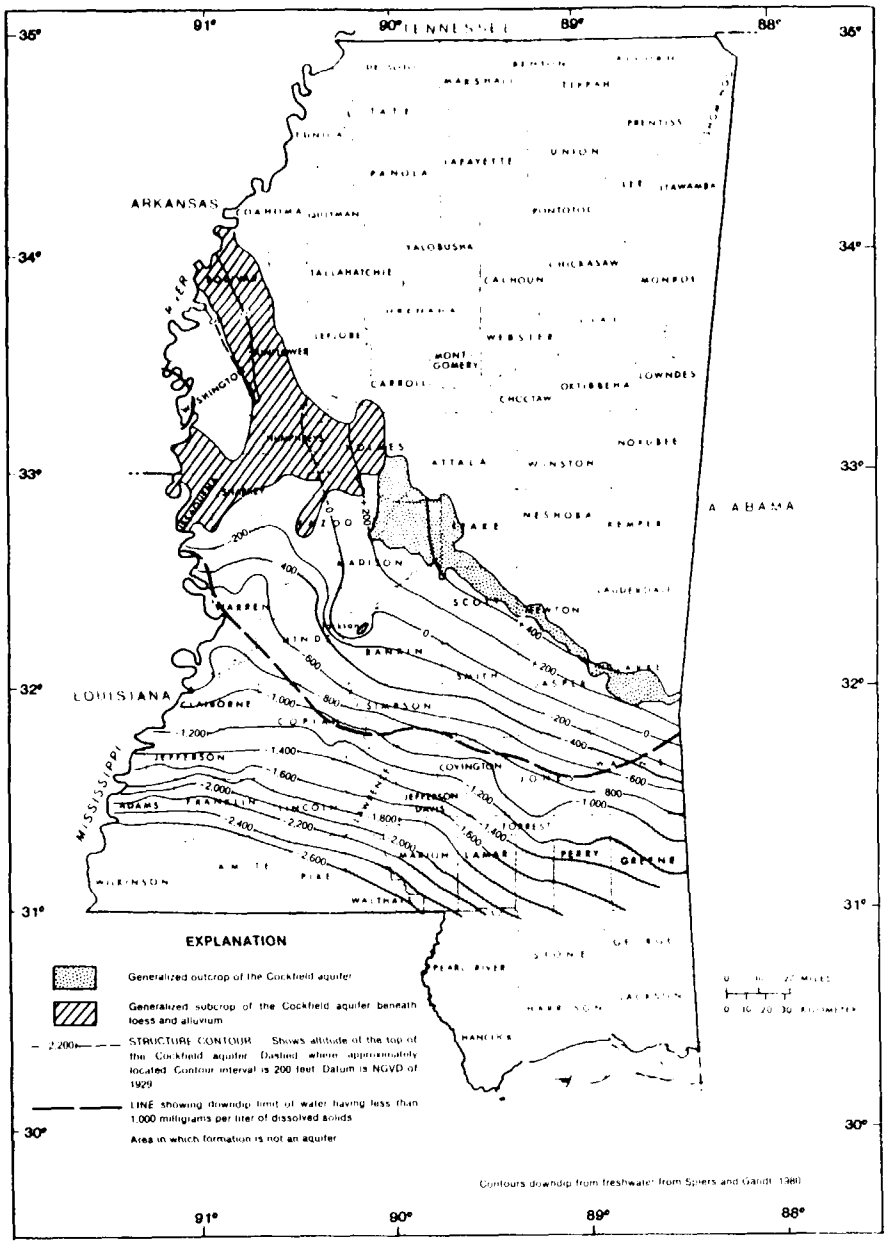


Figure 17. — Configuration of the top of the Cockfield aquifer.

