POOR LEGIBILITY

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

34344

M.2 - SITE MAINTENANCE FORM

EPA ID : ALD002904506

SITE NAME: USS FAIRFIELD WORKS FAIRFIELD PLT SOURCE: H

STREET : TIN MILL RD CONG DIST: 07

CITY : FAIRFIELD ZIP: 35064

CNTY NAME: JEFFERSON CNTY CODE : 073

LATITUDE : 33/26/00.0 LONGITUDE : 086/54/40.0

LL-SOURCE: R LL-ACCURACY:

SMSA : 1000 HYDRO UNIT: 03160112

INVENTORY IND: Y REMEDIAL IND: Y REMOVAL IND: N FED FAC IND: N

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE:

SITE/SPILL IDS:

RPM NAME: RPM PHONE: - -

SITE CLASSIFICATION: SITE APPROACH:

DIOXIN TIER: REG FLD1: REG FLD2: 1

RESP TERM: PENDING ( ) NO FURTHER ACTION ( )

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( )
ENFORCED RESPONSE ( ) COST RECOVERY ( )

SITE DESCRIPTION:

ACTION: _

PENDING (_) NO FURTHER ACTION (_)

M.2 - ALIAS/ALIAS LOCATION MAINTENANCE FORM

SITE: USS FAIRFIELD WORKS FAIRFIELD PLT

EPA ID: ALD002904506 ALIAS SEQ NO: 01

ALIAS NAME: EXUM DUMP SOURCE: R

ALIAS LOCATION

CONTIGUOUS PORTION OF SITE? N FED FAC IND: N

STREET : TIN MILL & PLESANT GROVE RD CONG DIST : 07

CITY : FAIRFIELD ST: AL ZIP: 35064

CNTY NAME: JEFFERSON CNTY CODE: 073

LATITUDE : 33/29/42.0 LONGITUDE : 086/54/42.0

LL-SOURCE: G LL-ACCURACY:

SMSA : 1000 HYDRO UNIT: 03160112

ALIAS DESCRIPTION:

ACTION: _

ACTION: _

M.2 - PROGRAM MAINTENANCE FORM

ACTION: _

SITE: USS FAIRFIELD WORKS FAIRFIELD PLT

EPA ID: ALD002904506 PROGRAM CODE: H01 PROGRAM TYPE: _

PROGRAM QUALIFIER: ALIAS LINK :

PROGRAM NAME: SITE EVALUATION

DESCRIPTION:

M.2 - EVENT MAINTENANCE FORM

ACTION: _

SITE: USS FAIRFIELD WORKS FAIRFIELD PLT
PROGRAM: SITE EVALUATION

EPA ID: ALD002904506 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: E

EVENT NAME: DISCOVERY STATUS:

DESCRIPTION:

ORIGINAL	CURRENT	ACTUAL
START:	START:	START:
COMP :	COMP :	COMP : 08/01/80

HQ COMMENT:

RG COMMENT:

COOP AGR #	AMENDMENT #	STATUS	STATE %
			0

M.2 - EVENT MAINTENANCE FORM

ACTION: _

SITE: USS FAIRFIELD WORKS FAIRFIELD PLT
PROGRAM: SITE EVALUATION

EPA ID: ALD002904506 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S

EVENT NAME: PRELIMINARY ASSESSMENT STATUS:

DESCRIPTION:

ORIGINAL	CURRENT	ACTUAL
START:	START:	START: 04/03/85
COMP :	COMP :	COMP : 04/03/85

HQ COMMENT:

RG COMMENT:

COOP AGR #	AMENDMENT #	STATUS	STATE %
			0

M.2 - COMMENT MAINTENANCE FORM

SITE: USS FAIRFIELD WORKS FAIRFIELD PLT

EPA ID: ALD002904506

COM NO	COMMENT	ACTION
001	PART A- ON FILE	
002	OLD EDA ID NUMBER ALD004001350	
003	103-C NOTIFICATION NUMBER IS ALS000 001138	

0077

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	ALD 002 904 506

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	B. STREET	
U.S. Steel Corp. Fairfield Plant	Tin Mill Rd	
C. CITY	**D. STATE**	**E. ZIP CODE**
Fairfield (Jefferson Co.)	AL	35064

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X				
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION *(since 1917)*

This is an operating, RCRA regulated facility with several old land disposal areas.

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Elizabeth Shaver	(404) 881-2234	4-3-85

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

Continue On Reverse

EPA

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

I. IDENTIFICATION
01 STATE: AL
02 SITE NUMBER: D 002904506

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): US STEEL CORP. - FAIRFIELD PLANT

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: TIN MILL ROAD (P.O. BOX 599)

03 CITY: FAIRFIELD

04 STATE: AL | 05 ZIP CODE: 35064 | 06 COUNTY: JEFFERSON | 07 COUNTY CODE: 073 | 08 CONG DIST: 06

09 COORDINATES LATITUDE: 33 28 30 | LONGITUDE: 086 57 00

10 DIRECTIONS TO SITE (Starting from nearest public road): TIN MILL ROAD

III. RESPONSIBLE PARTIES

01 OWNER (If known): UNITED STATES STEEL CORPORATION

02 STREET (Business, mailing, residential): 600 GRANT ST.

03 CITY: PITTSBURG

04 STATE: PA | 05 ZIP CODE: 15230 | 06 TELEPHONE NUMBER: (412) 433-6012

07 OPERATOR (If known and different from owner):

08 STREET (Business, mailing, residential):

09 CITY:

10 STATE | 11 ZIP CODE | 12 TELEPHONE NUMBER: ( )

13 TYPE OF OWNERSHIP (Check one)
[X] A. PRIVATE [ ] B. FEDERAL (Agency name) [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL
[ ] F. OTHER (Specify) [ ] G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
[X] A. RCRA 3001 DATE RECEIVED 11 19 80 (MONTH DAY YEAR) [X] B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 6 9 80 (MONTH DAY YEAR) [ ] C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
[X] YES DATE 6 16 83 (MONTH DAY YEAR) [ ] NO

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

CONTRACTOR NAME(S):

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

03 YEARS OF OPERATION
1917 (BEGINNING YEAR) | (ENDING YEAR) [ ] UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
BENZENE, TOLUENE, NAPHTHAS, NAPHTHALENE, 1,1,1-TRICHLOROETHANE, SODIUM DICHROMATE, SPENT PICKLE LIQUOR, K087 - TAR DECANTER SLUDGE K060 - AMMONIA STILL LIME SLUDGE

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
SEVERAL ON-SITE DISPOSAL AREAS IDENTIFIED IN SUPERFUND NOTICE HAVE NOT BEEN INVESTIGATED. THIS INCLUDES A SURFACE IMPOUNDMENT AND LANDFILL. SOLUENTS APPEAR TO CONTACT DITCHES ACROSS THE SITE

V. PRIORITY ASSESSMENT

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

VI. INFORMATION AVAILABLE FROM

01 CONTACT: STEVE MAURER SCM

02 OF (Agency/Organization): ADEM

03 TELEPHONE NUMBER: (205) 271-7728

04 PERSON RESPONSIBLE FOR ASSESSMENT: DONALEA DINSMORE

05 AGENCY:

06 ORGANIZATION: EPS

07 TELEPHONE NUMBER: (601) 922-8442

08 DATE: 3 12 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
AL	D000290456

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A SOLID
- B POWDER, FINES
- X 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 UNKNOWN
NO. OF DRUMS

03 WASTE CHARACTERISTICS (Check all that apply)

- X A TOXIC
- B CORROSIVE
- C RADIOACTIVE
- D PERSISTENT
- E SOLUBLE
- F INFECTIOUS
- X G FLAMMABLE
- X H IGNITABLE
- I HIGHLY VOLATILE
- 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	UNKNOWN		K087, CREOSOTE, B OILS, TAR, PITCH
OLW	OILY WASTE			
SOL	SOLVENTS	UNKNOWN		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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
SLU	NAPHTALENE	91203	SI (200 sq ft.)	UNKNOWN	
SLU	COKE PLANT TAR DECANTER	999	LF (45 acres)	"	
SLU	PHENOLICS	999	LF (45 acres)	"	
SOL	BENZENE	71432	LF	"	
SOL	TOLUENE	108883	LF	"	
SOL	1,1,1-TRICHLOROETHANE	71556	LF	"	

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)

SUPERFUND NOTIFICATION

EPA FORM 2070-12 (7-81)

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
AL	D002904506

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

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

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

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

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

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

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

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
SOLVENTS APPEAR TO CONTACT THE ENVIRONMENT THROUGH WASTEWATER DITCHES AND SURFACE IMPOUNDMENTS. THIS FACILITY HAS HAD ABOUT 52 YEARS OF UNREGULATED DISPOSAL OF HAZARDOUS MATERIALS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

COMPANY HAS REQUESTED DELETION OF TOXIC MATERIALS FROM REGULATION DUE TO THE MIXING RULE.

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

ADEM LAND, WATER FILES.

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
AL	D002904506

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [X] OBSERVED (DATE 2/83) — [X] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____
04 NARRATIVE DESCRIPTION
THIS INCIDENT HAS POTENTIALLY BEEN LINKED WITH LABOR PROBLEMS AND SABOTAGE. CONTAMINATION NOTED IN UPGRADIENT WELLS. POTENTIAL EXISTS FOR PROBLEMS IN GROUNDWATER FROM THE TIN MILL LANDFILL

01 [X] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE _____) — [ ] POTENTIAL — [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____
04 NARRATIVE DESCRIPTION
HAZARDOUS MATERIALS AND WASTES ARE INCLUDED IN WASTEWATER WHICH ENTERS SURFACE IMPOUNDMENTS, ~~AND~~ LAGOONS, AND DITCHES. THIS EVENTUALLY BECOMES AN NPDES DISCHARGE.

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

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

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

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE _____) — [X] POTENTIAL — [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED 45 (Acres)
04 NARRATIVE DESCRIPTION
HAZARDOUS MATERIALS HAVE BEEN LANDFILLED IN VARIOUS AREAS ON THE PLANT SITE. (TIN MILL LANDFILL, WIRE MILL DUMP, DOLOMITE ROAD DUMP, NO. 5 DUMP)

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

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

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

POTENTIAL HAZARDOUS WASTE S[illegible]
PRELIMINARY ASSESSMENT
EPS FORM 3012-1
EPS ANALYST/REVIEWER CHECKLIST

Site No. ALD002904506
Site Name U.S. Steel

Instructions: To be used in conjunction with EPA Form 2070-12 (7-81). Attach on inside front c[illegible] site folder. Initial and date for all assessment entries under appropriate part/subpart as completed. Initial/date in black for final assessment; in red [illegible] higher level (additional) assessment is in order. Follow same procedure for review process.

Review Codes: 1-Toxicology Review; 2-Chemical Review; 3-Ecology Review; 4-Chemical Engineer Review; 5-Geotechnical Review; 6-Project Manager Review; 7-Final Review

I. ANALYST/REVIEW STATUS

Form 2070 Part Number	Analyst/ Date	Review Code 1	Review Code 2	Review Code 3	Review Code 4	Review Code 5	Review Code 6	Review Code 7
1.I.-VI.	DD 3/18/85							
							GWW 3/19	GWW 3/19
2.I.								
2.II.								
2.III.								
2.IV.								
2.V.								
2.VI.	DD							
3.I.								
3.II.A								
3.II.B								
3.II.C								
3.II.D								
3.II.E								
3.II.F								
3.II.G								
3.II.H								
3.II.I								
3.II.J								
3.II.K								
3.II.L								
3.II.M								
3.II.N								
3.II.O								
3.II.P								
3.III.								

Continued from the front

II. PROCESSES (continued)

SPACE FOR ADDITIONAL PROCESS CODE. INCLUDE DESIGN CAPACITY — FOR DESCRIBING OTHER PROCESSES (code) — FOR EACH PROCESS ENTERED HERE

T04 Vacuum filter	40,000 U
T04 Vacuum filter	100,000 U
T04 Leaf Filter	300,000 U
Total	440,000 U

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	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

 CONTINUE ON PAGE 3

Continued from page 2.

FAIRFIELD

NOTE Photocopy this page before completing if 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 A L D 0 0 2 9 0 4 5 0 6 T/A C 1	W DUP T/A C 2 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	K087	800	T	D80	
2	K060	1,500	T	T04 D80	
3	D007	25	T	S02 T02 T01 T04	D30
4	K062	100	T	S02 T02 T01 T04	D30
5	K062	62,500	T	S02 S04 D79	
6	K062	250	T	T02 D80	
7	D002				Included with above
8	D007				Included with above
9	K062	3,625	T	T02 S04 D80	
10	D002				Included with above
11	D007				Included with above
12	D002	20	T	S02 T02 T01 T04	D80
13	D007				Included with above
14	D007	10	T	S02 T02 T01 T04	D80
15	F002	25	T	S02	
16	U228				Included with above
17	K062	20	T	S04 S02 T04	
18	D002	400	T	S02 T02 T01 T04	D80
19	D007				Included with above
20	F017	93	T	S01	
21	K062	14,600	T	T01 T04 D80	
22	D007				Included with above
23	U019	Undetermined		UNDETERMINED	
24	U220	Undetermined		UNDETERMINED	
25	U228	Undetermined		UNDETERMINED	
26	U239	Undetermined		UNDETERMINED	

2. PROJECT MANAGEMENT SUMM

Site Name: U.S. STEEL ~~CORP.~~ - FAIRFIELD PLANT

Site Number: ALD002904506

Owner: UNITED STATES STEEL CORPORATION

Operator:

Site Status: [X] Active [ ] Inactive [ ] Unknown

Priority: [ ] High [X] Medium [ ] Low [ ] None

3. FINAL DISPOSITION

I. EPS Final Review - Date: 3/19/85

Comments:

Site Inspection Required [X] Yes [ ] No

II. ADEM Review - Date: 3/28/85 SCM

Comments:

Follow-up Action Required [X] Yes [ ] No

III. Final Disposition:

Review & revise Date:

Edited & correct Date:

Transmitted Date:

File close-out Date:

Initiate site inspection Date:

4. ADDITIONAL COMMENTS (ONGOING & FINAL)

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
EPS FORM 3012-III

INDUSTRIAL NARRATIVE SHEET

1. Site Identification:

Site number: ALD002904516

Site name: U.S. Steel - Fairfield Plant

Site county: Jefferson

2. Industrial Narrative Summary:

Company Name: U.S. Steel - Fairfield Plant

Address: Tin Mill Road (P. O. Box 599)
Fairfield, AL 35064

Telephone No.: 205/783-2091

Contact: Gary Euler

Contact:

Contact:

Discussion: U.S. Steel has been operating in Fairfield since 1917. Review of compliance files indicate that this company owns extensive property throughout the Birmingham-Bessemer-Fairfield area. In 1980, the U.S. Steel facility filed a Part A application. At this time, they indicated that their wastes were as follows:

K087 - Decanter tank tar sludge from coking operations.

K060 - Ammonia still lime sludge from coking operation.

K062 - Spent pickle liquor, as well as benzene, toluene, and trichloroethene.

Review of other information submitted with the Part A application indicates there are several storage tanks on the facility, which store spent cleaning solution containing sodium dichromate and cyanides. These are reportedly associated with the wastewater treatment system.

ENVIRONMENTAL PROTECTION SYSTEMS, INC.

Alabama RCRA 3012 Site Ranking Scheme
EPS Form 3012-V

Site Name US Steel Corp
Site Number ALD002904506

Site Inspection Ranking Scheme

(Select one answer for each of the following seven questions)

1. Are Hazardous Substances Present?		
A. Confirmed on site!	10 points	X
B. Suspected at site!	5 points	
C. It is unknown!	2 points	
D. No hazardous substances	0 points	
E. RCRA facility only!	0 points	
2. Is There a Pollution Dispersal Pathway?		
A. Direct to surface and/or groundwater.	5 points	X
B. Indirect to surface and/or groundwater.	4 points	
C. Suspected to surface and/or groundwater.	3 points	
D. Not known for sure.	2 points	
E. No pathway.	0 points	
3. Characteristics of Human Population?		
A. High density.	5 points	X
B. Medium density.	4 points	
C. Low density.	3 points	
D. No population.	2 points	
4. Characteristics of Natural Environment?		
A. Critical habitat including endangered species, etc.	5 points	
B. Sensitive habitat.	3 points	
C. Common less sensitive habitat.	2 points	X
5. How is Human Population Affected By Site?		
A. Public utility of drinking water from site.	5 points	
B. Direct public access to site.	4 points	
C. Public access to affected surface water.	3 points	
D. Only potential for human population contact.	2 points	X
E. Low or no potential for contact.	1 point	
6. Facility Management Practices at Site?		
A. Site actively supervised and managed currently with monitoring reports and other permit and report requirements.	1 point	
B. Site inadequately managed records not up-to-date.	3 points	

C. Site not currently managed or regulated.	4 points	X	Part of facility has not been actively managed or regulated since the plant closed
D. Abandon site.	5 points		

7. Potential Responsible Parties for Site Operations?

A. Controlling party identified and accepts responsibility for site.	1 point	X
B. Suspected controlling party identified but does not accept responsibility for site.	4 points	
C. No responsible party available.	5 points	

Ranking Score =

$$\frac{10}{\#1} \times \left[\frac{5}{\#2} + \frac{2}{\#4} + \left(\frac{5}{\#3} \times \frac{2}{\#5} \right) + \frac{4}{\#6} + \frac{1}{\#7} \right]$$

TABLE 1. Ranking Assessment

NUMERICAL RANGE	PRIORITY ASSESSMENT
0-50	NONE
50-150	LOW
150-300	MEDIUM
300-450	HIGH

Ranking Score: 220

Priority Assessment: MEDIUM

Rec'd 10 # 40

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	AL 000000460

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	B. STREET	
U.S. Steel	Ensley-Pleasant Grove Road & Tin Mill Rd.	
C. CITY	**D. STATE**	**E. ZIP CODE**
Birmingham	Alabama	35224

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD					
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*	X	X	X		X
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(if yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

This site is operated by U.S. Steel and is referred to as "Exum" Dump. It has been in use since the 1920's. Preliminary sampling has indicated potential problems with oily sludge waste at the site.

The site also sits above a major fault in Jefferson County. More work is being done by this agency, EPA, with information being requested from U.S. Steel.

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
David L. Roberson	(205) 832-6728	1-6-81

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

A geosurvey has been completed and U.S. Steel has been requested to submit hydro-geological data to this office for possible placement of monitoring wells. U.S. Steel has a consulting firm compiling the data.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo, day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

EPA Form T2070-4 (10-79)

Continue On Reverse

Continued From Front

III. INVESTIGATIVE ACTIVITY NE D and PART B - PROPOSED INVESTIGATIV CTIVITY (*Continued*)

d. TYPE OF LAB ANALYSIS				
(1)				
(2)				
e. OTHER (*specify*)				
(1)				
(2)				

C. ELABORATE ON ANY OF THE INFORMATION PROVIDED IN PART B (*on front & above*) AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER (*specify*)	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY (*On Site & Off-Site*): List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE (mo,day,& yr)	3. EST. END DATE (mo,day,& yr)	4. ACTION AGENCY (*EPA, State, Private Party*)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY (*On Site & Off-Site*): List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE mo,day,& yr)	3. EST. END DATE (mo,day,& yr)	4. ACTION AGENCY (*EPA, State Private Party*)	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER (*specify*)		

David

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

George C. Wallace
Governor

751 Federal Drive
Montgomery, AL
36130
205 271-7700

Field Offices

P.O. Box 353
Decatur, AL
35602
205 353-1713

Unit 806, Building 8
225 Oxmoor Circle
Birmingham, AL
35209
205 942-6168

358 Midmost Drive
Mobile, AL
36603
205 343-7841

U.S. STEEL FAIRFIELD WORKS, FAIRFIELD PLANT
Groundwater Monitoring Inspection

On November 8, 1983, Ronald F. Ford and other members of the technical staff of the Department of Environmental Management conducted a groundwater monitoring inspection of the R.C.R.A. wells located at the U.S. Steel Fairfield Works in Jefferson County. A representative of the company gave us a map of the facility but did not stay with us during all of the sampling.

Well depths and present volumes of water were determined by measurements and calculations prior to sampling. Wells were then pumped until samples showed a constant pH and specific conductance as determined by a Presto-Tek, Model DP-38. A stainless steel Johnson-Keck pump was used in sampling some wells with samples being collected from the pump discharge hose. The pump hose was beverage grade and the pump's electrical connections were teflon coated. Between wells the pump was purged with distilled water. ISCO peristaltic pumps were used to sample the rest of the wells with samples being collected from the pump discharge hose. The tubing was new tygon tubing with a teflon and stainless steel strainer on the lower end. Between wells the pump hose, tubing and strainer were purged with distilled water.

Samples were collected and preserved in the following manner:

One half-gallon plastic jug - iced
One half-gallon plastic jug - 4 ml of Sulfuric Acid
One half-gallon plastic jug - 4 ml of Nitric Acid
One gallon glass jug - for Radiation sample of only TM-5

Samples were transported to the Environmental Laboratory Services in Montgomery for analysis.

Chain of custody was maintained by locking samples in the truck when not in sight of a state employee. No duplicate samples were taken by the facility.

All eleven wells equal and/or exceed Secondary Drinking Water Standards for Iron and Manganese. Well DF-5 exceeds Secondary D.W.S. for Chlorides.

RFF/sd

NOV 1984

Facility U.S. Steel Fairfield Works, Fairfield Plant

Permit #ALD002904506

WELL #	DATE	DEPTH TO WATER	TOTAL DEPTH	pH	WATER TEMP. °C	SPECIFIC CONDUCTANCE umho/cm.	mV	Chlorides as Cl mg./l.	Sulfate as SO_4 mg./l.	Chemical Oxygen Demand (C.O.D.) mg./l.	Iron as Fe mg./l.	Manganese as Mn mg./l.	Sodium as Na mg./l.	Phenols mg./l.
TM-1	11/8/83	10'7"	21'8"	6.3	-	700	-	38	102	7	21.8	7.17	35	<.02
TM-2	"	9'9"	23'3"	5.7	-	4,000	-	36	96	< 2	0.3	2.72	33	<.02
TM-3	"	10'5"	27'5"	6.4	-	1,000	-	59	2.0	7	0.7	1.61	70	<.02
TM-4	"	18' 10"	26'	6.2	-	800	-	45	92	14	14.4	5.71	54	<.02
TM-5	11/9/83	17'3"	25'	5.92	19.1	616	+042	22	88	14	13.2	6.72	24	<.02
TM-6	11/8/83	17' 11"	29'6"	6.6	-	800	-	36	156	9	2.0	2.98	54	< .02
TM-5	Radiation - See attached sheet													
Primary D.W.S.														
Secondary D.W.S.								250	250		0.3	0.05		

D.W.S. _ Drinking Water Standards

Facility U.S. Steel Fairfield Works, Fairfield Plant Permit # ALD002904506

WELL #	DATE	DEPTH TO WATER	TOTAL DEPTH	pH	WATER TEMP. °C	SPECIFIC CONDUCTANCE umho/cm.	mV	Chlorides as Cl mg./l.	Sulfate as SO_4 mg./l.	Chemical Oxygen Demand (C.O.D.) mg./l.	Iron as Fe mg./l.	Manganese as Mn mg./l.	Sodium as Na mg./l.	Phenols mg./l.
LF-1	11-8-83	83' 2"	103' 10"	5.45	19.6	3,560	+085	0	160	26	285.3	39.0	108	<.02
LF-2	11-9-83	47' 6"	93'	4.90	18.6	960	+115	109	160	3	178.7	9.90	16	<.02
LF-3	11-8-83	85'	90'6"	3.1	-	1,500	-	0	148	140	1198.8	329.25	56	<.02
LF-4	11-9-83	74' 6"	100'	5.45	18.8	56.5	+052	23	146	< 2	1.1	0.31	3	<.02
LF-5	11-9-83	-	-	6.07	18.6	4,070	+026	950	132	4	191.0	8.64	43	<.02
Primary D.W.S.														
Secondary D.W.S.								250	250		0.3	0.05		

D.W.S. _ Drinking Water Standards

The task will involve well sampling and analytical testing. Samples from the six existing monitoring wells and the proposed new well will be obtained quarterly for one year by Baker/TSA personnel in accordance with the Fairfield Works Procedures Manual. The protocol will be as specified in the Alabama Hazardous Waste Management Regulations for establishing initial background concentrations for the first year; that is, indicator, groundwater quality, and drinking water parameters (excluding pesticides, radioactivity, and coliform parameters) will be analyzed. At the new upgradient well, the indicator parameters will be analyzed in quadruplicate.

TASK 4 - REPORTING

Reporting will be as described in Task 3 for the Disposal Area Site.

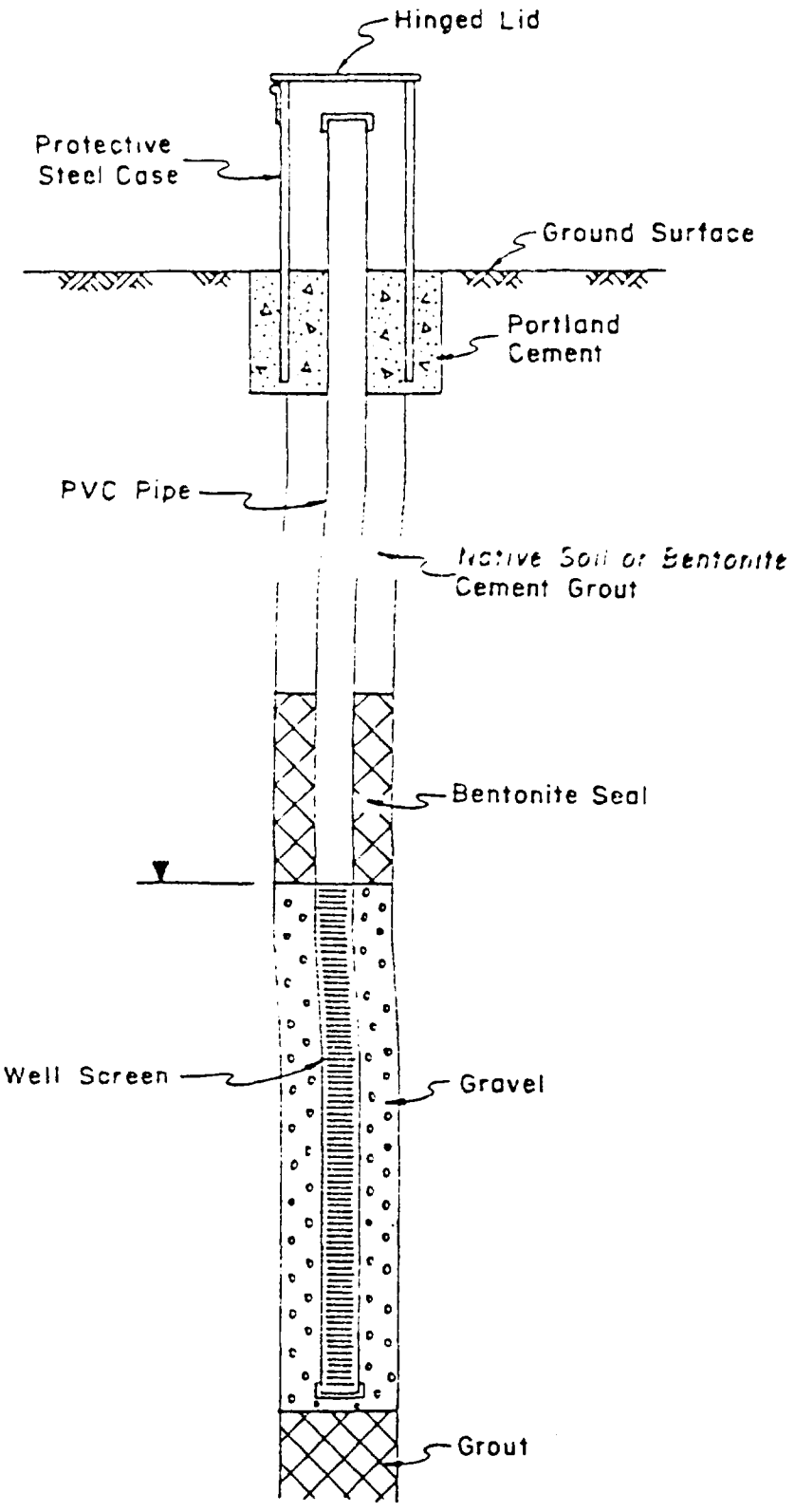


FIGURE 3 TYPICAL WELL INSTALLATION

SCALE: Not to Scale S.O.No. _____

DATE: _____ FILE: DWH

MICHAEL BAKER, JR., INC.
Consulting Engineers
BEAVER, PENNSYLVANIA

Monitoring results to date indicate that well TM-1 uniformly has been upgradient of the other wells. However, it has been affected by a seemingly transient event. Therefore, it is necessary to locate and install a new upgradient well. In this task the location and installation will be completed; subtasks will include:

Subtask 2.1 Well Location Evaluation and Subcontract Preparation
Subtask 2.2 Well Installation and Development

It is anticipated that this well will be located 200 to 300 feet northeast of TM-1. However, the final location will be based upon a site inspection by a Baker/TSA geologist and upon consideration of several factors including on-going or future activities in the candidate areas. The well will be installed by a qualified local drilling contractor under subcontract to Baker/TSA. A local surveyor, also under contract to Baker/TSA, will determine well coordinates and elevation.

The new well will be constructed of two-inch I.D., flush joint, threaded PVC pipe, installed as shown in Figure 3 to an approximate depth of 30 feet. The boring for the well will be advanced using hollow stemmed augers; split spoon samples will be taken at five foot intervals or at every change in material using a standard 1-3/8 inch I.D. split spoon in accordance with ASTM Test Method D 1586. Any drilling of bedrock will be made using the rotary air method. Water will not be used for any drilling purposes.

Soils samples will be classified visually for estimating permeability.

All work will be performed in the presence of a Baker/TSA geologist who will log the well, determine the final depth and determine that the well is installed correctly. Following installation, the well will be developed with compressed air and allowed to stabilize at least one week before sampling.

TASK 3 - GROUNDWATER SAMPLING AND ANALYSES

TECHNICAL APPROACH - TIN MILL TREATMENT PLANT AREA

At the Tin Mill Treatment Plant Area, statistically significant differences have been confirmed for pH at two downgradient wells (TM-2 and TM-6), and for specific conductance at two other downgradient wells (TM-3 and TM-4). However, in the fourth quarter of the initial background year, an unexplained transient event was detected at upgradient well TM-1. This event, a TOX measurement of 76 mg/l, is not consistent with TOX data at other wells, or other parameters at the same well. If the elevated TOX measurement was attributed to the nearby tin mill ditch (see Figure 2), it also would be expected that elevated metals concentrations or a low pH would have been observed at TM-1 or possibly TM-3 (another well in close proximity to the ditch). This, however, was not observed, and the cause of the elevated TOX reading cannot be determined. As a result, the validity of the initial background data base for the upgradient well is of concern. Because subsequent actions are linked intimately to this initial background data, it is imperative that the data base be reliable. Consequently, the GWQAP proposes installation of a new upgradient well and the re-establishment of the initial year monitoring protocol. The proposed activities are described below.

TASK 1 - COMPARISON OF SITE AND REGIONAL GROUNDWATER REGIMES

The task is equivalent to Task 1 for the Disposal Area Site. It will consist of the following subtasks:

Subtask 1.1	Data Acquisition and Review
Subtask 1.2	Comparison Between Site and Regional Groundwater Quality
Subtask 1.3	Evaluation of Downgradient Groundwater Usage
Subtask 1.4	Reporting

The activities will be as described previously for disposal site area Task 1.

TASK 2 - LOCATION AND INSTALLATION OF NEW UPGRADIENT WELL

Following the completion of the fourth quarter sampling event, an annual report will be prepared. It will include tabulations of the data and a graphical time-trend analysis for key parameters. Conclusions will be drawn with regard to site impact on local groundwater, comparisons with regional conditions will be made, and potential impacts on downgradient conditions and water uses will be assessed. A strategy for future actions also will be discussed.

indicator parameters - pH, specific conductance, TOC, TOX

groundwater quality parameters - chloride, iron, manganese, phenols, sodium, sulfate

drinking water parameters - arsenic, barium, cadmium, chromium, fluoride, lead, mercury, nitrate, selenium, silver

In addition, based upon available waste inventory information, the following specific parameters will be included in the first two quarterly sampling events:

- o naphthalene
- o cyanide

Prior to initiating the first sampling event, up-to-date waste inventory information will be reviewed, and the site-specific parameters will be amended, if necessary. The need to continue analyzing for these parameters will be assessed following the first two quarters. For the indicator parameters, testing at the upgradient well will be in quadruplicate.

Sampling and testing will be conducted in accordance with the Fairfield Works Procedures Manual previously prepared by Baker/TSA and followed during prior 1983 sampling events.

TASK 3 - REPORTING

Results of each sampling event will be reported to USSC following that event. Reports will contain a brief narrative assessment of the results and data tabulations. The Baker/TSA computerized data management system will be used to store, manipulate, and retrieve monitoring results.

there are seasonal fluctuations and if site quality differs significantly from regional quality. The emphasis will be on pH, specific conductance (or total dissolved solids), and soluble heavy metal parameters.

Baker/TSA also will identify the location of downgradient groundwater uses and the aquifers penetrated. The area of consideration will extend approximately one mile around the site; however, this will depend upon the nature and extent of uses and geology in the area. An assessment will be made of the potential for these uses to be affected by waste or waste constituent migration from the site.

Findings from Task 1 will be summarized in a concise report which will contain supporting data in tabular and graphic forms. It is anticipated that U.S.G.S. maps will be used as base maps to present regional interpretations of groundwater flow and geology. Conclusions and recommendations for future action will be made.

TASK 2 - GROUNDWATER SAMPLING AND ANALYSES

This task will consist of the following subtasks:

Subtask 2.1 Select Site-Specific Monitoring Parameters

Subtask 2.2 Perform Sampling and Analysis

As previously stated, monitoring results to date indicate statistically significant differences for pH and specific conductance at several wells and for TOC at one downgradient well. However, some inconsistent fluctuations have been observed. Therefore, it is proposed that the existing monitoring network (one upgradient and four downgradient wells) continue to be used and that sampling be conducted quarterly for one year. The parameters to be measured will include those specified in the regulations, except that the drinking water supply group will be modified as shown below:

TECHNICAL APPROACH - DISPOSAL SITE AREA

At the Disposal Site Area, statistically significant differences have been observed for pH at up and downgradient wells, for specific conductance at downgradient wells and for TOC at one downgradient well (LF-5A). However, the trends have not been consistent; for example, conductance has been fairly stable but decreasing pH has been observed at downgradient well LF-2. Similarly, at upgradient well LF-4, conductance has remained stable (averaging 128 μmhos/cm during the initial year and 106 μmhos/cm in the first semiannual sampling in 1983) while pH dropped to 5.4 during the first semiannual sampling event (May 18, 1983) and rose to 5.9 in the confirming sampling of June 28, 1983. Based upon these results and the understanding that there have been previous assessments of the affects of mining activities on groundwater quality in the region, it is proposed that the GWQAP focus on making a comparison between site-specific and regional groundwater quality, identifying downgradient groundwater uses, and also monitoring for selected specific constituents representative of wastes being managed at the site. The proposed activities are described below.

TASK 1 - COMPARISON OF SITE AND REGIONAL GROUNDWATER REGIMES

This task will consist of the following subtasks:

Subtask 1.1	Data Acquisition and Review
Subtask 1.2	Comparison Between Site and Regional Groundwater Quality
Subtask 1.3	Evaluation of Downgradient Groundwater Usage
Subtask 1.4	Reporting

State and federal agencies will be contacted and attempts made to obtain data describing area hydrogeology, aquifer characteristics, groundwater quality, and downgradient groundwater uses. Regional groundwater flow direction and rates and quality will be estimated and comparisons will be made with site-specific data. Regarding groundwater quality, regional data, if available, will be screened to determine if

These regulations also require that a Groundwater Quality Assessment Program (GWQAP) be implemented whenever it has been determined that any hazardous waste disposal facility may be affecting groundwater quality. On August 9, 1983, at the Fairfield Works, the proposed GWQAP was discussed in general terms with ADEM representatives. The program described herein corresponds to that plan outlined during that meeting.

For the Disposal Site Area, the GWQAP consists of the tasks outlined below:

Task 1 - Comparison of Site and Regional Groundwater Regimes
Task 2 - Groundwater Sampling and Analyses
Task 3 - Reporting

Tasks associated with the Tin Mill Treatment Plant Area are as follows:

Task 1 - Comparison of Site and Regional Groundwater Regimes
Task 2 - Location and Installation of New Upgradient Well
Task 3 - Groundwater Sampling and Analyses
Task 4 - Reporting

Each of these tasks is described in the Technical Approach. A schedule for their completion is provided herein.

This plan has been prepared by the following geologist and engineers of the Baker/TSA Division of Michael Baker, Jr., Inc. for United States Steel Corporation:

A. P. Pajak, P.E., Environmental Engineer
B. M. Camlin, R.G., Senior Geologist
C. J. Touhill, Ph.D., P.E., Environmental Engineer
A. J. Shuckrow, Ph.D., Environmental Engineer.

As shown by the individual resumes included in this document, the team has extensive experience in the fields of hazardous waste management and groundwater quality assessment.

May 8, 1984

Mr. Gary Euler
U.S. Steel Fairfield Works
Post Office Box 599
Fairfield, Alabama 35064

Dear Mr. Euler:

The exemption you have claimed for the Tin Mill Ditch waste water treatment unit under 40 CFR 261.(a)(3)(i) seems allowable as long as the following criteria are met:

(1). No other hazardous wastes besides K062 have been introduced into the Ditch.

(2). All spent pickle liquor that has gone and is going into the Ditch was and is solely for the purpose of waste water treatment.

If the above conditions are met, the waste oil being reclaimed from the Tin Mill Ditch is not a listed hazardous waste because it came in contact with K062 while in the Ditch, but it should be evaluated as a solid waste to determine if it exhibits any of the characteristics of a hazardous waste. Your analysis of the oil indicates it is non-hazardous and may be managed accordingly.

Sincerely,

Bernard E. Cox, Jr., Chief
Industrial and Hazardous Waste Section
Land Division

BEC/DH/sdm

Key to Units Shown on Items V and VI--Fairfield Plant

Unit	Description
D-1	Injection well
D-6	Landfill
T-9	Sedimentation lagoon
T-10	Equilization lagoons (2)
T-11	Clarifiers (3)
T-12	Vacuum filter
T-13	Leaf filter
T-51	Vacuum filters (2)
S-2	Drum storage
S-7	Storage tanks (2)
S-10	Storage lagoon
S-13	Storage tank
S-14	Storage tank
S-15	Storage tank
S-16	Storage tank
S-17	Storage tank
S-18	Storage tank
S-19	Storage tank
S-20	Storage lagoons (6)
S-21	Storage tank
S-22	Storage lagoon
S-23	Storage tank
S-24	Storage tank
S-26	Storage tank
S-28	Storage tank
S-29	Storage tank
S-31	Drum storage
S-32	Storage tanks

HAZARDOUS WASTE CONTINGENCY PLAN

EFFECTIVE NOVEMBER 19, 1980

1. Drum Storage (S-2)

   In the event of spills from drums, the Transportation Department will clean up spilled material and contaminated earth and transport it to No. 10 Dump.

2. Paint Drum Storage (S-31)

   In the event of rupture or spill, the Sheet Mill Division Superintendent will be responsible for having the spilled material and contaminated earth taken to No. 10 Dump.

3. Tin Mill Ditch Trickle Tank (S-7)

   Leaks from this tank will go into the ditch and to the Tin Mill waste treatment plant where it will be treated.

4. Cleaning Solution, Pickling Solution and Treating Solution Tanks in ETL Basement (S-13, 14, 16, 17, 26 and 28)

   Spillage will flow to sumps and is pumped back to Tank S-13 in No. 1 ETL basement or Tank S-14 in No. 4 ETL basement.

5. 12,000 Gallon Tank North of No. 4 ETL (S-15)

   Tin Mill Operations will divert leaks or spills to prevent the material from entering the sewers. The Tin Mill Division Superintendent will be responsible for having the spilled material and contaminated earth taken to No. 10 Dump. Any spilled material not diverted will flow into the plant recirculating water system.

6. Brick Lined Waste Pickle Liquor Sumps at Pickle Lines (S-18 and S-19) and Piping to the Tank (S-21) at the Acid Regeneration Plant

   If a significant leak occurs in the piping system, Tin Mill Operations will notify Plant Security. Plant Security will prevent unauthorized entry into the affected area and will have the Fire Department wash down the waste pickle liquor. The run-off will flow into the plant recirculating water system and be neutralized. The Tin Mill Division Superintendent will be responsible for repairs to the piping and for having any contaminated earth taken to No. 10 Dump.

7. Brick Lined Waste Sump at No. 4 Galvanizing Line (S-23)

   Any piping leaks shall be reported to the Sheet Mill Division Superintendent who will be responsible for effecting repairs to the piping and having the contaminated earth taken to No. 10 Dump.

8. Paint Line Waste Sump (S-24)

Any piping leaks shall be reported to the Sheet Mill Division Superintendent who will be responsible for effecting repairs to the piping and having the contaminated earth taken to No. 10 Dump. Leakage would flow to the plant recirculating system where acid would be neutralized.

9. South Waste Sump at No. 4 Galvanizing Line (S-29)

Any spilled material will be soaked up with absorbent material and taken to No. 10 Dump along with any contaminated earth.

10. Temper Mill Sumps - Sheet Mill (S-32)

Any spillage will flow to the plant recirculating water system where the oil and combined trichloroethylene will be skimmed off.

11. Pickle Liquor Lagoons - Regeneration Plant (S-20 and S-22)

In case of a leak, either Fairfield Works Inspectors or the Regeneration Plant Operators will notify the Division Superintendent-Central Maintenance who will be responsible for effecting repairs and/or containing the leakage. If leakage flows to plant recirculating water system, it will be neutralized by the ED&C Division. If there is a significant flow to Little Creek, Central Maintenance Division will neutralize by adding lime in the ditch and Plant Security will provide any necessary protection of the public.

12. Tin Mill Waste Treatment Plant Equalization Basins (T-10), Clarifiers (T-11) and Vacuum Filters (T-12)

The Foreman and/or the Operator will take immediate steps to stop the loss of hazardous wastes. If any assistance is required by other Maintenance or Construction personnel, the Division Superintendent-Central Maintenance shall be notified. Any spillage will flow to the final effluent control pond where it will settle and/or mix with other waste water before flowing to Opossum Creek.

13. Tin Mill Waste Treatment Plant Sludge Pits (S-10)

Any material spilled around pits when sludge is being transferred shall be placed back in the pit.

14. Tin Mill Ditch Basin at Oil Skimmer (T-9)

All spills will flow back into ditch.

15. Injection Well Filter (T-13)

Any spilled liquids will flow back into acid sump.

16. Spent Pickle Liquor Injection Well (D-1)

In the event of a leak, Plant Security will provide protection of the public and have the Fire Department wash down the equipment and work areas. ED&C Division and Plant Engineering will make the necessary arrangements to have the leak sealed. Spillage and flow to the plant recirculating water system will be neutralized.

17. Landfills - No. 10 Dump (D-6)

The Division Superintendent of Transportation will be responsible for repairing any leaks and returning waste materials to the lagoons.

18. Vacuum Filters - Bio-Treatment Plant (T-51)

In case of a leak, the flow to the filter will be stopped, repairs effected and spilled material absorbed and transferred to No. 10 Dump.

19. General

In the event of leaks or spills which cannot be quickly controlled, the operating unit producing the hazardous waste will be immediately shut down if this is the only way to stop the flow of the waste.

Any person observing spill of hazardous waste shall immediately notify the Foreman and/or Superintendent of the area who will then notify the Emergency Coordinator. The Emergency Coordinator will make notification to the National Response Center.

Emergency Coordinators

Gary Euler 1104 Highland Drive Fairfield, Alabama	Home: 787-8505	Office: 4236
James T. Alley 1109 Delwood Place Birmingham, Alabama	Home: 822-4256	Office: 4436
L. C. McLean 3249 Mockingbird Lane Birmingham, Alabama	Home: 822-0375	Office: 2201

Emergency Equipment

Plant Fire Engine
Plant Construction Department Equipment

REQUIRED EQUIPMENT 265.32

(a) Internal communications or alarm for emergency instructions.

(b) Telephone or radio for summoning help from local fire and police departments, etc.

(c) Portable fire extinguishers or other fire fighting equipment and spill control equipment.

(d) Water, foam, sprinklers, etc. adequate for fire fighting.

S-10 Tin Mill Treatment Plant Storage Lagoon - Sludge is not flammable and has a very low level of hazard to personnel and no likelihood of contaminating environment. Fire fighting equipment, spill control, and communications equipment are not required.

S-18, S-19 Waste Pickle Liquor Sumps - Material is not flammable, sumps are below ground and there is no likelihood of a situation requiring an emergency alarm or which could damage the environment; therefore no special equipment is required.

S-20, S-21, S-22, T-13, D-1 Spent Pickle Liquor Facilities - Material is not flammable. Telephone is available in the injection well building to summon assistance from other areas of the plant in the event of a leak.

S-31 Paint Drum Storage - Material is flammable. Telephones are available in adjacent buildings to summon the plant fire department. Fire plugs and portable fire extinguishers are available. Alarm system is not needed. Volume and nature of material do not warrant spill control equipment on site.

S-32 Temper Mill Sumps - Lubricating oil in sumps in basement. No emergency is likely except for slight fire hazard. On-site fire extinguishers and fire hoses are available and a sprinkler system protects the basement. Telephones are accessible in the building for summoning the plant fire department.

T-9, T-10 Tin Mill Ditch Sedimentation Lagoon and Equalization Lagoons - Waste water is not flammable; leaks would flow back to ditch and would create no emergency. No emergency equipment is required.

D-6 Landfills - Contain some flammable material, but site is remote and fire could not spread outside pit. Telephone is available in adjacent injection well building to summon plant fire department.

TRIP REPORT & SITE STATUS REVIEW
U.S. STEEL EXUM DUMP
BIRMINGHAM, ALABAMA
TDD F4-8010-4

Introduction

Arrangements were made by Ecology and Environment, Inc. (E&E) to conduct a site reconnaissance of U.S. Steel's Exum Dump in Birmingham, Alabama on November 17, 1980. The participants in this site visit were as follows:

Gary Euler, Environmental Engineer U.S. Steel
Buddy Cox, Alabama Department of Public Health, Division of Solid Waste & Vector Control
David Roberson, Alabama Department of Public Health, Division of Solid Waste & Vector Control
Steve Hall, U.S. Environmental Protection Agency, Surveillance and Analysis Division (SAD)
Charles Wilson, E&E FIT
Jennifer Scott-Simpson, E&E FIT

The purpose of this meeting was two-fold: (1) to bring EPA records up-to-date on the on-going activities at Exum Dump and (2) to determine the type of additional investigative work required to assess the extent of contamination originating from Exum Dump. Steve Hall's participation in this investigation also included the collection of environmental samples to determine if leachate from the dump was being conveyed into adjacent surface waters.

Site History and Observations

Exum Dump, comprised of between 75 and 100 acres, is located about one mile west of U. S. Steel's Fairfield Works near Birmingham, Alabama. The site originally was a valley which, over at least the past 50 years, has been partially filled with wastes primarily from the manufacturing of steel. According to U. S. Steel, 38 acres of Exum Dump are being used for waste disposal and the remaining acreage is used for raw materials storage. The source and types of waste disposed of at Exum Dump by U. S. Steel are presented in Attachment 1. The active waste disposal areas consist of two pits, approximately 2 to 3 acres in size, with an original depth of 40 to 50 feet. One pit contains waste oil while the other holds filter cake. During the site reconnaissance, the eastern portion of the site was also actively being used for waste disposal. A tank truck was observed emptying its contents over the edge of a 60 foot embankment. Mr. Gary Euler, U.S. Steel representative, stated that the company is trying to prevent their waste transport contractors from using this area as a disposal site and the company is having limited success.

Access to Exum Dump is provided by an unimproved road that enters the site from the south and a railway that enters the site from the northeast. The site is bordered on the south and west by forested land, on the north by a fenced field and on the east by a depressed area containing water. Further east is Chem Haulers, Inc. Chem Haulers uses this area to wash and clean their trucks. Southeast of Exum Dump is a wood preserving company.

Three areas of concern were noted during the reconnaissance visit to Exum Dump. The group of pits used for waste oil and filter cake disposal were unlined and may present a threat to groundwater quality. The second area of concern is the eastern portion of the dump and the adjacent lowland area which was actively receiving wastes and potentially receives contaminated runoff. The lowland area east of Exum Dump contains ponded water fed by a stream originating from the north. Investigators saw no apparent outflow for this water. The USGS topographic map indicates that this depression is a sinkhole. Two similar low areas, much smaller in size, were noted on the northeastern border of the dump beyond the railroad tracks. The third area of concern is the western side of Exum Dump which is at a lower elevation than the other portions of the dump. A culvert leads from the dump into a stream that empties into Bayview Lake. County officials report that the water quality of Bayview Lake is poor and therefore, the water is not used as a drinking supply.

Future Site Activities

The State of Alabama representatives have approached the Exum Dump site as a single location with contaminants potentially originating from multiple sources. Given this approach, the State ordered Chem Haulers and the wood preserving company to cease discharge of contaminated wastewater and to develop an effective waste management system. Currently, each company is working on the installation of a waste water treatment system. Chem Haulers will supplement their treatment system by shipping some of their wastes (e.g. acids) to another facility which is capable of treating the waste properly and discharging the treated waste to a sewer. The wood preserving company plans to use a closed-cycle wastewater treatment system.

U. S. Steel and the State of Alabama are also cooperating to determine the extent of groundwater contamination, if any, that has originated from the Exum Dump. U. S. Steel obtained the services of a private consulting firm to determine the hydrogeological characteristics of the site. This study is complete and will serve to ensure proper well placement. The State is now waiting to receive a schedule from U. S. Steel that will outline the dates for the installation of six groundwater monitoring wells.

After the wells are installed, the State of Alabama will arrange for water samples to be collected from each well and analyzed. The groundwater quality will be evaluated according to drinking water standards and the presence, if any, of priority pollutants.

Recommendations

The past studies of Exum Dump have served as a preliminary assessment of the hazardous waste problems associated with the site. The current groundwater assessment program required by the State is the first study that is intended to provide portions of a detailed site characterization. E & E recommends that this type of site characterization be conducted for the other media potentially affected by contaminants from Exum Dump, that is, surface water and soil. A thorough description of the existing contaminated areas and those areas that are potentially contributing to contamination is necessary prior to developing a feasibility study for remedial alternatives.

EPA Notification of Hazardous Waste Site

R

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

810009

PLSC

Person Required to Notify:

Enter the name and address of the person or organization required to notify

Name: United States Steel Corporation
Street: 600 Grant Street
City: Pittsburgh State: Pa Zip Code: 15230

Site Location.

Enter the common name (if known) and actual location of the site

SEE ATTACHED
ALD004001350

Name of Site: Fairfield Works - U. S. Steel Corporation
Street: Tin Mill Road
City: Fairfield County: Jefferson State: Al Zip Code: 35064

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): Varner, J. A. - Chief Engineer
Phone: 205/783-2201

Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site

From (Year): To (Year): SEE ATTACHED

Waste Type: *Choose the option you prefer to complete*

Option 1: 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

SEE ATTACHED

RECEIVED
EPA/REGION IV
JUN 9 1981

090016

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

COMPOSITIONS OF RESIDUALS AND DISPOSAL SITE LOCATIONS

acilities	Residual	Composition	Disposal Site Location
ire Mill	Wastewater Treatment Plant Wire Drawing Grease	Proprietary	Jefferson County Dump
	Wire Drawing Soap	Proprietary	Jefferson County Dump
	Nail Quench Sludge	SiO_2 0.22%; Al_2O_3 1.3%; CaO 0.5%, MgO .28%; C 1.7%; N 0.12%; Cl 5.8%	In-Plant Dump at Wire Mill
	Trichloroethylene Degreaser Sludge	Not Available	Jefferson County Dump
lectric & Utilities Division	Tin Mill Waste Treatment Plant Filter Cake	H_2O 50%, FeO 15%; $CaCO_3$ 15%; Fe 5%; Oil & Grease 10%; Other 5%	Exum Dump
	Reclaim Water Skimmer Waste Oil	H_2O 40%; Oil 55%; FeO 5%	Exum Dump
	Final Effluent Control Pond Waste Oil	H_2O 40% Oil 60%	Exum Dump
ot Roller Division	Roller Grinder Sludge	Fe 80%	Exum Dump
	Q-BOP Vacuum Filter Cake	Fe 48.9%, H_2O 31.6%, Lime 11.2%; C 2.6%, Si 2.4%; Magnesia 13,000 ppm; Mn 9,000 ppm; Alumina 9,000 ppm, S [illegible],000 ppm	Exum Dump
	Q-BOP Rake Classifier Sludge	Fe 2[illegible] 1%; Lime 48%, H_2O 12.9%; Si 10.2%; Magnesia 3.8%, C 13,000 ppm; Mn 12,000 ppm; P 8,000 ppm; Alumina 7,000 ppm	Exum Dump
	Q-BOP Flux Spill	$CaCO_3$ 81.3%, Mg_2CO_3 4%, Si_2O_3 1.3%; Calcium Fluoride 9.2%; H_2O 3.6% P 100 ppm, K_2O 280 ppm, Fe 410 ppm; Al_2O_3 230 ppm	In-Plant Dump Off Dolomite Road
oke and Coal hemical Division	Absorbent	Not Available	Coke Plant Lagoon
	Residue from Tar Production	SiO_2 3.3[illegible]%, Fe_2O_3 7.03%, Al_2O_3 1.85%, CaO 19.[illegible]%, MgO 22.64%, K_2O [illegible] S [illegible] 68%; Chloride 0.21%, C 2.53%, NH_2O 0.01% Hydrogen 1.19%	Coke Plant Lagoon
	Wastewater Treatment Plant Oily Grit	Not Available	Coke Plant Lagoon
In Division	Hot Strip Mill & Coal Roll Reduction - Roll Shop Grinder Sludge	H_2O 50%; Fe 10%; SiO_2 20%; Al_2O_3 3%; C 3%; Oily Matter 5 ppm	Exum Dump
	Roll Reduction Shop Blast Grit	H_2O 0%; Fe 96%; SiO_2 1.5%; Al_2O_3 1.8%; C 1.2%	In-Plant Dump (#5)
ntral Maintenance ivision	Fairfield Tractor Shop Degreaser Sludge	Oil 25%, Grime 75%	Exum Dump
	Fairfield Machine Shop Degreaser Sludge	Oil 25% Grime 75%	Exum Dump

NOTIFICATION OF HAZARDOUS WASTE SITE

SITE	DATES OF WASTE HANDLING	TYPE WASTE	QUANTITY (b)	FACILITY AREA (b)
Exum Dump (A) East End	Unknown start to 1974 or 1975 See Note (a).	1. Coke Plant Tar Decanter Sludge (K087)	Generating 800 T per year in recent years.	35 Acres (Total Exum)
	Unknown start to 1974 or 1975 See Note (a).	2. Residual deposits from cleaning tanks (Coke Plant) that contained tar, pitch, naphthalene, sulfuric acid, creosote, wash oil, light oil and BTX (Benzene(U019), Toluene (U220), Xylene (U239)) products.	Unknown	
	Unknown start to 1970 See Note (a).	3. Coke Plant Residues from BTX operating equipment, stills, acid pots and light oil agitators (operation discontinued in 1970).	Unknown	
(B) Oil Pit	1973 to Nov. 1980	4. Same as 1 and 2 above.	Unknown	
	1974 or 1975 to Nov. 1980	5. Oil from Tin Mill ditch which has been in contact with waste pickle liquor (K062)	Unknown	
	July 1975 to Nov. 1980	6. Coke Plant ammonia still lime sludge (K060) mixed with biomass from biological treatment plant.	1500 T per year	

SITE	DATES OF WASTE HANDLING	TYPE WASTE	QUANTITY (b)	FACILITY AREA (b)
Exum Dump (C) Filter Cake Pit	1973 to Nov. 1980	7. Tin Mill waste treatment plant filter cake (K062, D007).	14,600 T per year	
Coke Plant (A) North of Biotreatment Plant		8. Same as 1, 2 and 3 above.		1/3 acre
(B) North of Pitch Plant	About 1970	9. Naphthalene (U165)	900 cu.ft.	200 sq.ft.
Tin Mill Dump	Unknown start to about 1972	10. Same as 1, 2 and 3 above.		20 acres
No. 5 Dump		11. Same as 1, 2 and 3 above.		25 acres
Old Drum Reclaiming Area	Unknown start to Nov. 1980	12. Predominantly empty drums previously containing oil and grease - possibly some with unknown contents.	Unknown	1/2 acre

Notes: (a) The Coke Plant began operation in the early 1900's. Records of waste disposed of from the coking operations were not kept until the Fall of 1980.

(b) Quantities and areas are rough estimates.

Defining the problems associated with Exum Dump is complicated by several factors:

1) the large acreage involved and the depth of fill;
2) the presence of limestone and likelihood of sinkholes in the area;
3) the reported existence of a fault running through the dump;
4) lack of historical information on the waste management practices; and
5) the existence of adjacent facilities that may be contributing to contamination.

At present, there are many knowledge gaps in the Exum Dump information. Surface waters are contaminated but the source(s) and extent of contamination are not known. Soils on the dump surface are contaminated but the depth of contamination and site runoff patterns have not been documented. The 38 acres actively used for waste disposal have not been accurately mapped to facilitate interpretation of potential migratory pathways. Therefore, a significant amount of work is still needed to ensure a reliable definition of the potential site problems.

E & E recommends that the next steps involving Exum Dump be directed toward completing the site characterization through developing a full sampling program. Historical and current aerial photographs would assist in the selection of the appropriate sampling points. The surface waters on the eastern and western side of the site should be sampled again for organics and metals. The samples would include both water and sediment phases and would be collected at stations farther upstream and downstream than have been selected for preliminary reconnaissance. Also, a formal grid sampling plan should be developed for collection of soil samples. The entire surface of Exum Dump is not believed to be contaminated; yet, the specific areas of surface contamination have not been defined. Use of a grid sampling approach with knowledge of the general waste disposal locations would facilitate characterization of such a large surface area. The results of this sampling should enable the review agencies to focus on the most serious areas of concern. Then these agencies could direct development of remedial actions for specific areas of the dump instead of attempting to alleviate the problems of the entire 75 to 100 acres with one plan.

These recommended work items are needs typical of site characterization and can be scheduled concurrently with the on-going groundwater assessment. It is suggested that a critical flow path for assimilating data on Exum Dump be developed in the near future to assure efficient management of work tasks and to facilitate data organization and interpretation.

HAZARDOUS WASTE MANAGEMENT FACILITIES
SECOND QUARTERLY REPORT
GROUND WATER MONITORING
U.S. STEEL FAIRFIELD WORKS
JULY 14, 1982

INTRODUCTION

This report constitutes the second quarterly report of primary drinking water parameters required under Section 4-256.12 of ADPH Hazardous Waste Management Regulations for the continued compliance of United States Steel Corporation - Fairfield Works hazardous waste management facilities. Testing of coliform has been excluded, per prior agreement with ADPH. The report has been prepared by our environmental consultants, Dames & Moore, Atlanta, Georgia.

Two groups of hazardous waste management facilities are being monitored under the regulations. One group is comprised of an Impoundment, Lined Spent Pickle Liquor Storage Pond, and Unlined Spent Pickle Liquor Storage Pond. These are monitored by wells designated LF-1, LF-2, LF-3A, LF-4 and LF-5A. The second group includes the Tin Mill Ditch Sedimentation Lagoon, Tin Mill Treatment Plant Equalization Basins, and the Tin Mill Treatment Plant Sludge Treatment Lagoon which are monitored by wells designated TM-1, TM-2, TM-3, TM-4, TM-5 and TM-6.

SAMPLING AND ANALYSIS

On May 15, 1982, samples were collected from the monitoring wells associated with the hazardous waste facilities by Dames & Moore personnel. Laboratory analysis of the samples was performed by Harmon Engineering and Testing of Auburn, Alabama. The analyses were received by Dames & Moore on July 8, 1982

ANALYTICAL RESULTS

The following primary drinking water parameters have been found to exceed the maximum contaminant levels (standards) listed in Section 4-256.27(C). The laboratory omitted the SDWA limit for Gross Beta, which is 50 pCi/L.

Radium - Well TM-1, with possible exceedence in Well TM-2.

Gross Alpha - Well TM-1, with possible exceedences in wells TM-2, TM-5, and LF-1.

CONCLUSION

This concludes the reporting that is required to maintain compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12 for the Fairfield hazardous waste management facilities. All other required analytical results and field measurements made during the second quarter are on file at Fairfield Works.

ATTACHMENTS: Three test data sheets.

HARMON ENGINEERING & TESTING

AUBURN INDUSTRIAL PARK, AUBURN, AL. 36830 (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames & Moore, Inc.
455 East Paces Ferry Road
Atlanta, GA. 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01
DATE SAMPLE RECEIVED 5/17/82
DATE DATA TRANSMITTED 6/30/82
CLIENT JOB REFERENCE U.S. Steel GW Monitoring - Second Quarter

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No	TM-1 5721	TM-2 5722	TM-3 5723	TM-4 5724
Arsenic	0.05		<0.02	<0.02	<0.02	<0.02
Barium	1.0		<0.5	<0.5	<0.5	<0.5
Cadmium	0.01		<0.01	<0.01	<0.01	<0.01
Chromium	0.05		<0.05	<0.05	<0.05	<0.05
Lead	0.05		<0.05	<0.05	<0.05	<0.05
Mercury	0.002		<0.001	<0.001	<0.001	<0.001
Selenium	0.01		<0.005	<0.005	<0.005	<0.005
Silver	0.05		<0.02	<0.02	<0.02	<0.02
Fluoride	1.4-2.4		0.12	0.18	0.11	0.39
Nitrate-N	10		<0.1	<0.1	<0.1	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01	<0.01
Radium, pCi/L	5		14±4.9	5.7±4.2	<0.6	<0.6
Gross Alpha pCi/L	15		43±17	20±15	<2	<2
Gross Beta pCi/L	-		22±3	12±3	<3	5±2

AN ENGINEERING-SCIENCE COMPANY

Approved for Transmittal
Laboratory Manager

HARMON ENGINEERING & TESTING

AUBURN INDUSTRIAL PARK, AUBURN, AL. 36830 (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames & Moore, Inc.
455 East Paces Ferry Road
Atlanta, GA. 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01
DATE SAMPLE RECEIVED 5/17/82
DATE DATA TRANSMITTED 6/30/82
CLIENT JOB REFERENCE U.S. Steel GW Monitoring-Second Quarter

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No.	TM-5 5725	TM-6 5726	LF-1 5727	LF-2 5728
Arsenic	0.05		<0.02	<0.02	<0.02	<0.02
Barium	1.0		<0.5	<0.5	<0.5	<0.5
Cadmium	0.01		<0.01	<0.01	<0.01	<0.01
Chromium	0.05		<0.05	<0.05	<0.05	<0.05
Lead	0.05		<0.05	<0.05	<0.05	<0.05
Mercury	0.002		<0.001	0.001	<0.001	<0.001
Selenium	0.01		<0.005	<0.005	<0.005	<0.005
Silver	0.05		<0.02	<0.02	<0.02	<0.02
Fluoride	1.4-2.4		0.23	<0.10	0.10	0.42
Nitrate-N	10		<0.1	<0.1	0.2	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01	<0.01
Radium, pCi/L	5		<0.6	<0.6	<0.6	<0.6
Gross Alpha pCi/L	15		16±12	<2	21±18	<2
Gross Beta pCi/L	-		24±3	<3	18±3	6±2

Approved for Transmittal
Laboratory Manager

AN ENGINEERING-SCIENCE COMPANY

HARMON ENGINEERING & TESTING

AUBURN INDUSTRIAL PARK, AUBURN, AL. 36830 (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames & Moore, Inc.
455 East Paces Ferry Road
Atlanta, GA. 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01

DATE SAMPLE RECEIVED 5/17/82

DATE DATA TRANSMITTED 6/30/82

CLIENT JOB REFERENCE U.S.Steel GW Monitoring - Second Quarter

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No.	LF-3A 5729	LF-4	LF-5A 5731
Arsenic	0.05		<0.02	<0.02	<0.02
Barium	1.0		<0.5	<0.5	<0.5
Cadmium	0.01		<0.01	<0.01	<0.01
Chromium	0.05		<0.05	<0.05	<0.05
Lead	0.05		<0.05	<0.05	<0.05
Mercury	0.002		<0.001	<0.001	<0.001
Selenium	0.01		<0.005	<0.005	<0.005
Silver	0.05		<0.02	<0.02	<0.02
Fluoride	1.4-2.4		<0.1	<0.1	<0.1
Nitrate-N	10		4.2	0.7	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01
Radium, pCi/L	5		<0.6	<0.6	<0.6
Gross Alpha pCi/L	15		<2	<2	<2
Gross Beta pCi/L	-		14±3	6±2	3±2

AN ENGINEERING-SCIENCE COMPANY

Approved for Transmittal

Laboratory Manager

GW - U.S. Steel Corp
Off Co.

United States Steel Corporation

THEODORE STEVENSON
GENERAL SUPERINTENDENT

FAIRFIELD WORKS
P. O. BOX 599
FAIRFIELD, ALABAMA 35064

APR 1982
RECEIVED
Health Dept.
Solid Waste

April 19, 1982

Mr. Bernard E. Cox
Chief of Hazardous & Industrial Waste Section
Division of Solid and Hazardous Waste
434 Monroe Street
Montgomery, Alabama 36130-1701

Dear Mr. Cox:

First Quarterly Report
Ground Water Monitoring
U. S. Steel Corporation - Fairfield Works

The attached First Quarterly Report of drinking water parameters is presented in compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12.

The report meets the regulatory requirements except for the 15-day time limit. It will be noted that the analytical data sheets indicate laboratory transmittal on March 25, 1982. However, when the original data was received by our consultants, it was noted that results of several analyses were missing from the data sheets. The laboratory then submitted corrected data sheets which were received by our consultants April 9 and are included in this report.

If you have any questions, please contact us.

Attachments

HAZARDOUS WASTE MANAGEMENT FACILITIES
FIRST QUARTERLY REPORT
GROUND WATER MONITORING
U. S. STEEL CORPORATION - FAIRFIELD WORKS
APRIL 14, 1982

INTRODUCTION

This report constitutes the first quarterly report of primary drinking water parameters required under Section 4-256.12 of ADPH Hazardous Waste Management Regulations for the continued compliance of United States Steel Corporation - Fairfield Works hazardous waste management facilities

Two groups of hazardous waste management facilities are being monitored under the regulations. One group is comprised of an Impoundment and Spent Pickle Liquor Storage Ponds. These are monitored by wells designated LF-1, LF-2, LF-3A, LF-4 and LF-5A. The second group includes the Tin Mill Ditch Sedimentation Lagoon, the Tin Mill Treatment Plant Equalization Basins, and the Tin Mill Treatment Plant Sludge Treatment Lagoon which are monitored by wells designated TM-1, TM-2, TM-3, TM-4, TM-5 and TM-6.

SAMPLING AND ANALYSIS

On February 18, 1982, samples were collected from the monitoring wells by our consultants, Dames & Moore, of Atlanta, Georgia. Laboratory analysis of the samples was performed by Harmon Engineering and Testing of Auburn, Alabama. The final laboratory reports were received by Dames & Moore on April 9, 1982.

ANALYTICAL RESULTS

The following primary drinking water parameters have been found to exceed the maximum contaminant levels (standards) listed in Section 4.256.27(C).

Arsenic	- Wells LF-1, LF-2, LF-3A and LF-5A
Lead	- Well LF-3A
Radium	- Wells TM-1, TM-2, TM-4, TM-5, TM-6 and LF-3A
Gross Alpha	- Wells TM-1, TM-2, TM-4, TM-5, TM-6, LF-1, LF-2, and LF-3A (possible Exceedance)

CONCLUSION

This report contains the information that is required to maintain compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12 for the Fairfield hazardous waste management facilities. All other required analytical results and field measurements made during the first quarter are on file at Fairfield Works.

ATTACHMENTS

Three test data sheets

HARMO ENGINEERING & TESTING

AUBURN INDU RIAL PARK, AUBURN, AL. 3F (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames and Moore, Inc.
455 East Paces Ferry Road
Suite 200
Atlanta, GA 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01
DATE SAMPLE RECEIVED 2/19/82
DATE DATA TRANSMITTED 3/25/82
CLIENT JOB REFERENCE US Steel GW Monitoring

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No.	TM1 5213	TM2 5214	TM3 5215	TM4 5216
Arsenic	0.05		<0.05	<0.05	<0.05	0.05
Barium	1.0		<0.5	<0.5	<0.5	<0.5
Cadmium	0.01		<0.005	<0.005	<0.005	<0.005
Chromium	0.05		<0.02	<0.02	<0.02	<0.02
Lead	0.05		<0.02	<0.02	<0.02	<0.02
Mercury	0.002		<0.002	<0.002	<0.002	<0.002
Selenium	0.01		<0.01	<0.01	<0.01	<0.01
Silver	0.05		<0.01	<0.01	<0.01	<0.01
Fluoride	1.4-2.4		0.20	0.21	0.16	0.37
Nitrate-N	10		<0.1	<0.1	<0.1	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01	<0.01
Radium, pCi/L	5		198±96*	72±42*	<2	158±92*
Gross Alpha pCi/L	15		68±8	110±9	13±5	52±7
Gross Beta pCi/L	50		8.4±1.3	7.1±1.1	1.7±0.7	2.6±0.7

* High statistics due to high amount of solids.

AN ENGINEERING-SCIENCE COMPANY

Approved for Transmittal
Mark Sloan
Laboratory Manager

HARMC ENGINEERING & TESTING

AUBURN INDU TRIAL PARK, AUBURN, AL. 3 30 (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames and Moore, Inc.
455 East Paces Ferry Road
Suite 200
Atlanta, GA 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01
DATE SAMPLE RECEIVED 2/19/82
DATE DATA TRANSMITTED 3/25/82
CLIENT JOB REFERENCE US Steel GW Monitoring

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No.	TM5 5217	TM6 5218	LF1 5219	LF2 5220
Arsenic	0.05		<0.05	<0.05	0.27	0.50
Barium	1.0		<0.5	<0.5	<0.5	<0.5
Cadmium	0.01		<0.005	<0.005	<0.005	<0.005
Chromium	0.05		<0.02	<0.02	<0.02	<0.02
Lead	0.05		<0.02	<0.02	<0.02	<0.02
Mercury	0.002		<0.002	<0.002	<0.002	<0.002
Selenium	0.01		<0.01	<0.01	<0.01	<0.01
Silver	0.05		<0.01	<0.01	<0.01	<0.01
Fluoride	1.4-2.4		0.37	0.17	0.29	0.16
Nitrate-N	10		<0.1	<0.1	<0.1	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01	<0.01
Radium, pCi/L	5		171±93*	117±88*	<2	<2
Gross Alpha pCi/L	15		86±8	38±6	34±6	35±6
Gross Beta pCi/L	50		3.2±0.8	1.6±0.5	1.8±0.6	1.5±0.5

* High statistics due to high amount of solids.

AN ENGINEERING-SCIENCE COMPANY

Approved for Transmittal
Mark Shear
Laboratory Manager

HARMON ENGINEERING & TESTING

AUBURN INDUSTRIAL PARK, AUBURN, AL. 36830 (205)821-9250

GROUNDWATER MONITORING LABORATORY RESULTS

SDWA PARAMETERS

Dames and Moore, Inc.
455 East Paces Ferry Road
Suite 200
Atlanta, GA 30363

Attn: Mr. Robert Hunter

HE&T PROJECT 675-01
DATE SAMPLE RECEIVED 2/19/82
DATE DATA TRANSMITTED 3/25/82
CLIENT JOB REFERENCE US Steel GW Monitoring

PARAMETER	SDWA LIMITS mg/L	WELL ID. LAB. No.	LF3A 5221	LF4 5222	LF5A 5223
Arsenic	0.05		0.80	<0.05	0.18
Barium	1.0		<0.5	<0.5	<0.5
Cadmium	0.01		<0.005	<0.005	<0.005
Chromium	0.05		<0.02	<0.02	<0.02
Lead	0.05		0.19	<0.02	<0.02
Mercury	0.002		<0.002	<0.002	<0.002
Selenium	0.01		<0.01	<0.01	<0.01
Silver	0.05		<0.01	<0.01	<0.01
Fluoride	1.4-2.4		0.26	0.10	0.10
Nitrate-N	10		<0.1	<0.1	<0.1
Endrin	0.0002		<0.0002	<0.0002	<0.0002
Lindane	0.004		<0.004	<0.004	<0.004
Methoxychlor	0.1		<0.1	<0.1	<0.1
Toxaphene	0.005		<0.005	<0.005	<0.005
2,4-D	0.1		<0.1	<0.1	<0.1
2,4,5-TP Silvex	0.01		<0.01	<0.01	<0.01
Radium, pCi/L	5		90±86*	<2	<2
Gross Alpha pCi/L	15		11±5	4±2	<3
Gross Beta pCi/L	50		<0.6	<0.6	<0.6

* High statistics due to high amount of solids.

AN ENGINEERING-SCIENCE COMPANY

Approved for Transmittal
Mark Greene
Laboratory Manager

BEC

9/21

United States Steel Corporation

FAIRFIELD WORKS
P. O. BOX 599
FAIRFIELD, ALABAMA 35064

September 2, 1983

Mr. Harold W. Taylor
Hazardous Waste Division
Alabama Dept. of Environmental Management
State Capitol
Montgomery, Alabama 36130

Dear Mr. Taylor:

Attached is a tabulation which includes the analytical results for U. S. Steel's split of the well samples taken at Exum Dump on July 1 and 2, 1982.

