Tronox LLC, Columbus

General Information

ID	Branch	SIC	County	Basin	Start	End
1696	Chemical	2491	Lowndes	Tombigbee River	10/27/1992	

Address

Physical Address (Primary)	Mailing Address
2300 14th Avenue North Columbus, MS 39701	PO Box 268859 Oklahoma City, OK 731268859

Telecommunications

Type	Address or Phone
Work phone number	(405) 775-5129

Alternate / Historic AI Identifiers

Alt ID	Alt Name	Alt Type	Start Date	End Date
2808700020	Tronox LLC, Columbus	Air-AIRS AFS	10/12/2000	06/01/2002
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Construction	06/12/1998	
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Synthetic Minor Operating	06/06/1997	06/01/2002
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Synthetic Minor Operating	06/12/1998	06/01/2002
MSR220010	Kerr McGee Chemical Corporation, Columbus	GP-Wood Treating	10/27/1992	07/13/1997
MSD990866329	Kerr McGee Chemical Corporation, Columbus	Hazardous Waste-EPA ID	10/12/2000	
MSD990866329	Kerr McGee Chemical Corporation, Columbus	Hazardous Waste-TSD	06/11/2001	04/12/2006
MSD990866329	Tronox LLC, Columbus	Hazardous Waste-TSD	04/13/2006	05/31/2011
1696	Kerr McGee Chemical Corporation	Historic Site Name	10/27/1992	04/10/2006
1696	Tronox, LLC	Official Site Name	04/10/2006	
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	10/11/1994	10/10/1999
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	08/23/2000	07/31/2005
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	10/31/2005	04/12/2006
MSP090021	Tronox LLC, Columbus	Water-Pretreatment	04/13/2006	09/30/2010

Regulatory Programs

Program	SubProgram	Start Date	End Date
Air	NSPS Subpart Dc	09/12/1990	06/01/2002
Air	SM	06/06/1997	06/01/2002
Hazardous Waste	Large Quantity Generator	04/01/1997	
Hazardous Waste	TSD - Not Classified	06/11/2001	
Water	PT CIU	10/11/1994	09/01/2003
Water	PT CIU - Timber Products	10/11/1994	09/01/2003

	Processing (Subpart 429)		
Water	PT NCS	09/01/2003	
Water	PT SIU	10/11/1994	

Locational Data

Latitude	Longitude	Metadata	S / T / R	Map Links
33 ° 30 ' 38 .51 (033.510697)	88 ° 24 ' 34 .02 (088.409450)	**Point Desc:** PG - Plant entrance (General) Data collected by Louis Crawford on 7/11/00. PG - Plant Entrance (General) Data collected by Clift Jeter on 6/13/02. LAT 33deg 30min 36.6sec LON 88deg 24min 35.1sec **Method:** GPS Code (Psuedo Range) Differential **Datum:** NAD83 **Type:** MDEQ	Section: Township: Range:	SWIMS TerraServer Map It

10/13/2006 10:29:50 AM

Kerr McGee Chemical Corporation, Columbus

General Information

ID	Branch	SIC	County	Basin	Start	End
1696	Chemical	2491	Lowndes	Tombigbee River	10/27/1992	

Address

Physical Address (Primary)	Mailing Address
2300 14th Avenue North Columbus, MS 39701	PO Box 268859 Oklahoma City, OK 731268859

Telecommunications

Type	Address or Phone
Work phone number	(405) 775-5110

Alternate / Historic AI Identifiers

Alt ID	Alt Name	Alt Type	Start Date	End Date
08700020	Kerr McGee Chemical Corporation, Columbus	Air-AIRS AFS	10/12/2000	
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Construction	06/12/1998	
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Synthetic Minor Operating	06/06/1997	06/01/2002
168000020	Kerr McGee Chemical Corporation, Columbus	Air-Synthetic Minor Operating	06/12/1998	06/01/2002
MSR220010	Kerr McGee Chemical Corporation, Columbus	GP-Wood Treating	10/27/1992	07/13/1997
MSD990866329	Kerr McGee Chemical Corporation, Columbus	Hazardous Waste-EPA ID	10/12/2000	
MSD990866329	Kerr McGee Chemical Corporation, Columbus	Hazardous Waste-TSD	06/11/2001	05/31/2011
1696	Kerr McGee Chemical Corporation	Official Site Name	10/27/1992	
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	10/11/1994	10/10/1999
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	08/23/2000	07/31/2005
MSP090021	Kerr McGee Chemical Corporation, Columbus	Water-Pretreatment	10/31/2005	09/30/2010

Regulatory Programs

Program	SubProgram	Start Date	End Date

Air	NSPS Subpart Dc	09/12/1990	
Air	SM	06/06/1997	
Hazardous Waste	TSD - Not Classified	06/11/2001	
Water	PT CIU	10/11/1994	09/01/2003
Water	PT CIU - Timber Products Processing (Subpart 429)	10/11/1994	09/01/2003
Water	PT NCS	09/01/2003	
Water	PT SIU	10/11/1994	

Locational Data

Latitude	Longitude	Metadata	S / T / R	Map Links
33 ° 30 ' 38 .51 (033.510697)	88 ° 24 ' 34 .2 (088.409450)	**Point Desc:** PG - Plant entrance (General) Data collected by Louis Crawford on 7/11/00. PG - Plant Entrance (General) Data collected by Clift Jeter on 6/13/02. LAT 33deg 30min 36.6sec LON 88deg 24min 35.1sec **Method:** GPS Code (Psuedo Range) Differential **Datum:** NAD83 **Type:** MDEQ	Section: Township: Range:	SWIMS TerraServer Map It

Report Date: 12/16/2005 3:17:08 PM

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (Section 3010 of the Resource Conservation and Recovery Act).

EPA Notification of Regulated Waste Activity

United States Environmental Protection Agency

Date Received (For Official Use Only)

I. Installation's EPA ID Number *(Mark 'X' in the appropriate box)*

[ ] A. First Notification [X] B. Subsequent Notification *(complete item C)*

C. Installation's EPA ID Number: MSD990866329

II. Name of Installation *(include company and specific site name)*

Kerr-McGee Chemical Corporation

III. Location of Installation *(physical address not P.O. Box or Route Number)*

Street: 2300 14 Avenue & 20 Street

Street (continued): North

City or Town: Columbus | State: MS | ZIP Code: 39703-0906

County Code: | County Name: Lowndes

IV. Installation Mailing Address *(See instructions)*

Street or P.O. Box: PO Box 906

City or Town: Columbus | State: MS | ZIP Code: 39703-0906

V. Installation Contact *(Person to be contacted regarding waste activities at site)*

Name (last): Helms | (first): Anthony

Job Title: Plant Manager | Phone Number (area code and number): 601-328-7551

VI. Installation Contact Address *(See instructions)*

A. Contact Address: [X] Location [ ] Mailing

B. Street or P.O. Box: PO Box 906

City or Town: Columbus | State: MS | ZIP Code: 39703-0906

VII. Ownership *(See instructions)*

A. Name of Installation's Legal Owner: Kerr-McGee Chemical Corp

Street, P.O. Box, or Route Number: PO Box 25861

City or Town: Oklahoma City | State: Ok | ZIP Code: 73125-

Phone Number (area code and number): 405-270-2394

B. Land Type: P

C. Owner Type: P

D. Change in Owner Indicator: Yes [ ] [X]

Date Changed (Month Day Year):

EPA Form 8700-12 (07-90) Previous edition is obsolete.