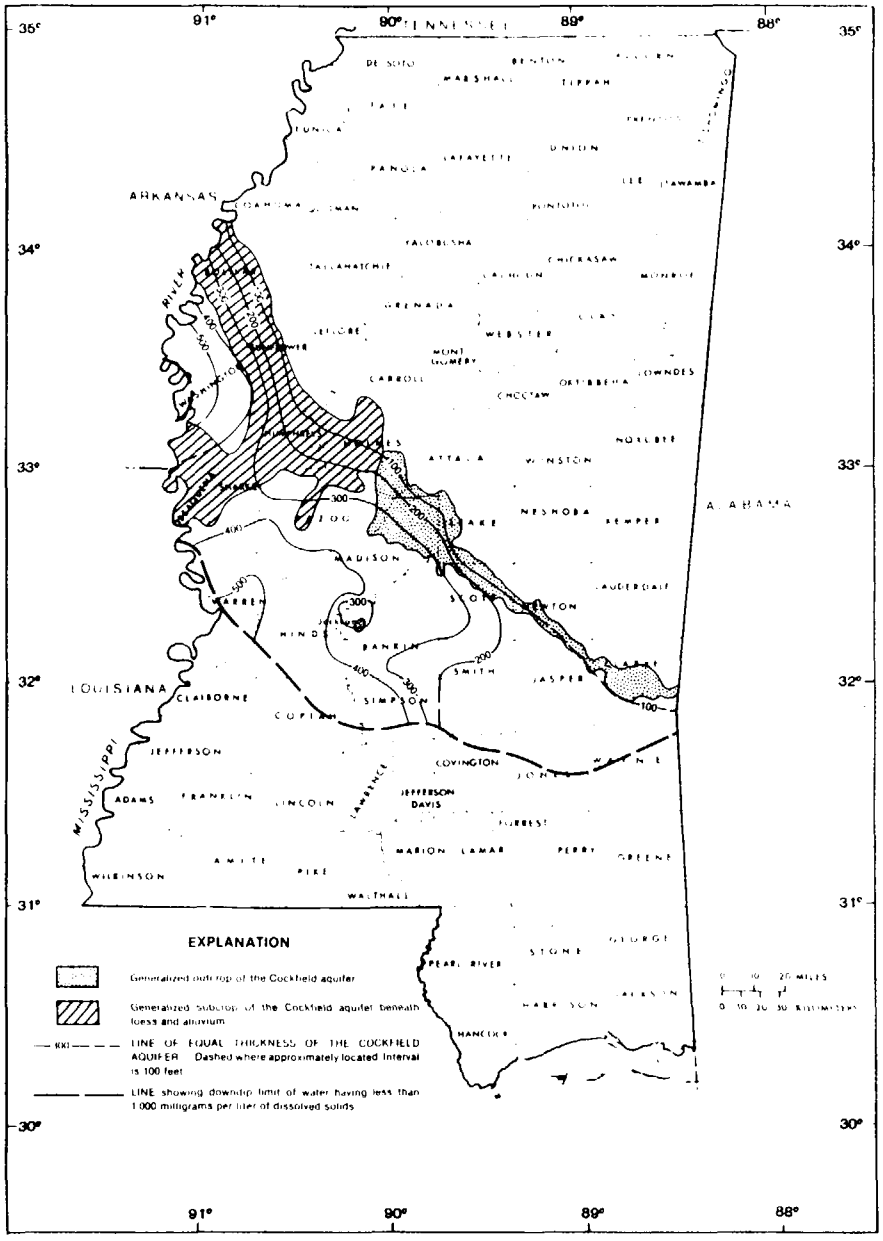


Figure 18. — Thickness of the Cockfield aquifer.

clayey downdip and ceases to be an aquifer. The Cockfield is composed of fine-to-medium sand, sandy marls, and thin beds of lignite. In the northern and western area of its occurrence, the Cockfield consists of several thick sand beds totaling more than 500 feet.

Water levels in the Cockfield aquifer (fig. 19) are highest in the outcrop area. Water levels have been declining at about 1.5 ft/yr and declines are greatest in areas of heavy pumpage. In the subcrop area below the alluvium and loess, levels are affected by the contact between the Cockfield and other aquifers. Recharge is by precipitation on the outcrop, by stream infiltration through an inlier near Jackson, and by contact with the alluvial aquifer. In the northern alluvial plain, the underlying Cook Mountain Formation, which usually acts as a confining bed, is sandy and forms a hydraulic connection between the Cockfield and the underlying Sparta Sand. Water movement in the Cockfield is mostly downdip, except near the Jackson dome and other areas of uplift. In the Mississippi River alluvial plain, movement is in several directions due to hydraulic connections with adjacent aquifers.