Very truly yours,

Chief Engineer

Attachment
GWE:dl

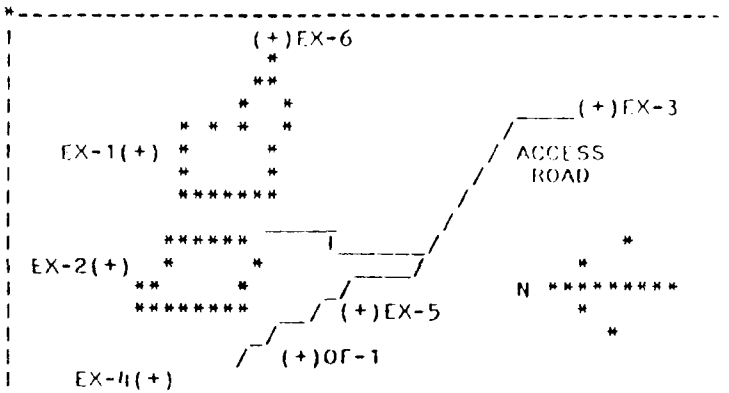
Copy to: T. Stevenson
W. H. Cantees
J. R. Guseman
R. V. McCarthy
J. K. Peterson
A. A. Spinola

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL

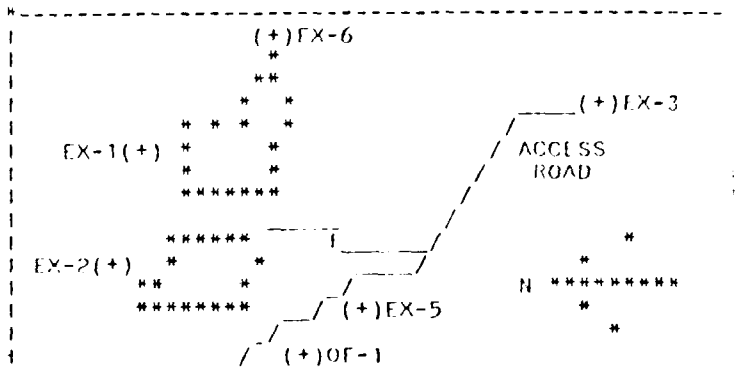


FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
ALUMINUM	MG/L		NO DATA	NO DATA	18.6	NO DATA	0.1 (U)
ANTIMONY	MG/L		LT0.005	NO DATA	NO DATA	LT0.1	0.04 (U)
BERYLLIUM	MG/L		LT0.0005	NO DATA	NO DATA	LT0.04	0.01 (U)
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	94.	NO DATA	10.
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
COPPER	MG/L		LT0.01	NO DATA	0.034	0.02	0.01 (U)
CYANIDE	MG/L		0.02	NO DATA	0.026	0.02	0.013
MAGNESIUM	MG/L		NO DATA	NO DATA	41.	NO DATA	3.6
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
NICKEL	MG/L		NO DATA	NO DATA	0.032	0.06	0.03 (U)
STRONTIUM	MG/L		NO DATA	NO DATA	1.323	NO DATA	0.17
TIN	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.1 (U)
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.04 (U)
THALLIUM	MG/L		0.14	NO DATA	NO DATA	0.045	0.1 (U)
TITANIUM	MG/L		NO DATA	NO DATA	0.247	NO DATA	0.01 (U)
TURBIDITY	NTU		30.	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	0.033	NO DATA	0.01 (U)
YTTRIUM	MG/L		NO DATA	NO DATA	0.009	NO DATA	0.01 (U)
ZINC	MG/L		17.3	NO DATA	24.	28.5	14.
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	0.013	NO DATA	NO DATA	LT0.002	0.04 (U)
BARIUM	MG/L	1.0	0.11	NO DATA	0.261	0.9	0.026
CADMIUM	MG/L	0.01	0.006	NO DATA	0.01	0.014	0.012
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	0.001	NO DATA	0.037	0.016	0.01 (U)
COLIFORM BACTERIA	COL/100M		0.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	LT0.1	NO DATA	NO DATA	LT0.006	NO DATA
ENDRIN	UG/L	0.0002	LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
FLUORIDE	MG/L	1.4-2.4	0.54	NO DATA	NO DATA	0.55	NO DATA
GROSS ALPHA	PCI/L	15.	2.6±3.2	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	22.±14.7	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		0.02	NO DATA	28.	NO DATA	0.35
LEAD	MG/L	0.05	0.005	NO DATA	0.272	0.24	0.15
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		1.93	NO DATA	1.	NO DATA	0.05 (U)
MERCURY	MG/L	0.002	LT0.0001	NO DATA	NO DATA	LT0.0001	0.0002 (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL

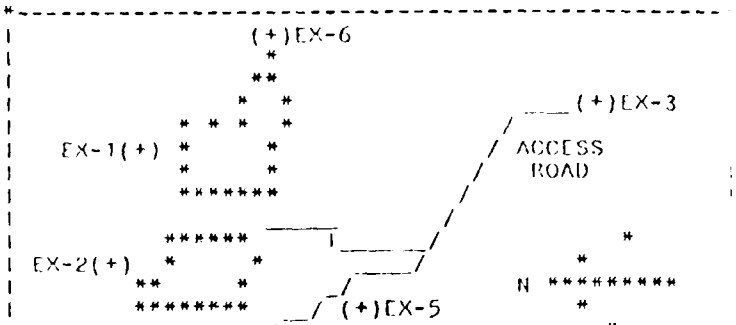
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
METHOXYCHLOR	MG/L	0.1	LT0.1	NO DATA	NO DATA	NO DATA	0.0003 (U)
NITRATE	MG/L	10.	0.27	NO DATA	NO DATA	0.32	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		LT0.01	NO DATA	NO DATA	LT0.1	NO DATA
RADIUM	PCI/L	5.	.8±.2	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	LT0.001	NO DATA	NO DATA	LT0.001	0.04 (U)
SILVER	MG/L	0.05	0.007	NO DATA	NO DATA	0.03	0.01 (U)
SODIUM	MG/L		53.	NO DATA	71.	NO DATA	34.
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	LT0.005	NO DATA	NO DATA	LT0.002	0.002 (U)
2,4,5-TP (SILVEX)	UG/L	0.01	LT10.	NO DATA	NO DATA	LT1.	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DIMETHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2-METHYL-4,6-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2,4-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2-NITROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
4-NITROPHENOL	UG/L		LT50.	NO DATA	NO DATA	LT10.	20. (U)
4-CHLORO-3-METHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL



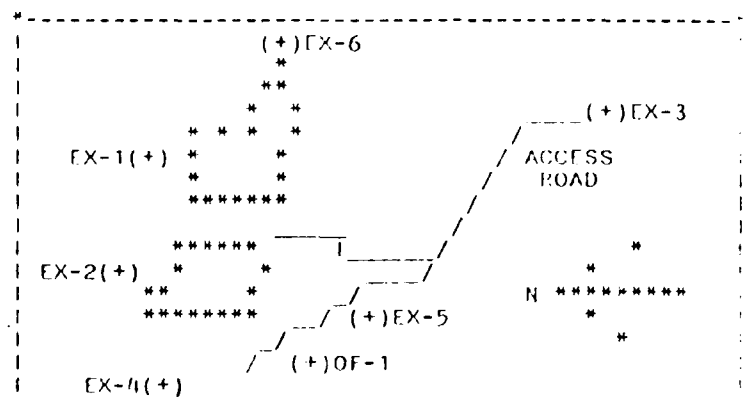
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81		USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82		EPA RESULTS	
PENTACHLOROPHENOL	UG/L		LT50.		NO DATA	NO DATA	37.		30.	(U)
PHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		10.	(U)
2,4,6-TRICHLOROPHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		10.	(U)
ACENAPHTHENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
ACENAPHTHYLENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
ANTHRACENE	UG/L		LT10.	(N)	NO DATA	12. (K)	LT10.	(N)	10.	(U)
BENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		NO DATA	
BENZO (A) ANTHRACENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
BENZO (A) PYRENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BENZO (B) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U,B
BENZO (G,H,I) PERYLENE	UG/L		LT25.		NO DATA	NO DATA	LT20.		10.	(U)
BENZO (K) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U,B
BIS (2-CHLOROETHOXY) METHANE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-CHLOROETHYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
4-BROMOPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BENZYL BUTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
2-CHLORONAPHTHALENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
4-CHLOROPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
CHRYSENE	UG/L		LT10.		NO DATA	12. (K)	LT10.	(N)	10.	(U)
DIBENZO (A,H) ANTHRACENE	UG/L		LT25.		NO DATA	NO DATA	LT20.		10.	(U)
1,2-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,3-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,4-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
3,3-DICHLOROBENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DIETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DIMETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DI-N-BUTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	26.		15.	
2,4-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
2,6-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DI-N-OCTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,2-DIPHENYLHYDRAZINE	UG/L		LT10.	(E)	NO DATA	NO DATA	LT10.	(E)	NO DATA	
FLUORANTHENE	UG/L		10.		NO DATA	12. (K)	LT10.	(N)	10.	(U)
FLUORENE	UG/L		LT10.	(N)	NO DATA	12. (K)	LT10.		10.	(U)
HEXACHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
HEXACHLOROBUTADIENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL



FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROETHANE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
INDENO (1,2,3-CD) PYRENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	10. (U)
ISOPHORONE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
NITROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIPHENYLAMINE	UG/L		LT10. (D)	NO DATA	NO DATA	LT10. (D)	10. (U,D)
PHENANTHRENE	UG/L		16.	NO DATA	12. (K)	LT10. (N)	10. (U)
PYRENE	UG/L		LT10. (N)	NO DATA	12. (K)	LT10. (N)	10. (U)
1,2,4-TRICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		LT10. (N)	NO DATA	NO DATA	LT10. (N)	10. (U)
ALDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ALPHA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
BETA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
DELTA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
GAMMA-BHC(LINDANE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
CHLORDANE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.3 (U,S)
4,4'-DDD (P,P'-DDD)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDE (P,P'-DDE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDT (P,P'-DDT)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
DIELDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN I (ALPHA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN II (BETA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDOSULFAN SULFATE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDRIN ALDEHYDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	NO DATA
HEPTACHLOR	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
HEPTACHLOR EPOXIDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
PCB-1016	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1221	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1232	UG/L		LT4.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1242	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1248	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1254	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
PCB-1260	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	LT10.	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL

```
*-----------------------------------------------
|                (+)EX-6
|                  *
|                  **
|               *  *                 __(+)EX-3
|            * * *  *                /
|   EX-1(+)  *      *               / ACCESS
|            *      *              /   ROAD
|            *******              /
|                                /
|           ******  ____        /              *
| EX-2(+)   *      *     |______/              *
|          **      *     ____/              N *********
|          ********   __/ (+)EX-5             *
|                   _/                         *
|                 /  (+)OF-1
|     EX-4(+)
*--------- FAIRFIELD WORKS - EXUM SITE ---------
```

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
ACRYLONITRILE	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
BENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
BROMOFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CARBON TETRACHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DIBROMOCHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
2-CHLOROETHYLVINYL ETHER	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
CHLOROFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
BROMODICHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROPROPANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRANS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
ETHYLBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
METHYL BROMIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYLENE CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2,2-TETRACHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TETRACHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TOLUENE	UG/L		LT5. (N)	NO DATA	NO DATA	LT5.	5. (U)
1,2-TRANS-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,1-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROETHENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROFLUOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	NO DATA
VINYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
CIS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL

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*-----------------------------------------------------
|                (+)EX-6
|                 *
|                **
|               *  *                  ____(+)EX-3
|            * * *  *                /
|   EX-1(+) *      *               / ACCESS
|           *      *              /  ROAD
|           *******              /
|                              /
|          ******  ____       /                *
| EX-2(+)  *      *     \____/                 *
|         **      *      _/                 N *********
|         ********    __/ (+)EX-5              *
|                    /                          *
|                   /  (+)OF-1
|    EX-4(+)
*--------- FAIRFIELD WORKS - EXUM SITE ---------
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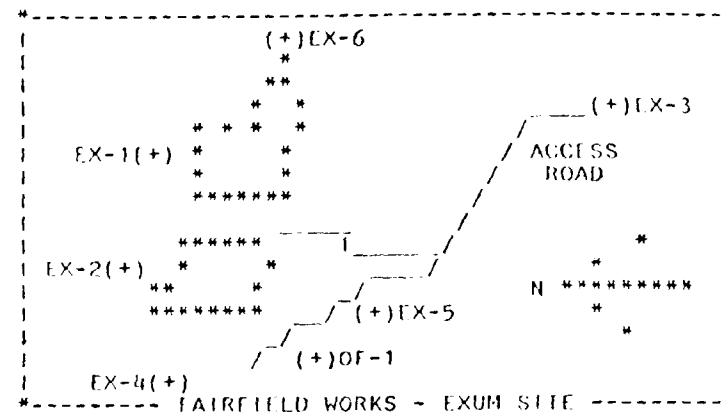
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
ALUMINUM	MG/L		NO DATA	NO DATA	9.4	NO DATA	0.28
ANTIMONY	MG/L		LT0.005	NO DATA	NO DATA	LT0.1	0.04 (U)
BERYLLIUM	MG/L		LT0.0005	NO DATA	NO DATA	LT0.04	0.01 (U)
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	26.	NO DATA	13.
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
COPPER	MG/L		LT0.01	NO DATA	0.02	LT0.01	0.01 (U)
CYANIDE	MG/L		LT0.005	NO DATA	NO DATA	LT0.005	0.002 (K)
MAGNESIUM	MG/L		NO DATA	NO DATA	9.1	NO DATA	6.
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
NICKEL	MG/L		NO DATA	NO DATA	0.029	LT0.04	0.03 (U)
STRONTIUM	MG/L		NO DATA	NO DATA	0.101	NO DATA	0.043
TIN	MG/L		NO DATA	NO DATA	0.061	NO DATA	0.1 (U)
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.04 (U)
THALLIUM	MG/L		0.02	NO DATA	NO DATA	0.003	0.1 (U)
TITANIUM	MG/L		NO DATA	NO DATA	0.083	NO DATA	0.01 (U)
TURBIDITY	NTU		20.	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	0.018	NO DATA	0.01 (U)
YTTRIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
ZINC	MG/L		15.1	NO DATA	55.	30.5	28.
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	0.003	NO DATA	NO DATA	LT0.002	0.04 (U)
BARIUM	MG/L	1.0	0.29	NO DATA	0.274	0.78	0.081
CADMIUM	MG/L	0.01	0.006	NO DATA	0.016	0.022	0.013
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	0.001	NO DATA	0.057	0.006	0.01 (U)
COLIFORM BACTERIA	COL/100M		0.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	LT0.1	NO DATA	NO DATA	LT0.006	NO DATA
ENDRIN	UG/L	0.0002	LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
FLUORIDE	MG/L	1.4-2.4	0.14	NO DATA	NO DATA	0.08	NO DATA
GROSS ALPHA	PCI/L	15.	0.7±1.3	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	0.5±3.9	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		LT0.01	NO DATA	19.	NO DATA	3.9
LEAD	MG/L	0.05	0.024	NO DATA	0.949	0.23	0.14
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		2.54	NO DATA	0.648	NO DATA	0.11
MERCURY	MG/L	0.002	0.0007	NO DATA	NO DATA	LT0.0001	0.0002 (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



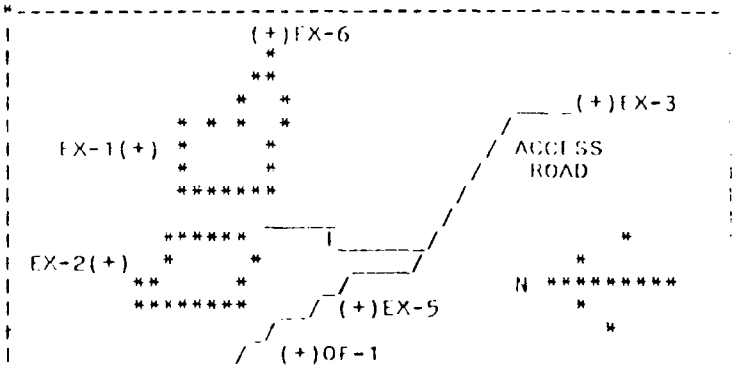
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-1
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	12. (K,N)	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXAHONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA(N)	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



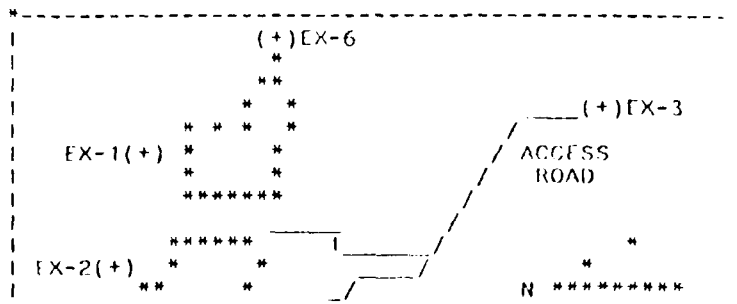
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
METHOXYCHLOR	MG/L	0.1	LT0.1	NO DATA	NO DATA	NO DATA	0.0003 (U)
NITRATE	MG/L	10.	0.05	NO DATA	NO DATA	0.18	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		LT0.01	NO DATA	NO DATA	LT0.1	NO DATA
RADIUM	PCI/L	5.	0.2±0.1	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	LT0.001	NO DATA	NO DATA	LT0.001	0.04 (U)
SILVER	MG/L	0.05	0.002	NO DATA	NO DATA	0.03	0.01 (U)
SODIUM	MG/L		6.4	NO DATA	6.	NO DATA	4.6
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	LT0.005	NO DATA	NO DATA	LT0.002	0.002 (U)
2,4,5-TP (SILVEX)	UG/L	0.01	LT10.	NO DATA	NO DATA	LT1.	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DIMETHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2-METHYL-4,6-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2,4-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2-NITROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
4-NITROPHENOL	UG/L		LT50.	NO DATA	NO DATA	LT10.	20. (U)
4-CHLORO-3-METHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL

--------- FAIRFIELD WORKS - EXUM SITE ---------

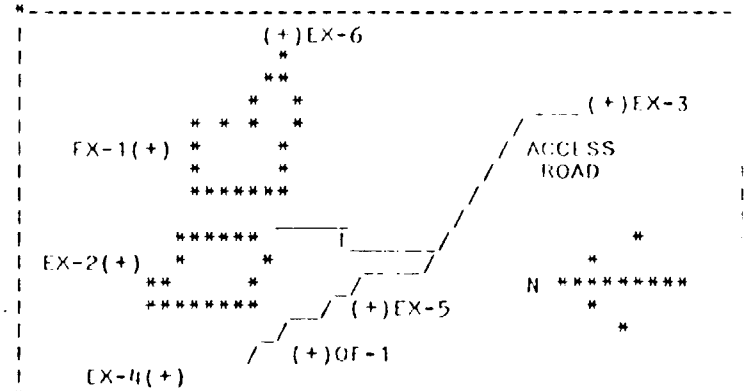
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81		USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82		EPA RESULTS	
PENTACHLOROPHENOL	UG/L		LT50.		NO DATA	NO DATA	LT10.		30.	(U)
PHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		10.	(U)
2,4,6-TRICHLOROPHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		10.	(U)
ACENAPHTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
ACENAPHTHYLENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
ANTHRACENE	UG/L		LT10.	(N)	NO DATA	12. (K)	LT10.		10.	(U)
BENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		NO DATA	
BENZO (A) ANTHRACENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
BENZO (A) PYRENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
BENZO (B) FLUORANTHENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U,P
BENZO (G,H,I) PERYLENE	UG/L		LT25.		NO DATA	12. (K)	LT20.		10.	(U)
BENZO (K) FLUORANTHENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U,P
BIS (2-CHLOROETHOXY) METHANE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-CHLOROETHYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	28.		10.	(U)
4-BROMOPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
BENZYL BUTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
2-CHLORONAPHTHALENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
4-CHLOROPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
CHRYSENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
DIBENZO (A,H) ANTHRACENE	UG/L		LT25.		NO DATA	NO DATA	LT20.		10.	(U)
1,2-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,3-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,4-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
3,3-DICHLOROBENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DIETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DIMETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DI-N-BUTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
2,4-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
2,6-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
DI-N-OCTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
1,2-DIPHENYLHYDRAZINE	UG/L		LT10.	(E)	NO DATA	NO DATA	LT10.	(E)	NO DATA	
FLUORANTHENE	UG/L		LT10.		NO DATA	12. (K)	LT10.		10.	(U)
FLUORENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
HEXACHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)
HEXACHLOROBUTADIENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		10.	(U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL



FAIRFIELD WORKS - EXUM SITE

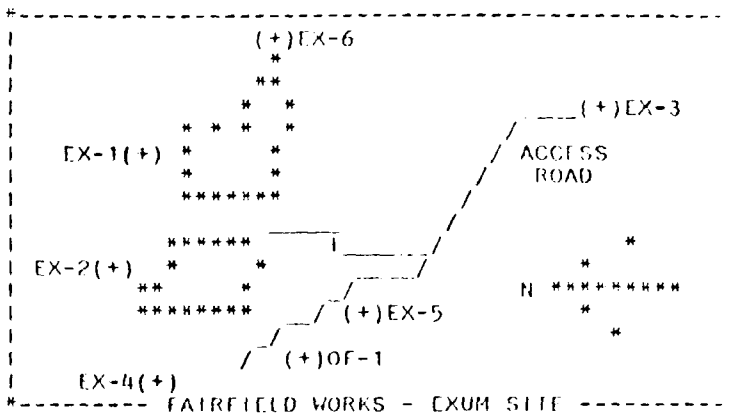
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROETHANE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
INDENO (1,2,3-CD) PYRENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	10. (U)
ISOPHORONE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
NITROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIPHENYLAMINE	UG/L		LT10. (D)	NO DATA	NO DATA	LT10. (D)	10. (U,D
PHENANTHRENE	UG/L		LT10. (N)	NO DATA	12. (K)	LT10.	10. (U)
PYRENE	UG/L		LT10.	NO DATA	12. (K)	LT10.	10. (U)
1,2,4-TRICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		LT10. (N)	NO DATA	NO DATA	LT10.	10. (U)
ALDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ALPHA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
BETA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
DELTA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
GAMMA-BHC(LINDANE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
CHLORDANE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.3 (U,S
4,4'-DDD (P,P'-DDD)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDE (P,P'-DDE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDT (P,P'-DDT)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
DIELDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN I (ALPHA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN II (BETA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDOSULFAN SULFATE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDRIN ALDEHYDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	NO DATA
HEPTACHLOR	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
HEPTACHLOR EPOXIDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
PCB-1016	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1221	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1232	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1242	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1248	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1254	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
PCB-1260	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	LT10.	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL

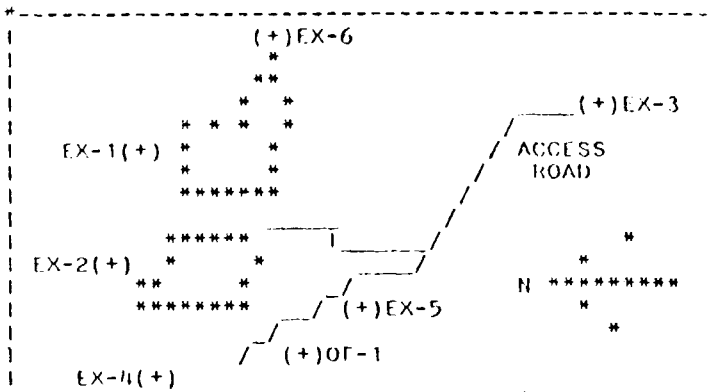


FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
ACRYLONITRILE	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
BENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
BROMOFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CARBON TETRACHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DIBROMOCHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
2-CHLOROETHYLVINYL ETHER	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
CHLOROFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
BROMODICHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROPROPANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRANS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
ETHYLBENZENE	UG/L		LT5. (N)	NO DATA	NO DATA	LT5.	5. (U)
METHYL BROMIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYLENE CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2,2-TETRACHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TETRACHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TOLUENE	UG/L		9.	NO DATA	NO DATA	LT5.	5. (U)
1,2-TRANS-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,1-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROETHENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROFLUOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	NO DATA
VINYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
CIS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	10. (J)
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	10. (J)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



FAIRFIELD WORKS - EXUM SITE

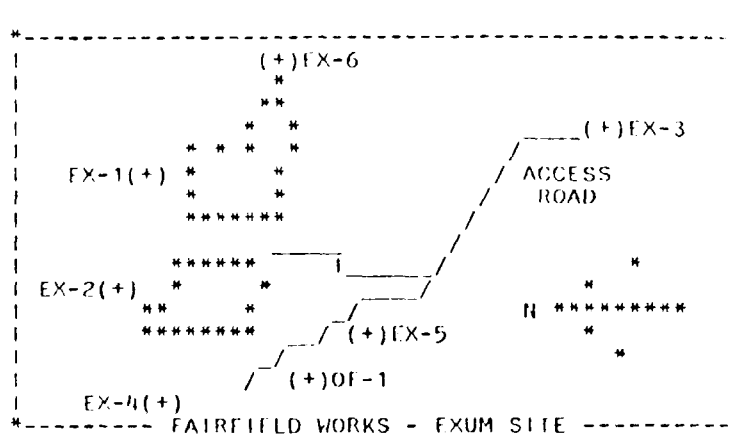
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-2
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	27. (J,N
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	10. (J,N
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA(N)	NO DATA	NO DATA(N)
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	10. (J,N
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	16. (J,N
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	1200. (J,N
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



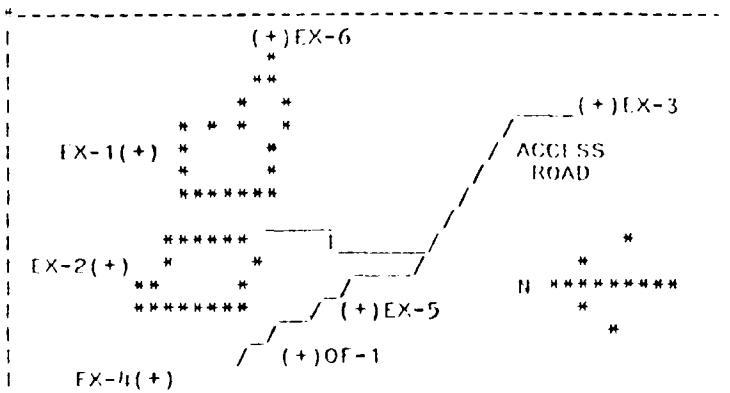
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-3
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
ALUMINUM	MG/L		NO DATA	NO DATA	359.8	NO DATA	NO DATA
ANTIMONY	MG/L		NO DATA	0.1	NO DATA	NO DATA	NO DATA
BERYLLIUM	MG/L		NO DATA	0.019	NO DATA	NO DATA	NO DATA
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	262.	NO DATA	NO DATA
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
COPPER	MG/L		NO DATA	0.67	0.58	NO DATA	NO DATA
CYANIDE	MG/L		NO DATA	0.005	NO DATA	NO DATA	NO DATA
MAGNESIUM	MG/L		NO DATA	NO DATA	184.	NO DATA	NO DATA
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NICKEL	MG/L		NO DATA	0.79	0.73	NO DATA	NO DATA
STRONTIUM	MG/L		NO DATA	NO DATA	2.265	NO DATA	NO DATA
TIN	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
THALLIUM	MG/L		NO DATA	0.24	NO DATA	NO DATA	NO DATA
TITANIUM	MG/L		NO DATA	NO DATA	3.97	NO DATA	NO DATA
TURBIDITY	NTU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	0.745	NO DATA	NO DATA
YTTRIUM	MG/L		NO DATA	NO DATA	0.245	NO DATA	NO DATA
ZINC	MG/L		NO DATA	2.37	17.61	NO DATA	NO DATA
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	NO DATA	0.23	NO DATA	NO DATA	NO DATA
BARIUM	MG/L	1.0	NO DATA	NO DATA	6.695	NO DATA	NO DATA
CADMIUM	MG/L	0.01	NO DATA	0.012	0.075	NO DATA	NO DATA
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	NO DATA	0.15	0.72	NO DATA	NO DATA
COLIFORM BACTERIA	COL/100M		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ENDRIN	UG/L	0.0002	NO DATA	LT1.	NO DATA	NO DATA	NO DATA
FLUORIDE	MG/L	1.4-2.4	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROSS ALPHA	PCI/L	15.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		NO DATA	NO DATA	736.	NO DATA	NO DATA
LEAD	MG/L	0.05	NO DATA	0.17	0.87	NO DATA	NO DATA
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		NO DATA	NO DATA	1.133	NO DATA	NO DATA
MERCURY	MG/L	0.002	NO DATA	LT0.001	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



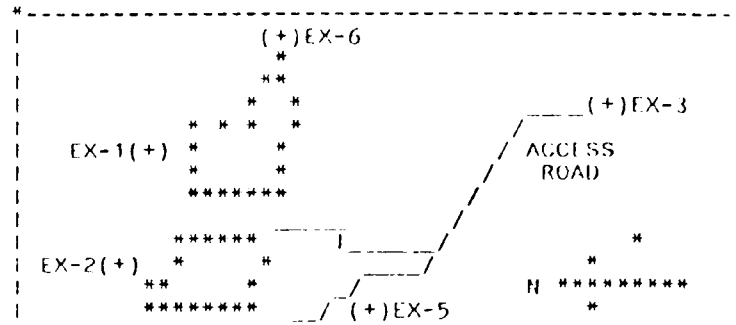
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-3
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
METHOXYCHLOR	MG/L	0.1	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NITRATE	MG/L	10.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM	PCI/L	5.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	NO DATA	LT0.001	NO DATA	NO DATA	NO DATA
SILVER	MG/L	0.05	NO DATA	0.005	NO DATA	NO DATA	NO DATA
SODIUM	MG/L		NO DATA	NO DATA	44.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	NO DATA	LT0.017	NO DATA	NO DATA	NO DATA
2,4,5-TP (SILVEX)	UG/L	0.01	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
2,4-DICHLOROPHENOL	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
2,4-DIMETHYLPHENOL	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
2-METHYL-4,6-DINITROPHENOL	UG/L		NO DATA	LT100.	NO DATA	NO DATA	NO DATA
2,4-DINITROPHENOL	UG/L		NO DATA	LT100.	NO DATA	NO DATA	NO DATA
2-NITROPHENOL	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
4-NITROPHENOL	UG/L		NO DATA	LT50.	NO DATA	NO DATA	NO DATA
4-CHLORO-3-METHYLPHENOL	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-3
TYPE: WELL

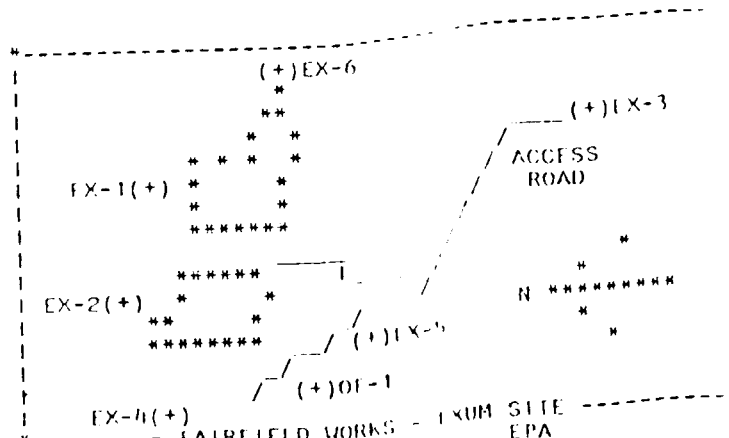
--------- FAIRFIELD WORKS - EXUM SITE ----------

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81		EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
PENTACHLOROPHENOL	UG/L		NO DATA	LT50.		NO DATA	NO DATA	NO DATA
PHENOL	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
2,4,6-TRICHLOROPHENOL	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
ACENAPHTHENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
ACENAPHTHYLENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
ANTHRACENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZIDINE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZO (A) ANTHRACENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZO (A) PYRENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZO (B) FLUORANTHENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZO (G,H,I) PERYLENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZO (K) FLUORANTHENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BIS (2-CHLOROETHOXY) METHANE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BIS (2-CHLOROETHYL) ETHER	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
4-BROMOPHENYL PHENYL ETHER	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
BENZYL BUTYL PHTHALATE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
2-CHLORONAPHTHALENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
4-CHLOROPHENYL PHENYL ETHER	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
CHRYSENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
DIBENZO (A,H) ANTHRACENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
1,2-DICHLOROBENZENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
1,3-DICHLOROBENZENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
1,4-DICHLOROBENZENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
3,3-DICHLOROBENZIDINE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
DIETHYL PHTHALATE	UG/L		NO DATA	36.		NO DATA	NO DATA	NO DATA
DIMETHYL PHTHALATE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
DI-N-BUTYLPHTHALATE	UG/L		NO DATA	19.		NO DATA	NO DATA	NO DATA
2,4-DINITROTOLUENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
2,6-DINITROTOLUENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
DI-N-OCTYLPHTHALATE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
1,2-DIPHENYLHYDRAZINE	UG/L		NO DATA	LT20.	(E)	NO DATA	NO DATA	NO DATA
FLUORANTHENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
FLUORENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
HEXACHLOROBENZENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA
HEXACHLOROBUTADIENE	UG/L		NO DATA	LT20.		NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1)

REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

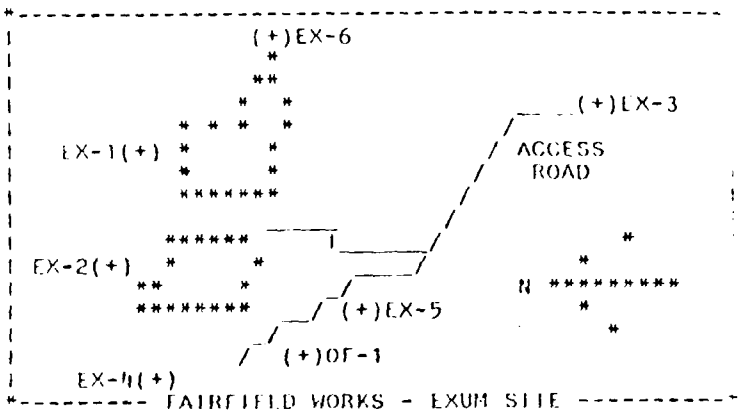
SITE: FXUM

SAMPLING POINT: EX-3
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
HEXACHLOROETHANE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
INDENO (1,2,3-CD) PYRENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
ISOPHORONE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
NITROBENZENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
N-NITROSODIPHENYLAMINE	UG/L		NO DATA	LT20. (D)	NO DATA	NO DATA	NO DATA
PHENANTHRENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
PYRENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
1,2,4-TRICHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		NO DATA	LT20.	NO DATA	NO DATA	NO DATA
ALDRIN	UG/L		NO DATA	LT2.	NO DATA	NO DATA	NO DATA
ALPHA-BHC	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
BETA-BHC	UG/L		NO DATA	LT2.	NO DATA	NO DATA	NO DATA
DELTA-BHC	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
GAMMA-BHC(LINDANE)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
CHLORDANE	UG/L		NO DATA	LT2.	NO DATA	NO DATA	NO DATA
4,4'-DDD (P,P'-DDD)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
4,4'-DDE (P,P'-DDE)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
4,4'-DDT (P,P'-DDT)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
DIELDRIN	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
ENDOSULFAN I (ALPHA)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
ENDOSULFAN II (BETA)	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
ENDOSULFAN SULFATE	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
ENDRIN ALDEHYDE	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
HEPTACHLOR	UG/L		NO DATA	LT1.	NO DATA	NO DATA	NO DATA
HEPTACHLOR EPOXIDE	UG/L		NO DATA	LT7.	NO DATA	NO DATA	NO DATA
PCB-1016	UG/L		NO DATA	LT42.	NO DATA	NO DATA	NO DATA
PCB-1221	UG/L		NO DATA	LT12.	NO DATA	NO DATA	NO DATA
PCB-1232	UG/L		NO DATA	LT8.	NO DATA	NO DATA	NO DATA
PCB-1242	UG/L		NO DATA	LT10.	NO DATA	NO DATA	NO DATA
PCB-1248	UG/L		NO DATA	LT16.	NO DATA	NO DATA	NO DATA
PCB-1254	UG/L		NO DATA	LT7.	NO DATA	NO DATA	NO DATA
PCB-1260	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA				

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



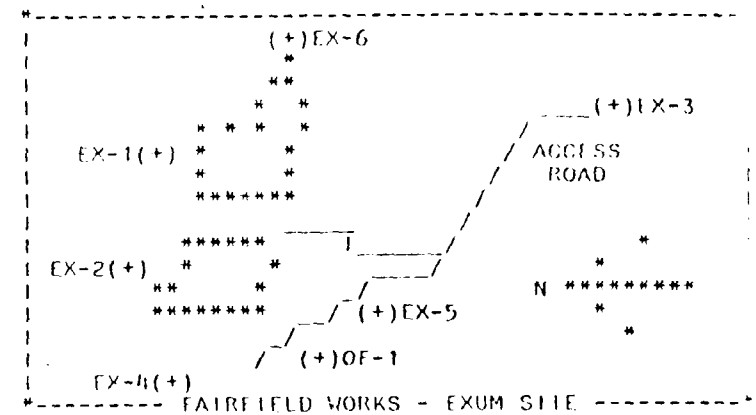
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-3
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		NO DATA	LT100.	NO DATA	NO DATA	NO DATA
ACRYLONITRILE	UG/L		NO DATA	LT100.	NO DATA	NO DATA	NO DATA
BENZENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
BROMOFORM	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
CARBON TETRACHLORIDE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
CHLOROBENZENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
DIBROMOCHLOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
CHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
2-CHLOROETHYLVINYL ETHER	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
CHLOROFORM	UG/L		NO DATA	LT5.	5. (K)	NO DATA	NO DATA
BROMODICHLOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	5.7	NO DATA	NO DATA
1,1-DICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,2-DICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,2-DICHLOROPROPANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
TRANS-1,3-DICHLOROPROPENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
ETHYLBENZENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
METHYL BROMIDE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
METHYL CHLORIDE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
METHYLENE CHLORIDE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,1,2,2-TETRACHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
TETRACHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
TOLUENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,2-TRANS-DICHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,1,1-TRICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
1,1,2-TRICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
TRICHLOROETHENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
TRICHLOROFLUOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
VINYL CHLORIDE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CIS-1,3-DICHLOROPROPENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-3
TYPE: WELL

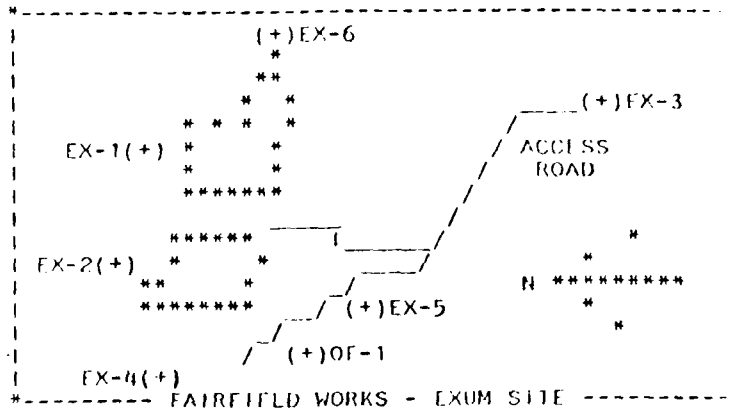
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	10. (K,N)	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL



FAIRFIELD WORKS - EXUM SITE

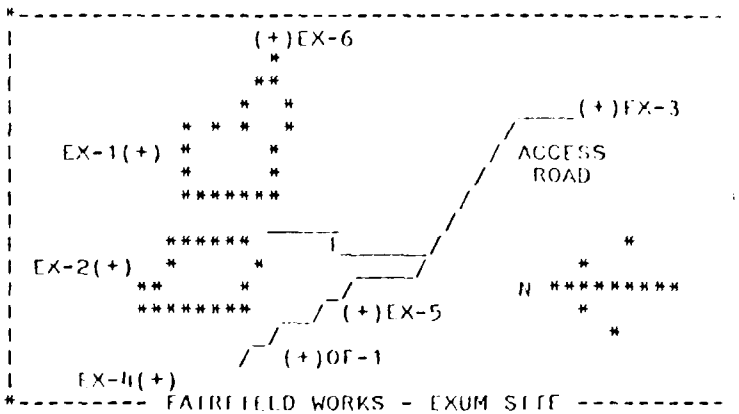
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
ALUMINUM	MG/L		NO DATA	NO DATA	3.	NO DATA	0.4
ANTIMONY	MG/L		LT0.005	NO DATA	NO DATA	LT0.1	0.8 (U)
BERYLLIUM	MG/L		LT0.0005	NO DATA	NO DATA	LT0.04	0.01 (U)
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	24.	NO DATA	31.
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
COPPER	MG/L		LT0.01	NO DATA	0.012	0.02	0.028
CYANIDE	MG/L		LT0.005	NO DATA	NO DATA	LT0.005	NO DATA
MAGNESIUM	MG/L		NO DATA	NO DATA	8.3	NO DATA	15.
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
NICKEL	MG/L		NO DATA	NO DATA	NO DATA	LT0.04	0.03 (U)
STRONTIUM	MG/L		NO DATA	NO DATA	0.155	NO DATA	0.3
TIN	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.1 (U)
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.8 (U)
THALLIUM	MG/L		0.04	NO DATA	NO DATA	0.032	0.1 (U)
TITANIUM	MG/L		NO DATA	NO DATA	0.041	NO DATA	0.01 (U)
TURBIDITY	NTU		15.	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
YTTRIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
ZINC	MG/L		2.6	NO DATA	29.057	90.	110.
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	LT0.001	NO DATA	NO DATA	LT0.002	0.04 (U)
BARIUM	MG/L	1.0	0.17	NO DATA	0.252	2.24	0.1
CADMIUM	MG/L	0.01	0.003	NO DATA	NO DATA	0.004	0.01 (U)
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	0.002	NO DATA	0.028	0.015	0.02
COLIFORM BACTERIA	COL/100M		0.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	LT0.1	NO DATA	NO DATA	LT0.006	NO DATA
ENDRIN	UG/L	0.0002	LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
FLUORIDE	MG/L	1.4-2.4	0.46	NO DATA	NO DATA	0.3	NO DATA
GROSS ALPHA	PCI/L	15.	3.4±3.3	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	LT0.2±4.6	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		LT0.01	NO DATA	5.	NO DATA	5.2
LEAD	MG/L	0.05	0.011	NO DATA	0.202	0.57	0.96
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		0.43	NO DATA	0.926	NO DATA	1.4
MERCURY	MG/L	0.002	0.0007	NO DATA	NO DATA	LT0.0001	0.0002 (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL



FAIRFIELD WORKS - EXUM SITE

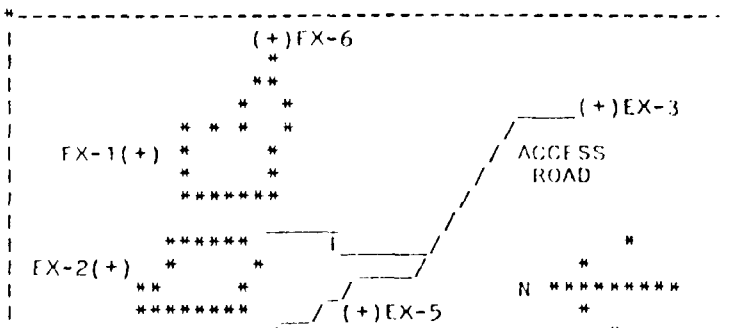
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82	EPA RESULTS
METHOXYCHLOR	MG/L	0.1	LT0.1	NO DATA	NO DATA	NO DATA	0.0003 (U)
NITRATE	MG/L	10.	0.07	NO DATA	NO DATA	0.18	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		LT0.01	NO DATA	NO DATA	LT0.1	NO DATA
RADIUM	PCI/L	5.	0.5±0.1	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	LT0.001	NO DATA	NO DATA	LT0.001	0.8 (U)
SILVER	MG/L	0.05	0.003	NO DATA	NO DATA	0.02	0.01 (U)
SODIUM	MG/L		16.4	NO DATA	28.	NO DATA	38.
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	LT0.005	NO DATA	NO DATA	LT0.002	0.002 (U)
2,4,5-TP (SILVEX)	UG/L	0.01	LT10.	NO DATA	NO DATA	LT1.	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)
2,4-DICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)
2,4-DIMETHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)
2-METHYL-4,6-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	33. (U)
2,4-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	33. (U)
2-NITROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)
4-NITROPHENOL	UG/L		LT50.	NO DATA	NO DATA	LT10.	22. (U)
4-CHLORO-3-METHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL



FAIRFIELD WORKS - EXUM SITE

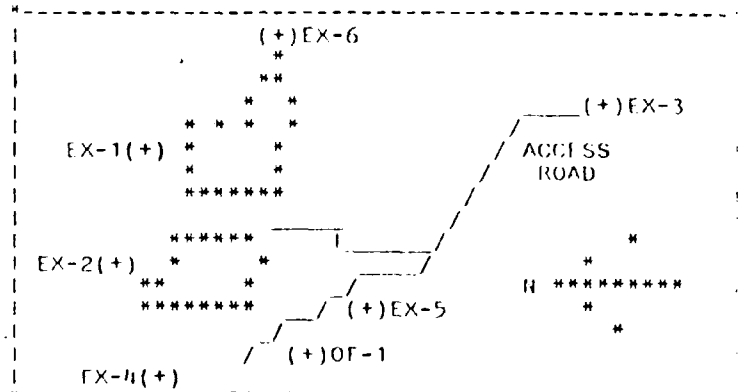
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81		USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82		EPA RESULTS	
PENTACHLOROPHENOL	UG/L		LT50.		NO DATA	NO DATA	LT10.		33.	(U)
PHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		11.	(U)
2,4,6-TRICHLOROPHENOL	UG/L		LT20.		NO DATA	NO DATA	LT10.		11.	(U)
ACENAPHTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
ACENAPHTHYLENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
ANTHRACENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		NO DATA	
BENZO (A) ANTHRACENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BENZO (A) PYRENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BENZO (B) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U,L
BENZO (G,H,I) PERYLENE	UG/L		LT25.		NO DATA	NO DATA	LT20.		11.	(U)
BENZO (K) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U,L
BIS (2-CHLOROETHOXY) METHANE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BIS (2-CHLOROETHYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		150.	
4-BROMOPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
BENZYL BUTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
2-CHLORONAPHTHALENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
4-CHLOROPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
CHRYSENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
DIBENZO (A,H) ANTHRACENE	UG/L		LT25.		NO DATA	NO DATA	LT20.		11.	(U)
1,2-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
1,3-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
1,4-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
3,3-DICHLOROBENZIDINE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
DIETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
DIMETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
DI-N-BUTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	18.		11.	(U)
2,4-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
2,6-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
DI-N-OCTYLPHTHALATE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
1,2-DIPHENYLHYDRAZINE	UG/L		LT10.	(E)	NO DATA	NO DATA	LT10.	(E)	NO DATA	
FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
FLUORENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
HEXACHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)
HEXACHLOROBUTADIENE	UG/L		LT10.		NO DATA	NO DATA	LT10.		11.	(U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

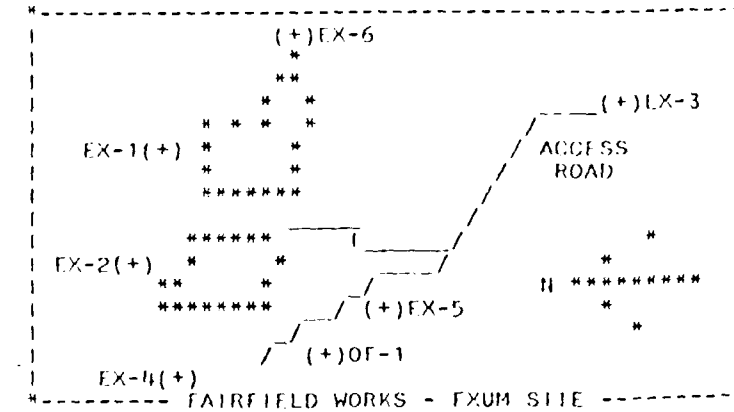
SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL



PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		LT20.	NO DATA	NO DATA	LT10.	11. (U)
HEXACHLOROETHANE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
INDENO (1,2,3-CD) PYRENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	11. (U)
ISOPHORONE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
NITROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
N-NITROSODIPHENYLAMINE	UG/L		LT10. (D)	NO DATA	NO DATA	LT10. (D)	11. (U,D
PHENANTHRENE	UG/L		LT10.	NO DATA	10. (K)	LT10.	11. (U)
PYRENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
1,2,4-TRICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	11. (U)
ALDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ALPHA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
BETA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
DELTA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
GAMMA-BHC(LINDANE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
CHLORDANE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.3 (U,5
4,4'-DDD (P,P'-DDD)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDE (P,P'-DDE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDT (P,P'-DDT)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
DIELDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN I (ALPHA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN II (BETA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDOSULFAN SULFATE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDRIN ALDEHYDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	NO DATA
HEPTACHLOR	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
HEPTACHLOR EPOXIDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
PCB-1016	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1221	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1232	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1242	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1248	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1254	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
PCB-1260	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	LT10.	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



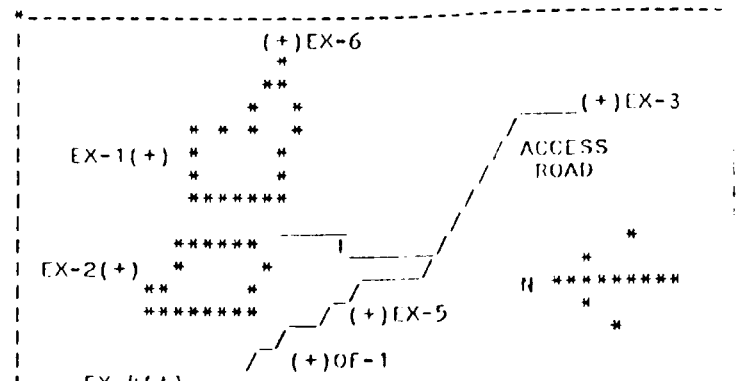
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82	EPA RESULTS
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
ACRYLONITRILE	UG/L		LT100.	NO DATA	NO DATA	LT100.	NO DATA
BENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
BROMOFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CARBON TETRACHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DIBROMOCHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
CHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
2-CHLOROETHYLVINYL ETHER	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
CHLOROFORM	UG/L		LT5. (N)	NO DATA	NO DATA	LT5.	5. (U)
BROMODICHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,2-DICHLOROPROPANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRANS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
ETHYLBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
METHYL BROMIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
METHYLENE CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2,2-TETRACHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TETRACHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TOLUENE	UG/L		·8.	NO DATA	NO DATA	LT5.	5. (U)
1,2-TRANS-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,1-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
1,1,2-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROETHENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
TRICHLOROFLUOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	NO DATA
VINYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	5. (U)
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
CIS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	5. (U)
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	5. (U)
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-4
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	15. (J,N)
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	24. (J,N)
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	11. (J,N
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	11. (J,N
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	70. (J,N)
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	31. (J,N

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-5
TYPE: WELL

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*-------------------------------------------------------
|                (+)EX-6
|                  *
|                 **
|               *  *                  ____(+)EX-3
|            * * *  *                /
|   EX-1(+)  *      *               / ACCESS
|            *      *              /   ROAD
|            *******              /
|                  ____          /
|           ******    |_____/                 *
| EX-2(+)  *      *     ____/                 *
|         **      *   _/                 N *********
|         ********  __/ (+)EX-5               *
|                 _/                           *
|               /  (+)OF-1
|    EX-4(+)
*--------- FAIRFIELD WORKS - EXUM SITE ----------
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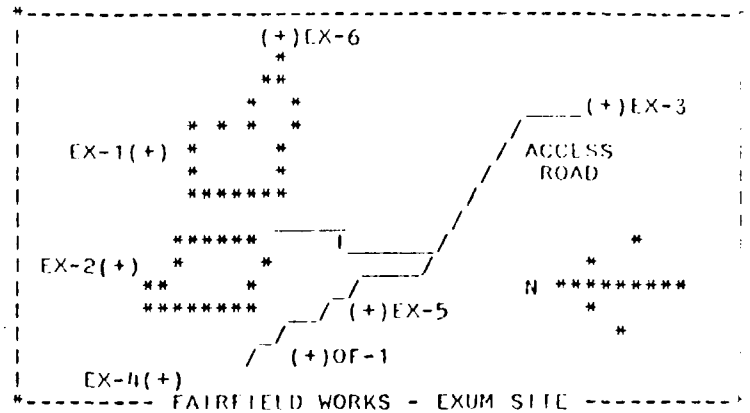
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
ALUMINUM	MG/L		NO DATA	NO DATA	6.9	NO DATA	2.6
ANTIMONY	MG/L		NO DATA	0.008	NO DATA	LT0.1	0.04 (U)
BERYLLIUM	MG/L		NO DATA	0.002	NO DATA	LT0.04	0.01 (U)
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	39.	NO DATA	26.
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
COPPER	MG/L		NO DATA	0.03	0.016	0.04	0.032
CYANIDE	MG/L		NO DATA	0.005	0.005	LT0.005	0.002 (K)
MAGNESIUM	MG/L		NO DATA	NO DATA	15.	NO DATA	7.4
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
NICKEL	MG/L		NO DATA	0.08	NO DATA	LT0.04	0.05
STRONTIUM	MG/L		NO DATA	NO DATA	0.752	NO DATA	0.59
TIN	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.1 (U)
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.04 (U)
THALLIUM	MG/L		NO DATA	0.13	NO DATA	0.018	0.1 (U)
TITANIUM	MG/L		NO DATA	NO DATA	0.081	NO DATA	0.03
TURBIDITY	RTU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	0.011	NO DATA	0.01 (U)
YTTRIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
ZINC	MG/L		NO DATA	19.2	11.578	51.5	36.
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	NO DATA	0.006	NO DATA	LT0.002	0.04 (U)
BARIUM	MG/L	1.0	NO DATA	NO DATA	0.49	1.6	0.3
CADMIUM	MG/L	0.01	NO DATA	0.002	NO DATA	0.005	0.01 (U)
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	NO DATA	0.11	0.065	0.14	0.13
COLIFORM BACTERIA	COL/100M		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	NO DATA	NO DATA	NO DATA	LT0.006	NO DATA
ENDRIN	UG/L	0.0002	NO DATA	LT1.	NO DATA	LT1.	0.1 (U)
FLUORIDE	MG/L	1.4-2.4	NO DATA	NO DATA	NO DATA	0.45	NO DATA
GROSS ALPHA	PCI/L	15.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		NO DATA	NO DATA	11.	NO DATA	6.9
LEAD	MG/L	0.05	NO DATA	0.07	0.108	0.62	0.48
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		NO DATA	NO DATA	0.931	NO DATA	0.38
MERCURY	MG/L	0.002	NO DATA	0.003	NO DATA	LT0.0001	0.0003

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

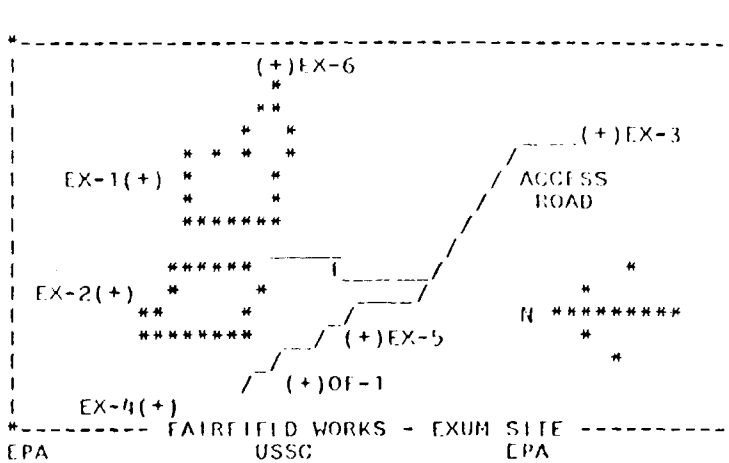
SITE: EXUM SAMPLING POINT: EX-5
TYPE: WELL



PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS 07/01/82
METHOXYCHLOR	MG/L	0.1	NO DATA	NO DATA	NO DATA	NO DATA	0.0003 (U)
NITRATE	MG/L	10.	NO DATA	NO DATA	NO DATA	0.12	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		NO DATA	NO DATA	NO DATA	LT0.1	NO DATA
RADIUM	PCI/L	5.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	NO DATA	LT0.001	NO DATA	LT0.001	0.05 (U)
SILVER	MG/L	0.05	NO DATA	0.002	NO DATA	0.02	0.01 (U)
SODIUM	MG/L		NO DATA	NO DATA	96.	NO DATA	110.
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	NO DATA	LT0.005	NO DATA	LT0.006	0.003 (U)
2,4,5-TP (SILVEX)	UG/L	0.01	NO DATA	NO DATA	NO DATA	LT1.	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
2,4-DICHLOROPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
2,4-DIMETHYLPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
2-METHYL-4,6-DINITROPHENOL	UG/L		NO DATA	LT100.	NO DATA	LT50.	330. (U)
2,4-DINITROPHENOL	UG/L		NO DATA	LT100.	NO DATA	LT50.	330. (U)
2-NITROPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
4-NITROPHENOL	UG/L		NO DATA	LT50.	NO DATA	LT10.	220. (U)
4-CHLORO-3-METHYLPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



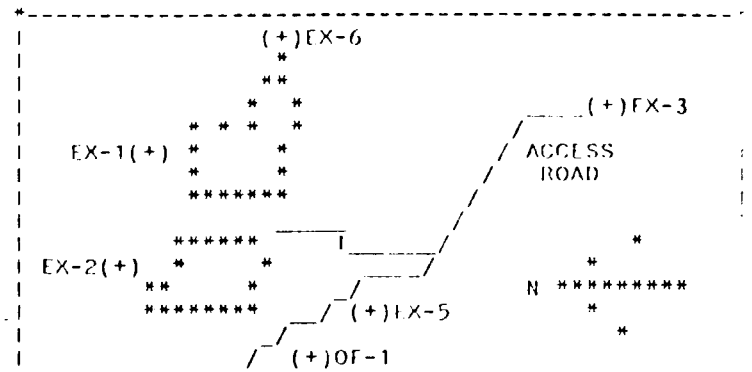
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-5
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS 07/02/82	USSC RESULTS 07/01/82	EPA RESULTS
PENTACHLOROPHENOL	UG/L		NO DATA	LT50.	NO DATA	LT10.	330. (U)
PHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
2,4,6-TRICHLOROPHENOL	UG/L		NO DATA	LT20.	NO DATA	LT10.	110. (U)
ACENAPHTHENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
ACENAPHTHYLENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
ANTHRACENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BENZIDINE	UG/L		NO DATA	LT20.	NO DATA	LT20.	NO DATA
BENZO (A) ANTHRACENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BENZO (A) PYRENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BENZO (B) FLUORANTHENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U,B
BENZO (G,H,I) PERYLENE	UG/L		NO DATA	LT20.	NO DATA	LT40.	110. (U)
BENZO (K) FLUORANTHENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U,B
BIS (2-CHLOROETHOXY) METHANE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BIS (2-CHLOROETHYL) ETHER	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20. (N)	110. (U)
4-BROMOPHENYL PHENYL ETHER	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
BENZYL BUTYL PHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
2-CHLORONAPHTHALENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
4-CHLOROPHENYL PHENYL ETHER	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
CHRYSENE	UG/L		NO DATA	LT20.	10. (K)	LT20.	110. (U)
DIBENZO (A,H) ANTHRACENE	UG/L		NO DATA	LT20.	NO DATA	LT40.	110. (U)
1,2-DICHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
1,3-DICHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
1,4-DICHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
3,3-DICHLOROBENZIDINE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
DIETHYL PHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
DIMETHYL PHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
DI-N-BUTYLPHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
2,4-DINITROTOLUENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
2,6-DINITROTOLUENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
DI-N-OCTYLPHTHALATE	UG/L		NO DATA	LT20.	NO DATA	LT20. (N)	110. (U)
1,2-DIPHENYLHYDRAZINE	UG/L		NO DATA	LT20. (E)	NO DATA	LT20. (E)	NO DATA
FLUORANTHENE	UG/L		NO DATA	LT20.	10. (K)	LT20.	110. (U)
FLUORENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
HEXACHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
HEXACHLOROBUTADIENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

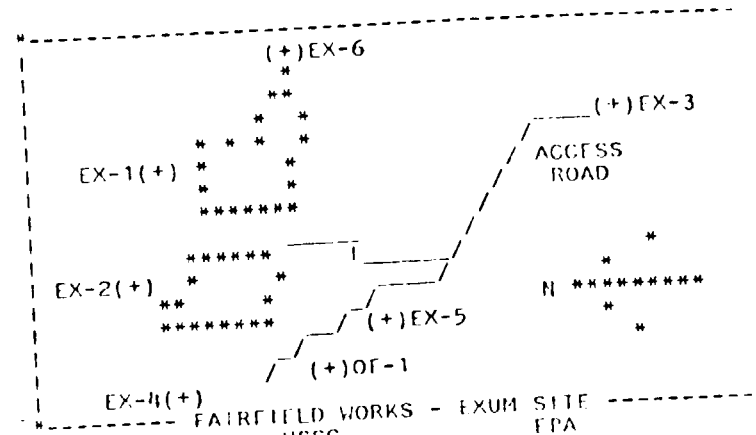
SITE: EXUM SAMPLING POINT: EX-5
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
HEXACHLOROETHANE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
INDENO (1,2,3-CD) PYRENE	UG/L		NO DATA	LT20.	NO DATA	LT40.	110. (U)
ISOPHORONE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
NITROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
N-NITROSODIPHENYLAMINE	UG/L		NO DATA	LT20. (D)	NO DATA	LT20. (D)	110. (U,D
PHENANTHRENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
PYRENE	UG/L		NO DATA	LT20.	10. (K)	LT20.	110. (U)
1,2,4-TRICHLOROBENZENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		NO DATA	LT20.	NO DATA	LT20.	110. (U)
ALDRIN	UG/L		NO DATA	LT1.	NO DATA	LT2.	0.07 (U)
ALPHA-BHC	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
BETA-BHC	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
DELTA-BHC	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
GAMMA-BHC(LINDANE)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
CHLORDANE	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.48 (A,S
4,4'-DDD (P,P'-DDD)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.1 (U)
4,4'-DDE (P,P'-DDE)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.11 (A)
4,4'-DDT (P,P'-DDT)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.2 (A,N
DIELDRIN	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
ENDOSULFAN I (ALPHA)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
ENDOSULFAN II (BETA)	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.1 (U)
ENDOSULFAN SULFATE	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.1 (U)
ENDRIN ALDEHYDE	UG/L		NO DATA	LT1.	NO DATA	LT1.	NO DATA
HEPTACHLOR	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
HEPTACHLOR EPOXIDE	UG/L		NO DATA	LT1.	NO DATA	LT1.	0.07 (U)
PCB-1016	UG/L		NO DATA	LT3.	NO DATA	LT3.	0.7 (U)
PCB-1221	UG/L		NO DATA	LT3.	NO DATA	LT5.	0.7 (U)
PCB-1232	UG/L		NO DATA	LT3.	NO DATA	LT5.	0.7 (U)
PCB-1242	UG/L		NO DATA	LT3.	NO DATA	LT4.	0.7 (U)
PCB-1248	UG/L		NO DATA	LT3.	NO DATA	LT5.	0.7 (U)
PCB-1254	UG/L		NO DATA	LT3.	NO DATA	LT3.	0.8 (U)
PCB-1260	UG/L		NO DATA	LT3.	NO DATA	LT3.	0.8 (U)
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	LT20.	NO DATA

SUMMARY OF EXISTING DATA (SR-1)

REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

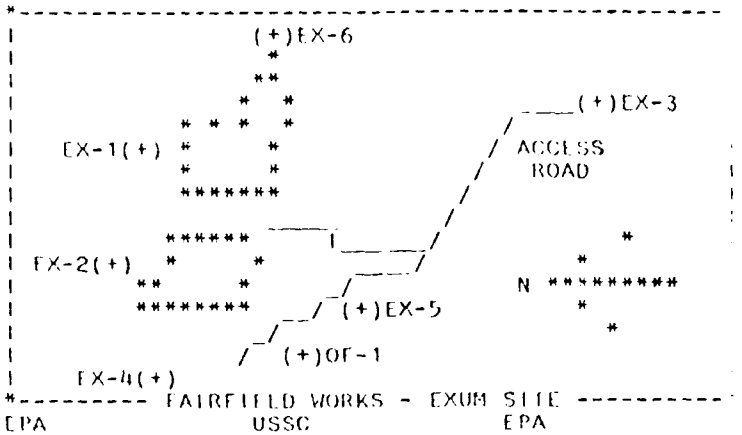
SITE: EXUM

SAMPLING POINT: EX-5
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS 07/01/82
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		NO DATA	LT100.	NO DATA	LT100.	NO DATA
ACRYLONITRILE	UG/L		NO DATA	LT100.	NO DATA	LT100.	NO DATA
BENZENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
BROMOFORM	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
CARBON TETRACHLORIDE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
CHLOROBENZENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
DIBROMOCHLOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
CHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
2-CHLOROETHYLVINYL ETHER	UG/L		NO DATA	LT5.	NO DATA	LT10.	5. (U)
CHLOROFORM	UG/L		NO DATA	LT5.	NO DATA	LT10.	5. (U)
BROMODICHLOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,1-DICHLOROETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,2-DICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,1-DICHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,2-DICHLOROPROPANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
TRANS-1,3-DICHLOROPROPENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
ETHYLBENZENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
METHYL BROMIDE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
METHYL CHLORIDE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
METHYLENE CHLORIDE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,1,2,2-TETRACHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
TETRACHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
TOLUENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,2-TRANS-DICHLOROETHYLENE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
1,1,1-TRICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	NO DATA
1,1,2-TRICHLOROETHANE	UG/L		NO DATA	LT5.	NO DATA	LT5.	5. (U)
TRICHLOROETHENE	UG/L		NO DATA	LT5.	NO DATA	LT10.	5. (U)
TRICHLOROFLUOROMETHANE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	5. (U)
VINYL CHLORIDE	UG/L		NO DATA	NO DATA	NO DATA	LT5.	5. (U)
M-XYLENE	UG/L		NO DATA	LT5.	NO DATA	NO DATA	NO DATA
CIS-1,3-DICHLOROPROPENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



FAIRFIELD WORKS - EXUM SITE

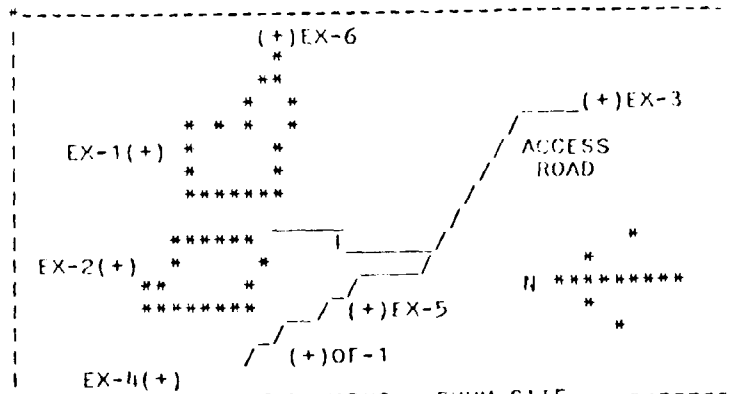
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-5
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYLETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

FAIRFIELD WORKS - EXUM SITE

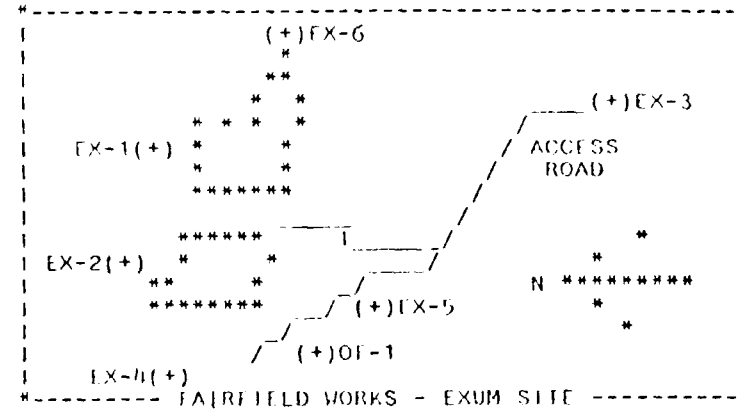
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS 07/01/82
ALUMINUM	MG/L		NO DATA	NO DATA	1.1	NO DATA	0.32
ANTIMONY	MG/L		LT0.005	NO DATA	NO DATA	LT0.1	0.04 (U)
BERYLLIUM	MG/L		LT0.0005	NO DATA	NO DATA	LT0.04	0.01 (U)
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		NO DATA	NO DATA	56.	NO DATA	32.
COBALT	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
COPPER	MG/L		LT0.01	NO DATA	NO DATA	LT0.01	0.011
CYANIDE	MG/L		0.01	NO DATA	0.005	LT0.005	0.007
MAGNESIUM	MG/L		NO DATA	NO DATA	24.	NO DATA	17.
MOLYBDENUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.02 (U)
NICKEL	MG/L		NO DATA	NO DATA	NO DATA	LT0.04	0.03 (U)
STRONTIUM	MG/L		NO DATA	NO DATA	0.794	NO DATA	0.62
TIN	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.1 (U)
TELLURIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.04 (U)
THALLIUM	MG/L		0.08	NO DATA	NO DATA	0.033	0.1 (U)
TITANIUM	MG/L		NO DATA	NO DATA	0.024	NO DATA	0.01 (U)
TURBIDITY	NTU		30.	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
YTTRIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	0.01 (U)
ZINC	MG/L		6.	NO DATA	16.078	34.	87.
ZIRCONIUM	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	0.005	NO DATA	NO DATA	LT0.002	0.04 (U)
BARIUM	MG/L	1.0	0.47	NO DATA	0.165	0.88	0.12
CADMIUM	MG/L	0.01	0.003	NO DATA	NO DATA	0.003	0.01 (U)
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	0.001	NO DATA	NO DATA	0.014	0.034
COLIFORM BACTERIA	COL/100M		0.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	LT0.1	NO DATA	NO DATA	LT0.006	NO DATA
ENDRIN	UG/L	0.0002	LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
FLUORIDE	MG/L	1.4-2.4	0.68	NO DATA	NO DATA	0.42	NO DATA
GROSS ALPHA	PCI/L	15.	0.7±0.1	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	29.3±13.6	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		LT0.01	NO DATA	1.2	NO DATA	1.2
LEAD	MG/L	0.05	0.019	NO DATA	0.128	0.13	0.6
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		0.31	NO DATA	0.145	NO DATA	0.11
MERCURY	MG/L	0.002	LT0.0001	NO DATA	NO DATA	LT0.0001	0.0002 (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

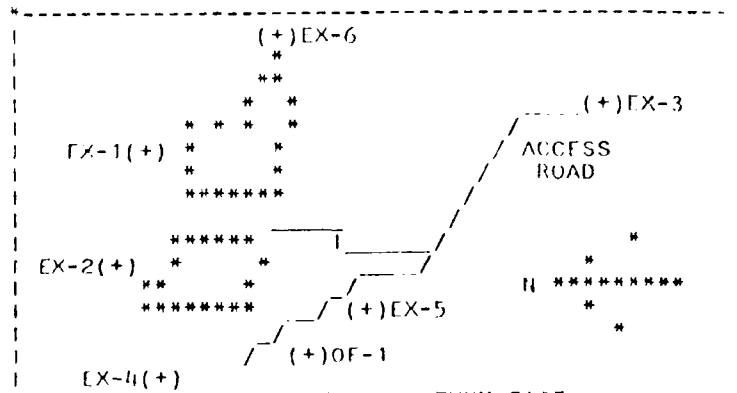


FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
METHOXYCHLOR	MG/L	0.1	LT0.1	NO DATA	NO DATA	NO DATA	0.0003 (U)
NITRATE	MG/L	10.	0.9	NO DATA	NO DATA	0.08	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		LT0.01	NO DATA	NO DATA	LT0.1	NO DATA
RADIUM	PCI/L	5.	0.7±0.1	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	LT0.001	NO DATA	NO DATA	0.002	0.4 (U)
SILVER	MG/L	0.05	0.004	NO DATA	NO DATA	0.02	0.01 (U)
SODIUM	MG/L		1.5	NO DATA	32.	NO DATA	26.
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	LT0.005	NO DATA	NO DATA	LT0.002	0.002 (U)
2,4,5-TP (SILVEX)	UG/L	0.01	LT10.	NO DATA	NO DATA	LT1.	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4-DIMETHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2-METHYL-4,6-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2,4-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	LT50.	30. (U)
2-NITROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
4-NITROPHENOL	UG/L		LT50.	NO DATA	NO DATA	LT10.	20. (U)
4-CHLORO-3-METHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



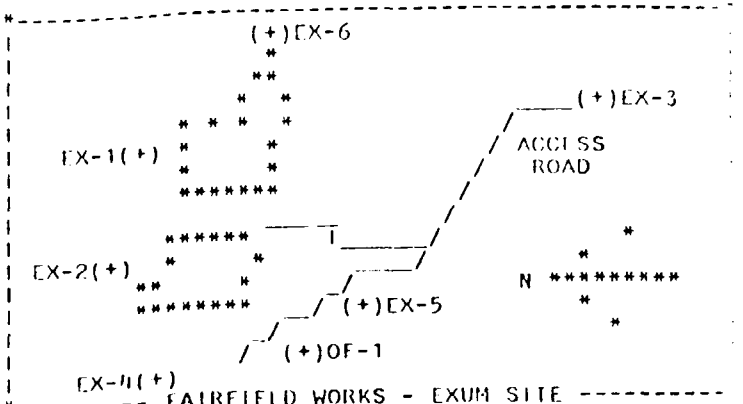
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
PENTACHLOROPHENOL	UG/L		LT50.	NO DATA	NO DATA	LT10.	30. (U)
PHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
2,4,6-TRICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
ACENAPHTHENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
ACENAPHTHYLENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
ANTHRACENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BENZIDINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	NO DATA
BENZO (A) ANTHRACENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BENZO (A) PYRENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BENZO (B) FLUORANTHENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U,B
BENZO (G,H,I) PERYLENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	10. (U)
BENZO (K) FLUORANTHENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U,B
BIS (2-CHLOROETHOXY) METHANE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BIS (2-CHLOROETHYL) ETHER	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		LT10.	NO DATA	NO DATA	11.	10. (U)
4-BROMOPHENYL PHENYL ETHER	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
BENZYL BUTYL PHTHALATE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
2-CHLORONAPHTHALENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
4-CHLOROPHENYL PHENYL ETHER	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
CHRYSENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
DIBENZO (A,H) ANTHRACENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	10. (U)
1,2-DICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
1,3-DICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
1,4-DICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
3,3-DICHLOROBENZIDINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
DIETHYL PHTHALATE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
DIMETHYL PHTHALATE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
DI-N-BUTYLPHTHALATE	UG/L		LT10.	NO DATA	NO DATA	33.	14.
2,4-DINITROTOLUENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
2,6-DINITROTOLUENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
DI-N-OCTYLPHTHALATE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
1,2-DIPHENYLHYDRAZINE	UG/L		LT10. (E)	NO DATA	NO DATA	LT10. (E)	NO DATA
FLUORANTHENE	UG/L		LT10.	NO DATA	10. (K)	LT10.	10. (U)
FLUORENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROBUTADIENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



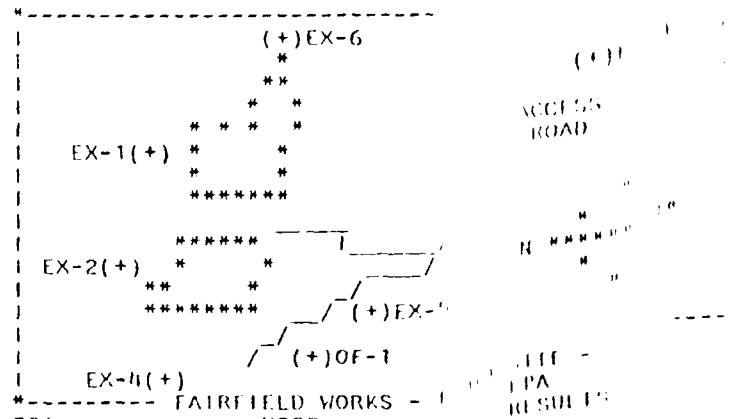
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		LT20.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROETHANE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
INDENO (1,2,3-CD) PYRENE	UG/L		LT25.	NO DATA	NO DATA	LT20.	10. (U)
ISOPHORONE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
NITROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
N-NITROSODIPHENYLAMINE	UG/L		LT10. (D)	NO DATA	NO DATA	LT10. (D)	10. (U)
PHENANTHRENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
PYRENE	UG/L		LT10.	NO DATA	10. (K)	LT10.	10. (U)
1,2,4-TRICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		LT10.	NO DATA	NO DATA	LT10.	10. (U)
ALDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ALPHA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
BETA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
DELTA-BHC	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
GAMMA-BHC(LINDANE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
CHLORDANE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.3 (U)
4,4'-DDD (P,P'-DDD)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDE (P,P'-DDE)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
4,4'-DDT (P,P'-DDT)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
DIELDRIN	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN I (ALPHA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
ENDOSULFAN II (BETA)	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDOSULFAN SULFATE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.1 (U)
ENDRIN ALDEHYDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	NO DATA
HEPTACHLOR	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
HEPTACHLOR EPOXIDE	UG/L		LT1.	NO DATA	NO DATA	LT1.	0.03 (U)
PCB-1016	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1221	UG/L		LT4.	NO DATA	NO DATA	LT1.	0.3 (U)
PCB-1232	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1242	UG/L		LT4.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1248	UG/L		LT3.	NO DATA	NO DATA	LT2.	0.3 (U)
PCB-1254	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
PCB-1260	UG/L		LT3.	NO DATA	NO DATA	LT1.	0.8 (U)
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	LT10.	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



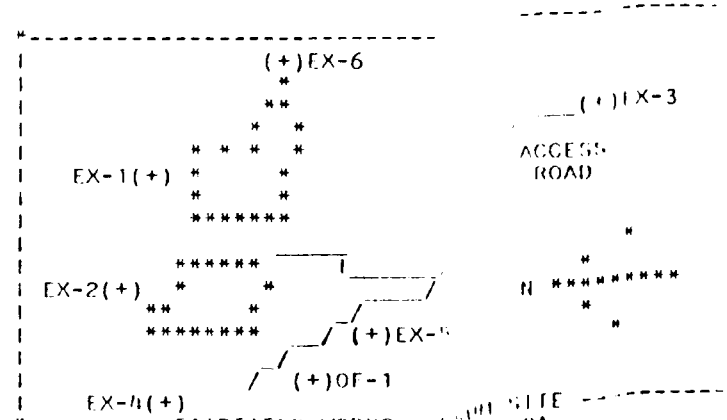
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/ 07/01	
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA (U)
ACROLEIN	UG/L		LT100.	NO DATA	NO DATA	LT100.	(U)
ACRYLONITRILE	UG/L		LT100.	NO DATA	NO DATA	LT100.	(U)
BENZENE	UG/L		LT5. (N)	NO DATA	NO DATA	LT5.	(U)
BROMOFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
CARBON TETRACHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
CHLOROBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
DIBROMOCHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
CHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT10.	
2-CHLOROETHYLVINYL ETHER	UG/L		LT5.	NO DATA	NO DATA	LT10.	(U)
CHLOROFORM	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
BROMODICHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	(U)
1,1-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
1,2-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
1,1-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
1,2-DICHLOROPROPANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
TRANS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
ETHYLBENZENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
METHYL BROMIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	(U)
METHYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	(U)
METHYLENE CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
1,1,2,2-TETRACHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
TETRACHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
TOLUENE	UG/L		7.	NO DATA	NO DATA	LT5.	(U)
1,2-TRANS-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	
1,1,1-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
1,1,2-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
TRICHLOROETHENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
TRICHLOROFLUOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	LT5.	(U)
VINYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	LT10.	
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	
CIS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	LT5.	
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



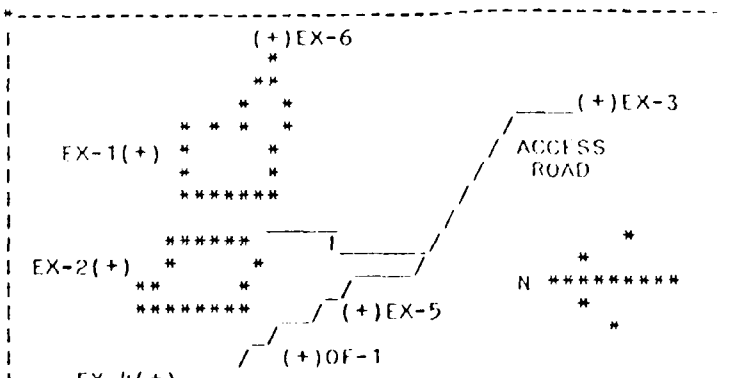
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-6
TYPE: WELL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/[illegible] 07/01/[illegible]	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



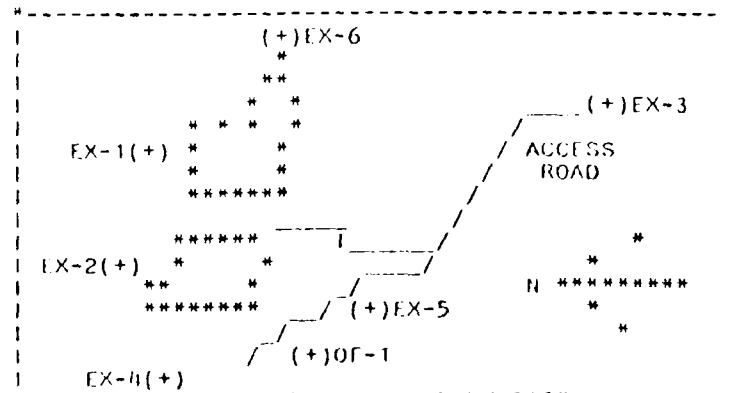
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
ALUMINUM	MG/L		6.8	NO DATA	NO DATA	NO DATA	NO DATA
ANTIMONY	MG/L		LT0.005	NO DATA	NO DATA	NO DATA	NO DATA
BERYLLIUM	MG/L		LT0.0005	NO DATA	NO DATA	NO DATA	NO DATA
BORON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/L		21.	NO DATA	NO DATA	NO DATA	NO DATA
COBALT	MG/L		LT0.02	NO DATA	NO DATA	NO DATA	NO DATA
COPPER	MG/L		0.01	NO DATA	NO DATA	NO DATA	NO DATA
CYANIDE	MG/L		0.05	NO DATA	NO DATA	NO DATA	NO DATA
MAGNESIUM	MG/L		5.1	NO DATA	NO DATA	NO DATA	NO DATA
MOLYBDENUM	MG/L		LT0.04	NO DATA	NO DATA	NO DATA	NO DATA
NICKEL	MG/L		0.03	NO DATA	NO DATA	NO DATA	NO DATA
STRONTIUM	MG/L		0.14	NO DATA	NO DATA	NO DATA	NO DATA
TIN	MG/L		0.06	NO DATA	NO DATA	NO DATA	NO DATA
TELLURIUM	MG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
THALLIUM	MG/L		0.05	NO DATA	NO DATA	NO DATA	NO DATA
TITANIUM	MG/L		0.09	NO DATA	NO DATA	NO DATA	NO DATA
TURBIDITY	NTU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/L		0.046	NO DATA	NO DATA	NO DATA	NO DATA
YTTRIUM	MG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
ZINC	MG/L		0.04	NO DATA	NO DATA	NO DATA	NO DATA
ZIRCONIUM	MG/L		LT0.015	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/L	0.05	0.021	NO DATA	NO DATA	NO DATA	NO DATA
BARIUM	MG/L	1.0	0.02	NO DATA	NO DATA	NO DATA	NO DATA
CADMIUM	MG/L	0.01	0.005	NO DATA	NO DATA	NO DATA	NO DATA
CHLORIDE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/L	0.05	0.001	NO DATA	NO DATA	NO DATA	NO DATA
COLIFORM BACTERIA	COL/100M		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2,4-D	MG/L	0.1	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ENDRIN	UG/L	0.0002	LT1.	NO DATA	NO DATA	NO DATA	NO DATA
FLUORIDE	MG/L	1.4-2.4	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROSS ALPHA	PCI/L	15.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROSS BETA	PCI/L	*	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/L		0.3	NO DATA	NO DATA	NO DATA	NO DATA
LEAD	MG/L	0.05	0.001	NO DATA	NO DATA	NO DATA	NO DATA
LINDANE	MG/L	0.004	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/L		0.07	NO DATA	NO DATA	NO DATA	NO DATA
MERCURY	MG/L	0.002	0.0004	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



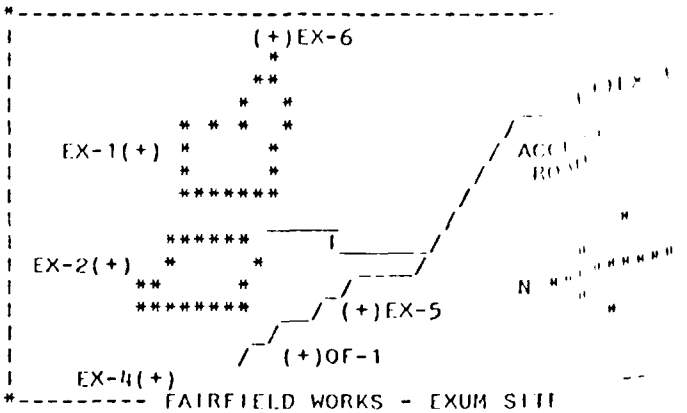
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82	EPA RESULTS 07/01/82
METHOXYCHLOR	MG/L	0.1	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NITRATE	MG/L	10.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PH	SU		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PHENOLS	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM	PCI/L	5.	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 228	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
RADIUM 226	PCI/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/L	0.01	LT0.001	NO DATA	NO DATA	NO DATA	NO DATA
SILVER	MG/L	0.05	0.006	NO DATA	NO DATA	NO DATA	NO DATA
SODIUM	MG/L		42.	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SULFATE	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC HALOGEN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOXAPHENE	MG/L	0.005	LT0.005	NO DATA	NO DATA	NO DATA	NO DATA
2,4,5-TP (SILVEX)	UG/L	0.01	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
GROUND WATER ELEVATION	FT MSL		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-DICHLOROPHENOL	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-DIMETHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA
2-METHYL-4,6-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	NO DATA	NO DATA
2,4-DINITROPHENOL	UG/L		LT100.	NO DATA	NO DATA	NO DATA	NO DATA
2-NITROPHENOL	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA
4-NITROPHENOL	UG/L		LT50.	NO DATA	NO DATA	NO DATA	NO DATA
4-CHLORO-3-METHYLPHENOL	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

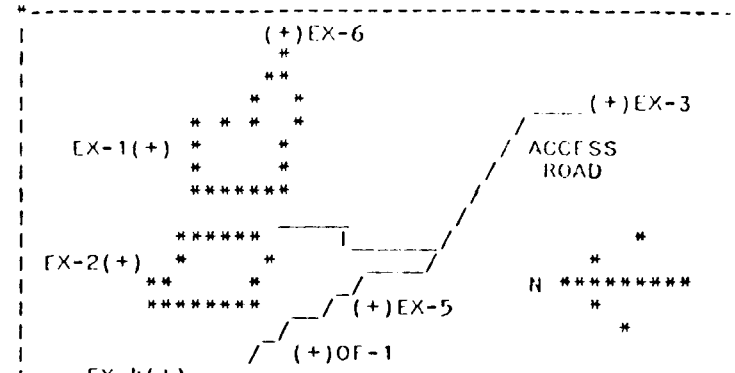
SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL

FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81		USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
PENTACHLOROPHENOL	UG/L		LT50.		NO DATA	NO DATA	NO DATA	NO DATA
PHENOL	UG/L		LT20.		NO DATA	NO DATA	NO DATA	NO DATA
2,4,6-TRICHLOROPHENOL	UG/L		LT20.		NO DATA	NO DATA	NO DATA	NO DATA
ACENAPHTHENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
ACENAPHTHYLENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
ANTHRACENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZIDINE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZO (A) ANTHRACENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZO (A) PYRENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZO (B) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZO (G,H,I) PERYLENE	UG/L		LT25.		NO DATA	NO DATA	NO DATA	NO DATA
BENZO (K) FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BIS (2-CHLOROETHOXY) METHANE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BIS (2-CHLOROETHYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BIS (2-CHLOROISOPROPYL) ETHER	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BIS (2-ETHYLHEXYL) PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
4-BROMOPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
BENZYL BUTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
2-CHLORONAPHTHALENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
4-CHLOROPHENYL PHENYL ETHER	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
CHRYSENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
DIBENZO (A,H) ANTHRACENE	UG/L		LT25.		NO DATA	NO DATA	NO DATA	NO DATA
1,2-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
1,3-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
1,4-DICHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
3,3-DICHLOROBENZIDINE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
DIETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
DIMETHYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
DI-N-BUTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
2,4-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
2,6-DINITROTOLUENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
DI-N-OCTYL PHTHALATE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
1,2-DIPHENYLHYDRAZINE	UG/L		LT10.	(E)	NO DATA	NO DATA	NO DATA	NO DATA
FLUORANTHENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
FLUORENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
HEXACHLOROBENZENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA
HEXACHLOROBUTADIENE	UG/L		LT10.		NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL

--------- FAIRFIELD WORKS - EXUM SITE ----------

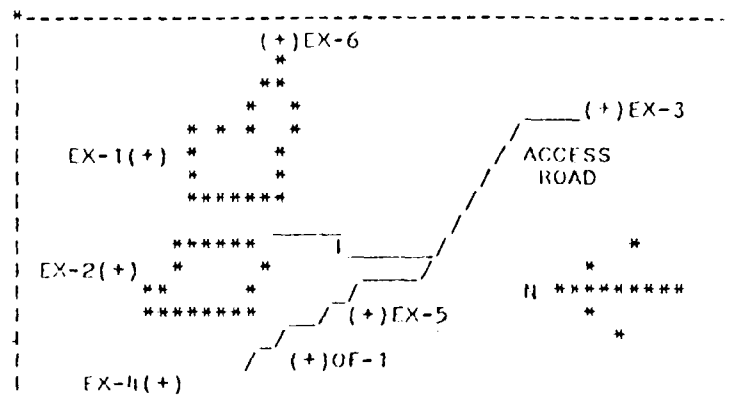
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
HEXACHLOROCYCLOPENTADIENE	UG/L		LT20.	NO DATA	NO DATA	NO DATA	NO DATA
HEXACHLOROETHANE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
INDENO (1,2,3-CD) PYRENE	UG/L		LT25.	NO DATA	NO DATA	NO DATA	NO DATA
ISOPHORONE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
NITROBENZENE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODIMETHYLAMINE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODIPHENYLAMINE	UG/L		LT10. (D)	NO DATA	NO DATA	NO DATA	NO DATA
PHENANTHRENE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
PYRENE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
1,2,4-TRICHLOROBENZENE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
HEXACHLOROBENZENE (HCB)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPTHALENE	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
ALDRIN	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
ALPHA-BHC	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
BETA-BHC	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
DELTA-BHC	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
GAMMA-BHC(LINDANE)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
CHLORDANE	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
4,4'-DDD (P,P'-DDD)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
4,4'-DDE (P,P'-DDE)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
4,4'-DDT (P,P'-DDT)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
DIELDRIN	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
ENDOSULFAN I (ALPHA)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
ENDOSULFAN II (BETA)	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
ENDOSULFAN SULFATE	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
ENDRIN ALDEHYDE	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
HEPTACHLOR	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
HEPTACHLOR EPOXIDE	UG/L		LT1.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1016	UG/L		LT12.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1221	UG/L		LT8.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1232	UG/L		LT10.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1242	UG/L		LT7.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1248	UG/L		LT3.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1254	UG/L		LT4.	NO DATA	NO DATA	NO DATA	NO DATA
PCB-1260	UG/L		LT3.	NO DATA	NO DATA	NO DATA	NO DATA
TETRACHLORODIBENZO-P-DIOXIN	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL



FAIRFIELD WORKS - EXUM SITE

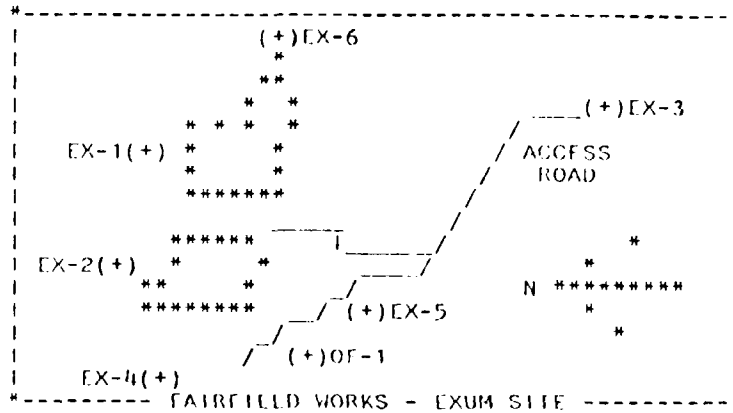
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
TCDD (DIOXIN)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	UG/L		LT100.	NO DATA	NO DATA	NO DATA	NO DATA
ACRYLONITRILE	UG/L		LT100.	NO DATA	NO DATA	NO DATA	NO DATA
BENZENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
BROMOFORM	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
CARBON TETRACHLORIDE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
CHLOROBENZENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
DIBROMOCHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
CHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
2-CHLOROETHYLVINYL ETHER	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
CHLOROFORM	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
BROMODICHLOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
DICHLORODIFLUOROMETHANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHANE	UG/L		LT5. (N)	NO DATA	NO DATA	NO DATA	NO DATA
1,2-DICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
1,1-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
1,2-DICHLOROPROPANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
TRANS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLBENZENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
METHYL BROMIDE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
METHYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
METHYLENE CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
1,1,2,2-TETRACHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
TETRACHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
TOLUENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
1,2-TRANS-DICHLOROETHYLENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
1,1,1-TRICHLOROETHANE	UG/L		13.	NO DATA	NO DATA	NO DATA	NO DATA
1,1,2-TRICHLOROETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
TRICHLOROETHENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
TRICHLOROFLUOROMETHANE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
VINYL CHLORIDE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
M-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CIS-1,3-DICHLOROPROPENE	UG/L		LT5.	NO DATA	NO DATA	NO DATA	NO DATA
O&P-XYLENE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACETYLOXYOCTADECENOIC A.,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BENZOTHIAZOLE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: OF-1
TYPE: OUTFALL



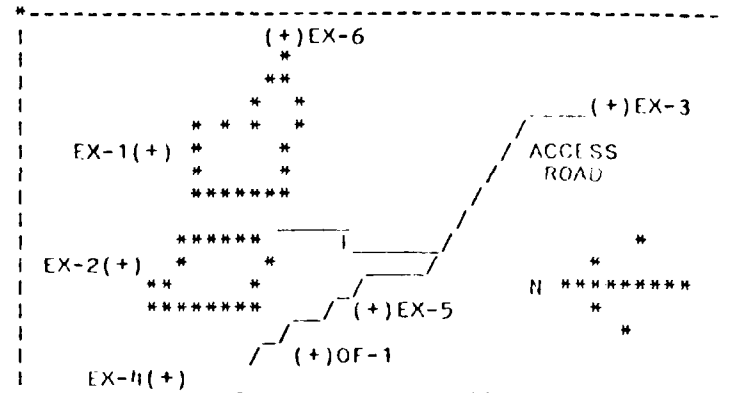
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS 09/17/81	USSC RESULTS 11/04/81	EPA RESULTS	USSC RESULTS 07/02/82 07/01/82	EPA RESULTS
DODECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECYCLOXYETHANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXADECANOIC ACID DIOCTYLESTER	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NONANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OCTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
OXYBISMETHYLENEBISOXIRANE	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TRIDECANOL	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	UG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-E
TYPE: SLUDGE

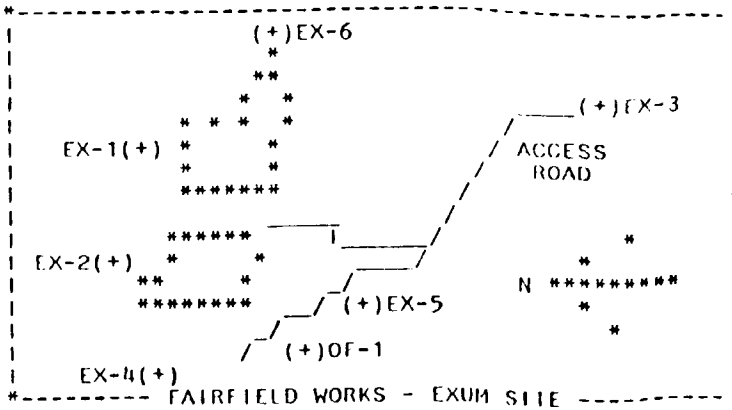


FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS	USSC RESULTS	EPA RESULTS	USSC RESULTS 06/30/82	EPA RESULTS
ALUMINUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ANTIMONY	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BERYLLIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BORON	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CALCIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
COBALT	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
COPPER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MAGNESIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MOLYBDENUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NICKEL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
STRONTIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TELLURIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
THALLIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TITANIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
VANADIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
YTTRIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ZINC	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ZIRCONIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ARSENIC	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BARIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CADMIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CHROMIUM, HEX	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
IRON	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
LEAD	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MANGANESE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
MERCURY	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SELENIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SILVER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
SODIUM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2-METHYL-4,6-DINITROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3000. (U)
4-CHLORO-3-METHYLPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
2-CHLOROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
2,4 DICHLOROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
2,4-DIMETHYLPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
2,4-DINITROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3000. (U

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 81

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-E
TYPE: SLUDGE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS	USSC RESULTS	EPA RESULTS	USSC RESULTS 06/30/82	EPA RESULTS	
2-NITROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
4-NITROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	2000.	(U)
PENTACHLOROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3000.	(U)
PHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
2,4,6-TRICHLOROPHENOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
ACENAPHTHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
ACENAPHTHYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
ANTHRACENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZIDINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	
BENZO (A) ANTHRACENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZO (A) PYRENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZO (B) FLUORANTHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZO (G,H,I) PERYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZO (K) FLUORANTHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BIS (2-CHLOROETHOXY) METHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BIS (2-CHLOROETHYL) ETHER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BIS (2-CHLOROISOPROPYL) ETHER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BIS (2-ETHYLHEXYL) PHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
4-BROMOPHENYL PHENYL ETHER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
BENZYL BUTYL PHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
2-CHLORONAPHTHALENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
4-CHLOROPHENYL PHENYL ETHER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
CHRYSENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
DIBENZO (A,H) ANTHRACENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
1,2-DICHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
1,3-DICHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
1,4-DICHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
3,3-DICHLOROBENZIDINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
DIETHYL PHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
DIMETHYL PHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
DI-N-BUTYLPHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
2,4-DINITROTOLUENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
2,6-DINITROTOLUENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
DI-N-OCTYLPHTHALATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	
1,2-DIPHENYLHYDRAZINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
FLUORANTHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)
FLUORENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000.	(U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

```
*-----------------------------------------------------
|                (+)EX-6
|                 *
|                 **
|                *  *                    ____(+)EX-3
|             * * *  *                  /
|   EX-1(+)  *      *                  / ACCESS
|            *      *                  /  ROAD
|            *******                  /
|                    ____            /
|           ******   I    /_____/
| EX-2(+)  *      *     ____/            *
|         **      *    _/                *
|         ********  __/ (+)EX-5        N *********
|                  _/                     *
|                 /  (+)OF-1               *
|    EX-4(+)
*--------- FAIRFIELD WORKS - EXUM SITE ---------
```

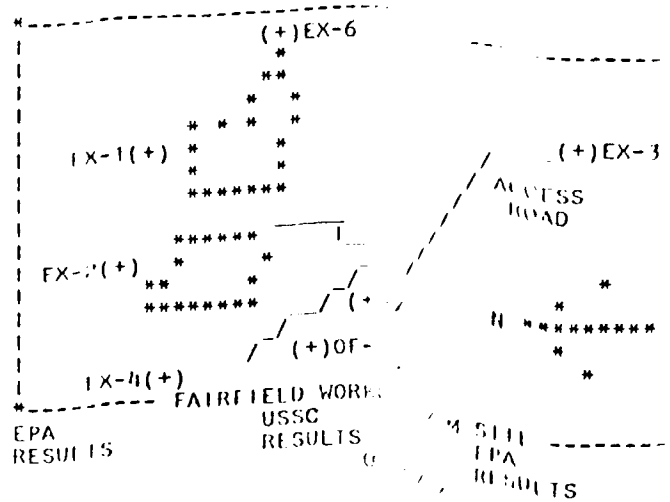
CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-E
TYPE: SLUDGE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS	USSC RESULTS	EPA RESULTS	USSC RESULTS 06/30/82	EPA RESULTS
HEXACHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
HEXACHLOROBUTADIENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
HEXACHLOROCYCLOPENTADIENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
HEXACHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
INDENO (1,2,3-CD) PYRENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
ISOPHORONE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
NITROBENZENE*	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
N-NITROSODIMETHYLAMINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
N-NITROSODI-N-PROPYLAMINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
N-NITROSOPHENYLAMINE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
PHENANTHRENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
PYRENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
1,2,4-TRICHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
2,4-D	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
2,4,5-TP (SILVEX)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
NAPHTHALENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (U)
ALDRIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
ALPHA-BHC	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
BETA-BHC	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
DELTA-BHC	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
GAMMA-BHC (LINDANE)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
CHLORDANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U,S
4,4'-DDD (P,P'-DDD)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	7. (U)
4,4'-DDE (P,P'-DDE)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	7. (U)
4,4'-DDT (P,P'-DDT)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	7. (U)
DIELDRIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3. (U)
ENDOSULFAN I (ALPHA)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3. (U)
ENDOSULFAN II (BETA)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	7. (U)
ENDOSULFAN SULFATE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	8. (U)
ENDRIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	7. (U)
ENDRIN ALDEHYDE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTACHLOR	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	20. (U)
HEPTACHLOR EPOXIDE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	3. (U)
TOXAPHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	100. (U)
PCB-1016	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	200. (U)
PCB-1221	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	200. (U)
PCB-1232	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	200. (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-E
TYPE: SLUDGE

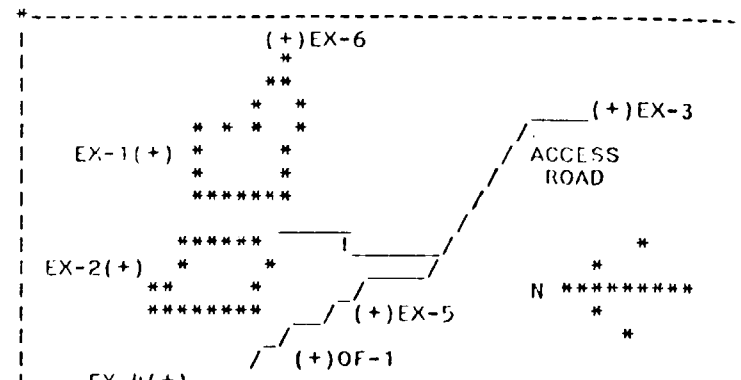
PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS	USSC RESULTS	EPA RESULTS	USSC RESULTS	EPA RESULTS
PCB-1242	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	
PCB-1248	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	
PCB-1254	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	200. (U)
PCB-1260	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	200. (U)
METHOXYCHLOR	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	50. (U)
TETRACHLORODIBENZO-P-DIOXIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	50. (U)
TCDD (DIOXIN)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	50. (U)
TRANS-1,3-DICHLOROPROPENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACROLEIN	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ACRYLONITRILE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
BENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BROMOFORM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
CARBON TETRACHLORIDE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
CHLOROBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
DIBROMOCHLOROMETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
CHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
2-CHLOROETHYLVINYL ETHER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
CHLOROFORM	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
BROMODICHLOROMETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
DICHLORODIFLUOROMETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
1,1-DICHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
1,2-DICHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
1,1-DICHLOROETHYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
1,2-DICHLOROPROPANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
ETHYLBENZENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
METHYL BROMIDE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
METHYL CHLORIDE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
METHYLENE CHLORIDE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
1,1,2,2-TETRACHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
TETRACHLOROETHYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
TOLUENE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
1,2-TRANS-DICHLOROETHYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
1,1,1-TRICHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
1,1,2-TRICHLOROETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.005 (U)
TRICHLOROETHENE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
TRICHLORODIFLUOROMETHANE	MG/KG		NO DATA	NO DATA	NO DATA	NO	0.008 (U)
VINYL CHLORIDE	MG/KG		NO DATA	NO DATA	NO DATA		NO DATA
							0.008 (U)

SUMMARY OF EXISTING DATA (SR-1) REPORT DATE: 18 JUL 83

TABULATION OF PARAMETERS BY FACILITY, SITE, SAMPLING POINT, AND DATE

CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS
LOCATION: FAIRFIELD, AL

SITE: EXUM SAMPLING POINT: EX-E
TYPE: SLUDGE



FAIRFIELD WORKS - EXUM SITE

PARAMETER	UNITS	REGUL. LIMIT	USSC RESULTS	USSC RESULTS	EPA RESULTS	USSC RESULTS 06/30/82	EPA RESULTS
M-XYLENE.	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
CIS-1,3-DICHLOROPROPENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.008 (U)
O&P-XYLENE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	0.009 (U)
ACETYLOXYOCTADECENOIC A.,M.E.	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (J)
BENZOTHIAZOLE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
BUTYLOCTANOL (3 ISOMERS)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
DODECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (J)
DODECYCLOXYETHANOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
ETHYLDECANOL (2 ISOMERS)	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEPTADECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (J)
HEXADECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	9999.99(L)
HEXADECANOIC ACID DIOCTYLESTER	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
HEXAOXACYCLOOCTADECANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
METHYLHEPTADECANOIC ACID,M.E.	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (J)
NONANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	1000. (J)
OCTADECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	9999.99(L)
OXYBISMETHYLENEBISOXIRANE	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTADECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PENTAOXANONADECANOL 4 ISOMERS	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PETROLEUM PRODUCT	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
PROPYLHEPTANOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TETRADECANOIC ACID	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	5900. (J)
TRIDECANOL	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED ALCOHOL COMPOUNDS	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
UNIDENTIFIED COMPOUND	MG/KG		NO DATA	NO DATA	NO DATA	NO DATA	9999.99(L)

D	Benzo(B) Fluoranthene and/or Benzo(K) Fluoranthene
E	And/Or Diphenylamine
J	And/Or Azobenzene
K	Estimated Value
L	Actual Value is known to be Less Than Value Given
N	Actual Value is known to be Greater Than Value Given
S	Presumptive Evidence of Presence of Material at Less Than Stated Detection Limit
U	Includes constituents of technical chlordane
LT	Material was Analyzed for but Not Detected at the Detection Level Given Less Than

State of Alabama

DEPARTMENT OF PUBLIC HEALTH

State Office Building
Montgomery, Alabama 36130

IRA L. MYERS, M.D.
STATE HEALTH OFFICER

September 15, 1980

Mr. Joel Veater
Residuals Management Branch
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Dear Joel:

Enclosed are the analyses from U. S. Steel property in Jefferson County, Alabama, as reported by their private laboratory and the State of Alabama Environmental Health Laboratory.