KERR-McGEE CHEMICAL CORPORATION
P.O. BOX 906 • COLUMBUS, MISSISSIPPI 39703-0906

November 15, 1993

RECEIVED
NOV 16 1993
Dept. of Environmental Quality
Office of Pollution Control

Michael J. Weaver
Mississippi Hazardous Waste Division
Bureau of Pollution Control
Department of Environmental Quality
P. O. Box 10385
Jackson, MS 39289-0385

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, MS Facility
EPA ID MSD990866329
Notification of Regulated Waste Activity

During a recent internal audit it was found that our Notification of Regulated Waste Activity had an incorrect EPA ID number. Please find attached a new form with the correct EPA ID number. Sorry for any inconvenience this might have caused you.

Sincerely,

KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Anthony N. Helms

Anthony N. Helms
Plant Manager

ANH/tjj

Enclosure

Certified Mail P 962 485 682

cc: N. E. Bock
Joe Mashburn
U.S. EPA Region IV

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: KERR MCGEE CHEMICAL CORP. COLUMBUS, MISSISSIPPI

EPA ID NO. MSD990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1989 Hazardous Waste Report

FORM GM

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 14 of the 1989 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description (Instruction Page 15): CREOSOTE CONTAMINATED SOIL AND DEBRIS RESULTING FROM CONSTRUCTION OF TANK FARM CONTAINMENT.

B. EPA hazardous waste code (Page 15): U051

C. State hazardous waste code (Page 16): NA

D. SIC code (Page 16): 2491

E. Source code (Page 16): A69

F. Form code (Page 16): B301

G. Origin (Page 16): Code 1; System type M301

H. TRI constituent (Page 17): 3

I. CAS numbers (Page 17): 1. 120-12-7; 2. 130-64-9; 3. 91-20-3; 4. ; 5.

Sec. II

A. Quantity generated in 1988 (Instruction Page 17): 937800

B. Quantity generated in 1989 (Page 17): 293460

C. UOM (Page 18): 1

D. Density (Page 18): NA ☐ 1 lbs/gal ☐ 2 sg

E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? (Page 18)
☐ 1 Yes (CONTINUE TO SYSTEM 1)
☒ 2 No (SKIP TO SEC. III)

SYSTEM 1
System type (Page 18): M132
Quantity treated, disposed or recycled in 1989 (Page 18): 293460

SYSTEM 2
System type (Page 18): M
Quantity treated, disposed or recycled in 1989 (Page 18):

Sec. III

A. Was this waste shipped off site? (Instruction Page 19)
☐ 1 Yes (CONTINUE TO BOX B)
☐ 2 No (SKIP TO SEC. IV)

Site	B. EPA ID No. of facility to which waste was shipped (Instruction Page 19)	C. System type (Page 19)	D. Total quantity shipped in 1989 (Page 19)
1	ALD006224644	M132	293460
2		M	

Sec. IV

A. Waste minimization results in 1989 (Instruction Page 20)
☐ 1 Yes (CONTINUE TO BOX B)
☐ 2 No (THIS FORM IS COMPLETE)

B. Activity (Page 21)	C. Other effects (Page 21)	D. Quantity recycled in 1989 due to new activities (Page 21)	E. Activity/Production Index (Page 21)	F. Source Reduction Quantity (Page 22)
W32, W52, W34, W	☐ 1 Yes ☒ 2 No	DK	0.3	DK

Comments: SEC I (E) CONSTRUCTION OF SECONDARY TANK FARM CONTAINMENT.

OMB# 2050-0024 Expires 3-31-92

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: KERR McGEE Chemical Corp. Columbus, Mississippi

EPA ID NO.: MSD990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1989 Hazardous Waste Report

FORM IC

IDENTIFICATION AND CERTIFICATION

RECEIVED FEB 22 1990 Dept. of Environmental Quality Office of Solid Waste Division Control

INSTRUCTIONS: Read the detailed instructions beginning on page 7 of the 1989 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete items A through H. Check the box ☒ in items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 7.

A. EPA ID No. Same as label ☐ or → MSD990866329

B. Site/company name Same as label ☐ or → KERR McGEE CHEM. CORP.

C. Has the site name associated with this EPA ID changed since 1987? ☐ 1 Yes ☒ 2 No

D. Street name and number. If not applicable, enter industrial park, building name or other physical location description. Same as label ☐ or → 2300 14th Ave & 20th Street North

E. City, town, village, etc. Same as label ☐ or → Columbus

F. County: Lowndes

G. State Same as label ☐: MS

H. Zip Code Same as label ☐: 39701 – ____

SEC. II Mailing address of site. Instruction page 7.

A. Is the mailing address the same as the location address? ☐ 1 Yes (SKIP TO SEC. III) ☒ 2 No (COMPLETE SEC. II)

B. Number and street name of mailing address: P.O. Box 906

C. City, town, village, etc.: Columbus

D. State: MS

E. Zip Code: 39701 – ____

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 7.

A. Please print: Last name: GETZ First name: JOHN M.I.: J.

B. Title: PLANT MGR

C. Telephone: 601 328 – 7551 Extension ____

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 8.

A. 2491 B. ____ C. ____ D. ____

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

A. Number of form pages submitted: Form IC 2 Form GM 1 Form WR NA Form PS NA

B. Please print: Last name: GETZ First name: JOHN M.I.: J.

C. Title: PLANT MANAGER

D. Signature: John J. Getz

E. Date of signature: 02 (MO.) 24 (DAY) 90 (YR.)

EPA Form 8700-13A/B (5-80) (Revised 11-85) (Revised 12-87) (Revised 11-89)

OVER →

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

Form Approved. OMB No. 2050-0028. Expires 9-30-88
GSA No. 0246-EPA-01

United States Environmental Protection Agency
Washington, DC 20460

EPA Notification of Hazardous Waste Activity

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

For Official Use Only

Comments

Installation's EPA ID Number	Approved	Date Received (yr. mo. day)
C F T/A C 1		

RECEIVED

I. Name of Installation

KERR McGEE Chemical Corp.

II. Installation Mailing Address

Street or P.O. Box: PO Box 906

City or Town	State	ZIP Code
Columbus	MS	39701

III. Location of Installation

Street or Route Number: 2300 14Th Ave & 20Th Street N

City or Town	State	ZIP Code
Columbus	MS	39701

IV. Installation Contact

Name and Title (*last, first, and job title*)	Phone Number (*area code and number*)
Getz John Plant Mgr	601 328 7551

V. Ownership

A. Name of Installation's Legal Owner	B. Type of Ownership (*enter code*)
KERR McGEE Chemical	P

VI. Type of Regulated Waste Activity (*Mark 'X' in the appropriate boxes. Refer to instructions.*)

A. Hazardous Waste Activity

- ☐ 1a. Generator
- ☒ 1b. Less than 1,000 kg/mo.
- ☐ 2. Transporter
- ☐ 3. Treater/Storer/Disposer
- ☐ 4. Underground Injection
- ☐ 5. Market or Burn Hazardous Waste Fuel (*enter 'X' and mark appropriate boxes below*)
  - ☐ a. Generator Marketing to Burner
  - ☐ b. Other Marketer
  - ☐ c. Burner

B. Used Oil Fuel Activities

- ☐ 6. Off-Specification Used Oil Fuel (*enter 'X' and mark appropriate boxes below*)
  - ☐ a. Generator Marketing to Burner
  - ☐ b. Other Marketer
  - ☐ c. Burner
- ☐ 7. Specification Used Oil Fuel Marketer (*or On site Burner*) Who First Claims the Oil Meets the Specification