Results of 27 aquifer tests indicate transmissivities of 80 to 21,000 ft^2/d, hydraulic conductivities of 1 to 120 ft/d, and specific capacities ranging from 1.6 to 43 (gal/min)/ft of drawdown (Spiers, 1977a).

The Cockfield aquifer is heavily used by industry and municipalities, particularly at Greenville in Washington County, and water levels are lowest in that area (fig. 19). The highest yielding well at Greenville, produces 1,500 gal/min, and yields of 500 to 1,000 gal/min can be expected where the sands are thick.

Excessive color and dissolved-solids concentrations higher than 500 mg/L have caused under utilization in some areas. In other areas, high dissolved solids are tolerated for economic reasons and the water may be mixed with fresher water from other sources. The downdip limits of fresh, slightly saline, and moderately saline water are shown in figure 16. In the extreme southeast the Cockfield Formation contains little sand and is not an aquifer.

The water is a hard calcium-bicarbonate type near the outcrop and changes to sodium bicarbonate downdip. Iron concentrations may be high in water from shallow wells. Lignite found in the Cockfield may be partially responsible for the high color of water from the aquifer.

The Cockfield has been used for disposal of oil field wastes in the southwest, downdip from the 10,000 mg/L dissolved-solids zones (Bicker, 1972).

et

PROPERTY OF:
MICHAEL T. SLACK

SOURCES FOR WATER SUPPLIES IN MISSISSIPPI

A COOPERATIVE STUDY SPONSORED BY THE
U. S. GEOLOGICAL SURVEY
and the
Mississippi Research and Development Center
JACKSON, MISSISSIPPI

REVISED 1986

Oligocene Aquifer System

Geologic Data

Structure: The base of the Forest Hill Sand (base of the Oligocene aquifer system) slopes generally to the south at about 30 feet per mile (fig. 19). Structure contours are from Gandl (1979).

Outcrop area: Generalized from Belt and others (1945) and Bicker (1969).

Area of freshwater occurrence: About 6,000 square miles.

Lithologic character: The Oligocene aquifer system consists of several geologic units (table 2). The basal unit, the Forest Hill Sand, commonly consists of less than 40 percent sand—the remainder is mostly clay. The upper units consist mostly of beds of limestone and marl, but include beds of sand.

Confining beds:

Overlying bed: Commonly sand and clay in the base of the Miocene aquifer system overlies the top of the Oligocene beds; however, the top beds of the Oligocene consist mostly of clay and marl that act as confining beds.

Underlying beds: The Yazoo Clay, several hundred feet thick, is a confining bed.

Hydrologic atlas describing aquifer: The Oligocene aquifer system in Mississippi (Gandl, 1979).

Areal water-resources reports: See map showing areas covered by reports (fig. 1) and selected references.

23

OVERSIZED

DOCUMENT

24

U.S. Fish and Wildlife Service
Vicksburg Office

SPECIES LIST BY COUNTY

E - Endangered Species
T - Threatened Species
P - Proposed Species
C - Candidate Species
CA - Conservation Agreement
CH - Critical Habitat