If you have any questions, please contact this office.

Sincerely,

David L. Roberson

David L. Roberson, Environmentalist
Division of Solid Waste & Vector Control
Environmental Health Administration

DLR/mm

Enclosures

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump USS	WL 657	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge — Oily	August 15, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	0.190 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	< .5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	< .05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	< .05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	< .5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	< .001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	< .01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	< .05 mg/l
Cyanide as CN^-	< .02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's	0	Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

PH-F-SW-3/Rev. 11/79

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 648	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	July 25, 1980
Collection Date	Type Analysis	Date Reported

Lower End - USS #1 Extraction Procedure

Other Sample Information

pH			Aluminum as Al		mg/l
Specific Conductance		umho/cm	Arsenic as As	.038	mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l	Barium as Ba	3.3	mg/l
Alkalinity, Total as $CaCO_3$		mg/l	Calcium as Ca		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l	Cadmium as Cd	<.05	mg/l
Carbon Dioxide, free as CO_2		mg/l	Chromium as Cr	0.08	mg/l
Chloride as Cl^-		mg/l	Copper as Cu		mg/l
Fluoride		mg/l	Iron as Fe		mg/l
Hardness, EDTA as $CaCO_3$		mg/l	Lead as Pb	0.6	mg/l
Nitrate Nitrogen as NO_3^-		mg/l	Magnesium as Mg		mg/l
Phosphate as PO_4^{---}		mg/l	Manganese as Mn		mg/l
Silica as SiO_2		mg/l	Mercury as Hg	<.001	mg/l
Sulfate as SO_4^{--}		mg/l	Nickel as Ni		mg/l
Turbidity		JTU	Potassium as K		mg/l
Biochemical Oxygen Demand (BOD)		mg/l	Selenium as Se	<.01	mg/l
Chemical Oxygen Demand (COD)		mg/l	Silver as Ag	<.05	mg/l
Cyanide as CN^-	<.02	mg/l	Sodium as Na		mg/l
Oil and Grease		mg/l	Zinc as Zn		mg/l
Oxygen Dissolved (DO)		mg/l	Total Solids		mg/l
Phenols		mg/l	Total Dissolved		mg/l
Pesticides			Total Suspended		mg/l
Chlorinated hydrocarbons			Total Volatile		mg/l
Chlorophenoxys			Volatile Dissolved		mg/l
			Volatile Suspended		mg/l
			Total Fixed		mg/l
PCB's	Ø		Fixed Dissolved		mg/l
Other Organic		mg/l	Fixed Suspended		mg/l
		mg/l	Settleable		mg/l
		mg/l	Radioactivity		
		mg/l	Alpha		pCi/l
		mg/l	Beta		pCi/l
		mg/l	Gamma Scan		

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 649	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water (Clear)	July 25, 1980
Collection Date	Type Analysis	Date Reported

USS - #1

Other Sample Information

pH	11.8	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 650, 651 and 652	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water (Oily)	August 21, 1980
Collection Date	Type Analysis	Date Reported

Water from upper end - USS-2

Other Sample Information

pH		7.4	Aluminum as Al		mg/l
Specific Conductance		umho/cm	Arsenic as As	0.02	mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l	Barium as Ba	<.5	mg/l
Alkalinity, Total as $CaCO_3$		mg/l	Calcium as Ca		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l	Cadmium as Cd	<.05	mg/l
Carbon Dioxide, free as CO_2		mg/l	Chromium as Cr	<.05	mg/l
Chloride as Cl^-		mg/l	Copper as Cu		mg/l
Fluoride		mg/l	Iron as Fe		mg/l
Hardness, EDTA as $CaCO_3$		mg/l	Lead as Pb	<.5	mg/l
Nitrate Nitrogen as NO_3^-		mg/l	Magnesium as Mg		mg/l
Phosphate as PO_4^{---}		mg/l	Manganese as Mn		mg/l
Silica as SiO_2		mg/l	Mercury as Hg	<.001	mg/l
Sulfate as SO_4^{--}		mg/l	Nickel as Ni		mg/l
Turbidity		JTU	Potassium as K		mg/l
Biochemical Oxygen Demand (BOD)		mg/l	Selenium as Se	<.01	mg/l
Chemical Oxygen Demand (COD)		mg/l	Silver as Ag	<.05	mg/l
Cyanide as CN^-		mg/l	Sodium as Na		mg/l
Oil and Grease		1 mg/l	Zinc as Zn		mg/l
Oxygen Dissolved (DO)		mg/l	Total Solids		mg/l
Phenols		mg/l	Total Dissolved		mg/l
Pesticides			Total Suspended		mg/l
Chlorinated hydrocarbons			Total Volatile		mg/l
Chlorophenoxys			Volatile Dissolved		mg/l
			Volatile Suspended		mg/l
PCP		Ø	Total Fixed		mg/l
PCB's	NONE	Ø	Fixed Dissolved		mg/l
Other Organic		mg/l	Fixed Suspended		mg/l
Phenol, methyl phenols,		mg/l	Settleable		mg/l
dimethyl phenols detected		mg/l	Radioactivity		
but not quantitated	good presence?	mg/l	Alpha		pCi/l
		mg/l	Beta		pCi/l
		mg/l	Gamma Scan		

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 653	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	August 7, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure USS #2 Upper End

Other Sample Information

pH			Aluminum as Al		mg/l
Specific Conductance		umho/cm	Arsenic as As	<	.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l	Barium as Ba	<	.5 mg/l
Alkalinity, Total as $CaCO_3$		mg/l	Calcium as Ca		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l	Cadmium as Cd	<	.05 mg/l
Carbon Dioxide, free as CO_2		mg/l	Chromium as Cr	<	.05 mg/l
Chloride as Cl^-		mg/l	Copper as Cu		mg/l
Fluoride		mg/l	Iron as Fe		mg/l
Hardness, EDTA as $CaCO_3$		mg/l	Lead as Pb	<	.5 mg/l
Nitrate Nitrogen as $\bar{N}O_3$		mg/l	Magnesium as Mg		mg/l
Phosphate as PO_4^{---}		mg/l	Manganese as Mn		mg/l
Silica as SiO_2		mg/l	Mercury as Hg	<	.001 mg/l
Sulfate as $S\bar{O}_4$		mg/l	Nickel as Ni		mg/l
Turbidity		JTU	Potassium as K		mg/l
Biochemical Oxygen Demand (BOD)		mg/l	Selenium as Se	<	.01 mg/l
Chemical Oxygen Demand (COD)		mg/l	Silver as Ag	<	.05 mg/l
Cyanide as $C\bar{N}$	<	.02 mg/l	Sodium as Na		mg/l
Oil and Grease		mg/l	Zinc as Zn		mg/l
Oxygen Dissolved (DO)		mg/l	Total Solids		mg/l
Phenols		mg/l	Total Dissolved		mg/l
Pesticides			Total Suspended		mg/l
Chlorinated hydrocarbons			Total Volatile		mg/l
Chlorophenoxys			Volatile Dissolved		mg/l
			Volatile Suspended		mg/l
PCP	0		Total Fixed		mg/l
PCB's	0		Fixed Dissolved		mg/l
Other Organic		mg/l	Fixed Suspended		mg/l
		mg/l	Settleable		mg/l
		mg/l	Radioactivity		
		mg/l	Alpha		pCi/l
		mg/l	Beta		pCi/l
		mg/l	Gamma Scan		

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Exum Dump - Birmingham	WL 654	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water	July 25, 1980
Collection Date	Type Analysis	Date Reported

Middle USS - #3

Other Sample Information

pH	7.1	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as $\bar{N}O_3$	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as $S\bar{O}_4$	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as $C\bar{N}$	mg/l	Sodium as Na	mg/l
Oil and Crease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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Exum Dump - Birmingham	WL 655	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	August 7, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure on USS - #3 Middle Area

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as $\bar{N}O_3$	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as $C\bar{N}$	<.02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
PCP	Ø	Total Fixed	mg/l
PCB's	Ø	Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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Exum Dump - USS #4	WL 656	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Oil	August 1, 1980
Collection Date	Type Analysis	Date Reported

Oil Pit USS #4 for total metals (HNO_3)

Other Sample Information

pH		
Specific Conductance		umho/cm
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l
Alkalinity, Total as $CaCO_3$		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l
Carbon Dioxide, free as CO_2		mg/l
Chloride as Cl^-		mg/l
Fluoride		mg/l
Hardness, EDTA as $CaCO_3$		mg/l
Nitrate Nitrogen as $\bar{N}O_3$		mg/l
Phosphate as PO_4^{---}		mg/l
Silica as SiO_2		mg/l
Sulfate as $S\bar{O}_4$		mg/l
Turbidity		JTU
Biochemical Oxygen Demand (BOD)		mg/l
Chemical Oxygen Demand (COD)		mg/l
Cyanide as $C\bar{N}$		mg/l
Oil and Grease		mg/l
Oxygen Dissolved (DO)		mg/l
Phenols		mg/l
Pesticides		
Chlorinated hydrocarbons		
Chlorophenoxys		
PCB's		
Other Organic		mg/l
		mg/l
		mg/l
		mg/l
		mg/l
		mg/l

RESULTS IN MICROGRAMS PER GRAM

Aluminum as Al	
Arsenic as As	29
Barium as Ba	< 50
Calcium as Ca	
Cadmium as Cd	< 5
Chromium as Cr	2325
Copper as Cu	
Iron as Fe	
Lead as Pb	306
Magnesium as Mg	
Manganese as Mn	
Mercury as Hg	< .08
Nickel as Ni	
Potassium as K	
Selenium as Se	6
Silver as Ag	5
Sodium as Na	
Zinc as Zn	
Total Solids	mg/l
Total Dissolved	mg/l
Total Suspended	mg/l
Total Volatile	mg/l
Volatile Dissolved	mg/l
Volatile Suspended	mg/l
Total Fixed	mg/l
Fixed Dissolved	mg/l
Fixed Suspended	mg/l
Settleable	mg/l
Radioactivity	
Alpha	pCi/l
Beta	pCi/l
Gamma Scan	

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Exum Dump - USS #5	WL 658	David Roberson
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	July 25, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure on filter cake

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	<.02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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Exum Dump - USS #6	WL 659	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water	July 25, 1980
Collection Date	Type Analysis	Date Reported

Preserved with HNO_3

Other Sample Information

pH	11.0	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	0.022 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	mg/l	Sodium as Na	mg/l
Oil and Crease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

POOR LEGIBILITY

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

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Exum Dump - Birmingham	WL 649	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water (Clear)	July 25, 1980
Collection Date	Type Analysis	Date Reported

USS - #1

Other Sample Information

pH	11.8	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as $\bar{N}O_3$	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as $S\bar{O}_4$	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as $C\bar{N}$	mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/
	mg/l	Beta	pCi/
	mg/l	Gamma Scan	

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Exum Dump - Birmingham	WL 648	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	July 25, 1980
Collection Date	Type Analysis	Date Reported

Lower End - USS #1 Extraction Procedure

Other Sample Information

pH			Aluminum as Al		mg/l
Specific Conductance		umho/cm	Arsenic as As	.038	mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l	Barium as Ba	3.3	mg/l
Alkalinity, Total as $CaCO_3$		mg/l	Calcium as Ca		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l	Cadmium as Cd	<.05	mg/l
Carbon Dioxide, free as CO_2		mg/l	Chromium as Cr	0.08	mg/l
Chloride as Cl^-		mg/l	Copper as Cu		mg/l
Fluoride		mg/l	Iron as Fe		mg/l
Hardness, EDTA as $CaCO_3$		mg/l	Lead as Pb	0.6	mg/l
Nitrate Nitrogen as NO_3^-		mg/l	Magnesium as Mg		mg/l
Phosphate as PO_4^{---}		mg/l	Manganese as Mn		mg/l
Silica as SiO_2		mg/l	Mercury as Hg	<.001	mg/l
Sulfate as SO_4^{--}		mg/l	Nickel as Ni		mg/l
Turbidity		JTU	Potassium as K		mg/l
Biochemical Oxygen Demand (BOD)		mg/l	Selenium as Se	<.01	mg/l
Chemical Oxygen Demand (COD)		mg/l	Silver as Ag	<.05	mg/l
Cyanide as CN^-	<.02	mg/l	Sodium as Na		mg/l
Oil and Grease		mg/l	Zinc as Zn		mg/l
Oxygen Dissolved (DO)		mg/l	Total Solids		mg/l
Phenols		mg/l	Total Dissolved		mg/l
Pesticides			Total Suspended		mg/l
Chlorinated hydrocarbons			Total Volatile		mg/l
Chlorophenoxys			Volatile Dissolved		mg/l
			Volatile Suspended		mg/l
			Total Fixed		mg/l
PCB's	Ø		Fixed Dissolved		mg/l
Other Organic		mg/l	Fixed Suspended		mg/l
		mg/l	Settleable		mg/l
		mg/l	Radioactivity		
		mg/l	Alpha		pCi/l
		mg/l	Beta		pCi/l
		mg/l	Gamma Scan		

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Exum Dump - Birmingham	WL 650, 651 and 652	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water (Oily)	August 21, 1980
Collection Date	Type Analysis	Date Reported

Water from upper end - USS-2

Other Sample Information

pH		7.4		Aluminum as Al	mg/l
Specific Conductance		umho/cm		Arsenic as As	0.02 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l		Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$		mg/l		Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l		Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2		mg/l		Chromium as Cr	<.05 mg/l
Chloride as Cl^-		mg/l		Copper as Cu	mg/l
Fluoride		mg/l		Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$		mg/l		Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-		mg/l		Magnesium as Mg	mg/l
Phosphate as PO_4^{---}		mg/l		Manganese as Mn	mg/l
Silica as SiO_2		mg/l		Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}		mg/l		Nickel as Ni	mg/l
Turbidity		JTU		Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)		mg/l		Selenium as Se	<.01 mg/
Chemical Oxygen Demand (COD)		mg/l		Silver as Ag	<.05 mg/
Cyanide as CN^-		mg/l		Sodium as Na	mg/
Oil and Grease		1 mg/l		Zinc as Zn	mg/
Oxygen Dissolved (DO)		mg/l		Total Solids	mg/
Phenols		mg/l		Total Dissolved	mg/
Pesticides				Total Suspended	mg/
Chlorinated hydrocarbons				Total Volatile	mg/
Chlorophenoxys				Volatile Dissolved	mg/
				Volatile Suspended	mg/
PCP		Ø		Total Fixed	mg
PCB's	NONE	Ø		Fixed Dissolved	mg
Other Organic		mg/l		Fixed Suspended	mg
Phenol, methyl phenols,		mg/l		Settleable	mg
dimethyl phenols detected		mg/l	Radioactivity		
but not quantitated	good precision	mg/l		Alpha	pC
		mg/l		Beta	pC
		mg/l		Gamma Scan	

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Exum Dump - Birmingham	WL 653	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	August 7, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure USS - #2 Upper End

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	<.02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
PCP	Ø	Total Fixed	mg/l
PCB's	Ø	Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi
	mg/l	Beta	pCi
	mg/l	Gamma Scan	

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STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 654	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water	July 25, 1980
Collection Date	Type Analysis	Date Reported

Middle USS - #3

Other Sample Information

pH	7.1	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as $\bar{N}O_3$	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as $S\bar{O}_4$	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as $C\bar{N}$	mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - Birmingham	WL 655	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	August 7, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure on USS - #3 Middle Area

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	<.02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
PCP	Ø	Total Fixed	mg/l
PCB's	Ø	Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - USS #4	WL 656	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Oil	August 1, 1980
Collection Date	Type Analysis	Date Reported

Oil Pit USS #4 for total metals (HNO_3)

Other Sample Information

pH		
Specific Conductance		umho/cm
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l
Alkalinity, Total as $CaCO_3$		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l
Carbon Dioxide, free as CO_2		mg/l
Chloride as Cl^-		mg/l
Fluoride		mg/l
Hardness, EDTA as $CaCO_3$		mg/l
Nitrate Nitrogen as NO_3^-		mg/l
Phosphate as PO_4^{---}		mg/l
Silica as SiO_2		mg/l
Sulfate as SO_4^{--}		mg/l
Turbidity		JTU
Biochemical Oxygen Demand (BOD)		mg/l
Chemical Oxygen Demand (COD)		mg/l
Cyanide as CN^-		mg/l
Oil and Grease		mg/l
Oxygen Dissolved (DO)		mg/l
Phenols		mg/l
Pesticides		
Chlorinated hydrocarbons		
Chlorophenoxys		
PCB's		
Other Organic		mg/l
		mg/l
		mg/l
		mg/l
		mg/l
		mg/l

RESULTS IN MICROGRAMS PER GRAM

Aluminum as Al		
Arsenic as As	29	
Barium as Ba	< 50	
Calcium as Ca		
Cadmium as Cd	< 5	
Chromium as Cr	2325	
Copper as Cu		
Iron as Fe		
Lead as Pb	306	
Magnesium as Mg		
Manganese as Mn		
Mercury as Hg	< .08	
Nickel as Ni		
Potassium as K		
Selenium as Se	6	
Silver as Ag	5	
Sodium as Na		
Zinc as Zn		
Total Solids		mg/l
Total Dissolved		mg/l
Total Suspended		mg/l
Total Volatile		mg/l
Volatile Dissolved		mg/l
Volatile Suspended		mg/l
Total Fixed		mg/l
Fixed Dissolved		mg/l
Fixed Suspended		mg/l
Settleable		mg/l
Radioactivity		
Alpha		pCi/l
Beta		pCi/l
Gamma Scan		

STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - USS	WL 657	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge - Oily	August 15, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure

Other Sample Information

pH			Aluminum as Al		mg/l
Specific Conductance		umho/cm	Arsenic as As	0.190	mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$		mg/l	Barium as Ba	<.5	mg/l
Alkalinity, Total as $CaCO_3$		mg/l	Calcium as Ca		mg/l
Acidity, Total Mineral, as $CaCO_3$		mg/l	Cadmium as Cd	<.05	mg/l
Carbon Dioxide, free as CO_2		mg/l	Chromium as Cr	<.05	mg/l
Chloride as Cl^-		mg/l	Copper as Cu		mg/l
Fluoride		mg/l	Iron as Fe		mg/l
Hardness, EDTA as $CaCO_3$		mg/l	Lead as Pb	<.5	mg/l
Nitrate Nitrogen as $\bar{N}O_3$		mg/l	Magnesium as Mg		mg/l
Phosphate as PO_4^{---}		mg/l	Manganese as Mn		mg/l
Silica as SiO_2		mg/l	Mercury as Hg	<.001	mg/l
Sulfate as $S\bar{O}_4$		mg/l	Nickel as Ni		mg/l
Turbidity		JTU	Potassium as K		mg/l
Biochemical Oxygen Demand (BOD)		mg/l	Selenium as Se	<.01	mg/l
Chemical Oxygen Demand (COD)		mg/l	Silver as Ag	<.05	mg/l
Cyanide as $C\bar{N}$	<.02	mg/l	Sodium as Na		mg/l
Oil and Grease		mg/l	Zinc as Zn		mg/l
Oxygen Dissolved (DO)		mg/l	Total Solids		mg/l
Phenols		mg/l	Total Dissolved		mg/l
Pesticides			Total Suspended		mg/l
Chlorinated hydrocarbons			Total Volatile		mg/l
Chlorophenoxys			Volatile Dissolved		mg/l
			Volatile Suspended		mg/l
			Total Fixed		mg/l
PCB's	Ø		Fixed Dissolved		mg/l
Other Organic		mg/l	Fixed Suspended		mg/l
		mg/l	Settleable		mg/l
		mg/l	Radioactivity		
		mg/l	Alpha		pCi/l
		mg/l	Beta		pCi/l
		mg/l	Gamma Scan		

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STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - USS #5	WL 658	David Roberson
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Sludge	July 25, 1980
Collection Date	Type Analysis	Date Reported

Extraction Procedure on filter cake

Other Sample Information

pH		Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	<.01 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	<.02 mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi/l
	mg/l	Beta	pCi/l
	mg/l	Gamma Scan	

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STATE OF ALABAMA HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH ADMINISTRATION
DIVISION OF SOLID WASTE & VECTOR CONTROL

Exum Dump - USS #6	WL 659	Tim McCartha
Sampling Location	Laboratory Sample Number	Collector
June 25, 1980	Water	July 25, 1980
Collection Date	Type Analysis	Date Reported

Preserved with HNO_3

Other Sample Information

pH	11.0	Aluminum as Al	mg/l
Specific Conductance	umho/cm	Arsenic as As	0.022 mg/l
Alkalinity, Phenolphthalein, as $CaCO_3$	mg/l	Barium as Ba	<.5 mg/l
Alkalinity, Total as $CaCO_3$	mg/l	Calcium as Ca	mg/l
Acidity, Total Mineral, as $CaCO_3$	mg/l	Cadmium as Cd	<.05 mg/l
Carbon Dioxide, free as CO_2	mg/l	Chromium as Cr	<.05 mg/l
Chloride as Cl^-	mg/l	Copper as Cu	mg/l
Fluoride	mg/l	Iron as Fe	mg/l
Hardness, EDTA as $CaCO_3$	mg/l	Lead as Pb	<.5 mg/l
Nitrate Nitrogen as NO_3^-	mg/l	Magnesium as Mg	mg/l
Phosphate as PO_4^{---}	mg/l	Manganese as Mn	mg/l
Silica as SiO_2	mg/l	Mercury as Hg	<.001 mg/l
Sulfate as SO_4^{--}	mg/l	Nickel as Ni	mg/l
Turbidity	JTU	Potassium as K	mg/l
Biochemical Oxygen Demand (BOD)	mg/l	Selenium as Se	<.01 mg/l
Chemical Oxygen Demand (COD)	mg/l	Silver as Ag	<.05 mg/l
Cyanide as CN^-	mg/l	Sodium as Na	mg/l
Oil and Grease	mg/l	Zinc as Zn	mg/l
Oxygen Dissolved (DO)	mg/l	Total Solids	mg/l
Phenols	mg/l	Total Dissolved	mg/l
Pesticides		Total Suspended	mg/l
Chlorinated hydrocarbons		Total Volatile	mg/l
Chlorophenoxys		Volatile Dissolved	mg/l
		Volatile Suspended	mg/l
		Total Fixed	mg/l
PCB's		Fixed Dissolved	mg/l
Other Organic	mg/l	Fixed Suspended	mg/l
	mg/l	Settleable	mg/l
	mg/l	Radioactivity	
	mg/l	Alpha	pCi
	mg/l	Beta	pCi
	mg/l	Gamma Scan	

ADPH-F-SW-3/Rev. 11/79

BASE TOPOGRAPHIC MAP BY USGS 1959
PHOTO REVISED 1970

Disposal Area below
Chem Haxles

AREAL GEOLOGY AND LINEAMENTS OF THE ADAMSVILLE
QUADRANGLE, ALABAMA

Ken Taylor 7/7/88

Fault reference number	Location[1]				Fault type[2]	Fault horizon[3]	Maximum vertical displacement (feet)	Dip direction	General strike	Length (miles)	Name	Data source(s)[4]
	Section(s)	Township(s)	Range(s)	7½-minute quadrangle(s)								
1	16	19S	5W	Yolande NE	N	U	?	?	N18W	0.22		49
2	8, 17, 16, 21, 28, 33 3, 4	17S 18S	4W 4W	Adamsville	N?	S ?, M	150	NE	N15-20W	5.70	Camp Branch fault	7, 10, 31, 40, 48
3	4, 9, 10, 15	18S	4W	Adamsville Bessemer	N	S ?, M	80	NE	N9W	2.20	Little Creek fault	16, 31, 40, 48
4	5, 4, 9, 16	18S	4W	Adamsville Bessemer	N	S, M	10	?	N9-12W	2.23		12, 16, 31, 40, 48, 49
5	27, 34 3	17S 18S	4W 4W	Adamsville	N	S ?, M	150	NE	N7W	2.15		16, 31, 40, 48
6	16	19S	5W	Yolande NE	N	U	?	?	N18W	0.30		49
7	3, 10	18S	4W	Adamsville Bessemer	N	S ?, M	20	SW	N5W	0.90		31, 40, 48
8	3	18S	4W	Adamsville Bessemer	N	S ?, M	10	E	N5W-N10E	0.35		7, 31, 40, 48
9	27, 34 3, 10	17S 18S	4W 4W	Adamsville Bessemer	N	S ?, M	80	SW	N9W	2.98		7, 10, 12, 16, 31, 40, 48
10	34 2, 3	17S 18S	4W 4W	Adamsville	N	S ?, M	5	NE	N3-13W	0.83		7, 40, 48
11	26, 35 2	17S 18S	4W 4W	Adamsville	N	S ?, M	60	SW	N10W	1.75		7, 10, 16, 31, 40, 48
12	35	17S	4W	Adamsville	N	M	?	?	N8W	0.22		48
13	17, 19, 20, 30 25, 36	15S 15S	1E 1W	Argo	T	S	?	?	N45E	3.87		6, 31
14	17, 20, 29	16S	4W	Brookside Adamsville	N	S ?, M	?	?	N15W	2.10		40, 48
15	28, 33	16S	4W	Adamsville	N	S ?, M	20	NE	N15W	1.75		31, 40, 48
16	34 2, 3	16S 17S	4W 4W	Adamsville	N	U	40	NE	N18W	1.27		31, 40, 48
17	35 2, 11, 12	16S 17S	4W 4W	Adamsville	N	S ?, M	50	NE	N22-30W	1.63		31, 40, 48
18	1, 2, 12, 13, 24	17S	4W	Adamsville	N	S ?, M	60	NE	N9-26W	2.90		7, 10, 16, 31, 40, 48, 49
19	1, 12, 13 18, 19, 30	17S 17S	4W 3W	Adamsville	N	S ?, M	?	SW	N10-25W	3.70		7, 10, 16, 31, 40, 48, 49
20	26, 35, 36 1, 12 7, 18	16S 17S 17S	4W 4W 3W	Adamsville	N	S ?, M	?	?	N24W	4.20		16, 31, 40, 49
21	26, 25, 36 1	16S 17S	5W 5W	Dora Sylvan Springs	N	U	80	SW	N15-22W	2.30		16, 40, 48
22	23, 26, 35	16S	5W	Dora	N	U	200	NE	N20W	2.75		16, 40, 48

Inspection
U S Steel
Fairfield Works

United States Steel Corporation

RICHARD DWOREK
DIRECTOR—ENVIRONMENT
ENVIRONMENT & ENERGY

125 JAMISON LANE
MONROEVILLE, PENNSYLVANIA 15146
412/372-1212, EXT. 2219

RECEIVED
Solid Waste

March 4, 1983

Alabama Department
of Environmental Resources
Division of Solid and Hazardous Waste
434 Monroe Street
Montgomery, Alabama 36130

U. S. Environmental Protection Agency
Region IV
Office of Solid Waste
345 Courtland Street
Atlanta, Georgia 30308

Re: United States Steel Fairfield Works
US EPA ID No. ALD 002904506

Gentlemen:

As a result of a review of all corporate Part A Applications, United States Steel Corporation is herein submitting for your review and files a revised Part A Application for the subject facility.

The major changes made on the application are summarized below:

Major Changes in Form 3, Item 3

Drum storage area S-2 has been deleted since it is not being used to store drums as originally planned.

Storage tanks S-7, S-13, S-14, S-15, S-16, S-17, S-23, S-24, S-26, S-28, S-29 and S-32 have been deleted since there are wastewater storage tanks (or sumps) excluded from regulation under 40 CFR 122.21(d)(2)(vi).

Unit S-21, previously identified as a 250,000-gallon spent pickle liquor storage tank was found to also include an existing 13,500-gallon spent pickle liquor storage sump.

Existing storage tank S-35 (tin mill ditch skimmer tank) was identified as an HWMF during a meeting at Fairfield held after the original Part A application was submitted.

Storage impoundments S-10 were found to be drying lagoons, so they have been redesignated at treatment impoundments T-17.

United States Steel Corporation

Major Changes in Form 3, Item 3 (Con't.)

Storage impoundment S-30 has been added to account for the use of Unit 3c near the unlinked pickle liquor pond for the storage of up to 12,000 55-gallon drums (660,000 gallons total storage capacity).

Treatment tanks T-11 (tin mill treatment plant clarifiers) have been deleted since they are wastewater treatment tanks excluded from regulation under 40 CFR 122.21(d)(2)(vi).

Treatment unit T-12 (tin mill treatment plant pressure filter), although not a tank, need not be included on the Part A application since it will be covered under RCRA permit-by-rule. This was confirmed by Mr. Buddy Cox of the Alabama Division of Solid and Hazardous Waste in a March 17, 1982 telephone conversation with Stephen Lemont of Dames & Moore.

Treatment unit T-13 (pickle liquor filter at injection well) and injection well D-1 have been deleted since they were inactive by November 19, 1980.

Treatment units T-51 (vacuum filters at bio treatment plant) have been deleted since they are wastewater treatment tanks excluded from regulation under 40 CFR 122.21(d)(2)(vi).

Landfills D-6 have been redesignated as disposal surface impoundments. Units 3a, 3b, 4 and 5 of D-6, are used as disposal impoundments; but Unit 3c has been changed to S-30, surface impoundment. Also, the design capacity of D-6 has been changed from 47,900,000 gallons to 46,600,000 gallons.

Major Changes in Form 3, Item IV

Process codes have been changed for many Item IV entries to reflect the changes discussed above.

#2 and #4 galvanizing alkali cleaner wastes (D002) were added to Item IV. The estimated annual quantity for these wastes is 700 tons/year.

Trichlorocthylene (F002, U228), found later to 1,1,1 trichloroethane, has been deleted from the application due to the facts that (1) certain of these wastes are not hazardous due to the mixture rule, and also (2) the sumps and tank (S-32) used to store these wastes at the temper mill are wastewater storage tanks excluded from regulation under 40 CFR 122.21(d)(2)(vi).

United States Steel Corporation

Major Changes in Form 3, Item IV (Con't.)

The following wastes have been deleted since they are not hazardous due to the mixture rule:

- benzene at coke plant (U019)

- toluene at coke plant (U220)

- trichloroethylene solvents (U228) used by Energy Dist. and Control Dept., also by electric shop

- xylene at coke plant (U239)

Very truly yours

A. A. Spinola

A. A. Spinola
Senior Environment Engineer
Environment & Energy Dept.

AAS/mmh
Attachment

CHANGES IN ITEM III OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY					REVISED OR NEW ENTRY					
WASTE UNIT DESIG-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	PROCESS DESIGN CAPACITY	WASTE UNIT DESIGN-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	DESIGN CAPACITY	COMMENTS
TORAGE - CONTAINERS										
-2	Drum storage	Drums and undefined waste	S01	825,000 gal			- DELETED -			Drums to be sent to reprocessor; no hazardous waste identified.
-31	Paint drum storage	Waste paint/solvent and empty drums	S01	264,000 gal			- NO CHANGE -			
TORAGE - TANKS										
-7	Trickle tank at tin mill ditch	Pickle liquor and sodium dichromate	S02	40,000 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
-13	Tin mill tank	Spent cleaning solution and pickle liquor rinse water	S02	3,000 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
-14	Tin mill tank	Spent cleaning solution and pickle liquor rinse water	S02	5,800 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
-15	Tin mill tank	Spent sodium dichromate bath and rinse water	S02	12,000 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
-16	Tin mill tank	Spent sodium dichromate bath and rinse water	S02	3,000 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
-17	Tin mill tank	Spent sodium dichromate bath and rinse water	S02	2,000 gal			- DELETED -			Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).

CHANGES IN ITEM III OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY					REVISED OR NEW ENTRY					
WASTE UNIT DESIG-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	PROCESS DESIGN CAPACITY	WASTE UNIT DESIGN-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	DESIGN CAPACITY	COMMENTS
S-18	#3 Pickle line sump	Pickle line spent pickle liquor	S02	22,600 gal	- NO CHANGE -					
S-19	#3 Pickle line sump	Pickle line spent pickle liquor	S02	34,600 gal	- NO CHANGE -					
S-21	Pickle liquor storage tank at injection well	Pickle liquor	S02	250,000 gal	S-21	Pickle liquor storage tank and sump near regeneration plant:	Spent pickle liquor	S02		Sump identified as a HWMF during last site visit.
						Tank Sump			250,000 gal 13,500 gal	
S-23	#4 Galvanizing chromic acid wastes-North sump	Spent pickle liquor	S02	25,000 gal	- DELETED -					Wastewater storage sump excluded from regulation under 40 CFR 122.21(d)(2)(vi).
S-24	#2 Galvanizing sodium dichromate waste and spent paint line cleaning section baths--South end sump	Sodium dichromate, chromic acid, and other baths	S02	46,000 gal	- DELETED -					Wastewater storage sump excluded from regulation under 40 CFR 122.21(d)(2)(vi).
S-26	Tin mill tank	Spent pickle liquor	S02	5,000 gal	- DELETED -					Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
S-28	Tin mill tank	Spent pickle liquor	S02	5,000 gal	- DELETED -					Wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).

CHANGES IN ITEM III OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY					REVISED OR NEW ENTRY					
WASTE UNIT DESIG-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	PROCESS DESIGN CAPACITY	WASTE UNIT DESIGN-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	DESIGN CAPACITY	COMMENTS
TREATMENT - TANKS										
T-11	Clarifiers (3) --Tin mill treatment plant	Tin mill waste slurry	T01	10,000,000 gal/day			- DELETED -			Wastewater treatment tanks excluded from regulation under 40 CFR 122.21(d)(2)(vi).
TREATMENT - SURFACE IMPOUNDMENTS										
T-9	Sedimentation lagoon on tin mill ditch	Tin mill wastes	T02	10,000,000 gal/day			- NO CHANGE -			
T-10	Equalization basins (2)--Tin mill treatment plant	Tin mill wastes	T02	10,000,000 gal/day			- NO CHANGE -			
--					T-17	Tin mill treatment plant sludge drying lagoon	Tin mill wastes (chromic acid, alkali cleaners, sodium dichromate, and spent pickle liquor)	T02	17,000 gal/day	During last site visit, it was determined that S-10 is actually a treatment lagoon.
TREATMENT - OTHER										
T-12	Pressure filter--Tin mill treatment plant	Tin mill treatment plant filter cake	T04	100,000 gal/day			- DELETED -			Wastewater treatment unit excluded from regulation under 40 CFR 122.21(d)(2)(vi).
T-13	Pickle liquor filter at injection well	Pickle liquor filter cake	T04	300,000 gal/day			- DELETED -			This unit is inactive.
T-51	Vacuum filters (2)--Bio treatment plant	Ammonia still lime sludge	T04	40,000 gal/day			- DELETED -			Wastewater treatment tanks excluded from regulation under 40 CFR 122.21(d)(2)(vi).

CHANGES IN ITEM III OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY					REVISED OR NEW ENTRY					
WASTE UNIT DESIG-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	PROCESS DESIGN CAPACITY	WASTE UNIT DESIGN-NATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	DESIGN CAPACITY	COMMENTS
DISPOSAL - INJECTION WELL										
D-1	Spent pickle liquor in-jection well	Spent pickle liquor	D79	400,000,000 gal			- DELETED -			This unit became inactive by Nov. 19, 1980.
DISPOSAL - LANDFILLS										
D-6	Landfills (5) near unlined pickle liquor pond	Tin mill treatment plant filter cake, decanter tar sludge, ammonia still lime sludge, waste from skimmer lagoon in tin mill ditch, waste from tin mill treatment plant lagoons	D80	147 acre-feet	D-6	See revised entry below under DISPOSAL - SURFACE IMPOUNDMENTS				Landfills D-6 have been redesignated as surface impoundments.
DISPOSAL - SURFACE IMPOUNDMENTS										
-					D-6	Surface im-poundments (4) near un-lined pickle liquor pond	Tin mill treat-ment plant filter cake, decanter tar sludge, ammonia still lime sludge, waste from skimmer lagoon in tin mill ditch, sludge from tin mill treatment plant lagoons	D83	46,600,000 gal	Landfills D-6 have been redesignated as as surface impound-ments. Units 3a, 3b, 4, and 5 are used as disposal impound-ments; Unit 3c has been changed to S-30, surface impoundment for paint drum stor-age.

CHANGES IN ITEM IV OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE FAIRFIELD PLANT

ORIGINAL ENTRY				REVISED OR NEW ENTRY				
HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	COMMENTS
Tar decanter sludge	K087	800	D80	Tar decanter sludge	K087	800	D83	Landfills D-6 have been re-designated as impoundments.*
Ammonia still lime sludge	K060	1,500	D80,T04	Ammonia still	K060	1,500	D83	Vacuum filters at bio treatment plant deleted since they are wastewater treatment tanks exempt from regulation under 40 CFR 122.21(d)(2)(vi).
Tin mill spent sodium dichromate bath and rinse water	D007	25	S02,T02, T01,T04, D80	Tin mill spent sodium dichromate bath and rinse water	D007	25	S02,T02 D83	Tin mill storage tanks, clarifiers, and pressure filter deleted since they are wastewater storage or treatment units excluded from regulation under 40 CFR 122.21(d)(2)(vi).
Tin mill pickle liquor rinse water and tin mill spent pickle liquor	K062	100	S02,T02, T01,T04, D80	Tin mill spent pickle liquor	K062	50	S02,T02, D83	Tin mill storage tanks, clarifiers, and pressure filter deleted since they are wastewater storage or treatment units excluded from regulation under 40 CF 122.21(d)(2)(vi). Some of these wastes may enter the tin mill ditch skimmer tank (S-35). Pickle liquor rinse water deleted per corporate policy that this is not a listed hazardous waste.
Tin mill pickle line spent pickle liquor	K062	62,500	S02,S04, D79	Tin mill pickle line spent pickle liquor	K062	62,500	S02,S04	This waste, which is currently generated, now goes to the regeneration plant instead of the inactive injection well.
Tin mill ditch sedimentation lagoon wastes	K062 D002 D007	250 Included with above Included with above	T02,D80	Tin mill ditch sedimentation lagoon wastes	K062 D002 D007	250 Included with above Included with above	T02,D83	

*All D80 process codes in this table have been changed to D83.

CHANGES IN ITEM IV OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY				REVISED OR NEW ENTRY				
HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	COMMENTS
Tim mill wastes from treatment plant equalization lagoons	K062 D002 D007	3,625 Included with above Included with above	T02,S04 D80	Tin mill wastes from treatment plant equalization lagoons	K062 D002 D007	3,625 Included with above Included with above	T02,D83	Lagoon S-10, which received waste from the equalization lagoons (T-10) has been redesignated as a treatment lagoon (T-17).
Galvanizing chromic acid	D002 D007	20 Included with above	S02,T02, T01,T04, D80	Galvanizing chromic acid	D002 D007	20 Included with above	S02,T02, D83	Galvanizing waste storage tanks and the tin mill treatment plant clarifiers and pressure filter have been deleted since they are wastewater storage or treatment units excluded from regulation under 40 CFR 122.21(d)(2)(vi). Some of this waste may enter the tin mill ditch skimmer tank (S-35).
--				#2 and #4 Galvanizing alkali cleaner wastes	D002	700	S02,T02, D83	Waste previously not accounted for.
Galvanizing sodium dichromate wastes	D007	10	S02,T02, T01,T04, D80	#2 Galvanizing sodium dichromate wastes	D007	10	S02,T02, D83	Galvanizing waste storage tanks and the tin mill treatment plant clarifiers and pressure filter have been deleted since they are wastewater storage or treatment units excluded from regulation under 40 CFR 122.21(d)(2)(vi). Some of this waste may enter the tin mill ditch skimmer tank (S-35).
Galvanizing mill trichloroethylene and oil	F002 U228	25 Included with above	S02			- DELETED -		The tank in which this waste is stored is a wastewater storage tank excluded from regulation under 40 CFR 122.21(d)(2)(vi). Thus, waste need not be listed.
Pickle liquor injection well filter wastes	K062	20	S04,S02, T04			- DELETED -		This waste is not longer generated since the pickle liquor filter (T-13) is inactive.

CHANGES IN ITEM IV OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY				REVISED OR NEW ENTRY				
HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	HAZARDOUS WASTE	EPA HAZARDOUS WASTE NO.	ESTIMATED ANNUAL QUANTITY (TONS)	PROCESS CODES	COMMENTS
Paint line chromic acid and other baths	D002 D007	400 Included with above	S02,T02, T01,T04, D80	Paint line chromic acid and other baths	D002 D007	400 Included with above	S02,T02, D83	Paint line waste storage tanks and the tin mill treatment plant clarifiers and pressure filter have been deleted since they are wastewater storage or treatment units excluded from regulation under 40 CFR 122.21(d)(2)(vi).
/aste paint/solvents and empty lrums	F017	93	S01	Paint line waste paint and solvents	F017 D001	93 Included with above	S01,S04	Accounts for ignitable solvents; and the fact that these drums are stored in surface impoundment S-30, as well as at drum storage area S-31.
in mill treatent plant ilter cake aste	K062 D007	14,600 Included with above	T01,T04, D80	Tin mill treatment plant filter cake waste	K062 D007	14,600 Incuded with above	D83	Tin mill treatment plant clarifiers and pressure filter have been deleted since they are wastewater treatment units excluded from regulation under 40 CFR 122.21(d)(2)(vi).
enzene at coke lant	U019	Undetermined	Undetermined			- DELETED -		Deleted per plant instructions.
oluene at coke lant	U220	Undetermined	Undetermined			- DELETED -		Deleted per plant instructions.
ichloroethyene solvent sed by Energy st. and Conol Dept., so by electic shop	U228	Undetermined	Undetermined			- DELETED -		Waste not hazardous due to mixture rule.
lene at coke ant	U239	Undetermined	Undetermined			- DELETED -		Deleted per plant instructions.

CHANGES IN ITEM III OF FORM 3 OF THE PART A PERMIT APPLICATION FOR THE

FAIRFIELD PLANT

ORIGINAL ENTRY					REVISED OR NEW ENTRY					
WASTE UNIT DESIGNATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	PROCESS DESIGN CAPACITY	WASTE UNIT DESIGNATION	WASTE UNIT DESCRIPTION	HAZARDOUS WASTE(S)	PROCESS CODE	DESIGN CAPACITY	COMMENTS
29	#4 Galvanizing chromic acid waste sump - South end	Chromic acid	S02	4,500 gal			- DELETED -			Wastewater storage sump excluded from regulation under 40 CFR 122.21(d)(2)(vi).
32	Temper mill sump system	Waste oil and spent 1,1,1-trichloroethane from degreasing	S02	400 gal (Also includes a 10,000 gal tank)			- DELETED -			Wastewater storage sumps and tank excluded from regulation under 40 CFR 122.21(d)(2)(vi).
					S-35	Tin mill ditch oil skimmer tank	Tin mill wastes (chromic acid, alkali cleaners, sodium dichromate and spent pickle liquor)	S02	20,000 gal	Tank identified as a HWMF during meeting at Fairfield.
ORAGE - SURFACE IMPOUNDMENTS										
10	Tin mill treatment plant storage lagoon	Tin mill wastes	S04	1,000,000 gal	T-17	See revised entry below under TREATMENT - SURFACE IMPOUNDMENTS				During last site visit, it was determined that this is a treatment lagoon.
20	Unlined pickle liquor storage pond	Pickle liquor	S04	10,000,000 gal			- NO CHANGE -			
22	Unlined pickle liquor emergency storage pond	Pickle liquor	S04	3,000,000 gal			- NO CHANGE -			
					S-30	Surface impoundment (Unit 3c) near unlined pickle liquor pond	Drums of paint solvent and paint cleanup waste	S04	660,000 gal (12,000 drums)	Added in accordance with instructions from AL Dept. of Env. Mgmt. Drums stored here for eventual reclamation or disposal by contractor.

POOR LEGIBILITY

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

Inv. v. U.S. Steel
Jeff Co.

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

July 11, 1983

...ing Address
...le Capitol
...ntgomery, AL
...30
...834 1303

...d Offices

...O. Box 953
...atur, AL
...02
...353-1713

...t 806, Building 8
...Oxmoor Circle
...mingham, AL
...09
...912 6168

...Midmost Drive
...ile, AL
...09
...343-7841

...Demetropolis Rd
...e 10
...ile, AL
...09
...660 0150

Mr. Gary Euler
U.S. Steel Corporation
Fairfield Works
P. O. Box 599
Fairfield, Alabama 35064

Re: Wenonah Plant #ALD000826800 Ensley Plant #ALD077641751

Dear Sir:

This is to acknowledge receipt of your request to withdraw your Part A, RCRA Permit Application. Since Alabama has Phase I Authorization, it will be our responsibility to determine if your request should be honored.

Based upon the information you supplied, it appears that your facility is no longer treating, storing, or disposing of hazardous waste and is, therefore, not subject to Alabama's Hazardous Waste Management Regulations. Therefore, your request to withdraw your Part A Application is granted. However, you should be aware that as a generator of hazardous waste you must meet the generator requirements of RCRA as specified in 40 CFR 262.

You should be aware that your request to withdraw interim status means that you may not treat, store, or dispose of hazardous waste without a permit issued under the authority of Code of Ala. 1975, Section 22-30-12, as amended, and the Regulations adopted thereunder.

Should you have questions or comments, please feel free to contact this office.

Sincerely,

Bernard E. Cox, Jr., Chief
Industrial and Hazardous Waste Section
Land Program

BEC:rc

cc: Mr. James Scarbrough
EPA Region IV

Inspection - U.S. Steel Jeff. Co.

ADEM

ALABAMA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

[illegible], 1983

Mr. Carl Euler
United States Steel Corporation
Fairfield Works
P. O. Box 599
Fairfield, Alabama 35064

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: Facility #AED [illegible]

Dear Mr. Euler:

On July 16, 1983, Messrs. David Roberson and Joe Brewer, from the Department of Environmental Management, Land Division, met with you and Mr. Jack Peterson to perform an interim status standards inspection. The purpose of the inspection was to determine compliance of the facility with the Alabama Hazardous Waste Management Regulations.

Below you will find information which indicates deficiencies noted during the inspection. Sections identified in this letter refer to sections in the aforementioned regulations. Items for your attention are as follows:

1) Section 4-256.03: Security - The security provided for the area designated as D-6 which includes the impoundments and drum storage facility is inadequate. It has been brought to our attention that entry to the area has been gained by unauthorized personnel. In addition, as evidenced by the empty shotgun shells found on-site, persons have entered the area and discharged firearms. One empty shotgun shell and a plastic wadding was found near a sign that had been shot. Because of the nature of the wastes stored in the area, such activity noted above could pose a threat to human health and the environment. Adequate security must be provided as required by this section.

2) Section 4-256.08: Contingency and Emergency Procedures Plan - Item 13 in the contingency plan revised November 1, 1982, states that any material spilled around the sludge pit will be placed back into the pit. Sludge has been spilled along the route from the Tin Mill ditch to the sludge pit. Any sludge spilled in the area of the Tin Mill ditch and the impoundments must be removed and placed in the sludge pit.

Item 17 on the contingency plan states that rainwater will be pumped out of the drum storage area at subunit 3C of the D-6 drum storage site. The rainwater must be tested to determine if it is a hazardous waste. The water should be properly treated and discharged through an NPDES permitted facility.

3) Section 4-256.12: Groundwater Monitoring - Data for the parameters listed in paragraph (h)(2.) of this section has not been submitted with the groundwater sampling data.

The statistical data required in paragraph (i)(2.) that was due by May 19, 1983, has not been submitted. We request that you submit a copy of your groundwater quality assessment outline required in paragraph (e) for review.

[illegible] June 24, 1983

4) Section [illegible]: Closure and Post-Closure - The Closure Plan must be revised to implement closure of all hazardous waste facilities using January 1, 1984, as the [illegible] that the plan will be submitted to this office for review, unless the company desires to begin closure earlier. The beginning date of closure [illegible] July 1, 1984, assuming January 1, 1984, date for submittal. Final closure must be complete by January 1, 1985. Since the plant is shut down and no waste is being generated, closure is required by [illegible] of this section. As you will recall, your Part B permit application was called by this Agency and EPA on March 3, 1982. Subsequently, this request was withdrawn by this Agency after U. S. Steel furnished this office information that the facility would be closed due to closure of the plant. If U. S. Steel does not intend to meet the January 1, 1984, closure date outlined above, then we will immediately call for your Part B.

The facilities deleted or added on the Part A application revised March 4, 1983, should be removed or included in the revised closure plan as necessary.

5) Section 4-256.17: Use and Management of Containers - The drums floating subunit 5 of the D-6 area impoundment, have not been crushed, shredded or similarly reduced in volume as required by Section 4-256.22(o) prior to disposal. Therefore, all visible drums in the impoundment must be removed and properly disposed of within 60 days of receipt of this letter.

The drum storage area subunit 3c of D-6 requires your immediate attention. Waste stored in deteriorating drums must be transferred to new drums. The overturned drums must be turned upright to prevent possible leaking. Open drums must be sealed. Adequate aisle space must be provided. Water must be pumped out as required in Item 2 above.

Since the drum storage area is not being properly managed and adequate security is not provided for the area, all drums must be removed from the drum storage site and disposed of properly at an approved hazardous waste disposal site or shipped to an approved site capable of benificially reusing, legitimately recyling or reclaiming the waste. Complete removal of the drums from the site is required within 90 days of receipt of this letter.

Please submit a copy of the inspection log for the D-6 area and a copy of the analyses of the waste placed in the impoundment, subunit 5, as requested during the inspection.

Enclosed at your request is a copy of the Part B checklist and a copy of the February 22, 1982, letter written to Bill Roche by Arthur Linton, USEPA.

Serious consideration should be given to closing facilities per the regulations that may not be used in the foreseeable future.

If you have any questions regarding the inspection, please contact Mr. Joe Brewer at this office.

Sincerely,

Bernard E. Cox, Jr., Chief
Industrial and Hazardous Waste Section
Land Division

BEC:JB:rc

cc: Jack Peterson

STATE OF ALABAMA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Dr. Dewey A. White, Jr.
Chairman

Thomas R. DeBray
J. Ernest Farnell, P.E.
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James W. Warr
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Dr. Cameron McDonald, Birmingham
Russell L. Riley, Auburn

Mailing Address:
State Capitol
Montgomery, AL 36130
Telephone: 205/277-3630

April 12, 1983

Mr. Gary Euler
Environmental Engineer
U. S. Steel Corporation
P.O. Box 599
Fairfield, Alabama 35064

Re: Exum Dump

Dear Mr. Euler:

As you are aware, USEPA has recently made available the results of the groundwater monitoring conducted on July 1-2, 1982, at Exum Dump. In order to complete our evaluation, we are requesting copies of the analytical results from the duplicate samples from this investigation which U.S. Steel had analyzed. In addition, we would appreciate any comments which you might have regarding the results, or any discrepancies which you have noted.

After we have had adequate time to review the analytic data, it may be appropriate to schedule a meeting to discuss the results and future monitoring requirements for the site. In the meantime, if you should have any questions, please don't hesitate to contact our office.

Sincerely,

Harold W. Taylor

Harold W. Taylor, Pollution Control Specialist
Industrial and Hazardous Waste Section
Land Program

HWT:rc

cc: Joel Vearory

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE JAN 13 1983 ATHENS, GEORGIA 30613

SUBJECT Conclusions and Recommendations, U. S. Steel (Exum Dump) Hazardous Waste Site Investigation, Fairfield, Alabama, July 1982

FROM Hazardous Waste Section

TO Al Smith, Chief
ERRB/AWMD

THRU: M. D. Lair, Chief
Hazardous Waste Section

Michael R. Carter, Chief
Engineering Support Branch

During July 1-2, 1982, Jim Kopotic and Don Lawhorn of the U. S. Environmental Protection Agency, Region IV, Environmental Services Division (ESD) conducted a hazardous waste site investigation at U. S. Steel's Exum Dump. This investigation was a follow-up to the US-EPA investigation conducted on November 4, 1981. Five of the six groundwater monitoring wells located at the dump were sampled during this investigation. The upgradient well was not sampled because the well did not recover after being evacuated.

Di-n-butylphthalate was positively identified and quantified in samples from the downgradient monitoring wells EX-1 (15 ug/l) and EX-6 (14 ug/l), and bis (2-ethylhexyl) phthalate was detected in the sample collected from monitoring well EX-4 (150 ug/l). Several other extractable organic compounds were tentatively identified in the samples. Lead and zinc concentrations were generally higher in the samples collected during this investigation than in the samples collected in 1981.

The monitoring wells at Exum Dump should be resampled (preferably within FY-83) because:

1. Depth to water surface measurements varied significantly in several of the wells from measurements taken during the 1981 investigation.

2. Sampling procedures during the 1981 investigation deviated from US-EPA Region IV standard field operating procedures.[1]

3. During the 1982 investigation, U. S. Steel was filling in part of the landfill and constructing a railroad across the middle area. Therefore, drainage, runoff, and general surface topography has changed.

James D. Kopotic

cc: Finger/Adams/Carter/Lair

---

1. "Hazardous Waste Site Investigation, U. S. Steel (Exum) Dump, Fairfield, Alabama, November 1981, "U. S. Environmental Protection Agency, Region IV, Environmental Services Division, March 1982.

2/23/95

CONFIDENTIAL

This document is prepared in anticipation of enforcement litigation. It is not subject to discovery.

EPA Form 1320-6 (Rev. 3-76)

Inspection - [illegible]
Jeff. Co.

[illegible] Alabama

DEPARTMENT OF PUBLIC HEALTH

[illegible]

Montgomery, Alabama [illegible]

[illegible]

[illegible]
[illegible]

[illegible]
United States Steel [illegible]
Fairfield Works
P. O. Box [illegible]
Fairfield, Alabama [illegible]

[illegible]

Dear Mr. Euler:

On July 10, 198[illegible], Mr. Joe Brewer from the Division of Solid and Hazardous Waste met with you to perform an interim status standards inspection. The purpose of the inspection was to determine compliance with the Alabama Hazardous Waste Management regulations.

Below you will find a list of the deficiencies which were noted during the inspection. The list is by section numbers as found in the Alabama Hazardous Waste Management Regulations. Please refer to the regulations for complete detail.

1) Section 4-256.[illegible] - Contingency and Emergency Procedures Plan: The contingency plan must be amended to address implementation of the plan in case of fire or explosion as required in subsection (a) and (b). In addition to the requirements listed above, the plan should reflect all necessary changes resulting from the temporary [illegible] of the plant as requested in our letter to you during Jan. [illegible], 19[illegible].

2) [illegible] - [illegible] Requirements: The closure plan must include a closure cost estimate. The closure cost estimate must be updated annually.

3) Section 4-256.[illegible] - Impoundments used to treat, store or dispose of hazardous waste: Impoundment D-6 as described in the closure plan is being closed as a landfill. An operating log of all hazardous waste deposited in D-6 must be recorded as required by Section 4-256.22 (e). Drums of hazardous waste deposited in impoundment D-6 must be analyzed to determine waste type prior to disposal. Drums containing free-standing liquids can not be placed in a landfill. Empty drums must be crushed, shredded or similarly reduced in volume before being buried beneath the surface of a landfill (Section 4-256.22 (o).

1) The drum storage area located near impoundment D-6 has collected a large volume of precipitation. The water must be pumped out of the drum storage area. An analysis must be performed to determine if the water is a hazardous waste. The water should be properly treated and discarded through an NPDES permitted facility. For further information regarding containment storage requirements, please refer to the November 6, 1981, Federal Register.

[illegible] September [illegible], 1982

The [illegible] in the closure plan and the location [illegible] in addition, the Part A application should [illegible] drums.

Another change [illegible] the Part A application [illegible] the deletion [illegible] process [illegible] since the [illegible].

Should you have questions concerning the [illegible], please contact Joe Brewer or [illegible] at this office.

Sincerely,

Bernard E. Cox, Jr., Chief
Industrial and Hazardous Waste Section
Division of Solid and Hazardous Waste

BEC:JB:[illegible]

cc: Beverly Spagg
Sidney [illegible]

U.S. Steel - Jeff. C

BEC

David, Do we want to agree or disagree with USS?

J. K. PETERSON
MANAGER
ENVIRONMENT - SOUTH

United States Steel Corporation

600 GRANT STREET
PITTSBURGH, PENNSYLVANIA 15230

June 25, 1982

Mr. C. R. Jeter
Regional Administrator
U.S. Environmental Protection Agency
345 Courtland NE
Atlanta, Georgia 30365

Dear Mr. Jeter:

Re: Part B Application
U. S. Steel Corporation Fairfield Works
EPA ID #ALD 002-904506

On March 3, 1982, U. S. Steel Corporation received a formal request for Part B of our Fairfield Works application for a hazardous waste facility permit under the Resource Conservation and Recovery Act; that request came from your office and that of the Division of Solid and Hazardous Waste, Alabama Department of Public Health. On April 29, 1982, U. S. Steel requested that your request be withdrawn in light of the severe economic situation at the Fairfield Works, as well as in the entire steel industry. That request was denied by you on May 24, 1982, because economic conditions were not taken into account in the selection process.

Subsequent to our April 29 letter, U. S. Steel announced its decision to totally suspend operations at Fairfield Works. That decision is presently being implemented; it is likely to be January of 1984 before operations are resumed.

In the light of this action, U. S. Steel requests that the requirement to submit Part B be deferred until sometime after operations are resumed at Fairfield Works. The hazardous waste facilities at Fairfield Works are currently in compliance with all applicable interior status regulations. Moreover, discussions have already been held with representatives of the Hazardous Waste Division of the Alabama Department of Health, regarding security, inspections, and monitoring during the extended suspension of operations. As a result, we do not believe that there will be any risk to the environment associated with our request for deferral.

Please contact this office if there are any questions about this request.

Sincerely,

JKP/es

June 22, 1982

Mr. William Rouse
Right-of-Way & Solid Waste Administrator
Jefferson County Department of Public Works
Courthouse, Room 202-A
Birmingham, Alabama 35203

Re: U. S. Steel Waste

Dear Mr. Rouse:

This office has talked with U. S. Steel regarding the animal fat waste they u utilize in their tin mills. This waste has been contaminated during use with iron filings and dirt and is ready for disposal.

There are approximately twenty (20) drums of the material. Jack Honeycutt, Chief of our Solid Waste Section, stated that Peabody Sanitary Landfill could be used for this waste. You may accept this letter as approval for disposal of this waste.

By copy of this letter, we are notifying Mr. Gary Euler of U. S. Steel to contact you to get any additional information on disposal.

Please contact this office if you have any questions regarding this matter.

Sincerely,

David L. Roberson, Pollution Control Specialist
Industrial and Hazardous Waste Section
Division of Solid and Hazardous Waste

DLR:rc

cc: Jack Honeycutt
Gary Euler
Bob Ferguson

State of Alabama

DEPARTMENT OF PUBLIC HEALTH

State Office Building
Montgomery, Alabama 36130

IRA L. MYERS, M.D.
STATE HEALTH OFFICER

June 22, 1982

Mr. Gary Euler
Environmental Engineer
U. S. Steel Corporation
P. O. Box 599
Fairfield, Alabama 35064

Re: Exum Landfill

Dear Mr. Euler:

As we have previously discussed by telephone, our office has scheduled a compliance monitoring trip for the inactive Exum Landfill. The trip has been scheduled to start on June 30, 1982, and may extend to include July 1, 1982. Because of their superior analytical capabilities, we have asked for and received the assistance of the Surveillance and Analysis Division of the USEPA, Region IV for these monitoring activities. A member of our staff will accompany the EPA monitoring team during their visit.

The six groundwater monitoring wells at the site will be sampled and analyzed in a similar manner as to that performed on November 4, 1981. In addition, other environmental samples will be collected as needed.

If there are any questions, please feel free to contact our office or Mr. Jim Kopatic, with EPA in Athens at (404)546-3172.

Sincerely,

Harold W. Taylor, Jr.

Harold W. Taylor, Pollution Control Specialist
Industrial and Hazardous Waste Section
Division of Solid and Hazardous Waste

HWT:rc

cc: Joel Veater ✓
Myron Liar

File I Facility U.S Steel

County Jefferson

State of Alabama

DEPARTMENT OF PUBLIC HEALTH

State Office Building
Montgomery, Alabama 36130

IRA L. MYERS, M.D.
STATE HEALTH OFFICER

M E M O R A N D U M

DATE: May 18, 1982

TO: Bernard E. Cox, Jr., Chief

FROM: Joe Brewer, Pollution Control Specialist

RE: Conference with U.S. Steel

FACILITY NAME: United States Steel Corporation, Fairfield Works

FACILITY NO.:

CONTACT: Gary Euler

INSPECTION DATE: TIME: 10:00 a.m.

On May 13, 1982, David Roberson and I from the Division of Solid and Hazardous Waste met with Mr. Gary Euler and Mr. Laughlin C. McLean of United States Steel to discuss U.S. Steel's hazardous waste management program.

One point of particular interest that was discussed was the entire shut down of the facility scheduled for June 15, 1982. Mr. Roberson asked what would the status of the facility be when U.S. Steel closed down. Mr. McLean stated that the entire plant would be inactive except for continued construction on the new pipe mill. Mr. Roberson requested a letter from U.S. Steel giving a complete evaluation of the status of the plant. Mr. Roberson stated that we would be looking at a possible partial closure plan regarding the hazardous waste facilities at U.S. Steel. Mr. McLean asked why would closure be necessary. Mr. Roberson stated that when a plant closes down, the hazardous waste facilities can't be left unclosed without monitoring or adequate security. Mr. McLean said if U.S. Steel is only closed for a short time (6 weeks or so) would closure have to be implemented. Mr. Roberson states that shut down of the plant for only a short period of time would not require closure;

but adequate security and continued monitoring of the hazardous waste site, including samples from the monitoring wells on a quarterly basis would be necessary.

U.S. Steel was informed that EPA would perform an audit of the hazardous waste facilities at U.S. Steel in the near future. We requested that U.S. Steel inform this office so we could be present at the audit.

Another area of concern that was discussed in the meeting was the drum storage site. Mr. Roberson stated that drum storage is not a method of disposal and that some progress needed to be made toward proper disposal of the drums in the drum storage area. Mr. McLean said that Lori Spencer had been to U.S. Steel and had taken samples of the solvents to see if she could recycle the waste and sell the recycled solvents. This would still be at least 9 months in the future due to the 6 months notification requirements prior to construction than the additional time that was required to build the facility. Mr. McLean said that if closure of the drum storage area was required that it would be hard to get anything done with the drums for approximately 6 weeks. Mr. Roberson then stated that U.S. Steel would need to inspect the drum storage area for leaking drums and open drums, then replace the drums that were leaking and put lids on the open drums. The drums are to be stored on pallets and the rainwater should not be contaminated with the waste from the drums. When U.S. Steel receives their Part B then the rainwater will have to be treated in a wastewater treatment plant. The only way to get out of treatment of the rainwater is to sample after every rain to show that the rainwater is not contaminated.

U.S. Steel would like to be able to get the waste solvents in the drums recycled rather than disposing of them at a disposal facility. One problem with getting the solvents recycled is that rags and other wastes are being mixed with the spent solvents. Mr. Roberson said that a better effort at segregating the rags and other wastes from the solvents should be made so that the recycling of the solvents would be more appealing to recyclers. Mr. Euler suggested adding absorbent material to take up any liquids left in the drums that had rags retained in them, then disposing of the drums in a secure landfill.

A third point of interest was the impoundment. Drums have been thrown into the impoundment. Mr. Roberson suggested that U.S. Steel again evaluate the impoundment situation because at first, the impoundment was called a landfill. An analysis needs to be performed on the waste contained in the drums. Mr. Euler said that the drums in the impoundment contain mostly oil and grease. Mr. Roberson stated that no more drums are to be thrown into the impoundment. Mr. McLean stated that U.S. Steel needs to look into the possibility of closing the impoundment. Mr. Roberson said that for now, we are not saying that the facility will have to be closed - quarterly groundwater monitoring will be required.

The waste oil thatis being transported to T&S in Tuscaloosa was also discussed. Mr. Euler stated that the waste was listed and that U.S. Steel is running test on it for EP toxicity and corrosive characteristics. Mr. Roberson said the waste

oil may not be hazardous. Also, we would like to set up a meeting with U.S. Steel at T&S to discuss the waste oil recycling.

The situation at Exxon dump concerning the groundwater analysis from two of the monitoring wells at the site was discussed. Mr. Robertson stated that if EPA says that there is a problem with Exxon dump, then we would have to request technical assistance. After the next samples are made and compared with the previous sampler, we will let U.S. Steel know if a problem does exist.

Finally, the waste from the acid spill at PETOX was discussed. I told Mr. Euler that we were waiting on an analysis from PEROX to determine if the waste was a hazardous waste and that we would let U.S. Steel knew as soon as we received the analysis from PEROX; then it would be up to U.S. Steel whether or not they wanted to dispose of the waste on U.S. Steel property.

JB:hj

UNITED ATES ENVIRONMENTAL PROTECT' AGENCY
ATHENS, GEORGIA 30613

DATE MAR 1982

SUBJECT Conclusions and Recommendations Concerning the Hazardous Waste Site Investigation, Exum Dump (U.S. Steel), Fairfield, Alabama, November 1981

FROM Water Surveillance Branch

TO Al Smith, Chief
ERRB/AWMD

THRU: M. R. Carter, Chief
Water Surveillance Branch

M. D. Lair, Chief
Engineering Section

The investigation was conducted in response to a request from the Alabama Department of Public Health, Division of Solid and Hazardous Waste to determine if groundwater in the vicinity of Exum Dump was contaminated.

The two wells which were most contaminated, EX-1 and EX-2, contained 10 and 11 organic compounds, respectively, and 17 metals in each. Also, the cyanide concentration was greater (29 ug/l) in well EX-1 than in other wells where detected (5 ug/l).

U.S. Steel's groundwater consultant, Dames and Moore, contends that groundwater in the area flows northerly. If this is correct, the contamination of wells EX-1 and EX-2 can probably be attributed to the waste pits located upgradient from each (see figure 2 in subject report).

Insufficient evidence is available to determine if groundwater from the other wells investigated is contaminated by Exum Dump.

It is recommended that an additional set of groundwater samples be collected from each well sampled during the November 1981 investigation and the same analyses be performed.

If a second set of samples yields similar results as the subject November 1981 investigation, it is further recommended that the contents of the waste pits be removed and properly disposed of.

Additionally, periodic sampling of all six wells should be considered in order to monitor changes in groundwater quality.

Steve Hall

cc: Finger/Adams/Carter/Lair

2/23/95

CONFIDENTIAL
This document is prepared in anticipation of enforcement litigation. It is not subject to discovery.

EPA Form 1320-6 (Rev. 3-76)

UNITED STATES STEEL CORPORATION
USS ENGINEERING

PLANT ENGINEERING
FAIRFIELD WORKS
NOVEMBER 20, 1981

MEMORANDUM

MEETING - RCRA MONITOR WELLS AT DISPOSAL SITE
FAIRFIELD WORKS

RECEIVED
Health Dept.
Solid Waste

Attending

Alabama Division of Solid and Hazardous Waste
- B. E. Cox
- L. G. Lynn
- D. C. Roberson

United States Steel Corporation
- L. C. McLean
- J. T. Alley
- G. W. Euler

Dames and Moore
- D. R. Gibeaut
- R. E. Hunter

The meeting convened at 1:00 p.m., November 13, in the Fairfield Works Engineering Conference Room. Messrs. Gibeaut and Hunter described the work that has been done to install monitoring wells at the Hazardous Waste Impoundment, providing the following information:

A blackboard sketch of the well locations, water depths and elevations, surface lie and relation to hazardous waste facilities.

A brief description of the drilling methods and geology.

An explanation of how the wells were monitored over a period of time to establish whether they would produce water.

Two of the five 100-ft deep wells appeared to be dry and were extended to 150-ft deep. This appeared to be unsuccessful, so two alternate 100-ft wells were installed close to the 150-ft wells.

All wells subsequently produced some degree of water; therefore plans are now to plug the two 150-ft wells and complete the five 100-ft wells by installing pipe, gravel pack, screen, etc. The wells will be gravel packed for the full rock depth with the gravel packs ranging in length from approximately 65 feet to 90 feet. This work should be complete in about two weeks with sampling beginning close to Christmas.

In response to questions from the State, it was reported that no preliminary samples have been taken and that the well recovery rates range from about one day to two or three days.

Mr. Cox stated the following: Analysis of well samples will not be required for fecal coliform or for the two radioactive parameters. EPA is essentially deleting the requirement for annual reports, but the State will continue to require them for the present time.

The State wants to split samples with USS at least once in the first year.

Following the meeting, the site was inspected by Mr. Lynn who was accompanied by Euler and Hunter. Mr. Lynn was particularly interested in whether organic wastes had been placed in the impoundment. After seeing the drums of oil, trichloroethylene, etc. he decided that we should analyze for the full range of organics at least on the first round of samples.

It was not mentioned in the meeting, but Roberson had previously strongly recommended that some type of lockable covers be placed over the wells to avoid contamination by vandalism. He has knowledge of wells lost in this way.

J. A. Varner

GWEuler/aa

cc: Mr. B. E. Cox ✓

POOR LEGIBILITY

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

AUG 11 1981

AUG 1981
RECEIVED
Health Dept.
Solid Waste

SWD: 4WH-SM

Mr. Carter Hunt
North American Environmental Corporation
Executive Office 2100 Broad Street
Chattanooga, Tennessee 37408

Dear Mr. Hunt:

I have received your letter of July 15, 1981, requesting a determination as to whether the waste oil you described is a hazardous waste and subject to regulation under the Resource Conservation and Recovery Act (RCRA).

The waste oil is not a listed hazardous waste under 40 CFR Sections 261.31 or 261.32. However, since the waste oil comes into contact with spent pickle liquor, which is a listed hazardous waste (EPA Hazardous Waste I.D. Number K062), the resulting mixture is considered a listed hazardous waste (see 40 CFR Section 261.3) and subject to regulation under 40 CFR Parts 260 through 265 and Parts 122 through 124.

Since your facility is planning to recycle the waste oil, the reduced requirements as specified in 40 CFR Section 261.6(b) would apply. Your facility, as well as any facility which receives the reprocessed oil, is required to notify under Section 3010 of RCRA and is subject to 40 CFR Part 262 and 263, Part 264 Subparts A, B, C, D, and E, Part 265 Subpart A-E, G, H, I, J, and L, and Parts 122 and 124 with respect to transportation and storage of hazardous waste. The water and/or sludge separated from the oil during reprocessing is also considered hazardous and must be treated, stored, or disposed of in accordance with 40 CFR Parts 260 through 265, and Parts 122 through 124.

Your letter indicates that the waste oil may be burned as a fuel in a boiler. We question the classification of 60% water/40% waste oil mixture as a fuel. For a material to be considered a fuel it must be able to support combustion. Fuels are not currently regulated as solid or hazardous wastes (40 CFR 261.2(c)(2)).

However, your company must obtain a permit prior to receiving any hazardous waste oil for reprocessing. If you have any further questions regarding permits, please call Mr. Dan Tieman at (404) 881-3328.

If you have any questions regarding the applicability of the regulations to your waste or facility, please call Betty C. Willis of my staff at (404) 881-3016.

Sincerely yours,

James H. Scarbrough, Chief
Residuals Management Branch

cc: Dwight Hinch
Tennessee Department of Public Health

Dan Cooper
Alabama Department of Public Health Services

Spill Control Association of America

NORTH AMERICAN ENVIRONMENTAL CORPORATION

EXECUTIVE OFFICES 2100 BROAD STREET
CHATTANOOGA, TENNESSEE 37408
Telephone 615 • 756-8116

RECEIVED

July 15, 1981

JUL 17 1981

STATE HEALTH DEPARTMENT
DIVISION OF SOLID WASTE

Mr. Dan Thoman
Consolidated Permits Division
Environmental Protection Agency, Region IV
345 Courtland Street, N. E.
Atlanta, Ga. 30365

REF: Waste Oil - U. S. Steel, Fairfield, Alabama

Dear Mr. Thoman:

This is in connection with my visit with you on Monday concerning the above.

This oil has come in contact with waste pickle liquor. It has a lead content of 1250 ppm and a chrome content of 510 ppm. The water content will range from 5% to 60%. If we handle this waste oil, it will be recycled for boiler fuel. It is not now determined whether it will be returned to U. S. Steel or transported to another user.

U. S. Steel is under the impression that subject waste oil has been classified K 062. They do not have this in writing from any official source. In order to get an authoritative ruling, would you be kind enough to furnish me a written determination whether this product is a classified waste. Also, would the fact that it is to be recycled have any affect on the classification.

Thank you in advance for your prompt attention to this request. If you require anything further in order to assist you in your evaluation, please call me collect.

Very truly yours,

NORTH AMERICAN VIRONMENTAL CORP.

C. Carter Hunt

C. Carter Hunt
President

CCH:dn

POOR LEGIBILITY

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GODSEY-
EARLOUGHER
DIVISION
OF
WILLIAMS BROTHERS
ENGINEERING COMPANY
A Resource Sciences Company

RESOURCE SCIENCES CENTER | 6600 S. YALE AVE. | TULSA, OKLAHOMA 74177
PHONE (918) 496 5020 | TELEX 49-7493 WBEC-TUL

May 27, 1981

Mr. R. D. Hames
Water Improvement Commission
State of Alabama
State Office Building
Montgomery, Alabama 36130

Subject: Plugging and Abandoning
U.S. Steel WPL - Disposal Well No. 1
Fairfield, Alabama

Dear Mr. Hames:

This letter will confirm our telephone conversation of May 20, wherein we stated that the field work on the subject project would be completed May 21, 1981.