VII. Waste Fuel Burning: Type of Combustion Device (*enter 'X' in all appropriate boxes to indicate type of combustion device(s) in which hazardous waste fuel or off-specification used oil fuel is burned. See instructions for definitions of combustion devices.*)

☐ A. Utility Boiler ☐ B. Industrial Boiler ☐ C. Industrial Furnace

VIII. Mode of Transportation (*transporters only — enter 'X' in the appropriate box(es)*)

☐ A. Air ☐ B. Rail ☐ C. Highway ☐ D. Water ☐ E. Other (*specify*)

IX. First or Subsequent Notification

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

☐ A. First Notification ☒ B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number: MSD990866329

Notification of Hazardous Waste Activity
Addendum

Facility Name KERR McGEE Chemical Corp
City Columbus, MS

INSTRUCTIONS:

MARK ALL THAT APPLY

A. Hazardous Waste Activity

1. Do you generate less than 100 kg/mo (220 lb/mo)? Yes __ No X

B. Used Oil Fuel Activities

7. Specification Used Oil Fuel Marketer (or On-Site Burner) Who First Claims the Oil Meets the Specification

___ Marketer
___ On-Site Burner

C. Recycling Activities

___ On-Site Solvent Recovery/Recycling
___ Lead-Acid Battery Recycling
___ Precious Metals Recycling (Silver from x-ray and photographic solutions)
___ Other; specify _____

D. Hazardous Waste Storage

X Drums
___ Tanks
___ Impoundments
X Other; specify No Routine Generation

D 8/1/88

OMB#: 2050-0024 Expires 12-31-8

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Kerr McGee Chemical Corporation Columbus, MS Facility

EPA ID NO. MSD990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1987 Hazardous Waste Generation and Management Report

FORM **IC**

IDENTIFICATION AND CERTIFICATION

WHO MUST COMPLETE THIS FORM? Form IC must be completed by every site that received this package.

INSTRUCTIONS: Please read the detailed instructions beginning on page 8 of the 1987 Hazardous Waste Generation and Management Report Instructions booklet before completing this form.

Complete Sections I through IV and Sections VI through IX immediately. Complete Section V, certification, after you have finished the full report package.

SEC. I. Site name and physical location which may differ from the mailing address. Complete items A through G. Mark [X] for items A, B, C, D, F, and G if same as label; if different, enter corrections. If label is absent, enter information.

A. Site/company name — Same as label ☐ or → Kerr McGee Chemical Corporation

B. EPA ID No. — Same as label ☐ or → MSD990866329

C. Address number and street name of physical location - If not known, enter industrial park, building name or other physical location description — Same as label ☐ or → 2300 14th Avenue and 20th Street North

D. City, town, village, etc. — Same as label ☐ or → Columbus

E. County: Lowndes

F. State — Same as label ☐ or → MS

G. Zip Code — Same as label ☐ or → 39703-0906

SEC. II. Mailing address of site. Mark [X] for A, B, C, and D if same as label; if different, enter corrections.

A. Number and street name of mailing address — Same as label ☐ or → P. O. Box 906

B. City, town, village, etc. — Same as label ☐ or → Columbus

C. State — Same as label ☐ or → MS

D. Zip Code — Same as label ☐ or → 39703-0906

SEC. III. Name, title, and telephone number of the person who should be contacted if questions arise regarding this report.

A. Please print: Last name: Creekmore; First name: Erman; M.I.: L.

B. Title: Plant Superintendent

C. Telephone: 601 328-7551; Extension:

SEC. IV. Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. SIC codes are listed beginning on page 1 of the 1987 Hazardous Waste Generation, Shipment and Management Report Codebook.

A.	B.	C.	D.	E.	F.
2491					

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

A. Please print: Last name: Bull; First name: Jeffrey; M.I.: H.

Title: Manager - Environmental Control

B. Signature: Jeffrey H. Bull

Date of signature: 04 (Mo.) 18 (Day) 88 (Yr.)

EPA Form 8700 - 13A/B (5-80) (Rev. 11-85) Revised (12-87)

OVER →

SEC. VI Does this site's EPA ID authorize hazardous waste generation?

- [ ] NO —— SKIP TO SECTION VII.
- [X] YES —— Did this site generate any hazardous waste during 1987?
  - [X] YES —— READ DETAILED INSTRUCTION ON PAGE 4 OF THE 1987 HAZARDOUS WASTE GENERATION AND MANAGEMENT REPORT INSTRUCTIONS BOOKLET FOR ACUTE AND ACCUMULATION LIMITS. MARK [X] NEXT TO THE HAZARDOUS WASTE GENERATION QUANTITY CATEGORY THAT APPLIED TO THIS SITE DURING 1987.
    - [X] Category 1: More than 1000 kg (2,200 lb) in one or more months
    - [ ] Category 2: More than 100 kg (220 lb) but no more than 1000 kg (2,200 lb) in any single month
    - [ ] Category 3: No more than 100 kg (220 lb) in any single month
      - [ ] Mark [X] if this site changed from Category 1 to Category 2 or 3 due to waste minimization activity conducted during 1986 or 1987.
  - [ ] NO —— CONTINUE BELOW, MARK [X] NEXT TO ALL THAT APPLY.
    - [ ] Generated, excluded or delisted wastes
    - [ ] Generated hazardous waste prior to 1987 but do not expect to generate in the future - MARK [X] FOR REASON IN ONE BOX BELOW
      - [ ] Waste was from one-time event(s) (e.g. spills, remedial actions, etc.)
      - [ ] Waste minimization activity undertaken during 1986 or 1987
      - [ ] Out of business
    - [ ] Generated hazardous waste prior to 1987 and expect to generate in the future
    - [ ] Never generated before but expect to generate in the future
    - [ ] Never generated and do not expect to generate in the future - MARK [X] FOR REASON IN ONE BOX BELOW
      - [ ] Protective notifier only
      - [ ] Misunderstood the requirements
      - [ ] Notified to secure transportation services
      - [ ] Other EXPLAIN REASON FOR GENERATOR NOTIFICATION IN COMMENTS

SEC. VII. Does this site have RCRA Interim Status or a RCRA permit to treat, store, or dispose hazardous waste?

- [ ] NO —— SKIP TO SECTION VIII
- [X] YES —— Did the site treat, store, or dispose (T/S/D) hazardous waste in RCRA-regulated units during 1987?
  - [X] YES —— SKIP TO SECTION VIII
  - [ ] NO —— CONTINUE BELOW, MARK [X] NEXT TO ALL THAT APPLY
    - [ ] T/S/D excluded waste during 1987
    - [ ] T/S/D hazardous waste in exempt units during 1987
    - [ ] T/S/D hazardous waste prior to 1987 but did not T/S/D waste during 1987. MARK [X] IN ONE BOX BELOW
      - [ ] T/S/D will resume in the future
      - [ ] Have notified of planned closure
      - [ ] Site is in closure or post closure
    - [ ] Never T/S/D hazardous waste prior to 1987 but: MARK [X] IN ONE BOX BELOW
      - [ ] Expect to T/S/D hazardous waste in the future
      - [ ] Do not expect to T/S/D hazardous waste in the future - EXPLAIN REASON FOR INTERIM STATUS OR PERMIT IN COMMENTS

SEC. VIII. Do you wish to withdraw this site's generator notification or EPA Part A permit application?

Withdraw generator notification	[ ] Yes	[X] No
Withdraw Part A permit application	[ ] Yes	[X] No

SEC. IX. Does this site have an area not requiring a RCRA Part A or Part B permit that is used exclusively for the short term accumulation of hazardous waste?