RECEIVED
APR 28 1989
Dept. of Natural Resources
Bureau of Pollution Control

MISSISSIPPI

Amite	E - Red-cockaded woodpecker (Picoides borealis)
Bolivar	E - Pondberry
Claiborne	T - Bayou darter (Etheostoma rubrum)
Clark	C - Yellowblotched sawback - Graptemys flavimaculata
Copiah	T - Bayou darter (Etheostoma rubrum) T - Ringed sawback turtle (Graptemys oculifera)
Covington	T - Gopher tortoise (Gopherus polyphemus)
Forrest	E - Red-cockaded woodpecker (Picoides borealis) T - Gopher tortoise (Gopherus polyphemus) C - Yellowblotched sawback - Graptemys flavimaculata
Franklin	E - Red-cockaded woodpecker (Picoides borealis)
George	E - Red-cockaded woodpecker (Picoides borealis) T - Gopher tortoise (Gopherus polyphemus) C - Maureen's symnocthebius minute moss beetle C - Yellowblotched sawback - Graptemys flavimaculata
Greene	E - Red-cockaded woodpecker (Picoides borealis) T - Gopher tortoise (Gopherus polyphemus) C - Yellowblotched sawback - Graptemys flavimaculata
Hancock	E - Brown pelican (Pelecanus occidentalis) T - Gopher tortoise (Gopherus polyphemus)
Harrison	E - Red-cockaded woodpecker (Picoides borealis) E - Bald eagle (Haliaeetus leucocephalus) E - Eastern indigo snake (Drymarchon corais couperi) E - Brown pelican (Pelecanus occidentalis) T - Gopher tortoise (Gopherus polyphemus)
Hinds	T - Bayou darter (Etheostoma rubrum) T - Ringed sawback turtle (Graptemys oculifera)
Itawamba	E - Curtus' mussel (Pleurobema curtum) E - Penitent shell mussel (Epioblasma penita) E - Judge Tait's mussel (Pleurobema taitianum) C - Southern clubshell Pleurobema decisum
Jackson	E - Brown pelican (Pelecanus occidentalis) E - Red-cockaded woodpecker (Picoides borealis) E - Mississippi sandhill crane (CH) (Grus canadensis pulla) T - Gopher tortoise (Gopherus polyphemus) C - Yellowblotched sawback - Graptemys flavimaculata

Jasper	E - Red-cockaded woodpecker (Picoides borealis)
Jones	E - Red-cockaded woodpecker (Picoides borealis) T - Gopher tortoise (Gopherus polyphemus) C - Yellowblotched sawback - Graptemys flavimaculata
Lawrence	T - Ringed sawback turtle (Graptemys oculifera)
Lamar	T - Gopher tortoise (Gopherus polyphemus)
Leake	T - Ringed sawback turtle (Graptemys oculifera)
Lowndes	E - Judge Tait's mussel (Pleurobema taitianum) E - Penitent shell mussel (Pleurobema penita)
Madison	T - Ringed sawback turtle (Graptemys oculifera)
Marion	T - Ringed sawback turtle (Graptemys oculifera) T - Gopher tortoise (Gopherus polyphemus)
Monroe	E - Curtus' mussel (Pleurobema curtum) E - Penitent shell mussel (Epioblasma penita) E - Judge Tait's mussel (Pleurobema taitianum) C - Southern clubshell Pleurobema decisum
Neshoba	T - Ringed sawback turtle (Graptemys oculifera)
Noxubee	E - Red-cockaded woodpecker (Picoides borealis)
Oktibbeha	E - Red-cockaded woodpecker (Picoides borealis)
Pearl River	T - Ringed sawback turtle (Graptemys oculifera) T - Gopher tortoise (Gopherus polyphemus)
Perry	E - Red-cockaded woodpecker (Picoides borealis) T - Gopher tortoise (Gopherus polyphemus) C - Yellowblotched sawback - Graptemys flavimaculata
Rankin	T - Ringed sawback turtle (Graptemys oculifera)
Scott	E - Red-cockaded woodpecker (Picoides borealis) T - Ringed sawback turtle (Graptemys oculifera)
Simpson	T - Ringed sawback turtle (Graptemys oculifera)
Smith	E - Red-cockaded woodpecker (Picoides borealis)
Stone	E - Red-cockaded woodpecker (Picoides borealis) E - Eastern indigo snake (Drymarchon corais couperi) T - Gopher tortoise (Gopherus polyphemus)
Sharkey	E - Pondberry (Lindera melissifolia)
Sunflower	E - Pondberry (Lindera melissifolia)

Wayne	E - Red-cockaded woodpecker (*Picoides borealis*) T - Gopher tortoise (*Gopherus polyphemus*) C - Yellowblotched sawback - *Graptemys flavimaculata*
Wilkinson	E - Red-cockaded woodpecker (*Picoides borealis*)
Winston	E - Red-cockaded woodpecker (*Picoides borealis*)

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

May 23, 1980

CERTIFIED MAIL -RETURN RECEIPT REQUESTED

Mr. F. L. Barnett
Production Manager
Chloride Metals, Inc.
P. O. Box 488
Tampa, Florida 33601

Dear Mr. Barnett:

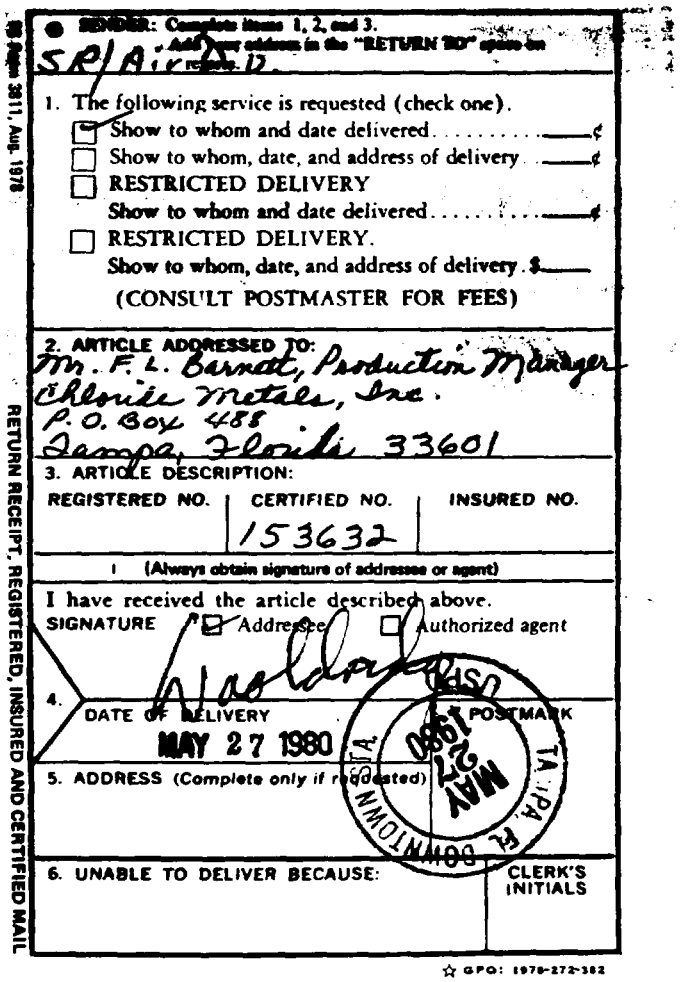
At its regular meeting held on May 2
mission on Natural Resources conside
your operation located in Florence,
Commission Order No. 518-80, which h
that consideration.

Your cooperation in carrying out the
order will be appreciated. As you k
accordance with the law.

If you have any questions regarding

CLB:CHC:mh

Enclosure


SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.
SR/Air D.
1. The following service is requested (check one).
☐ Show to whom and date delivered ____¢
☐ Show to whom, date, and address of delivery ____¢
☐ RESTRICTED DELIVERY
Show to whom and date delivered ____¢
☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery $____
(CONSULT POSTMASTER FOR FEES)
2. ARTICLE ADDRESSED TO:
Mr. F. L. Barnett, Production Manager
Chloride Metals, Inc.
P. O. Box 488
Tampa, Florida 33601
3. ARTICLE DESCRIPTION:
REGISTERED NO. | CERTIFIED NO. 153632 | INSURED NO.
(Always obtain signature of addressee or agent)
I have received the article described above.
SIGNATURE ☑ Addressee ☐ Authorized agent
4. DATE OF DELIVERY MAY 27 1980
POSTMARK MAY 27 1980 TAMPA, FLA.
5. ADDRESS (Complete only if requested)
6. UNABLE TO DELIVER BECAUSE:
CLERK'S INITIALS
PS Form 3811, Aug. 1978
RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL
☆ GPO: 1979-272-362

DATA CODED

MISSISSIPPI DEPARTMENT OF
Bureau of Pollutio
P. O. Box 1(
Jackson, Mississip
(601) 961-5

u of Pollution Control
(Name of Sender)
Box 10385
(Street or P. O. Box)
kson, Ms. 39209
(City, State, and ZIP Code)

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, $300

May 23, 198(

CERTIFIED MAIL -RETURN RECEIPT REQUE

Mr. F. L. Barnett
Production Manager
Chloride Metals, Inc.
P. O. Box 488
Tampa, Florida 33601

Dear Mr. Barnett:

At its regular meeting held on May 22, 1980, the Mississippi Commission on Natural Resources considered certain evidence regarding your operation located in Florence, Mississippi. Enclosed is Commission Order No. 518-80, which has been issued as a result of that consideration.