The actual procedure attached was slightly different from that which we proposed in our letter to you dated March 26, 1981. The geological evaluation on the Neutron Life Time Log is attached for your review and file.

Essentially, the disposal well was plugged and abandoned by permanently squeezing off the entire disposal zone using Epseal (epoxy-type) cement, plus a continuous column of regular cement inside the 5-1/2" OD casing string back to the surface. The 5-1/2" casing had been cemented previously using Epseal cement.

Since the operator discontinued injecting waste pickle liquor on February 11, 1981, we suggest that the Commission issue an early approval to plug and abandon the two monitoring wells. Plugging procedure would be similar to that of the disposal well, except the bottom (Epseal) cement plug would not necessarily be required. A P&A procedure will be submitted for your approval when we receive a preliminary "go ahead" directive.

We sincerely appreciate the cooperation the Commission has afforded us during the planning and final stages of this project. We also wish to thank the Alabama Geological Survey for their technical assistance.

Sincerely,

GODSEY-EARLOUGHER Division
Williams Brothers Engineering Company

Wesley W. Smith

Wesley W. Smith
Principal Project Engineer

WWS:cn/4777
Attachments

cc: D. Moore
B. Stuedler
E. Suley
T. Thrift
J. Varner (3)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ATHENS, GEORGIA 30613

DATE MAY 07 1981

SUBJECT Conclusions and Recommendations Concerning the Hazardous Waste Site Reconnaissance Investigation, Exum Dump (U.S. Steel), Birmingham, Alabama, November 17, 1980

FROM Water Surveillance Branch

TO Al Smith, Director
HERB

Sixty-two organic compounds and twenty-two metals were detected in the water and sediment samples collected at the two stations located upstream and downstream from the dump site.

The primary source of the organic compounds appears to be a tank truck cleaning operation (believed to be Chem Haulers, Inc.) located just east of the subject dump site. Historically, tank trucks were cleaned and the wastewater was dumped onto the ground surface and allowed to flow into a pooled water area upstream and adjacent to Exum Dump.

The source of metals cannot be solely attributed to either the dump site or to the tank truck cleaning operation.

In order to determine the full extent of surface and/or groundwater contamination and to isolate the source(s) thereof, it is recommended that surface streams and groundwater in the vicinity of the dump site be sampled and analyzed for organic compounds and metals. Surface stream sampling should include the same locations sampled as part of the subject reconnaissance investigation, plus further upstream and downstream locations. Water and sediment samples should be collected at each location. Groundwater sampling can be conducted using the monitoring wells installed by U.S. Steel at the request of the Alabama Department of Public Health. One of these wells will be located upgradient from the dump site.

It is also recommended that the two waste pits on Exum Dump and any apparent liquid discharges on the dump face plus the ground surface on the property of the tank truck cleaning company be sampled for the same parameter analyses.

It is further recommended that this investigation be conducted by the Alabama Department of Public Health with assistance from the Surveillance and Analysis Division.

Steve Hall

cc: Finger/Adams
Carter/Lair

KH 2/23/95

CONFIDENTIAL
This document is prepared in anticipation of enforcement litigation. It is not subject to discovery.

RECEIVED
APR 8 1981
STATE HEALTH DEPARTMENT
DIVISION OF SOLID WASTE

United States Steel Corporation
EASTERN STEEL DIVISION

April 3, 1981

Mr. David Roberson
Alabama Division of Hazardous Waste
Public Health Service Building
434 Monroe Street
Montgomery, Alabama 36130

Dear Mr. Roberson:

This letter is written in compliance with the State of Alabama Hazardous Waste Management Regulations - Section 4-251.01 and 40 CFR - Part 265-D, and to confirm the telephoned reports on April 1, 1981, from Gary Euler of U. S. Steel Corporation to you, Ensign Mitchell of the National Response Center and Mr. Rodney Hames of the Alabama Water Improvement Commission.

At approximately 11:10 a.m. on April 1, 1981, a U. S. Steel truck driver reported a leak in the waste pickle liquor pipeline from the pickle line sump to the Perox acid regeneration plant. The leak was located such that the waste pickle liquor sprayed on the ground in a wooded area on U. S. Steel property, combined with water from several wet weather springs and flowed across a public road (Tin Mill Road) back onto U. S. Steel property. The waste pickle liquor contained 1-1/2 percent HCl and 15.4 percent $FeCl_2$, and a rough estimate indicates less than 1,000 gallons were lost.

Within about five minutes of being reported, the pump was shut off and the line was allowed to drain back into the sump. Within another fifteen minutes the plant fire truck and security people were at the site washing down what remained on the ground and controlling traffic through the area. Two thousand gallons of water were used to flush the waste pickle liquor into the plant recirculating water system which contains approximately forty million gallons of water. PH sampling in this water system detected no effect. The recirculating water system blows down to Opossum Creek. Measurements of puddles of water remaining on the ground indicated a pH range of five to six which is the same as the wet weather springs. This was verified on April 2 by Mr. L. L. Eldridge of the Alabama Water Improvement Commission. The expansion joint which was leaking was replaced and the line was put back into service on April 1, 1981.

The following data was given in the telephone reports:

Time	Approximately 11:00 a.m.
Date	April 1, 1981
Quantity	Unknown - probably less than 500 gallons
Material	Waste Pickle Liquor (HCl)
Receiving Waters	Opossum Creek via plant recirculating water system
Remedial Action	(1) Flushed into plant recirculating water system with 2,000 gallons of fresh water, and (2) Controlled traffic on Tin Mill Road where waste pickle liquor and water were crossing road.
Company Name	U. S. Steel Corporation - Fairfield Works
Company Address	P. O. Box 599, Fairfield, Alabama 35064
Company Telephone	205/783-2091
Person Reporting	Gary Euler
Injuries or Property Damage	None
Location of Spill	Adjacent to Tin Mill Road, near Fairfield, Alabama

cc: Mr. Rodney Hames

POOR LEGIBILITY

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United States Steel Corporation

EASTERN STEEL DIVISION

March 10, 1981

Mr. Daniel Thoman
U. S. Environmental Protection Agency
Consolidated Permits Branch
345 Courtland Street, NE
Atlanta, Georgia 30365

Dear Mr. Thoman:

In response to your two letters dated March 2, 1981, the attached forms indicate that neither our Ensley Plant (EPA I.D. No. ALD077641751) nor our Ore Conditioning Plant (AL000826800) treat, store or dispose of any hazardous wastes. Further, neither location generates or transports hazardous wastes.

Attachments

bc: Mr. J. D. Moniot - Att.
Dr. J. K. Peterson - Att.
Mr. P. S. Kiswardy - Att.
Mr. L. C. McLean - Att.

February 25, 1981

Mr. L. C. McLean
Chief Engineer
U. S. Steel Corporation
Fairfield Works
P. O. Box 599
Fairfield, Alabama 35064

Re: Facility I. D. Number-
ALD002904506

Dear Mr. McLean:

On February 10 and 11, 1981, Mr. David Roberson from this agency inspected your treatment, storage, and disposal facilities for which you applied for RCRA permits. Mr. Roberson stated that you or members of your staff accompanied him during the two day visit.

Below you will find a list of deficiencies which were noted during the inspection. Additional items may be brought to your attention following a complete review of the inspection report in conjunction with the interim status standards. Please review the enclosed inspection form for additional comments:

Item .02 General Waste Analysis - Analysis of spent pickle liquor from Bessemer plant needed. Analysis to be included in analysis plan for facility.

.03 Security - Gate must be provided at entrance to landfill. Gate to be locked when landfill is unattended.

.06 General Requirements For Ignitable, Reactive, or Incompatible Waste: - "No Smoking" signs needed at solvent storage area S-31.

.07 Preparedness and Prevention - Capabilities of fire department, security, and medical facilities should be explained in contingency plan.

.11 Manifest System, Recordkeeping and Reporting - An operating record is needed for the waste taken from the plant in Bessemer.

.22 Landfills - Ignitable solvents may not be landfilled unless they no longer meet the definition of ignitable waste. This is in reference to the drum disposal area which you stated was a disposal area.

We ask that you also review the landfill requirements under .22(e)(1) of the inspection report to include the depth of the fill area in the operating record.

The major discrepancy items are listed above. It is suggested that you refer to federal and state regulations for clarification of items needed.

Your prompt attention to the correction of the deficiencies noted above is requested. A follow-up inspection will be performed on March 17, 1981. If this conflicts with your schedule, please notify this office immediately so a new date can be set.

Sincerely,

Bernard E. Cox, Chief
Hazardous & Industrial Waste Section
Division of Solid & Hazardous Waste
Environmental Health Administration

BEC:rm

Enclosure

cc: Mr. John Dickinson, Jr.
Hazardous Waste Management Coordinator
USEPA-Region IV

State of Alabama

DEPARTMENT OF PUBLIC HEALTH

State Office Building
Montgomery, Alabama 36130

IRA L. MYERS, M.D.
STATE HEALTH OFFICER

February 18, 1981

M E M O R A N D U M

TO: Bernard E. Cox, Jr., Chief BEC
Hazardous & Industrial Waste Section
Division of Solid & Hazardous Waste

FROM: Daniel E. Cooper, P.E., Deputy Director
Division of Solid & Hazardous Waste

RE: Anonymous Complaint, U. S. Steel, Birmingham

On February 17, 1981 an unknown gentleman telephoned the writer to lodge a complaint concerning hazardous waste generated by U. S. Steel. According to the caller, Bryson Environmental Services, Inc. pumps waste into drums in the U. S. Steel facility and then transports them to a site located near PECON. Approximately 80-160 drums per day are said to be disposed at this site located near the Number 2 Tin Mill gate.

The caller also mentioned a dump site located behind the Union Hall on Pleasant Grove Road where dirt was dumped. According to the caller, the dirt "smoked" when it was dumped.

The caller left no name or contact information.

DEC:rm

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE NOV 2 0 1980 ATHENS, GEORGIA 30613

SUBJECT Reconnaissance Survey, Hazardous Waste Sites, Alabama, November 17-20, 1980

FROM Water Surveillance Branch

TO See Below

Surveillance and Analysis Division personnel will conduct pre-field investigation reconnaissance surveys at two potential hazardous waste sites in Alabama during the week of November 17, 1980. The purpose of the reconnaissance is to decide what sampling may be necessary in order to determine if area contamination has occurred from waste material deposition.

Exum Dump, owned by U. S. Steel in Birmingham, will be surveyed by Mr. Hall and FIT personnel on November 17. Ciba-Geigy in McIntosh will be surveyed by Hall and Air and Hazardous Materials Division, Enforcement Division, and FIT personnel on November 19.

Subsequent to these reconnaissance surveys, study plans will be prepared for field investigations to be conducted at each location utilizing both S&A and FIT personnel.

Steve

Steve Hall

Addressees:

S&A Division
Finger/Adams
Carter/Lair

Air and Hazardous Materials Division
Scarbrough/Mathis
Weater

Enforcement Division
Eagle

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE [illegible]

SUBJECT Geologic Assessment of Exum Dump, Birmingham, Alabama

FROM Hydrogeologist

TO Files

THUR: Wayne Mathis, Program Manager

Exum Dump is a disposal site which is owned and operated by U.S. Steel in Birmingham, Alabama. The area of primary concern is a lagoon which is about 2-3 acres in size. The lagoon has two visible inflow points, however, there are no visible routes of drainage. The lagoon is used by U.S. Steel and receives runoff from tank washing and cleaning from Chem Haulers Inc.

The lagoon and dump are underlain by the Pottsville Formation. The Pottsville Formation is a consolidated formation consisting of shale and sandstone interspersed with coal seams. In this area the vertical extent of the formation is about 2800 feet. This formation possesses low permeability and would make a poor aquifer.

Joints and fissures in the Pottsville would provide the primary channels for groundwater movement. A fault system known as the Little Creek Fault underlies Exum Dump. Little Creek Fault is a normal dip slip fault. This fault is 2.2 miles long and has a maximum vertical displacement of 80 feet. Little Creek Fault has a strike of North 90° west and dips to the Northeast. This fault system would greatly enhance the likelihood of contamination by Exum Dump, of the underlying aquifer.

Exploratory borings at this disposal site should answer many unresolved questions concerning the geology of this area. Monitoring wells may need to be installed at this site if leachate analysis from the lagoon indicate hazardous substances are present (results from analysis expected by July 20, 1980.

Ron Joyner

POOR LEGIBILITY

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

State of Alabama
Department of Public Health
State Office Building
Montgomery, Alabama 36104

IRA L. MYERS, M. D.
STATE HEALTH OFFICER

April 1, 1980

Mr. L. C. McLean
Chief Engineer
U. S. Steel Corporation
P. O. Box 599
Fairfield, Alabama 35064

Dear Mr. McLean:

This letter is to confirm the visit made on March 26, 1980, to the Exum Dump property which is owned and operated by your company. The visit was made by Messrs. Roberson and Cox, of this Department, and Messrs. Veater, Joiner and Hall, of the U. S. Environmental Protection Agency. These men were accompanied by Mr. Jim Long, Environmental Engineer on your staff.

The purpose of the visit was to gather facts in order to develop a course of action to be taken by both U. S. Steel and this agency. This action will be in response to the site inspection of the Eckhardt Report in determining if a potential hazard exists, and if so, to what extent.

The representatives from Environmental Protection Agency were present to advise the State on hydrogeological factors which may need to be taken into consideration. After viewing and walking over the site, they will prepare a report to forward to us regarding the course of action needed. In preparing this report, similar visits may be required as well as sampling of wastes present and sampling of surface and groundwater in the area.

This agency will also seek the assistance of the State of Alabama Geological Survey for their knowledge of the area and recommendations.

Any work done in the area will be coordinated through Mr. Gary Euler, of your staff, unless otherwise notified. Samples may be split as taken so your lab can run any parameters which we will have run.

The final determination as to disposition of the wastes will depend on wastes present and also the final regulations which come from EPA concerning hazardous wastes. Any testing of wastes will be achieved through use of the proposed regulations of December 18, 1978.

RECEIVED
APR 04 1980
ENVIRONMENTAL MANAGEMENT DIV.

We appreciate the cooperation your staff has shown in this matter, and we look forward to working with you in assessing the problems at Exum Dump.

If you have any questions regarding this matter, please contact this office.

Sincerely,

David L. Roberson

David L. Roberson
Environmentalist
Division of Solid Waste & Vector Control
Environmental Health Administration

DLR:clr

CC: Mr. Frank Phillips
Jefferson County Health Department

Mr. Joel Veater
U. S. Environmental Protection Agency
Atlanta, Georgia

State of Alabama
Department of Public Health
State Office Building
Montgomery, Alabama 36104

IRA L. MYERS, M. D.
STATE HEALTH OFFICER

March 25, 1980

M E M O R A N D U M

TO: Mr. Dan Cooper, P.E., Deputy Director
Division of Solid Waste & Vector Control

FROM: Mr. Bernard E. Cox, Public Health Engineer BEC
Chief, Hazardous and Industrial Wastes Section
Division of Solid Waste & Vector Control

RE: Eckhardt Report - Exum Dump (#40) - Highest Priority

Exum Dump is a disposal site operated by U. S. Steel near Dolomite in Jefferson County. It is known that U. S. Steel, Chem-Haulers, and Allied Chemicals have deposited waste material at the site. In addition, there is no physical security at the site to prohibit other persons from using the facility.

It is known that U. S. Steel puts wastewater treatment sludges and oil residues at the site. Chem-Haulers have stated that all forms of materials except poisons have been dumped at the site. Extensive amounts of oil and tar byproducts are evident at the site. In addition, Allied Chemicals has dumped trace amounts of organics and heavy metals at the site.

We have requested assistance from S & A with EPA in Athens to determine the extent of the problem(s) existing at the Exum site. It is hoped that S & A can devise a comprehensive plan of study which will aid this agency with a final determination on the nature of the problem.

VIEW EVENT COMMENTS

REF NO.: 00077 EPA ID: ALD002904506

OPUNIT: 00 SITE NAME: USS FAIRFIELD WORKS FA

EVENT: SI1 EVENT NAME: SCREENING SITE INSPECT

COMM ID	LINE NO.	COMMENTS	TYPE
001	01	RCRA REGULATED.	$

Add new comment Select comment ID View screen Leave [ ]

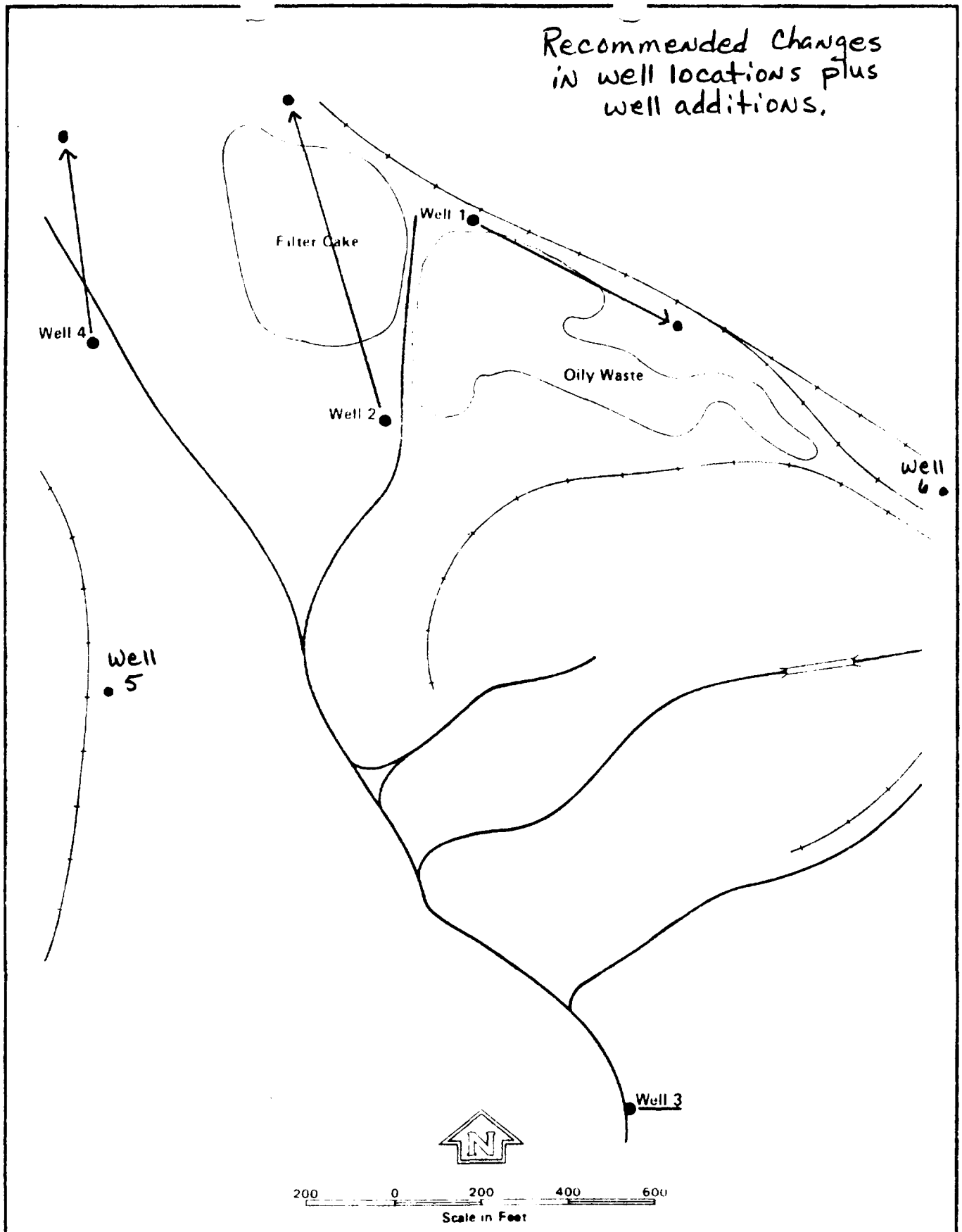


FIGURE 1
AERIAL MAP OF EXUM DUMP AND WELL LOCATIONS

DAMES & MOORE

	RCRA	NPDES
Exum Dump		
storage tanks (ww treatment system)	✓	
1 coke pt. area n. of biotreatment		
2 coke pt n. of pitch plant		
3 Tin Mill Dump		
4 #5 dump		
5 old drum reclaiming area	✓	
Tin Mill Ditch	✓	
final effluent control pond	✓	
settling pond #5 (s. of sheet metal pt)		
Tin Mill Ldfl		
past storage area n. of coal storage area (near cooling towers)		
deep well injection		
Wire mill dump		
Dolomite Road Dump		

Inspection
US Steel Fairfield Wks

[illegible] Transportation [illegible] Degreasing Operations

[illegible] Degreaser:

1. Annual average solvent usage is [illegible] gal per week. Maximum [illegible] usage is 300 gal.

2. Solvent is applied by spraying, evaporating conservatively [illegible] of volume before entering floor drain.

3. Solvent is insoluble in water and does not form stable compounds with mineral oils but continues to evapor[illegible]

4. Due to warm water and long residence time in sewers, ditches, three settling basins and the final effluent control pond (about two miles from floor drain to discharge) essentially all of the solvent should evaporate. However, estimate conservatively that only half evaporates.

5. Any solvent trapped in oil and grease would be removed by two separate skimmers before discharge

Temper Mill Degreasing:

1. Annual Solvent Usage Is About 10,000 gal.

2. Solvent is applied by spraying and portion not evapora[illegible] flows to sumps in basement along with oils from leaks etc. where it evaporates further.

3. Sumps are periodically pumped to a 10,000 gal tank.

4. Sample of oil from sump indicated 0.02% 1,1,1-trichloroethane.

5. Assume that 10,000 gal. of oil would be transferred to tin mill ditch during same week that Electric Shop has maximum discharge.

6. Assume the weight of waste oil is 7.5 lb/gal.

— CONTINUED —

SPENT 1,1,1 TRICHLOROETHANE FROM DEGREASING OPERATIONS
CONTINUED

GENERAL:

1. Waste water flow into the final effluent control pond during normal plant operations is 29 MMGD.

2. Sample at outfall 010-027 indicated 0.018 mg/l of 1,1,1-trichloroethane.

3. Specific gravity of 1,1,1-trichloroethane is 1.325.

CALCULATE CONCENTRATION:

300 gal/wk X $\frac{1}{3}$ evaporation X $\frac{1}{2}$ evaporation X 1.325 X 8.34 lb/gal = 550 lb/wk

10000 gal/wk X 7.5 lb/gal X 0.02% ÷ 100 = 15 lb/wk

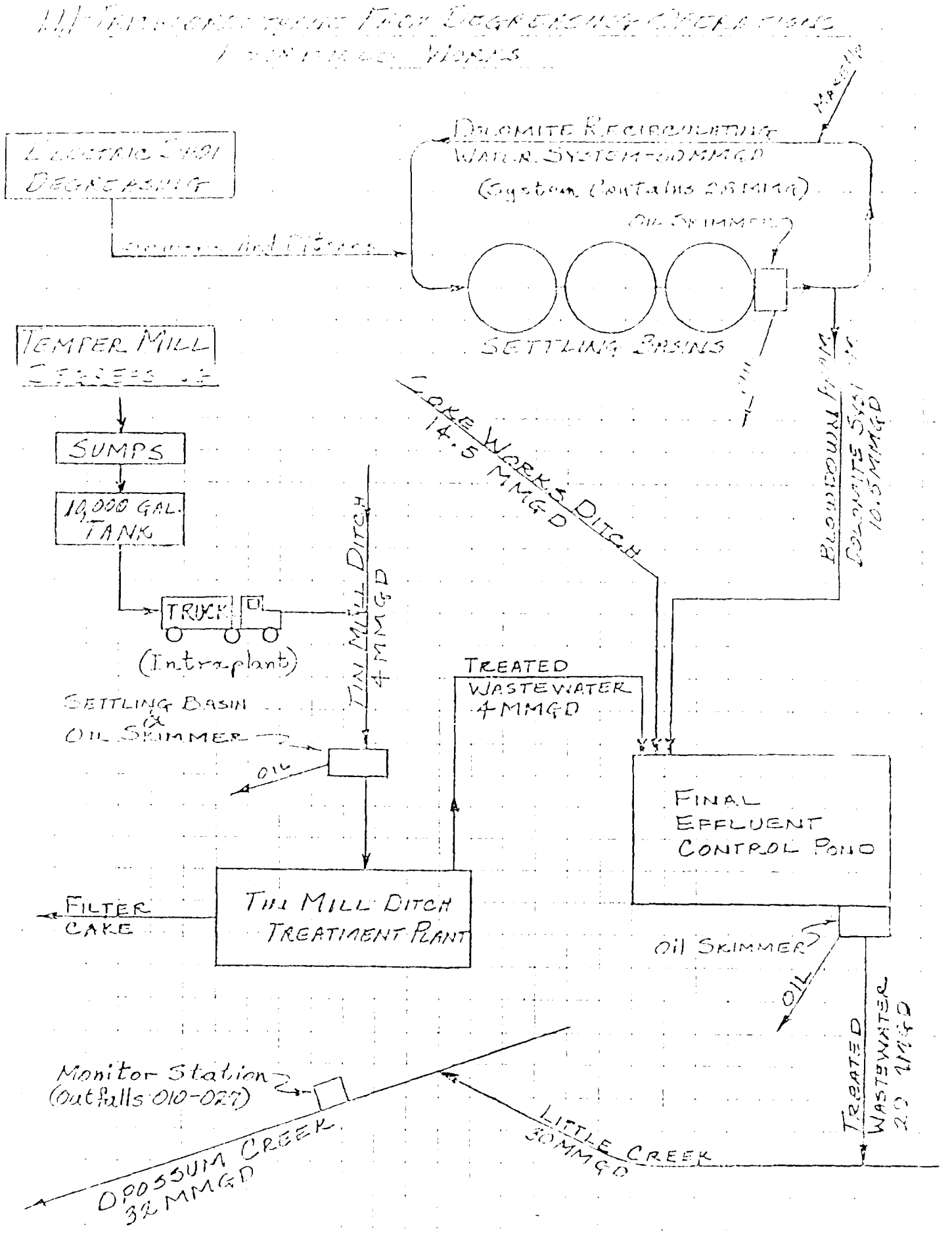
Total 1,1,1-trichloroethane = 565 lb/wk

29 million gal/day X 7 day/wk X 8.34 lb/gal = 1700 X 10^6 lb/wk Flow

$$\frac{565 \text{ lb/wk}}{1700 \times 10^6 \text{ lb/wk}} = \underline{\underline{0.33 \text{ ppm}}}$$

Allowable concentration is 25.0 ppm

Calculated concentration at outfall 010-027 is:
(0.33 ppm)(29 MMGD/32 MMGD) = 0.30 ppm.
Compare to actual analysis of 0.018 ppm.



G.W. Fulton 10/8/82

POOR LEGIBILITY

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

DSWVC Code 80-I-82-37-13-H

SOLID WASTE DISPOSAL-GEOHYDROLOGIC EVALUATION

Report No. 81-1 to the Alabama Division of Solid Waste and Vector Control

from

GEOLOGICAL SURVEY OF ALABAMA
Environmental Division
P.O. Drawer O
University, Alabama 35486
(205) 349-2852

RECEIVED
OCT 20 1980
STATE HEALTH DEPARTMENT
DIVISION OF SOLID WASTE
& VECTOR CONTROL

Date Examined: October 2, 1980

Date of Report: October 17, 1980

Report Prepared By: Paul H. Moser

Signature: Paul H. Moser

Client: U.S. Steel

Address: P.O. Box 599
Fairfield, Alabama

Property Owner: U.S. Steel

CRITERIA USED IN EVALUATION

A. Facility: X existing ____ proposed ____ adjoining existing facility

B. Disposal material: Oil, filter cake, slag, demolition wastes.

C. Location:

1. County Jefferson

2. 7½-Minute Quadrangle Bessemer Other map ____

3. ____ ¼ ____ ¼ NE ¼ sec. 3, T. 18S., R. 4W.

4. Hydrologic features of area: (see attached map or sketch for checked (√) items)

( ) Water wells
( ) Springs
(X) Perennial streams or drainages
(X) Intermittent streams or drainages
( ) Impoundments
( ) Areas subject to flooding
( ) Other ____

D. Geography:

1. Site description (land use, size, etc.): About 38 acres have been used for disposal for unknown number of years.

2. Topography (slope, grade, direction, etc.): A westward-sloping drain has been filled to a maximum depth of about 80 feet.

F. *Geologic Setting:*

1. *Unconsolidated material above bedrock:*

   a. *Field description:* Black cinders, filter cake, and demolition waste.

   b. *SCS description:* Black cinders, filter cake and demolition waste.

   c. *Estimated thickness of unconsolidated material:* 60 to 80 feet

   d. *Permeability:* ____ *very low* ____ *low* X *moderate* TO X *high* ____ *very high*

   e. *Pertinent engineering characteristics:* The waste material appears stable.

2. *Bedrock:*

   a. *Name and age of unit:* Pottsville Formation of Pennsylvanian age.

   b. *Lithologic description:* Shale, gray, blue gray, dense; sandstone, medium grained, blocky, friable; with coal and underclay layers.

   c. *Geologic structure or weathering and fracturing:* Numerous faults are indicated in the area. (See attached map.)

   d. *Permeability:* ____ *very low* ____ *low* ____ *moderate* X *high* ____ *very high*

   e. *Other pertinent features (sinkholes, depressions, etc.):* No sinkholes were observed. Faulting may be responsible for the high porosity in the Pottsville Formation.

CONCLUSIONS

A. *From observed geohydrologic conditions, this site is considered:*

_____ *Good* _____ *Fair* X *Marginal* TO X *Poor*

B. *Overall evaluation and potential problems:* Waste material has been disposed of at this site for several scores of years. The disposal material is apparently stable, and no toxic or hazardous constituents have been reported. The disposal material may be as much as 60 to 80 feet thick and has dammed the westward-flowing surface drainage feature. Numerous faults are indicated on geologic maps, and these may be responsible for the downward migration of liquids. The Pratt Coal seam has been mined at depths of 400 to 500 feet below the existing fill.

C. *Recommended placement of monitoring wells:* If monitoring wells are to be installed, one well should be placed upgradient to the south to obtain basic water-quality data. Two additional wells should be placed downgradient to detect any possible ground-water contamination. These should be placed adjacent to and along the western edge of the [illegible] the northern and southern extremes.

[illegible] disp[illegible]

F. *Hydrology:*

1. *Ground water:*

a. *Reported yields of wells in the area:* No wells were observed in this area.

b. *Direction of ground-water movement:* Northwest

c. *Ground-water supplies: Wells and springs within the hydrologic influence of the site are shown on the attached map or sketch.*

Data for wells:

No. designation on map
Water level (ft. below lsd)
Total depth
Casing depth
Type (dug, drilled & diameter)
Use (domestic, industrial, etc)
Approx. distance, direction from site
Elevation in relation to site

The industrialized area is dependent on city water. No wells were encountered in this area. The Pottsville Formation in other parts of the county may yield adequate quantities of ground water for domestic use if a fracture system is encountered by the drilling.

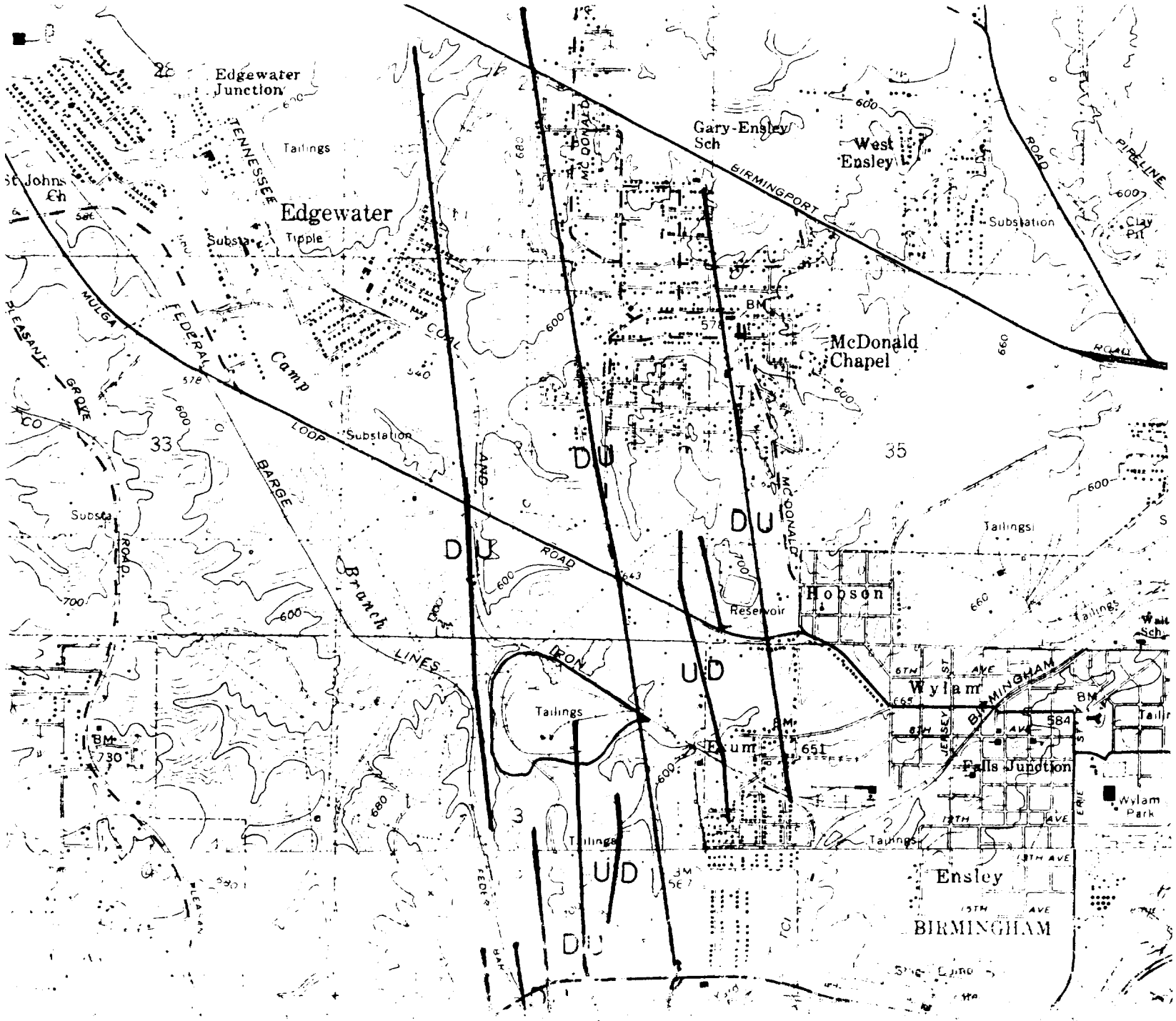
Source of data:

(X) *field observations*
(X) *water-well data*
(X) *topographic map*
(X) *reported information*
(X) *published information*
(X) *previous investigation*
( ) *open-file reports*
( ) *other* _____

2. *Surface water:*

a. *Nearest tributary:* Camp Branch, adjacent to site to the west.

b. *Site subject to flooding:* X *no* _____ *yes* _____ *frequency*



Edgewater Junction
Tailings
TENNESSEE
St Johns Ch
Edgewater
Substa
Tipple
MULGA
FEDERAL
Camp
COAL
PLEASANT GROVE
LOOP
Substation
33
BARGE
Substa
ROAD
Branch
LINES
IRON
Tailings
BM 730
Gary-Ensley Sch
West Ensley
BIRMINGPORT
ROAD
PIPELINE
Substation
Clay Pit
McDONALD
McDonald Chapel
35
DU
DU
DU
UD
UD
DU
Tailings
Hobson
Reservoir
Wylam
BIRMINGHAM
Exum
651
Falls Junction
Wylam Park
Ensley
BIRMINGHAM

In 1981, the company filed the Superfund notification. At this time, they indicated that major portions of the waste from this facility went into the Exum dump. An effort was made to identify which wastes had gone to this dump. U.S. EPA sent an inspection team to examine the potential environmental hazards posed by this site. In addition to the Exum dump, the facility identified five locations on the manufacturing plant site where hazardous wastes potentially had been disposed. These included the coke plant area north of the biotreatment plant, the coke plant north of the pitch plant, Tin Mill dump, #5 dump, and the old drum reclaiming area. Reportedly, the following wastes had been disposed in those areas: coke plant tar decanter sludge (K087); residual deposits from cleaning tanks in the coke plant, which contained tar, pitch, naphthalene, sulfuric acid, creosote, wash oil, light oil; and organics containing benzene, toluene and xylene products. In addition, the composition of several wastes disposed was given, as well as the location of the disposal site. Review of this information indicates that only major constituents were identified, and the presence of toxic constituents were difficult to determine. For example, tar production residue is expressed in terms of carbon, hydrogen, and amino content. Several of the wastes were listed as composition unknown, not available, or proprietary. ADEM officials inspected this facility and identified the drum reclamation area as a potential environmental hazard. Working with U.S. Steel, they had the drums removed from this impoundment, and groundwater monitoring wells have been installed at the site. During this time period, a Part B application was also called. As U.S. Steel was undergoing financial difficulties, they requested and received an extension on the Part B requirement. Essentially, the calling of the Part B was postponed. The major section of the U.S. Steel operations ceased operations in 1981. They anticipated the plant would reopen; therefore, did not implement any closure plans. In March of 1983, U.S. Steel submitted a correction of the Part A applications. The major changes included exclusion of several storage tanks, which were included in the wastewater treatment system. These tanks have been reported to contain spent cleaning solution, pickle liquor wastewater, and spent sodium dichromate bath and rinse waters. Waste unit designation S-32, described as the temper mill sump system, was also deleted at this time. This storage tank contains waste oil and spent 1,1,1 trichloroethane from degreasing. This was deleted from the Part A, as it is reportedly a wastewater storage tank in their NPDES treatment system.

Pressure filters and vacuumm filters were also deleted from the Part A application. These were indicated to be excluded under regulation 40 CFR 122.21. A further review of the information submitted to the ADEM offices indicated that a 1,1,1 trichloroethane and oil mixture is being placed into the Tin Mill Ditch. Tin Mill Ditch is a regulated facility under RCRA. In addition to the groundwater monitoring wells, which have been installed at the surface impoundment area, groundwater monitoring wells have also been installed in the Tin Mill Ditch area. In the third quarter of 1982, a spike value for TOX was encountered. This was determined to be trichloroethane. Groundwater assessment was triggered, and it was reported that this was a one-time occurrence. The company has suggested that the contamination in the upgradient well was linked to labor problems and was artificially induced.

Conversations with the ADEM staff indicate that the Tin Mill Ditch is fully regulated under RCRA. ADEM staff have expressed a concern about the above indicated surface impoundments. There are discussions ongoing with U.S. Steel as to whether the ponds identified as the final effluent control pond in the lower dolomite pond have received hazardous waste. ADEM staff are continuing discussions about which other areas are regulated on the plant site. EPA Region IV has indicated that they intend to call a Part B application, and this will most likely be due in October. In light of this information, the ADEM staff are preparing for a comprehensive site investigation into the Part A regulated facilities. In addition, further evaluation will be done regarding the facilities deleted from the original Part A application.

3. Disposition:

It appears that this facility should receive a priority for a site investigation under the RCRA 3012 Program. Several past hazardous waste management facilities on the main manufacturing plant site have been identified in a Superfund notification. These include a past surface impoundment identified as Settling Pond #5. The pond is located to the south of the sheet metal plant. In addition, materials were also landfilled in an area identified as the Tin Mill Landfill. A past storage area is located north of the coal storage area and close proximity to the cooling towers. Refer to the Site Blueprint Map, for location of these facilities. These areas are of prime concern. In addition, review of submitted information indicates that sodium dichromate is used at this facility. Sodium dichromate is known to be a hexavalent chromium species; therefore, treatment of this material is of particular concern. The company has indicated that this material is treated in the NPDES treatment system. Therefore, disposal of

resultant sludges would be of concern, in regard to hazardous waste regulations. It should also be noted that spent pickle liquor sludge has been disposed at a deep well injection on the site. This deep well is very close to the PEROX facility. Testing of the pickle liquor is indicated that this material is hazardous only due to corrosivity.

4. Comments:

It appears that toxic organics are entering the NPDES system. Of particular concern are the areas where this wastewater contacts the environment. At a very minimum this may represent a threat to surface water quality. Its potential effect on groundwater quality must be examined.

TABLE 3-7

POLLUTION CONTROL RESIDUES
FAIRFIELD DISTRICT WORKS
U. S. STEEL CORPORATION*

Source	Annual Quantity Residue - dry tons	Residue Produced/ Ton Q-BOP Steel** (Percent)	Disposition of Residue
DUST			
Sintering	15,500	0.6	Sinter
EP Blast Furnace	73,800	2.7	Sinter
Q-BOP	6,480	0.2	Sinter
SLUDGE			
Sintering	23,600	0.9	Stock
EP Blast Furnace	13,290	0.5	Sinter
Rolling	15,600	0.6	Stock/Sinter
Pickling — LIST EP	1,600	0.1	Landfill
FILTER CAKE			
Lime/Bio-Mass	3,300	0.1	Landfill
EP Tin Mill Treatment Plant	15,800	0.6	Landfill
SCALE			
Rolling Mills	84,700	3.1	Sinter/BF
SLUDGE & FILTER CAKE			
EP Q-BOP	15,200	0.6	Sinter
TOTAL		10.0	Landfill

* Taken from EPA study entitled "Managing and Disposing of Residues from Environmental Control Facilities in the Steel Industry" - 12-15-7[illegible]

** Q-BOP production of 2,500,000 tons/yr in 1975.

United States Steel Corporation

THEODORE STEVENSON
GENERAL SUPERINTENDENT

FAIRFIELD WORKS
P. O. BOX 591
FAIRFIELD, ALABAMA 35064

1983 MAR

March 24, 1983

Mr. Alfred S. Chipley
Director, Land Program
Alabama Department of Environmental Management
State Capitol
Montgomery, Alabama 36130

Dear Mr. Chipley:

Attached is the 1982 RCRA annual report for the Fairfield Works of U. S. Steel Corporation detailing all hazardous wastes generated, disposed and stored on site, and shipped off site. These forms do not comprehend hazardous wastes received from other generators; therefore, the following is presented here:

1. 119,500 pounds of contaminated water, codes K062,D002, D007 - separated from U. S. Steel's waste oil by T&S Salvage Company (Coaling, Al.) and returned to the Tin Mill Ditch Waste Water Treatment Plant at Fairfield Works for treatment.

2. 145,500 pounds of waste pickle liquor from steel finishing operations, code K062, received from Alabama Pickling and Warehouse, 2201 5th Avenue N., Bessemer, Alabama 35020. This material was used as a treatment aid at the Tin Mill Ditch Waste Water Treatment Plant.

3. Waste pickle liquor from steel finishing operations, code K062, received from Metalplate Galvanizing Inc. and used as a treatment aid at the Tin Mill Ditch Waste Water Treatment Plant.

   123,000 pounds from Plant No. 1, 757 North 44th Street, Birmingham, Alabama 35212; 156,500 pounds from Plant No. 2, 1120 39th Street North, Birmingham, Alabama 35234.

Also attached are the ground water monitor well data requested by ADEM memorandum dated Dec. 27, 1982, and copy of a letter to Mr. Daniel Thoman of EPA indicating no hazardous waste activity at the Ensley and Wenonah plants.

Very truly yours,

Attachments

ANNUAL REPORT 1982
GROUND WATER MONITORING
HAZARDOUS WASTE MANAGEMENT FACILITIES
U.S. STEEL FAIRFIELD WORKS
MARCH 16, 1983

INTRODUCTION

This report constitutes the annual report of ground water monitoring data required under Section 4-256.12 of ADPH Hazardous Waste Management Regulations and the memorandum entitled Ground Water Monitoring Annual Report dated December 27, 1982 for the continued compliance of United States Steel Corportion Fairfield Works hazardous waste management facilities. The report has been prepared by our environmental consultants, Dames & Moore, Atlanta, Georgia.

Two groups of hazardous waste management facilities are being monitored under the regulations. One group is comprised of an Impoundment, Lined Spent Pickle Liquor Storage Pond, and Unlined Spent Pickle Liquor Storage Pond. These are monitored by wells designated LF-1, LF-2, LF-3A, LF-4, and LF-5A. The second group includes the Tin Mill Ditch Sedimentation Lagoon, Tin Mill Treatment Plant Equalization Basins, and the Tin Mill Treatment Plant Sludge Treatment Lagoon which are monitored by wells designated TM-1, TM-2, TM-3, TM-4, TM-5, and TM-6.

DATA REPORT AND ANALYSIS

Table I presents indicator parameter data for all wells monitored for each of the four quarters.

Table II presents ground water elevations of all wells monitored for each of the four quarters. An examination of these elevations demonstrates that the designated upgradient well in each system has remained, in fact, the system upgradient well. Therefore, each of the monitoring systems are in compliance with the regulatory requirements.

No ground water quality assesment program was initiated during the year 1982 or previous to 1982.

-oOo-

This concludes the reporting that is required to maintain compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12 for the Fairfield hazardous waste management facilities. All other required analytical results and field measurements made for the year 1982 are on file at the Fairfield Works.

ATTACHMENTS: Table 1
Table 2

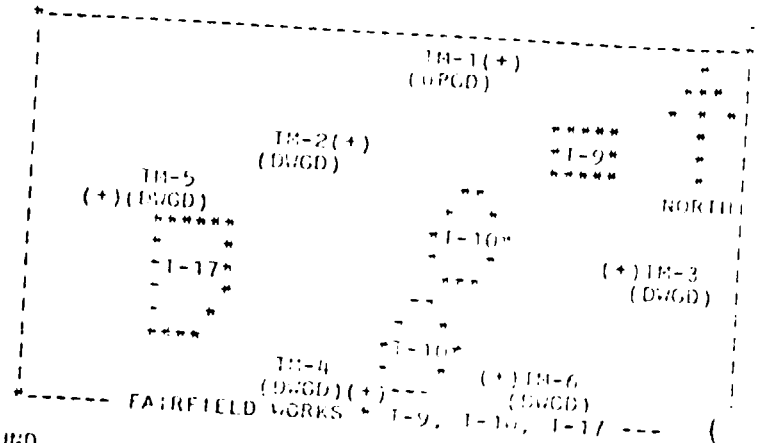
EXCEPTION REPORT (ER-1)

REPORT DATE: 26 JUL 83

IDENTIFICATION OF STATISTICALLY SIGNIFICANT CHANGES
FOR EACH SAMPLING POINT

RANDOM NUMBER REPORT
R INDICATES A RANDOM NUMBER OR A VALUE DERIVED BY USE OF A RANDOM NUMBER

CLIENT: U.S. STEEL CORPORATION
FACILITY FAIRFIELD WORKS LOCATION FAIRFIELD, AL
SITE: T-9
SAMPLING ROUND: 02 YEAR: 83



SAMPLING POINT WITH SIGNIFICANT CHANGE	SAMPLING DATE	INDICATOR PARAMETER WITH SIGNIFICANT CHANGE	UNIT	INITIAL BACKGROUND MEAN	INITIAL BACKGROUND VARIANCE	SAMPLING RESULTS MEAN	SAMPLING RESULTS VARIANCE
TM-2	DOWNGRADIENT 06/28/83	PH	SU	6.31	0.0945	5.90	0.0000
TM-6	DOWNGRADIENT 06/28/83	PH	SU	6.31	0.0945	6.85	0.0029
TM-3	DOWNGRADIENT 06/28/83	SPEC COND	UMHOS/CM	820.19	991.3625	903.75	883.9286
TM-4	DOWNGRADIENT 06/28/83	SPEC COND	UMHOS/CM	820.19	991.3625	900.00	28.5714

0.01 LEVEL OF SIGNIFICANCE USED

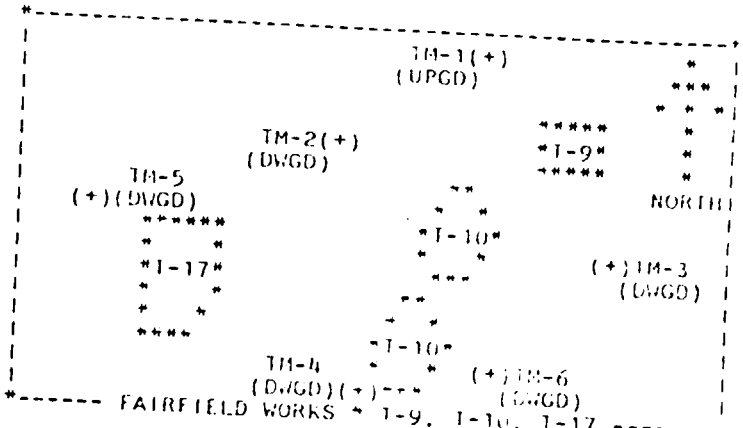
STATISTICAL COMPARISON (SC-1)

REPORT DATE: 26 JUL 83

COMPARISON OF INDICATOR PARAMETER VALUES WITH INITIAL BACKGROUND VALUES BY FACILITY, SITE AND SAMPLING POINT

RANDOM NUMBER REPORT
R INDICATES A RANDOM NUMBER OR A VALUE DERIVED BY USE OF A RANDOM NUMBER

CLIENT: U.S. STEEL CORPORATION
FACILITY FAIRFIELD WORKS LOCATION FAIRFIELD, AL
SITE: T-9
SAMPLING ROUND: 02 YEAR: 83



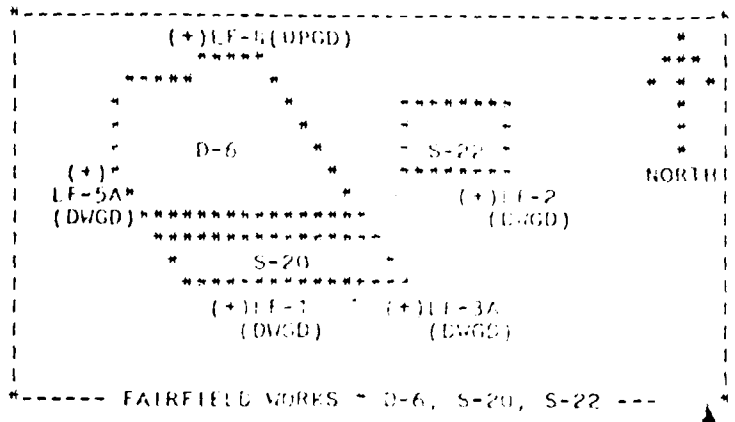
INITIAL BACKGROUND

PARAMETER	UNITS	SAMPLING POINT	MEAN	VARIANCE	SAMPLING POINT	VALUES				MEAN	VARIANCE	STATS SIGNIF. CHANGE
PH	SU	TM-1	6.31	0.0945	TM-1							***
					TM-2	5.9	5.9	5.9	5.9	5.90	0.0000	YES
						5.9	5.9	5.9	5.9			***
					TM-3							***
					TM-4							
					TM-5	6.3	6.3	6.2	6.3	6.27	0.0021	NO
						6.3	6.3	6.3	6.2			
					TM-6	6.8	6.9	6.8	6.9	6.85	0.0029	YES
						6.9	6.8	6.8	6.9			
SPEC COND	UMHOS/CM	TM-1	820.19	991.3625	TM-1							***
					TM-2	900.	920.	920.	860.	903.75	883.9286	YES
					TM-3	950.	870.	920.	890.			***
						900.	890.	900.	910.			
					TM-4	900.	900.	900.	900.			
					TM-5							***
					TM-6							***
TOC	MG/L	TM-1	72.88	1918.7833	TM-1					900.00	28.5714	YES
					TM-2							***
					TM-3							***
					TM-4							***
					TM-5							***
					TM-6							***

0.01 LEVEL OF SIGNIFICANCE USED

EXCEPTION REPORT (ER-1) REPORT DATE: 26 JUL 83

IDENTIFICATION OF STATISTICALLY SIGNIFICANT CHANGES
FOR EACH SAMPLING POINT



CLIENT: U.S. STEEL CORPORATION
FACILITY FAIRFIELD WORKS LOCATION FAIRFIELD, AL
SITE: D-6
SAMPLING ROUND: 02 YEAR: 83

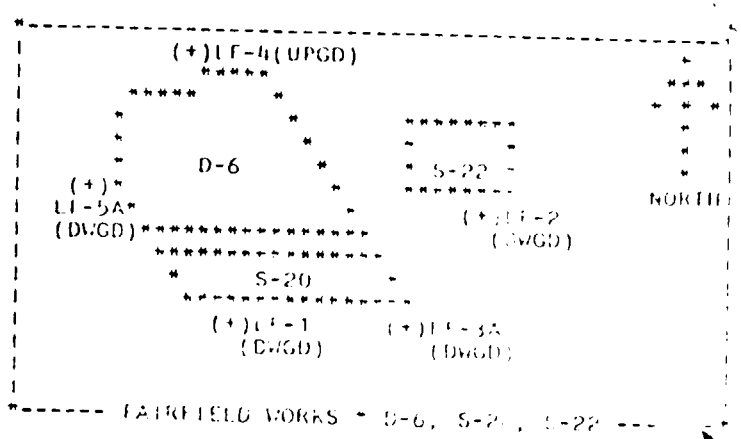
SAMPLING POINT WITH SIGNIFICANT CHANGE		SAMPLING DATE	INDICATOR PARAMETER WITH SIGNIFICANT CHANGE	UNIT	INITIAL BACKGROUND MEAN	INITIAL BACKGROUND VARIANCE	SAMPLING RESULTS MEAN	SAMPLING RESULTS VARIANCE
LF-1	DOWNGRADIENT	06/28/83	PH	SU	6.49	0.0332	4.60	0.0000
LF-2	DOWNGRADIENT	06/29/83	PH	SU	6.49	0.0332	3.90	0.0000
LF-3A	DOWNGRADIENT	06/28/83	PH	SU	6.49	0.0332	3.40	0.0000
LF-4	UPGRADIENT	06/28/83	PH	SU	6.49	0.0332	5.90	0.0000
LF-1	DOWNGRADIENT	06/28/83	SPEC COND	UMHOS/CM	128.19	519.7625	10675.00	13571.4286
LF-2	DOWNGRADIENT	06/29/83	SPEC COND	UMHOS/CM	128.19	519.7625	878.75	69.0429
LF-3A	DOWNGRADIENT	06/28/83	SPEC COND	UMHOS/CM	128.19	519.7625	9412.50	55535.7143
LF-5A	DOWNGRADIENT	06/29/83	SPEC COND	UMHOS/CM	128.19	519.7625	3335.00	1285.7143
LF-5A	DOWNGRADIENT	06/29/83	TOC	MG/L	35.22	1931.1207	81.80	342.1977

0.01 LEVEL OF SIGNIFICANCE USED

STATISTICAL COMPARISON (SC-1)

REPORT DATE: 26 JUL 83

COMPARISON OF INDICATOR PARAMETER VALUES WITH INITIAL BACKGROUND VALUES BY FACILITY, SITE AND SAMPLING POINT



CLIENT: U.S. STEEL CORPORATION
FACILITY FAIRFIELD WORKS LOCATION FAIRFIELD, AL
SITE: D-6
SAMPLING ROUND: 02 YEAR: 83

INITIAL BACKGROUND

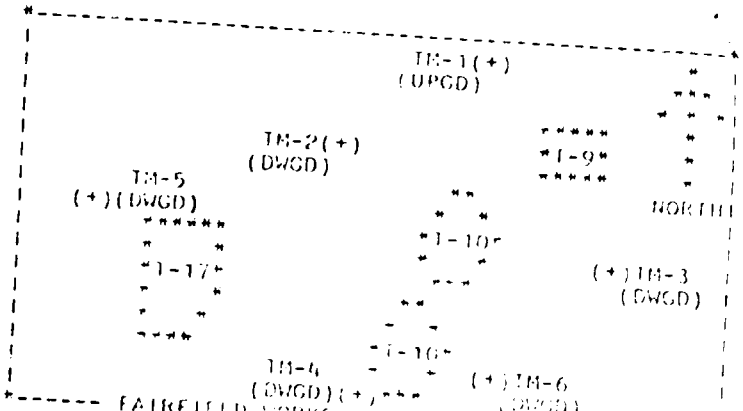
PARAMETER	UNITS	SAMPLING POINT	MEAN	VARIANCE	SAMPLING POINT	VALUES				MEAN	VARIANCE	STAT SIGNIF. CHANG(
PH	SU	LF-4	6.49	0.0332	LF-1	4.6	4.6	4.6	4.6			
						4.6	4.6	4.6	4.6	4.60	0.0000	YES
					LF-2	3.9	3.9	3.9	3.9			
						3.9	3.9	3.9	3.9	3.90	0.0000	YES
					LF-3A	3.4	3.4	3.4	3.4			
						3.4	3.4	3.4	3.4	3.40	0.0000	YES
					LF-4	5.9	5.9	5.9	5.9			
						5.9	5.9	5.9	5.9	5.90	0.0000	YES
					LF-5A	6.4	6.4	6.4	6.4			
						6.4	6.4	6.4	6.4	6.40	0.0000	NO
SPEC COND	UMHOS/CM	LF-4	128.19	519 7625	LF-1	10700.	10600.	10900.	10600.			
						10600.	10600.	10800.	10600.	10675.00	13571.4286	YES
					LF-2	880.	890.	880.	870.			
						880.	870.	870.	890.	878.75	69.6429	YES
					LF-3A	9000.	9300.	9400.	9700.			
						9500.	9600.	9200.	9600.	9412.50	55535.7143	YES
					LF-4							
					LF-5A	3310.	3340.	3330.	3320.			
						3330.	3320.	3310.	3420.	3335.00	1285.7143	YES
TOC	MG/L	LF-4	35.22	1931.1207	LF-1							**(
					LF-2							***
					LF-3A							***
					LF-4							***
					LF-5A	68.9	91.8	75.1	93.3			
						99.3	83.1	67.6	75.3	81.80	142.1971	YES

0.01 LEVEL OF SIGNIFICANCE USED

SUMMARY REPORT - SAMPLING ROUND (SR-2)

REPORT DATE: 21 JUL 83

TABULATION OF RESULTS BY FACILITY, SITE,
AND SAMPLING POINT FOR SAMPLING ROUND

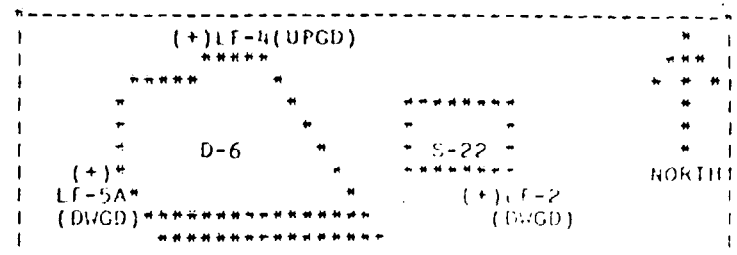


CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS LOCATION: FAIRFIELD, AL
SITE: T-9
SAMPLING ROUND: 02 YEAR: 83

PARAMETER	UNIT	REGULATORY LEVEL	TM-2 DOWNGRADIENT 06/28/83 830313	TM-3 DOWNGRADIENT 06/28/83 830314	TM-4 DOWNGRADIENT 06/28/83 830317	TM-5 DOWNGRADIENT 06/29/83 830318	TM-6 DOWNGRADIENT 06/29/83 830320
PH	SU		5.9	NO DATA	NO DATA	6.3	6.8
PH	SU		5.9	NO DATA	NO DATA	6.3	6.9
PH	SU		5.9	NO DATA	NO DATA	6.2	6.8
PH	SU		5.9	NO DATA	NO DATA	6.3	6.9
PH	SU		5.9	NO DATA	NO DATA	6.3	6.9
PH	SU		5.9	NO DATA	NO DATA	6.3	6.8
PH	SU		5.9	NO DATA	NO DATA	6.3	6.8
PH	SU		5.9	NO DATA	NO DATA	6.2	6.9
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	900.	900.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	920.	890.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	920.	900.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	860.	910.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	950.	900.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	870.	900.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	920.	900.	NO DATA	NO DATA
SPECIFIC CONDUCTANCE	UMHOS/CM		NO DATA	890.	900.	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	NO DATA
TEMPERATURE	C		18.	19.	19.	17.	18.
GROUND WATER ELEVATION	FT MSL		537.35	536.64	524.97	524.67	525.8

SUMMARY REPORT - SAMPLING ROUND (SR-2) REPORT DATE: 21 JUL 83

TABULATION OF RESULTS BY FACILITY, SITE,
AND SAMPLING POINT FOR SAMPLING ROUND



CLIENT: U.S. STEEL CORPORATION
FACILITY: FAIRFIELD WORKS LOCATION: FAIRFIELD, AL
SITE: D-6
SAMPLING ROUND: 02 YEAR: 83

			SAMPLING POINT, SAMPLE NO.				
			LF-1	LF-2	LF-3A	LF-4	LF-5A
			DOWNGRADIENT	DOWNGRADIENT	DOWNGRADIENT	UPGRADIENT	DOWNGRADIENT
		REGULATORY	06/28/83	06/29/83	06/28/83	06/28/83	06/29/83
PARAMETER	UNIT	LEVEL	830305	830307	830308	830311	830301
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
PH	SU		4.6	3.9	3.4	5.9	6.4
SPECIFIC CONDUCTANCE	UMHOS/CM		10700.	880.	9000.	NO DATA	3310.
SPECIFIC CONDUCTANCE	UMHOS/CM		10600.	890.	9300.	NO DATA	3240.
SPECIFIC CONDUCTANCE	UMHOS/CM		10900.	880.	9400.	NO DATA	3330.
SPECIFIC CONDUCTANCE	UMHOS/CM		10600.	870.	9700.	NO DATA	3320.
SPECIFIC CONDUCTANCE	UMHOS/CM		10600.	880.	9500.	NO DATA	3330.
SPECIFIC CONDUCTANCE	UMHOS/CM		10600.	870.	9600.	NO DATA	3320.
SPECIFIC CONDUCTANCE	UMHOS/CM		10800.	870.	9200.	NO DATA	3310.
SPECIFIC CONDUCTANCE	UMHOS/CM		10600.	890.	9600.	NO DATA	3420.
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	68.9
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	91.8
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	75.1
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	93.3
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	99.3
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	83.1
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	67.6
TOTAL ORGANIC CARBON	MG/L		NO DATA	NO DATA	NO DATA	NO DATA	75.3
TEMPERATURE	C		19.	17.	18.	18.	19.
GROUND WATER ELEVATION	FT MSL		555.31	622.24	560.84	630.18	622.63

FOURTH QUARTERLY REPORT
GROUND WATER MONITORING
HAZARDOUS WASTE MANAGEMENT FACILITIES
U.S. STEEL FAIRFIELD WORKS
JANUARY 25, 1983

INTRODUCTION

This report constitutes the fourth quarterly report of primary drinking water parameters required under Section 4-256.12 of ADPH Hazardous Waste Management Regulations for the continued compliance of United States Steel Corportion - Fairfield Works hazardous waste management facilities. Testing of coliform has been excluded, per prior agreement with ADPH. The report has been prepared by our environmental consultants, Dames & Moore, Atlanta, Georgia.

Two groups of hazardous waste management facilities are being monitored under the regulations. One group is comprised of an Impoundment, Lined Spent Pickle Liquor Storage Pond, and Unlined Spent Pickle Liquor Storage Pond. These are monitored by wells designated LF-1, LF-2, LF-3A, LF-4, and LF-5A. The second group includes the Tin Mill Ditch Sedimentation Lagoon, Tin Mill Treatment Plant Equalization Basins, and the Tin Mill Treatment Plant Sludge Treatment Lagoon which are monitored by wells designated TM-1, TM-2, TM-3, TM-4, TM-5, and TM-6.

SAMPLING AND ANALYSIS

On November 16 and 17, 1982, samples were collected from the monitoring wells associated with the hazardous waste facilities by Dames & Moore personnel. Laboratory testing of the samples was performed by Environmental Testing and Certification Corporation of Edison, New Jersey. Analysis of the test data was completed by Dames & Moore on January 24.

ANALYTICAL RESULTS

Test data are reported on Table 1. The following primary drinking water parameters have been found to exceed maximum contaminant levels (standards):

Flouride - Wells LF-3A and LF-1 (based on 73.9°F annual average maximum air temperature for Birmingham)
Cadmium - Well LF-3A
Radium - Possible exceedance in Well TM-1
Gross Alpha - Possible exceedance in Well LF-3A

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This concludes the reporting that is required to maintain compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12 for the Fairfield hazardous waste management facilities. All other required analytical results and field measurements made for the fourth quarter are on file at the Fairfield Works.

ATTACHMENTS: Table 1

TABLE 1
PRIMARY DRINKING WATER PARAMETERS
FOURTH QUARTERLY SAMPLING

Parameter*	PDW Limits	LF-1	LF-2	LF-3A	LF-4	LF-5A	TM-1	TM-2	TM-3	TM-4	TM-5	TM-6
Arsenic	0.05	ND	ND	0.006	ND	ND	ND**	ND	ND	<0.006	ND	ND
Barium	1.0	ND	ND	<0.040	<0.160	<0.040	0.05	0.050	<0.040	ND	0.170	<0.50
Cadmium	0.01	0.005	0.010	0.030	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	0.05	ND	ND	<0.030	ND	ND	ND	ND	ND	ND	ND	ND
Lead	0.05	ND	<0.005	<0.010	ND	<0.005	<0.005	<0.005	0.0005	ND	<0.005	0.00[illegible]
Mercury	0.002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002	0.002	0.0002	0.0002	<0.000[illegible]
Selenium	0.01	ND	ND	<0.005	ND	ND	<0.005	ND	ND	ND	ND	ND
Silver	0.05	<0.010	<0.01	<0.030	ND	ND	ND	ND	ND	ND	<0.010	ND
Flouride	1.4-2.4	2.22	0.92	2.09	<0.040	<0.040	<0.040	<0.040	<0.040	0.200	<0.200	<0.040
Nitrate-N	10	<0.04	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Endrin	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lindane	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methoxychlor	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toxaphene	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
2,4-D	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2,4,5-TP Silvex	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Radium***	5	<2.0	<1.8	<3.0	<1.8	<1.8	5.04±0.50	<2	<2	<3	<2	<1.5
Gross Alpha	15	<10	<4	<20	2.1±0.7	<4	<3	<2	4.0±2.6	<3	<2	<
Gross Beta****	-	32±11	<4	22±13	4.0±1.6	<4	7.2±2.5	4.2±1.9	9.5±2.7	7.4±2.5	5.4±2.2	4.8±2.6

*Units are mg/l except for Radium, Gross Alpha, and Gross Beta which are pCi/L.
**Not detected.
***Based on arithmetic sum of values for Radium 226 and Radium 228.
****Gross beta values are as recorded from all radioisotopes in sample. State of Alabama has not defined a specific pCi/l value for water quality limits.

TABLE I

FAIRFIELD WORKS INDICATOR PARAMETER CONCENTRATIONS
ANNUAL REPORT - 1982

FIRST QUARTER DATA

Disposal Site Area Wells			pH S.U.	Specific Conductance µmhos/cm	TOC mg/L	TOX mg/L
Upgradient:	LF4	A	6.7	115	5	0.03
	LF4	B	6.7	96	3	0.04
	LF4	C	6.6	99	4	0.05
	LF4	D	6.6	98	4	0.04
	LF1		6.3	4563	29	0.05
	LF2		6.3	4250	3	0.18
	LF3A		5.0	5375	16	0.03
	LF5A		6.3	2625	21	0.06
Tin Mill Treatment Area Wells						
Upgradient:	TM1	A	6.6	875	24	0.03
	TM1	B	6.6	863	25	0.07
	TM1	C	6.6	875	29	0.03
	TM1	D	6.6	850	26	0.04
	TM2		5.8	494	12	0.06
	TM3		6.9	900	9	0.05
	TM4		6.4	1000	11	0.05
	TM5		6.3	506	13	0.09
	TM6		7.0	1131	32	0.02

SECOND QUARTER DATA

Disposal Site Area Wells			pH S.U.	Specific Conductance µmhos/cm	TOC mg/L	TOX mg/L
Upgradient:	LF4	A	6.3	160	109	0.14
		B	6.2	160	108	0.10
		C	6.3	160	108	0.11
		D	6.2	160	108	0.12
	LF1		6.3	3080	119	<0.05
	LF2		4.7	1500	105	<0.05
	LF3A		4.8	5340	141	0.65
	LF5A		6.5	2880	<1	0.05
Tin Mill Treatment Area Wells						
Upgradient:	TM1	A	6.5	790	38	<0.05
		B	6.4	790	38	<0.05
		C	6.5	790	39	<0.05
		D	6.5	790	37	<0.05
	TM2		6.0	340	39	<0.05
	TM3		6.9	880	63	0.09
	TM4		6.6	1060	74	<0.05
	TM5		6.5	600	88	<0.05
	TM6		7.1	2000	121	<0.05

THIRD QUARTER DATA

Disposal Site Area Wells			pH S.U.	Specific Conductance µmhos/cm	TOC mg/L	TOX µg/L
Upgradient:	LF4	A	6.4	118	21	159
		B	6.4	114	19	182
		C	6.4	116	19	197
		D	6.4	116	20	156
	LF1		5.2	8250	67	375*
	LF2		4.2	1720	55	139.5*
	LF3A		4.4	6200	63	439*
	LF5A		6.3	3150	191	187*
Tin Mill Treatment Area Wells						
Upgradient:	TM1	A	6.4	820	104	6770
		B	6.4	830	103	7090
		C	6.3	830	102	6930
		D	6.3	830	103	7050
	TM2		5.8	415	48	51.6*
	TM3		6.3	980	69	59.0*
	TM4		6.6	1120	64	48.5*
	TM5		6.5	1125	51	44.1*
	TM6		7.1	1215	94	22.3*

*Average of duplicate analysis.

TABLE 1 (Continued)

FOURTH QUARTER DATA

			pH S.U.	Conductance µmhos/cm	TOC mg/L	TOX µg/L	
Disposal Site Area Wells							
Upgradient:	LF4	A	6.7	135	9.4	93.5	
		B	6.6	134	9.1	95.8	
		C	6.7	135	8.9	77.4	
		D	6.6	135	8.2	104.0	
	LF1		4.3	9000	60*	129.5*	
	LF2		4.8	2290	8.3*	54.3*	
	LF3A		3.6	13,190	8.2*	124.5*	
	FL5A		6.2	3520	111.5*	37.8*	
Tin Mill Treatment Area Wells							
Upgradient:	TM1	A	5.9	787	100	77,790	[illegible] a conduit
		B	5.8	801	136	75,490	
		C	5.8	801	130	74,490	
		D	5.8	801	132	77,650	
	TM2		5.6	515	1.3*	10.2*	
	TM3		6.5	964	2.2*	29.2*	
	TM4		6.4	1014	36*	25.9*	
	TM5		6.3	672	9.4*	<37*	
	TM6		6.6	1155	57*	42.4*	

*Average of duplicate analysis.

*Upgradient [illegible]

TABLE 2

FAIRFIELD WORKS GROUND WATER ELEVATION DATA
ANNUAL REPORT 1982

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Disposal Site Area Wells	Date Sampled	Water Elevation (MSL)	Date Sampled	Water Elevation (MSL)	Date Sampled	Water Elevation (MSL)	Date Sampled	Water Elevation (MSL)
LF1	17 February	560.6	14 May	555.5	20 August	547.9	16 November	550.9
LF2	17 February	627.5	14 May	622.5	19 August	620.4	16 November	611.9
LF3A	17 February	562.3	14 May	560.4	20 August	559.8	16 November	560.3
LF4*	17 February	639.9	14 May	631.9	19 August	633.0	16 November	633.9
LF5A	16 February	629.2	14 May	622.3	19 August	620.2	16 November	607.3
Tim Mill Treatment Area Wells								
TM1*	17 February	543.9	14 May	541.4	19 August	539.5	16 November	538.5
TM2	17 February	537.7	14 May	535.8	20 August	536.3	16 November	534.9
TM3	17 February	537.7	14 May	535.1	20 August	535.4	16 November	534.4
TM4	17 February	526.4	14 May	525.3	20 August	524.7	16 November	524.2
TM5	17 February	524.9	14 May	523.3	20 August	523.6	16 November	519.9
TM6	17 February	526.9	14 May	525.9	20 August	525.3	16 November	524.8

*Upgradient well.

THIRD QUARTERLY REPORT
GROUND WATER MONITORING
HAZARDOUS WASTE MANAGEMENT FACILITIES
U.S. STEEL FAIRFIELD WORKS
NOVEMBER 24, 1982

INTRODUCTION

This report constitutes the third quarterly report of primary drinking water parameters required under Section 4-256.12 of ADPH Hazardous Waste Management Regulations for the continued compliance of United States Steel Corportion - Fairfield Works hazardous waste management facilities. Testing of coliform has been excluded, per prior agreement with ADPH. The report has been prepared by our environmental consultants, Dames & Moore, Atlanta, Georgia.

Two groups of hazardous waste management facilities are being monitored under the regulations. One group is comprised of an Impoundment, Lined Spent Pickle Liquor Storage Pond, and Unlined Spent Pickle Liquor Storage Pond. These are monitored by wells designated LF-1, LF-2, LF-3A, LF-4, and LF-5A. The second group includes the Tin Mill Ditch Sedimentation Lagoon, Tin Mill Treatment Plant Equalization Basins, and the Tin Mill Treatment Plant Sludge Treatment Lagoon which are monitored by wells designated TM-1, TM-2, TM-3, TM-4, TM-5, and TM-6.

SAMPLING AND ANALYSIS

On August 19 and 20, 1982, samples were collected from the monitoring wells associated with the hazardous waste facilities by Dames & Moore personnel. Laboratory testing of the samples was performed by Environmental Testing and Certification Corporation of Edison, New Jersey. Analysis of the test data was completed by Dames & Moore on November 23.

ANALYTICAL RESULTS

Test data are reported on Table 1. The following primary drinking water parameters have been found to exceed maximum contaminant levels (standards):

Flouride - Well LF-1 (based on 73.9°F annual average maximum air temperature for Birmingham)
Selinium - Well LF-5A
Gross Alpha - Possible exceedances in Wells LF-1 and LF-3A

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This concludes the reporting that is required to maintain compliance with ADPH Hazardous Waste Management Regulations, Section 4-256.12 for the Fairfield hazardous waste management facilities. All other required analytical results and field measurements made for the third quarter are on file at Fairfield Works.

ATTACHMENTS: Table 1

TABLE 1

PRIMARY DRINKING WATER PARAMETERS
THIRD QUARTERLY SAMPLING *

Parameter*	PDW Limits	LF-1	LF-2	LF-3A	LF-4	LF-5A	TM-1	TM-2	TM-3	TM-4	TM-5	TM-6
Arsenic	0.05	ND**	ND	ND	ND	ND	ND	ND	ND	<0.005	<0.005	ND
Barium	1.0	<0.5	ND	ND	<0.5	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.01	ND	0.006	0.006	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	0.05	<0.005	<0.005	<0.005	<0.005	ND	<0.005	<0.005	ND	ND	ND	ND
Mercury	0.002	<0.0006	0.002	ND	ND	ND	ND	ND	0.0005	ND	0.0003	<0.0003
Selenium	0.01	<0.005	0.006	ND	0.008	0.015	0.01	0.005	0.005	0.01	0.006	0.005
Silver	0.05	ND	<0.01	<0.01	ND	<0.01	ND	ND	ND	ND	ND	ND
Flouride	1.4-2.4	1.8	0.54	0.17	<0.1	<0.1	0.12	0.17	0.11	0.34	0.33	0.15
Nitrate-N	10	<0.1	0.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4
Endrin	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lindane	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methoxychlor	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toxaphene	0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
2,4-D	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2,4,5-TP Silvex	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Radium***	5	4.68±1.03	<1.9	<2.0	<2	<2.0	<3.33±0.27	<2.0	<2.0	<4.39±0.34	<1.9	<2.0
Gross Alpha	15	<20	<3	<30	1.7±0.7	<10	<2	<1	3.9±1.9	<2	<1	<2
Gross Beta****	-	35±2.3	9.0±3.2	140±30	4.6±1.7	<30	5.6±2.5	5.1±2.0	8.7±2.7	6.0±2.6	3.4±2.0	8.2±2.9

*Units are mg/l except for Radium, Gross Alpha, and Gross Beta which are pCi/L.
**Not detected.
***Based on arithmetic sum of values for Radium 226 and Radium 228.
****Gross beta values are as recorded from all radioisotopes in sample. State of Alabama has not defined a specific pCi/l value for water quality limits.

* Samples were collected on August 19 and 20, 1982.

1982 Hazardous Waste Generator and On-Site TSD Facility Annual Report

U.S. Steel Corporation - Fairfield Plant

NOTE: Read all instructions prior to completing this form.

I. Installation EPA ID Number: AL D 0 0 2 9 0 4 5 0 6

II. Name of Installation: U. S. Steel Corporation - Fairfield Plant

III. Location of Installation: P. O. Box 599
(Street or Route Number)

Fairfield (City or Town) | Jefferson (County) | Alabama (State) | 35064 (Zip Code)

IV. Installation Contact: Gary W. Euler (Name) | (205) (Area Code) | 783-4236 (Telephone Number)

V. Waste Identification:

Line Number	A. EPA Waste Number	B. Description of Waste	C. Quantity Generated (LBS)	D. Amount of Waste by Handling Method: 1. Handling Method Code	2. Quantity Stored, Treated Disposed, or Recovered On-Site	Shipped to Off-Site Treatment, Disposal, or Recovery Facility: 3. Quantity	4. Facility EPA ID No./Recovery Facility Name
1.	K087	Decanter tank tar sludge from coking operations	482,000	D85	482,000		
2.							
3.	K06[illegible]	Ammonia still lime sludge from coking operations	604,000	D85	604,000		
4.		mixed with clarifier sludge from biotreatment of coke					
5.		plant waste water					

(If more space is needed, check [X] and complete Attachment I)

VI. Closure Cost Estimate for Facilities $1,377,201.00

VII. Cost Estimate for Post-Closure Monitoring and Maintenance (Disposal Facility Only) $25,045.00 Annually

VIII. Certification:

[signature] (Signature) | T. Stevenson (Print or Type Name) | General Superintendent (Title)

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.

U.S. Steel Corporation - Fairfield Plant

V. Waste Identification:

Line Number	A. EPA Waste Number	B. Description of Waste	C. Quantity Generated (LBS)	D. Amount of Waste by Handling Method			
				1. Handling Method Code	2. Quantity Stored, Treated Disposed, or Recovered On-Site	Shipped to Off-Site Treatment, Disposal, or Recovery Facility	
						3. Quantity	4. Facility EPA ID No./Recovery Facility Name
1	K062	Filter Coke from Waste					
2	D007	Water Treatment Plant Serving Steel Finishing Operations	10,550,000	D85	10,550,000		
3							
4							
5							
6	F006						
7	D001	Waste Oil Recovered		R01		297,000	T&S Salvage Co. Box 726
8	D002	from Plant Above	3,782,000	D85	3,505,000		Coaling, Al. 35449 ALD 980559850
9							
10							
11							
12							
13							
14							
15							
16	Formerly F017						
17	D001	Waste Paint/Solvent	11,600	R01	305,600		
18							
19							

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
LAND PROGRAM
19____ Hazardous Waste Generators Annual Report

I. Facility ID # AL D 0 0 2 9 0 4 5 0 6

II. Facility Name U. S. Steel Corporation - Fairfield Plant

III. Location of Facility P. O. Box 599 Tin Mill Road
(Street or Route Number)

Fairfield (City) Jefferson (County) Alabama (State) 35064 (Zip Code)

IV. Installation Contact Gary Euler (Name) (205) (Area Code) 783-4236 (Telephone Number)

V. During 19 83 the facility did [X] did not [ ] generate reportable amounts of hazardous waste. (If you check did not, skip to Item VII.)

VI. Waste Identification:

	A. EPA Waste Number	B. Waste Description	C. Amount of Waste (lbs)	D. Receiving Facility	E. Receiving Facility ID Number	F. Transporter Name	G. Transporter ID Number
1.	F003	Spent Non-Halogenated Solvents	1,257,159 (1)	M & M Chemical	ALD070513767	M & M Chemical	ALD070513767
2.	U134	Hydrofluoric Acid Pipe Cleaning Solution	520,660	RES*	LAD010395127	Matlack	PAD046548756
3.	D002	Waste Cleaning Solution	2,331,860	RES*	LAD010395127	Matlack & REX	See Note (5)
4.	D002	Caustic Cleaning Waste Solution	977,020	RES*	LAD010395127	Matlack & Big Chief	See Note (6)
5.	D002	Waste Corrosive	4,620	RES*	LAD010395127	RES	LAD010395127
6.	F002	Spent Halogenated Solvents	7,752 (2)	U.S. Steel	ALD002904506	U.S. Steel	ALD002904506

VII. Certification:

Signature R. W. Raybuck (Print or Type)

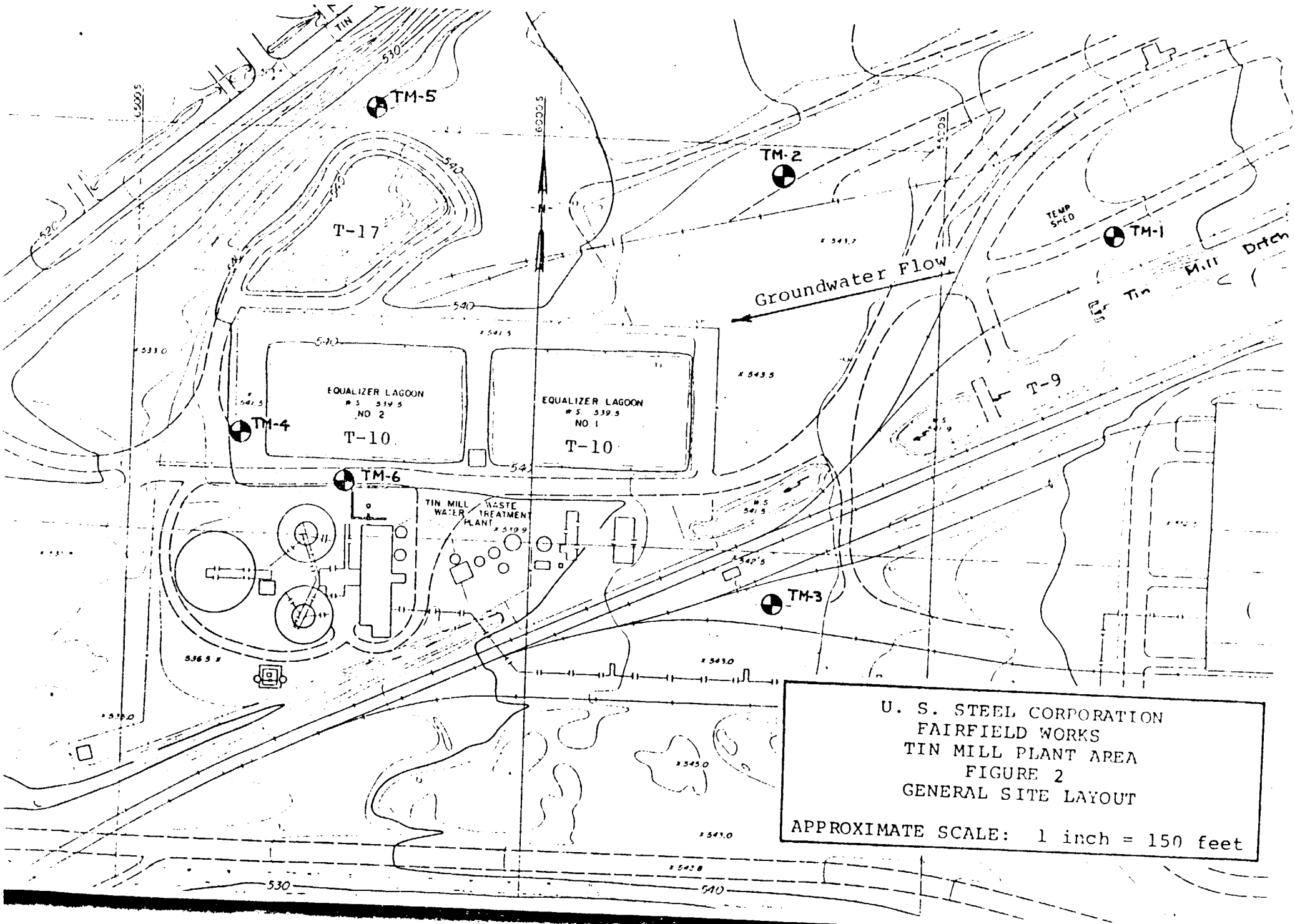
Title General Manager

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.