- [X] NO
- [ ] YES —— DOES THE AREA HAVE:

Containers	[ ] No	[ ] Yes	ENTER THE NUMBER OF TANKS AND THEIR TOTAL CAPACITY IN GALLONS.
Tanks	[ ] No	[ ] Yes ——	[ ] [ ] [ ] [ ] Number [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] Gallon capacity

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Kerr McGee Chemical Corporation
Columbus, MS facility

EPA ID NO: MS0990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1987 Hazardous Waste Generation and Management Report

FORM GM

WASTE GENERATION AND MANAGEMENT

WHO MUST COMPLETE THIS FORM? Form GM must be completed by every site that generated hazardous waste on site or shipped hazardous waste off site during 1987.

☐ Mark ☒ if you are not required to complete Form GM.

INSTRUCTIONS: Please read the detailed instructions beginning on page 12 of the 1987 Hazardous Waste Generation and Management Report Instructions booklet before completing this form.

Make and complete a photocopy of this form for each hazardous waste generated on site or shipped off site during 1987.

Complete Sections I through IV. Throughout this form enter "DK" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable.

Sec. I

A. Waste description (Instruction Page 12): Hazardous Solid Waste; USEPA Code - K001 ORM-E; NA-9189

B. EPA hazardous waste code (Page 12): K001

C. State hazardous waste code (Page 13):

D. SIC code (Page 13): 2491

E. Source code (Page 13): 24 25

F. Waste form code (Page 13): N91

G. Waste minimization results (Page 13): A

Sec. II

A. Organics (Instruction Page 14): High N; Low; Test; Note
B. Water (Page 15): High K; Low; Note
C. Total Solids (Page 15): High D; Low; Note
D. Suspended Solids (Page 15): High; Low; Note N
E. BTU (Page 16): High; Low; UOM; Note N
F. Toxic Metals (Page 16) Note A

Metal	High	Low	Test
1.			
2.			
3.			
4.			
5.			
6.			

G. pH (Page 18): High 6.9; Low 4.1; Note
H. Flashpoint (Page 18): High °F; Low °F; Note D
I. Cyanides (Page 19): High; Low; Test; Note D
J. Halogens (Page 20): High; Low; Note N
K. Radioactive (Page 20): Yes ☐; No ☒; Note

Sec. III

A. 1986 quantity generated (Instruction Page 20): 2668620
B. 1987 quantity generated (Page 20): 651160
C. UOM (Page 21): P
D. Density (Page 21): N/A ☐ lbs/gal ☐ sg
E. Waste origin (Page 21) Code A; On-site T/S/D/R code

F. On-site T/S/D/R code (Page 21): 1. D02 2. NA 3. NA 4. NA 5. NA 6. NA 7. NA 8. NA

Sec. IV

A. EPA ID No. of facility to which waste was shipped (Instruction Page 22): ALD000622464
B. Number of shipments (Page 22):
C. Transport mode (Page 23): H
D. Off-site T/S/D/R code (Page 23): M10 M72
E. Total Quantity shipped (Page 23): 651169

Comments

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Kerr McGee Chemical Corporation
Columbus, MS facility

EPA ID NO. MSD990816329

U.S ENVIRONMENTAL PROTECTION AGENCY

1987 Hazardous Waste Generation and Management Report

FORM OI

OFF-SITE IDENTIFICATION

WHO MUST COMPLETE THIS FORM? Form OI must be completed by every site that shipped hazardous waste off site and every site that received hazardous waste from off site during 1987.

☐ Mark [X] if you are not required to complete Form OI.

INSTRUCTIONS: Please read the detailed instructions beginning on page 27 of the 1987 Hazardous Waste Generation and Management Report Instructions booklet before completing this form.

Complete A through E for each off-site installation to which you shipped waste or from which you received waste during 1987

Complete A through D for every transporter you used during the reporting year.

Throughout this form enter "0" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable. Make and complete additional copies of this form if you need to identify more than four off-site installations or transporters.

Site 1

A. EPA ID No. of off-site installation or transporter (Instruction page 27): ALID000616244

B. Name of off-site installation or transporter (Page 27): Chemical Waste Management, Inc.

C. Site type code (Page 28): F

D. Site relationship code (Page 28): D

E. Address of off-site installation (Page 28):
Street: Alabama Highway 17at Mile Marker 163
City: Emelle State: AL Zip Code: 35459 –

Site 2

A. EPA ID No. of off-site installation or transporter (Instruction page 27):

B. Name of off-site installation or transporter (Page 27):

C. Site type code (Page 28):

D. Site relationship code (Page 28):

E. Address of off-site installation (Page 28):
Street:
City: State: Zip Code: –

Site 3

A. EPA ID No. of off-site installation or transporter (Instruction page 27):

B. Name of off-site installation or transporter (Page 27):

C. Site type code (Page 28):

D. Site relationship code (Page 28):

E. Address of off-site installation (Page 28):
Street:
City: State: Zip Code: –

Site 4

A. EPA ID No. of off-site installation or transporter (Instruction page 27):

B. Name of off-site installation or transporter (Page 27):

C. Site type code (Page 28):

D. Site relationship code (Page 28):

E. Address of off-site installation (Page 28):
Street:
City: State: Zip Code: –

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Kerr McGee Chemical Corporation
Columbus, MS Facility

EPA ID NO. MSD990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1987 Hazardous Waste Generation and Management Report

FORM WM

WASTE MINIMIZATION

PART I

WHO MUST COMPLETE THIS FORM? Form WM Part I, describing efforts undertaken to implement waste minimization programs, must be completed by all generators required to file an Annual/Biennial Report. This requirement was established in response to statutory provisions included in the Hazardous and Solid Waste Amendments of 1984 (HSWA).

NOTE: Generators shipping hazardous waste off site are required to certify, on Item 16 of the Uniform Hazardous Waste Manifest, that they have a program in place to reduce, to the degree determined economically practicable, the volume and toxicity of hazardous waste generated. A similar certification must also be made by generators who have obtained a RCRA treatment, storage, or disposal permit. Consistent with these certification requirements, generators must report, on Form WM Part I, the efforts undertaken to implement waste minimization programs.

INSTRUCTIONS: Please read the detailed instructions on page 29 of the 1987 Hazardous Waste Generation and Management Report Instructions booklet before completing this form.

Answer questions 1 through 10. Throughout this form enter "DK" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable.

1. Did this site create or expand a source reduction and recycling program?

	1987 Yes	1987 No	1986 Yes	1986 No	Prior Years Yes	Prior Years No
Create	☐	X	☐	X	X	☐
Expand	☐	X	X	☐	☐	X

2. Did this site have a written policy or statement that outlined goals, objectives and methods for source reduction and recycling of hazardous waste?

	1987	1986	Prior Years
Yes	X	X	☐
No	☐	☐	X

3. What was the dollar amount of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste? ENTER ZERO (0) IF NONE.

	1987	1986	Prior Years
Capital expenditures	$ 0	$ 200,000	$ DK
Operating costs	$ 75,000	$ 75,000	$ DK

4. Did this site have an employee training program or provide incentives (bonuses, awards, personal recognition, etc.) to identify and implement source reduction and recycling opportunities and activities?