Your cooperation in carrying out the provisions of the enclosed order will be appreciated. As you know, appeals can be taken in accordance with the law.

If you have any questions regarding this matter, please advise.

Very truly yours,

Charlie L. Blalock
Executive Director

CLB:CHC:mh

Enclosure

DATA CODED

BEFORE THE MISSISSIPPI COMMISSION ON NATURAL RESOURCES

BUREAU OF POLLUTION CONTROL

IN THE MATTER OF:

MISSISSIPPI COMMISSION ON NATURAL RESOURCES — COMPLAINANT

VS. — NO. 518 80

CHLORIDE METALS — RESPONDENT

ORDER

The above styled cause came on this date for consideration and the Commission, having heard and considered the same, finds as follows:

1.

The Respondent, Chloride Metals, is the owner and operator of a secondary lead smelter located in Florence, Mississippi, Rankin County, and, as such is subject to the provisions of laws of this State governing the operation of equipment which causes the issuance of air contaminants, the same appearing as Section 49-17-1, et. seq., and the rules and regulations of the Mississippi Commission on Natural Resources.

2.

Respondent's facility is a source of significant lead emissions and that monitoring of ambient lead concentrations should be done to determine if the established ambient lead standards are being met.

3.

Sources of fugitive emissions within the facility contribute unquantified but significant amounts of lead to the atmosphere and that these sources should be controlled to the maximum, practical degree.

4.

Odors from the facility continue to generate citizen complaints.

5.

Premises considered, the Commission finds that the following order should be issued to Chloride Metals in Florence, Mississippi.

IT IS, THEREFORE, ORDERED AND ADJUDGED that the Respondent, Chloride Metals, comply with the following actions and conditions with respect to monitoring and controlling air contaminants from the secondary lead operation:

1. On or before June 1, 1980, the Respondent shall submit a report of the results of ambient lead monitoring for the period February 1, 1980, through April 30, 1980. Monitoring and reporting shall be in accordance with the Lead Monitoring Plan for Chloride Metals, Inc., Florence, Mississippi, as submitted to the Bureau of Pollution Control in November, 1979, by the Respondent.

   The Respondent shall continue monitoring beyond April 30, 1980, until such time the Respondent is notified by the Bureau of Pollution Control that sufficient monitoring data has been accumulated. The Respondent shall be allowed to reduce the sampling frequency to one day per six days for the monitoring period following April 30, 1980.

2. On or before June 1, 1980, the Respondent shall submit an engineering report detailing the results of investigation and research of potential sources of odor from the entire lead smelting and refining operation. The report shall explain in detail what actions can be taken to prevent or reduce the effect of odors, which of those actions will be taken, and the estimated amount of time required to implement the action.

3. On or before August 1, 1980, the Respondent shall have completed all modifications and/or improvements necessary for the reduction of fugitive dust losses and control of odor and shall submit notification to such effect to the Bureau of Pollution Control. The Respondent shall also submit a completed application for a permit to operate. The application shall be accompanied by a documented report demonstrating that all applicable emission standards are being met and that fugitive emissions and odors have been as thoroughly investigated and controlled as

is practical. Determinations of whether control of fugitive emissions and odors is adequate will be made based upon inspections by the Bureau of Pollution Control.

4. On or before October 1, 1980, the Respondent shall submit a plan of control for any source of emissions which has been determined by the Bureau of Pollution Control to be inadequately controlled.

IT IS FURTHER ORDERED AND ADJUDGED that this Order shall become final thirty (30) days after the date of rendition hereof, unless Chloride Metals, before the said thirty (30) days have elapsed, files a sworn petition with this Commission as provided by Section 49-17-41, Mississippi Code Annotated (1972) setting forth the grounds and reasons for said complaint and asking for a hearing thereon.

ORDERED AND ADJUDGED, this the 22nd day of May, 1980, by the Mississippi Commission on Natural Resources.