ATTACHMENT I

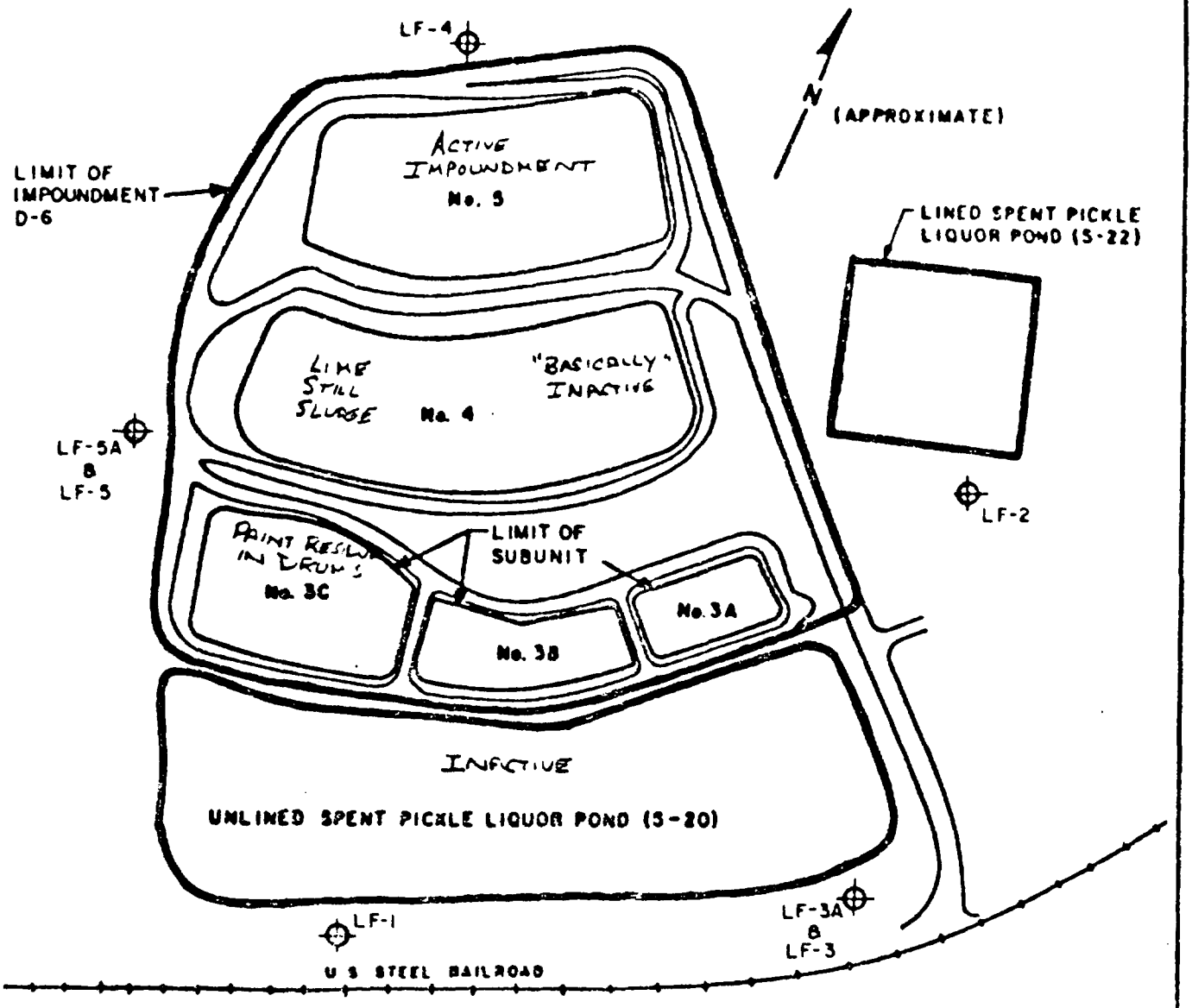
VI. Waste Identification Continuation Sheet:

	A. EPA Waste Number	B. Waste Description	C. Amount of Waste (lbs)	D. Receiving Facility	E. Receiving Facility ID Number	F. Transporter Name	G. Transporter ID Number
7.	F002	Spent Halogenated Solvents	15,233 (3)	U.S. Steel	ALD002904506	U.S. Steel	ALD002904506
8.	F002	" " "	5,991 (4)	" "	"	" "	"
9.	D002 and D007	Filter Cake from Wastewater					
10.		Treatment Plant Serving Steel Finishing Operations	168,000	" "	"	" "	"
11.	D002 and D007	Waste Oil Sludge	504,000	" "	"	" "	"
12.							
13.	(1)	Pounds F003 Solvents = 2125	Drums X 55 gal/drum X 1.3 (A)		x 8.34 =	1,267,159	
14.	(2)	Pounds F002 Solvents = 715	gal Multisolve (B) x 1.3 (A)		x 8.34 =	7,752	
15.	(3)	Pounds F002 Solvents = 1405	gal Vapor Kleen (B) x 1.3 (A)		x 8.34 =	15,233	
16.	(4)	Pounds F002 Solvents = 550	gal Inhibisolve (B) x 1.306		x 8.34 =	5,991	
17.							
18.	(A)	Estimated Specific Gravity					
19.	(B)	Solvent Manufacturer's Trade Name					
20.							
21.	*	Rollins Environmental Services					
22.							
23.	(5)	Matlack ID # PAD046548756 and RES ID # LAD010395127					
24.	(6)	Matlack ID # PAD046548756 and Big Chief Truck Lines I.D. # 230913716					



U. S. STEEL CORPORATION
FAIRFIELD WORKS
TIN MILL PLANT AREA
FIGURE 2
GENERAL SITE LAYOUT

APPROXIMATE SCALE: 1 inch = 150 feet



LEGEND:

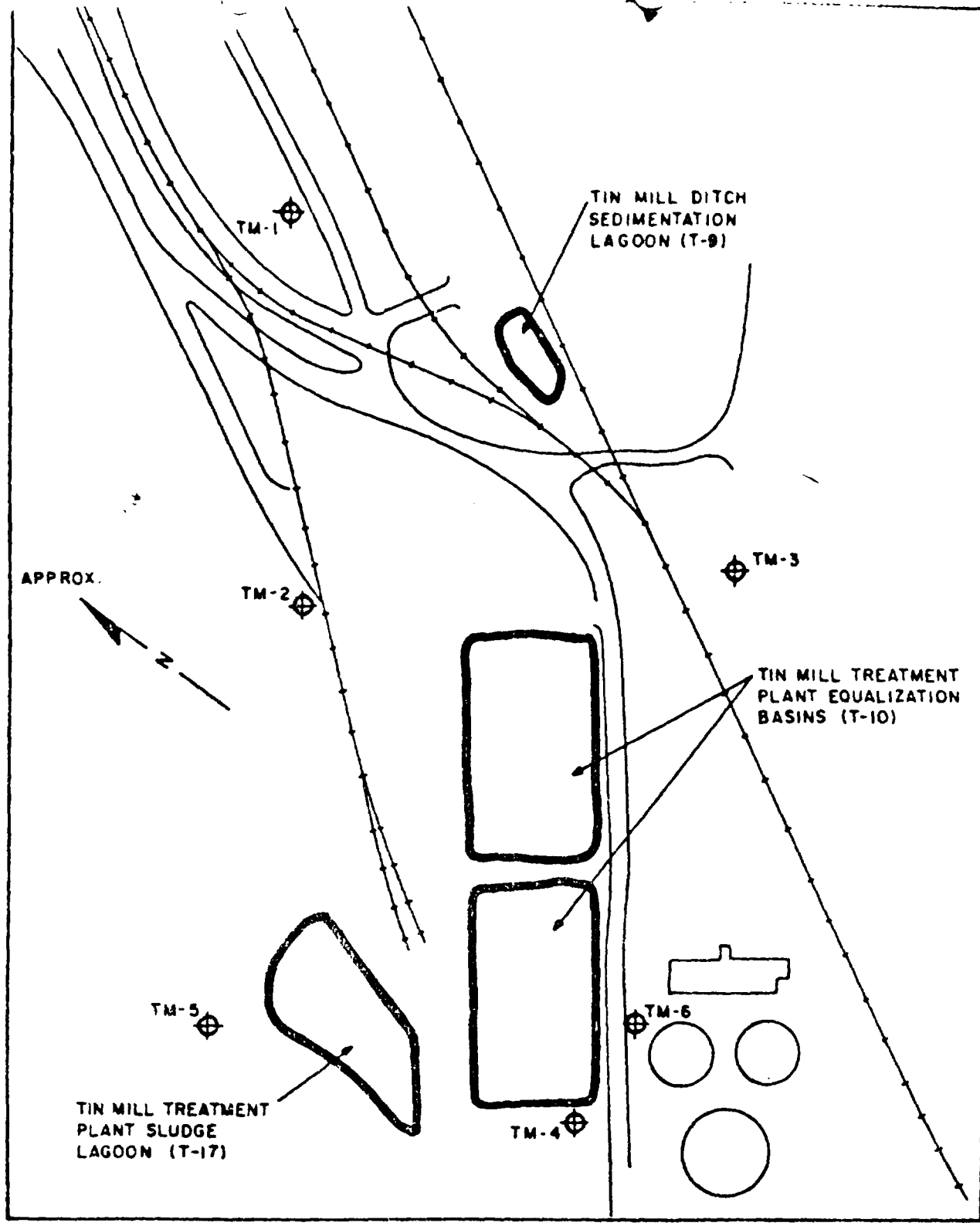
LF-1 - MONITORING WELL

S-22 - HAZARDOUS WASTE FACILITY

NOTES: 1. FACILITY D-6 CONSISTS OF SUBUNITS 3A, 3B, 3C, 4, AND 5.
2. DRAWING NOT TO SCALE

MONITORING WELL LOCATIONS - DISPOSAL SITE AREA
GROUND WATER MONITORING SYSTEM

DAMES & MOORE



LEGEND:

TM-1 - MONITORING WELL

T-9 - HAZARDOUS WASTE FACILITY

0 100 200 300
FEET

MONITORING WELL LOCATIONS - TIN MILL TREATMENT PLANT AREA
GROUND WATER MONITORING SYSTEM

DAMES & MOORE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ATHENS, GEORGIA 30613

DATE JAN 13 1983

SUBJECT Report - Hazardous Waste Site Investigation - U. S. Steel (Exum Dump) - Fairfield, Alabama - July 1982

FROM Chief, Hazardous Waste Section
Engineering Support Branch

TO Al Smith Chief
ERRB/AWMD

ATTN: Wayne Mathis/Joel Veater
SSES, ERRB, AWMD

THRU: Michael R. Carter, Chief
Engineering Support Branch M. R. Carter

Attached is a copy of the subject report. The following individuals have requested copies of this report:

Harold Taylor
Alabama Division of Solid and
Hazardous Waste
Environmental Health Administration
Public Health Services Building
434 Monroe Street
Montgomery, Alabama 36130

Gary Euler
Environmental Engineer
U. S. Steel Corporation
P. O. Box 599
Fairfield, Alabama 35064

M. D. Lair

M. D. Lair, P.E.

Attachment

cc: Finger/Adams/Carter/Lair
Carroll/Bennett
Guinyard/Fehn

HAZARDOUS WASTE SITE INVESTIGATION
U. S. STEEL (EXUM DUMP)
FAIRFIELD, ALABAMA
EPA PROJECT NUMBER [illegible]
JANUARY 7, 19[illegible]

INTRODUCTION

A hazardous waste site investigation was conducted at the Exum Dump during July 1-2, 1982 by Jim Kopotic and Don Lawhorn of the U. S. Environmental Protection Agency, Region IV, Environmental Services Division (ESD). Harold Taylor, Alabama Division of Solid and Hazardous Waste, and Gary Fuller, Environmental Engineer for U. S. Steel, were also present during the investigation.

The purpose of this investigation, requested by the US-EPA, Air and Waste Management Division (AWMD), was a follow-up to the US-EPA, ESD investigation conducted on November 4, 1981. The investigation involved the sampling of five of the six groundwater monitoring wells located at Exum Dump (Figure 1). The upgradient well (EX-3) was not sampled because it did not recover after being evacuated. Duplicate samples were collected from each monitoring well by EPA personnel with EPA equipment. One set of the duplicate samples from each well was placed in containers supplied by U. S. Steel. The custody of the set of samples was relinquished to the U. S. Steel representative.

STUDY AREA

Exum Dump, owned and operated by U. S. Steel for the past 51 years, is located off of Pleasant Road, one mile west of U. S. Steel's Fairfield Works near Birmingham, Alabama (Figure 2). The dump covers 100 acres with an estimated 38 acres used for the disposal of waste oils, sludges, filter cake, slag, and various other waste products associated with the steel industry. At the time of the investigation the two waste pits, approximately 50 feet deep and 2 to 3 acres in size, were still partially filled with water and a black sludge material. Based on photographs taken during the 1981 investigation, the physical geography of Exum Dump appears to be the same except that fill dirt has been hauled in for the construction of a railroad bed.

A report on Exum Dump, prepared by the Geological Survey of Alabama during October 1980, indicates that the dump was originally a valley that now contains fill to a maximum depth of 80 feet (5). The bedrock consists of Pottsville Formation of Pennsylvania age containing numerous faults. The Pratt Coal seam is located 400-500 feet beneath the dump.

DISCUSSION

General

The six monitoring wells (2 inch galvanized steel) were installed in August and September 1981 by Dames and Moore, U. S. Steel's groundwater consultant. According to Dames and Moore, groundwater generally flows to the north (6). Figure 1 shows the location of each well, and Table 1 gives a description.

All samples were analyzed for organic compounds, cyanide, and metals, including priority pollutants. Tables 2 and 3 summarize the organic, cyanide, and metal compounds detected at each location. For comparison, the analytical results from the 1981 investigation have been included in the tables. The complete analytical results are included in Attachment 2. Also included are the organic compound analyses for a sample (EX-6) collected the afternoon of June 30, 1982. While evacuating monitoring well EX-4, a dump truck entered the dump area at approximately 5:45 p.m. and began dumping a black sludge on the access road. A sample was collected of the sludge [illegible] analyses and the results are summarized in Table 4.

Sampling Stations

Organic Compounds -- Di-n-butylphthalate was positively identified and quantified in downgradient monitoring wells EX-1 (15 ug/l) and EX-4 (16 ug/l). Bis (2-ethylhexyl) phthalate was detected in the sample collected from monitoring well EX-4 (150 ug/l). Three pesticides, 4,4'-DDT, 4,4'-DDE, and chlordane were detected in monitoring well EX-5. The remaining organic compounds detected were present at concentrations below accurate quantifiable levels. Therefore, these compounds were tentatively identified and/or reported at estimated concentrations. The sludge sample collected at the access road contained primarily long chain fatty acids and fatty acid esters. Hexadecanoic acid, tetradecanoic acid, and several unidentified compounds exceeded 10,000 ug/l.

Cyanide/Metals -- Cyanide concentrations ranged from less than 2 ug/l in downgradient wells EX-2, EX-4, and EX-5 to 13 ug/l in downgradient well EX-1. Lead and zinc concentrations in wells EX-1 and EX-2 were also lower than those concentrations detected in samples from the 1981 investigation. However, lead and zinc concentrations in samples from wells EX-4, EX-5, and EX-6 were significantly higher than those reported for the 1981 investigation. Mercury was detected at 0.36 ug/l in the sample collected from well EX-5; no mercury was detected during the 1981 US-EPA investigation.

METHODOLOGY

The upgradient well (EX-3) did not recover once evacuated to dryness. Depth to water surface for each well was measured and individual well volumes calculated. A minimum of three well volumes were evacuated from each well using a stainless steel nitrogen operated bladder pump prior to sample collection. Samples, duplicated and split with U. S. Steel, were collected using clean stainless steel bailers. New nylon rope was used at each sampling station.

All samples collected during this investigation were collected in accordance with standard operating procedures of the Engineering Support Branch, ESD/EPA (1). All laboratory analyses were conducted by the Analytical Support Branch (ASB), ESD/EPA in accordance with standard procedures and protocols of the ASB (2).

REFERENCES

1. Water Surveillance Branch Standard Op[illegible] Assurance Manual (Draft); U. S. Environm[illegible] IV, Surveillance and Analysis Divisi[illegible]; August 2[illegible], 1980.

2. Analytical Services Branch Operations and [illegible] Environmental Protection Agency, Region IV, Environmental [illegible] sion; April, 1982.

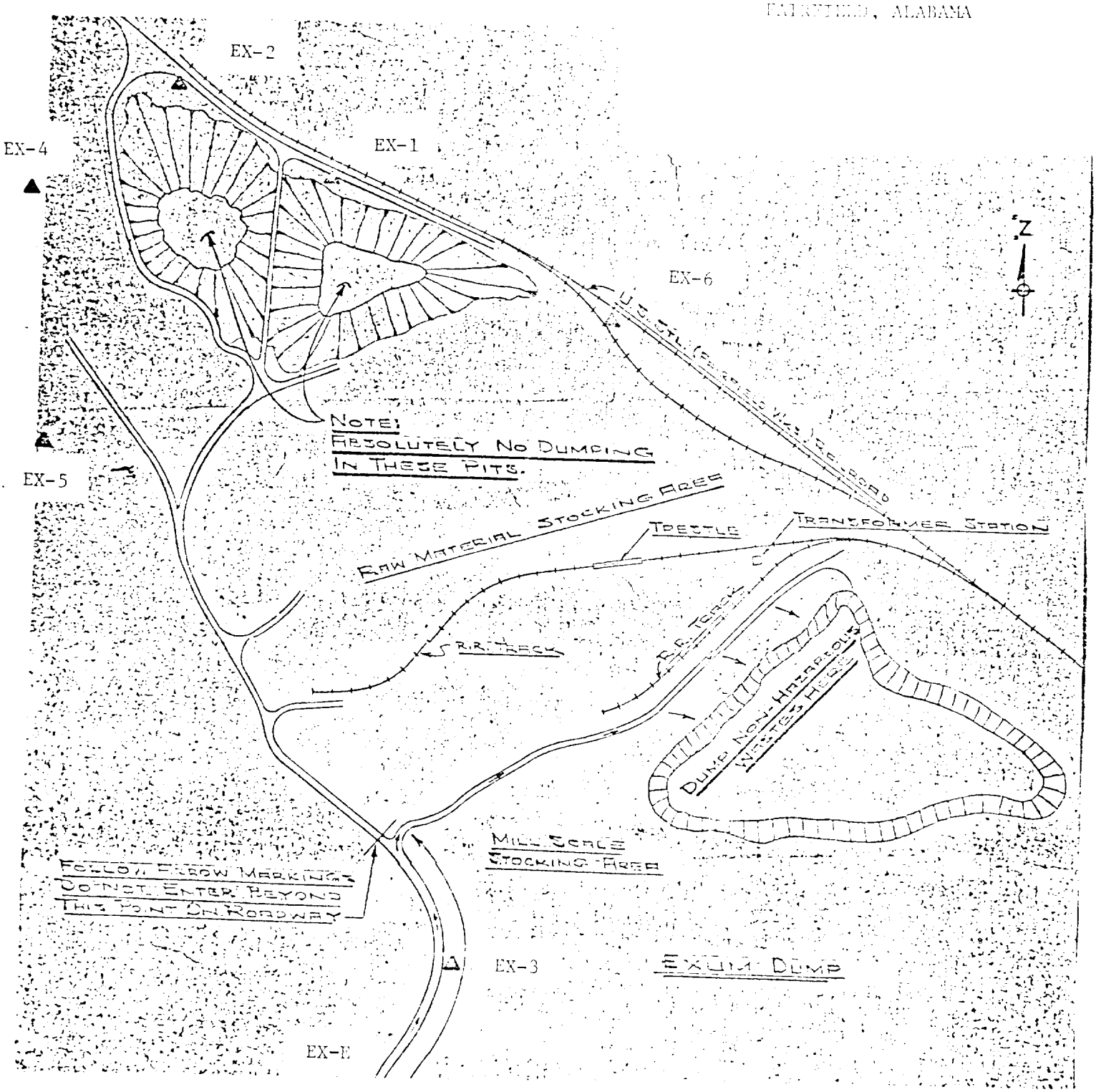
3. "Hazardous Waste Site Investigation, U. S. Steel (Exum) Dump, [illegible], Alabama, November 1981," U. S. Environmental [illegible], Environmental Services Division, March 1[illegible].

4. "Trip Report and Site Status Review, U. S. Steel Exum Dump, [illegible], Alabama, November 1980, TDD F4-8010-4," [illegible], September 3, 1981.

5. "Solid Waste Disposal - Geohydrologic Evaluation," Exum Dump, Fairfield, Alabama, October 2, 1980, Report Number [illegible], October 17, 1980.

6. "Final Report Exum Landfill, Ground Water Monitoring for United States Steel Corporation (USSC), Fairfield Works, May 14, 1982," [illegible].

FIGURE 1
SITE LOCATION MAP
EXUM DUMP
(U.S. STEEL)
FAIRFIELD, ALABAMA



Drawing provided by U.S. Steel.

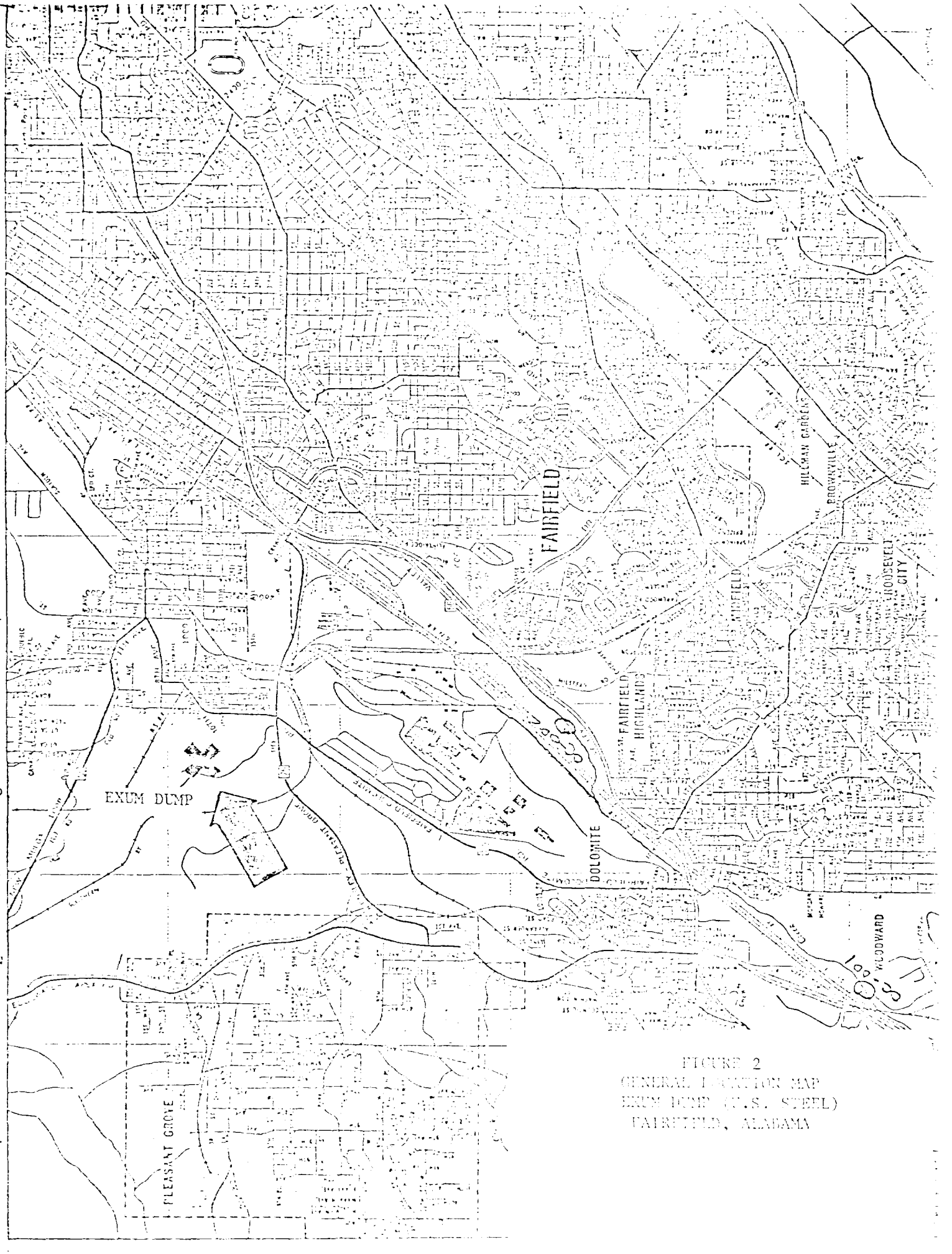


FIGURE 2
GENERAL LOCATION MAP
EXUM DUMP (U.S. STEEL)
FAIRFIELD, ALABAMA

TABLE 1
WELL SAMPLING LOCATIONS
EXUM DUMP, U. S. STEEL
BIRMINGHAM, ALABAMA
JULY 1982

Field Sample Designation	Ground Surface Elevation (MSL)	Screened Interval/Depth[2] (feet)	Depth to Water Surface (feet) 11-81	Depth to Water Surface (feet) 7-82[3]
EX-1	600.97	87.16 - 97.16	67.75	55.0
EX-2	599.28	59.83 - 69.83	40.25	29.0
EX-3[1]	697.26	85.58 - 95.58	86.42	80.0
EX-4	550.17	85.75 - 95.75	70.92	37.0
EX-5	565.45	87.58 - 97.58	76.92	64.0
EX-6	605.81	75 - 85	41.83	48.0

1 - After being evacuated to dryness, well EX-3 did not receover during the investigation.

2 - Determined by Dames and Moore (U. S. Steel's groundwater consultant).

3 - Measurements recorded to nearest foot.

TABLE 2
ORGANIC COMPOUNDS DETECTED (ug/l)
GROUNDWATER MONITORING WELLS
U. S. STEEL CORPORATION (EXUM DUMP)
FAIRFIELD, ALABAMA

	EX-1		EX-2		EX-3		EX-4		EX-5		EX-6	
Priority Pollutants	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82
Acenaphthylene	12K		12K			*						
Acenaphthene	12K											
Fluorene	12K											
Phenanthrene	12K		12K				10K					
Anthracene	12K		12K									
Fluoranthene	12K		12K						10K		10K	
Pyrene	12K		12K						10K		10K	
Chrysene	12K		12K						10K			
Benzo (a) anthracene	12K		12K									
Benzo (b) fluoranthene			12K									
Benzo (k) fluoranthene			12K									
Benzo-a-pyrene			12K									
Benzo (ghi) perylene			12K									
4,4'-DDT (p,p'-DDT)										0.20AN		
4,4'-DDE (p,p'-DDE)										0.11A		
Chlordane (tech. mixture)										0.48A		
Dichlorodifluoromethane		NA		NA	5.7			NA		NA		NA
Chloroform					5K							
Di-n-butylphthalate		15										14
Bis (2-ethylhexyl) phthalate								150				
Miscellaneous Analyses												
Hexadecanoic acid	12KN				10KN			15JN				
Benzothiazole		10JN										
Butyloctanol (3 isomers)		10JN										
Propylheptanol		10JN										
Ethyldecanol (2 isomers)		10JN										
Tridecanol		16JN										
Dodecyloxyethanol		27JN										
Unidentified compounds		13(1200JN)						1(31JN)				
Petroleum product	N	N	N	N						N		N
Oxybismethylenebisoxirane								11JN				
Hexanedioic acid, dioctyl ester								24JN				
Petaoxanonadecanol (4 isomers)								70JN				
Hexaoxacyclooctadecane (2 isomers)								11JN				

Notes:

Blank space indicates compound not detected above minimum detection limit.
* - Samples were not collected from well EX-3 during 1982 investigation.
A - Mean value.
J - Estimated value.
K - Actual value is known to be less than given value.
N - Tentative identification.
NA - Not analyzed.

TABLE 3
METALS (ug/l) AND CYANIDE (ug/l) DETECTED
GROUNDWATER MONITORING WELLS
U. S. STEEL CORPORATION (EXUM DUMP)
FAIRFIELD, ALABAMA

	EX-1		EX-2		EX-3		EX-4		EX-5		EX-6	
	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82	11-81	7-82
Cyanide	26	13		2K	I	*		2K	5	2K	5	7
Barium	261	26	274	81	6,695		252	100	490	300	165	12
Cadmium	10	12	16	13	75							
Chromium	37		57		720		28	20	65	130		34
Copper	34		20		580		12	28	16	32		11
Nickel	32		29		730					50		
Lead	272	150	949	140	870		202	960	108	480	128	600
Tin			61									
Strontium	1,323	170	101	43	2,265		155	300	752	590	794	620
Titanium	247		83		3,970		41		81	30	24	
Vanadium	33		18		745				11			
Yttrium	9				245							
Zinc	24,000	14,000	55,000	28,000	17,610		29,057	110,000	11,578	36,000	16,078	87,000
Aluminum	18,600		9,400	280	359,800		3,000	400	6,900	2,600	1,100	320
Manganese	1,000		648	110	1,133		926	1,400	931	380	145	110
Calcium	94,000	10,000	26,000	13,000	262,000		24,000	31,000	39,000	26,000	56,000	32,000
Magnesium	41,000	3,600	9,100	6,000	184,000		8,300	15,000	15,000	7,400	24,000	17,000
Iron	28,000	350	19,000	3,900	736,000		5,000	5,200	11,000	6,900	1,200	1,200
Sodium	71,000	34,000	6,000	4,600	44,000		28,000	38,000	96,000	110,000	32,000	26,000
Mercury										0.36		

Notes:

Blank space indicates compound not detected above minimum detection limit.
* - Samples not collected from well EX-3 during 1982 investigation.
I - Indicates analyses not conducted due to interference.
K - Actual value is known to be less than value given.

TABLE 4
ORGANIC COMPOUNDS DETECTED (ug/kg)
SLUDGE SAMPLE
U. S. STEEL CORPORATION (EXUM DUMP)
FAIRFIELD, ALABAMA

	EX-E 7-82
Nonanoic acid	1,000,000J
Dodecanoic acid	1,000,000J
Tetradecanoic acid	5,900,000J
Pentadecanoic acid	1,000,000J
Acetyloxyoctadecenoic acid, methyl ester	1,000,000J
Hexadecanoic acid	10,000,000L
Heptadecanoic acid	1,000,000J
Methylheptadecanoic acid, methyl ester	1,000,000J
Octadecanoic acid	10,000,000L
One unidentified compound	10,000,000L
1,1,1-trichloroethane[1]	5J
o&p-xylene (mixed)[1]	9

Notes:
1 - Priority Pollutants.
J - Estimated value.
L - Actual value is known to be greater than value given.

ATTACHMENT A
ANALYTICAL RESULTS
EXUM DUMP
FAIRFIELD, ALABAMA
JULY 1982

DATE:08/25/82

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 845

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

CHEMIST: DGR METHOD: 625-81

RESULTS: UG/L	COMPOUND	STORET
NA	N-NITROSODIMETHYLAMINE	34438
NA	1,2-DIPHENYLHYDRAZINE /9	34346
NA	BENZIDINE	39120
10U	1,3-DICHLOROBENZENE	34566
10U	1,4-DICHLOROBENZENE	34571
10U	1,2-DICHLOROBENZENE	34536
10U	BIS(2-CHLOROETHYL) ETHER	34273
10U	HEXACHLOROETHANE	34396
10U	BIS(2-CHLOROISOPROPYL) ETHER	34283
10U	N-NITROSODI-N-PROPYLAMINE	34428
10U	NITROBENZENE	34447
10U	HEXACHLOROBUTADIENE	39702
10U	1,2,4-TRICHLOROBENZENE	34551
10U	NAPHTHALENE	34696
10U	BIS(2-CHLOROETHOXY) METHANE	34278
10U	ISOPHORONE	34408
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
10U	2-CHLORONAPHTHALENE	34581
10U	ACENAPHTHYLENE	34200
10U	ACENAPHTHENE	34205
10U	DIMETHYL PHTHALATE	34341
10U	2,4-DINITROTOLUENE	34611
10U	2,6-DINITROTOLUENE	34626
10U	4-CHLOROPHENYL PHENYL ETHER	34641
10U	FLUORENE	34381
10U	DIETHYL PHTHALATE	34336
10U	N-NITROSODIPHENYLAMINE /10	34433
10U	HEXACHLOROBENZENE (HCB)	39700
10U	4-BROMOPHENYL PHENYL ETHER	34636
10U	PHENANTHRENE	34461
10U	ANTHRACENE	34220
15	DI-N-BUTYLPHTHALATE	39110
10U	FLUORANTHENE	34376
10U	PYRENE	34469
10U	BENZYL BUTYL PHTHALATE	34292
10U	BIS(2-ETHYLHEXYL) PHTHALATE	39100

RESULTS: UG/L	COMPOUND	STORET
10U	BENZO(A)ANTHRACENE	34526
10U	CHRYSENE	34320
10U	3,3'-DICHLOROBENZIDINE	34631
10U	DI-N-OCTYLPHTHALATE	34596
10U	BENZO(B)FLUORANTHENE /11	34230
10U	BENZO(K)FLUORANTHENE /11	34242
10U	BENZO-A-PYRENE	34247
10U	INDENO (1,2,3-CD) PYRENE	34403
10U	DIBENZO(A,H)ANTHRACENE	34556
10U	BENZO(GHI)PERYLENE	34521
10U	2-CHLOROPHENOL	34586
10U	2-NITROPHENOL	34591
10U	PHENOL	34694
10U	2,4-DIMETHYLPHENOL	34606
10U	2,4-DICHLOROPHENOL	34601
10U	2,4,6-TRICHLOROPHENOL	34621
10U	4-CHLORO-3-METHYLPHENOL	34452
30U	2,4-DINITROPHENOL	34616
30U	2-METHYL-4,6-DINITROPHENOL	34657
30U	PENTACHLOROPHENOL	39032
20U	4-NITROPHENOL	34646

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) AND/OR AZOBENZENE
10) AND/OR DIPHENYLAMINE
11) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE: 09/27/82

MISCELLANEOUS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS.GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: FROM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME): 07/02/82 845

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

RESULTS: UG/L COMPOUND

EXTRACTABLE ORGANIC ANALYSIS

CHEMIST: DGR METHOD: 625-81

1. PETROLEUM PRODUCT

NOTES: 1) J-ESTIMATED VALUE
2) E-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) E-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: CHH

DATE:08/25/82

PESTICIDES/PCBS AND OTHER COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 845

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

CHEMIST: HLR METHOD:

RESULTS: UG/L	COMPOUND	STORET
0.030	ALDRIN	39330
0.030	HEPTACHLOR	39410
0.030	HEPTACHLOR EPOXIDE	39420
0.030	ALPHA-BHC	39337
0.030	BETA-BHC	39338
0.030	GAMMA-BHC (LINDANE)	39340
0.030	DELTA-BHC	34259
0.030	ENDOSULFAN I (ALPHA)	34361
0.030	DIELDRIN	39380
0.10	4,4'-DDT (P,P'-DDT)	39300
0.10	4,4'-DDE (P,P'-DDE)	39320
0.10	4,4'-DDD (P,P'-DDD)	39310
0.10	ENDRIN	39390
0.10	ENDOSULFAN II (BETA)	34356
0.10	ENDOSULFAN SULFATE	34351
0.30	CHLORDANE (TECH. MIXTURE) /10	39350
0.30	PCB-1242 (AROCLOR 1242)	39496
0.30	PCB-1254 (AROCLOR 1254)	39504
0.30	PCB-1221 (AROCLOR 1221)	39488
0.30	PCB-1232 (AROCLOR 1232)	39492
0.30	PCB-1248 (AROCLOR 1248)	39500
0.30	PCB-1260 (AROCLOR 1260)	39508
0.30	PCB-1016 (AROCLOR 1016)	34671
20	TOXAPHENE	39400
NA	ENDRIN ALDEHYDE	34366
NA	TCDD(DIOXIN)	34675
----	CHLORDENE /9	77884
----	ALPHA-CHLORDENE /9	
----	GAMMA-CHLORDENE /9	
----	1-HYDROXYCHLORDENE	
----	GAMMA-CHLORDANE /9	39810
----	TRANS-NONACHLOR /9	39671
----	ALPHA-CHLORDANE /9	39348
----	CIS-NONACHLOR /9	39068
0.30	METHOXYCHLOR	39480
NA	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
NA	HEXACHLOROPROPADIENE (HCPRD)	

RESULTS: UG/L	COMPOUND	STORET
NA	HEPTACHLORONORBORNENE (HCNB)	
NA	OCTACHLOROCYCLOPENTENE (OCCP)	39130
NA	HEXACHLOROBENZENE (HCB)	39700
NA	2,4-D	39730
NA	SILVEX (2,4,5-TP)	39760
NA	2,4,5-T	39740

DATA VERIFIED BY: SJH

NOTE: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) CONSTITUENTS OF TECHNICAL CHLORDANE
10) WHEN NO VALUE IS REPORTED, SEE CHLORDANE CONSTITUENTS BELOW

DATE:08/25/82

PURGABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXIM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 845

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

CHEMIST: EWL METHOD: 624-81

RESULTS: UG/L	COMPOUND	STORET
NA	DICHLORODIFLUOROMETHANE	34668
NA	TRICHLOROFLUOROMETHANE	34488
NA	ACROLEIN	34210
NA	ACRYLONITRILE	34215
50	CHLOROMETHANE	34418
50	BROMOMETHANE	34413
50	VINYL CHLORIDE	39175
50	CHLOROETHANE	34311
50	METHYLENE CHLORIDE	34423
50	1,1-DICHLOROETHENE	34501
50	1,1-DICHLOROETHANE	34496
50	TRANS-1,2-DICHLOROETHENE	34546
50	CHLOROFORM	32106
50	1,2-DICHLOROETHANE	32103
50	1,1,1-TRICHLOROETHANE	34506
50	CARBON TETRACHLORIDE	32102
50	BROMODICHLOROMETHANE	32101
50	1,2-DICHLOROPROPANE	34541
50	TRANS-1,3-DICHLOROPROPENE	34699
50	TRICHLOROETHENE	39180
50	BENZENE	34030
50	DIBROMOCHLOROMETHANE	34306
50	1,1,2-TRICHLOROETHANE	34511
50	CIS-1,3-DICHLOROPROPENE	34704
50	2-CHLOROETHYLVINYL ETHER	34576
50	BROMOFORM	32104
50	1,1,2,2-TETRACHLOROETHANE	34516
50	TETRACHLOROETHENE	34475
50	TOLUENE	34010
50	CHLOROBENZENE	34301
50	ETHYL BENZENE	34371
50	M-XYLENE	
50	ORP-XYLENE(MIXED)	

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) E-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) E-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE UPPER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE: 08/25/82

INORGANICS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS.GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXIM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME): 07/02/82 845

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

CHEMIST: RPL CHEMIST:

RESULTS	UNITS	ELEMENT	STORET	METHOD
--	UG/L	MERCURY	71900	
0.013	MG/L	CYANIDE	00720	
--	UG/L	2,4-D	39730	
--	UG/L	SILVEX (2,4,5-TP)	39760	
--	UG/L	METHOXYCHLOR	39480	

NOTES: 1) J-ESTIMATED VALUE
2) E-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: DLC

VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV

DATE: [illegible]

METALS
DATA REPORTING SHEET
WATER

EPA-SAD.RSN.IV
ATHENS.GA

PROJECT #: [illegible] PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

[illegible]: [illegible] STEEL

SAMPLE TYPE: MODAL

SAMPLE START(DATE & TIME): 07/02/82 845

CITY: [illegible] STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-1 WELL #1

SAD NO.: 82C1730

CHEMIST: McDaniel COMPLETED 7-12-82

ELEMENT	STORET#		UNITS
SILVER	01077	10U	UG/L
[illegible]	01002	40U	UG/L
[illegible]	01022	NA	UG/L
[illegible]	01007	26	UG/L
[illegible]	01012	10U	UG/L
[illegible]	01027	12	UG/L
[illegible]	01037	20U	UG/L
[illegible]	01034	10U	UG/L
[illegible]	01042	10U	UG/L
[illegible]	01062	20U	UG/L
[illegible]	01067	30U	UG/L
[illegible]	01051	150	UG/L
[illegible]	01097	40U	UG/L
[illegible]	01147	40U	UG/L
[illegible]	01102	100U	UG/L
[illegible]	01052	170	UG/L
[illegible]	01064	40U	UG/L
[illegible]	01152	10U	UG/L
[illegible]	01059	100U	UG/L
[illegible]	01087	10U	UG/L
[illegible]	01263	10U	UG/L
[illegible]	01092	14000	UG/L
[illegible]	01162	NA	UG/L
[illegible]	71900	0.2U	UG/L
[illegible]	01105	100U	UG/L
[illegible]	01055	50U	UG/L
[illegible]	00915	10	UG/L
[illegible]	00927	3.6	UG/L
[illegible]	74010	0.35	UG/L
[illegible]	00929	34	UG/L
[illegible]	01032	NA	UG/L

NOTE: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) [illegible] WAS ANALYZED FOR BUT NOT DETECTED
6) [illegible]-ESTIMATED VALUE
7) [illegible]-INTERFERENCES

DATE:08/25/82

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 1045

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-2 WELL #2

SAD NO.: 82C1732

CHEMIST: DGR METHOD: 625-81

RESULTS: UG/L	COMPOUND	STORET
NA	N-NITROSODIMETHYLAMINE	34438
NA	1,2-DIPHENYLHYDRAZINE /9	34346
NA	BENZIDINE	39120
10U	1,3-DICHLOROBENZENE	34566
10U	1,4-DICHLOROBENZENE	34571
10U	1,2-DICHLOROBENZENE	34536
10U	BIS(2-CHLOROETHYL) ETHER	34273
10U	HEXACHLOROETHANE	34396
10U	BIS(2-CHLOROISOPROPYL) ETHER	34283
10U	N-NITROSODI-N-PROPYLAMINE	34428
10U	NITROBENZENE	34447
10U	HEXACHLOROBUTADIENE	39702
10U	1,2,4-TRICHLOROBENZENE	34551
10U	NAPHTHALENE	34696
10U	BIS(2-CHLOROETHOXY) METHANE	34278
10U	ISOPHORONE	34408
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
10U	2-CHLORONAPHTHALENE	34581
10U	ACENAPHTHYLENE	34200
10U	ACENAPHTHENE	34205
10U	DIMETHYL PHTHALATE	34341
10U	2,4-DINITROTOLUENE	34611
10U	2,6-DINITROTOLUENE	34626
10U	4-CHLOROPHENYL PHENYL ETHER	34641
10U	FLUORENE	34381
10U	DIETHYL PHTHALATE	34336
10U	N-NITROSODIPHENYLAMINE /10	34433
10U	HEXACHLOROBENZENE (HCB)	39700
10U	4-BROMOPHENYL PHENYL ETHER	34636
10U	PHENANTHRENE	34461
10U	ANTHRACENE	34220
10U	DI-N-BUTYLPHTHALATE	39110
10U	FLUORANTHENE	34376
10U	PYRENE	34469
10U	BENZYL BUTYL PHTHALATE	34292
10U	BIS(2-ETHYLHEXYL) PHTHALATE	39100

RESULTS: UG/L	COMPOUND	STORET
10U	BENZO(A)ANTHRACENE	34526
10U	CHRYSENE	34320
10U	3,3'-DICHLOROBENZIDINE	34631
10U	DI-N-OCTYLPHTHALATE	34596
10U	BENZO(B)FLUORANTHENE /11	34230
10U	BENZO(K)FLUORANTHENE /11	34242
10U	BENZO-A-PYRENE	34247
10U	INDENO (1,2,3-CD) PYRENE	34403
10U	DIBENZO(A,H)ANTHRACENE	34556
10U	BENZO(GHI)PERYLENE	34521
10U	2-CHLOROPHENOL	34586
10U	2-NITROPHENOL	34591
10U	PHENOL	34694
10U	2,4-DIMETHYLPHENOL	34606
10U	2,4-DICHLOROPHENOL	34601
10U	2,4,6-TRICHLOROPHENOL	34621
10U	4-CHLORO-3-METHYLPHENOL	34452
30U	2,4-DINITROPHENOL	34616
30U	2-METHYL-4,6-DINITROPHENOL	34657
30U	PENTACHLOROPHENOL	39032
20U	4-NITROPHENOL	34646

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) AND/OR AZOBENZENE
10) AND/OR DIPHENYLAMINE
11) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE: 08/27/82

MISCELLANEOUS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS.GA

PROJECT #: R2-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP OF STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME): 07/02/82 1045

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-2 WELL #2

SAD NO.: 82C1732

RESULTS: UG/L COMPOUND

EXTRACTABLE ORGANIC ANALYSIS

CHEMIST: DGR METHOD: 625-81

100 N	BENZOTRIAZOLE
100 N	BUTYLOCTANOL (3 ISOMERS)
100 N	PROPYLHEPTANOL
100 N	ETHYLDECANOL (2 ISOMERS)
150 N	TRIDECANOL
270 N	DODECYLOXYETHANOL
1200 N	13 UNIDENTIFIED ALCOHOL TYPE COMPOUNDS
6	PETROLEUM PRODUCT

NOTES:
1) J-ESTIMATED VALUE
2) R-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE:08/25/82

PESTICIDES/PCBS AND OTHER COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 1045

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-2 WELL #2

SAD NO.: 82C1732

CHEMIST: HLR METHOD:

RESULTS: UG/L	COMPOUND	STORET
0.030	ALDRIN	39330
0.030	HEPTACHLOR	39410
0.030	HEPTACHLOR EPOXIDE	39420
0.030	ALPHA-BHC	39337
0.030	BETA-BHC	39338
0.030	GAMMA-BHC (LINDANE)	39340
0.030	DELTA-BHC	34259
0.030	ENDOSULFAN I (ALPHA)	34361
0.030	DIELDRIN	39380
0.10	4,4'-DDT (P,P'-DDT)	39300
0.10	4,4'-DDE (P,P'-DDE)	39320
0.10	4,4'-DDD (P,P'-DDD)	39310
0.10	ENDRIN	39390
0.10	ENDOSULFAN II (BETA)	34356
0.10	ENDOSULFAN SULFATE	34351
0.30	CHLORDANE (TECH. MIXTURE) /10	39350
0.30	PCB-1242 (AROCLOR 1242)	39496
0.30	PCB-1254 (AROCLOR 1254)	39504
0.30	PCB-1221 (AROCLOR 1221)	39488
0.30	PCB-1232 (AROCLOR 1232)	39492
0.30	PCB-1248 (AROCLOR 1248)	39500
0.80	PCB-1260 (AROCLOR 1260)	39508
0.30	PCB-1016 (AROCLOR 1016)	34671
20	TOXAPHENE	39400
NA	ENDRIN ALDEHYDE	34366
NA	TCDD(DIOXIN)	34675
----	CHLORPEDE /9	77884
----	ALPHA-CHLORDENE /9	
----	GAMMA-CHLORDENE /9	
----	1-HYDROXYCHLORDENE	
----	GAMMA-CHLORDANE /9	39810
----	TRANS-NONACHLOR /9	39071
----	ALPHA-CHLORDANE /9	39348
----	CIS-NONACHLOR /9	39068
0.30	METHOXYCHLOR	39480
NA	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
NA	HEXACHLORONORBORNADIENE (HCNBD)	

RESULTS: UG/L	COMPOUND	STORET
NA	HEPTACHLORONORBORNENE (HCNB)	
NA	OCTACHLOROCYCLOPENTENE (OCCP)	39130
NA	HEXACHLOROBENZENE (HCB)	39700
NA	2,4-D	39730
NA	SILVEX (2,4,5-TP)	39760
NA	2,4,5-T	39740

DATA VERIFIED BY: SJH

NOTES:
1) J-ESTIMATED VALUE
2) E-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) CONSTITUENTS OF TECHNICAL CHLORDANE
10) WHEN NO VALUE IS REPORTED.SEE CHLORDANE CONSTITUENTS BELOW

DATE:08/25/82

PURGABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS,GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 1045

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-2 WELL #2

SAD NO.: 82C1732

CHEMIST: EWL METHOD: 624-81

RESULTS: UG/L	COMPOUND	STORET
NA	DICHLORODIFLUOROMETHANE	34668
NA	TRICHLOROFLUOROMETHANE	34488
NA	ACROLEIN	34210
NA	ACRYLONITRILE	34215
50	CHLOROMETHANE	34418
50	BROMOMETHANE	34413
50	VINYL CHLORIDE	39175
50	CHLOROETHANE	34311
50	METHYLENE CHLORIDE	34423
50	1,1-DICHLOROETHENE	34501
50	1,1-DICHLOROETHANE	34496
50	TRANS-1,2-DICHLOROETHENE	34546
50	CHLOROFORM	32106
50	1,2-DICHLOROETHANE	32103
50	1,1,1-TRICHLOROETHANE	34506
50	CARBON TETRACHLORIDE	32102
50	BROMODICHLOROMETHANE	32101
50	1,2-DICHLOROPROPANE	34541
50	TRANS-1,3-DICHLOROPROPENE	34699
50	TRICHLOROETHENE	39180
50	BENZENE	34030
50	DIBROMOCHLOROMETHANE	34306
50	1,1,2-TRICHLOROETHANE	34511
50	CIS-1,3-DICHLOROPROPENE	34704
50	2-CHLOROETHYLVINYL ETHER	34576
50	BROMOFORM	32104
50	1,1,2,2-TETRACHLOROETHANE	34516
50	TETRACHLOROETHENE	34475
50	TOLUENE	34010
50	CHLOROBENZENE	34301
50	ETHYL BENZENE	34371
50	M-XYLENE	
0	O&P-XYLENE(MIXED)	

DATA VERIFIED BY: DGR

NOTES: 1) E-ESTIMATED VALUE
2) P-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) T-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE:08/25/82

INORGANICS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS.GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/02/82 1045

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-2 WELL #2

SAD NO.: 82C1732

CHEMIST: RPL CHEMIST:

RESULTS	UNITS	ELEMENT	STORET	METHOD
--	UG/L	MERCURY	71900	
0.002K	MG/L	CYANIDE	00720	
--	UG/L	2,4-D	39730	
--	UG/L	SILVEX (2,4,5-TP)	39760	
--	UG/L	METHOXYCHLOR	39480	

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: DLC

[illegible]

METALS
DATA REPORTING SHEET
WATER

EPA-SAO.RGN.IV
ATHENS.GA

[illegible] PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

[illegible] STEEL

SAMPLE TYPE: MONZL

SAMPLE START(DATE & TIME): 07/02/82 1045

[illegible] STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

[illegible]

SAD NO.: 82C1732

CHEMIST: McDaniel COMPLETED 7-12-82

ELEMENT	STORET#		UNITS
[illegible]	01077	10U	UG/L
[illegible]	01002	40U	UG/L
[illegible]	01022	NA	UG/L
[illegible]	01007	8I	UG/L
[illegible]	01012	10U	UG/L
[illegible]	01027	13	UG/L
[illegible]	01037	20U	UG/L
[illegible]	01034	10U	UG/L
[illegible]	01042	10U	UG/L
[illegible]	01062	20U	UG/L
[illegible]	01067	30U	UG/L
[illegible]	01051	140	UG/L
[illegible]	01097	40U	UG/L
[illegible]	01147	40U	UG/L
[illegible]	01102	100U	UG/L
[illegible]	01082	43	UG/L
[illegible]	01064	40U	UG/L
[illegible]	01152	10U	UG/L
[illegible]	01059	100U	UG/L
[illegible]	01087	10U	UG/L
[illegible]	01203	10U	UG/L
[illegible]	01092	28000	UG/L
[illegible]	01162	NA	UG/L
[illegible]	71900	0.2U	UG/L
[illegible]	01105	280	UG/L
[illegible]	01055	110	UG/L
[illegible]	00916	13	MG/L
[illegible]	00927	6.0	MG/L
[illegible]	74010	3.9	MG/L
[illegible]	00929	4.6	MG/L
[illegible]	01032	NA	UG/L

[illegible]: 1) [illegible] VALUE IS SHOWN TO BE LESS THAN VALUE GIVEN.
2) [illegible] VALUE IS SHOWN TO BE GREATER THAN VALUE GIVEN.
3) [illegible] VALUE
4) [illegible]-ELEMENT NOT ANALYZED FOR
5) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED
6) J-ESTIMATED VALUE
7) CAI-INTERFERENCES

DATE:08/25/82

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1015

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-4 WELL #4

SAD NO.: 82C1726

CHEMIST: DGR METHOD: 625-81

RESULTS: UG/L	COMPOUND	STORET
NA	N-NITROSODIMETHYLAMINE	34438
NA	1,2-DIPHENYLHYDRAZINE /9	34346
NA	BENZIDINE	39120
11U	1,3-DICHLOROBENZENE	34566
11U	1,4-DICHLOROBENZENE	34571
11U	1,2-DICHLOROBENZENE	34536
11U	BIS(2-CHLOROETHYL) ETHER	34273
11U	HEXACHLOROETHANE	34396
11U	BIS(2-CHLOROISOPROPYL) ETHER	34283
11U	N-NITROSODI-N-PROPYLAMINE	34428
11U	NITROBENZENE	34447
11U	HEXACHLOROBUTADIENE	39702
11U	1,2,4-TRICHLOROBENZENE	34551
11U	NAPHTHALENE	34696
11U	BIS(2-CHLOROETHOXY) METHANE	34278
11U	ISOPHORONE	34408
11U	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
11U	2-CHLORONAPHTHALENE	34581
11U	ACENAPHTHYLENE	34200
11U	ACENAPHTHENE	34205
11U	DIMETHYL PHTHALATE	34341
11U	2,4-DINITROTOLUENE	34611
11U	2,6-DINITROTOLUENE	34626
11U	4-CHLOROPHENYL PHENYL ETHER	34641
11U	FLUORENE	34381
11U	DIETHYL PHTHALATE	34336
11U	N-NITROSODIPHENYLAMINE /10	34433
11U	HEXACHLOROBENZENE (HCB)	39700
11U	4-BROMOPHENYL PHENYL ETHER	34636
11U	PHENANTHRENE	34461
11U	ANTHRACENE	34220
11U	DI-N-BUTYLPHTHALATE	39110
11U	FLUORANTHENE	34376
11U	PYRENE	34469
11U	BENZYL BUTYL PHTHALATE	34292
11U	BIS(2-ETHYLHEXYL) PHTHALATE	39100

RESULTS: UG/L	COMPOUND	STORET
11U	BENZO(A)ANTHRACENE	34526
11U	CHRYSENE	34320
11U	3,3'-DICHLOROBENZIDINE	34631
11U	DI-N-OCTYLPHTHALATE	34596
11U	BENZO(B)FLUORANTHENE /11	34230
11U	BENZO(K)FLUORANTHENE /11	34242
11U	BENZO-A-PYRENE	34247
11U	INDENO (1,2,3-CD) PYRENE	34403
11U	DIBENZO(A,H)ANTHRACENE	34556
11U	BENZO(GHI)PERYLENE	34521
11U	2-CHLOROPHENOL	34586
11U	2-NITROPHENOL	34591
11U	PHENOL	34694
11U	2,4-DIMETHYLPHENOL	34606
11U	2,4-DICHLOROPHENOL	34601
11U	2,4,6-TRICHLOROPHENOL	34621
11U	4-CHLORO-3-METHYLPHENOL	34452
33U	2,4-DINITROPHENOL	34616
33U	2-METHYL-4,6-DINITROPHENOL	34657
33U	PENTACHLOROPHENOL	39032
22U	4-NITROPHENOL	34646

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) M-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) AND/OR AZOBENZENE
10) AND/OR DIPHENYLAMINE
11) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:08/25/82

MISCELLANEOUS
DATA REPORTING SHEET
WATER

EPA-ESD,RGN.IV
ATHENS,GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1015

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-4 WELL #4

SAD NO.: 82C1726

RESULTS: UG/L COMPOUND

EXTRACTABLE ORGANIC ANALYSIS

CHEMIST: DGR METHOD: 625-81

11 JN	OXYBISMETHYLENEBISOXIRANE
15 JN	HEXADECANOIC ACID
24 JN	HEXANEDIOIC ACID,DIOCTYL ESTER
70 JN	PENTAOXANONADECANOL (4 ISOMERS)
11 JN	HEXAOXACYCLOOCTADECANE (2 ISOMERS)
31 JN	1 UNIDENTIFIED COMPOUND

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: CHH

DATE:08/25/82

PESTICIDES/PCBS AND OTHER COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1015

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-4 WELL #4

SAD NO.: 82C1726

CHEMIST: HLR METHOD:

RESULTS: UG/L	COMPOUND	STORET
0.030	ALDRIN	39330
0.030	HEPTACHLOR	39410
0.030	HEPTACHLOR EPOXIDE	39420
0.030	ALPHA-BHC	39337
0.030	BETA-BHC	39338
0.030	GAMMA-BHC (LINDANE)	39340
0.030	DELTA-BHC	34259
0.030	ENDOSULFAN I (ALPHA)	34361
0.030	DIELDRIN	39380
0.10	4,4'-DDT (P,P'-DDT)	39300
0.10	4,4'-DDE (P,P'-DDE)	39320
0.10	4,4'-DDD (P,P'-DDD)	39310
0.10	ENDRIN	39390
0.10	ENDOSULFAN II (BETA)	34356
0.10	ENDOSULFAN SULFATE	34351
0.30	CHLORDANE (TECH. MIXTURE) /10	39350
0.30	PCB-1242 (AROCLOR 1242)	39496
0.30	PCB-1254 (AROCLOR 1254)	39504
0.30	PCB-1221 (AROCLOR 1221)	39488
0.30	PCB-1232 (AROCLOR 1232)	39492
0.30	PCB-1248 (AROCLOR 1248)	39500
0.30	PCB-1260 (AROCLOR 1260)	39508
0.30	PCB-1016 (AROCLOR 1016)	34671
20	TOXAPHENE	39400
NA	ENDRIN ALDEHYDE	34366
NA	TCDD(DIOXIN)	34675
----	CHLORDENE /9	77884
----	ALPHA-CHLORDENE /9	
----	GAMMA-CHLORDENE /9	
----	1-HYDROXYCHLORDENE	
----	GAMMA-CHLORDANE /9	39810
----	TRANS-NONACHLOR /9	39071
----	ALPHA-CHLORDANE /9	39348
----	CIS-NONACHLOR /9	39068
0.30	METHOXYCHLOR	39480
NA	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
NA	HEXACHLORONORBORNADIENE (HCNBD)	

RESULTS: UG/L	COMPOUND	STORET
NA	HEPTACHLORONORBORNENE (HCNB)	
NA	OCTACHLOROCYCLOPENTENE (OCCP)	39130
NA	HEXACHLOROBENZENE (HCB)	39700
NA	2,4-D	39730
NA	SILVEX (2,4,5-TP)	39760
NA	2,4,5-T	39740

DATA VERIFIED BY: SJH

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) CONSTITUENTS OF TECHNICAL CHLORDANE
10) WHEN NO VALUE IS REPORTED,SEE CHLORDANE CONSTITUENTS BELOW

DATE:08/25/82

PURGABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS,GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1015

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-4 WELL #4

SAD NO.: 82C1726

CHEMIST: EWL METHOD: 624-81

RESULTS: UG/L	COMPOUND	STORET
NA	DICHLORODIFLUOROMETHANE	34668
NA	TRICHLOROFLUOROMETHANE	34488
NA	ACROLEIN	34210
NA	ACRYLONITRILE	34215
50	CHLOROMETHANE	34418
50	BROMOMETHANE	34413
50	VINYL CHLORIDE	39175
50	CHLOROETHANE	34311
50	METHYLENE CHLORIDE	34423
50	1,1-DICHLOROETHENE	34501
50	1,1-DICHLOROETHANE	34496
50	TRANS-1,2-DICHLOROETHENE	34546
50	CHLOROFORM	32106
50	1,2-DICHLOROETHANE	32103
50	1,1,1-TRICHLOROETHANE	34506
50	CARBON TETRACHLORIDE	32102
50	BROMODICHLOROMETHANE	32101
50	1,2-DICHLOROPROPANE	34541
50	TRANS-1,3-DICHLOROPROPENE	34699
50	TRICHLOROETHENE	39180
50	BENZENE	34030
50	DIBROMOCHLOROMETHANE	34306
50	1,1,2-TRICHLOROETHANE	34511
50	CIS-1,3-DICHLOROPROPENE	34704
50	2-CHLOROETHYLVINYL ETHER	34576
50	BROMOFORM	32104
50	1,1,2,2-TETRACHLOROETHANE	34516
50	TETRACHLOROETHENE	34475
50	TOLUENE	34010
50	CHLOROBENZENE	34301
50	ETHYL BENZENE	34371
50	M-XYLENE	
50	O&P-XYLENE(MIXED)	

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) F-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) D-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE: 07/06/82

METALS
DATA REPORTING SHEET
WATER

EPA-SAD.REG.IV
ATHENS.GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM LUMBUS STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME): 07/01/82 1015

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-4 WELL #4

SAD NO.: 82C1725

CHEMIST: McDaniel COMPLETED 7-12-82

ELEMENT	STORET#		UNITS
[illegible]	01077	100	UG/L
ARSENIC	01002	400	UG/L
[illegible]	01022	NA	UG/L
[illegible]	01007	100	UG/L
[illegible]	01012	100	UG/L
[illegible]	01027	100	UG/L
[illegible]	01037	200	UG/L
[illegible]	01034	20	UG/L
[illegible]	01042	28	UG/L
[illegible]	01062	200	UG/L
[illegible]	01067	300	UG/L
[illegible]	01051	960	UG/L
[illegible]	01097	8000	UG/L
[illegible]	01147	8000	UG/L
[illegible]	01102	1000	UG/L
[illegible]	01082	300	UG/L
[illegible]	01064	8000	UG/L
[illegible]	01152	100	UG/L
[illegible]	01059	1000	UG/L
[illegible]	01087	100	UG/L
[illegible]	01203	100	UG/L
[illegible]	01092	110000	UG/L
[illegible]	01162	NA	UG/L
[illegible]	71900	0.20	UG/L
[illegible]	01105	400	UG/L
[illegible]	01055	1400	UG/L
[illegible]	00916	31	MG/L
[illegible]	00927	15	MG/L
[illegible]	74010	5.2	MG/L
[illegible]	00929	38	MG/L
[illegible]	01032	NA	UG/L

NOTES: 1) [illegible] VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) [illegible] VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED
6) J-ESTIMATED VALUE
7) MAI-INTERFERENCES

DATE:08/25/82

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXIM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1300

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1727

CHEMIST: DGR METHOD: 625-81

RESULTS: UG/L	COMPOUND	STORET
NA	N-NITROSODIMETHYLAMINE	34438
NA	1,2-DIPHENYLHYDRAZINE /9	34346
NA	BENZIDINE	39120
110U	1,3-DICHLOROBENZENE	34566
110U	1,4-DICHLOROBENZENE	34571
110U	1,2-DICHLOROBENZENE	34536
110U	BIS(2-CHLOROETHYL) ETHER	34273
110U	HEXACHLOROETHANE	34396
110U	BIS(2-CHLOROISOPROPYL) ETHER	34283
110U	N-NITROSODI-N-PROPYLAMINE	34428
110U	NITROBENZENE	34447
110U	HEXACHLOROBUTADIENE	39702
110U	1,2,4-TRICHLOROBENZENE	34551
110U	NAPHTHALENE	34696
110U	BIS(2-CHLOROETHOXY) METHANE	34278
110U	ISOPHORONE	34408
110U	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
110U	2-CHLORONAPHTHALENE	34581
110U	ACENAPHTHYLENE	34200
110U	ACENAPHTHENE	34205
110U	DIMETHYL PHTHALATE	34341
110U	2,4-DINITROTOLUENE	34611
110U	2,6-DINITROTOLUENE	34626
110U	4-CHLOROPHENYL PHENYL ETHER	34641
110U	FLUORENE	34381
110U	DIETHYL PHTHALATE	34336
110U	N-NITROSODIPHENYLAMINE /10	34433
110U	HEXACHLOROBENZENE (HCB)	39700
110U	4-BROMOPHENYL PHENYL ETHER	34636
110U	PHENANTHRENE	34461
110U	ANTHRACENE	34220
110U	DI-N-BUTYLPHTHALATE	39110
110U	FLUORANTHENE	34376
110U	PYRENE	34469
110U	BENZYL BUTYL PHTHALATE	34292
110U	BIS(2-ETHYLHEXYL) PHTHALATE	39100

RESULTS: UG/L	COMPOUND	STORET
110U	BENZO(A)ANTHRACENE	34526
110U	CHRYSENE	34320
110U	3,3'-DICHLOROBENZIDINE	34631
110U	DI-N-OCTYLPHTHALATE	34596
110U	BENZO(B)FLUORANTHENE /11	34230
110U	BENZO(K)FLUORANTHENE /11	34242
110U	BENZO-A-PYRENE	34247
110U	INDENO (1,2,3-CD) PYRENE	34403
110U	DIBENZO(A,H)ANTHRACENE	34556
110U	BENZO(GHI)PERYLENE	34521
110U	2-CHLOROPHENOL	34586
110U	2-NITROPHENOL	34591
110U	PHENOL	34694
110U	2,4-DIMETHYLPHENOL	34606
110U	2,4-DICHLOROPHENOL	34601
110U	2,4,6-TRICHLOROPHENOL	34621
110U	4-CHLORO-3-METHYLPHENOL	34452
330U	2,4-DINITROPHENOL	34616
330U	2-METHYL-4,6-DINITROPHENOL	34657
330U	PENTACHLOROPHENOL	39032
220U	4-NITROPHENOL	34646

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) AND/OR AZOBENZENE
10) AND/OR DIPHENYLAMINE
11) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:08/27/82

MISCELLANEOUS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS.GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1300

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1727

RESULTS: UG/L COMPOUND

EXTRACTABLE ORGANIC ANALYSIS

CHEMIST: DGR METHOD: 625-81

4 PETROLEUM PRODUCT

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: CHH

DATE:08/25/82

PESTICIDES/PCBS AND OTHER COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1300

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1727

CHEMIST: HLR METHOD:

RESULTS: UG/L	COMPOUND	STORET
0.07U	ALDRIN	39330
0.07U	HEPTACHLOR	39410
0.07U	HEPTACHLOR EPOXIDE	39420
0.07U	ALPHA-BHC	39337
0.07U	BETA-BHC	39338
0.07U	GAMMA-BHC (LINDANE)	39340
0.07U	DELTA-BHC	34259
0.07U	ENDOSULFAN I (ALPHA)	34361
0.07U	DIELDRIN	39380
0.20AN	4,4'-DDT (P,P'-DDT)	39300
0.11A	4,4'-DDE (P,P'-DDE)	39320
0.1U	4,4'-DDD (P,P'-DDD)	39310
0.1U	ENDRIN	39390
0.1U	ENDOSULFAN II (BETA)	34356
0.1U	ENDOSULFAN SULFATE	34351
0.48A	CHLORDANE (TECH. MIXTURE) /10	39350
0.7U	PCB-1242 (AROCLOR 1242)	39496
0.8U	PCB-1254 (AROCLOR 1254)	39504
0.7U	PCB-1221 (AROCLOR 1221)	39488
0.7U	PCB-1232 (AROCLOR 1232)	39492
0.7U	PCB-1248 (AROCLOR 1248)	39500
0.8U	PCB-1260 (AROCLOR 1260)	39508
0.7U	PCB-1016 (AROCLOR 1016)	34671
NU	TOXAPHENE	39400
NA	ENDRIN ALDEHYDE	34366
NA	TCDD(DIOXIN)	34675
----	CHLORDENE /9	77884
----	ALPHA-CHLORDENE /9	
----	GAMMA-CHLORDENE /9	
----	1-HYDROXYCHLORDENE	
----	GAMMA-CHLORDANE /9	39810
----	TRANS-NONACHLOR /9	39071
----	ALPHA-CHLORDANE /9	39348
----	CIS-NONACHLOR /9	39068
0.8U	METHOXYCHLOR	39480
NA	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
NA	HEXACHLORONORBORNADIENE (HCNBD)	

RESULTS: UG/L	COMPOUND	STORET
NA	HEPTACHLORONORBORNENE (HCNB)	
NA	OCTACHLOROCYCLOPENTENE (OCCP)	39130
NA	HEXACHLOROBENZENE (HCB)	39700
NA	2,4-D	39730
NA	SILVEX (2,4,5-TP)	39760
NA	2,4,5-T	39740

DATA VERIFIED BY: SJH

NOTES:
1) J-ESTIMATED VALUE
2) P-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAT-INTERFERENCES
9) CONSTITUENTS OF TECHNICAL CHLORDANE
10) WHEN NO VALUE IS REPORTED,SEE CHLORDANE CONSTITUENTS BELOW

DATE:08/25/82

PURGABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS,GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXDM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1300

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1727

CHEMIST: EWL METHOD: 624-81

RESULTS: UG/L	COMPOUND	STORET
NA	DICHLORODIFLUOROMETHANE	34668
NA	TRICHLOROFLUOROMETHANE	34488
NA	ACROLEIN	34210
NA	ACRYLONITRILE	34215
50	CHLOROMETHANE	34418
50	BROMOMETHANE	34413
50	VINYL CHLORIDE	39175
50	CHLOROETHANE	34311
50	METHYLENE CHLORIDE	34423
50	1,1-DICHLOROETHENE	34501
50	1,1-DICHLOROETHANE	34496
50	TRANS-1,2-DICHLOROETHENE	34546
50	CHLOROFORM	32106
50	1,2-DICHLOROETHANE	32103
50	1,1,1-TRICHLOROETHANE	34506
50	CARBON TETRACHLORIDE	32102
50	BROMODICHLOROMETHANE	32101
50	1,2-DICHLOROPROPANE	34541
50	TRANS-1,3-DICHLOROPROPENE	34699
50	TRICHLOROETHENE	39180
50	BENZENE	34030
50	DIBROMOCHLOROMETHANE	34306
50	1,1,2-TRICHLOROETHANE	34511
50	CIS-1,3-DICHLOROPROPENE	34704
50	2-CHLOROETHYLVINYL ETHER	34576
50	BROMOFORM	32104
50	1,1,2,2-TETRACHLOROETHANE	34516
50	TETRACHLOROETHENE	34475
50	TOLUENE	34010
50	CHLOROBENZENE	34301
50	ETHYL BENZENE	34371
50	M-XYLENE	
50	O&P-XYLENE(MIXED)	

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE:08/25/82

INORGANICS
DATA REPORTING SHEET
WATER

EPA-ESD,RGN.IV
ATHENS,GA

PROJECT #: 82-156 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXDM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1300

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1727

CHEMIST: RPL CHEMIST:

RESULTS	UNITS	ELEMENT	STORET	METHOD
--	UG/L	MERCURY	71900	
0.002R	MG/L	CYANIDE	00720	
--	UG/L	2,4-D	39730	
--	UG/L	SILVEX (2,4,5-TP)	39760	
--	UG/L	METHOXYCHLOR	39480	

NOTES: 1) J-ESTIMATED VALUE
2) R-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: DLC

VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV

DATE: [illegible]

METALS
DATA REPORTING SHEET
WATER

EPA-SAD.PS.IV
ATTEN:SA

[illegible] #: [illegible] PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

[illegible] STEEL

SAMPLE TYPE: GRAB

SAMPLE START(DATE & TIME): 07/01/82 1300

CITY: [illegible] STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: [illegible] #5

SAD NO.: 82C1727

CHEMIST: McDaniel COMPLETED 7-12-82

ELEMENT	STORET#		UNITS
[illegible]	01077	100U	UG/L
[illegible]	01002	400U	UG/L
[illegible]	01022	NA	UG/L
[illegible]	01007	300	UG/L
[illegible]	01012	100U	UG/L
[illegible]	01027	100U	UG/L
[illegible]	01037	200U	UG/L
[illegible]	01034	130	UG/L
[illegible]	01042	32	UG/L
[illegible]	01062	200U	UG/L
[illegible]	01067	50	UG/L
[illegible]	01051	480	UG/L
[illegible]	01097	400U	UG/L
[illegible]	01147	500U	UG/L
[illegible]	01102	1000U	UG/L
[illegible]	01082	590	UG/L
[illegible]	01059	400U	UG/L
[illegible]	01152	30	UG/L
[illegible]	01054	1000U	UG/L
[illegible]	01087	100U	UG/L
[illegible]	01093	100U	UG/L
[illegible]	01092	36000	UG/L
[illegible]	01102	NA	UG/L
[illegible]	71900	0.36	UG/L
[illegible]	01105	2600	UG/L
[illegible]	01055	380	UG/L
[illegible]	00916	26	MG/L
[illegible]	00927	7.4	MG/L
[illegible]	00011	6.9	MG/L
[illegible]	00929	110	MG/L
[illegible]	01032	NA	UG/L

U : [illegible] VALUE IS FOUND TO BE LESS THAN VALUE GIVEN.
[illegible] VALUE IS FOUND TO BE GREATER THAN VALUE GIVEN.
[illegible] VALUE
NA-ELEMENT NOT ANALYZED FOR

5) U-ELEMENT WAS ANALYZED FOR-BUT NOT DETECTED
6) J-ESTIMATED VALUE
7) INT-INTERFERENCES

DATE:08/25/82

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXHM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1600

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-6 WELL #6

SAD NO.: 82C1729

CHEMIST: DGR METHOD: 625-81

RESULTS: UG/L	COMPOUND	STORET
NA	N-NITROSODIMETHYLAMINE	34438
NA	1,2-DIPHENYLHYDRAZINE /9	34346
NA	BENZIDINE	39120
10U	1,3-DICHLOROBENZENE	34566
10U	1,4-DICHLOROBENZENE	34571
10U	1,2-DICHLOROBENZENE	34536
10U	BIS(2-CHLOROETHYL) ETHER	34273
10U	HEXACHLOROETHANE	34396
10U	BIS(2-CHLOROISOPROPYL) ETHER	34283
10U	N-NITROSODI-N-PROPYLAMINE	34428
10U	NITROBENZENE	34447
10U	HEXACHLOROBUTADIENE	39702
10U	1,2,4-TRICHLOROBENZENE	34551
10U	NAPHTHALENE	34696
10U	BIS(2-CHLOROETHOXY) METHANE	34278
10U	ISOPHORONE	34408
10U	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
10U	2-CHLORONAPHTHALENE	34581
10U	ACENAPHTHYLENE	34200
10U	ACENAPHTHENE	34205
10U	DIMETHYL PHTHALATE	34341
10U	2,4-DINITROTOLUENE	34611
10U	2,6-DINITROTOLUENE	34626
10U	4-CHLOROPHENYL PHENYL ETHER	34641
10U	FLUORENE	34381
10U	DIETHYL PHTHALATE	34336
10U	N-NITROSODIPHENYLAMINE /10	34433
10U	HEXACHLOROBENZENE (HCB)	39700
10U	4-BROMOPHENYL PHENYL ETHER	34636
10U	PHENANTHRENE	34461
10U	ANTHRACENE	34220
NA	DI-N-BUTYLPHTHALATE	39110
10U	FLUORANTHENE	34376
10U	PYRENE	34469
10U	BENZYL BUTYL PHTHALATE	34292
10U	BIS(2-ETHYLHEXYL) PHTHALATE	39100

RESULTS: UG/L	COMPOUND	STORET
10U	BENZO(A)ANTHRACENE	34526
10U	CHRYSENE	34320
10U	3,3'-DICHLOROBENZIDINE	34631
10U	DI-N-OCTYLPHTHALATE	34596
10U	BENZO(B)FLUORANTHENE /11	34230
10U	BENZO(K)FLUORANTHENE /11	34242
10U	BENZO-A-PYRENE	34247
10U	INDENO (1,2,3-CD) PYRENE	34403
10U	DIBENZO(A,H)ANTHRACENE	34556
10U	BENZO(GHI)PERYLENE	34521
10U	2-CHLOROPHENOL	34586
10U	2-NITROPHENOL	34591
10U	PHENOL	34694
10U	2,4-DIMETHYLPHENOL	34606
10U	2,4-DICHLOROPHENOL	34601
10U	2,4,6-TRICHLOROPHENOL	34621
10U	4-CHLORO-3-METHYLPHENOL	34452
30U	2,4-DINITROPHENOL	34616
30U	2-METHYL-4,6-DINITROPHENOL	34657
30U	PENTACHLOROPHENOL	39032
20U	4-NITROPHENOL	34646

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAT-INTERFERENCES
9) AND/OR AZOBENZENE
10) AND/OR DIPHENYLAMINE
11) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:08/27/82

MISCELLANEOUS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS,GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1600

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-5 WELL #5

SAD NO.: 82C1729

RESULTS: UG/L COMPOUND

EXTRACTABLE ORGANIC ANALYSIS

CHEMIST: DGR METHOD: 625-81

0 PETROLEUM PRODUCT

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) MAI-INTERFERENCES

DATA VERIFIED BY: CHH

DATE:08/25/82

PESTICIDES/PCBS AND OTHER COMPOUNDS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS, GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1600

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-6 WELL #6

SAD NO.: 82C1729

CHEMIST: HLR METHOD:

RESULTS: UG/L	COMPOUND	STORET
0.030	ALDRIN	39330
0.030	HEPTACHLOR	39410
0.030	HEPTACHLOR EPOXIDE	39420
0.030	ALPHA-BHC	39337
0.030	BETA-BHC	39338
0.030	GAMMA-BHC (LINDANE)	39340
0.030	DELTA-BHC	34259
0.030	ENDOSULFAN I (ALPHA)	34361
0.030	DIELDRIN	39380
0.10	4,4'-DDT (P,P'-DDT)	39300
0.10	4,4'-DDE (P,P'-DDE)	39320
0.10	4,4'-DDD (P,P'-DDD)	39310
0.10	ENDRIN	39390
0.10	ENDOSULFAN II (BETA)	34356
0.10	ENDOSULFAN SULFATE	34351
0.30	CHLORDANE (TECH. MIXTURE) /10	39350
0.30	PCB-1242 (AROCLOR 1242)	39496
0.30	PCB-1254 (AROCLOR 1254)	39504
0.30	PCB-1221 (AROCLOR 1221)	39488
0.30	PCB-1232 (AROCLOR 1232)	39492
0.30	PCB-1248 (AROCLOR 1248)	39500
0.30	PCB-1260 (AROCLOR 1260)	39508
0.30	PCB-1016 (AROCLOR 1016)	34671
20	TOXAPHENE	39400
NA	ENDRIN ALDEHYDE	34366
NA	TCDD(DIOXIN)	34675
----	CHLORDENE /9	77884
----	ALPHA-CHLORDENE /9	
----	GAMMA-CHLORDENE /9	
----	1-HYDROXYCHLORDENE	
----	GAMMA-CHLORDANE /9	39810
----	TRANS-NONACHLOR /9	39071
----	ALPHA-CHLORDANE /9	39348
----	CIS-NONACHLOR /9	39068
0.30	METHOXYCHLOR	39480
NA	HEXACHLOROCYCLOPENTADIENE (HCCP)	34386
NA	HEXACHLORONORBORNADIENE (HCNBD)	

RESULTS: UG/L	COMPOUND	STORET
NA	HEPTACHLORONORBORNENE (HCNB)	
NA	OCTACHLOROCYCLOPENTENE (OCCP)	39130
NA	HEXACHLOROBENZENE (HCB)	39700
NA	2,4-D	39730
NA	SILVEX (2,4,5-TP)	39760
NA	2,4,5-T	39740

DATA VERIFIED BY: SJH

NOTES:
1) J-ESTIMATED VALUE
2) P-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) A-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES
9) CONSTITUENTS OF TECHNICAL CHLORDANE
10) WHEN NO VALUE IS REPORTED,SEE CHLORDANE CONSTITUENTS BELOW

DATE:08/25/82

PURGABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

SAMPLE AND ANALYSIS MANAGEMENT SYSTEM
EPA-ESD, REGION 4, ATHENS,GA.

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1600

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-6 WELL #6

SAD NO.: 82C1729

CHEMIST: EWL METHOD: 624-81

RESULTS: UG/L	COMPOUND	STORET
NA	DICHLORODIFLUOROMETHANE	34668
NA	TRICHLOROFLUOROMETHANE	34488
NA	ACROLEIN	34210
NA	ACRYLONITRILE	34215
50	CHLOROMETHANE	34418
50	BROMOMETHANE	34413
50	VINYL CHLORIDE	39175
50	CHLOROETHANE	34311
50	METHYLENE CHLORIDE	34423
50	1,1-DICHLOROETHENE	34501
50	1,1-DICHLOROETHANE	34496
50	TRANS-1,2-DICHLOROETHENE	34546
50	CHLOROFORM	32106
50	1,2-DICHLOROETHANE	32103
50	1,1,1-TRICHLOROETHANE	34506
50	CARBON TETRACHLORIDE	32102
50	BROMODICHLOROMETHANE	32101
50	1,2-DICHLOROPROPANE	34541
50	TRANS-1,3-DICHLOROPROPENE	34699
50	TRICHLOROETHENE	39180
50	BENZENE	34030
50	DIBROMOCHLOROMETHANE	34306
50	1,1,2-TRICHLOROETHANE	34511
50	CIS-1,3-DICHLOROPROPENE	34704
50	2-CHLOROETHYLVINYL ETHER	34576
50	BROMOFORM	32104
50	1,1,2,2-TETRACHLOROETHANE	34516
50	TETRACHLOROETHENE	34475
50	TOLUENE	34010
50	CHLOROBENZENE	34301
50	ETHYL BENZENE	34371
50	M-XYLENE	
50	OSP-XYLENE(MIXED)	

DATA VERIFIED BY: DGR

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATE:08/25/82

INORGANICS
DATA REPORTING SHEET
WATER

EPA-ESD.RGN.IV
ATHENS,GA

PROJECT #: 82-150 PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):07/01/82 1600

CITY: BIRMINGHAM STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: EX-6 WELL #6

SAD NO.: 82C1729

CHEMIST: RPL CHEMIST:

RESULTS	UNITS	ELEMENT	STORET	METHOD
--	UG/L	MERCURY	71900	
0.007	MG/L	CYANIDE	00720	
--	UG/L	2,4-D	39730	
--	UG/L	SILVEX (2,4,5-TP)	39760	
--	UG/L	METHOXYCHLOR	39480	

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-NOT ANALYZED
8) NAI-INTERFERENCES

DATA VERIFIED BY: DLC

VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV

DATE: 07/06/82

METALS
DATA REPORTING SHEET
WATER

ERA-SAD.RGN.IV
ATHENS.GA

PROJECT #: 82-1[illegible] PROG ELEMENT #: NSF

SAMPLE RECEIVED(DATE & TIME): 07/03/82 1135

SOURCE: EXOT [illegible] STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME): 07/01/82 1600

CITY: [illegible] STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 0

STATION: [illegible]

SAD NO.: 82C1729

CHEMIST: McDaniel COMPLETED 7-12-82

ELEMENT	STORET#		UNITS
SILVER	01077	10U	UG/L
ARSENIC	01002	40U	UG/L
BORON	01022	NA	UG/L
BARIUM	01007	120	UG/L
BERYLLIUM	01012	10U	UG/L
CADMIUM	01027	10U	UG/L
COBALT	01037	20U	UG/L
CHROMIUM	01034	34	UG/L
COPPER	01042	11	UG/L
MANGANESE	01062	20U	UG/L
NICKEL	01067	30U	UG/L
LEAD	01051	600	UG/L
ANTIMONY	01097	40U	UG/L
SELENIUM	01147	400U	UG/L
TIN	01102	100U	UG/L
STRONTIUM	01082	620	UG/L
TELLURIUM	01064	40U	UG/L
TITANIUM	01152	10U	UG/L
THALLIUM	01059	100U	UG/L
VANADIUM	01087	10U	UG/L
YTTRIUM	01203	10U	UG/L
ZINC	01092	87000	UG/L
ZIRCONIUM	01162	NA	UG/L
MERCURY	71900	0.2U	UG/L
[illegible]	01105	320	UG/L
[illegible]	01055	110	UG/L
[illegible]	00916	32	UG/L
[illegible]	00927	17	MG/L
[illegible]	74010	1.2	MG/L
[illegible]	00929	26	MG/L
CHROMIUM,HEXAVALENT	01032	NA	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED
6) J-ESTIMATED VALUE
7) OAT-INTERFERENCES

Rec. 22 March 82

HAZARDOUS WASTE SITE INVESTIGATION
U.S. STEEL (EXUM) DUMP
FAIRFIELD, ALABAMA
NOVEMBER 1981

INTRODUCTION

A hazardous waste site investigation of Exum Dump was conducted jointly by Steve Hall of the U. S. Environmental Protection Agency, Region IV, Environmental Services Division (ESD) and David L. Roberson and Lloyd G. Linn of the Alabama Department of Public Health, Division of Solid and Hazardous Waste (DSHW) on November 4, 1981. Also present were Mr. Gary Euler, Environmental Engineer for U.S. Steel, and Mr. John Meadow, an employee of Dames and Moore, U.S. Steel's groundwater consultant.

The purpose of this investigation was to determine if any contaminants are in the groundwater in the vicinity of Exum Dump. This investigation is a follow-up of a reconnaissance investigation conducted jointly by ESD and DSHW in November 1980. Following the reconnaissance investigation, the DSHW requested U. S. Steel to install six monitoring wells in the vicinity of the site. The 1981 investigation included the sampling of these monitoring wells. Participation by ESD in this investigation was requested by the DSHW.