	1987 Yes	1987 No	1986 Yes	1986 No	Prior Years Yes	Prior Years No
Training	X	☐	X	☐	X	☐
Incentives	☐	X	☐	X	☐	X

OVER —>

5. Did this site conduct a source reduction and/or recycling opportunity assessment or audit? Note: an opportunity assessment or audit is a procedure that identifies practices that can be implemented to reduce the generation of hazardous waste or the quantity which must subsequently be treated, stored or disposed.

	1987		1986		Prior Years	
	Yes	No	Yes	No	Yes	No
Site-Wide	☐	☒	☐	☒	☒	☐
Process-Specific	☐	☒	☐	☒	☐	☒

6. Did this site identify or implement new SOURCE REDUCTION opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site?

	1987		1986		Prior Years	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☐	☒	☐
Implement	☒	☐	☒	☐	☐	☒

7. What factors have delayed or prevented implementation of SOURCE REDUCTION opportunities. MARK ☒ NEXT TO ALL THAT APPLY.

- ☐ a. Insufficient capital to install new source reduction equipment or implement new source reduction practices.
- ☐ b. Lack of technical information on source reduction techniques, applicable to my specific production processes.
- ☐ c. Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- ☐ d. Concern that product quality may decline as a result of source reduction.
- ☐ e. Technical limitations of the production processes.
- ☐ f. Permitting burdens.
- ☐ g. Other (SPECIFY) _____

8. Did this site identify or implement new RECYCLING opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site or subsequently treated, stored, or disposed of on site or off site?

	1987		1986		Prior Years	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☒	☒	☐
Implement	☐	☒	☒	☐	☐	☒

EPA ID NO. MSD990866329

9. What factors have delayed or prevented implementation of on-site or off-site RECYCLING opportunities. MARK [X] NEXT TO ALL THAT APPLY.

- [ ] a. Insufficient capital to install new recycling equipment or implement new recycling practices.
- [ ] b. Lack of technical information on recycling techniques applicable to this site's specific production processes.
- [ ] c. Recycling is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- [ ] d. Concern that product quality may decline as a result of recycling.
- [ ] e. Requirements to manifest wastes inhibit shipments off site for recycling.
- [ ] f. Financial liability provisions inhibit shipments off site for recycling.
- [ ] g. Technical limitations of product processes inhibit shipments off site for recycling.
- [ ] h. Technical limitations of production processes inhibit on-site recycling.
- [ ] i. Permitting burdens inhibit recycling.
- [ ] j. Lack of permitted off-site recycling facilities.
- [ ] k. Unable to identify a market for recyclable materials.
- [ ] l. Other (SPECIFY) _____

10. Has this site requested or received technical information or financial assistance on source reduction and/or recycling practices from any of the following sources? MARK [X] NEXT TO ALL THAT APPLY.

	1987		1986		Prior Years	
	Technical	Financial	Technical	Financial	Technical	Financial
a. Local government	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
b. State government	[X]	[ ]	[X]	[ ]	[ ]	[ ]
c. Federal government	[X]	[ ]	[X]	[ ]	[ ]	[ ]
d. Trade associations	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
e. Educational institutions	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
f. Suppliers	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
g. Other parts of your firm	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
h. Other firms/consultants	[X]	[ ]	[X]	[ ]	[ ]	[ ]
i. No request made	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
j. Other (conferences, literature, etc.)_____	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Kerr McGee Chemical Corporation
Columbus, MS Facility

EPA ID NO. MSD990866329

U.S. ENVIRONMENTAL PROTECTION AGENCY

1987 Hazardous Waste Generation and Management Report

FORM WM

WASTE MINIMIZATION

PART II

WHO MUST COMPLETE THIS FORM? Form WM Part II must be completed only by generators that engaged in an activity during 1987 that resulted in waste minimization.

Waste minimization means:
(1) reduction in the volume and/or toxicity of hazardous waste generated as a result of source reduction and or,
(2) reduction in the volume and/or toxicity of hazardous waste subsequently treated, stored, or disposed as a result of on-site or off-site recycling.

☐ Mark ☒ and do not complete this form if no waste minimization results were achieved during 1987.

INSTRUCTIONS: Please read the detailed instructions beginning on page 30 of the 1987 Hazardous Waste Generator and Management Report Instructions booklet before completing this form.

Make and complete a photocopy of this form for each hazardous waste minimized in 1987.

Complete Sections I through IV. Throughout this form enter "DK" if the information requested is not known or is not available; enter "NA" if the information requested is not applicable.

Sec. I

A. EPA hazardous waste code Instruction Page 31	B. State hazardous waste code Page 31	C. Product or service description Page 31	D. Product or service SIC code Page 31
K001		Wood preserving	2491

E. Waste form code Page 31	F. UOM Page 32	G. Density Page 32	H. Source description: Page 32	I. Source code Page 32
N89	P	NA. ☐ lbs/gal ☐ sg	Wastewater treatment	24/10

Sec. II

A. 1986 quantity generated Instruction Page 33	B. 1987 quantity generated Page 33	C. Production ratio Page 33	D. Toxicity change code Page 35
2668620	65160	0.02	2

E. Waste minimization: recycling Page 35		F. Waste minimization: source reduction Page 36	
Code 1. 0 2.	Quantity recycled	Code 1. 2 2. 3.	Quantity prevented 7013885

Sec. III

A. Narrative description of waste minimization project or activity and results achieved Instruction Page 43

Hazardous waste generated in 1986 was the result of closing surface impoundments. Waste minimization at the plant consists of in process recovery of chemicals to minimize the amount of waste generated.

OVER —>

Sec. IV.	**Instructions:** Answer questions 1 through 4. Mark ☒ next to the effects produced by the source reduction and/or recycling activity reported on this form in Sections I through III.

1. What effect did this site's source reduction and/or recycling activity have on the **quantity of water effluent** produced by hazardous waste generation processes during 1987?

   - ☐ a. Increase in the quantity of water effluent
   - ☒ b. Decrease in the quantity of water effluent
   - ☐ c. No effect on the quantity of water effluent
   - ☐ d. Don't know

2. What effect did this site's source reduction and/or recycling activity have on the **toxicity of water effluent** produced by hazardous waste generation processes during 1987?

   - ☐ a. Increase in the concentration of hazardous constituents
   - ☒ b. Decrease in the concentration of hazardous constituents
   - ☐ c. No effect on the concentration of hazardous constituents
   - ☐ d. Don't know

3. What effect did this site's source reduction and/or recycling activity have on the **quantity of air emissions** produced by hazardous waste generation processes during 1987?