MISSISSIPPI COMMISSION ON
NATURAL RESOURCES,
BUREAU OF POLLUTION CONTROL

BY: _____
CHARLIE L. BLALOCK
EXECUTIVE DIRECTOR

FILE COPY

MEMORANDUM

TO: Wayne Anderson

FROM: Don Watts

SUBJECT: Chloride Metals Application Review & Redesignation As Minor Source
Rankin County
Facility No: 2380-00038
Minor/South for November 26, 1985, Permit Board

DATE: November 15, 1985

The only operation at Chloride Metals is the lead oxide process; the smelters which were once used have been removed. Therefore, the Major/Minor designation is determined by the lead emission rate as described in the Lead Implementation Plan since lead oxide process is not a listed source.

The particulate emission rates shown in the application for the three baghouses total 0.08 lbs/hr or 0.35 TPY at full time operation. From previous analyses, the % Pb in the lead oxide is 92.3%. Therefore, the emission rate of lead is 0.33 TPY, which is less than the 5 TPY criteria for a major source. Therefore, this facility will be classified as a minor source.

Since Chloride Metals meets the applicable requirements, I recommend that a Permit to Operate be issued.

STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT

TO OPERATE AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

GNB, Inc.
Resource Recycling Division
Briarhill Road
Florence, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this 27th day of June, 1989

MISSISSIPPI NATURAL RESOURCES PERMIT BOARD

DIRECTOR, BUREAU OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES

Expires 1st day of July, 1992

Permit No. 2380-00038

PART I
GENERAL CONDITIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any air pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or modifications which will result in new, different, or increased emission of air pollutants must be reported by submission of a new application.

2. The permittee shall at all times maintain in good working order and operate as efficiently as possible all air pollution control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

3. Solids removed in the course of control of air emissions shall be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering state waters.

4. Any diversion from or bypass of collection and control facilities is prohibited except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Natural Resources Permit Board.

5. Whenever any emergency, accidental or excessive discharge of air contaminants occurs, the office of the Mississippi Department of Natural Resources Bureau of Pollution Control shall be notified immediately of all information concerning cause of the discharge, point of discharge, volume and characteristics, and whether discharge is continuing or stopped.

6. Should the Executive Director of the Mississippi Department of Natural Resources declare an Air Pollution Control Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule.

7. The permittee shall allow the Mississippi Department of Natural Resources Bureau of Pollution Control and the Mississippi Natural Resources Permit Board and/or their authorized representatives, upon the presentation of credentials:

   a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit, and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.

8. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:

   a. Violation of any terms or conditions of this permit.

   b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

   c. A change in any condition that required either a temporary or permanent reduction or elimination of authorized air emissions.

9. For renewal of this permit the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Natural Resources Permit Board.

10. Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Natural Resources Bureau of Pollution Control.

11. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

12. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.

13. This permit is non-transferable.

14. This permit is for air pollution control purposes only.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning June 27, 1989, and lasting until July 1, 1992, the permittee is authorized to operate air emissions equipment and emit air contaminants from the lead oxide process.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

PART III
OTHER REQUIREMENTS

None.

Chloride Metals - Rankin County
2380-00038

April 10, 1979

INSPECTION REPORT

Subject: Chloride Metals / Annual Insp.

Date: March 20, 1979

By: Danny Russell

DATA CODED

On March 20, 1979, I inspected Chloride Metals' secondary lead smelter and lead oxide operation at Florence, Mississippi. I contacted the plant manager, Mr. Bob North. The plant refines lead from old car batteries into various qualities of lead, lead alloys, and lead oxide. There are three distinct operations: (1) lead smelting, (2) pot furnaces, and (3) lead oxide production.

(1) Lead Smelting - Chloride Metals uses two blast furnaces (cupolas) to produce "hard" or "antimonial" lead. Coke, battery plates, rerun slag, cast iron, drosses, and limestone (approximately 550 pounds combined weight) are charged into the furnace at differing intervals averaging about seven charges per hour. As lead becomes molten, it is tapped off into water cooled molds to form hard lead buttons which weigh from 600 to 1000 pounds each. Slag comprises about 30% of the melt and is tapped at intervals as necessary - usually about every 30 minutes. The slag tap is one source of emissions from the operation. Hoods surround the slag tap and emissions are vented to a baghouse which serves the slag tap from both cupolas. The baghouse does a good job of controlling emissions, but the hoods are inadequate and some fugitive emissions occur from around the slag tap hoods. Larger enclosed hoods have recently been installed, but at the time of my inspection, were in poor repair and I noticed only minor improvement over the previous hood arrangement.