STUDY AREA

Exum Dump is owned by U.S. Steel and is located about one mile from their Fairfield Works (Figure 1). The dump covers about 100 acres and is essentially a valley which has been filled with waste products (primarily inorganic with some waste oils) from U.S. Steel's Fairfield Works. This dump has existed for at least 50 years, and U.S. Steel personnel know little about the underlying area and whether or not it was ever mined or has always been used for a tailing or waste dump. U.S. Steel personnel stated that the site is presently used for raw material storage and as a dump for bricks and pallets. Waste oil and air scrubber filter cake had been placed in two on site pits until recently. There is one unguarded access road onto the site; however, there was little evidence of any dumping other than that from U.S. Steel.

Between the east end of the dump and easternmost end of the valley there is an area of pooled water which has no apparent discharge, although there is an inflowing stream. There is a significant surface water flow at the west end of the site which may be from the pooled water, natural runoff or a combination of both. Surface water flows generally from east to west along the long axis of the valley towards Village Creek located northwest of the property.

Historically, the pooled water area received wastes from a tank truck cleaning operation and run-off from a creosote plant in addition to "over the edge" dumping at the east end of Exum Dump. Wastes/run-off from the tank truck cleaning and creosote plant was allegedly stopped in January 1981.

DISCUSSION OF RESULTS

General

According to Dames and Moore, groundwater generally flows to the north. Since there were no residential or commercial wells within two to three miles of the area, the DSHW requested that six monitoring wells be placed in the vicinity of Exum Dump. These wells were installed in August and September 1981 under the direction of Dames and Moore. Prior to installation of the wells, U.S. Steel/ Dames and Moore submitted a plan to the DSHW who generally indicated the location where the wells should be installed. Final site selection was left to Dames and Moore during the field installation. Figure 2 shows the location of each of these wells. Table 1 describes the wells.

Water samples were collected from each of the wells using either a DSHW or Dames and Moore PVC well bailer. Well number EX-3 was sampled first since it was considered to be upgradient of the other wells. The remaining wells were located downgradient from the dump area. All samples were analyzed for organic compounds, cyanide, and metals, including priority pollutants. Tables 2 and 3 display the organic and metals/cyanide results detected at each location. All analytical results are included in attachment A.

Summary

The two wells (EX-1 and EX-2) located near the now unused on-site pits (Figure 2) contained more organic compounds (10 in EX-1; 11 in EX-2) (Table 2) and metals (17 in each) (Table 3) than any of the other wells sampled. Additionally, the cyanide concentration in well EX-1 was greater (29 ug/l) than in either of the other two wells (EX-5 and EX-6 at 5 ug/l each) where detected. Also, metal concentrations were, in most instances, greater in well EX-1 than in the other wells.

Control Well (EX-3)

Organic Compounds -- Three organic compounds were detected in well EX-3. Dichlorodifluoromethane (5.7 ug/l) was positively identified; chloroform was positively identified but had an estimated concentration of less than 5 ug/l; hexadecanoic acid was tentatively identified and had an estimated concentration of less than 10 ug/l.

Chloroform and dichlorodifluoromethane were not detected in any of the other wells during this investigation. Hexadecanoic acid was tentatively identified with an estimated concentration of less than 12 ug/l in only one well (EX-1).

Neither chloroform nor dichlorodifluoromethane was detected in any of the surface water or sediment samples collected during a reconnaissance investigation in November 1980. Hexadecanoic acid was detected only in the downstream sediment sample during that investigation.

Metals -- The water sample from well EX-3 was very turbid and was inadvertantly acidfied prior to filtration. Therefore, concentrations of metals detected in this sample would not be comparable to other non-turbid well water samples.

Downgradient Wells

Organic Compounds -- Two wells, EX-1 and EX-2, contained a significantly greater number of organic compounds than any of the other wells. Ten compounds were detected in EX-1 and eleven were in EX-2 (Table 2). The number of compounds detected in the other wells ranged from one to three. Wells EX-1 and EX-2 are the ones closest to the on-site waste pits which were used historically for dumping oil and air scrubber filter cake (Figure 2). None of the positively identified compounds were detected in the control well EX-3.

All of the compounds positively identified are polycyclic aromatic hydrocarbons, which are coal tar derivatives and would be expected from a coke plant such as U.S. Steel operates.

Cyanide/Metals -- Three of the wells (EX-1, EX-5, and EX-6) contained cyanide; EX-1 had the greatest concentration (26 ug/l); while EX-5 and EX-6 each contained 5 ug/l.

Although the metal control sample (from EX-3) could not be compared with downgradient well samples, it is obvious that wells EX-1 and EX-2 have more metals in the groundwater and at greater concentrations than the other wells sampled (Table 3). Seventeen metals were detected in wells EX-1 and EX-2 while 13 were in EX-4, 14 in EX-5, and 11 in EX-6. Usually, the greatest metal concentrations were in EX-1, but EX-2 had the highest concentrations of cadmium (16 ug/l), lead (949 ug/l), tin (61 ug/l), and zinc (55,000 ug/l). Well EX-5 had the highest concentrations of barium (490 ug/l), chromium (65 ug/l), and sodium (96,000 ug/l).

Of the priority pollutant metals detected, cadmium, chromium, lead, and zinc were at greater concentrations in the groundwater during this investigation than in surface waters during the November 1980 reconnaissance investigation. However, copper and nickel had greater concentrations in the surface waters (November 1980) than in the groundwater (November 1981).

METHODOLOGY

With the exception of the deviations discussed below, all sampling and preservation was in accordance with the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (August 29, 1980) Draft (1). Chain-of custody was maintained from time of collection until relinquished to Laboratory Services Branch personnel at the US-EPA Laboratory in Athens, Georgia.

All analyses were conducted by the Region IV, Laboratory Services Branch in accordance with Laboratory Services Branch Operations and Quality Control Manual (March 1981) (2).

Two deviations from the standard field operating procedures were used. PVC well bailers had been used prior to the samping investigation by D&M to purge the wells, and the bailer had been cleaned with only tap water between uses. It would have been preferable if a bailer had been made of Teflon and had been cleaned according to standard procedures between uses; however, since this was not the case the PVC bailer which had been used to purge wells was used and was cleaned with milli-Q water between uses at the wells. The second deviation was that the water sample from well EX-3 did contain visible sediment and was preserved with nitric acid inadvertently. Therefore metal analytical results on this sample were disregarded in the discussion.

REFERENCES

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

2. Laboratory Services Branch Operations and Quality Control Manual, U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division, March 1981.

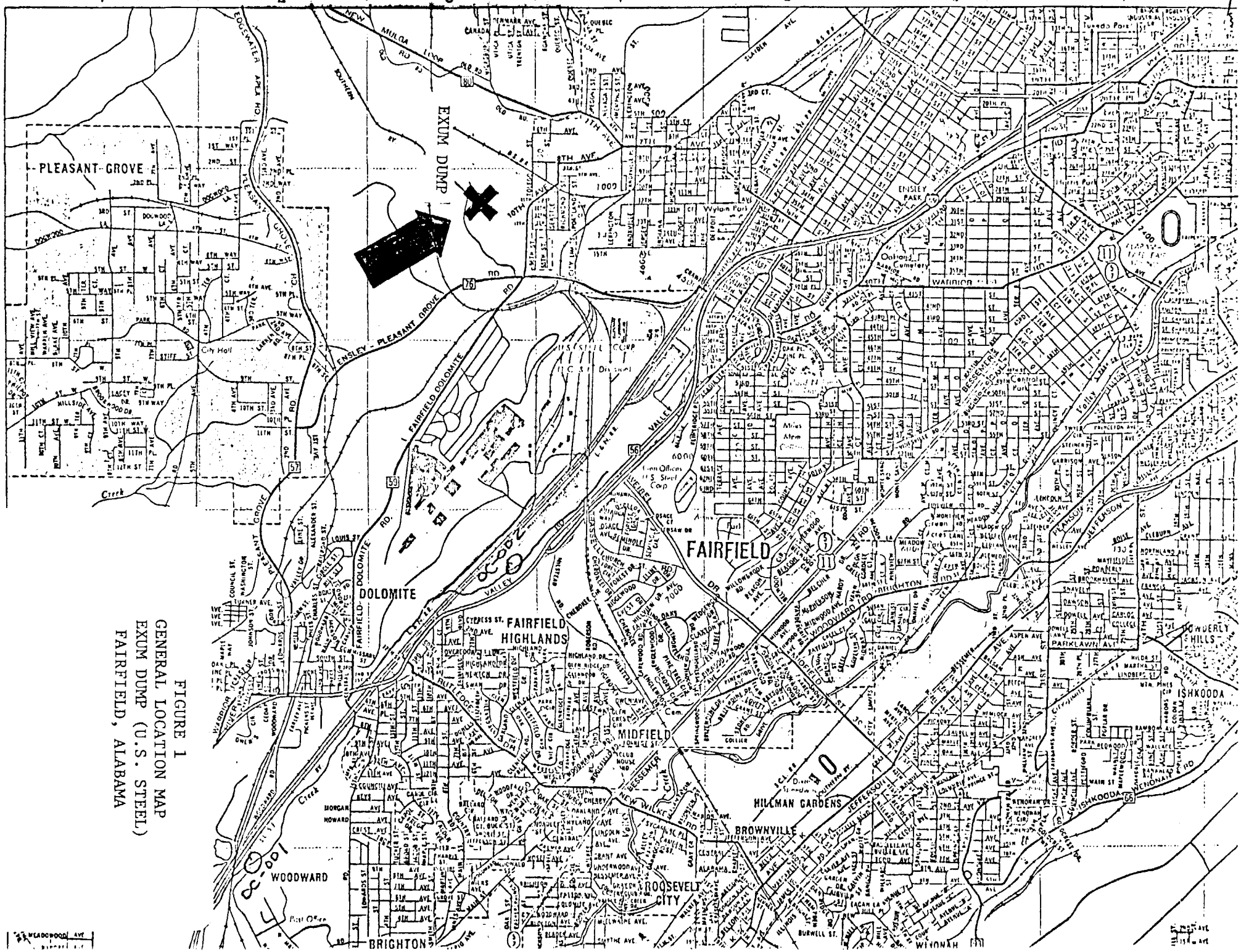
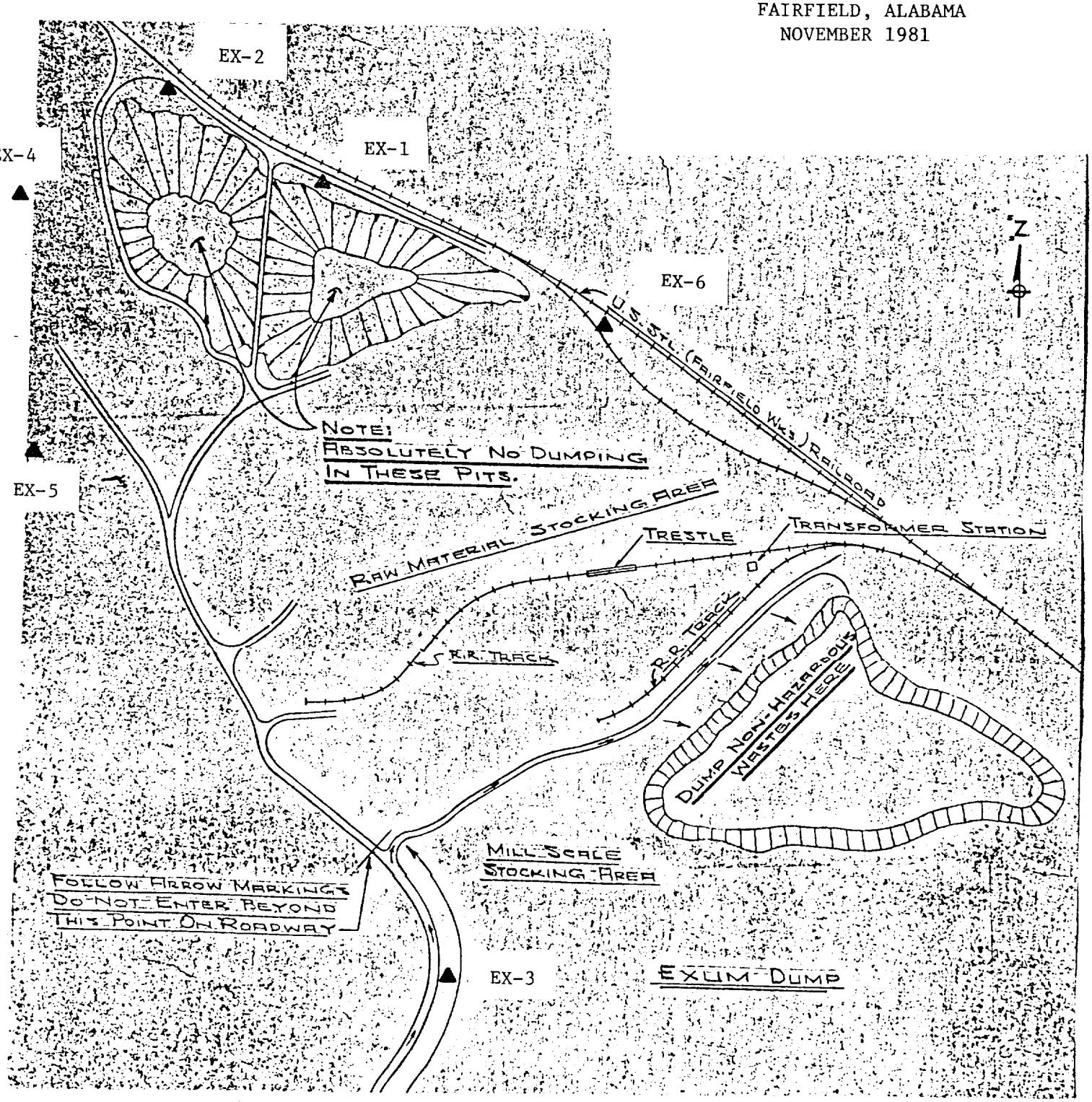


FIGURE 1
GENERAL LOCATION MAP
EXUM DUMP (U.S. STEEL)
FAIRFIELD, ALABAMA

FIGURE 2
SITE LOCATION MAP
EXUM DUMP
(U.S. STEEL)
FAIRFIELD, ALABAMA
NOVEMBER 1981



Drawing provided by U.S. Steel.

TABLE 1
WELL SAMPLING LOCATIONS
EXUM DUMP, U.S. STEEL
BIRMINGHAM, ALABAMA
NOVEMBER 1981

Field Sample Designation	Laboratory Number	Date/Time	Well Depth*	Depth to Water Surface*
EX-1	0267	11/4/81 1240-1250	97' 2"	67' 9"
EX-2	0268	11/4/81 1215-1235	69' 10"	40' 3"
EX-3	0269	11/4/81 0930-1030	95' 7"	86' 5"
EX-4	0270	11/4/81 1130-1150	95' 9"	70' 11"
EX-5	0271	11/4/81 1100-1120	97' 7"	76' 11"
EX-6	0272	11/4/81 1300-1310	85' 0"	41' 10"

* Well depths determined by Dames and Moore prior to investigation. Depth to water surface measured by Dames and Moore during investigation.

TABLE 2
ORGANIC COMPOUNDS DETECTED
U.S. STEEL CORPORATION (EXUM DUMP)
FAIRFIELD, ALABAMA
NOVEMBER 1981

	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6
Acenaphthylene (μg/l)	12K	12K	--	--	--	--
Acenaphthene	12K	--	--	--	--	--
Fluorene	12K	--	--	--	--	--
Phenanthrene	12K	12K	--	10K	--	--
Anthracene	12K	12K	--	--	--	--
Fluoranthene	12K	12K	--	--	10K	10K
Pyrene	12K	12K	--	--	10K	10K
Chrysene	12K	12K	--	--	10K	--
Benzo (A) Anthracene	12K	12K	--	--	--	--
Benzo (B) Fluoranthene	--	12K	--	--	--	--
Benzo (K) Fluoranthene	--	12K	--	--	--	--
Benzo-A-Pyrene	--	12K	--	--	--	--
Benzo (GHI) Perylene	--	12K	--	--	--	--
Hexadecanoic acid*	12KN	--	10KN	--	--	--
Dichlorodifluoromethane	--	--	5.7	--	--	--
Chloroform	--	--	5K	--	--	--

Notes: *All of the listed compounds except hexadecanoic acid are priority pollutants listed in the Natural Resources Defense Council, Inc., et. al.; Consent Decree dated June 7, 1976.

-- Dash indicates compound not detected at minimum detection limit.

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

N - Tentative identification.

TABLE 3
METALS AND CYANIDE DETECTED
U.S. STEEL CORPORATION (EXUM DUMP)
FAIRFIELD, ALABAMA
NOVEMBER 1981

	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6
Cyanide* (μg/l)	26	--	I	--	5	5
Barium	261	274	6,695	252	490	165
Cadmium*	10	16	75	--	--	--
Chromium*	37	57	720	28	65	--
Copper*	34	20	580	12	16	--
Nickel*	32	29	730	--	--	--
Lead*	272	949	870	202	108	128
Tin	--	61	--	--	--	--
Strontium	1,323	101	2,265	155	752	794
Titanium	247	83	3,970	41	81	24
Vanadium	33	18	745	--	11	--
Yttrium	9	--	245	--	--	--
Zinc*	24,000	55,000	17,610	29,057	11,578	16,078
Aluminum	18,600	9,400	359,800	3,000	6,900	1,100
Manganese	1,000	648	1,133	926	931	145
Calcium	94,000	26,000	262,000	24,000	39,000	56,000
Magnesium	41,000	9,100	184,000	8,300	15,000	24,000
Iron	28,000	19,000	736,000	5,000	11,000	1,200
Sodium	71,000	6,000	44,000	28,000	96,000	32,000

NOTES: Dash indicates metal/cyanide not detected at minimum detection limit.

I - Indicates analyses not conducted due to interference.

APPENDIX A
ANALYTICAL RESULTS
EXUM DUMP
(U.S. STEEL)
FAIRFIELD, ALABAMA
NOVEMBER 1981

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1240

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1250

STATION: EX-1 EXUM DUMP WELL #1

SAD NO.: 82C0267

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	40U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	261	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10	UG/L
COBALT	CO	01037	25U	UG/L
CHROMIUM	CR	01034	37	UG/L
COPPER	CU	01042	34	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	32	UG/L
LEAD	PB	01051	272	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	40U	UG/L
TIN	SN	01102	50U	UG/L
STRONTIUM	SR	01082	1323	UG/L
TELLURIUM	TE	01064	40U	UG/L
TITANIUM	TI	01152	247	UG/L
THALLIUM	TL	01059	NA	UG/L
VANADIUM	V	01087	33	UG/L
YTTRIUM	Y	01203	9	UG/L
ZINC	ZN	01092	24000	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	18600	UG/L
MANGANESE	MN	01055	1000	UG/L
CALCIUM	CA	00916	94	MG/L
MAGNESIUM	MG	00927	41	MG/L
IRON	FE	74010	28	MG/L
SODIUM	NA	00929	71	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD.RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1215

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1235

STATION: EX-2 EXUM DUMP WELL # 2

SAD NO.: 82C0268

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	40U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	274	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	16	UG/L
COBALT	CO	01037	25U	UG/L
CHROMIUM	CR	01034	57	UG/L
COPPER	CU	01042	20	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	29	UG/L
LEAD	PB	01051	949	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	40U	UG/L
TIN	SN	01102	61	UG/L
STRONTIUM	SR	01082	101	UG/L
TELLURIUM	TE	01064	40U	UG/L
TITANIUM	TI	01152	83	UG/L
THALLIUM	TL	01059	100U	UG/L
VANADIUM	V	01087	18	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	55000	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	9400	UG/L
MANGANESE	MN	01055	648	UG/L
CALCIUM	CA	00916	26	MG/L
MAGNESIUM	MG	00927	9.1	MG/L
IRON	FE	74010	19	MG/L
SODIUM	NA	00929	6	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 930

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1030

STATION: EX-3 EXUM DUMP WELL #3

SAD NO.: 82C0269

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	20U	UG/L
ARSENIC	AS	01002	400U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	6695	UG/L
BERYLLIUM	BE	01012	20U	UG/L
CADMIUM	CD	01027	75	UG/L
COBALT	CO	01037	NA	UG/L
CHROMIUM	CR	01034	720	UG/L
COPPER	CU	01042	580	UG/L
MOLYBDENUM	MO	01062	200U	UG/L
NICKEL	NI	01067	730	UG/L
LEAD	PB	01051	870	UG/L
ANTIMONY	SB	01097	400U	UG/L
SELENIUM	SE	01147	400U	UG/L
TIN	SN	01102	NA	UG/L
STRONTIUM	SR	01082	2265	UG/L
TELLURIUM	TE	01064	NA	UG/L
TITANIUM	TI	01152	3970	UG/L
THALLIUM	TL	01059	NA	UG/L
VANADIUM	V	01087	745	UG/L
YTTRIUM	Y	01203	245	UG/L
ZINC	ZN	01092	17610	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	359,800	UG/L
MANGANESE	MN	01055	1133	UG/L
CALCIUM	CA	00916	262	MG/L
MAGNESIUM	MG	00927	184	MG/L
IRON	FE	74010	736	MG/L
SODIUM	NA	00929	44	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1130

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1150

STATION: EX-004 EXUM DUMP WELL #4

SAD NO.: 82C0270

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	40U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	252	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10U	UG/L
COBALT	CO	01037	NA	UG/L
CHROMIUM	CR	01034	28	UG/L
COPPER	CU	01042	12	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	25U	UG/L
LEAD	PB	01051	202	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	40U	UG/L
TIN	SN	01102	NA	UG/L
STRONTIUM	SR	01082	155	UG/L
TELLURIUM	TE	01064	NA	UG/L
TITANIUM	TI	01152	41	UG/L
THALLIUM	TL	01059	NA	UG/L
VANADIUM	V	01087	10U	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	29057	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	3000	UG/L
MANGANESE	MN	01055	926	UG/L
CALCIUM	CA	00916	24	MG/L
MAGNESIUM	MG	00927	8.3	MG/L
IRON	FE	74010	5	MG/L
SODIUM	NA	00929	28	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD.RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1100

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1120

STATION: EX-005 EXUM DUMP WELL #5

SAD NO.: 82C0271

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	40U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	490	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10U	UG/L
COBALT	CO	01037	NA	UG/L
CHROMIUM	CR	01034	65	UG/L
COPPER	CU	01042	16	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	25U	UG/L
LEAD	PB	01051	108	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	40U	UG/L
TIN	SN	01102	NA	UG/L
STRONTIUM	SR	01082	752	UG/L
TELLURIUM	TE	01064	NA	UG/L
TITANIUM	TI	01152	81	UG/L
THALLIUM	TL	01059	NA	UG/L
VANADIUM	V	01087	11	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	11578	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	6900	UG/L
MANGANESE	MN	01055	931	UG/L
CALCIUM	CA	00916	39	MG/L
MAGNESIUM	MG	00927	15	MG/L
IRON	FE	74010	11	MG/L
SODIUM	NA	00929	96	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM.HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE:11/16/81

METALS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1300

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1310

STATION: EX-006 EXUM DUMP WELL #6

SAD NO.: 82C0272

CHEMIST: McDaniel COMPLETED 11/16/81

ELEMENT		STORET#		UNITS
SILVER	AG	01077	10U	UG/L
ARSENIC	AS	01002	40U	UG/L
BORON	B	01022	NA	UG/L
BARIUM	BA	01007	165	UG/L
BERYLLIUM	BE	01012	10U	UG/L
CADMIUM	CD	01027	10U	UG/L
COBALT	CO	01037	NA	UG/L
CHROMIUM	CR	01034	10U	UG/L
COPPER	CU	01042	10U	UG/L
MOLYBDENUM	MO	01062	20U	UG/L
NICKEL	NI	01067	25U	UG/L
LEAD	PB	01051	128	UG/L
ANTIMONY	SB	01097	40U	UG/L
SELENIUM	SE	01147	40U	UG/L
TIN	SN	01102	NA	UG/L
STRONTIUM	SR	01082	794	UG/L
TELLURIUM	TE	01064	NA	UG/L
TITANIUM	TI	01152	24	UG/L
THALLIUM	TL	01059	NA	UG/L
VANADIUM	V	01087	10U	UG/L
YTTRIUM	Y	01203	10U	UG/L
ZINC	ZN	01092	16078	UG/L
ZIRCONIUM	ZR	01162	NA	UG/L
MERCURY	HG	71900	0.2U	UG/L
ALUMINUM	AL	01105	1100	UG/L
MANGANESE	MN	01055	145	UG/L
CALCIUM	CA	00916	56	MG/L
MAGNESIUM	MG	00927	24	MG/L
IRON	FE	74010	1.2	MG/L
SODIUM	NA	00929	32	MG/L
CYANIDE	CN	00720	--	MG/L
ASBESTOS	ASSB	34225	--	F/L
CHROMIUM,HEXAVALENT	CR(6)	01032	--	UG/L

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) A-AVERAGE VALUE
4) NA-ELEMENT NOT ANALYZED FOR
5) U - None Detected; Number is Detection Limit.

DATE: 11/12/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
82C0267 - 82C0274
PROJECT # 82-24 ***PROG ELEMENT # HWSR

SOURCE: EXUM DUMP US STEEL

SAMPLE RECEIVED DATE & TIME: 11/05/81 1722

CITY : FAIRFIELD STATE: AL

CHEMIST:

COMPLETED:

SAD NO.	STATION	DATE & TIME SAMPLED	SAMPLE TYPE	ANALYSES TO BE RUN					
82C0267	EX-1 EXUM DUMP WELL #1	11/04/81- 1240- 00/00/00 1250	MONWL	:ORGS	:PEST	:VOA	:METSCUG/L	:CN MG/L	:HG UG/L
								0.026	
82C0268	EX-2 EXUM DUMP WELL # 2	11/04/81- 1215- 00/00/00 1235	MONWL	:ORGS	:PEST	:VOA	:METSCUG/L	:CN MG/L	:HG UG/L
								.002K	
82C0269	EX-3 EXUM DUMP WELL #3	11/04/81- 930- 00/00/00 1030	MONWL	:ORGS	:PEST	:VOA	:METSCUG/L	:CN MG/L	:HG UG/L
								NAI	
82C0270	EX-004 EXUM DUMP WELL #4	11/04/81- 1130- 00/00/00 1150	MONWL	:ORGS	:PEST	:VOA	:METSCUG/L	:CN MG/L	:HG UG/L
								.002K	
82C0271	EX-005 EXUM DUMP WELL #5	11/04/81- 1100- 00/00/00 1120	MONWL	:ORGS	:PEST	:VOA	:METSCUG/L	:CN MG/L	:HG UG/L
								.005	

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
3) NAI - Not able to analyze due to interference

DATE: 11/12/81

US EPA REGION IV S&A DIVISION
LABORATORY SERVICES BRANCH
DATA REPORTING SHEET
82C0267 - 82C0274
PROJECT # 82-24 ***PROG ELEMENT # HWSR

SOURCE: EXUM DUMP US STEEL

SAMPLE RECEIVED DATE & TIME: 11/05/81 1722

CITY : FAIRFIELD STATE: AL

CHEMIST:

COMPLETED:

SAD NO.	STATION	DATE & TIME SAMPLED	SAMPLE TYPE	ANALYSES TO BE RUN					
				ORGS	PEST	VOA	METSCUG/L	CN MG/L	HG UG/L
82C0272	EX-006 EXUM DUMP WELL #6	11/04/81- 1300- 00/00/00 1310	MONWL					.005	
82C0273	FINAL METAL BLANK	11/04/81- 1500- 00/00/00 0	BLKWA	METSCUG/L	HG UG/L				
82C0274	VOA TRIP BLANK	10/28/81- 1400- 00/00/00 0	BLKWA	VOA					

NOTES: 1) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
2) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1240

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1250

STATION: EX-1 EXUM DUMP WELL #1

SAD NO.: 82C0267

CHEMIST: E.W. Loy, Jr. COMPLETED 11/19/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	12U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	12K	UG/L
1,2-DICHLOROBENZENE	34536	12U	UG/L	*	BENZO(A)ANTHRACENE	34526	12K	UG/L
1,3-DICHLOROBENZENE	34566	12U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	12U	UG/L
1,4-DICHLOROBENZENE	34571	12U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	12U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	12U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	12U	UG/L
HEXACHLOROETHANE	34396	12U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	12U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	12U	UG/L	*	BENZO-A-PYRENE	34247	12U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	12U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	12U	UG/L
NITROBENZENE	34447	12U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	12U	UG/L
HEXACHLOROBUTADIENE	39702	12U	UG/L	*	BENZO(GHI)PERYLENE	34521	12U	UG/L
1,2,4-TRICHLOROBENZENE	34551	12U	UG/L	*	2-CHLOROPHENOL	34586	12U	UG/L
NAPHTHALENE	34696	12U	UG/L	*	2-NITROPHENOL	34591	12U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	12U	UG/L	*	PHENOL (GC/MS)	34694	12U	UG/L
ISOPHORONE	34408	12U	UG/L	*	2,4-DIMETHYLPHENOL	34606	12U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	12U	UG/L	*	2,4-DICHLOROPHENOL	34601	12U	UG/L
2-CHLORONAPHTHALENE	34581	12U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	12U	UG/L
ACENAPHTHYLENE	34200	12K	UG/L	*	PARACHLOROMETA CRESOL	34452	12U	UG/L
ACENAPHTHENE	34205	12K	UG/L	*	2,4-DINITROPHENOL	34616	34U	UG/L
DIMETHYL PHTHALATE	34341	12U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	34U	UG/L
2,4-DINITROTOLUENE	34611	12U	UG/L	*	PENTACHLOROPHENOL	39032	34U	UG/L
2,6-DINITROTOLUENE	34626	12U	UG/L	*	4-NITROPHENOL	34646	23U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	12U	UG/L	*				%
FLUORENE	34381	12K	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	12U	UG/L	*	hexadecanoic acid		12KN	UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	12U	UG/L	*				UG/L
N-NITROSODIPHENYLAMINE 9/	34433	12U	UG/L	*				UG/L
HEXACHLOROBENZENE	39700	12U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	12U	UG/L	*				UG/L
PHENANTHRENE	34461	12K	UG/L	*				UG/L
ANTHRACENE	34220	12K	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	12U	UG/L	*				UG/L
FLUORANTHENE	34376	12K	UG/L	*	the chromatogram indicates the presence			UG/L
PYRENE	34469	12K	UG/L	*	of a petroleum type product			UG/L
N-BUTYL BENZYL PHTHALATE	34292	12U	UG/L	*				UG/L
BENZIDINE	39120	12U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 34 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1215

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1235

STATION: EX-2 EXUM DUMP WELL # 2

SAD NO.: 82C0268

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	12U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	12K	UG/L
1,2-DICHLOROBENZENE	34536	12U	UG/L	*	BENZO(A)ANTHRACENE	34526	12K	UG/L
1,3-DICHLOROBENZENE	34566	12U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	12U	UG/L
1,4-DICHLOROBENZENE	34571	12U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	12U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	12U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	12K	UG/L
HEXACHLOROETHANE	34396	12U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	12K	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	12U	UG/L	*	BENZO-A-PYRENE	34247	12K	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	12U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	12U	UG/L
NITROBENZENE	34447	12U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	12U	UG/L
HEXACHLOROBUTADIENE	39702	12U	UG/L	*	BENZO(GHI)PERYLENE	34521	12K	UG/L
1,2,4-TRICHLOROBENZENE	34551	12U	UG/L	*	2-CHLOROPHENOL	34586	12U	UG/L
NAPHTHALENE	34696	12U	UG/L	*	2-NITROPHENOL	34591	12U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	12U	UG/L	*	PHENOL (GC/MS)	34694	12U	UG/L
ISOPHORONE	34408	12U	UG/L	*	2,4-DIMETHYLPHENOL	34606	12U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	12U	UG/L	*	2,4-DICHLOROPHENOL	34601	12U	UG/L
2-CHLORONAPHTHALENE	34581	12U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	12U	UG/L
ACENAPHTHYLENE	34200	12K	UG/L	*	PARACHLOROMETA CRESOL	34452	12U	UG/L
ACENAPHTHENE	34205	12U	UG/L	*	2,4-DINITROPHENOL	34616	34U	UG/L
DIMETHYL PHTHALATE	34341	12U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	34U	UG/L
2,4-DINITROTOLUENE	34611	12U	UG/L	*	PENTACHLOROPHENOL	39032	34U	UG/L
2,6-DINITROTOLUENE	34626	12U	UG/L	*	4-NITROPHENOL	34646	23U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	12U	UG/L	*				%
FLUORENE	34381	12U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	12U	UG/L	*	the chromatogram indicates the presence			UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	12U	UG/L	*	of a petroleum type product			UG/L
N-NITROSODIPHENYLAMINE 9/	34433	12U	UG/L	*				UG/L
HEXACHLOROBENZENE	39700	12U	UG/L	*	the data are suspect based on			UG/L
4-BROMOPHENYL PHENYL ETHER	34636	12U	UG/L	*	quality control information			UG/L
PHENANTHRENE	34461	12K	UG/L	*				UG/L
ANTHRACENE	34220	12K	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	12U	UG/L	*				UG/L
FLUORANTHENE	34376	12K	UG/L	*				UG/L
PYRENE	34469	12K	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	12U	UG/L	*				UG/L
BENZIDINE	39120	12U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 34 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 930

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1030

STATION: EX-3 EXUM DUMP WELL #3

SAD NO.: 82C0269

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	10U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	10U	UG/L
1,2-DICHLOROBENZENE	34536	10U	UG/L	*	BENZO(A)ANTHRACENE	34526	10U	UG/L
1,3-DICHLOROBENZENE	34566	10U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	10U	UG/L
1,4-DICHLOROBENZENE	34571	10U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	10U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	10U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	10U	UG/L
HEXACHLOROETHANE	34396	10U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	10U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	10U	UG/L	*	BENZO-A-PYRENE	34247	10U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	10U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	10U	UG/L
NITROBENZENE	34447	10U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	10U	UG/L
HEXACHLOROBUTADIENE	39702	10U	UG/L	*	BENZO(GHI)PERYLENE	34521	10U	UG/L
1,2,4-TRICHLOROBENZENE	34551	10U	UG/L	*	2-CHLOROPHENOL	34586	10U	UG/L
NAPHTHALENE	34696	10U	UG/L	*	2-NITROPHENOL	34591	10U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	10U	UG/L	*	PHENOL (GC/MS)	34694	10U	UG/L
ISOPHORONE	34408	10U	UG/L	*	2,4-DIMETHYLPHENOL	34606	10U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	10U	UG/L	*	2,4-DICHLOROPHENOL	34601	10U	UG/L
2-CHLORONAPHTHALENE	34581	10U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	10U	UG/L
ACENAPHTHYLENE	34200	10U	UG/L	*	PARACHLOROMETA CRESOL	34452	10U	UG/L
ACENAPHTHENE	34205	10U	UG/L	*	2,4-DINITROPHENOL	34616	30U	UG/L
DIMETHYL PHTHALATE	34341	10U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	30U	UG/L
2,4-DINITROTOLUENE	34611	10U	UG/L	*	PENTACHLOROPHENOL	39032	30U	UG/L
2,6-DINITROTOLUENE	34626	10U	UG/L	*	4-NITROPHENOL	34646	20U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	10U	UG/L	*				%
FLUORENE	34381	10U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	10U	UG/L	*				UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	10U	UG/L	*	hexadecanoic acid		10KN	UG/L
N-NITROSODIPHENYLAMINE 9/	34433	10U	UG/L	*				UG/L
HEXACHLOROBENZENE	39700	10U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	10U	UG/L	*	the data are suspect based on			UG/L
PHENANTHRENE	34461	10U	UG/L	*	quality control information			UG/L
ANTHRACENE	34220	10U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	10U	UG/L	*				UG/L
FLUORANTHENE	34376	10U	UG/L	*				UG/L
PYRENE	34469	10U	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	10U	UG/L	*				UG/L
BENZIDINE	39120	10U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 30 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1130

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1150

STATION: EX-004 EXUM DUMP WELL #4

SAD NO.: 82C0270

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	10U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	10U	UG/L
1,2-DICHLOROBENZENE	34536	10U	UG/L	*	BENZO(A)ANTHRACENE	34526	10U	UG/L
1,3-DICHLOROBENZENE	34566	10U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	10U	UG/L
1,4-DICHLOROBENZENE	34571	10U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	10U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	10U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	10U	UG/L
HEXACHLOROETHANE	34396	10U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	10U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	10U	UG/L	*	BENZO-A-PYRENE	34247	10U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	10U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	10U	UG/L
NITROBENZENE	34447	10U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	10U	UG/L
HEXACHLOROBUTADIENE	39702	10U	UG/L	*	BENZO(GHI)PERYLENE	34521	10U	UG/L
1,2,4-TRICHLOROBENZENE	34551	10U	UG/L	*	2-CHLOROPHENOL	34586	10U	UG/L
NAPHTHALENE	34696	10U	UG/L	*	2-NITROPHENOL	34591	10U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	10U	UG/L	*	PHENOL (GC/MS)	34694	10U	UG/L
ISOPHORONE	34408	10U	UG/L	*	2,4-DIMETHYLPHENOL	34606	10U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	10U	UG/L	*	2,4-DICHLOROPHENOL	34601	10U	UG/L
2-CHLORONAPHTHALENE	34581	10U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	10U	UG/L
ACENAPHTHYLENE	34200	10U	UG/L	*	PARACHLOROMETA CRESOL	34452	10U	UG/L
ACENAPHTHENE	34205	10U	UG/L	*	2,4-DINITROPHENOL	34616	30U	UG/L
DIMETHYL PHTHALATE	34341	10U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	30U	UG/L
2,4-DINITROTOLUENE	34611	10U	UG/L	*	PENTACHLOROPHENOL	39032	30U	UG/L
2,6-DINITROTOLUENE	34626	10U	UG/L	*	4-NITROPHENOL	34646	20U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	10U	UG/L	*				*
FLUORENE	34381	10U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	10U	UG/L	*				UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	10U	UG/L	*	The data are suspect based on quality			UG/L
N-NITROSODIPHENYLAMINE 9/	34433	10U	UG/L	*	control information			UG/L
HEXACHLOROBENZENE	39700	10U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	10U	UG/L	*				UG/L
PHENANTHRENE	34461	10K	UG/L	*				UG/L
ANTHRACENE	34220	10U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	10U	UG/L	*				UG/L
FLUORANTHENE	34376	10U	UG/L	*				UG/L
PYRENE	34469	10U	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	10U	UG/L	*				UG/L
BENZIDINE	39120	10U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 30 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD.RGN.IV
ATHENS.GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1100

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1120

STATION: EX-005 EXUM DUMP WELL #5

SAD NO.: 82C0271

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	10U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	10K	UG/L
1,2-DICHLOROBENZENE	34536	10U	UG/L	*	BENZO(A)ANTHRACENE	34526	10U	UG/L
1,3-DICHLOROBENZENE	34566	10U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	10U	UG/L
1,4-DICHLOROBENZENE	34571	10U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	10U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	10U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	10U	UG/L
HEXACHLOROETHANE	34396	10U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	10U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	10U	UG/L	*	BENZO-A-PYRENE	34247	10U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	10U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	10U	UG/L
NITROBENZENE	34447	10U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	10U	UG/L
HEXACHLOROBUTADIENE	39702	10U	UG/L	*	BENZO(GHI)PERYLENE	34521	10U	UG/L
1,2,4-TRICHLOROBENZENE	34551	10U	UG/L	*	2-CHLOROPHENOL	34586	10U	UG/L
NAPHTHALENE	34696	10U	UG/L	*	2-NITROPHENOL	34591	10U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	10U	UG/L	*	PHENOL (GC/MS)	34694	10U	UG/L
ISOPHORONE	34408	10U	UG/L	*	2,4-DIMETHYLPHENOL	34606	10U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	10U	UG/L	*	2,4-DICHLOROPHENOL	34601	10U	UG/L
2-CHLORONAPHTHALENE	34581	10U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	10U	UG/L
ACENAPHTHYLENE	34200	10U	UG/L	*	PARACHLOROMETA CRESOL	34452	10U	UG/L
ACENAPHTHENE	34205	10U	UG/L	*	2,4-DINITROPHENOL	34616	30U	UG/L
DIMETHYL PHTHALATE	34341	10U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	30U	UG/L
2,4-DINITROTOLUENE	34611	10U	UG/L	*	PENTACHLOROPHENOL	39032	30U	UG/L
2,6-DINITROTOLUENE	34626	10U	UG/L	*	4-NITROPHENOL	34646	20U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	10U	UG/L	*				%
FLUORENE	34381	10U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	10U	UG/L	*	The data are suspect based on quality			UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	10U	UG/L	*	control information			UG/L
N-NITROSODIPHENYLAMINE 9/	34433	10U	UG/L	*				UG/L
HEXACHLOROBENZENE	39700	10U	UG/L	*				UG/L
4-BROMOPHENYL PHENYL ETHER	34636	10U	UG/L	*				UG/L
PHENANTHRENE	34461	10U	UG/L	*				UG/L
ANTHRACENE	34220	10U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	10U	UG/L	*				UG/L
FLUORANTHENE	34376	10K	UG/L	*				UG/L
PYRENE	34469	10K	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	10U	UG/L	*				UG/L
BENZIDINE	39120	10U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 30 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

EXTRACTABLE ORGANIC ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1300

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1310

STATION: EX-006 EXUM DUMP WELL #6

SAD NO.: 82C0272

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#		UNITS
BIS(CHLOROMETHYL) ETHER	34268	NA	UG/L	*	BIS(2-ETHYLHEXYL) PHTHALATE	39100	10U	UG/L
N-NITROSODIMETHYLAMINE	34438	NA	UG/L	*	CHRYSENE	34320	10U	UG/L
1,2-DICHLOROBENZENE	34536	10U	UG/L	*	BENZO(A)ANTHRACENE	34526	10U	UG/L
1,3-DICHLOROBENZENE	34566	10U	UG/L	*	3,3'-DICHLOROBENZIDINE	34631	10U	UG/L
1,4-DICHLOROBENZENE	34571	10U	UG/L	*	DI-N-OCTYL PHTHALATE	34596	10U	UG/L
BIS(2-CHLOROETHYL) ETHER	34273	10U	UG/L	*	BENZO(B)FLUORANTHENE 10/	34230	10U	UG/L
HEXACHLOROETHANE	34396	10U	UG/L	*	BENZO(K)FLUORANTHENE 10/	34242	10U	UG/L
BIS(2-CHLOROISOPROPYL) ETHER	34283	10U	UG/L	*	BENZO-A-PYRENE	34247	10U	UG/L
N-NITROSODI-N-PROPYLAMINE	34428	10U	UG/L	*	INDENO (1,2,3-CD) PYRENE	34403	10U	UG/L
NITROBENZENE	34447	10U	UG/L	*	1,2,5,6-DIBENZANTHRACENE	34556	10U	UG/L
HEXACHLOROBUTADIENE	39702	10U	UG/L	*	BENZO(GHI)PERYLENE	34521	10U	UG/L
1,2,4-TRICHLOROBENZENE	34551	10U	UG/L	*	2-CHLOROPHENOL	34586	10U	UG/L
NAPHTHALENE	34696	10U	UG/L	*	2-NITROPHENOL	34591	10U	UG/L
BIS(2-CHLOROETHOXY) METHANE	34278	10U	UG/L	*	PHENOL (GC/MS)	34694	10U	UG/L
ISOPHORONE	34408	10U	UG/L	*	2,4-DIMETHYLPHENOL	34606	10U	UG/L
HEXACHLOROCYCLOPENTADIENE	34386	10U	UG/L	*	2,4-DICHLOROPHENOL	34601	10U	UG/L
2-CHLORONAPHTHALENE	34581	10U	UG/L	*	2,4,6-TRICHLOROPHENOL	34621	10U	UG/L
ACENAPHTHYLENE	34200	10U	UG/L	*	PARACHLOROMETA CRESOL	34452	10U	UG/L
ACENAPHTHENE	34205	10U	UG/L	*	2,4-DINITROPHENOL	34616	30U	UG/L
DIMETHYL PHTHALATE	34341	10U	UG/L	*	4,6-DINITRO-O-CRESOL	34657	30U	UG/L
2,4-DINITROTOLUENE	34611	10U	UG/L	*	PENTACHLOROPHENOL	39032	30U	UG/L
2,6-DINITROTOLUENE	34626	10U	UG/L	*	4-NITROPHENOL	34646	20U	UG/L
4-CHLOROPHENYL PHENYL ETHER	34641	10U	UG/L	*				%
FLUORENE	34381	10U	UG/L	*				UG/L
DIETHYL PHTHALATE	34336	10U	UG/L	*				UG/L
1,2-DIPHENYLHYDRAZINE 8/	34346	10U	UG/L	*				UG/L
N-NITROSODIPHENYLAMINE 9/	34433	10U	UG/L	*	the data are suspect based on			UG/L
HEXACHLOROBENZENE	39700	10U	UG/L	*	quality control information			UG/L
4-BROMOPHENYL PHENYL ETHER	34636	10U	UG/L	*				UG/L
PHENANTHRENE	34461	10U	UG/L	*				UG/L
ANTHRACENE	34220	10U	UG/L	*				UG/L
DI-N-BUTYL PHTHALATE	39110	10U	UG/L	*				UG/L
FLUORANTHENE	34376	10K	UG/L	*				UG/L
PYRENE	34469	10K	UG/L	*				UG/L
N-BUTYL BENZYL PHTHALATE	34292	10U	UG/L	*				UG/L
BENZIDINE	39120	10U	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 30 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED. THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) NA-COMPOUND NOT ANALYZED FOR.
6) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
7) A-AVERAGE VALUE
8) AND/OR AZOBENZENE
9) AND/OR DIPHENYLAMINE
10) BENZO(B)FLUORANTHENE AND/OR BENZO(K)FLUORANTHENE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1240

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1250

STATION: EX-1 EXUM DUMP WELL #1

SAD NO.: 82C0267

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81.

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.2U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.2U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1215

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1235

STATION: EX-2 EXUM DUMP WELL # 2

SAD NO.: 82C0268

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.04U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.1U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 930

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1030

STATION: EX-3 EXUM DUMP WELL #3

SAD NO.: 82C0269

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.04U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.1U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1130

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1150

STATION: EX-004 EXUM DUMP WELL #4

SAD NO.: 82C0270

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.04U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.1U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1100

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1120

STATION: EX-005 EXUM DUMP WELL #5

SAD NO.: 82C0271

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.04U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.1U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE:11/16/81

PESTICIDES/PCB'S AND OTHER CHLORINATED COUMPOUNDS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1300

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1310

STATION: EX-006 EXUM DUMP WELL #6

SAD NO.: 82C0272

CHEMIST: E.W. Loy, Jr. COMPLETED 11/20/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
ALDRIN	39330	0.04U	UG/L	*			UG/L
DIELDRIN	39380	0.04U	UG/L	*			UG/L
CHLORDANE (TECH. MIXTURE & METABOLITES)	39350	0.5U	UG/L	*			UG/L
P,P'-DDT	39300	0.1U	UG/L	*			UG/L
P,P'-DDE	39320	0.1U	UG/L	*			UG/L
P,P'-DDD	39310	0.1U	UG/L	*			UG/L
ENDOSULFAN,ALPHA	34361	0.04U	UG/L	*			UG/L
ENDOSULFAN,BETA	34356	0.1U	UG/L	*			UG/L
ENDOSULFAN SULFATE	34351	0.1U	UG/L	*			UG/L
ENDRIN	39390	0.1U	UG/L	*			UG/L
ENDRIN ALDEHYDE	34366	NA	UG/L	*			UG/L
HEPTACHLOR	39410	0.04U	UG/L	*			UG/L
HEPTACHLOR EPOXIDE	39420	0.04U	UG/L	*			UG/L
ALPHA-BHC	39337	0.04U	UG/L	*			UG/L
BETA-BHC	39338	0.04U	UG/L	*			UG/L
GAMMA-BHC (LINDANE)	39340	0.04U	UG/L	*			UG/L
DELTA-BHC	34259	0.04U	UG/L	*			UG/L
PCB-1242 (AROCLOR 1242)	39496	0.5U	UG/L	*			UG/L
PCB-1254 (AROCLOR 1254)	39504	0.9U	UG/L	*			UG/L
PCB-1221 (AROCLOR 1221)	39488	0.5U	UG/L	*			UG/L
PCB-1232 (AROCLOR 1232)	39492	0.5U	UG/L	*			UG/L
PCB-1248 (AROCLOR 1248)	39500	0.5U	UG/L	*			UG/L
PCB-1260 (AROCLOR 1260)	39508	0.9U	UG/L	*			UG/L
PCB-1016 (AROCLOR 1016)	34671	0.5U	UG/L	*			UG/L
TOXAPHENE	39400	2U	UG/L	*			UG/L
TCDD (DIOXIN)	34675	NA	UG/L	*			UG/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR
8) CONFIRMED ON TWO DIFFERENT GC COLUMNS
9) CONFIRMED BY GC/MS
10) REPORTED AS INDIVIDUAL COMPOUNDS
11) CONSTITUENTS OF TECHNICAL CHLORDANE

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1240

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1250

STATION: EX-1 EXUM DUMP WELL #1

SAD NO.: 82C0267

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS	*	COMPOUND	STORET#		UNITS
METHYL CHLORIDE	34418	50	UG/L	*				UG/L
METHYL BROMIDE	34413	50	UG/L	*				UG/L
DICHLORODIFLOUROMETHANE	34668	50	UG/L	*				UG/L
VINYL CHLORIDE	39175	50	UG/L	*				UG/L
CHLOROETHANE	34311	50	UG/L	*				UG/L
METHYLENE CHLORIDE	34423	50	UG/L	*				UG/L
TRICHLOROFLUOROMETHANE	34488	50	UG/L	*				UG/L
1,1-DICHLOROETHYLENE	34501	50	UG/L	*				UG/L
1,1-DICHLOROETHANE	34496	50	UG/L	*				UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	50	UG/L	*				UG/L
CHLOROFORM	32106	50	UG/L	*				UG/L
1,2-DICHLOROETHANE	32103	50	UG/L	*				UG/L
1,1,1-TRICHLOROETHANE	34506	50	UG/L	*				UG/L
CARBON TETRACHLORIDE	32102	50	UG/L	*				UG/L
DICHLOROBROMOMETHANE	32101	50	UG/L	*				UG/L
1,2-DICHLOROPROPANE	34541	50	UG/L	*				UG/L
TRANS-1,3-DICHLOROPROPENE	34699	50	UG/L	*				UG/L
TRICHLOROETHYLENE	39180	50	UG/L	*				UG/L
BENZENE	34030	50	UG/L	*				UG/L
CHLORODIBROMOMETHANE	34306	50	UG/L	*				UG/L
1,1,2-TRICHLOROETHANE	34511	50	UG/L	*				UG/L
CIS-1,3-DICHLOROPROPENE	34704	50	UG/L	*				UG/L
2-CHLOROETHYL VINYL ETHER	34576	50	UG/L	*				UG/L
BROMOFORM	32104	50	UG/L	*				UG/L
1,1,2,2-TETRACHLOROETHANE	34516	50	UG/L	*				UG/L
TETRACHLOROETHYLENE	34475	50	UG/L	*				UG/L
TOLUENE	34010	50	UG/L	*				UG/L
CHLOROBENZENE	34301	50	UG/L	*				UG/L
ETHYLBENZENE	34371	50	UG/L	*				UG/L
ACROLEIN	34210	1000	UG/L	*				UG/L
ACRYLONITRILE	34215	1000	UG/L	*				UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1215

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1235

STATION: EX-2 EXUM DUMP WELL # 2

SAD NO.: 82C0268

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLUOROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5U	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 930

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1030

STATION: EX-3 EXUM DUMP WELL #3

SAD NO.: 82C0269

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLOUROMETHANE	34668	5.7	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5K	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1130

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1150

STATION: EX-004 EXUM DUMP WELL #4

SAD NO.: 82C0270

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLOUROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5U	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1100

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1120

STATION: EX-005 EXUM DUMP WELL #5

SAD NO.: 82C0271

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLUOROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5U	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES: 1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

DATE: 11/16/81

PURGEABLE ORGANICS ANALYSIS
DATA REPORTING SHEET
WATER

EPA-SAD,RGN.IV
ATHENS,GA

PROJECT #: 82-24 PROG ELEMENT #: HWSR

SAMPLE RECEIVED(DATE & TIME): 11/05/81 1722

SOURCE: EXUM DUMP US STEEL

SAMPLE TYPE: MONWL

SAMPLE START(DATE & TIME):11/04/81 1300

CITY: FAIRFIELD STATE: AL

SAMPLE STOP(DATE & TIME): 00/00/00 1310

STATION: EX-006 EXUM DUMP WELL #6

SAD NO.: 82C0272

CHEMIST: E.W. Loy, Jr. COMPLETED 11/23/81

COMPOUND	STORET#		UNITS		COMPOUND	STORET#	UNITS
METHYL CHLORIDE	34418	5U	UG/L	*			UG/L
METHYL BROMIDE	34413	5U	UG/L	*			UG/L
DICHLORODIFLOUROMETHANE	34668	5U	UG/L	*			UG/L
VINYL CHLORIDE	39175	5U	UG/L	*			UG/L
CHLOROETHANE	34311	5U	UG/L	*			UG/L
METHYLENE CHLORIDE	34423	5U	UG/L	*			UG/L
TRICHLOROFLUOROMETHANE	34488	5U	UG/L	*			UG/L
1,1-DICHLOROETHYLENE	34501	5U	UG/L	*			UG/L
1,1-DICHLOROETHANE	34496	5U	UG/L	*			UG/L
1,2-TRANS-DICHLOROETHYLENE	34546	5U	UG/L	*			UG/L
CHLOROFORM	32106	5U	UG/L	*			UG/L
1,2-DICHLOROETHANE	32103	5U	UG/L	*			UG/L
1,1,1-TRICHLOROETHANE	34506	5U	UG/L	*			UG/L
CARBON TETRACHLORIDE	32102	5U	UG/L	*			UG/L
DICHLOROBROMOMETHANE	32101	5U	UG/L	*			UG/L
1,2-DICHLOROPROPANE	34541	5U	UG/L	*			UG/L
TRANS-1,3-DICHLOROPROPENE	34699	5U	UG/L	*			UG/L
TRICHLOROETHYLENE	39180	5U	UG/L	*			UG/L
BENZENE	34030	5U	UG/L	*			UG/L
CHLORODIBROMOMETHANE	34306	5U	UG/L	*			UG/L
1,1,2-TRICHLOROETHANE	34511	5U	UG/L	*			UG/L
CIS-1,3-DICHLOROPROPENE	34704	5U	UG/L	*			UG/L
2-CHLOROETHYL VINYL ETHER	34576	5U	UG/L	*			UG/L
BROMOFORM	32104	5U	UG/L	*			UG/L
1,1,2,2-TETRACHLOROETHANE	34516	5U	UG/L	*			UG/L
TETRACHLOROETHYLENE	34475	5U	UG/L	*			UG/L
TOLUENE	34010	5U	UG/L	*			UG/L
CHLOROBENZENE	34301	5U	UG/L	*			UG/L
ETHYLBENZENE	34371	5U	UG/L	*			UG/L
ACROLEIN	34210	100U	UG/L	*			UG/L
ACRYLONITRILE	34215	100U	UG/L	*			UG/L

NO OTHER ORGANIC COMPOUND DETECTED WITH AN ESTIMATED MINIMUM DETECTION LIMIT OF 5 µg/L

NOTES:
1) J-ESTIMATED VALUE
2) K-ACTUAL VALUE IS KNOWN TO BE LESS THAN VALUE GIVEN.
3) L-ACTUAL VALUE IS KNOWN TO BE GREATER THAN VALUE GIVEN.
4) U-MATERIAL WAS ANALYZED FOR BUT NOT DETECTED.
THE NUMBER IS THE MINIMUM DETECTION LIMIT.
5) N-PRESUMPTIVE EVIDENCE OF PRESENCE OF MATERIAL
6) A-AVERAGE VALUE
7) NA-COMPOUND NOT ANALYZED FOR.

United States Steel Corporation

600 GRANT STREET
PITTSBURGH, PENNSYLVANIA 15230

RICHARD DWOREK
[illegible]

May 19, 1982

Mr. Bernard F. Cox
Chief Hazardous & Industrial Waste Section
Division of Solid & Hazardous Waste
[illegible] Monroe Street
Montgomery, Alabama 36130-1701

Dear Mr. Cox:

Please find attached a copy of United States Steel Corporation Fairfield Works final report for Exum Landfill groundwater monitoring.

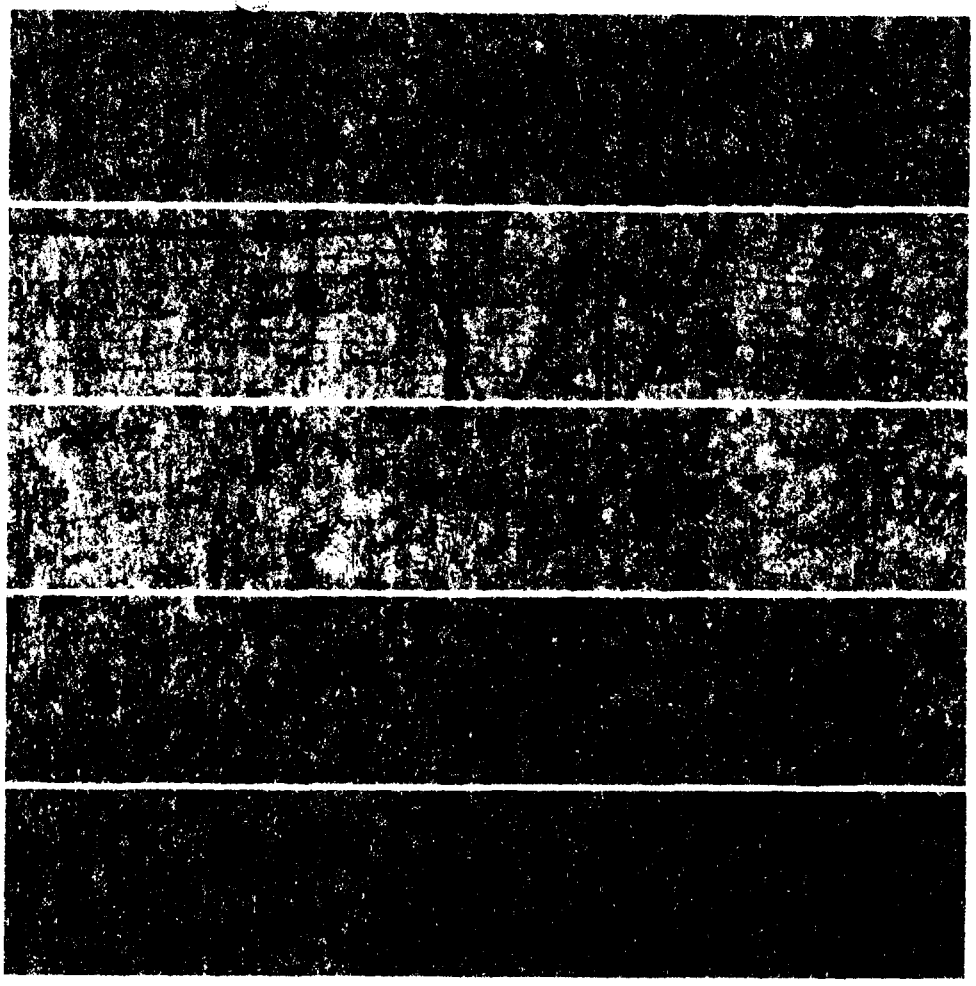
Should you have any questions regarding this report, please contact this office at (412)-433-6016.

Very truly yours

A. A. Spinola

A. A. Spinola
Senior Environment Engineer
Environment & Energy

[illegible]
[illegible]



FINAL REPORT
EXUM LANDFILL GROUND WATER
MONITORING FOR
UNITED STATES STEEL CORPORATION (USSC)
FAIRFIELD WORKS

JOB NO 2556-181-09
MAY 14, 1992

Dames & Moore

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FINAL REPORT
EXUM LANDFILL GROUND WATER MONITORING FOR
UNITED STATES STEEL CORPORATION (USSC)
FAIRFIELD WORKS

INTRODUCTION

This report presents the results of our installation of a ground water monitoring well system at Exum landfill and chemical analysis of initial water samples from these wells. The landfill is located about 2 miles north of the United States Steel Corporation (USSC) Fairfield Works main plant area and has been used for many years as a disposal site for large quantities of nonhazardous waste. There are also lesser quantities of other wastes, which by definitions in regulations under the Resource Conservation and Recovery Act (40 CFR 261, May 19, 1980) now are considered hazardous. Disposal of the hazardous materials was terminated in the fall of 1980, and the site is therefore an inactive facility not subject to ground water monitoring specified (40 CFR 265) for active hazardous waste landfills.

This ground water quality investigation has been requested by the Alabama Department of Public Health, with authority available under the imminent hazard provisions of the Act. The well locations and depths, and analysis parameters were agreed upon by USSC and Alabama Department of Public Health (ADPH) , during a meeting with Dames & Moore on May 27, 1981.

The scope of work includes:

- Developing monitoring well system layout and design;
- Installing system of six monitoring wells, Ex-1 through Ex-6;
- Collecting ground water samples from the installed well system;
- Analyzing water samples by a commercial laboratory for the priority pollutants and primary drinking water parameters;
- Preparing a report presenting the details of well design and installation, field investigations, and sample handling and analysis results.

In addition, during the field investigation, USSC requested Dames & Moore to sample one surface water station (OF-1) at a culvert and test for the same parameters that were analyzed by USEPA in their assessment of Exum surface water in 1980/81. The USEPA program included sampling at the same point as Dames & Moore's OF-1.

PRELIMINARY EVALUATIONS

Preliminary evaluations were conducted to develop ground water monitoring well system layout and well design. The results of these evaluations were presented to USSC in our report dated Janaury 8, 1981. The evaluations were based on literature review and site reconnaissance and presented a description of the anticipated regional and site geohydrology and recommendations for the well system layout and design. The locations were reviewed by ADPH who made substantive revisions and selected the locations used for installation.

SUBSURFACE EXPLORATIONS

Borings were drilled at each selected well location to determine site geohydrologic conditions and for installation of monitoring wells. This drilling program was conducted from August 31, 1981 through September 22, 1981. Well locations and location of the surface water sampling station are shown on Plate 1. Well elevations and coordinate locations are presented on Plates 2 through 7. Horizontal and vertical survey data were provided by USSC personnel. Wells Ex-1, Ex-2, Ex-4, and Ex-6 were drilled with a Failing 1500 rig using augers to penetrate the soil and rotary wash with a 5-3/4 inch diameter tricone bit for rock penetration. Wells Ex-3 and Ex-5 were drilled with a Gardener Denver 15-W rig using air-rotary with a tricone bit to penetrate soil and a 6.1 inch down-hole air driven precussion bit to penetrate rock. All water used in the drilling program was obtained from a city water supply. Where augers were used to advance wells, standard penetration samples were taken. Cutting and chip samples were collected when drilling in rock. The wells were drilled under the supervision of a Dames & Moore geohydrologist who maintained a detailed log and collected representative samples of the materials encountered.

GEOHYDROLOGIC CONDITIONS

Data on site-specific geohydrologic conditions were gathered during the drilling and monitor well installation operations.

The site is underlain by Pennsylvania age rocks of the Pottsville formation. Lithologies encountered were shales, sandy shales, and fine to very fine grained sandstones. Occasional stringers of coal (probably less than 6 inches in thickness) were noted throughout the section drilled. The weathered soil zone on top of sound rock was relatively thin, varying from a minimum of none to a maximum of 16 feet thick. Natural material was overlain by fill varying in thickness from 8 feet to 21 feet in Wells Ex-1, Ex-2, Ex-4, and Ex-5. Lithologic logs of the wells are presented on Plates 2 through 7.

Examination of rock cuttings indicates that the shales and sandstones are well lithified with negligible primary permeability. Water transport through the formation is inferred to be limited to movement through joint and tectonic fracture systems. Static water elevations are presented on Plates 2 through 7.

MONITORING WELL INSTALLATION

All of the borings drilled were completed into permanent monitoring wells. General construction procedures and materials used were as follows. A 10-foot long section of 2-inch diameter slotted stainless steel screen with a 5-foot stainless steel riser was set at 2 to 5 feet above the bottom of the well and connected to the surface with 2-inch galvanized steel pipe. The annulus between the pipe and drilled well was packed with filter gravel to an appropriate thickness above the screen. A minimum 1-foot thick bentonite clay seal was placed on top of the gravel and the remaining annulus was filled with an approximate 6 water to 1 cement slurry mix. Each well was back flushed with city water and developed by pressurized air lift until a clean water flow was produced. Specific construction details of each well are presented in Table 1.

Data in the table show that the gravel packed interval in these wells is considerably greater than the screen lengths. The extended

gravel pack accommodates the relatively slow flow rate within the rock. Because of the slow flow rate, specific zones of ground water flow could not be detected when making the well boring. The gravel pack design allows any zone that is capable of producing water to contribute its flow for sampling required from the wells.

GROUND AND SURFACE WATER SAMPLING

Ground water samples for chemical analysis were taken from Wells Ex-1, Ex-2, Ex-4, and Ex-6 on September 17, 1981. Wells Ex-3 and EX-5 were sampled on November 4, 1981. The following sampling protocol and shipping procedures were used. Depth to water in the casing was measured and the appropriate volume of water to be evacuated prior to sample collection was calculated. Each well was evacuated of 1.5 casing volumes or bailed dry dependant on which condition occurred first. Bailing was accomplished with a PVC bailer. The bailer was rinsed between each well to minimize potential for cross contamination. Each well was sampled in the order that it was evacuated. Samples were placed in pre-sterilized containers provided by the analytical laboratory. Individual containers were labeled and the aggregate of containers necessary for an individual well's sample was placed in an ice packed chest. The samples were transferred to a courier provided by the analytical laboratory and delivered to the lab for analysis.

The surface water sample, OF-1, was collected at an outfall which drains a portion of the landfill. The sample was collected using a sterilized plastic container to dip water from the outfall and fill sample bottles. The sample was placed in pre-sterilized containers, labeled and shipped by the same procedure as the ground water samples.

SAMPLE ANALYSIS

The samples were delivered to CH_2M Hill in Montgomery, Alabama, for analysis. Priority pollutants were analyzed in accordance with the procedures described in Methods 624 and 625, Federal Register Vol. 44, No. 223 (1979). Primary Drinking Water Standards were analyzed in accordance with Standard Methods for the Examination of Water and Waste Water, 15th Edition. The Appendix presents the results of analysis of

samples from monitoring wells EX-1 through EX-6, and surface water sample OF-1. The majority of the parameters for both the Dames & Moore samples and USEPA sample did not exceed detection limits.

Table 2 compares the results of USEPA's sample SAD 81C0404 and Dames & Moore's OF-1, surface water samples taken at the same location but at different times. It should be noted that analysis results on the first three pages of this table are expressed in micro-grams per liter, and results on the fourth page are in milligrams per liter.

Table 3 presents all organic compounds detected in analysis of Samples EX-1 through EX-6.

Table 4 presents all cyanide, radiological data, and inorganic compounds detected in analysis of Samples EX-1 through EX-6. Those compounds which exceed primary drinking water standards are noted.

REFERENCES

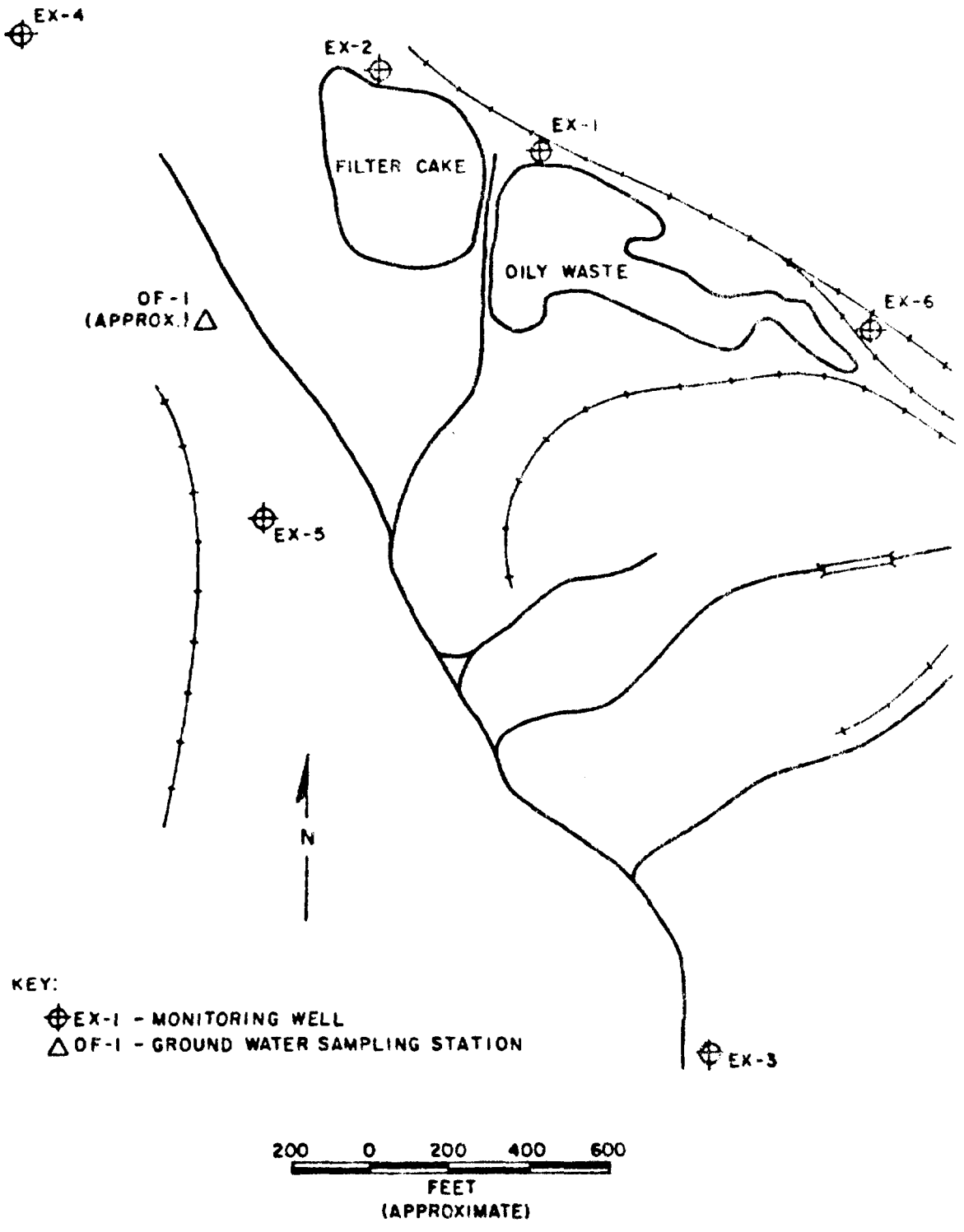
1. Alabama Department of Public Health, 1980. Hazardous waste management regulations. Alabama Department of Public Health, Montgomery, Alabama.

2. Dames & Moore, 1981. Report ground water monitoring Exum dump for U.S. Steel Corporation, Dames & Moore, Washington, D.C., January 8, 1981.

3. Kidd, J.T., 1979. Areal geology of Jefferson County, Alabama. Geological Survey of Alabama, Geologic Division, Atlas 15.

4. Moffett, T.B., and Moser, P.H., 1979. Ground water resources of the Birmingham and Cahaba Valleys of Jefferson County, Alabama. Geological Survey of Alabama, Environmental Division and Water Resources Division, Circular 103.

5. Szabo, M.W., Beg, M.A., Rheams, L.J., and Clark, O.M., Jr., 1979. Engineering geology of Jefferson County, Alabama: Geological Survey of Alabama, Mineral Resource Division, Atlas 14.



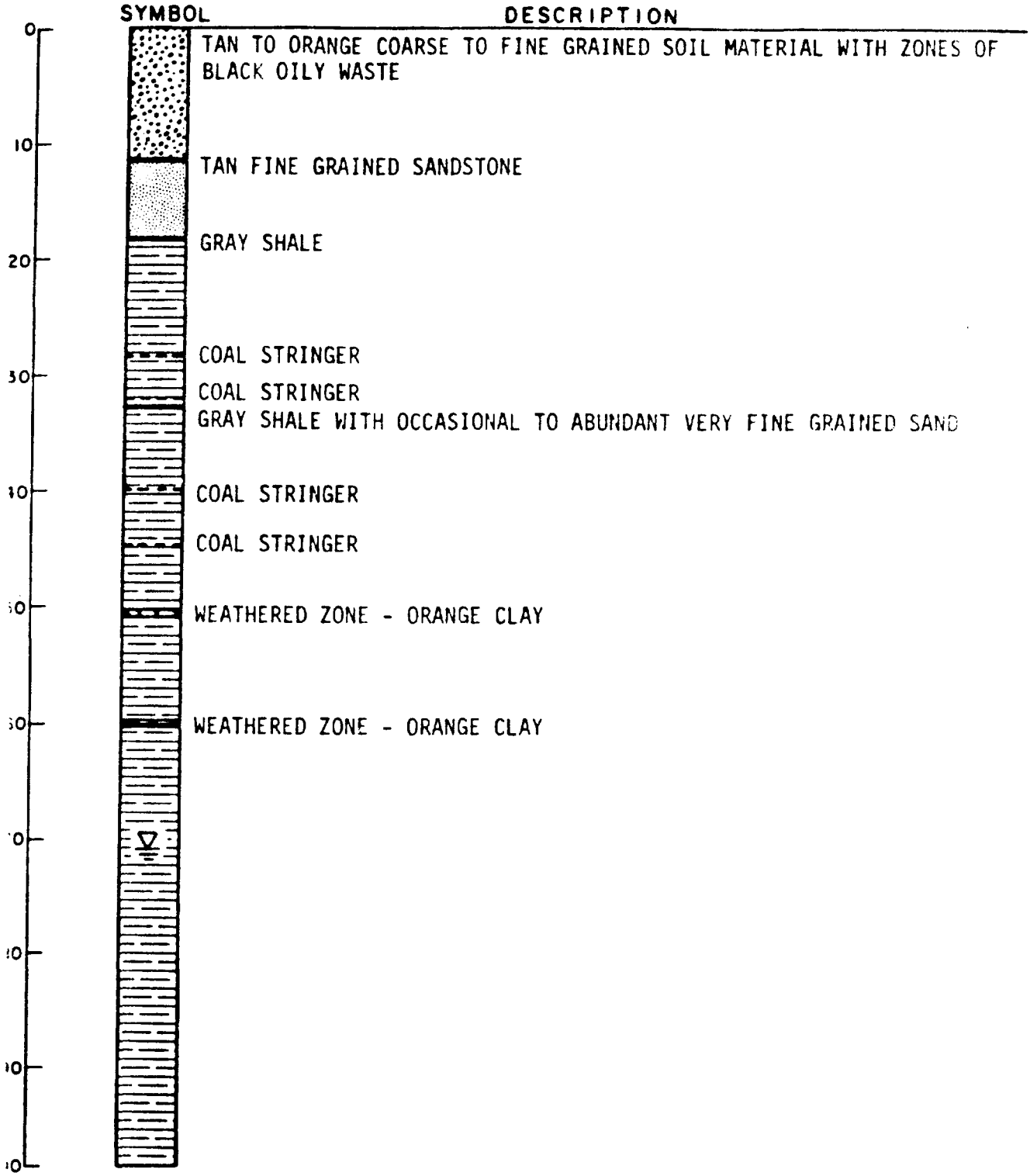
EXUM LANDFILL MONITORING WELL LOCATIONS AND
GROUND WATER SAMPLING STATION

DAMES & MOORE

LOG OF WELL EX-1

LOCATION: 6405.67 N
8603.28 W

GROUND SURFACE ELEVATION: 600.97 MSL
STATIC WATER ELEVATION: 530.77 MSL
3 OCT 81



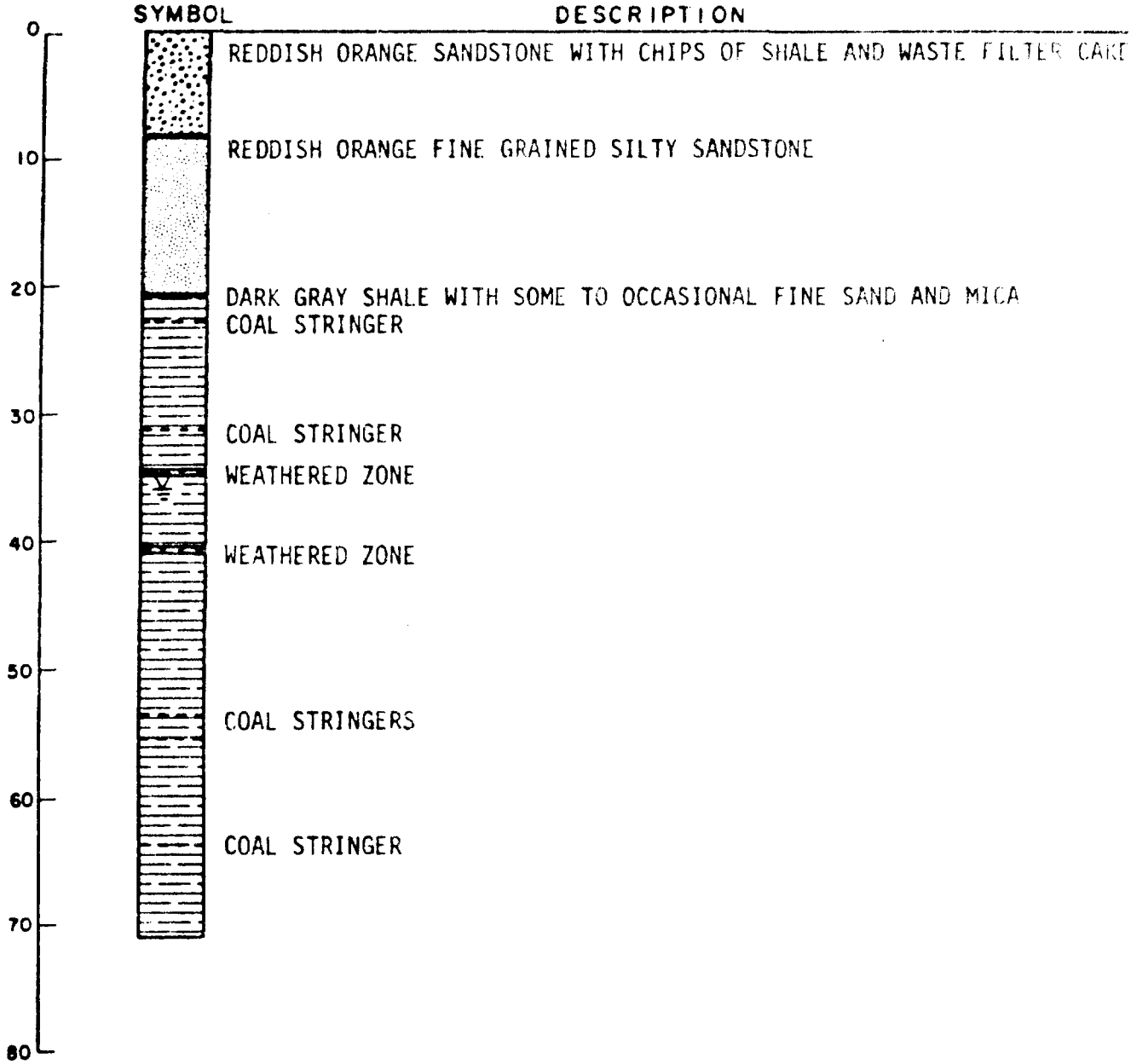
END:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

LOG OF WELL EX-2

LOCATION: 6303.29 N
9057.64 W

GROUND SURFACE ELEVATION: 599.28 MSL
STATIC WATER ELEVATION: 562.78 MSL
3 OCT 81



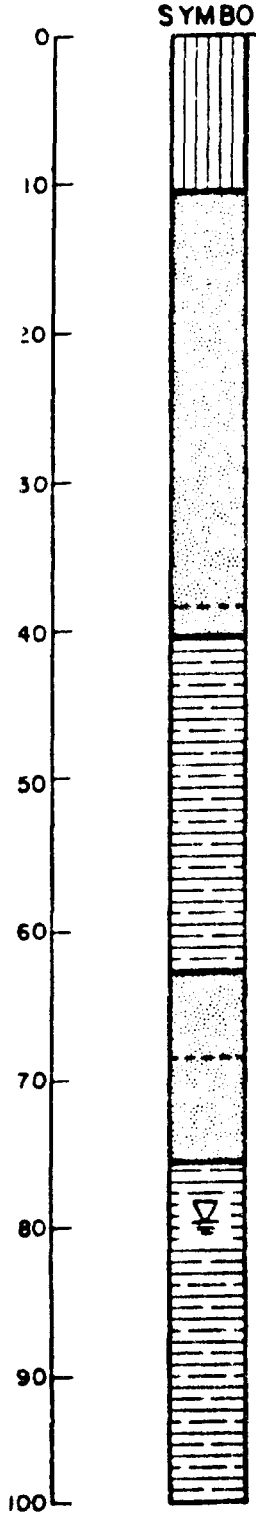
LEGEND:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

LOG OF WELL EX-3

LOCATION: 4914.22N
6861.13W

GROUND SURFACE ELEVATION: 697.26
STATIC WATER ELEVATION: 617.26
28 OCT 81



SYMBOL	DESCRIPTION
	ORANGE TO TAN MICACOUS SILTY FINE GRAINED SAND
	TAN TO BROWN MICACOUS, FINE TO MEDIUM GRAINED SANDSTONE
	GRADES TO GRAY
	COAL STRINGER
	GRAY SHALE WITH SOME FINE GRAINED SAND
	MEDIUM GRAY VERY FINE GRAINED SANDSTONE WITH OCCASIONAL STRINGERS OF SHALE
	COAL STRINGER
	DARK GRAY SHALE WITH SOME VERY FINE GRAINED SAND

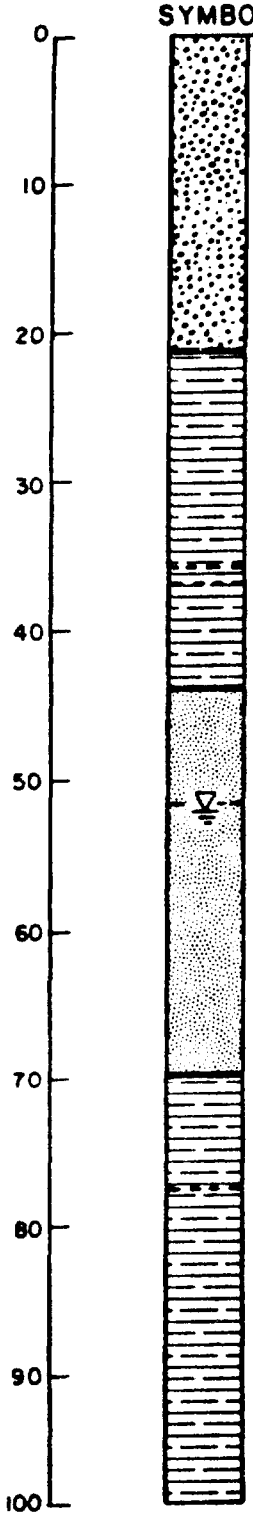
LEGEND:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

LOG OF WELL EX-4

LOCATION: 5865.78 N
7829.42 W

GROUND SURFACE ELEVATION: 550.17 MSL
STATIC WATER ELEVATION: 497.75 MSL
3 OCT 81



DESCRIPTION

LIMESTONE COBBLES, SLAG, SANDY CLAY, COAL

LIGHT TO DARK GRAY SHALE WITH SOME VERY FINE GRAINED SAND

COAL STRINGERS

LIGHT GRAY VERY FINE GRAINED SANDSTONE

COAL STRINGER

GRADES WITH OCCASIONAL STRINGERS OF SILTY SHALE

DARK GRAY SHALE WITH ABUNDANT VERY FINE GRAINED SAND

GRADES WITH NO SAND

COAL STRINGER

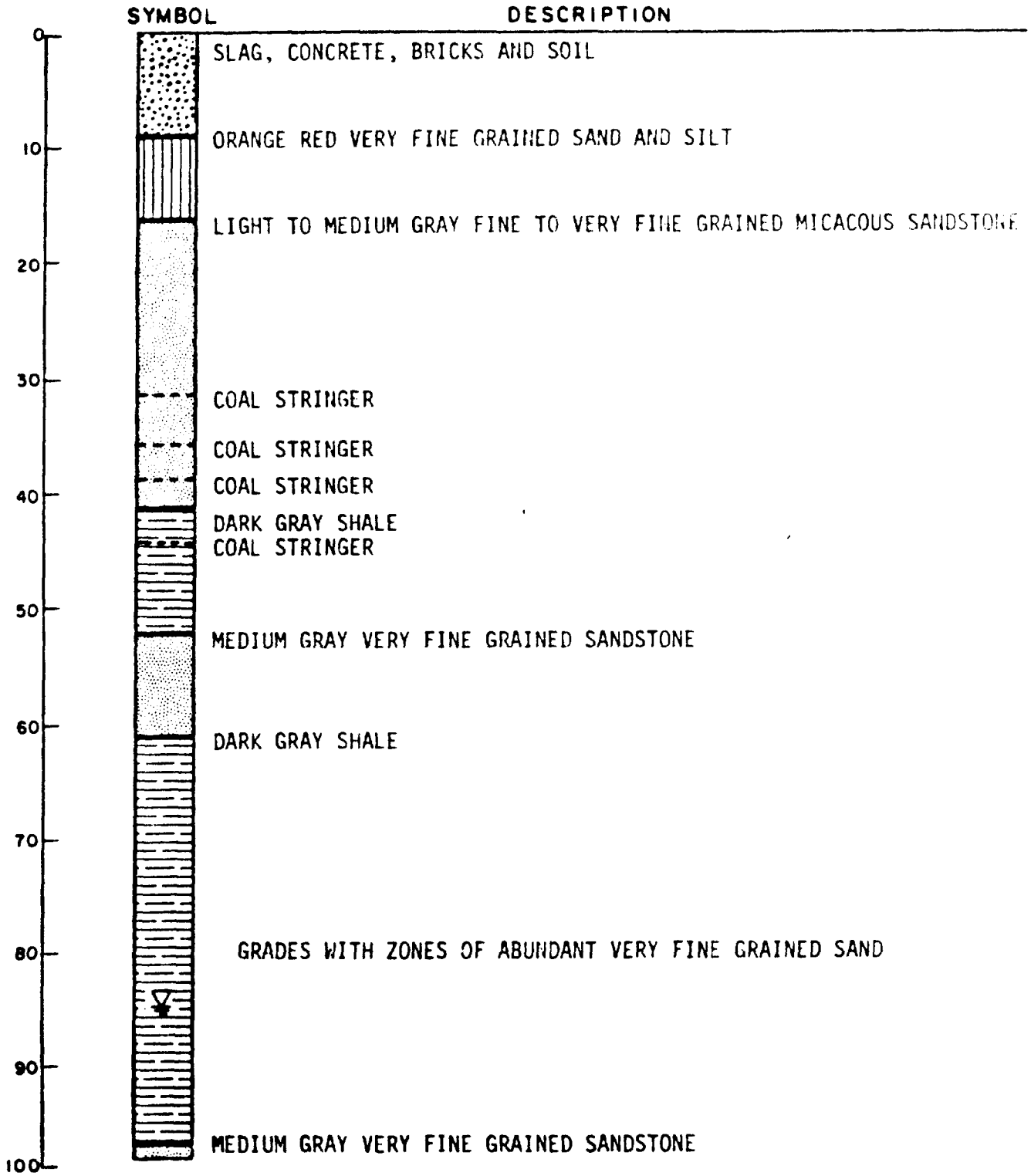
EGEND:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

LOG OF WELL EX-5

LOCATION: 5305.49N
8561.78W

GROUND SURFACE ELEVATION: 565.45 MSL
STATIC WATER ELEVATION: 480.46 MSL
28 OCT 81



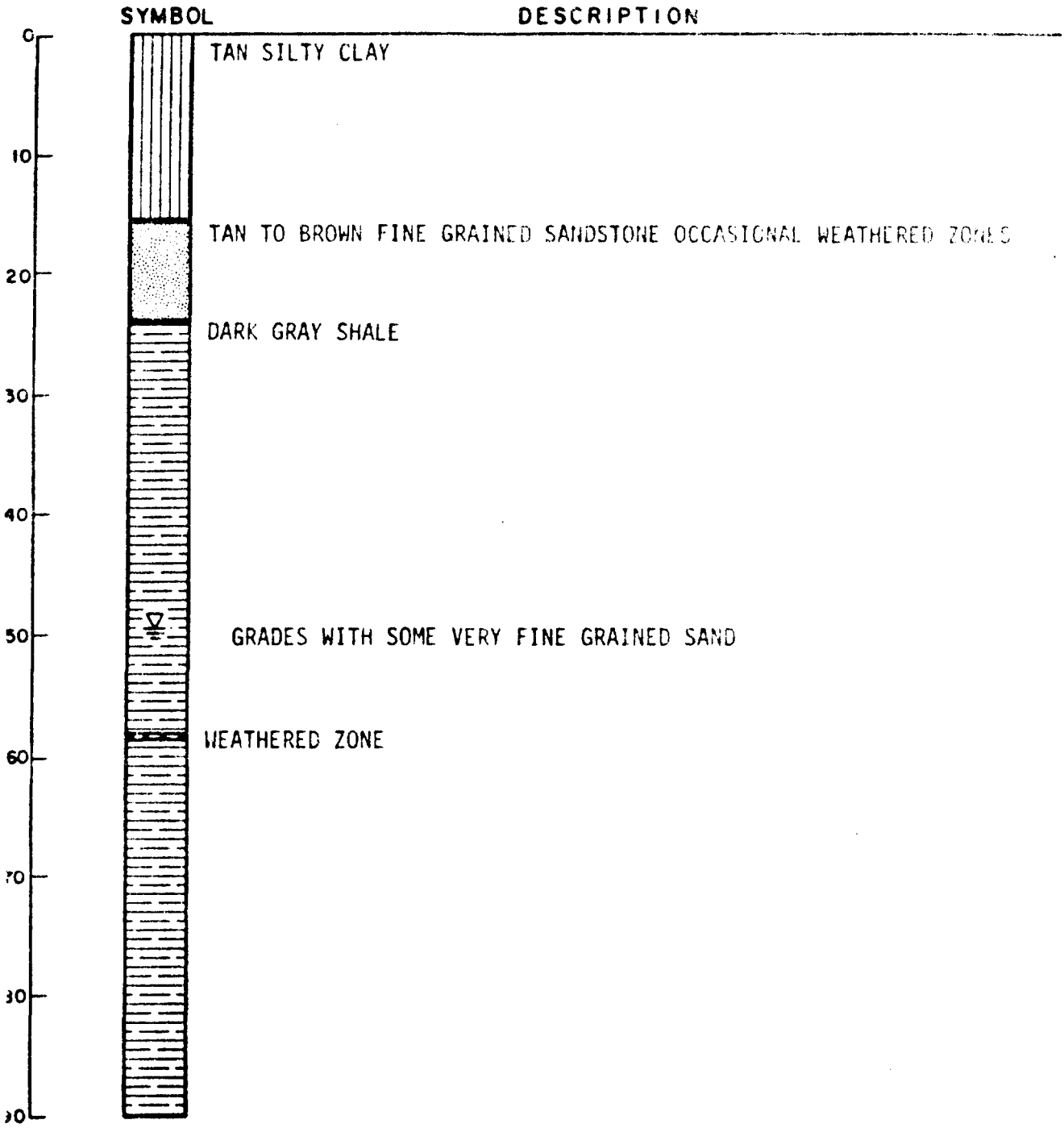
LEGEND:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

LOG OF WELL EX-6

LOCATION: 6567.96N
7693.66W

GROUND SURFACE ELEVATION: 605.81 MSL
STATIC WATER ELEVATION: 556.81 MSL
3 OCT 8



END:

- FILL OR PROBABLE FILL
- SOIL
- SANDSTONE
- SHALE
- COAL STRINGER
- WEATHERED ZONE
- STATIC WATER LEVEL

TABLE 1

MONITORING WELL CONSTRUCTION DETAILS

Well Number	Screened Interval*	Gravel-Pack Interval*	Clay Seal Interval*	Cement-Gravel Interval*
Ex-1	87'2"-97'2"	28'-100'	25'6"-28'	0'-25'6"
Ex-2	59'10"-69'10"	20'6"-71'	18'-20'6"	0'-18'
Ex-3	85'7"-95'7"	21'-100'	20'-21'	0'-20'
Ex-4	85'9"-95'9"	27'-100'	24'6"-27'	0'-24'6"
Ex-5	87'7"-97'7"	20'-99'6"	18'-20'	0'-18'
Ex-6	75'-85'	13'-90'	11'-13'	0'-13'

* Interval is feet below ground surface.