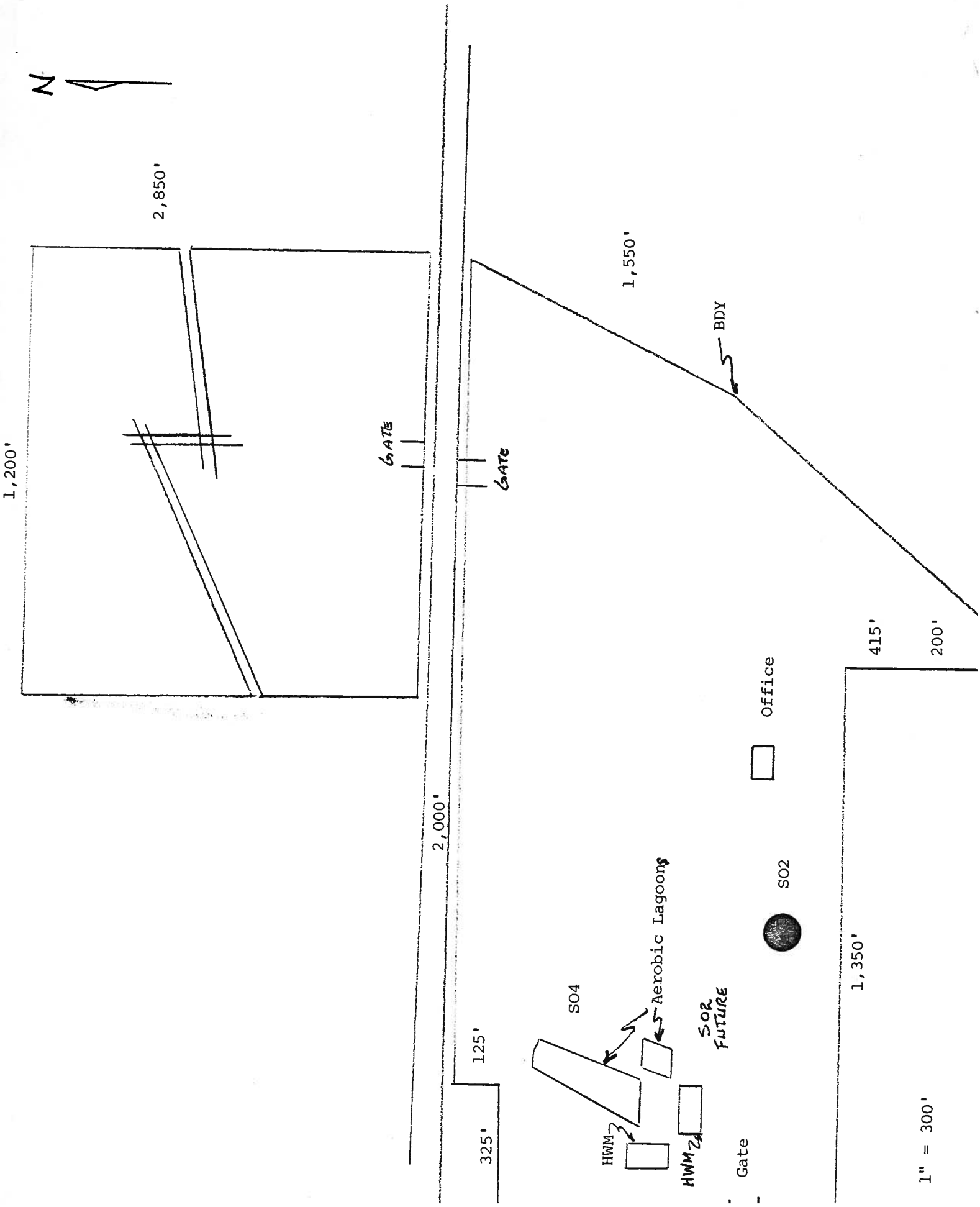
   - ☐ a. Increase in the quantity of air emissions
   - ☐ b. Decrease in the quantity of air emissions
   - ☒ c. No effect on the quantity of air emissions
   - ☐ d. Don't know

4. What effect did this site's source reduction and/or recycling activity have on the **toxicity of the air emissions** produced by hazardous waste generation processes during 1987?

   - ☐ a. Increase in the concentration of hazardous constituents
   - ☐ b. Decrease in the concentration of hazardous constituents
   - ☒ c. No effect on the concentration of hazardous constituents
   - ☐ d. Don't know

Comments:

V. Facility Drawing



THIS FILE IS CLOSED

THE MATERIAL ENCLOSED IN THIS FILE BEGINS ON:

DATE : 1988

AND ENDS ON:

DATE : 1990

THERE IS MORE RECENT INFORMATION IN THE NEXT FILE ON THIS SITE

TSD
Comp # 3

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

September 17, 1990

FILE COPY

CERTIFIED MAIL NO. P 444 543 944

Mr. Nick E. Boch
Environmental Control and
Regulatory Affairs
Kerr-McGee Chemical Corporation
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

In order to settle certain environmental issues regarding Kerr-McGee Chemical Company, you have agreed to the conditions of Administrative Order No. 1884-90, which is enclosed.

If you have questions about this matter, please contact Mr. Steve Spengler at telephone #601/961-5171.

Sincerely,

Charles Chisolm

Charles H. Chisolm, Head
Office of Pollution Control

CHC:mh

Enclosure

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

September 10, 1990

RECEIVED
SEP 13 1990
Dept. of Environmental Quality
Bureau of Pollution Control

Wm. Stephen Spengler, P.E.
RCRA Branch
State of Mississippi
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Decommissioned Meridian, MS Facility
Agreed Order

Dear Mr. Spengler:

Please find enclosed two copies of the signed agreed order for our decommissioned wood treating facility in Meridian, Mississippi. On page two, Section 6.B. a typographical error was corrected. The designation for upgradient monitoring well designated MW-1B was corrected from MW-1A to MW-1B.

If you have any additional questions or if you should require any additional information, please let me know.

Sincerely,

KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick E. Bock
Environmental Control and
Regulatory Affairs

NEB/lw
Enclosures

cc: R. Widmann
C. Trumpolt

FOREST PRODUCTS

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

August 16, 1989

CERTIFIED MAIL NO. P 965 303 975

FILE COPY

Mr. Jeffrey Bull, Manager
Environmental Control & Regulatory
Compliance
Kerr-McGee Chemical Corporation
Forest Products Division
P.O. Box 25861
MT 1206
Oklahoma City, Oklahoma 73125

Dear Mr. Bull:

Re: Kerr-McGee Chemical Corp.
Columbus, MS Facility
MSD990866329

Enclosed is an agreed order which contains a compliance schedule for conducting groundwater assessment activities at the above referenced facility. Please review this document and if the wording and conditions contained within it are agreeable to Kerr-McGee Chemical Corporation, have it signed and dated by the responsible company official and returned to my attention at the above address by September 1, 1989. If the wording or conditions are not agreeable to Kerr-McGee Chemical Corporation, please contact me at your earliest convenience so that we can discuss any changes that may be necessary.

If you should have any questions or if you should require any additional information, please contact me at (601) 961-5171.

Sincerely,

Wm. Stephen Spengler, P.E., Coord.
RCRA TSD Branch

WSS:lr
Enclosure
cc: Mr. Nick Bock, Kerr-McGee Chemical Corp.

Section C - Containment Systems NA

1. Do all dikes have a protective cover such as grass, shale or rock? (Part 265) (265.223) __Yes __No __NA

Section D - Waste Analysis and Trial Tests N/A

1. Will the surface impoundment be used to: (265.225)

   a. Chemically treat a hazardous waste which is substantially different from wastes previously treated in the impoundment? (Part 265) __Yes __No __NA
   b. Chemically treat hazardous waste with a substantially different process than any previously used in that impoundment? __Yes __No __NA

2. If the answer in #1 was yes to any questions, has the owner/operator:

   a. Conducted waste analysis or trial treatment tests? __Yes __No __NA
   b. Obtained written, documented information on treatment of similar wastes under similar operating conditions? __Yes __No __NA

Section E - Inspections and Monitoring N/A

1. Does the owner/operator:

   a. Inspect the freeboard at least one each operating day? (265.226) __Yes __No __NA
   b. Inspect the surface impoundment including dikes and vegetation at least once per week and after storms? (264.226) (265.226) __Yes __No __NA

2. Have any deteriorations or malfunctions that have been found been remediated? __Yes __No __NA

3. Has the owner/operator obtained a certification from a qualified engineer that the impoundments dike has structural integrity? (264.226) __Yes __No __NA

Section F - Emergency Repairs, Contingency Plans (Part 264) (264.227)