The exhaust gases from each cupola are drawn through an afterburner, cooling section, and finally a baghouse. (Both cupola systems are identical except that the baghouses differ slightly). When there were no upsets, the baghouses appeared to perform adequately. However, visible emissions were read for 18 minutes from the No. 2 furnace and exceeded the 20% opacity standard for new secondary lead smelters (NSPS) to which the No. 2 furnace is subject. A copy of the visible emission reading is attached. The average for 18 minutes was 33.9%. The baghouse stack from the No. 1 furnace was clear throughout my inspection.

A very significant source of emissions from the cupolas occurs during an "upset". These are apparently frequent judging from previous visits to the plant. During these episodes dense smoke is emitted from the charge door areas, and visible emissions usually increase from the stack. The episodes last from a few moments to 15 minutes. The company management says that the cause of these episodes is poor operation, but apparently they are unable to control this situation. Enclosures have been built around the charge doors and skip hoist (charge conveyor) in an effort to contain these fugitive emissions, but this appeared to be useless. It appears to me that to control these emissions a scavenger air system would be necessary. One possibility of the cause could be temporary failure of the afterburner. Another possible cause could be "bridging" of charge material in the cupola. During my inspection these "upset episodes" occured only on the No. 2 furnace, but past inspection reports indicate No. 1 is also susceptible to the problem.

There were fugitive emissions from the cap of the No. 2 cupola due to recent maintenance work. Mr. North had repairs made to the cap during my inspection.

(2) Pot or kettle furnaces - Chloride has four kettles in which they remelt "hard" lead for further refining. Various materials are added to molten lead in the kettles and the melt is agitated. Undesirable material combines with additives and this material is skimmed off so that only the desirable lead or lead alloy remains. The molten lead is tapped into molds. Each kettle has a hood vented to a common manifold and into a venturi scrubber. The scrubber appeared to be operating efficiently during my inspection. Although there were no fugitive emissions from this process during my inspection, I have in the past noticed that fugitive emissions do occur when the hoods cannot handle the smoke generated by the addition of refining material to all four kettles.

(3) Lead oxide production - Some of the better quality lead produced from the pot furnaces is used for the production of lead oxide. The lead is remelted and oxidized. The lead oxide is pneumatically conveyed and collected by a baghouse. There are no significant emissions from this process. However, I did notice a slight amount of leakage from a line conveying lead oxide to one of two storage silos. Mr. North said he would have it repaired immediately.

There are other sources of fugitive emissions at the plant. Batteries which are received are stockpiled. From the stockpile the batteries are taken to a shed in which the battery tops are sawed off and the plates

are dumped into a trough conveyor. The plates are stockpiled on the plant property for future charging. The plastic battery cases are thrown into a large ravine owned by the company. In an effort to reduce SO_2 and SO_3 emissions from the cupolas, a washing system has recently been installed but was not working during my visit. A spray nozzle sprays water on the battery plates while on the trough conveyor to wash off sulfuric acid. The water goes to the existing wastewater treatment.

The plant grounds is a significant source of fugitive dust, a large portion of which is probably lead and lead oxide. Plans and preparations were taking place during my inspection to pave the entire plant grounds such that dust can be washed away periodically and traffic through the plant will not create as bad a problem.

The following is a list of the point sources and fugitive sources listed in the order (in my opinion) of their relative impact on air quality - both particulates and odors:

Point Sources	Fugitive Sources
No. 2 furnace stack	No. 2 furnace charge doors
No. 1 furnace stack	No. 1 furnace charge doors
Pot furnace scrubber stack	Plant grounds/traffic
Cupola slag tap stack	No. 2 cupola slag tap
Lead oxide baghouse	No. 1 cupola slag tap
	Pot furnace roof monitor
	Materials storage

Although some improvements have been attempted and other measures such as repaving are underway, there is still a problem at this facility. The major problem, in my opinion, is frequent upsets of the cupolas causing the large amounts of fugitive emissions. Also, the battery plate washing operation may be effective in reducing SO_2 and related odors. However, the present plan for plate washing may not sufficiently remove the sulfuric acid and a more efficient washing system may be necessary.

DR:ls