TABLE 7

SURFACE WATER TEST DATA COMPARISON OF US EPA 1980 DATA
A DAMES & MOORE OF-1

8/27/80

WATER
DATA REPORTING SHEET

SAD NO. 81C0404 CONTRACT LAB NO. D0254 CONTRACT LAB Mead Lab
PROJECT U.S. Steel, Exum Dump SOURCE & STATION EOR-Downstream from Dump, Culvert under road.
Birmingham, AL
DATE/TIME SAMPLED 11-17-80 @ 1145 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-13-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	D&M OF-1
1B	Acenaphthene	34205	260	10U
5B	Benzidine	39120	10U	10U
8B	1,2,4-Trichlorobenzene	34551	10U	10U
9B	Hexachlorobenzene	39700	10U	10U
12B	Hexachloroethane	34396	10U	10U
17B	Bis(Chloromethyl) Ether	34268	NA	NA
18B	Bis(2-Chloroethyl) Ether	34273	10U	10U
20B	2-Chloronaphthalene	34581	10U	10U
25B	1,2-Dichlorobenzene	34536	10U	10U
26B	1,3-Dichlorobenzene	34566	10U	10U
27B	1,4-Dichlorobenzene	34571	10U	10U
28B	3,3'-Dichlorobenzidine	34631	10U	10U
35B	2,4-Dinitrotoluene	34611	10U	10U
36B	2,6-Dinitrotoluene	34626	10U	10U
37B	1,2-Diphenylhydrazine 1/	34346	10U	10U 1/
39B	Fluoranthene	34376	20	10U
40B	4-Chlorophenyl Phenyl Ether	34641	10U	10U
41B	4-Bromophenyl Phenyl Ether	34636	10U	10U
42B	Bis(2-Chloroisopropyl) Ether	34283	10U	10U
43B	Bis(2-Chloroethoxy) Methane	34278	10U	10U
52B	Hexachlorobutadiene	39702	10U	10U
53B	Hexachlorocyclopentadiene	34386	10U	20U
54B	Isophorone	34408	10U	10U
55B	Naphthalene	34696	10U	10U
56B	Nitrobenzene	34447	10U	10U
61B	N-Nitrosodimethylamine	34438	NA	NA
62B	N-Nitrosodiphenylamine 2/	34433	10U	10U 2/
63B	N-Nitrosodi-N-Propylamine	34428	10U	10U
66B	Bis(2-Ethylhexyl) Phthalate	39100	10U	10U
67B	Butyl Benzyl Phthalate	34292	10U	10U
68B	Di-N-Butylphthalate	39110	10U	10U
69B	Di-N-Octylphthalate	34596	10U	10U
70B	Diethylphthalate	34336	10U	10U
71B	Dimethylphthalate	34341	10U	10U
72B	Benzo (A) Anthracene 4/	34526	10U	10U
73B	Benzo(A) Pyrene	34247	10U	10U
74B	3,4-Benzofluoranthene 5/	34230	10U	10U 6/
75B	Benzo(K) Fluoranthene 5/	34242	10U	10U
76B	Chrysene 4/	34320	10U	10U
77B	Acenaphthylene	34200	10U	10U
78B	Anthracene 4/	34220	50	10U
79B	Benzo(GHI) Perylene	34521	25U	25U
80B	Fluorene	34381	160	10U
81B	Phenanthrene 3/	34461	50	10U
82B	Dibenzo(A, H) Anthracene	34556	25U	25U
83B	Indeno (1,2,3-CD) Pyrene	34403	25U	25U
84B	Pyrene	34469	25K	10U

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	
21A	2,4,6-Trichlorophenol	34621	25U	10U
22A	P-Chloro-m-Cresol	34452	25U	20U
24A	2-Chlorophenol	34586	25U	20U
31A	2,4-Dichlorophenol	34601	20K	20U
34A	2,4-Dimethylphenol	34606	58	20U
57A	2-Nitrophenol	34591	25U	20U
58A	4-Nitrophenol	34646	75U	50U
59A	2,4-Dinitrophenol	34616	250U	100U
60A	4,6-Dinitro-o-Cresol	34657	250U	100U
64A	Pentachlorophenol	39032	25U	50U
65A	Phenol (GC/MS)	34694	140	20U

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

(over)

Benzo (B) Fluoranthene

EPA, SAD, [illegible]
8/22/80

WATER
DATA REPORTING SHEET

SAD NO. 81C0404 CONTRACT LAB NO. D0254 CONTRACT LAB Mead Laboratory
PROJECT U.S. Steel, Exum Dump, Birmingham, AL SOURCE & STATION EDD-Downstream from dump, Culvert under road.
DATE/TIME SAMPLED 11-17-80 @ 1145 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-26-81

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	D&M OF-1
2V	Acrolein	34210	100U	100U
3V	Acrylonitrile	34215	100U	100U
4V	Benzene	34030	14	5U
6V	Carbon Tetrachloride	32102	10U	5U
7V	Chlorobenzene	34301	10U	5U
10V	1,2-Dichloroethane	32103	10U	5U
11V	1,1,1-Trichloroethane	34506	10U	13
13V	1,1-Dichloroethane	34496	10U	5U
14V	1,1,2-Trichloroethane	34511	10U	5U
15V	1,1,2,2-Tetrachloroethane	34516	10U	5U
16V	Chloroethane	34311	10U	5U
19V	2-Chloroethylvinyl Ether	34576	10U	5U
23V	Chloroform	32106	10U	5U
29V	1,1-Dichloroethylene	34501	10U	5U
30V	1,2-Trans-Dichloroethylene	34546	10U	5U
32V	1,2-Dichloropropane	34541	10U	5U
33V	1,3-Dichloropropylene	34561	10U	5U
38V	Ethylbenzene	34371	10U	5U
44V	Methylene Chloride	34423	10U	5U
45V	Methyl Chloride	34418	10U	5U
46V	Methyl Bromide	34413	10U	5U
47V	Bromoform	32104	10U	5U
48V	Dichlorobromomethane	32101	10U	5U
49V	Trichlorofluoromethane	34488	10U	5U
50V	Dichlorodifluoromethane	34668	10U	NA
51V	Chlorodibromomethane	34306	10U	5U
85V	Tetrachloroethylene	34475	10U	5U
86V	Toluene	34010	10U	5U
87V	Trichloroethylene	39180	76	5U
88V	Vinyl Chloride	39175	10U	5U
PESTICIDES/PCB'S ON NRDC LIST OF PRIORITY POLLUTANTS			**ug/L**	
89P	Aldrin	39330	0.10U	1U
90P	Dieldrin	39380	0.10U	1U
91P	Chlordane (Tech. Mixture & Metabolites)	39350	0.10U	1U
92P	4,4'-DDT (p,p'-DDT)	39300	0.10U	1U
93P	4,4'-DDE (p,p'-DDE)	39320	0.10U	1U
94P	4,4'-DDD (p,p'-TDE)	39310	0.10U	1U
95P	a-Endosulfan-Alpha	34361	0.10U	1U
96P	b-Endosulfan-Beta	34356	0.10U	1U
97P	Endosulfan Sulfate	34351	0.10U	1U
98P	Endrin	39390	0.10U	1U
99P	Endrin Aldehyde	34366	0.10U	1U
100P	Heptachlor	39410	0.10U	1U
101P	Heptachlor Epoxide	39420	0.10U	1U
102P	a-BHC-Alpha	39337	0.10U	1U
103P	b-BHC-Beta	39338	0.10U	1U
104P	γ-BHC-(Lindane)-Gamma	39340	0.10U	1U
105P	δ-BHC-Delta	34259	0.10U	1U
106P	PCB-1242 (Aroclor 1242)	39496	0.10U	7U
107P	PCB-1254 (Aroclor 1254)	39504	0.10U	4U
108P	PCB-1221 (Aroclor 1221)	39488	0.10U	8U
109P	PCB-1232 (Aroclor 1232)	39492	0.10U	10U
110P	PCB-1248 (Aroclor 1248)	39500	0.10U	3U
111P	PCB-1260 (Aroclor 1260)	39508	0.13U	3U
112P	PCB-1016 (Aroclor 1016)	34671	0.10U	12U
113P	Toxaphene	39400	0.40U	5U
129P	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	34675	NA	

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

N - No. [illegible]

TABLE 2 (Continued)

DATA REPORTING SHEET
WATER

PROJECT U. S. Steel Dump Birmingham, AL CHEMIST Bill McDaniel REC'D 11/20/80 COMPLETED 2/9/81
PROJECT No. 81-23

SAD NO.	B1C0402	B1C0403		
SOURCE & STATION	Upstream Sample EDU	Downstream Sample EDD	D&M OF-1	
DATE/TIME	11/17/80 @ 1100	11/17/80 @ 1105		
ELEMENT (ug/L)				
Silver * 01077	10K	10K	8	
Arsenic * 01002	40K	40K	21	
Boron 01022	—	—	--	
Barium 01007	25	47	20	
Beryllium * 01012	10K	10K	0.50	
Cadmium * 01027	10K	20K	5	
Cobalt 01037	25K	110	200	
Chromium * 01034	10	10K	1	
Copper * 01042	10K	185	10	
Molybdenum 01062	20	20K	400	
Nickel * 01067	20K	100	50	
Lead * 01051	25K	25K	1	
Antimony * 01097	25K	25K	5	
Selenium * 01147	40K	40K	10	
Tin 01102	50K	50K	60	
Strontium 01082	186	162	140	
Tellurium 01064	40K	40K	1000	
Titanium 01152	10K	10K	90	
Thallium * 01059	100K	100K	60	
Vanadium 01087	28	10K	46	
Yttrium 01203	10K	16	10,000	
Zinc * 01092	196	3,581	40	
Zirconium 01162	13	10K	150	
Mercury * 71900	0.50*	0.57*	0.4	
Aluminum 01105	1,300	5,300	6,800	
Manganese 01055	500	9,255	70	

* - HOLDING TIME ON MERCURY SAMPLES EXPIRED BEFORE ANALYSES WERE COMPLETED.

K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
* - Priority Pollutant.
U - Material analyzed but not detected - number is the minimum detection limit.

TABLE 2 (Continued)

[illegible]
WATER

PROJECT_____ CHEMIST_____ SEC'D_____ [illegible]

PROJECT No._____

SAD NO.		81C0407	81C0408	[illegible]	
SOURCE & STATION		Upstream Sample	Downstream Sample	[illegible]	
DATE/TIME					
ELEMENT (mg/L)					
Calcium	00916	47	95	21	
Magnesium	00927	6.7	26	[illegible]	
Iron	74010	0.1	14	[illegible]	
Sodium	00929	56	48	47	
Cyanide *	00720	[illegible]		[illegible]	
Asbestos *	34225	NA	NA	NA	[illegible]

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

[illegible] Actual value is known to be greater than value given.

[illegible]ority Pollutant.

TABLE 3

ORGANIC COMPOUNDS DETECTED
DAMES & MOORE SAMPLES EX-1 THROUGH EX-6
(ANALYSIS VALUES µg/l)

Compound	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6
Fluoranthene	10	K	K	K	K	K
Toluene	< 5**	9	K	8	K	7
Xylene	K	15	K	K	K	K
Phenanthrene	16	<10**	K	K	K	K
Di-N-Butyle Phthalate	K	K	19	K	K	K
Naphthalene	<10**	<10**	K	K	K	K
Fluorene	<10**	K	K	K	K	K
Anthracene	<10**	<10**	K	K	K	K
Pyrene	<10**	K	K	K	K	K
Ethylbenzene	K	< 5**	K	K	K	K
Chloroform	K	K	K	< 5**	K	K
Benzene	K	K	K	K	K	< 5**
Diethylphthalate	K	K	36	K	K	K

** = Present But Less than Stated Quantitative Detection Limits.

K = Not Detected at Minimum Detection Limits

TABLE 4

CYANIDE, RADIOLOGICAL DATA AND INORGANIC COMPOUNDS DETECTED
DAMES & MOORE SAMPLES EX-1 THROUGH EX-6
(ANALYSIS VALUES ug/l)

Compound	EX-1	EX-2	EX-3	EX-4	EX-5	EX-6
Cyanide	20	K	5	K	5	10
Arsenic	13	3	230***	K	6	5
Barium	110	290	NA	170	NA	470
Beryllium	K	K	19	K	2	K
Cadmium	6	6	12***	3	2	3
Chromium	1	1	150***	2	110***	1
Copper	K	K	670	K	30	1
Nickel	NA	NA	790	NA	NA	80
Lead	5	24	170***	11	70***	19
Mercury	K	0.7	K	0.7	3***	K
Silver	7	2	5	2	1	4
Thallium	140	20	240	40	130	8
Zinc	17,300	15,100	2,370	2,600	19,200	6,500
Manganese	1,930	2,540	NA	430	NA	510
Iron	20	K	NA	K	NA	K
Sodium	53,000	6,400	NA	16,400	NA	1,500
Fluoride	540	140	NA	460	NA	680
Nitrate-N	270	50	NA	70	NA	900
Radium (pCi/l)	0.8 ± 2.0	0.2 ± 0.1	NA	0.5 ± 0.1	NA	0.7 ± 0.1
Gross Alpha (pCi/l)	2.6 ± 3.2	0.7 ± 1.3	NA	3.4 ± 3.3	NA	0.7 ± 0.1
Gross Beta (pCi/l)	22 ±14.7	0.5 ± 3.9	NA	<0.2 ± 3.9	NA	29.3 ±13.6

NA = Not Analyzed

K = Not Detetected at Minimum Detection Limits

*** = Exceeds Primary Drinking Water Standards

APPENDIX

CHEMCIAL ANALYSIS RESULTS

This appendix presents the results of chemical analysis on water samples from Exum Landfill. Ground water samples Ex-1, Ex-2, Ex-4, and Ex-6 were analyzed for USEPA priority pollutants and primary Drinking Water Standards. Ground water samples Ex-3 and Ex-5 were analyzed for selected USEPA priority pollutants as agreed upon by U.S. Steel and ADEM representatives. Surface water sample OF-1 was analyzed for the same parameters as the sample taken by the USEPA from this sampling location in 1980 (USEPA sample, SAD 81C0404).

Several priority pollutant compound names in the analysis data differ from USEPA nomenclature. Table A-1 presents a nomenclature cross reference.

It will be noted that several compounds in the organic parameters are designated as internal standards or surrogates. These are compounds which are added to the samples for analysis control. A surrogate is used for analytical quality control, and an internal standard is used for calculating percent recoveries of unknown compounds. Analysis values have not been provided for these compounds. Surrogates are noted in parentheses on the analysis data sheets. Internal standards are noted by the abbreviation "IS" in parenthesis

Several organic compounds on the USEPA Priority Pollutant list were not analyzed. N-nitrosodimethylamine and bis (chloromethyl) ether are unstable and hence not analyzed. The laboratory believes dichlorodifluoromethane is no longer on the EPA list and did not analyze for this compound. Due to the extreme toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin, the laboratory does not maintain standards. Therefore this was not analyzed.

The laboratory omitted analysis of asbestos on all samples and nickel on samples Ex-1, Ex-2, Ex-4, and Ex-6.

TABLE A-1

CHEMICAL NOMENCLATURE CROSS REFERENCE

Compound Name Reported in Laboratory Analysis Results	Equivalent Compound in EPA Priority Pollutant List
Chloromethane	Methylchloride
Bromomethane	Methylbromide
Trans-1,3-Dichloropropene	1,2-Dichloropropylene
Cis-1,3-Dichloropropene	1,2-Dichloropropylene
4-Chloro-3-Methylphenol	P-Chloro-M-Cresol
2-Methyl-4,6-Dinitrophenol	4,6-Dinitro-o-cresol
Bis (ethylhexyl) phthalate	Bis (2-ethylhexyl) phthalate
Benzo (b) fluoranthene	3,4-Benzo fluoranthane

PURGEABLE ORGANICS

GC/MS Report

Sample Identification No. Ex-1 Laboratory No. 7786A

Date of Analysis September 22, 1981 Sample Description Two Septa-Sealed Vials labeled Ex-1 filled with water.

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (ISI)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene **	92	<5
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments: ** Present but less than stated quantitative detection limit.

ACIN

GC/MS Report

Sample Identification No. Ex-1 Laboratory No. [illegible]

Date of Analysis September 28, 1981 Sample Description [illegible]

bottle labeled Ex-1 Contaminated one gallon of water

Compounds	QM	Conc. µg/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-1 Laboratory No. [illegible]

Date of Analysis September 28, 1981 Sample Description One amber bottle labeled Ex-1 containing one gallon of water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc. µg/l
1,3-Dichlorobenzene	146	<10	Butyl benzyl phthalate	149	<10
1,4-Dichlorobenzene	146	<10	Bis(ethylhexyl) phthalate	149	<10
1,2-Dichlorobenzene	146	<10	Chrysene	228	<10
Hexachloroethane	117	<10	Benzo(a)anthracene	228	<10
Bis(2-Chloroethyl) ether	93	<10	3,3'-Dichlorobenzidine	252	<10
Bis(2-Chloroisopropyl) ether	45	<10	Di-n-octyl phthalate	149	<10
N-nitrosodi-n-propylamine	130	<10	Benzo(b)fluoranthene	252	<10
Isophorone	82	<10	Benzo(k)fluoranthene	252	<10
Nitrobenzene	77	<10	Benzo(a)pyrene	252	<10
Hexachlorobutadiene	225	<10	Indeno(1,2,3,-c,d)pyrene	276	<25
1,2,4-Trichlorobenzene	180	<10	Dibenzo(a,h)anthracene	278	<25
Naphthalene ****	128	<10	Benzo(g,h,i)perylene	276	<25
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND***
Bis(2-Chloroethoxy) methane	93	<10	Bis(chloromethyl)ether		ND***
Hexachlorocylopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND***
2-Chloronaphthalene	162	<10			
Acenaphthalene	152	<10			
Acenaphthene	154	<10			
2,6-Dinitrotoluene	165	<10			
Dimethylphthalate	163	<10			
Fluorene ****	166	<10			
4-Chlorophenyl phenyl ether	204	<10			
2,4-Dinitrotoluene	165	<10			
1,2-Diphenylhydrazine*	77	<10			
Diethylphthalate	149	<10			
N-Nitrosodiphenylamine**	169	<10			
Hexachlorobenzene	284	<10			
4-Bromophenyl phenyl ether	248	<10			
Anthracene ****	178	<10			
Phenanthrene	178	16			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<10			
Fluoranthene	202	10			
Pyrene ****	202	<10			
Benzidine	184	<10			

* detected as azobenzene

** detected as diphenylamine

*** not determined

Comments: **** Present but less than stated quantitative detection limit.

PESTICIDES/PCBs

GC Report

Sample Identification No. Ex-1 Laboratory No. [illegible]

Date of Analysis September 22, 1981 Sample Description [illegible]

glass bottle containing one gallon [illegible]

Compounds		Conc. µg/l		
Aldrin		<1		
a-BHC		<1		
b-BHC		<1		
d-BHC		<1		
g-BHC		<1		
Chlordane		<1		
4,4'-DDD		<1		
4,4'-DDE		<1		
4,4'-DDT		<1		
Dieldrin		<1		
Endosulfan I		<1		
Endosulfan II		<1		
Endosulfan Sulfate		<1		
Endrin		<1		
Endrin Aldehyde		<1		
Heptachlor		<1		
Heptachlor Epoxide		<1		
Toxaphene		<5		
PCB-1016		<3		
PCB-1221		<3		
PCB-1232		<3		
PCB-1242		<3		
PCB-1248		<3		
PCB-1254		<3		
PCB-1260		<3		

Comments:

PURGEABLE ORGANICS

GC/MS Report

Sample Identification No. Ex-2 Laboratory no. 27658

Date of Analysis September 22, 1981 Sample Description: Surface

Sealed Vials labeled Ex-2 filled with water.

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (IS1)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	9
Chlorobenzene	112	<5
Ethylbenzene **	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*
Xylene	106	15

*not determined

Comments: ** Present but less than stated quantitative detection limit.

ACID

GC/MS Report

CH2M HILL

Sample Identification No. Ex-2 Laboratory No. [illegible]

Date of Analysis September 28, 1981 Sample Description [illegible]

bottle labeled Ex-2 containing one gallon of water.

Compounds	QM	Conc. µg/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-2 Laboratory No. 27[illegible]

Date of Analysis September 28, 1981 Sample Description [illegible] amber bottled labeled Ex-2 containing one gallon of water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc. µg/l
.,3-Dichlorobenzene	146	<10	Butyl benzyl phthalate	149	<10
.,4-Dichlorobenzene	146	<10	Bis(ethylhexyl) phthalate	149	<10
.,2-Dichlorobenzene	146	<10	Chrysene	228	<10
Hexachloroethane	117	<10	Benzo(a)anthracene	228	<10
Bis(2-Chloroethyl) ether	93	<10	3,3'-Dichlorobenzidine	252	<10
Bis(2-Chloroisopropyl) ether	45	<10	Di-n-octyl phthalate	149	<10
N-nitrosodi-n-propylamine	130	<10	Benzo(b)fluoranthene	252	<10
Isophorone	82	<10	Benzo(k)fluoranthene	252	<10
Nitrobenzene	77	<10	Benzo(a)pyrene	252	<10
Hexachlorobutadiene	225	<10	Indeno(1,2,3,-c,d)pyrene	276	<25
.,2,4-Trichlorobenzene	180	<10	Dibenzo(a,h)anthracene	278	<25
Naphthalene ****	128	<10	Benzo(g,h,i)perylene	276	<25
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND***
Bis(2-Chloroethoxy) methane	93	<10	Bis(chloromethyl)ether		ND**
Hexachlorocylopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND***
2-Chloronaphthalene	162	<10			
Acenaphthalene	152	<10			
Acenaphthene	154	<10			
2,6-Dinitrotoluene	165	<10			
Dimethylphthalate	163	<10			
Fluorene	166	<10			
4-Chlorophenyl phenyl ether	204	<10			
2,4-Dinitrotoluene	165	<10			
.,2-Diphenylhydrazine*	77	<10			
Diethylphthalate	149	<10			
N-Nitrosodiphenylamine**	169	<10			
Hexachlorobenzene	284	<10			
4-Bromophenyl phenyl ether	248	<10			
Anthracene ****	178	<10			
Phenanthrene ****	178	<10			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<10			
Fluoranthene	202	<10			
Pyrene	202	<10	* detected as azobenzene		
Benzidine	184	<10	** detected as diphenylamine		
			*** not determined		

Comments: **** Present but less than stated quantitative detection limit.

PESTICIDES/PCBs

GC Report

Sample Identification No. Ex-2 Laboratory No. [illegible]

Date of Analysis September 23, 198[illegible] Sample Description: [illegible] glass bottle containing one gallon of water and [illegible]

Compounds		Conc. µg/l		
Aldrin		<1		
a-BHC		<1		
b-BHC		<1		
d-BHC		<1		
g-BHC		<1		
Chlordane		<1		
4,4'-DDD		<1		
4,4'-DDE		<1		
4,4'-DDT		<1		
Dieldrin		<1		
Endosulfan I		<1		
Endosulfan II		<1		
Endosulfan Sulfate		<1		
Endrin		<1		
Endrin Aldehyde		<1		
Heptachlor		<1		
Heptachlor Epoxide		<1		
Toxaphene		<5		
PCB-1016		<3		
PCB-1221		<3		
PCB-1232		<3		
PCB-1242		<3		
PCB-1248		<3		
PCB-1254		<3		
PCB-1260		<3		

Comments: _____

PURGEABLE ORGANICS

GC/MS Report

CHEMASPHERE

Sample Identification No. EX-1 Laboratory No. [illegible]

Date of Analysis 11/22/81 Sample Description [illegible]

septa sealed vial labeled EX-1 U. S. Steel Well 13.

Compound	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (ISI)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	166	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	<5
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments:

ACID

GC/MS Report

Sample Identification No. [illegible] Laboratory [illegible]

Date of Analysis 11/9/81 Sample [illegible]

bottle labeled EX-1 contaminated water

Compounds	QM	Conc. (µg/l)
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments: _____

BASE/NEUTRALS

GC/MS Report

Sample Identification [illegible]

Date of Analysis 11/2/81

Water Matrix Labeled RBD [illegible]

Compound	CM	Conc (ug/l)	Compound	CM	Conc (ug/l)
1,3-Dichlorobenzene	146	<20	[illegible]	[illegible]	[illegible]
1,4-Dichlorobenzene	146	<20	[illegible]	[illegible]	[illegible]
1,2-Dichlorobenzene	146	<20	[illegible]	[illegible]	[illegible]
Hexachloroethane	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bis(2-Chloroethyl) ether	93	<20	[illegible]	[illegible]	[illegible]
Bis(2-Chloroisopropyl) ether	45	<20	[illegible]	[illegible]	[illegible]
N-nitrosodi-n-propylamine	130	<20	[illegible]	[illegible]	[illegible]
Isophorone	82	<20	[illegible]	[illegible]	[illegible]
Nitrobenzene	77	<20	[illegible]	[illegible]	[illegible]
Hexachlorobutadiene	225	<20	[illegible]	[illegible]	[illegible]
1,2,4-Trichlorobenzene	180	<20	[illegible]	[illegible]	[illegible]
Naphthalene	128	[illegible]	[illegible]	[illegible]	[illegible]
2-Methylnaphthalene (Surrogate)	156		[illegible]	[illegible]	[illegible]
Bis(2-Chloroethyl) methane	93	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin	[illegible]	[illegible]
Hexachlorocyclopentadiene	237	<20			
2-Chloronaphthalene	162	<20			
Acenaphthylene	152	<20			
Acenaphthene	154	<20			
2,6-Dinitrotoluene	165	<20			
Dimethylphthalate	163	<20			
Fluorene	166	<20			
4-Chlorophenyl phenyl ether	204	<20			
2,4-Dinitrotoluene	165	<20			
1,2-Diphenylhydrazine*	77	<20			
Diethylphthalate	149	30			
N-nitrosodiphenylamine**	169	<20			
Hexachlorobenzene	284	<20			
4-Bromophenyl phenyl ether	248	<20			
Anthracene	178	<20			
Phenanthrene	178	<20			
9,10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	34			
Fluoranthene	202	<20			
Pyrene	202	<20			
Benzidine	184	<20			

* Interferent on [illegible]

** Detected as a diphenyl [illegible]

*** Not detected

Comments: [illegible]

[illegible]

[illegible] Report [illegible]

Sample Identification [illegible]

Date of Analysis [illegible] Sample [illegible]

Class [illegible] containing [illegible]

Compounds		[illegible]		
Aldrin		<2		
a-BHC		<1		
b-BHC		<2		
d-BHC		<1		
g-BHC		<1		
Chlordane		<2		
4,4'-DDD		<1		
4,4'-DDE		<1		
4,4'-DDT		<1		
Dieldrin		<1		
Endosulfan I		<1		
Endosulfan II		<1		
Endosulfan Sulfate		<1		
Endrin		<1		
Endrin Aldehyde		<1		
Heptachlor		<1		
Heptachlor Epoxide		<1		
Toxaphene		<1		
PCB-1016		<7		
PCB-1221		<32		
PCB-1232		<12		
PCB-1242		<[illegible]		
PCB-1248		<10		
PCB-1254		<1[illegible]		
PCB-1260		<[illegible]		

Comments: _____

PURGEABLE ORGANICS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-4 Laboratory No. [illegible]

Date of Analysis September 22, 1981 Sample Description Two Septa-Sealed Vials labeled Ex-4 filled with water.

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (ISI)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform **	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	8
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments: ** Present but less than stated quantitative detection limit.

ACID

GC/MS Report

CHEMTECH

Sample Identification No. Ex-4 Laboratory No. [illegible]

Date of Analysis September 23, 1981 Sample Description One amber bottle labeled Ex-4 containing one gallon of water.

Compounds	QM	Conc. µg/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-4 Laboratory No. 2786C

Date of Analysis September 23, 1981 Sample Description One amber bottled labeled Ex-4 containing one gallon of water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc. µg/l
1,3-Dichlorobenzene	146	<10	Butyl benzyl phthalate	149	<10
1,4-Dichlorobenzene	146	<10	Bis(ethylhexyl) phthalate	149	<10
1,2-Dichlorobenzene	146	<10	Chrysene	228	<10
Hexachloroethane	117	<10	Benzo(a)anthracene	228	<10
Bis(2-Chloroethyl) ether	93	<10	3,3'-Dichlorobenzidine	252	<10
Bis(2-Chloroisopropyl) ether	45	<10	Di-n-octyl phthalate	149	<10
N-nitrosodi-n-propylamine	130	<10	Benzo(b)fluoranthene	252	<10
Isophorone	82	<10	Benzo(k)fluoranthene	252	<10
Nitrobenzene	77	<10	Benzo(a)pyrene	252	<10
Hexachlorobutadiene	225	<10	Indeno(1,2,3,-c,d)pyrene	276	<25
1,2,4-Trichlorobenzene	180	<10	Dibenzo(a,h)anthracene	278	<25
Naphthalene	128	<10	Benzo(g,h,i)perylene	276	<25
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND***
Bis(2-Chloroethoxy) methane	93	<10	Bis(chloromethyl)ether		ND***
Hexachlorocylopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND***
2-Chloronaphthalene	162	<10			
Acenaphthalene	152	<10			
Acenaphthene	154	<10			
2,6-Dinitrotoluene	165	<10			
Dimethylphthalate	163	<10			
Fluorene	166	<10			
4-Chlorophenyl phenyl ether	204	<10			
2,4-Dinitrotoluene	165	<10			
1,2-Diphenylhydrazine*	77	<10			
Diethylphthalate	149	<10			
N-Nitrosodiphenylamine**	169	<10			
Hexachlorobenzene	284	<10			
4-Bromophenyl phenyl ether	248	<10			
Anthracene	178	<10			
Phenanthrene	178	<10			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<10			
Fluoranthene	202	<10			
Pyrene	202	<10			
Benzidine	184	<10			

* detected as azobenzene

** detected as diphenylamine

*** not determined

Comments:

PESTICIDES/PCBs

GC Report

CH2M HILL

Sample Identification No. Ex-4 Laboratory No. 2786C

Date of Analysis September 23, 1981 Sample Description One amber glass bottle containing one gallon of water and labeled Ex-4.

Compounds		Conc. µg/l			
Aldrin		<1			
a-BHC		<1			
b-BHC		<1			
d-BHC		<1			
g-BHC		<1			
Chlordane		<1			
4,4'-DDD		<1			
4,4'-DDE		<1			
4,4'-DDT		<1			
Dieldrin		<1			
Endosulfan I		<1			
Endosulfan II		<1			
Endosulfan Sulfate		<1			
Endrin		<1			
Endrin Aldehyde		<1			
Heptachlor		<1			
Heptachlor Epoxide		<1			
Toxaphene		<5			
PCB-1016		<3			
PCB-1221		<3			
PCB-1232		<3			
PCB-1242		<3			
PCB-1248		<3			
PCB-1254		<3			
PCB-1260		<3			

Comments:

PURGEABLE ORGANICS

GC/MS Report

CH2M HILL

Sample Identification No. EX-5 Laboratory No. 2863B

Date of Analysis 11/21/81 Sample Description One septa sealed vial labeled EX-5 U. S. Steel Well #5.

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (IS1)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	<5
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments:

ACID

GC/MS Report

CH2M HILL

Sample Identification No. EX-5 Laboratory No. [illegible]

Date of Analysis 11/9/81 Sample Description [illegible]

bottle labeled EX-5 containing water.

Compounds	QM	Conc. ug/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_6-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. EX-5 Laboratory No. 28638

Date of Analysis 11/9/81 Sample Description One amber bottle labeled EX-5 containing water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc µg/l
1,3-Dichlorobenzene	146	<20	Butyl benzyl phthalate	149	<20
1,4-Dichlorobenzene	146	<20	Bis(ethylhexyl) phthalate	149	<20
1,2-Dichlorobenzene	146	<20	Chrysene	228	<20
Hexachloroethane	117	<20	Benzo(a)anthracene	228	<20
Bis(2-Chloroethyl) ether	93	<20	3,3'-Dichlorobenzidine	252	<20
Bis(2-Chloroisopropyl) ether	45	<20	Di-n-octyl phthalate	149	<20
N-nitrosodi-n-propylamine	130	<20	Benzo(b)fluoranthene	252	<20
Isophorone	82	<20	Benzo(k)fluoranthene	252	<20
Nitrobenzene	77	<20	Benzo(a)pyrene	252	<20
Hexachlorobutadiene	225	<20	Indeno(1,2,3,-c,d)pyrene	276	<20
1,2,4-Trichlorobenzene	180	<20	Dibenzo(a,h)anthracene	278	<20
Naphthalene	128	<20	Benzo(g,h,i)perylene	276	<20
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND**
Bis(2-Chloroethoxy) methane	93	<20	Bis(chloromethyl)ether		ND**
Hexachlorocylopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND**
2-Chloronaphthalene	162	<20			
Acenaphthalene	152	<20			
Acenaphthene	154	<20			
2,6-Dinitrotoluene	165	<20			
Dimethylphthalate	163	<20			
Fluorene	166	<20			
4-Chlorophenyl phenyl ether	204	<20			
2,4-Dinitrotoluene	165	<20			
1,2-Diphenylhydrazine*	77	<20			
Diethylphthalate	149	<20			
N-Nitrosodiphenylamine**	169	<20			
Hexachlorobenzene	284	<20			
4-Bromophenyl phenyl ether	248	<20			
Anthracene	178	<20			
Phenanthrene	178	<20			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<20			
Fluoranthene	202	<20			
Pyrene	202	<20			
Benzidine	184	<20			

* detected as azobenzene

** detected as diphenylamine

*** not determined

Comments:

PESTICIDES/PCBs

GC Report

CHEMSHELL

Sample Identification No. EX-5 Laboratory No. 2-538

Date of Analysis 11/12/61 Sample Description One amber glass bottle containing one gallon of water.

Compounds		Conc.		
Aldrin		<1		
a-BHC		<1		
b-BHC		<1		
d-BHC		<1		
g-BHC		<1		
Chlordane		<1		
4,4'-DDD		<1		
4,4'-DDE		<1		
4,4'-DDT		<1		
Dieldrin		<1		
Endosulfan I		<1		
Endosulfan II		<1		
Endosulfan Sulfate		<1		
Endrin		<1		
Endrin Aldehyde		<1		
Heptachlor		<1		
Heptachlor Epoxide		<1		
Toxaphene		<5		
PCB-1016		<3		
PCB-1221		<3		
PCB-1232		<3		
PCB-1242		<3		
PCB-1248		<3		
PCB-1254		<3		
PCB-1260		<3		

Comments:

PURGEABLE ORGANICS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-6 Laboratory No. 27860

Date of Analysis September 22, 1981 Sample Description Two System-Sealed Vials labeled Ex-6 filled with water.

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (ISI)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	<5
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene **	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	7
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments: ** Present but less than stated quantitative detection limit.

ACID

GC/MS Report

CH2M HILL

Sample Identification No. Ex-6 Laboratory No. 2786D

Date of Analysis September 29, 1981 Sample Description One amber bottle labeled Ex-6 containing one gallon of water.

Compounds	QM	Conc. µg/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. Ex-6 Laboratory No. 2726D

Date of Analysis September 28, 1981 Sample Description One amber bottle labeled Ex-6 containing one gallon of water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc. µg/l
1,3-Dichlorobenzene	146	<10	Butyl benzyl phthalate	149	<10
1,4-Dichlorobenzene	146	<10	Bis(ethylhexyl) phthalate	149	<10
1,2-Dichlorobenzene	146	<10	Chrysene	228	<10
Hexachloroethane	117	<10	Benzo(a)anthracene	228	<10
Bis(2-Chloroethyl) ether	93	<10	3,3'-Dichlorobenzidine	252	<10
Bis(2-Chloroisopropyl) ether	45	<10	Di-n-octyl phthalate	149	<10
N-nitrosodi-n-propylamine	130	<10	Benzo(b)fluoranthene	252	<10
Isophorone	82	<10	Benzo(k)fluoranthene	252	<10
Nitrobenzene	77	<10	Benzo(a)pyrene	252	<10
Hexachlorobutadiene	225	<10	Indeno(1,2,3-c,d)pyrene	276	<25
1,2,4-Trichlorobenzene	180	<10	Dibenz(a,h)anthracene	278	<25
Naphthalene	128	<10	Benzo(g,h,i)perylene	276	<25
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND***
Bis(2-Chloroethoxy) methane	93	<10	Bis(chloromethyl)ether		ND***
Hexachlorocyclopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND**
2-Chloronaphthalene	162	<10			
Acenaphthalene	152	<10			
Acenaphthene	154	<10			
2,6-Dinitrotoluene	165	<10			
Dimethylphthalate	163	<10			
Fluorene	166	<10			
4-Chlorophenyl phenyl ether	204	<10			
2,4-Dinitrotoluene	165	<10			
1,2-Diphenylhydrazine*	77	<10			
Diethylphthalate	149	<10			
N-Nitrosodiphenylamine**	169	<10			
Hexachlorobenzene	284	<10			
4-Bromophenyl phenyl ether	248	<10			
Anthracene	178	<10			
Phenanthrene	178	<10			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<10			
Fluoranthene	202	<10			
Pyrene	202	<10			
Benzidine	184	<10			

* detected as azobenzene
** detected as diphenylamine
*** not determined

Comments:

PESTICIDES/PCBs

GC Report

CH2M HILL

Sample Identification No. Ex-6 Laboratory No. 27860

Date of Analysis September 23, 1981 Sample Description One amber glass bottle containing one gallon of water and labeled Ex-6.

Compounds		Conc. µg/l			
Aldrin		<1			
a-BHC		<1			
b-BHC		<1			
d-BHC		<1			
g-BHC		<1			
Chlordane		<1			
4,4'-DDD		<1			
4,4'-DDE		<1			
4,4'-DDT		<1			
Dieldrin		<1			
Endosulfan I		<1			
Endosulfan II		<1			
Endosulfan Sulfate		<1			
Endrin		<1			
Endrin Aldehyde		<1			
Heptachlor		<1			
Heptachlor Epoxide		<1			
Toxaphene		<5			
PCB-1016		<3			
PCB-1221		<4			
PCB-1232		<3			
PCB-1242		<4			
PCB-1248		<3			
PCB-1254		<3			
PCB-1260		<3			

Comments:

PURGEABLE ORGANICS

GC/MS Report

CH2M HILL

Sample Identification No. OF-1 Laboratory No. 2786E

Date of Analysis 9/22 Sample Description Two Septa-Sealed Vials labeled OF-1 filled with water

Compounds	QM	Conc. µg/l
Chloromethane	50	<5
Bromomethane	94	<5
Vinyl chloride	62	<5
Chloroethane	64	<5
Methylene chloride	84	<5
Trichlorofluoromethane	101	<5
Bromochloromethane (ISI)	128	
1,1-Dichloroethylene	96	<5
1,1-Dichloroethane**	63	<5
trans-1,2-Dichloroethylene	96	<5
Chloroform	83	<5
1,2-Dichloroethane	98	<5
1,1,1-Trichloroethane	97	13
Carbon tetrachloride	117	<5
Bromodichloromethane	127	<5
trans-1,3-Dichloropropene	75	<5
1,2-Dichloropropane	112	<5
Benzene	78	<5
2-Chloroethylvinyl ether	106	<5
cis-1,3-Dichloropropene	75	<5
Trichloroethylene	130	<5
Dibromochloromethane	127	<5
1,1,2-Trichloroethane	97	<5
2-Bromo-1-chloropropane (IS2)	77	
Bromoform	173	<5
1,1,2,2-Tetrachloroethane	168	<5
1,4-Dichlorobutane (IS3)	55	
Tetrachloroethylene	164	<5
Toluene	92	<5
Chlorobenzene	112	<5
Ethylbenzene	106	<5
Acrolein	56	<100
Acrylonitrile	53	<100
Dichlorodifluoromethane	101	ND*

*not determined

Comments: ** Present but less than stated quantitative detection limit.

ACID

GC/MS Report

CH2M HILL

Sample Identification No. OF-1 Laboratory No. 27862

Date of Analysis September 23, 1981 Sample Description One amber bottle labeled OF-1 Containing one gallon of water.

Compounds	QM	Conc. µg/l
2-Chlorophenol	128	<20
2-Nitrophenol	139	<20
Phenol	94	<20
D_5-Phenol (Surrogate)	99	
2,4-Dimethylphenol	122	<20
2,4-Dichlorophenol	162	<20
2,4,6-Trichlorophenol	196	<20
D_{10}-Anthracene (IS)	188	
4-Chloro-3-methylphenol	142	<20
2,4-Dinitrophenol	184	<100
2-Methyl-4,6-dinitrophenol	198	<100
Pentachlorophenol	266	<50
4-Nitrophenol	65	<50

Comments:

BASE/NEUTRALS

GC/MS Report

CH2M HILL

Sample Identification No. OF-1 Laboratory No. 2786E

Date of Analysis September 23, 1981 Sample Description One amber bottle labeled OF-1 Containing one gallon of water.

Compounds	QM	Conc. µg/l	Compounds	QM	Conc. µg/l
1,3-Dichlorobenzene	146	<10	Butyl benzyl phthalate	149	<10
1,4-Dichlorobenzene	146	<10	Bis(ethylhexyl) phthalate	149	<10
1,2-Dichlorobenzene	146	<10	Chrysene	228	<10
Hexachloroethane	117	<10	Benzo(a)anthracene	228	<10
Bis(2-Chloroethyl) ether	93	<10	3,3'-Dichlorobenzidine	252	<10
Bis(2-Chloroisopropyl) ether	45	<10	Di-n-octyl phthalate	149	<10
N-nitrosodi-n-propylamine	130	<10	Benzo(b)fluoranthene	252	<10
Isophorone	82	<10	Benzo(k)fluoranthene	252	<10
Nitrobenzene	77	<10	Benzo(a)pyrene	252	<10
Hexachlorobutadiene	225	<10	Indeno(1,2,3,-c,d)pyrene	276	<25
1,2,4-Trichlorobenzene	180	<10	Dibenzo(a,h)anthracene	278	<25
Naphthalene	128	<10	Benzo(g,h,i)perylene	276	<25
D-8-Naphthalene (Surrogate)	136		N-Nitrosodimethylamine		ND***
Bis(2-Chloroethoxy) methane	93	<10	Bis(chloromethyl)ether		ND***
Hexachlorocylopentadiene	237	<20	2,3,7,8-Tetrachlorodibenzo-p-dioxin		ND***
2-Chloronaphthalene	162	<10			
Acenaphthalene	152	<10			
Acenaphthene	154	<10			
2,6-Dinitrotoluene	165	<10			
Dimethylphthalate	163	<10			
Fluorene	166	<10			
4-Chlorophenyl phenyl ether	204	<10			
2,4-Dinitrotoluene	165	<10			
1,2-Diphenylhydrazine*	77	<10			
Diethylphthalate	149	<10			
4-Nitrosodiphenylamine**	169	<10			
Hexachlorobenzene	284	<10			
4-Bromophenyl phenyl ether	248	<10			
Anthracene	178	<10			
Phenanthrene	178	<10			
D10-Anthracene (IS)	188				
Di-n-butyl phthalate	149	<10			
Fluoranthene	202	<10			
Pyrene	202	<10			
Benzidine	184	<10			

* detected as azobenzene

** detected as diphenylamine

*** not determined

Comments:

PESTICIDES/PCBs

GC Report

CH2M HILL

Sample Identification No. OF-1 Laboratory No. 2786E

Date of Analysis September 30, 1981 Sample Description One amber glass bottle containing one gallon of water and labeled OF-1.

Compounds		Conc. µg/l		
Aldrin		<1		
a-BHC		<1		
b-BHC		<1		
d-BHC		<1		
g-BHC		<1		
Chlordane		<1		
4,4'-DDD		<1		
4,4'-DDE		<1		
4,4'-DDT		<1		
Dieldrin		<1		
Endosulfan I		<1		
Endosulfan II		<1		
Endosulfan Sulfate		<1		
Endrin		<1		
Endrin Aldehyde		<1		
Heptachlor		<1		
Heptachlor Epoxide		<1		
Toxaphene		<5		
PCB-1016		<12		
PCB-1221		<8		
PCB-1232		<10		
PCB-1242		<7		
PCB-1248		<3		
PCB-1254		<4		
PCB-1260		<3		

Comments:

RESULTS OF ANALYSIS BY CH_2 M HILL
FOR INORGANIC PARAMETERS
(ANALYSIS VALUES mg/l)

·ameters	EX-1 9/17/81	EX-2 9/17/81	EX-4 9/17/81	EX-6 9/17/81	OF-1 9/17/81
.mony	<0.005	<0.005	<0.005	<0.005	<0.005
.nic	0.013	0.003	<0.001	0.005	0.021
llium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
ium	0.006	0.006	0.003	0.003	0.005
mium	0.001	0.001	0.002	0.001	0.001
er	<0.01	<0.01	<0.01	<0.01	0.01
	0.005	0.024	0.011	0.019	0.001
ury	<0.0001	0.0007	0.0007	<0.0001	0.0004
nium	<0.001	<0.001	<0.001	<0.001	<0.001
er	0.007	0.002	0.003	0.004	0.006
.lium	0.14	0.02	0.04	0.08	0.05
:	17.3	15.1	2.6	6.0	0.04
ı	0.02	<0.01	<0.01	<0.01	0.30
ganese	1.93	2.54	0.43	0.31	0.07
ium	53	6.4	16.4	1.5	42
ium	0.11	0.29	0.17	0.47	0.02
ide	0.02	<0.005	<0.005	0.01	0.05
ols	<0.01	<0.01	<0.01	<0.01	--
ride	0.54	0.14	0.46	0.68	--
ate-N	0.27	0.05	0.07	0.90	--
um (p Ci/l)	0.8 ± .2	0.2 ± 0.1	0.5 ± 0.1	0.7 ± 0.1	--
s Alpha (p Ci/l)	2.6 ± 3.2	0.7 ± 1.3	3.4 ± 3.3	0.7 ± 0.1	--
s Beta (p Ci/l)	22 ± 14.7	0.5 ± 3.9	<0.2 ± 4.6	29.3 ± 13.6	--
bidity (NTU)	30	20	15	30	
l Coliform (n/100 ml)	0	0	0	0	--
lt	--	--	--	--	<0.02
ybdenium	--	--	--	--	<0.04
kel	--	--	--	--	0.03
	--	--	--	--	0.06
ontium	--	--	--	--	0.14
lurium	--	--	--	--	<1.0
anium	--	--	--	--	0.09
adium	--	--	--	--	0.046
rium	--	--	--	--	<10.0
conium	--	--	--	--	<0.015
minum	--	--	--	--	6.8
cium	--	--	--	--	21
nesium	--	--	--	--	5.1
-D	<0.1	<0.1	<0.1	<0.1	--
,5-TP	<0.01	<0.01	<0.01	<0.01	--
hoxychlor	<0.1	<0.1	<0.1	<0.1	--

CH2M HILL

ENVIRONMENTAL LABORATORY
807 S. McDonough Street
Montgomery, Alabama 36104
205/834-2870

REPORT OF ANALYSIS

Client Dames & Moore Project No. MG10.75

Address Suite 200 / 455 East Paces Ferry Road / Atlanta, GA 30363

Attention Robert Hunter Laboratory No. 2863A/B

Description of Sample:

Samples submitted to the laboratory on November 5, 1981. Collected by the EPA at U.S. Steel in Fairfield Works.

Description	EX-3	EX-5
Antimony	0.100	0.008
Arsenic	0.23	0.006
Beryllium	0.019	0.002
Cadmium	0.012	0.002
Chromium	0.15	0.11
Copper	0.67	0.03
Lead	0.17	0.07
Mercury	<0.001	0.003
Nickel	0.79	0.08
Selenium	<0.001	<0.001
Silver	0.005	0.002
Thallium	0.24	0.13
Zinc	2.37	19.2
Cyanide	0.005	0.005
Organics	*	*

* Separate Report

All results expressed as mg/l unless otherwise noted.

All analyses conducted in accordance with
STANDARD METHODS FOR WATER AND WASTEWATER.

Respectfully submitted,

Craig D. Vinson, Laboratory Director

LAB-01/79-0

FL 1006

DATE: OCT 16 1981 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Study Plan, Hazardous Waste Site Investigation, U.S. Steel Corporation (Exum Dump), Birmingham, Alabama.

FROM: Water Surveillance Branch

TO: See Below

THRU: Michael R. Carter, Chief
Water Surveillance Branch M. R. Carter

THRU: M. D. Lair, Chief
Engineering Section M. D. Lair

Attached is a copy of the subject study plan. Please provide comments to me by COB, October 23, 1981.

Steve

Steve Hall

Attachment

Finger/Adams
Carter/Lair
Carroll/Bennett
Smith/Stonebraker
Mathis/Veater
Newton/Turnipseed

EPA Form 1320-6 (Rev. 3-76)

STUDY PLAN
HAZARDOUS WASTE SITE INVESTIGATION
UNITED STATES STEEL
EXUM DUMP
BIRMINGHAM, ALABAMA

INTRODUCTION

The U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division (SAD) and Alabama Department of Public Health, Division of Solid and Hazardous Wastes (DSHW) will conduct a joint investigation in the vicinity of U.S. Steel's Exum Dump on November 4, 1981. This investigation is a follow-up of a reconnaissance investigation conducted jointly in November 1980. Following the reconnaissance investigation, the DSHW requested U.S. Steel to install six monitoring wells in and around the site. The proposed investigation will include sampling of these recently installed wells. The DSHW requested EPA's assistance during this investigation.

OBJECTIVES

The objective of the investigation will be to determine if any contaminents are in the groundwater in the vicinity of Exum Dump. This will be done by comparing analytical results of samples collected upgradient with those collected downgradient.

SCOPE AND TIME SCHEDULE

The investigation will be limited to a site examination and sampling the groundwater from the six wells.

Analyses to be conducted on these samples are discussed below in the field study outline.

The following time schedule will apply:

Task	Date
Field Activity	11/4/81
Completion of Analyses*	12/15/81
Completion of Report*	1/30/82

* Assuming a priority does not preempt

FIELD STUDY OUTLINE

General

The field study will be conducted on November 4, 1981 by SAD personnel Steve Hall and Ted Vaughan and David Roberson of the DSHW.

Sampling Locations

Groundwater samples will be collected from the six wells. To minimize contamination, the upgradient wells will be sampled first.

Sample and Analytical Methodology

All field activities will be conducted in accordance with the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual, August 29, 1980 (SOP). All laboratory procedures will be conducted in accordance with Laboratory Services Branch Operations and Quality Control Manual (March 1981 or latest revision).

The groundwater samples will be collected directly into the proper sample containers, as defined by the SOP, where possible. The wells will be sampled after evacuation for a minimum of three static volumes.

All samples from a single location will be placed in a cooler lined with a clean, unused plastic bag. All samples will be held under refrigeration until the investigation is complete and will be hand carried to the SAD laboratory. Chain of custody will be maintained in accordance with the SOP by field personnel.

The samples will be analyzed for volatile and extractable organics, metals, cyanide, pH and temperature.

SITE SAFETY PLAN

General

The site is classified as a Category II site requiring Level D protection.

The groundwater will be sampled from recently installed wells, and since there are no apparent hazards on the ground surface, it is not anticipated that personnel performing the investigation will be subjected to health hazards.

Clothing

Level D protection plus protective glows will be worn when sampling.

Hospitals

U.S. Steel personnel will be accompanying investigatory personnel, and the company's emergency medical facilities will be used, if necessary.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ATHENS, GEORGIA 30613

DATE: NOV 14 1980

SUBJECT: Study Plan, Hazardous Waste Site Investigation, U.S. Steel Corporation (Exum Dump), Birmingham, Alabama, November 17, 1980

FROM: Water Surveillance Branch

TO: See Below

Attached is a copy of the subject study plan.

Steve Hall

Attachment

Addressees:

S&A Division
Finger/Adams
Carter/Lair
Carroll/Bennett

AHMD
Scarbrough
Mathis

Enforcement Division
Turnipseed

EPA Form 1320-6 (Rev. 3-76)

STUDY PLAN
HAZARDOUS WASTE SITE INVESTIGATION
UNITED STATES STEEL
EXUM DUMP
BIRMINGHAM, ALABAMA

INTRODUCTION

The US-EPA, Region IV, Surveillance and Analysis Division (SAD) will conduct an investigation in the vicinity of U.S. Steel's Exum Dump on November 17, 1980. SAD's participation in the investigation was requested by the Region IV, Air and Hazardous Materials Division.

All field activities will be conducted in accordance with the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual.

OBJECTIVES

The objective of the investigation will be to determine if leachate from the dump is conveyed into surface waters flowing through the dump. This will be done by determining if either the number of parameters or the concentrations of parameters increase from upstream of the dump to downstream thereof.

SCOPE AND TIME SCHEDULE

The investigation will be limited to a site examination and sampling upstream and downstream of the dump.

Analyses to be conducted on these samples are discussed below in the field study outline.

The following time schedule will apply for the investigation:

Task	Date
Field Activity	11/17/80
Completion of Analyses*	1/31/81
Completion of Final Report*	2/15/81

*Assuming a priority does not preempt analyses.

FIELD STUDY OUTLINE

The field study will be conducted on November 17, 1980, by SAD personnel, Steve Hall (404/546-3172).

Water and sediment samples upstream and downstream of the dump will be collected directly into the proper containers, if possible. If intermediate sampling equipment is used, it will be cleaned according to standard procedures.

Water samples collected by US-EPA will be analyzed for volatile and extractable organics, metals, cyanide, phenol, pH and temperature. Sediment samples will be analyzed for metals and organics. Split sampling will be offered to U.S. Steel personnel for their independent analyses.

Water samples will be collected in the following sample containers with appropriate preservatives:

Analyses Required	Container; Preservative
Extractable Organics	1 gallon solvent rinsed, amber glass jug; refrigerate
Volatile Organics	VOA vial; refrigerate
Metals	1 pt. glass; HNO_3 to pH <2, refrigerate
Phenol	1 pt. glass; $CuSO_4$ & H_3PO_4 to ph <4, refrigerate
Cyanide	1/2 gal. plastic; NaOH to pH >12, refrigerate

Sediment samples will be collected in the following containers and will be refrigerated:

Analyses Required	Container
Organics	1 quart glass with Teflon liner
Metals	1 pint plastic

All samples from a single location will be placed in a separate cooler lined with a clean, unused plastic bag. All samples will be held under refrigeration until the investigation is complete and will be hand carried by Hall to the SAD laboratory in Athens, Georgia. Chain-of-custody will be maintained by field personnel from time of sample collection until relinquished to SAD Laboratory Services Branch personnel.

ROUTING AND TRANSMITTAL SLIP

Date 11/14/80

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Scarbrough - AHMD		
2. Atlanta		
3. Mathews		
4. Venter		
5.		

	Action		File		Note and Return
	Approval		For Clearance		Per Conversation
	As Requested		For Correction		Prepare Reply
	Circulate	X	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.
S. Hall	Phone No. 3117

5041-102

☆U.S. G.P.O. 1980-311-156/4

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

Copy to Cox 1/10/81

ecology and environment, inc.
4319 COVINGTON HIGHWAY, DECATUR, GEORGIA 30035, TEL. 404-288-7711
International Specialists in the Environmental Sciences

September 3, 1981

Mr. Joel Veater
Emergency Response Branch
Air & Hazardous Materials Division
U. S. Environmental Protection Agency
Atlanta, Georgia 30365

Dear Mr. Veater:

Enclosed is a trip report on the site reconnaissance of Exum Dump in Birmingham, Alabama performed jointly by Ecology & Environment, Inc. (E&E), EPA, Surveillance & Analysis Division and the State of Alabama. With the submittal of this report, E&E has fulfilled the initial tasks assigned by TDD F4-8010-4.

The TDD calls for work to be performed by E&E that would include (1) subcontracting for sample analyses and (2) a full field investigation to include collection of samples, performed jointly with Alabama Division of Solid Waste & Vector Control. After conferring with Dave Roberson, it is apparent that the State feels the next appropriate step in investigating Exum Dump will be to sample groundwater from six monitoring wells, once these wells are installed. Currently, the State is waiting for a schedule from U. S. Steel which will outline the dates of well installation. In view of the fact that this construction work may take several months to complete, E&E feels that it would be in the best interest of project management to include the subsequent sampling needs on a TDD issued at a later date. This management decision would then call for closing out the existing TDD and waiting until the needs are at hand to issue another TDD regarding work at Exum Dump. Having discussed this management issue with you by phone, I am also enclosing the appropriate documents that will officially close TDD F4-8010-4.

E&E believes that the work performed under TDD F4-8010-4 has been useful in keeping EPA apprised of the activities involving Exum Dump. U. S. Steel and the State of Alabama have been progressing in their efforts to determine the extent of contamination originating from the site and E&E is available to assist the State in any future work deemed necessary.

Yours truly,

Jennifer Scott-Simpson

Jennifer Scott-Simpson
Project Officer

JSS/lsr

recycled paper

TRIP REPORT & SITE STATUS REVIEW
U.S. STEEL EXUM DUMP
BIRMINGHAM, ALABAMA
TDD F4-8010-4

Introduction

Arrangements were made by Ecology and Environment, Inc. (E&E) to conduct a site reconnaissance of U.S. Steel's Exum Dump in Birmingham, Alabama on November 17, 1980. The participants in this site visit were as follows:

Gary Euler, Environmental Engineer U.S. Steel
Buddy Cox, Alabama Department of Public Health, Division of Solid Waste & Vector Control
David Roberson, Alabama Department of Public Health, Division of Solid Waste & Vector Control
Steve Hall, U.S. Environmental Protection Agency, Surveillance and Analysis Division (SAD)
Charles Wilson, E&E FIT
Jennifer Scott-Simpson, E&E FIT

The purpose of this meeting was two-fold: (1) to bring EPA records up-to-date on the on-going activities at Exum Dump and (2) to determine the type of additional investigative work required to assess the extent of contamination originating from Exum Dump. Steve Hall's participation in this investigation also included the collection of environmental samples to determine if leachate from the dump was being conveyed into adjacent surface waters.

Site History and Observations

Exum Dump, comprised of between 75 and 100 acres, is located about one mile west of U. S. Steel's Fairfield Works near Birmingham, Alabama. The site originally was a valley which, over at least the past 50 years, has been partially filled with wastes primarily from the manufacturing of steel. According to U. S. Steel, 38 acres of Exum Dump are being used for waste disposal and the remaining acreage is used for raw materials storage. The source and types of waste disposed of at Exum Dump by U. S. Steel are presented in Attachment 1. The active waste disposal areas consist of two pits, approximately 2 to 3 acres in size, with an original depth of 40 to 50 feet. One pit contains waste oil while the other holds filter cake. During the site reconnaissance, the eastern portion of the site was also actively being used for waste disposal. A tank truck was observed emptying its contents over the edge of a 60 foot embankment. Mr. Gary Euler, U.S. Steel representative, stated that the company is trying to prevent their waste transport contractors from using this area as a disposal site and the company is having limited success.

Access to Exum Dump is provided by an unimproved road that enters the site from the south and a railway that enters the site from the northeast. The site is bordered on the south and west by forested land, on the north by a fenced field and on the east by a depressed area containing water. Further east is Chem Haulers, Inc. Chem Haulers uses this area to wash and clean their trucks. Southeast of Exum Dump is a wood preserving company.

Three areas of concern were noted during the reconnaisance visit to Exum Dump. The group of pits used for waste oil and filter cake disposal were unlined and may present a threat to groundwater quality. The second area of concern is the eastern portion of the dump and the adjacent lowland area which was actively receiving wastes and potentially receives contaminated runoff. The lowland area east of Exum Dump contains ponded water fed by a stream originating from the north. Investigators saw no apparent outflow for this water. The USGS topographic map indicates that this depression is a sinkhole. Two similar low areas, much smaller in size, were noted on the northeastern border of the dump beyond the railroad tracks. The third area of concern is the western side of Exum Dump which is at a lower elevation than the other portions of the dump. A culvert leads from the dump into a stream that empties into Bayview Lake. County officials report that the water quality of Bayview Lake is poor and therefore, the water is not used as a drinking supply.

Future Site Activities

The State of Alabama representatives have approached the Exum Dump site as a single location with contaminants potentially originating from multiple sources. Given this approach, the State ordered Chem Haulers and the wood preserving company to cease discharge of contaminated wastewater and to develop an effective waste management system. Currently, each company is working on the installation of a waste water treatment system. Chem Haulers will supplement their treatment system by shipping some of their wastes (e.g. acids) to another facility which is capable of treating the waste properly and discharging the treated waste to a sewer. The wood preserving company plans to use a closed-cycle wastewater treatment system.

U. S. Steel and the State of Alabama are also cooperating to determine the extent of groundwater contamination, if any, that has originated from the Exum Dump. U. S. Steel obtained the services of a private consulting firm to determine the hydrogeological characteristics of the site. This study is complete and will serve to ensure proper well placement. The State is now waiting to receive a schedule from U. S. Steel that will outline the dates for the installation of six groundwater monitoring wells.

After the wells are installed, the State of Alabama will arrange for water samples to be collected from each well and analyzed. The groundwater quality will be evaluated according to drinking water standards and the presence, if any, of priority pollutants.

Recommendations

The past studies of Exum Dump have served as a preliminary assessment of the hazardous waste problems associated with the site. The current groundwater assessment program required by the State is the first study that is intended to provide portions of a detailed site characterization. E & E recommends that this type of site characterization be conducted for the other media potentially affected by contaminants from Exum Dump, that is, surface water and soil. A thorough description of the existing contaminated areas and those areas that are potentially contributing to contamination is necessary prior to developing a feasibility study for remedial alternatives.

Defining the problems associated with Exum Dump is complicated by several factors:

1) the large acreage involved and the depth of fill;
2) the presence of limestone and likelihood of sinkholes in the area;
3) the reported existence of a fault running through the dump;
4) lack of historical information on the waste management practices; and
5) the existence of adjacent facilities that may be contributing to contamination.

At present, there are many knowledge gaps in the Exum Dump information. Surface waters are contaminated but the source(s) and extent of contamination are not known. Soils on the dump surface are contaminated but the depth of contamination and site runoff patterns have not been documented. The 38 acres actively used for waste disposal have not been accurately mapped to facilitate interpretation of potential migratory pathways. Therefore, a significant amount of work is still needed to ensure a reliable definition of the potential site problems.

E & E recommends that the next steps involving Exum Dump be directed toward completing the site characterization through developing a full sampling program. Historical and current aerial photographs would assist in the selection of the appropriate sampling points. The surface waters on the eastern and western side of the site should be sampled again for organics and metals. The samples would include both water and sediment phases and would be collected at stations farther upstream and downstream than have been selected for preliminary reconnaissance. Also, a formal grid sampling plan should be developed for collection of soil samples. The entire surface of Exum Dump is not believed to be contaminated; yet, the specific areas of surface contamination have not been defined. Use of a grid sampling approach with knowledge of the general waste disposal locations would facilitate characterization of such a large surface area. The results of this sampling should enable the review agencies to focus on the most serious areas of concern. Then these agencies could direct development of remedial actions for specific areas of the dump instead of attempting to alleviate the problems of the entire 75 to 100 acres with one plan.

These recommended work items are needs typical of site characterization and can be scheduled concurrently with the on-going groundwater assessment. It is suggested that a critical flow path for assimilating data on Exum Dump be developed in the near future to assure efficient management of work tasks and to facilitate data organization and interpretation.

ATTACHMENT 1

Source and Composition of Wastes
Disposed of at Exum Dump*

Facility	Residual Waste	Composition
Electric & Utilities Division	Tin Mill Waste Treatment Plant Filter Cake	H_2O 50%; Fe O 15%; $CaCO_3$ 15%; Fe 5%; Oil & Grease 15%, Other 5%
	Reclaim Water Skimmer Waste Oil	H_2O 40%; Oil 55%; Fe O 5%
	Final Effluent Control Pond Waste Oil	H_2O 40%; Oil 60%
Hot Roller Division	Roller Grinder Sludge	Fe 80%
	O-BOP Vacuum Filter Cake	Fe 48.9 %; H_2O 31.5% Lime 11.2%; C 2.6% Si 2.4%; Magnesia 13,000 ppm; Mn 9,000 ppm; Alumina 9,000 ppm S 1,000 ppm
	Q-BOP Rake Classifer Sludge	Fe 21.1%; Lime 48%; H_2O 12.9%; Si 10.9%; Magnesia 3.8%; C 13,000 ppm; Mn 12,000 ppm; P 8,000 ppm; Alumina 7,000 ppm
Tin Division	Hot Strip Mill & Coal Roll Reduction - Roll Shop Grinder Sludge	H_2O 50%; Fe 10%, Si O 20%; Al_2O_3 3% C 3%; Oily Matter 5 ppm
Central Maintenance Division	Fairfield Tractor & Machine Shops	Oil 25%; Grime 75%

* Direct excerpt from State of Alabama files

UNITED STA .S ENVIRONMENTAL PROTECTION . ENCY
ATHENS, GEORGIA 30613

DATE: APR 30 1980

SUBJECT: Trip Report - Reconnaissance of Potential Hazardous Waste Sites, Birmingham, Alabama, March 26-27, 1980

FROM: Water Surveillance Branch

TO: James H. Finger, Director,
Surveillance & Analysis Division

THRU: Michael R. Carter, Chief
Water Surveillance Branch

SUMMARY

I met in Birmingham with Joel Veater and Ron Joyner from EPA's Air and Hazardous Materials Division and Buddy Cox and Dave Roberson from the Alabama Department of Public Health. The following locations were investigated:

- Exum Dump (property of U. S. Steel), Fairfield, Alabama

Mr. Jim Long, representing U.S. Steel, accompanied us on a reconnaissance of the dump area. The dump covers about 100 acres and is located approximately a mile from the Fairfield Works. The "dump" is essentially the filling in of a valley with waste products (primarily inorganic) and some waste oils from U.S. Steel's Fairfield Works. This dump has existed for at least 50 years and there is little known (by U.S. Steel personnel) concerning the underlying area as to whether or not it was ever mined, or has always been used for a tailings or waste dump. U. S. Steel personnel stated that they used the site for raw material storage and as a dump for bricks, pallets, waste oil, and air scrubber filter cake. Waste oil and filter cake are placed in two separate sumps within the dump.

There are two unguarded access roads onto the site, however, there was little evidence of any dumping other than that from U.S. Steel. There were some appliances (washing machine), household trash, and tires, but very little. Surface water flows generally east to west along the long axis of the valley towards Village Creek northwest of the property.

Between the east end of the dump and easternmost end of the valley there was an area of standing water which had no apparent discharge although there was an inflowing stream. State personnel speculated as to whether or not water from the area went into a "sink hole" or tunneled beneath the deposition of waste and discharged from the west end of the dump site. There was a significant surface water flow at the west end of the site which may have been from the standing water area or may have been natural runoff because of recent high rainfall.

This standing water area not only receives wastes deposited "over the edge" of the east end of the dump (evidence of oily wastes being discharged was obvious during the investigation), but also from Chem Haulers, Inc., who operates a tank truck cleaning operation at the east end of the valley.

In my opinion, the Chem Haulers, Inc., discharge could be a more severe problem than U.S. Steel's Exum dump.

There are no residential or commercial wells within 2 - 3 miles of the area, but there are some county monitoring wells in the vicinity of U.S. Steel's deep well injection, a couple of miles south of the Exum dump. Most of these wells, however, are deep monitoring wells and may not be applicable to the Exum dump area.

Summary of Investigation - EPA's services were offered to the Alabama Department of Public Health in planning and conducting a sampling and analytical program of the dump area if it is deemed necessary. State personnel were told that once sufficient groundwater and/or geological information were available, EPA would help the State plan a groundwater and surface water monitoring program. Mr. Dave Roberson from the State Department of Public Health will contact me for further plans. The time frame for a potential study depends upon available groundwater and geology information. If it is determined that no information is available or can be made available, further plans will be made by the EPA and State whether or not surface sampling of the vicinity streams would be appropriate to attempt to determine if a problem exists.

- Buckner Barrels and Drums, Inc., Birmingham, Alabama

The five EPA and Alabama people, listed previously, met with Mr. Frank Buckner and his Consulting Engineer, Mr. Ben Carr, from Carr and Lucus Consulting Engineers in Birmingham, at the site north of Birmingham. This site is located on the side of a hill with all surface drainage generally flowing south to the front of the property and then westerly along a railroad track to where it crosses under the track, ultimately reaching Five Mile Creek.

Mr. Buckner started a barrel reclaiming operation on this site approximately 3 1/2 years ago. He leases the property on a continuing 30 day lease from U.S. Pipe and Foundry. When he started his operation there were several drums (perhaps hundreds) already on the property, some partially filled and some empty. Even though he does not believe he is liable for the previous land user, he has offered to clean up the area as long as it does not "break him financially" at his primary operating location in another city in Alabama. The State of Alabama has agreed with Mr. Buckner that if he presents an acceptable plan for clean up and follows through with it, no adverse action will be taken against him. The State, however, will conduct soil monitoring and some surface water monitoring of the area to keep abreast of the problem.

Summary of action by EPA - No further action would be needed unless Mr. Buckner decided to cease his clean-up attempt and the State requested assistance either in sampling or analytical work.

- Alabama Gas Company, Birmingham, Alabama

The north Birmingham gas plant is located on a site which was initially a garbage dump and then a dump for gas purification waste products prior to the use of natural gas in the area. The gas purification process consisted of

passing coal gas from area coke ovens through a mixture of iron filings, sawdust and coke. The deposition of this mixture has recently come to the ground surface in the form of "blue mud." The State of Alabama has determined a pH of 2 in some mud samples and has also found high concentrations of metals, especially iron, and some low concentrations of cyanide. (I don't understand how cyanide can be present with such a low pH). The State is unsure as to the significance of this particular site and may request confirming analyses by EPA, primarily for metals and cyanide, before they request Alabama Gas Company to either clean up the area, treat it in place with lime, etc. I offered assistance if they need it in the future.

- Blount County Strip Mine Dumps

Four sites were investigated in Blount County. In addition to the five EPA and State personnel mentioned previously, Mr. Jack Hunnicutt, also from the Department of Public Health, was present during these investigations. These sites were originally checked by the state because of reported oil dumping, and state personnel wanted to make EPA personnel aware of them in case we thought sampling or other action was necessary.

Site one is near the Nyota Community and is an abandoned strip pit at an L&N Railroad crossing. This site allegedly received oil waste from U.S. Steel in an area approximately 50 feet in diameter by 12 feet deep, which is now covered with soil. Alabama analytical results showed high concentrations of heavy metals in the area.

No further action by EPA is recommended since the area is entirely covered with soil, and there is no evidence of oil waste or other waste products. Additionally, there are no residential wells or water supply users in the area. Because of mining in the area, the groundwater gradient would be probably completely unknown and would preclude any logical sampling program.

Site two is an abandoned plant site of Alabama Recyclers, also near the Nyota Community. Approximately 400 - 500 drums were once stored on the site and apparently contained paint residue, solvents, etc. Mr. Hunnicutt required Alabama Recylers to remove the drums, but some were left buried in the area and some apparently had spilled. Our reconnaissance showed evidence of a few drums and some waste products which had been spilled on the side of a hill. Household garbage is now being dumped in the area.

No further action should be considered by EPA since nothing constructive could be done to further clean up the area. No commercial or residential wells are in the area and the geology of the area has been so disturbed by the mining that a logical sampling program would be impossible. There are no water courses in the vicinity and thus, the chances of contamination of U.S. waters are minimal.

Site three is an old coal waste rock pile overlooking Locust Fork near the border of Jefferson and Blount Counties. Apparently oily sludge, allegedly from U.S. Steel, has also been dumped here, allegedly by Alabama Recyclers. The volume of the waste oil is unknown.

No further action should be considered by EPA since it does not appear that the waste oil would easily reach surface waters, and there are no known ground-water users in the area.

Site eight is near Little South Creek near the Selfville community. Oily sludge from U.S. Steel was allegedly dumped by Alabama Recyclers. The oil covers approximately an acre and appears to be on top of stagnant water at the bottom of a gully. The only way oil could reach surface waters is that the water level rise enough to get past an earthern barrier. If this occurred, minimal environmental damage would result.

This site may be a candidate for use of 311 funds, but because of the isolated area and minimal environmental damage, the cost-benefit ratio would be excessive.

ACTION

For your information.

BACKGROUND

Request by Air and Hazardous Materials Division to make a reconnaissance of above sites.

Steve

Steve Hall

cc: Joel Veater

RICHARD DWOREK
DIRECTOR, ENVIRONMENT
ENVIRONMENT & ENERGY

United States Steel Corporation
600 GRANT STREET
PITTSBURGH, PENNSYLVANIA 15230

June 9, 1981

US EPA Region 4
Sites Notification
Atlanta GA 30308

Subject: Hazardous Substances Notification of Treatment, Storage and Disposal Facilities

Gentlemen:

As required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, U. S. Steel Corporation is herein submitting notification of the existence of hazardous waste facilities in your region which do not have interim status or permits issued under Section 3005 of the Resource Conservation and Recovery Act. Notwithstanding the time constraints surrounding this submittal, U. S. Steel has attempted to fully disclose all sites for which a notification is required. If additional sites requiring notification are subsequently discovered, this information will be submitted to your office as it becomes available.

Very truly yours,

Anthony A. Spinola

Anthony A. Spinola
Environment Engineer
Environment & Energy Department

AAS:dk

Attachment

EPA Notification Hazardous Waste Sit

R

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.

810609

A Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: United States Steel Corporation
Street: 600 Grant Street
City: Pittsburgh State: Pa Zip Code: 15230

B Site Location:

Enter the common name (if known) and actual location of the ~~site~~.

SEE ATTACHED
ALD004001350

Name of Site: Fairfield Works - U. S. Steel Corporation
Street: Tin Mill Road
City: Fairfield County: Jefferson State: Al Zip Code: 35064

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): Varner, J. A. - Chief Engineer
Phone: 205/783-2201

D Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): To (Year): SEE ATTACHED

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.

SEE ATTACHED

RECEIVED
EPA/REGION IV
JUN 5 - 5 PM '81

0 9 0 0 1 6

Form Approved
OMB No. 2000-0138

EPA Form 8900-1

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

SEE ATTACHED

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

cubic feet _____

gallons _____

Total Facility Area

square feet _____

acres _____

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.

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 T. Stevenson, General Superintendent

Street P. O. Box 599

City Fairfield State Al Zip Code 35064

Signature [signature] Date 6-1-81

☒ Owner, Present
☐ Owner, Past
☐ Transporter
☒ Operator, Present
☐ Operator, Past
☐ Other

NOTIFICATION OF HAZARDOUS WASTE SITE

SITE	DATES OF WASTE HANDLING	TYPE WASTE	QUANTITY (b)	FACILITY AREA (b)
Exum Dump (A) East End	Unknown start to 1974 or 1975 See Note (a).	1. Coke Plant Tar Decanter Sludge (K087)	Generating 800 T per year in recent years.	35 Acres (Total Exum)
	Unknown start to 1974 or 1975 See Note (a).	2. Residual deposits from cleaning tanks (Coke Plant) that contained tar, pitch, naphthalene, sulfuric acid, creosote, wash oil, light oil and BTX (Benzene(U019), Toluene (U220), Xylene (U239)) products.	Unknown	
	Unknown start to 1970 See Note (a).	3. Coke Plant Residues from BTX operating equipment, stills, acid pots and light oil agitators (operation discontinued in 1970).	Unknown	
(B) Oil Pit	1973 to Nov. 1980	4. Same as 1 and 2 above.	Unknown	
	1974 or 1975 to Nov. 1980	5. Oil from Tin Mill ditch which has been in contact with waste pickle liquor (K062)	Unknown	
	July 1975 to Nov. 1980	6. Coke Plant ammonia still lime sludge (K060) mixed with biomass from biological treatment plant.	1500 T per year	

SITE	DATES OF WASTE HANDLING	TYPE WASTE	QUANTITY (b)	FACILITY AREA (b)
Exum Dump (C) Filter Cake Pit	1973 to Nov. 1980	7. Tin Mill waste treatment plant filter cake (K062, D007).	14,600 T per year	
Coke Plant (A) North of Biotreatment Plant		8. Same as 1, 2 and 3 above.		1/3 acre
(B) North of Pitch Plant	About 1970	9. Naphthalene (U165)	900 cu.ft.	200 sq.ft.
Tin Mill Dump	Unknown start to about 1972	10. Same as 1, 2 and 3 above.		20 acres
No. 5 Dump		11. Same as 1, 2 and 3 above.		25 acres
Old Drum Reclaiming Area	Unknown start to Nov. 1980	12. Predominantly empty drums previously containing oil and grease - possibly some with unknown contents.	Unknown	1/2 acre

Notes: (a) The Coke Plant began operation in the early 1900's. Records of waste disposed of from the coking operations were not kept until the Fall of 1980.

(b) Quantities and areas are rough estimates.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ATHENS, GEORGIA 30613

DATE MAY 07 1981

SUBJECT Hazardous Waste Site Reconnaissance Investigation, Exum Dump (U.S. Steel), Birmingham, Alabama, November 17, 1980

FROM Water Surveillance Branch

TO Al Smith, Director
HERB

Attached is a copy of the report for the investigation conducted at Exum Dump in November 1980. Mr. Gary Euler, Environmental Engineer, U.S. Steel requested a copy of the report. His address is P.O. Box 599, Fairfield, Alabama 35064, Mail Station D-400.

Steve

Steve Hall

Attachment

cc: Finger/Adams
Carroll/Bennett
Carter/Lair
Newton/Turnipseed (memo only)

HAZARDOUS WASTE SITE RECONNAISSANCE INVESTIGATION
U. S. STEEL (EXUM DUMP)
BIRMINGHAM, ALABAMA
NOVEMBER 1980

INTRODUCTION

A reconnaissance investigation of Exum Dump was conducted jointly by Steve Hall of the U. S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division (SAD), and Charles Wilson and Jennifer Scott-Simpson of Ecology and Environment on November 17, 1980. Also present were Buddy Cox and David Roberson of the Alabama Department of Public Health, Division of Solid and Hazardous Waste. Mr. Gary Euler, Environmental Engineer for U. S. Steel, accompanied the investigators.

The purpose of the reconnaissance was to determine: (1) if leachate from the dump was conveyed into surface waters flowing through the dump, and (2) what further investigations may be necessary to determine the extent of contamination of surface and/or groundwaters.

Participation by SAD in the investigation was requested by the Region IV, Air and Hazardous Materials Division.

STUDY AREA

Exum Dump is owned by U. S. Steel and is located about one mile from their Fairfield Works (Figure 1). The dump covers about 100 acres and is essentially a valley which has been filled in with waste products (primarily inorganic with some waste oils) from U. S. Steel's Fairfield Works. This dump has existed for at least 50 years, and U. S. Steel personnel know little about the underlying area and whether or not it was ever mined or has always been used for a tailings or waste dump. U. S. Steel personnel stated that the site is presently used for raw material storage and as a dump for bricks, pallets, waste oil and air scrubber filter cake. Waste oil and filter cake were placed in two separate pits within the dump. There is one unguarded access road onto the site; however, there was little evidence of any dumping other than that from U. S. Steel. There were some appliances (washing machine), household trash and tires.

Between the east end of the dump and easternmost end of the valley there is an area of pooled water which has no apparent discharge, although there is an inflowing stream. There is a significant surface water flow at the west end of the site which may be from the pooled water, natural runoff or a combination of both. Surface water flows generally from east to west along the long axis of the valley towards Village Creek located northwest of the property.

The pooled water area not only receives wastes deposited "over the edge" of the east end of the dump (evidence that oily wastes have been discharged was apparent during the investigation) but also wastes from a tank truck cleaning operation located at the east end of the valley (Figure 2).

There are no residential or commercial wells within 2-3 miles of the area, but there are some county monitoring wells in the vicinity of U. S. Steel's deep injection well, a couple of miles south of the dump. Most of these wells, however, are deep monitoring wells and are not associated with the dump area. The Alabama Department of Public Health, Division of Solid and Hazardous Wastes has requested U. S. Steel to place six groundwater monitoring wells around the site. These have not yet been installed.

DISCUSSION OF RESULTS

Summary

Water and sediment samples were collected near the influent to the pooled water area upstream of the dump site and near a drain culvert downstream from the site (Figure 2). These samples were considered representative of the respective areas sampled, and results should be helpful in determining needs for subsequent investigations, if required. The samples were analyzed for organic compounds and metals, including priority pollutants. Water sample organic analyses were conducted by Mead Technology (a laboratory under contract to EPA). All other analyses were conducted by SAD's Laboratory Services Branch. All analytical results are included in Attachment A.

Organic Compounds

Sixty-two organic compounds were detected in water and/or sediment samples collected at the stations located upstream and downstream of Exum Dump (Tables 1-3). Upstream and downstream water contained twelve and twenty-two organic compounds, respectively, with ten common to both locations. Sediment samples collected upstream and downstream contained forty-four and seventeen organic compounds, respectively, with thirteen common to both locations.

The sediment sample collected upstream (EDU) from the dump had significantly greater concentrations of organic compounds than the sample collected downstream (EDD) (Tables 1 & 2). However, concentrations of organic compounds detected in the water were greater in the downstream water sample than in the upstream sample (Table 1).

The presence of high concentrations of several organic compounds in the sediment from the upstream station (pooled water area) was expected. Wastes, both solid and liquid (composition unknown except for some apparent oily wastes), are dumped over the east dump face on U. S. Steel property and move or flow down the wall of the dump face into the pooled water area. Additionally, wastes from tank truck cleaning operations are dumped into the same pooled water area but further to the east (Figure 2).

The reason for higher concentrations of organic compounds in the downstream water (as compared to upstream) cannot be explained. Most of the constituents may pass through the dump via the stream, but some probably either leach into the stream from within the dump or are conveyed by surface runoff into the stream which flows through the dump. Waste oils from steel making and filter cake from U. S. Steel's air scrubbers were being placed in pits on the dump site -- not over the edge of the east face -- during the investigation. Plans were being made by the company to dispose of the waste oils elsewhere; the location was not disclosed to the investigators.

Uses of the organic compounds detected in the water and sediment samples range from vitamins to insecticides with various organic intermediates and solvents.

Many of the compounds are priority pollutants (1); some are on the 311 list of hazardous substances (2). EPA considers any of the compounds on either list to be toxic.

Metals

Twenty-two metals were detected in the water and sediment samples collected upstream and downstream from the dump (Table 4). Fourteen metals were detected upstream and downstream in the water; ten of these were common to both sampling locations. Nineteen metals were detected in the upgradient sediment sample; eighteen were in the downgradient sample; seventeen were common to both locations. In most cases, the concentrations of metals in the sediment upstream were greater than in the downstream sample. The reverse was true for the water phase; the downstream water contained greater concentrations of metals than the upstream sample.

Generally, the concentrations of metals detected in the water phase during this investigation exceeded those detected in vicinity streams during an EPA investigation of the Birmingham area in the 1978 (3). However, none of the metals detected in the downstream water phase were at high enough concentrations to be toxic to aquatic life (4). The presence of some metals, particularly mercury, in both the water and sediment samples, could be an indication of a potential hazard from the dump site, however. The concentrations of metals detected in the sediment were comparable to those detected in vicinity streams downstream from waste sources during the 1978 study (3).

The presence of several metals (Table 4) in the water and sediment would be expected since the dump site is used for ore storage as well as wastes from U. S. Steel. The samples collected upstream would be expected to be affected primarily by the tank truck washing rather than by depositions on the dump. However, during periods of flooding, the water upstream from the dump, but downstream from the tank truck cleaning company would presumably rise, and the entire area would be cross contaminated.

METHODOLOGY

All sampling and preservation methods were in accordance with the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (August 29, 1980) Draft (5). Chain-of-custody was maintained from time of collection until relinquished to Laboratory Services Branch personnel at the US-EPA laboratory in Athens, Georgia.

REFERENCES

1. Natural Resources Defense Council, et. al. and EPA Consent Decree of June 7, 1976.

2. 311 List of Hazardous Substances, Federal Register, Volume 44, No. 169, Wednesday, August 29, 1979.

3. Biological and Chemical Study on Opossum, Valley, Village and Five Mile Creeks, Birmingham, Alabama; U.S. Environmental Protection Agency, Region IV, Surveillance and Analysis Division, Unpublished, 1978.

4. Water Quality Criteria, McKee and Wolf, California State Water Resources Control Board, Publication 3-A, April 1971.

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

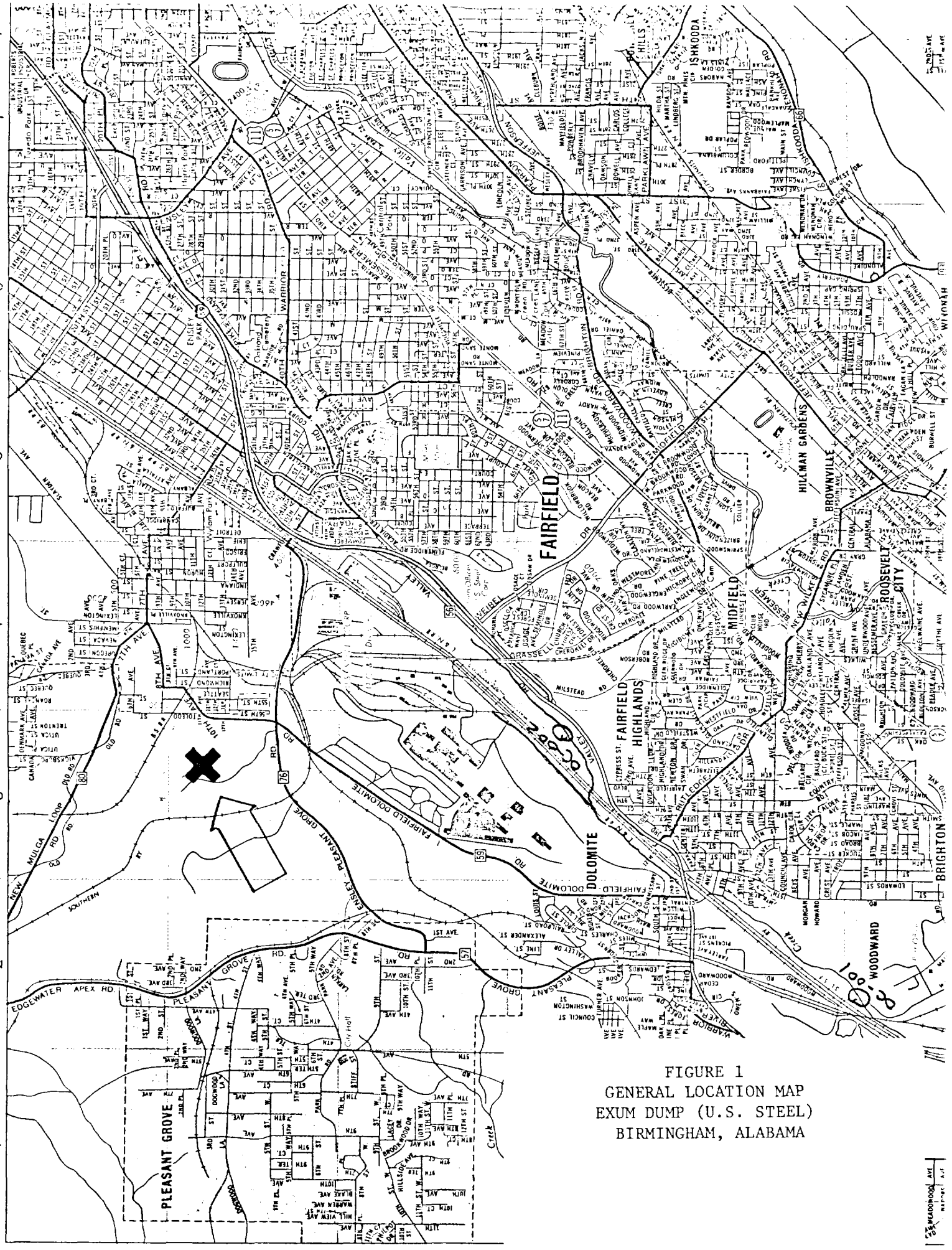
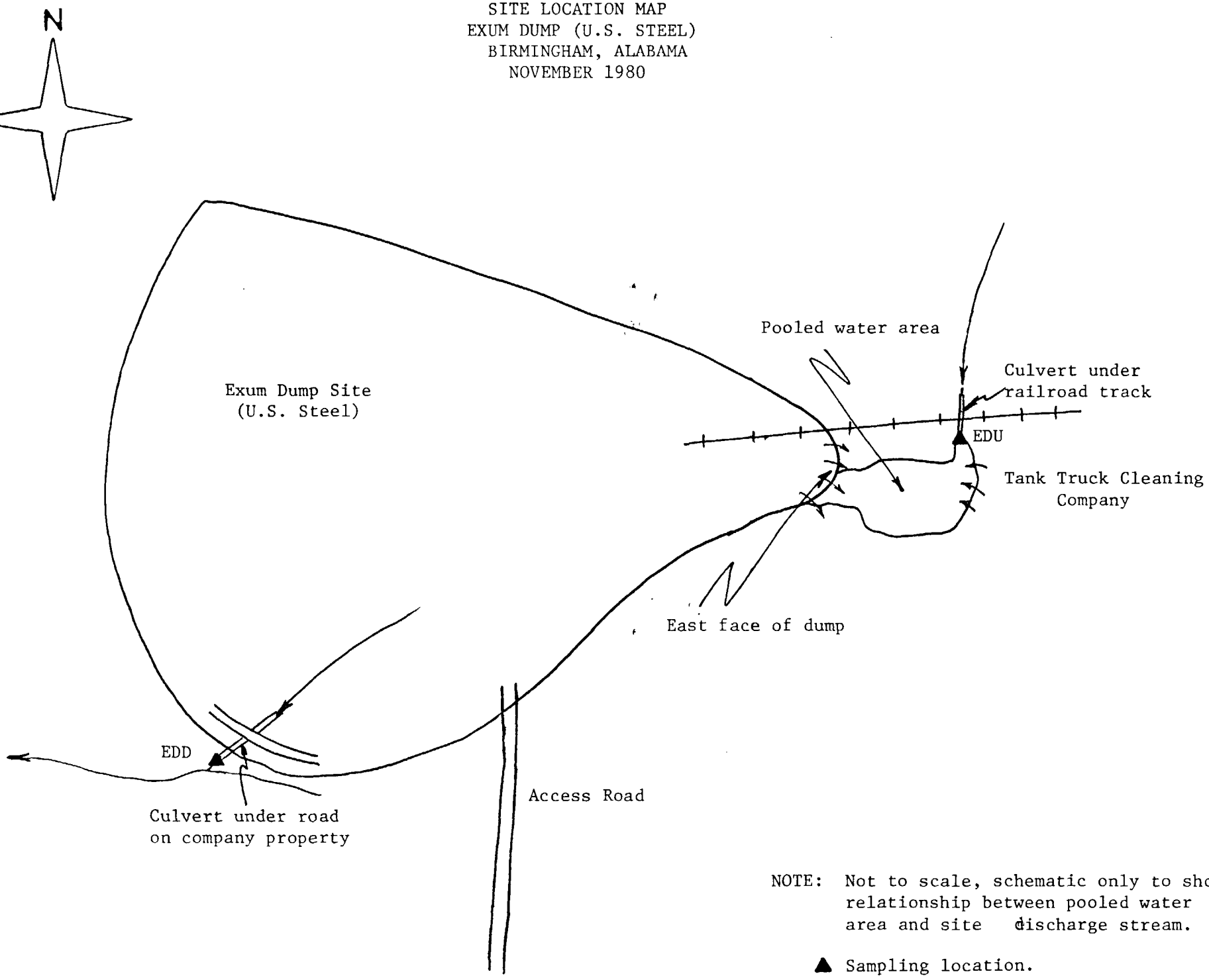


FIGURE 1
GENERAL LOCATION MAP
EXUM DUMP (U.S. STEEL)
BIRMINGHAM, ALABAMA

FIGURE 2
SITE LOCATION MAP
EXUM DUMP (U.S. STEEL)
BIRMINGHAM, ALABAMA
NOVEMBER 1980



NOTE: Not to scale, schematic only to show relationship between pooled water area and site discharge stream.

▲ Sampling location.

TABLE 1
PRIORITY POLLUTANT*
ORGANIC COMPOUNDS DETECTED
EXUM DUMP RECONNAISSANCE
NOVEMBER 1980

COMPOUND	LOCATION			
	Upstream		Downstream	
	Water (ug/l)	Sediment (ug/kg)	Water (ug/l)	Sediment (ug/kg)
Naphthalene	-	31,000	-	5,000K
Acenaphthylene	-	21,000	-	-
Acenaphthene	14	27,000	260	5,000K
Fluorene	22	37,000	160	5,000K
Phenanthrene or Anthracene	10K	110,000	50	5,000K
Fluoranthene	-	34,000	20	5,000K
Pyrene	-	26,000	25K	5,000K
Chysene or 1,2-Benzanthracene	10K	26,000		5,000K
11,12-Benzofluoranthene	-	31,000	-	-
3,4-Benzopyrene	-	17,000	-	5,000K
Indeno (1,2,3-cd) pyrene	-	4,900	-	-
1,2,5,6-Dibenzanthracene	-	1,900	-	-
1,12-Benzoperylene	-	5,900	-	-
Phenol (GC/MS)	42	4,000K	140	5,000K
2,4-Dinitrophenol	-	32,000	-	-
Trichloroethylene	-	-	76	-
Benzene	-	-	14	-
2,4-Dimethylphenol	25K	-	58	-
1,2-Dichloroethane	13	-	-	-
2,4-Dichlorophenol	-	-	20K	-
Phenol (total)	155	NA	1160	NA

*Priority pollutants listed in the Natural Resources Defense Council, Inc., et al., Consent Decree dated June 7, 1976.

Notes: K - Actual value is known to be less than value given.
Dash indicates compound not detected at minimum detection limit.
N/A - not analyzed.

TABLE 2
TENTATIVELY IDENTIFIED
ORGANIC COMPOUNDS* IN SEDIMENT
EXUM DUMP RECONNAISSANCE
NOVEMBER 1980

COMPOUND	LOCATION	
	Upstream Sediment (ug/kg)	Downstream Sediment (ug/kg)
Methyl Pyrene (2 isomers)	2100J	-
Ethyl Pyridine	1000K	-
Terphenyl (3 isomers)	2100J	-
Trimethyl Pyridine	1000K	-
Benzo Naphthothiophene	3200J	-
Methyl Styrene	1000K	-
Methyl Benzanthracene	2100J	-
Indene	1000K	-
Hydroxy Methyl Pentanone	43,000J	47,000J
Diethenylbenzene	1000K	-
Nitrosocarbazole	1900J	-
Quinoline (2 isomers)	20,000J	-
Methyl Naphthalene (2 isomers)	19,000J	-
Methyl Quinoline (2 isomers)	12,000J	-
C_2 Alkyl Naphthalene (3 isomers)	14,000J	-
Dimethyl Quinoline	1100J	-
Biphenyl	3000J	-
Dibenzofuran	15,000J	5,000J
Methyl Biphenyl	1000K	-
Methyl Dibenzofuran	3200J	-
Carbazole (2 isomers)	24,000J	-
Methyl Fluorene	1000K	-
Dibenzothiophene (2 isomers)	19,000J	-
Acridine	7500J	-
Phenanthridine	4300J	-
Cyclopenta (d,e,f) Phenanthrene	11,000J	5,000K
Methyl Carbazole	1000K	-
Phenyl Naphthalene	5300J	5,000K
Anthracene Carbonitrile	6400J	-
Phenyl Methyl Naphthalene	-	5,000K
Tetradecanoic Acid	-	8,000J
Hexadecanoic Acid	-	240,000J
Octadecanoic Acid	-	130,000J

* - Non-priority pollutants
Notes: J - Estimated value
K - Actual value is known to be less than given value.
Dash - Material was not detected at minimum detection limit.

TABLE 3
TENTATIVELY IDENTIFIED/NON-QUANTIFIED
ORGANIC COMPOUNDS* IN WATER
EXUM DUMP RECONNAISSANCE
NOVEMBER 1980

COMPOUND	LOCATION	
	Upstream Water	Downstream Water
2-Methyl Phenol	N	N
3,4-Dimethyl Phenol	N	N
3-Ethyl Phenol	-	N
2-Ethyl-4-Methyl Phenol	-	N
2-Naphthalnol	-	N
9,10-Anthracenedione	N	N
1,1'-Sulfonylbis Benzene	-	N
1,8'-Dimethyl Naphthalene	-	N
2-Methyl Quinoline	-	N
2-Methyl Naphthalene	-	N
9H-Carbazole	N	N

*Non-priority pollutants

Notes:

N - Tentatively identified, but not quantified

Dash indicates compound not detected at minimum detection limit.

TABLE 4
METALS DETECTED
EXUM DUMP RECONNAISSANCE
NOVEMBER 1980

METAL	LOCATION			
	Upstream		Downstream	
	Water ug/l	Sediment mg/kg	Water ug/l	Sediment mg/kg
Barium	25	171	47	72
Cadmium*	-	22	-	8
Cobalt	-	127	110	13
Chromium*	10	180	-	110
Copper*	-	756	185	22
Molybdenum	20	-	-	-
Nickel*	-	60	100	-
Lead*	-	320	-	33
Tin	-	-	-	50
Strontium	186	73	162	58
Titanium	-	784	-	275
Vanadium	28	149	-	75
Yttrium	-	24	16	5
Zinc*	196	1,936	3,581	183
Zirconium	13	-	-	-
Mercury*	0.5	0.19	0.57	0.13
Calcium	47,000	46,640	99,000	42,800
Magnesium	6,700	11,280	26,000	7,600
Aluminum	1,300	44,130	5,300	16,000
Iron	100	128,000	14,000	35,000
Manganese	500	2,800	9,255	1,775
Sodium	56,000	1,130	48,000	-

Notes: Dash indicates compound not detected at minimum detection limit

* Indicates priority pollutant listed in the Natural Resources Defense Council, Inc., et al., Consent Decree dated June 7, 1976.

ATTACHMENT A
ANALYTICAL DATA
EXUM DUMP
BIRMINGHAM, ALABAMA
NOVEMBER 1980

DATA REPORTING SHEET -Sediment
EXTRACTABLE ORGANIC ANALYSIS

EPA, SAD, RCN. IV
Athens, GA 4/80

ROJECT U.S. Steel, Exum Dump
Birmingham, AL

CH. T E. W. Loy, Jr. REC'D. 11-20-80 COMPL'D. 0-81

RESULTS ON DRY WEIGHT BASIS

AD NO.		81C 0405		
OURCE & STATION		EDD-Downstream from dump, Culvert under road.		
ATE/TIME		11-17-80 @ 1155		
ompounds on NRDC List of Priority ollutants		Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
7. bis(chloromethyl) ether	34271	NA	NA	NA
1. N-nitrosodimethylamine	34441	NA	NA	NA
5. 1,2-dichlorobenzene	34539	5,000U		
6. 1,3-dichlorobenzene	34569	5,000U		
7. 1,4-dichlorobenzene	34574	5,000U		
8. bis(2-chloroethyl) ether	34276	5,000U		
2. hexachloroethane	34399	5,000U		
2. bis(2-chloroisopropyl) ether	34286	5,000U		
3. N-nitrosodi-n-propylamine	34431	10,000U		
6. nitrobenzene	34450	5,000U		
2. hexachlorobutadiene	39705	5,000U		
8. 1,2,4-trichlorobenzene	34554	5,000U		
5. naphthalene	34445	5,000K		
3. bis(2-chloroethoxy) methane	34281	5,000U		
4. isophorone	34411	10,000U		
3. hexachlorocyclopentadiene	34389	5,000U		
0. 2-chloronaphthalene	34584	5,000U		
7. acenaphthylene	34203	5,000U		
1. acenaphthene	34208	5,000K		
1. dimethyl phthalate	34344	5,000U		
5. 2,4-dinitrotoluene	34614	5,000U		
	34629	5,000U		
9. 4-chlorophenyl phenyl ether	34644	5,000U		
0. fluorene	34384	5,000K		
0. diethyl phthalate	34339	5,000U		
7. 1,2-diphenylhydrazine 2/	34349	5,000U		
2. N-nitrosodiphenylamine 3/	34436	5,000U		
9. hexachlorobenzene	39701	5,000U		
1. 4-bromophenyl phenyl ether	34639	5,000U		
1. phenanthrene 4/	34464			
8. anthracene 4/	34223	5,000K		
8. di-n-butyl phthalate	39112	5,000U		
9. fluoranthene	34379	5,000K		
4. pyrene	34472	5,000K		
7. butyl benzyl phthalate	34295	5,000U		
5. benzidine	39121	10,000U		
6. bis(2-ethylhexyl) phthalate	39102	5,000U		
6. chrysene 5/	34323			
2. 1,2-benzanthracene 5/	34529	5,000K		
8. 3,3'-dichlorobenzidine	34634	5,000U		
9. di-n-octyl phthalate	34599	5,000U		
4. 3,4-benzofluoranthene 6/	34233			
5. 11,12-benzofluoranthene 6/	34245	5,000K		
3. 3,4-benzopyrene	34250	5,000K		
3. indeno (1,2,3-cd) pyrene	34406	5,000U		
2. 1,2,5,6-dibenzanthracene	34559	5,000U		
9. 1,12-benzoperylene	34524	5,000U		
4. 2-chlorophenol	34589	5,000U		
7. 2-nitrophenol	34594	5,000U		
5a. phenol (GC/MS)	34695	5,000K		
4. 2,4-dimethylphenol	34609	5,000U		
1. 2,4-dichlorophenol	34604	5,000U		
1. 2,4,6-trichlorophenol	34624	5,000U		
2. parachlorometa cresol	34455	5,000U		
9. 2,4-dinitrophenol	34619	40,000U		
0. 4,6-dinitro-o-cresol	34660	5,000U		
4. pentachlorophenol	39061	5,000U		
8. 4-nitrophenol	34649	10,000U		

- Not analyzed.
- Estimated value.
- Actual value is known to be less than value given.
- Actual value is known to be greater than value given.
- Material was analyzed for but not detected. The number is the Minimum Detection Limit.
/- Tentative identification.
/- and/or azobenzene.
/- and/or diphenylamine.
/- Phenanthrene and/or anthracene.

5/- Chrysene and/or 1,2-benzanthracene
6/- 3,4-benzofluoranthene and/or 11,12-benzofluoranthene.

(OVER)

DATA REPORTING SHEET
EXTRACTABLE ORGANIC ANALYSIS -Sediment Athens, GA 4/80

PROJECT U. S. Steel, Exum Dump Birmingham, AL CHEMI . W. Loy, Jr. REC'D. 11-20-80 COMPL'D 0-81

RESULTS ON DRY WEIGHT BASIS

SAD NO.	81C 0405		
SOURCE & STATION	EDD-Downstream from dump, Culvert under road.		
DATE/TIME	11-17-80 @ 1155		
COMPOUND	Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
cyclopenta(DEF)phenanthrene 1/	5,000K		
dibenzofuran 1/	5,000J		
hydroxy methyl pentanone 1/	47,000J		
tetradecanoic acid 1/	8,000J		
hexadecanoic acid 1/	240,000J		
octadecanoic acid 1/	130,000J		
phenyl naphthalene 1/	5,000K		
phenyl methyl naphthalene 1/	5,000K		

No other organic compounds detected with an estimated minimum detection limit of 50,000 ug/kg for base neutrals, 5000 ug/kg for acids.

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.

1/- Tentative identification.

SEDIMENT
DATA REPORTING SHEET
EXTRACTABLE ORGANIC ANALYSIS

EPA, SAD, RGN. IV
Athens, GA 4/80

PROJECT U.S. Steel, Exum Dump
Birmingham, AL

CHEMIST E. W. Loy, Jr. REC'D 11-20-80 COMPL'D. 2-10-81

RESULTS ON DRY WEIGHT BASIS

SAD NO.		81C 0403		
SOURCE & STATION		EDU-upstream near inf. stream near RR Track.		
DATE/TIME		11-17-80 @ 1105		
Compounds on NRDC List of Priority Pollutants		Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
17. bis(chloroethyl) ether	34271	NA	NA	NA
61. N-nitrosodimethylamine	34441	NA	NA	NA
25. 1,2-dichlorobenzene	34539	1000U		
26. 1,3-dichlorobenzene	34569	1000U		
27. 1,4-dichlorobenzene	34574	1000U		
18. bis(2-chloroethyl) ether	34276	1000U		
12. hexachloroethane	34399	1000U		
42. bis(2-chloroisopropyl) ether	34286	1000U		
63. N-nitrosodi-n-propylamine	34431	2000U		
56. nitrobenzene	34450	1000U		
52. hexachlorobutadiene	39705	1000U		
8. 1,2,4-trichlorobenzene	34554	1000U		
55. naphthalene	34445	31000		
43. bis(2-chloroethoxy) methane	34281	1000U		
54. isophorone	34411	2000U		
53. hexachlorocyclopentadiene	34389	1000U		
20. 2-chloronaphthalene	34584	1000U		
77. acenaphthylene	34203	21000		
1. acenaphthene	34208	27000		
71. dimethyl phthalate	34344	1000U		
35. 2,4-dinitrotoluene	34614	1000U		
36. 2,6-dinitrotoluene	34629	1000U		
40. 4-chlorophenyl phenyl ether	34644	1000U		
80. fluorene	34384	37000		
70. diethyl phthalate	34339	1000U		
37. 1,2-diphenylhydrazine 2/	34349	1000U		
62. N-nitrosodiphenylamine 3/	34436	1000U		
9. hexachlorobenzene	39701	1000U		
41. 4-bromophenyl phenyl ether	34639	1000U		
81. phenanthrene 4/	34464			
78. anthracene 4/	34223	110000		
68. di-n-butyl phthalate	39112	1000U		
39. fluoranthene	34379	34000		
84. pyrene	34472	26000		
67. butyl benzyl phthalate	34295	1000U		
5. benzidine	39121	2000U		
66. bis(2-ethylhexyl) phthalate	39102	1000U		
76. chrysene 5/	34323			
72. 1,2-benzanthracene 5/	34529	26000		
28. 3,3'-dichlorobenzidine	34634	1000U		
69. di-n-octyl phthalate	34599	1000U		
74. 3,4-benzofluoranthene 6/	34233			
75. 11,12-benzofluoranthene 6/	34245	31000		
73. 3,4-benzopyrene	34250	17000		
83. indeno (1,2,3-cd) pyrene	34406	4900		
82. 1,2,5,6-dibenzanthracene	34559	1900		
79. 1,12-benzoperylene	34524	5900		
24. 2-chlorophenol	34589	4000U		
57. 2-nitrophenol	34594	4000U		
65a. phenol (GC/MS)	34695	4000K		
34. 2,4-dimethylphenol	34609	4000U		
31. 2,4-dichlorophenol	34604	4000U		
21. 2,4,6-trichlorophenol	34624	4000U		
22. parachlorometa cresol	34455	4000U		
59. 2,4-dinitrophenol	34619	32000		
60. 4,6-dinitro-o-cresol	34660	4000U		
64. pentachlorophenol	39061	4000U		
58. 4-nitrophenol	34649	8000U		

NA - Not analyzed.
J - Estimated value.
K - Actual value is known to be less th

5/ - Chrysene and/or 1,2-benzanthracen

DATA REPORTING SHEET
EXTRACTABLE ORGANIC ANALYSIS

EPA, SAD, RCN. IV
Athens, GA 4/80

PROJECT U. S. Steel, Exum Dump Birmingham, AL CHEMIST E. W. Loy, Jr. REC'D. 11-20-80 COMPL'D. 2-10-81

RESULTS ON DRY WEIGHT BASIS

SAD NO.	81C 0403		
SOURCE & STATION	EDU-upstream near inf. stream near RR Track.		
DATE/TIME	11-17-80 @ 1105		
COMPOUND	Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
methyl pyrene (2 isomers) 1/	2100J		
ethyl pyridine 1/	1000K		
Terphenyl (3 isomers) 1/	2100J		
trimethyl pyridine 1/	1000K		
benzo naphthothiophene 1/	3200J		
methyl styrene 1/	1000K		
methyl benzanthracene 1/	2100J		
indene 1/	1000K		
hydroxy methyl pentanone 1/	43,000J		
diethenylbenzene 1/	1000K		
nitrosocarbazole 1/	1900J		
quinoline (2 isomers) 1/	20,000J		
methyl naphthalene (2 isomers) 1/	19,000J		
methyl quinoline (2 isomers) 1/	12,000J		
C_2 alkyl naphthalene (3 isomers) 1/	14,000J		
dimethyl quinoline 1/	1,100J		
biphenyl 1/	3000J		
dibenzofuran 1/	15,000J		
methyl biphenyl 1/	1000K		
methyl dibenzofuran 1/	3200J		
carbazole (2 isomers) 1/	24,000J		
methyl fluorene 1/	1000K		
dibenzothiophene (2 isomers) 1/	19,000J		
acridine 1/	7500J		
phenanthridine 1/	4300J		
cyclopenta (d,e,f,)phenanthrene	11,000J		
methyl carbazole 1/	1000K		
phenyl naphthalene 1/	5300J		
anthracene carbonitrile 1/	6400J		

No other organic compounds detected with an estimated minimum detection limit of .1000 ug/kg for base neutrals, and 4000 ug/kg for acids.

J — Estimated value.
K — Actual value is known to be less than value given.
L — Actual value is known to be greater than value given.
U — Material was analyzed for but not detected. The number is the Minimum Detection Limit.

1/ - Tentative identification.

SEDIMENT
DATA REPORTING SHEET
PURGEABLE ORGANIC ANALYSIS

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

PROJECT U.S. Steel, Exum Dump Birmingham, AL CHEMIST E. W. Loy, Jr. REC'D. 11-20-80 COMPLET'D. 2-17-81

BASED ON WET WEIGHT BASIS

SAD NO.		81C 0403	81C 0405	
SOURCE & STATION		EDU- Upstream near inf. stream.	EDD- Downstream from pump Culvert.	
DATE/TIME		11-17-80 @ 1105	11-17-80 @ 1155	
Compound		ug/kg	ug/kg	ug/kg
dichlorodifluoromethane 2/	34334	5U	5U	
methyl chloride 2/	34421	5U	5U	
methyl bromide 2/	34416	5U	5U	
vinyl chloride 2/	34495	5U	5U	
chloroethane 2/	34314	5U	5U	
methylene chloride 2/	34426	5U	5U	
trichlorofluoromethane 2/	34491	5U	5U	
1,1-dichloroethylene 2/	34504	5U	5U	
1,1-dichloroethane 2/	34499	5U	5U	
1,2-trans-dichloroethylene 2/	34549	5U	5U	
chloroform 2/	34318	5U	5U	
1,2-dichloroethane 2/	34534	5U	5U	
1,1,1-trichloroethane 2/	34509	5U	5U	
carbon tetrachloride 2/	34299	5U	5U	
dichlorobromomethane 2/	34330	5U	5U	
1,2-dichloropropane 2/	34544	5U	5U	
1,3-dichloropropylene 2/	34564	5U	5U	
trichloroethylene 2/	34487	5U	5U	
benzene 2/	34237	5U	5U	
chlorodibromomethane 2/	34309	5U	5U	
1,1,2-trichloroethane 2/	34514	5U	5U	
2-chloroethyl vinyl ether (mixed) 2/	34579	5U	5U	
bromoform 2/	34290	5U	5U	
1,1,2,2-tetrachloroethane 2/	34519	5U	5U	
tetrachloroethylene 2/	34478	5U	5U	
toluene 2/	34483	5U	5U	
chlorobenzene 2/	34304	5U	5U	
ethylbenzene 2/	34374	5U	5U	
acrolein 2/	34213	100U	100U	
acrylonitrile 2/	34218	100U	100U	

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

DATA REPORTING SHEET
WATER

ERA-SAD-LSS 4-10-80

PROJECT U. S. Steel Dump Birmingham, AL CHEMIST Bill McDaniel REC'D 11/20/80 COMPL'D 2/9/81

PROJECT No. 81-23

SAD NO.	81C0402	81C0404		
SOURCE & STATION	EDU	EDD		
DATE/TIME	11/17/80 @ 1100	11/17/80 @ 1145		
ELEMENT (ug/L)				
Silver * 01077	10K	10K		
Arsenic * 01002	40K	40K		
Boron 01022	--	--		
Barium 01007	25	47		
Beryllium * 01012	10K	10K		
Cadmium * 01027	10K	20K		
Cobalt 01037	25K	110		
Chromium * 01034	10	10K		
Copper * 01042	10K	185		
Molybdenum 01062	20	20K		
Nickel * 01067	20K	100		
Lead * 01051	25K	25K		
Antimony * 01097	25K	25K		
Selenium * 01147	40K	40K		
Tin 01102	50K	50K		
Strontium 01082	186	162		
Tellurium 01064	40K	40K		
Titanium 01152	10K	10K		
Thallium * 01059	100K	100K		
Vanadium 01087	28	10K		
Yttrium 01203	10K	16		
Zinc * 01092	196	3,581		
Zirconium 01162	13	10K		
Mercury * 71900	0.50*	0.57*		
Aluminum 01105	1,300	5,300		
Manganese 01055	500	9,255		

* - HOLDING TIME ON MERCURY SAMPLES EXPIRED BEFORE ANALYSES WERE COMPLETED.

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

(Continued on Back)

DATA REPORTING SHEET
WATER

PROJECT _____ CHEMIST _____ REC'D _____ COMPL'D _____

PROJECT No. _____

SAD NO.	81C0402	81C0404		
SOURCE & STATION				
DATE/TIME				
ELEMENT (mg/L)				
Calcium 00916	47	99		
Magnesium 00927	6.7	26		
Iron 74010	0.1	14		
Sodium 00929	56	48		
Cyanide * 00720				
Asbestos * 34225	NA	NA	NA	NA

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

L - Actual value is known to be greater than value given.

* - Priority Pollutant.

DATA REPORTING SHEET
SEDIMENT

EPA-SAD-LSB-4-10-80

PROJECT U. S. Steel, Exum Dump Birmingham, AL CHEMIST Bill McDaniel REC'D 11/20/80 COMPL'D 2/23/81

PROJECT NUMBER 81-23 RESULTS ON DRY WEIGHT BASIS

SAD NO.		81C0403	81C0405		
SOURCE & STATION		EDU	EDD		
DATE/TIME		11/17/80 @ 1105	11/17/80 @ 1155		
ELEMENT (mg/kg)					
Silver*	01078	10K	4K		
Arsenic*	01003	45K	18K		
Boron	01023	--	--		
Barium	01008	171	72		
Beryllium*	01013	10K	4K		
Cadmium*	01028	22	8		
Cobalt	01038	127	13		
Chromium*	01029	180	110		
Copper*	01043	756	22		
Molybdenum	01063	20K	8K		
Nickel*	01068	60	14K		
Lead*	01052	320	33		
Antimony*	01098	30K	10K		
Selenium*	01148	40K	12K		
Tin	01103	60K	50		
Strontium	01083	73	58		
Tellurium	45513	40K	16K		
Titanium	01153	784	275		
Thallium*	34480	100K	40K		
Vanadium	01088	149	75		
Yttrium	45514	24	5		
Zinc*	01093	1,936	183		
Zirconium	01163	10K	4K		
Mercury*	71921	0.19	0.13		
Calcium	00917	46,640	42,800		
Magnesium	00924	11,280	7,600		

- CONTINUED ON BACK -

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

- CONTINUATION -
DATA REPORTING SHEET
SEDIMENT

EPA-SAD-LSB-4-10-80 4

PROJECT U. S. Steel, Exum Dump Birmingham, AL CHEMIST McDaniel REC'D 11/20/80 COMPL'D 2/23/81

PROJECT NUMBER 81-23 RESULTS ON DRY WEIGHT BASIS

SAD NO.		81C0403	81C0405		
SOURCE & STATION		EDU	EDD		
DATE/TIME					
ELEMENT (mg/kg)					
Aluminum	01108	44,130	16,000		
Iron	01170	128,000	35,600		
Manganese	01053	2,800	1,775		
Sodium	00934	1,130	400K		
Cyanide*(Wet Weight)	00721				
Percent Moisture (%)		25	30		
Asbestos *	34228	NA	NA	NA	NA

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

DATA [illegible] SHEET
PESTICIDES/PCB'S, A[illegible] OTHER CHLORINATED COMPOUNDS

EPA-SAD-[illegible]
Athens, [illegible] 4/80

PROJECT U. S. Steel, Exum Dump CHEMIST E. W. Loy, Jr. REC'D. 11/20/80 @ 1500 COMPL'D. 3/18/81

Birmingham, AL

RESULTS ON DRY WEIGHT BASIS

SAD NO.			81C0403	81C0405		
SOURCE & STATION			EDU-Upstream near Inf Stream near RR Track	EDD-Downstream from Dump, Culvert under Road		
DATE/TIME			11/17/80 @ 1105	11/17/80 @ 1155		
	COMPOUND		Concentration ug/kg	Concentration ug/kg	Concentration ug/kg	Concentration ug/kg
89.	aldrin 2/	39333	4U	2U		
90.	dieldrin 2/	39383	3U	4U		
91.	chlordane (tech. mixture & metabolites) 2/	39351	3/	3/		
92.	4,4'-DDT (p,p'-DDT) 2/	39301	6U	20U		
93.	4,4'-DDE (p,p'-DDE) 2/	39321	6U	20U		
94.	4,4'-DDD (p,p'-TDE) 2/	39311	6U	20U		
95.	a-endosulfan-Alpha 2/	34364	3U	4U		
96.	b-endosulfan-Beta 2/	34359	30U	20U		
97.	endosulfan sulfate 2/	34354	400U	100U		
98.	endrin 2/	39393	6U	8U		
99.	endrin aldehyde 2/	34369	NA	NA		
100.	heptachlor 2/	39413	4U	2U		
101.	heptachlor epoxide 2/	39423	4U	2U		
102.	a-BHC-Alpha 2/	39076	4U	2U		
103.	b-BHC-Beta 2/	34257	300U	100U		
104.	γ-BHC-(lindane)-Gamma 2/	39343	4U	2U		
105.	Δ-BHC-Delta 2/	34262	300U	100U		
106.	PCB-1242 (Aroclor 1242) 2/	39499	300U	300U		
107.	PCB-1254 (Aroclor 1254) 2/	39507	200U	200U		
108.	PCB-1221 (Aroclor 1221) 2/	39491	300U	300U		
109.	PCB-1232 (Aroclor 1232) 2/	39495	300U	300U		
110.	PCB-1248 (Aroclor 1248) 2/	39503	300U	300U		
111.	PCB-1260 (Aroclor 1260) 2/	39511	200U	200U		
112.	PCB-1016 (Aroclor 1016) 2/	39514	300U	300U		
113.	Toxaphene 2/	39403	200U	200U		
	2,4-D	39731	NA	NA		
	Silvex	39761	NA	NA		
	2,4,5-T	39741	NA	NA		
	Propachlor (Ramrod)	66672*	NA	NA		
	Prometon	66673*	NA	NA		
129.	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 2/	34678	NA	NA	NA	NA
	alpha chlordane		20U 4/	2U 4/		
	gamma chlordane		20U 4/	2U 4/		
	alpha hydroxychlordene		20U 4/	2U 4/		

NA- Not analyzed.
J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit.
1/- Tentative identification.
2/- On NRDC List of Priority Pollutants.
3/- Reported as individual compounds.
4/- Constituents of technical chlordane.
5/- Confirmed on two separate GC columns.
* - Made up parameter numbers.

8/22/80

WATER
DATA REPORTING SHEET

SAD NO. 81C0402 CONTRACT LAB NO. D0253 CONTRACT LAB Mead Laboratory
PROJECT U.S. Steel Exum Dump Birmingham, AL SOURCE & STATION EDU-upstream near inf. stream near RR track.
DATE/TIME SAMPLED 11-17-80 @ 1100 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-20-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
1B	Acenaphthene	34205	14
5B	Benzidine	39120	10U
8B	1,2,4-Trichlorobenzene	34551	10U
9B	Hexachlorobenzene	39700	10U
12B	Hexachloroethane	34396	10U
17B	Bis(Chloromethyl) Ether	34268	NA
18B	Bis(2-Chloroethyl) Ether	34273	10U
20B	2-Chloronaphthalene	34581	10U
25B	1,2-Dichlorobenzene	34536	10U
26B	1,3-Dichlorobenzene	34566	10U
27B	1,4-Dichlorobenzene	34571	10U
28B	3,3'-Dichlorobenzidine	34631	10U
35B	2,4-Dinitrotoluene	34611	10U
36B	2,6-Dinitrotoluene	34626	10U
37B	1,2-Diphenylhydrazine 1/	34346	10U
39B	Fluoranthene	34376	10U
40B	4-Chlorophenyl Phenyl Ether	34641	10U
41B	4-Bromophenyl Phenyl Ether	34636	10U
42B	Bis(2-Chloroisopropyl) Ether	34283	10U
43B	Bis(2-Chloroethoxy) Methane	34278	10U
52B	Hexachlorobutadiene	39702	10U
53B	Hexachlorocyclopentadiene	34386	10U
54B	Isophorene	34408	10U
55B	Naphthalene	34696	10U
56B	Nitrobenzene	34447	10U
61B	N-Nitrosodimethylamine	34438	NA
62B	N-Nitrosodiphenylamine 2/	34433	10U
63B	N-Nitrosodi-N-Propylamine	34428	10U
66B	Bis(2-Ethylhexyl) Phthalate	39100	10U
67B	Butyl Benzyl Phthalate	34292	10U
68B	Di-N-Butylphthalate	39110	10U
69B	Di-N-Octylphthalate	34596	10U
70B	Diethylphthalate	34336	10U
71B	Dimethylphthalate	34341	10U
72B	Benzo (A) Anthracene 4/	34526	10U
73B	Benzo(A) Pyrene	34247	10U
74B	3,4-Benzofluoranthene 5/	34230	10U
75B	Benzo(K) Fluoranthene 5/	34242	10U
76B	Chrysene 4/	34320	10K
77B	Acenaphthylene	34200	10U
78B	Anthracene 3/	34220	10K
79B	Benzo(GHI) Perylene	34521	25U
80B	Fluorene	34381	22
81B	Phenanthrene 3/	34461	10K
82B	Dibenzo(A, H) Anthracene	34556	25U
83B	Indeno (1,2,3-CD) Pyrene	34403	25U
84B	Pyrene	34469	25U

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
21A	2,4,6-Trichlorophenol	34621	25U
22A	p-Chloro-m-Cresol	34452	25U
24A	2-Chlorophenol	34586	25U
31A	2,4-Dichlorophenol	34601	25U
34A	2,4-Dimethylphenol	34606	25K
57A	2-Nitrophenol	34591	25U
58A	4-Nitrophenol	34646	25U
59A	2,4-Dinitrophenol	34616	250U
60A	4,6-Dinitro-o-Cresol	34657	250U
64A	Pentachlorophenol	39032	25U
65A	Phenol (GC/MS)	34694	42

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

(OVER)

EPA, SAD, LSB
8/22/80

WATER
DATA REPORTING SHEET

SAD NO. 81C0402 CONTRACT LAB NO. D0253 CONTRACT LAB Mead Laboratory
PROJECT U.S. Steel Exum Dump Birmingham, AL SOURCE & STATION EDU-upstream near inf. stream near RR track.
DATE/TIME SAMPLED 11-17-80 @ 1100 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-20-81

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	TENTATIVELY-IDENTIFIED COMPOUNDS	ug/L
2V	Acrolein	34210	100U	2-methyl phenol (2 isomers)	N
3V	Acrylonitrile	34215	100U	3,4-dimethyl phenol	N
4V	Benzene	34030	10U	9,10-anthracenedione	N
6V	Carbon Tetrachloride	32102	10U	9H-carbazole	N
7V	Chlorobenzene	34301	10U	3 Unknown compounds	N
10V	1,2-Dichloroethane	32103	13		
11V	1,1,1-Trichloroethane	34506	10U		
13V	1,1-Dichloroethane	34496	10U		
14V	1,1,2-Trichloroethane	34511	10U		
15V	1,1,2,2-Tetrachloroethane	34516	10U		
16V	Chloroethane	34311	10U		
19V	2-Chloroethylvinyl Ether	34576	10U		
23V	Chloroform	32106	10U		
29V	1,1-Dichloroethylene	34501	10U		
30V	1,2-Trans-Dichloroethylene	34546	10U		
32V	1,2-Dichloropropane	34541	10U		
33V	1,3-Dichloropropylene	34561	10U		
38V	Ethylbenzene	34371	10U		
44V	Methylene Chloride	34423	10U		
45V	Methyl Chloride	34418	10U		
46V	Methyl Bromide	34413	10U		
47V	Bromoform	32104	10U		
48V	Dichlorobromomethane	32101	10U		
49V	Trichlorofluoromethane	34488	10U		
50V	Dichlorodifluoromethane	34668	10U		
51V	Chlorodibromomethane	34306	10U		
85V	Tetrachloroethylene	34475	10U		
86V	Toluene	34010	10U		
87V	Trichloroethylene	39180	10U		
88V	Vinyl Chloride	39175	10U		

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

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

8/22/80

WATER
DATA REPORTING SHEET

SAD NO. 81C0404 CONTRACT LAB NO. D0254 CONTRACT LAB Mead Lab
PROJECT U.S. Steel, Exum Dump SOURCE & STATION EDD-Downstream from Dump, Culvert under road.
Birmingham, AL
DATE/TIME SAMPLED 11-17-80 @ 1145 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-16-81

BASE/NEUTRAL COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
1B	Acenaphthene	34205	260
5B	Benzidine	39120	10U
8B	1,2,4-Trichlorobenzene	34551	10U
9B	Hexachlorobenzene	39700	10U
12B	Hexachloroethane	34396	10U
17B	Bis(Chloromethyl) Ether	34268	NA
18B	Bis(2-Chloroethyl) Ether	34273	10U
20B	2-Chlorenaphthalene	34581	10U
25B	1,2-Dichlorobenzene	34536	10U
26B	1,3-Dichlorobenzene	34566	10U
27B	1,4-Dichlorobenzene	34571	10U
28B	3,3'-Dichlorobenzidine	34631	10U
35B	2,4-Dinitrotoluene	34611	10U
36B	2,6-Dinitrotoluene	34626	10U
37B	1,2-Diphenylhydrazine 1/	34346	10U
39B	Fluoranthene	34376	20
40B	4-Chlorophenyl Phenyl Ether	34641	10U
41B	4-Bromophenyl Phenyl Ether	34636	10U
42B	Bis(2-Chloroisopropyl) Ether	34283	10U
43B	Bis(2-Chloroethoxy) Methane	34278	10U
52B	Hexachlorobutadiene	39702	10U
53B	Hexachlorocyclopentadiene	34386	10U
54B	Isophorone	34408	10U
55B	Naphthalene	34696	10U
56B	Nitrobenzene	34447	10U
61B	N-Nitrosodimethylamine	34438	NA
62B	N-Nitrosodiphenylamine 2/	34433	10U
63B	N-Nitrosodi-N-Propylamine	34428	10U
66B	Bis(2-Ethylhexyl) Phthalate	39100	10U
67B	Butyl Benzyl Phthalate	34292	10U
68B	Di-N-Butylphthalate	39110	10U
69B	Di-N-Octylphthalate	34596	10U
70B	Diethylphthalate	34336	10U
71B	Dimethylphthalate	34341	10U
72B	Benzo (A) Anthracene 4/	34526	10U
73B	Benzo(A) Pyrene	34247	10U
74B	3,4-Benzofluoranthene 5/	34230	10U
75B	Benzo(K) Fluoranthene 5/	34242	10U
76B	Chrysene 4/	34320	10U
77B	Acenaphthylene	34200	10U
78B	Anthracene 3/	34220	50
79B	Benzo(GHI) Perylene	34521	25U
80B	Fluorene	34381	160
81B	Phenanthrene 3/	34461	50
82B	Dibenzo(A, H) Anthracene	34556	25U
83B	Indeno (1,2,3-CD) Pyrene	34403	25U
84B	Pyrene	34469	25K

ACID COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L
21A	2,4,6-Trichlorophenol	34621	25U
22A	p-Chloro-m-Cresol	34452	25U
24A	2-Chlorophenol	34586	25U
31A	2,4-Dichlorophenol	34601	20K
34A	2,4-Dimethylphenol	34606	58
57A	2-Nitrophenol	34591	25U
58A	4-Nitrophenol	34646	25U
59A	2,4-Dinitrophenol	34616	250U
60A	4,6-Dinitro-o-Cresol	34657	250U
64A	Pentachlorophenol	39032	25U
65A	Phenol (GC/MS)	34694	140

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

(OVER)

WATER
DATA REPORTING SHEET

SAD NO. 81C0404 CONTRACT LAB NO. D0254 CONTRACT LAB Mead Laboratory
PROJECT U.S. Steel, Exum Dump Birmingham, AL SOURCE & STATION EDD-Downstream from dump, Culvert under road.
DATE/TIME SAMPLED 11-17-80 @ 1145 SAMPLE RECEIVED 11-20-80 @ 1500 DATA RECEIVED 1-16-81

VOLATILE COMPOUNDS ON NRDC LIST OF PRIORITY POLLUTANTS			ug/L	TENTATIVELY-IDENTIFIED COMPOUNDS	ug/L
2V	Acrolein	34210	100U	2-methyl phenol	N
3V	Acrylonitrile	34215	100U	3,4-dimethyl phenol	N
4V	Benzene	34030	14	3-ethyl phenol	N
6V	Carbon Tetrachloride	32102	10U	2 ethyl-4-methyl phenol	N
7V	Chlorobenzene	34301	10U	2 naphthalnol	N
10V	1,2-Dichloroethane	32103	10U	9,10-anthracenedione	N
11V	1,1,1-Trichloroethane	34506	10U	1,1'-sulfonylbis benzene	N
13V	1,1-Dichloroethane	34496	10U	1,8-dimethyl naphthalene	N
14V	1,1,2-Trichloroethane	34511	10U	2-methyl quinoline	N
15V	1,1,2,2-Tetrachloroethane	34516	10U	2-methyl naphthalene	N
16V	Chloroethane	34311	10U	9H-carbazole	N
19V	2-Chloroethylvinyl Ether	34576	10U		
23V	Chloroform	32106	10U	6 Unidentified compounds	N
29V	1,1-Dichloroethylene	34501	10U		
30V	1,2-Trans-Dichloroethylene	34546	10U		
32V	1,2-Dichloropropane	34541	10U		
33V	1,3-Dichloropropylene	34561	10U		
38V	Ethylbenzene	34371	10U		
44V	Methylene Chloride	34423	10U		
45V	Methyl Chloride	34418	10U		
46V	Methyl Bromide	34413	10U		
47V	Bromoform	32104	10U		
48V	Dichlorobromomethane	32101	10U		
49V	Trichlorofluoromethane	34488	10U		
50V	Dichlorodifluoromethane	34668	10U		
51V	Chlorodibromomethane	34306	10U		
85V	Tetrachloroethylene	34475	10U		
86V	Toluene	34010	10U		
87V	Trichloroethylene	39180	76		
88V	Vinyl Chloride	39175	10U		

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

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

U.S. STEEL, EXUM DUMP
BIRMINGHAM AL
NOVEMBER 1980

STATION	DATE	TIME	DATE	TIME	WATER TEMP CENT	PH SU	CYANIDE CN-TOT MG/L	PHENOLS TOTAL UG/L
EDD			801117	1145	18.5	10.20	0.014	1160.0

********** LOADINGS **********

U.S. STEEL, EXUM DUMP
BIRMINGHAM AL
NOVEMBER 1980

STATION	DATE	TIME	DATE	TIME	WATER TEMP CENT	PH SU	CYANIDE CN-TOT MG/L	PHENOLS TOTAL UG/L
EDU			801117	1100	14.9	5.80	0.034	155.0

********** LOADINGS **********

REG'ONAL INTERNAL DISTRIBUTION L

FIT REGION: IV

DOCUMENT NO. F4-8010-04
Technical = [illegible] Number;
Administrative = 4-letter code + year/mo'h/sequence

AUTHOR: J. Scott Simpson

KEY WORDS: (1) DELIVERABLE (2) Exum. (3) Dump
(4) AL

TYPE OF DOCUMENT

TECHNICAL

TDD No. _____

___ Technical Direction Document
___ Acknowledgement of Completion
___ Performance Evaluation
___ Site Safety Plan
X Report
___ Correspondence
___ Subcontract Documents

ADMINISTRATIVE/CONTRACT

___ (CEPA) Contract Letter from EPA
___ (EFCL) Contract Letter to EPA (including monthly reports)
___ (EFLS) Contract Letter to Subcontractor
___ (EFIC) Internal Contract Correspondence
___ (EFCM) Meeting with EPA
___ (EFEV) Equipment and Vans
___ (EFST) Safety and Training
___ (EFOC) Other Contract Correspondence (E & E)
___ (FFOC) Other Contract Correspondence (FCH)

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Direction: Place an X before the appropriate (Technical or Administrative/Contract) master file. Then place an A (for Answer) before the name of the person from whom you want a response and/or an I (for Information) before the name of the person to whom you want only to provide information. NOTE: ALL COMMITMENT RESPONSE TO THE CUSTOMER MUST BE SUBMITTED THROUGH THE NPMO CONTRACT MANAGER IN WASHINGTON, D.C.

FIT National Project Management Office

___ FIT Technical Master File
___ FIT Administrative/Contract Master File
___ Roger J. Gray, National Project Manager (NPM)
___ Lewis A. Welzel, Asst. NPM for Tech. Performance
___ Robert J. King, Asst. NPM for Training & Safety
___ Contracts Manager
X John B. Schultz, Information Manager
___ James Lukin, Coordinator

OTHER: _____

EPA-Region No.

IV Joel Veater
___ _____
___ _____

EPA-Washington

___ Harold Snyder, FIT Project Officer
___ Scott Fredericks, FIT Project Coordinator
___ William R. Topping, FIT Contract Officer

OTHER: _____

FIT Regions

Regions

___ I
___ II
___ III
___ IV
___ V
___ VI
___ VII
___ VIII
___ IX
___ X
___ NEIC

Personnel

___ FIT Leader
___ Regional Administrative Manager
___ Safety/Health Officer
___ Equipment Officer
___ Training Officer
___ Document Control Officer

OTHER: _____

Date: 9/3/81

(Rev. 8/28/81)

EPA

POTENTIAL HAZARDOUS WASTE SITE LOG

SITE NUMBER: 35

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

SITE NAME: Dolomite

CITY: Birmingham | STATE: Ala. | ZIP CODE: 35[illegible]

SUMMARY OF POTENTIAL OR KNOWN PROBLEM

Plant waste was [illegible] at this site from 19[illegible]. No waste was visible at time of site visit.

ITEM	DATE OF DETERMINATION OR COMPLETION	RESPONSIBLE ORGANIZATION OR INDIVIDUAL (EPA, State, Contractor, Other)	PERSON MAKING ENTRY TO LOG FORM	DATE ENTERED ON LOG (mo, day, yr)
1. IDENTIFICATION OF POTENTIAL PROBLEM	10-5-79	[illegible]	[illegible]	[illegible]
2. PRELIMINARY ASSESSMENT	[illegible]	State	[illegible]	[illegible]
APPARENT SERIOUSNESS OF PROBLEM	☐ HIGH	☐ MEDIUM ☐ LOW	☒ NONE ☐ UNKNOWN	
3. SITE INSPECTION	[illegible]	State	[illegible]	[illegible]
4. EPA TENTATIVE DISPOSITION (check appropriate item(s) below)				
☒ a. NO ACTION NEEDED	[illegible]	State	[illegible]	[illegible]
☐ b. INVESTIGATIVE ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED				
☐ d. ENFORCEMENT ACTION NEEDED				
5. EPA FINAL STRATEGY DETERMINATION (check appropriate item(s) below)				
☒ a. NO ACTION NEEDED	[illegible]	State	[illegible]	[illegible]
☐ b. REMEDIAL ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED BUT, NO RESOURCES AVAILABLE				
☐ d. ENFORCEMENT ACTION NEEDED				
☐ (1) CASE DEVELOPMENT PLAN PREPARED				
☐ (2) ENFORCEMENT CASE FILED OR ADMINISTRATIVE ORDER ISSUED				
6. STRATEGY COMPLETED	12-18-79	State	D Robe[illegible]	1-7-80

EPA Form T2070-1 (10-79)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by Hq)
IV	40

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

I. SITE IDENTIFICATION

A. SITE NAME: U.S. Steel

B. STREET (or other identifier): Tin Mill & Pleasant Grove

C. CITY: Dolomite

D. STATE: AL

E. ZIP CODE:

F. COUNTY NAME: Jefferson

G. SITE OPERATOR INFORMATION

1. NAME: U.S. Steel

2. TELEPHONE NUMBER:

3. STREET: P.O. Box 599

4. CITY: Fairfield

5. STATE: AL

6. ZIP CODE:

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

1. NAME: U.S. Steel

2. TELEPHONE NUMBER:

3. CITY: Fairfield

4. STATE: AL

5. ZIP CODE:

I. SITE DESCRIPTION: Landfilling + surface impoundment areas containing sludges, oily wastes, + inert debris.

J. TYPE OF OWNERSHIP

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

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

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

B. APPARENT SERIOUSNESS OF PROBLEM

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

Unknown - High Priority

C. PREPARER INFORMATION

1. NAME: David L. Roberson

2. TELEPHONE NUMBER: 205-832-6728

3. DATE (*mo., day, & yr.*): 3-10-80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: David L. Roberson

2. TITLE: Environmentalist III

3. ORGANIZATION: Div. of S.W. & V.C., State Health Dept.

4. TELEPHONE NO. (*area code & no.*): 205-832-6728

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
B.E. Cox	Div. of S.W. & V.C., State Health Dept.	205-832-6728

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

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Mr. Jack Peterson	Mgr.-Env. Control U.S. Steel 205-783-2201	P.O. Box 599, Fairfield, AL. 35064
Mr. Gary Euler	Env. Engr. U.S. Steel 205-783-4236	P.O. Box 599, Fairfield, AL. 35064

Continued From Front

II. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION *(sources of waste)*

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
U.S. Steel	205-783-4236	P.O. Box 599, Fairfield, AL, 35064	Solid, Liquid, Sludge

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
U.S. Steel	205-783-4236	P.O. Box 599, Fairfield, AL. 35064	Solid, Sludge
Bryson Env. Services		Dolomite, AL.	Liquid

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)*
3-6-80	9:00 A.M.	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER *(describe)*
Clear

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

[ ] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

[ ] YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

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

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

V. SITE INFORMATION

A. SITE STATUS

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

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

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

B. IS GENERATOR ON SITE?

[X] 1. NO [ ] 2. YES (specify generator's four-digit SIC Code): _____

C. AREA OF SITE (in acres)

100 Acres

~ 50 acres active disposal

D. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES (specify):

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
X	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): Impd. for oily wastes.
					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 [X] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [ ] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[X] 5. TOXIC [ ] 6. REACTIVE [X] 7. INERT [X] 8. FLAMMABLE

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

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

Yes

 Continue On Reverse

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: UNKNOWN	AMOUNT: UNKNOWN	AMOUNT:	AMOUNT:	AMOUNT: UNKNOWN	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.
X (2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	X (6) OTHER (specify): MISC.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(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			

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

Continue On Page 5

Continued From Page

III. 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

☐ 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

☐ M. PROPERTY DAMAGE

Continue On Page 7

Continued from Page 6

I. HAZARD DESCRIPTION (continued)

[ ] N. FIRE OR EXPLOSION

[ ] O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

[ ] P. SEWER, STORM DRAIN PROBLEMS

[ ] Q. EROSION PROBLEMS

[X] R. INADEQUATE SECURITY

No site security,

[ ] S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*

IX. POPULATION DIRECTLY AFFECTED BY SITE

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

X. WATER AND HYDROLOGICAL DATA

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

G. TYPE OF DRINKING WATER SUPPLY

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

☐ 3. SURFACE WATER ☐ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

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

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

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

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

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN

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

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

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

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

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

XIII. SOIL PERMEABILITY

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

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

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

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

J. OTHER GEOLOGICAL DATA

 Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

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

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN
NONE							

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.

FORM EPA-2
(9-26-79)

Subject to OMB Approval

OPEN DUMP INVENTORY REPORTING FORM

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR
ENVIRONMENTAL PROTECTION AGENCY

Section I – GENERAL INFORMATION

1. Date of determination
Enter month, day, and year
Month ☐☐ Day ☐☐ Year ☐☐

2a. Is this an update of a previous form?
Mark (X) one
1 ☐ Yes 2 ☐ No

2b. Is this form being submitted to remove the facility from the open dump inventory?
1 ☐ Yes 2 ☐ No

3. Facility Identification
State ☐☐ County ☐☐☐ Place ☐☐☐☐☐ Assigned Site No. ☐☐☐☐ Assigned Facility No. ☐☐☐

4. EPA Surface Impoundment Assessment No.
If applicable
State ☐☐ Cnty/City ☐☐☐ Place ☐☐☐☐☐ Category ☐☐☐ Site ☐☐☐☐☐ Impoundment ☐☐

5. State Facility Identification Number
If applicable
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

6. Name of facility

7. Facility location
Street, road, or other location description

City, town, or place | State | ZIP code

County name

8. Coordinates of facility location
Latitude: Degrees ☐☐ Minutes ☐☐ Seconds ☐☐
Longitude: Degrees ☐☐☐ Minutes ☐☐ Seconds ☐☐

9. Other legal description
If applicable
Range | Township | Section

10. Land owner
Name

Mailing address

City, town, or place | State | ZIP code

11. Operator
Name

Mailing address

City, town, or place | State | ZIP code

#. 40.

Section I – GENERAL INFORMATION – Continued

12. Type of facility
Mark (X) one

1 ☐ Landfill
2 ☐ Surface impoundment
3 ☐ Land spreading
4 ☒ Other – Explain: Open dump

13. Primary types of waste received

1 ☐ Municipal solid waste
2 ☐ Domestic sewage sludge
3 ☒ Industrial solid waste
4 ☐ Agricultural solid waste
5 ☐ Mining solid waste
6 ☐ Other – Explain:

Section II – NONCOMPLIANCE WITH FEDERAL CRITERIA

Indicate noncompliance with one or more of the following categories
Mark (X) each category for which a determination of noncompliance was made.

01 ☐ Floodplains
02 ☐ Endangered species
03 ☐ Surface water
04 ☐ Ground water
05 ☐ Application to food-chain cropland
06 ☐ Disease
07 ☐ Air
08 ☐ Safety
- 09 ☐ Gases
- 10 ☐ Fires
- 11 ☐ Bird/aircraft hazard
- 12 ☐ Access

Section III – RESPONSIBLE STATE OFFICIAL

Name: David L. Roberson			Telephone: Area code 205, Number 832-6726
Agency: Div. of S.W. + V.C., State Health Dept.			
Mailing address (Number and street): State office Building	City: Montgomery	State: AL.	ZIP code: 36130

Comments

FORM EPA-2 (9-28-79)

#40

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
2. Surface impoundments

2. STABILITY/CONDITION OF EMBANKMENTS
Good

3. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc.)*
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☒ NO

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☐ NO

7b. FINDINGS

8. SOIL STRUCTURE AND SUBSTRUCTURE

9. MONITORING WELLS
☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH WIDTH DEPTH

11. CALCULATED VOLUMETRIC CAPACITY

12. PERCENT OF CAPACITY REMAINING

13. ESTIMATE FREEBOARD
20'+

14. SOLIDS DEPOSITION
☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD
NONE

16. OTHER EQUIPMENT

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by HQ)
IV	AL 000000460

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	B. STREET (or other identifier)		
U S Steel (Ensley Dump)			
C. CITY	**D. STATE**	**E. ZIP CODE**	**F. COUNTY NAME**
Birmingham	Ala	35224	Jefferson

G. SITE OPERATOR INFORMATION

1. NAME	2. TELEPHONE NUMBER		
U S Steel			
3. STREET	**4. CITY**	**5. STATE**	**6. ZIP CODE**
	Birmingham	Ala	

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

1. NAME	2. TELEPHONE NUMBER		
[illegible]			
3. CITY		**4. STATE**	**5. ZIP CODE**
[illegible]			

I. SITE DESCRIPTION

disposal area for U.S.S., oily wastes, some construction debris, storage area for re use

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	2. TELEPHONE NUMBER	3. DATE (*mo., day, & yr.*)

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME	2. TITLE	
[illegible]	[illegible]	
3. ORGANIZATION		**4. TELEPHONE NO. (area code & no.)**

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
Steve Kell	[illegible]	[illegible]
[illegible]	[illegible] EPA Region IV	
[illegible]	Ala Solid Waste Division	
[illegible]	Ala Solid Waste Division	

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

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
[illegible]	923	[illegible]

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)
		☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

IV. SAMPLING INFORMATION

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

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
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:

[illegible] Joyner, [illegible]

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS:

[illegible]

E. COORDINATES

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

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

V. SITE INFORMATION

A. SITE STATUS

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

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

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

B. IS GENERATOR ON SITE?

[X] 1. NO [X] 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(in acres)*

[illegible]

D. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES *(specify)*:

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	X	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 [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1. LIQUID [X] 2. SOLID [X] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 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.

[illegible]

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: One	AMOUNT: [illegible]	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE: [illegible]	UNIT OF MEASURE: A	UNIT OF MEASURE	UNIT OF MEASURE: Acre	UNIT OF MEASURE
[ ] (1) PAINT, PIGMENTS	[X] (1) OILY WASTES	[ ] (1) HALOGENATED SOLVENTS	[ ] (1) ACIDS	[X] (1) FLYASH	[ ] (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	[X] (4) FERROUS SMELTING WASTES	[ ] (4) MUNICIPAL
[ ] (5) OTHER *(specify)*:			[ ] (5) DYES/INKS	[ ] (5) NON-FERROUS SMLTG. WASTES	[ ] (5) OTHER *(specify)*:
			[ ] (6) CYANIDE	[ ] (6) OTHER *(specify)*:	
			[ ] (7) PHENOLS		
			[ ] (8) HALOGENS		
			[ ] (9) PCB		
			[ ] (10) METALS		
			[ ] (11) OTHER *(specify)*:		

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			
	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

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued)*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☒ F. CONTAMINATION OF GROUND WATER

☒ 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

☐ 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

☐ 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)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

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

X. WATER AND HYDROLOGICAL DATA

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

G. TYPE OF DRINKING WATER SUPPLY

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

☐ 3. SURFACE WATER ☐ 4. WELL

 Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

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

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

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

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

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

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

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

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

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

'X'	A. OVERBURDEN	'X'	~~B. BEDROCK *(specify below)*~~	'X'	C. OTHER *(specify below)*
	1. SAND		[Area has been filled in so it is difficult to determine		original]
	2. CLAY		stratigraphic sequence		
	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

Area in lagoon could possibly have been mined; entire area has received a large amount of fill; very hard to determine area's original topography, permeability of the underlying fill could vary [redacted] extensively.

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.

POTENTIAL HAZARDOUS WASTE SITE LOG

SITE NUMBER: 40

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

SITE NAME: U. S. Steel (Exum Dump)

CITY	STATE	ZIP CODE
Birmingham	Ala.	35224

SUMMARY OF POTENTIAL OR KNOWN PROBLEM: This site receives plant waste from various industries in the area.

ITEM	DATE OF DETERMINATION OR COMPLETION	RESPONSIBLE ORGANIZATION OR INDIVIDUAL (EPA, State, Contractor, Other)	PERSON MAKING ENTRY TO LOG FORM	DATE ENTERED ON LOG (mo,day,yr)
1. IDENTIFICATION OF POTENTIAL PROBLEM	10-5-79	Eckhardt Subcommittee	D. Roberson	1-8-80
2. PRELIMINARY ASSESSMENT	12-18-79	State	D. Roberson	1-8-80
APPARENT SERIOUSNESS OF PROBLEM:	☐ HIGH	☐ MEDIUM ☐ LOW	☐ NONE ☒ UNKNOWN	
3. SITE INSPECTION	12-18-79	State	D. Roberson	1-8-80
4. EPA TENTATIVE DISPOSITION (check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☒ b. INVESTIGATIVE ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED				
☐ d. ENFORCEMENT ACTION NEEDED				
5. EPA FINAL STRATEGY DETERMINATION (check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☐ b. REMEDIAL ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED BUT, NO RESOURCES AVAILABLE				
☐ d. ENFORCEMENT ACTION NEEDED				
☐ (1) CASE DEVELOPMENT PLAN PREPARED				
☐ (2) ENFORCEMENT CASE FILED OR ADMINISTRATIVE ORDER ISSUED				
6. STRATEGY COMPLETED				

EPA Form 1320-1 (10-79)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: IV

SITE NUMBER (to be assigned by Hq): 35

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: Dolomite

B. STREET (or other identifier): Tin Mill Road

C. CITY: Birmingham

D. STATE: AL.

E. ZIP CODE: 35224

F. COUNTY NAME: Jefferson

G. SITE OPERATOR INFORMATION

1. NAME: U.S. Steel Corporation

2. TELEPHONE NUMBER: 205-783-4236

3. STREET: Tin Mill Road

4. CITY: Fairfield

5. STATE: AL.

6. ZIP CODE: 35064

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

1. NAME: Same As Site Operator.

2. TELEPHONE NUMBER:

3. CITY:

4. STATE:

5. ZIP CODE:

I. SITE DESCRIPTION
Old disposal site, waste placed there no longer visible. Waste from Allied Chemical's was reported to be coal tar byproducts.

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: David L. Roberson

2. TELEPHONE NUMBER: 205-832-6728

3. DATE (mo., day, & yr.): 12-18-79

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: David L. Roberson

2. TITLE: Environmentalist III

3. ORGANIZATION: Div. of SW + V.C., State Health Dept.

4. TELEPHONE NO. (*area code & no.*): 205-832-6728

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
L. G. Linn	Div. of SW + V.C., State Health Dept.	205-832-6728
J. E. Walls	Allied Chemical, Plant Mgr.	205-[illegible] 2635
W. J. Monk	Allied Chemical, Plant Controller	205-787-8605

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

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

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Allied Chemicals	787-8695	1327 Erie Street, Wylam, Birm, AL.	Coal Tar Byproducts

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
Same as D. above			

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)
12-18-79	9:30 A.M.	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)

Clear

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

[ ] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

[ ] YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

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

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

V. SITE INFORMATION

A. SITE STATUS

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

[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?

[X] 1. NO [ ] 2. YES (specify generator's four-digit SIC Code) _____

C. AREA OF SITE (in acres)

1

D. ARE THERE BUILDINGS ON THE SITE?

[X] 1. NO [ ] 2. YES (specify):

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

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

[ ] 1. STORAGE [ ] 2. INCINERATION [X] 3. LANDFILL [ ] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

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

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1. LIQUID [X] 2. SOLID [ ] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[ ] 1. CORROSIVE [ ] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[ ] 5. TOXIC [ ] 6. REACTIVE [X] 7. INERT [ ] 8. FLAMMABLE

[X] 9. OTHER (specify): UNKNOWN

C. WASTE CATEGORIES

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

No

 Continue On Reverse

Continued From Front

II. WASTE RELATED INFORMATION (continued)

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

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT .28	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE [illegible]	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify): [illegible]	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(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			

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

 Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ 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

☐ M. PROPERTY DAMAGE

 Continue On Page 7

Continued From Page 6

I. HAZARD DESCRIPTION *(continued)*

[ ] N. FIRE OR EXPLOSION

[ ] O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

[ ] 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)*

IX. POPULATION DIRECTLY AFFECTED BY SITE

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

X. WATER AND HYDROLOGICAL DATA

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

G. TYPE OF DRINKING WATER SUPPLY

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

☐ 3. SURFACE WATER ☐ 4. WELL

 Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA *(continued)*

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

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

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

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

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN

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

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

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

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

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

XIII. SOIL PERMEABILITY

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

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

G. RECHARGE AREA

☒ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE

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

J. OTHER GEOLOGICAL DATA

 Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

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

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

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

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

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

LANDFILLS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc)*
[ ] YES [X] NO

2. EVIDENCE OF IMPROPER DISPOSAL OF BULK LIQUIDS, SEMI-SOLIDS AND SLUDGES INTO THE LANDFILL
[ ] YES [X] NO

3. CHECK RECORDS OF CELL LOCATION AND CONTENTS AND BENCHMARK
[ ] YES [X] NO

4. WASTES SURROUNDED BY SORBENT MATERIAL
[ ] YES [ ] NO

5. DIVERSION STRUCTURES ARE EFFECTIVELY CONSTRUCTED AND PROPERLY MAINTAINED
[ ] YES [X] NO NONE PRESENT

6. EVIDENCE OF PONDING OF WATER ON SITE
[ ] YES [X] NO

7. EVIDENCE OF IMPROPER/INADEQUATE DRAINING
[ ] YES [X] NO

8. ADEQUATE LEACHATE COLLECTION SYSTEM *(If "Yes", specify Type)*
[ ] YES [X] NO NONE

8a. SURFACE LEACHATE SPRING
[ ] YES [X] NO

9. RECORDS OF LEACHATE ANALYSIS
[ ] YES [X] NO

10. GAS MONITORING
[ ] YES [X] NO

11. GROUNDWATER MONITORING WELLS
[ ] YES [X] NO

12. ARTIFICIAL MEMBRANE LINER INSTALLED
[ ] YES [X] NO

13. SPECIFIC CONTAINMENT MEASURES *(Clay Bottom, Sides, etc)*
[ ] YES [X] NO

14. FIXATION *(Stabilization)* OF WASTE
[X] YES [ ] NO

15. ADEQUATE CLOSURE OF INACTIVE PORTION OF FACILITY
[X] YES [ ] NO

16. COVER *(Type)*
Earth from surrounding Area.

16a. THICKNESS
Unknown

16b. PERMEABILITY
Low

16c. DAILY APPLICATION
[ ] YES [ ] NO
Waste covered when dumped.

ok File

#35

EPA	POTENTIAL HAZARDOUS WASTE SITE FINAL STRATEGY DETERMINATION	REGION IV	SITE NUMBER AL 000000500

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	B. STREET	
Dolomite	Tin Mill Road	
C. CITY	**D. STATE**	**E. ZIP CODE**
Birmingham	Alabama	35224

II. FINAL DETERMINATION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED	X				
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

Site was on U.S. Steel Corporation property. Waste was landfilled and there was no evidence of waste or any associated problems.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*

G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
David L. Roberson	(205) 832-6728	1-6-81

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	
	$	
	$	
	$	
	$	
	$	
	$	
	$	
D. TOTAL ESTIMATED COST	$	

EPA Form T2070-5 (10-79)

Continue On Reverse

Continued From Front

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY ACTIONS *(On Site and Off-Site)*: **List all emergency actions taken or planned to bring the site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.**

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site and Off-Site)*: **List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.**

1. ACTION	2. ACTION START DATE *(mo,day,&yr)*	3. ACTION END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED.
				$	
				$	
				$	
				$	
				$	
				$	

C. MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL MAN-HOURS FOR REMEDIAL ACTIVITIES	3. TOTAL COST FOR REMEDIAL ACTIVITIES
a. EPA		$
b. STATE		$
c. PRIVATE PARTIES		$
d. OTHER *(specify)*:		$

AL 000 [illegible] 46

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by HQ)
IV	[illegible]

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: [illegible] Steel (Evans Dump)

B. STREET (*or other identifier*): [illegible]-Pleasant Grove Road + Tin Mill Rd.

C. CITY: [illegible]

D. STATE: AL

E. ZIP CODE: 35224

F. COUNTY NAME: [illegible]

G. OWNER/OPERATOR (*if known*)
1. NAME: [illegible] Steel (Evans Dump)
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP
- [ ] 1. FEDERAL
- [ ] 2. STATE
- [ ] 3. COUNTY
- [ ] 4. MUNICIPAL
- [x] 5. PRIVATE
- [ ] 6. UNKNOWN

I. SITE DESCRIPTION: Site used 1948-50. [illegible] industrial other than filled [illegible].

J. HOW IDENTIFIED (*i.e., citizen's complaints, OSHA citations, etc.*): Environmental Report + Div. of Solid Waste Investigation

K. DATE IDENTIFIED (*mo., day, & yr.*): 10-5-79

L. PRINCIPAL STATE CONTACT
1. NAME: [illegible] Dan [illegible]
2. TELEPHONE NUMBER: 8[illegible]

II. PRELIMINARY ASSESSMENT (*complete this section last*)

A. APPARENT SERIOUSNESS OF PROBLEM
- [ ] 1. HIGH
- [ ] 2. MEDIUM
- [ ] 3. LOW
- [ ] 4. NONE
- [x] 5. UNKNOWN

B. RECOMMENDATION
- [ ] 1. NO ACTION NEEDED (*no hazard*)
- [x] 2. SITE INSPECTION NEEDED
  - a. TENTATIVELY SCHEDULED FOR: 12-18-79
  - b. WILL BE PERFORMED BY: D. Roberson
- [ ] 3. IMMEDIATE SITE INSPECTION NEEDED
  - a. TENTATIVELY SCHEDULED FOR:
  - b. WILL BE PERFORMED BY:
- [ ] 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION
1. NAME: David L. Roberson
2. TELEPHONE NUMBER: [illegible]-6728
3. DATE (*mo., day, & yr.*): 12-18-[illegible]

III. SITE INFORMATION

A. SITE STATUS
- [x] 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?
- [x] 1. NO
- [ ] 2. YES (*specify generator's four-digit SIC Code*): _____

C. AREA OF SITE (*in acres*): 1/4 of Approx. 50

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?
- [x] 1. NO
- [ ] 2. YES (*specify*): _____

T2070-2 (10-79)

Continue On Reverse

CTC 2865

...d 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	X	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	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. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

[illegible] uses site for some waste disposal filled chemical [illegible] and wastes [illegible] there by filled [illegible]

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.

No

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 .25 [illegible]	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Tons	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	X (6) OTHER (specify): Coal Tar by products	
			(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)*.

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	X			Possible sinkhole in area.
8. CONTAMINATION OF SURFACE WATER	X			Earth cover not applied.
9. DAMAGE TO FLORA/FAUNA	X			
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	X			
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS	X			
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER *(specify)*:				

Continue On Reverse

VII. PERMIT INFORMATION

INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

- [ ] 1. NPDES PERMIT
- [ ] 2. SPCC PLAN
- [ ] 3. STATE PERMIT *(specify)*:
- [ ] 4. AIR PERMITS
- [ ] 5. LOCAL PERMIT
- [ ] 6. RCRA TRANSPORTER
- [ ] 7. RCRA STORER
- [ ] 8. RCRA TREATER
- [ ] 9. RCRA DISPOSER
- [ ] 10. OTHER *(specify)*: NONE

B. IN COMPLIANCE?

- [ ] 1. YES
- [ ] 2. NO
- [ ] 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*:

VIII. PAST REGULATORY ACTIONS

- [x] A. NONE
- [ ] B. YES *(summarize below)*

IX. INSPECTION 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
Eckhardt Report Visit	12-18-79	State	By D. Roberson + L.G. Lina

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

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.

POTENTIAL HAZARDOUS WASTE SITE LOG

SITE NUMBER: 40

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

SITE NAME: U.S. Steel (Exum Dump)

CITY: Birmingham | STATE: N/A. | ZIP CODE: 35224

SUMMARY OF POTENTIAL OR KNOWN PROBLEM: This site receives plant waste from various industries in the area.

ITEM	DATE OF DETERMINATION OR COMPLETION	RESPONSIBLE ORGANIZATION OR INDIVIDUAL (EPA, State, Contractor, Other)	PERSON MAKING ENTRY TO LOG FORM	DATE ENTERED ON LOG (mo/day/yr)
1. IDENTIFICATION OF POTENTIAL PROBLEM	10-5-79	Earhart Subcommittee	D. Roberson	1-8-80
2. PRELIMINARY ASSESSMENT	12-18-79	State	D. Roberson	1-8-80
APPARENT SERIOUSNESS OF PROBLEM	☐ HIGH	☐ MEDIUM ☐ LOW	☐ NONE ☒ UNKNOWN	
3. SITE INSPECTION	12-18-79	State	D. Roberson	1-8-80
4. EPA TENTATIVE DISPOSITION (Check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☐ b. INVESTIGATIVE ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED				
☐ d. ENFORCEMENT ACTION NEEDED				
5. EPA FINAL STRATEGY DETERMINATION (Check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☐ b. REMEDIAL ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED BUT, NO FUNDS AVAILABLE				
☐ d. ENFORCEMENT ACTION NEEDED				
☐ e. CASE DEVELOPMENT PLAN PREPARED				
☐ f. ENFORCEMENT CASE FILED OR ADMINISTRATIVE ORDER ISSUED				
6. STRATEGY COMPLETED				

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by HQ)
IV	35

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: ~~Dolimite~~ Dolomite

B. STREET (*or other identifier*): Tin Mill Road

C. CITY: Birmingham

D. STATE: Al.

E. ZIP CODE: 35224

F. COUNTY NAME: Jefferson

G. OWNER/OPERATOR (*if known*)
1. NAME: U.S. Steel Corporation
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☑ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: Site used from 1948-50. Located in front of U.S. Steel Tin Mill. No waste visible at time of visit.

J. HOW IDENTIFIED (*i.e., citizen's complaints, OSHA citations, etc.*): Eckhardt Subcommittee Report

K. DATE IDENTIFIED (*mo., day, & yr.*): 10-5-79

L. PRINCIPAL STATE CONTACT
1. NAME: Mr. DAN Cooper
2. TELEPHONE NUMBER: 832-6728

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. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: 12-18-79
b. WILL BE PERFORMED BY: Roberson
☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION
1. NAME: David L. Roberson
2. TELEPHONE NUMBER: 832-6728
3. DATE (*mo., day, & yr.*): 12-18-79

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*):

C. AREA OF SITE (*in acres*): 1 acre

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

SIC 2865

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

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.

No

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 28 hundred	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Tons	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): Coal TAR Byproducts	
			(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*).

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				No Hazard evident.
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				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (*specify*):				

Continue On Reverse

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify): N/A

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION 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
Eckhardt Report Visit	12-18-79	State	By D. Roberson + L. G. Linn

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

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.

POOR LEGIBILITY

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