1. Does facility have a contingency plan? ✓Yes __No __NA

   a. If yes, does plan stipulate that impoundment be removed from service under the following conditions:

      1. Sudden drop in liquid level? __Yes __No ✓NA

2. Leaking dike? __Yes __No ✓NA

b. Does plan detail the steps to be followed when removing impoundment from service, including:

1. Shutting off flow into impoundment? __Yes __No ✓NA
2. Containing any surface leakage? __Yes __No ✓NA
3. Stopping the leak? __Yes __No ✓NA
4. Notifying Regional Administrator of problems in writing if leaks cannot be contained? __Yes __No __NA

c. If impoundment was removed from service, did owner/operator take the necessary precautions to rectify problems before restoring impoundment to service? __Yes __No ✓NA

d. If impoundment was removed from service and was not restored to service, was impoundment closed in accordance with an approved closure plan? ✓Yes __No __NA

Section G - Closure and Post-Closure (264.228) (265.228)

1. Is a closure plan retained at the facility? ✓Yes __No __NA

2. At closure, did owner/operator:

a. Remove standing liquids (Part 265)? ✓Yes __No __NA
b. Remove waste and waste residue (Part 265)? ✓Yes __No __NA
c. Remove liner (Part 265)? __Yes __No ✓NA
d. Remove underlying and surrounding contaminated soil? ✓Yes __No __NA
e. If not, did owner/operator demonstrate to Regional Administrator that the above materials were non-hazardous (Part 265)? __Yes ✓No __NA

1. If no, has owner/operator closed the impoundment and provided post-closure care (Part 265)? ✓Yes __No __NA

3. If regulated under Part 264, has owner/operator: (264.228)

a. Removed or decontaminated waste residues, contaminated system components, subsoils, structures, and equipment, and managed them as hazardous waste? ✓Yes __No __NA
b. Eliminated free liquids by removing or solidifying remaining wastes or waste residues? ✓Yes __No __NA
c. Stabilized remaining wastes to a bearing capacity sufficient to support final cover? ✓Yes __No __NA
d. Covered the impoundment with final cover? ✓Yes __No __NA

4. Did owner/operator leave any residuals in place at closure (Part 264)? (264.228) ✓Yes __No __NA

5. In post-closure, does owner/operator maintain integrity of cover and groundwater monitoring system, and prevent runon and runoff? (264.228) (265.228) ✓Yes __No __NA

Section H - Ignitable and Reactive Wastes (264.229) (265.229)

1. Are ignitable or reactive wastes placed in the impoundment? __Yes ✓No __NA

   a. If yes, are they treated, rendered, or mixed before or immediately after placement in the impoundment so it no longer meets the definition of ignitable or reactive? __Yes __No __NA

OR

   b. Is the impoundment used solely for emergencies? __Yes __No __NA

Section I - Incompatible Wastes (264.230) (265.230)

1. Are incompatible wastes placed in the impoundment? __Yes ✓No __NA

Part ___

GROUNDWATER MONITORING CHECKLIST

Section A - Monitoring System

1. Does the facility have a groundwater monitoring system in operation? ✓Yes __No __NA

   a. If yes, does the system consist of: (265.91)(264.97)

      1. At least one upgradient/background well? ✓Yes __No __NA
      2. At least three downgradient wells? ✓Yes __No __NA

   b. Are wells identified in the field? ✓Yes __No __NA

   c. Are well heads in good condition (i.e. free of cracks)? ✓Yes __No __NA

   d. Are well heads locked? ✓Yes __No __NA

   e. Do well heads have bumper guards or are otherwise protected? ✓Yes __No __NA

Section B - Sampling and Analysis (Part 264)

1. Does the facility obtain and analyze samples from the groundwater monitoring system? ✓Yes __No __NA

2. Has facility developed and followed a groundwater sampling and analysis plan? (264.97(d)) ✓Yes __No __NA

   a. If yes, does this plan include procedures and techniques for:

      1. Sample collection? ✓Yes __No __NA
      2. Sample preservation? ✓Yes __No __NA
      3. Analytical procedures? ✓Yes __No __NA
      4. Chain-of-custody control? ✓Yes __No __NA
      5. Determining the groundwater surface elevation? __Yes __No __NA

3. Has facility specified a statistical method to be used in evaluating groundwater monitoring data? ✓Yes __No __NA

4. Is all groundwater monitoring data recorded in the operating record? ✓Yes __No __NA

Section C - Detection Monitoring Program (264.98) N/A

1. Has owner/operator established detection monitoring system to provide reliable indications for detection releases? __Yes __No ✓NA

   a. If yes, are the following components included in the system:

      1. Background values? ✓Yes __No __NA
      2. Determination of groundwater flow rate and direction annually? (264.98(e)) ✓Yes __No __NA
      3. Determination of statistically significant increases over background concentrations at each well? (264.98(f)) ✓Yes __No __NA
      4. If there was a statistically significant increase indicated, did the facility notify the Executive Director per 264.98(g)(1)? ✓Yes __No __NA
      5. Did facility attempt to demonstrate an apparent increase was not caused by a regulated unit per MHWMR 264.98(g)(6)? ✓Yes __No __NA
      6. Is all information contained in the facility's operating record? ✓Yes __No __NA

Section D - Compliance Monitoring Program (264.99) N/A

1. Does the facility operate a compliance monitoring program? __Yes __No ✓NA

   a. If yes, does the facility:

      1. Determine the groundwater flow rate and direction in the uppermost aquifer annually? (264.99(e)) __Yes __No __NA
      2. Collect at least four samples from each well at least semi-annually? (264.99(f)) __Yes __No __NA
      3. Determine whether there is statistically significant evidence of increased contamination at each monitoring well? __Yes __No __NA
      4. If an increase was indicated, did facility notify the Executive Director? __Yes __No __NA
      5. Analyze samples for constituents listed in Appendix IX of Part 264 at least annually? __Yes __No __NA
      6. Record all information in the operating record? __Yes __No __NA

Section E - Corrective Action Program (Part 264 only) (264.100)

1. Does facility follow a corrective action program that meets the facility's permit requirements? ✓Yes __No __NA

Section F - Sampling and Analysis (Part 265)

1. Has the facility developed and followed a groundwater sampling and analysis plan? ✓ Yes __No __NA

   a. If yes, does the plan include procedures and techniques for:

      1. Sample collection? ✓ Yes __No __NA
      2. Sample preservation? ✓ Yes __No __NA
      3. Analytical procedure? ✓ Yes __No __NA
      4. Chain-of-custody control? ✓ Yes __No __NA

2. Has the owner/operator established initial background concentrations or values of all parameters specified in 265.92(b)? ✓ Yes __No __NA

   a. Samples collected to establish background quality (from above)? ✓ Yes __No __NA
   b. Samples collected to indicate contamination (from above)? ✓ Yes __No __NA
   c. Elevation of groundwater surface at each monitoring well at each sampling event? ✓ Yes __No __NA

Section G - Preparation, Evaluation, and Response (Part 265 only) (265.93) N/A

1. Did owner/operator prepare an outline of a groundwater quality assessment program? __Yes __No __NA

   a. If yes, did program determine the following:

      1. Whether hazardous waste or hazardous waste constituents have entered the groundwater? __Yes __No __NA
      2. Rate and extent of hazardous waste or hazardous waste constituent migration? __Yes __No __NA
      3. Concentrations of hazardous waste or hazardous waste constituents in groundwater? __Yes __No __NA

   b. For each well, has owner/operator calculated the arithmatic mean and variance, based on four replicate measurements for each sample, and compared the results with initial background mean? __Yes __No __NA

   c. Has owner/operator submitted information documenting any significant increase in comparisons for up-gradient wells (or decrease in pH)? __Yes __No __NA

   d. If the comparisons for downgradient wells show a significant increase (or pH decrease), has the owner/operator obtained additional groundwater samples from

those downgradient wells in which a significant decrease was detected? (Samples must be split in two, and analyses must be obtained of all additional samples to determine whether the significant difference was a result of lab error) N/A __Yes __No __NA

1. If analyses (described above) were performed, and confirmed the significant increase (or pH decrease), did owner/operator notify Regional Administrator within 7 days? __Yes __No __NA
2. If analyses confirmed significant increase (or pH decrease), did owner/operator submit to the Executive Director within 15 days after notification (discussed above) a certified groundwater quality assessment program? __Yes __No __NA
3. Did owner/operator implement the groundwater quality assessment program and, at a minimum, did he determine the following: __Yes __No __NA

   a. Rate and extent of migration of the hazardous waste constituents in the groundwater? __Yes __No __NA
   b. Concentrations of the hazardous waste in the groundwater? __Yes __No __NA

4. Did owner/operator submit a report to the Executive Director containing the requests of the assessment outlined in No. 3 above within 15 days? __Yes __No __NA
5. Did owner/operator notify the Executive Director of reinstatement of indicator evaluation program upon finding that no hazardous waste or hazardous waste constituents had entered the groundwater? __Yes __No __NA
6. If owner/operator determined that hazardous waste or hazardous waste constituents entered the groundwater, did he either continue to make the determinations listed in No. 3 above on a quarterly basis until final closure or groundwater quality assessment plan was implemented prior to post-closure care, or cease to make determinations required in No. 3 above if groundwater quality assessment plan was implemented during post-closure? __Yes __No __NA
7. If any groundwater quality assessment program is implemented to satisfy No. 3 above prior to final closure, has owner/operator completed program and reported to the Executive Director, as outlined in No. 4 above? __Yes __No __NA
8. If owner/operator does not monitor at least annually to satisfy No. 3 above, does owner/operator evaluate data on groundwater elevation

obtained under No. 3c in Section F above to determine whether the requirements for locating monitoring wells are satisfied? __Yes __No __NA

a. If evaluation shows that the requirements for monitoring wells are not satisfied, has owner/operator modified the number, location, or depth of the monitoring wells to bring the system into compliance? __Yes __No __NA

Section H - Recordkeeping and Reporting (Part 265 only) (265.94) N/A

1. Unless owner/operator is monitoring to satisfy the requirements of Section 265.93(d)(4), does owner/operator:

   a. Keep records of the analyses required in Section 265.92(c) and (d), groundwater surface elevations required in 265.93(b) throughout the active life of the facility and throughout post-closure? __Yes __No __NA

   b. Report the following information to the Executive Director:

      1. Within 15 days of analysis for each quarterly sampling event, does owner/operator submit results of background concentrations? __Yes __No __NA

      2. Does owner/operator inform the Executive Director about any parameters that exceed maximum contaminant levels listed in Appendix III? __Yes __No __NA

      3. (Annually) does owner/operator report concentrations or values of parameters listed in Section 265.92(b)(3) for each well, including required evaluationg for these parameters under Section 265.93(b)? __Yes __No __NA

         a. Does owner/operator also identify differences from initial background concentrations found in the upgradient wells no later than March 1 following each calendar year? __Yes __No __NA

2. Does owner/operator submit results of the groundwater surface elevations under Section 265.93(f), along with a description of the response, if needed? __Yes __No __NA

3. If groundwater is monitored to satisfy requirements of Section 265.93(d)(4), did owner/operator do the following:

   a. Keep records of analyses and evaluations specified in the plan throughout active life and post-closure? __Yes __No __NA

   b. (Annually, until final closure) submit to the Regional Administrator a report containing the results of the groundwater quality assessment program, including the calculated rate of migration of hazardous waste or hazardous waste constituents by March 1? __Yes __No __NA

Part ___

FINANCIAL REQUIREMENTS CHECKLIST

Section A - Closure

1. Is facility required to provide financial assurance for closure? __Yes ✓No __NA

   a. Type of financial assurance _____
   b. Amount of closure costs _____
      1. Date of most recent adjustment _____
   c. Effective date of mechanism _____
   d. Expiration date of mechanism _____
   e. Is instrument adequate? __Yes __No __NA

Section B - Post-Closure

1. Is facility required to provide financial assurance for post-closure care? ✓Yes __No __NA

   a. Type of financial assurance Financial Tests
   b. Amount of closure costs 757,000
      1. Date of most recent adjustment March 30, 1990
   c. Effective date of mechanism April 1 1990
   d. Expiration date of mechanism April 1, 1991
   e. Is instrument adequate? ✓Yes __No __NA

Section C - Corrective Action

1. Is facility required to provide financial assurance for corrective action? ✓Yes __No __NA

   a. Type of financial assurance Financial Test
   b. Amount of closure costs _____
      1. Date of most recent adjustment _____
   c. Effective date of mechanism _____
   d. Expiration date of mechanism _____
   e. Is instrument adequate? __Yes __No __NA

to begin 180 days from approval date which is Dec March 31, 1991 Kapt

Section D - Liability Requirements

1. Is facility required to provide liability coverage for sudden accidental occurrences? __Yes ✓No __NA

   a. Type of assurance _____
   b. Is amount at least $1 million per occurrence, $2 million annual aggregate? __Yes __No __NA
   c. Effective date of mechanism _____

d. Expiration date of mechanism _____

2. Is facility required to provide liability coverage for non-sudden accidental occurrences? __Yes ✓No __NA

a. Type of assurance _____
b. Is amount at least $3 million per occurrence, $6 million annual aggregate? __Yes __No __NA
c. Effective date of mechanism _____
d. Expiration date of mechanism _____

CHCKLIST:lr

Part ____

GENERATOR'S CHECKLIST

Section A - EPA Identification No.

1. Does generator have EPA I.D. No.? (262.12) ✓Yes __No __NA

   a. If yes, EPA I.D. No. M S D 9 9 0 8 6 6 3 2 9

Section B - Manifest

1. Does generator ship waste offsite? (262.20) ✓Yes __No __NA

   a. If no, do not fill out Sections B and D.

   b. If yes, identify primary offiste facility(s).
      CHEM WEST LAKE CHARLES LA

2. Does generator use manifest? (262.20) ✓Yes __No __NA

   a. If no, is generator a small quantity generator (generating between 100 and 1000 kg/month)? __Yes __No __NA

      1. If yes, does generator indicate this when sending waste to a TSD facility? ✓Yes __No __NA

   b. If yes, does manifest include the following information? __Yes __No __NA

      1. Manifest document No. ✓Yes __No __NA
      2. Generator's name, mailing address, telephone number ✓Yes __No __NA
      3. Generator EPA I.D. No. ✓Yes __No __NA
      4. Transporter Name(s) and EPA I.D. No.(s) ✓Yes __No __NA
      5. a. Facility name, address, and EPA I.D. No. ✓Yes __No __NA
         b. Alternate facility name, address, and EPA I.D. No. ✓Yes __No __NA
         c. Instructions to return to generator if undeliverable __Yes ✓No __NA
      6. Waste information required by DOE - shipping name, quantity (weight or vol.), containers (type and number) __Yes __No __NA
      7. Emergency information (optional) (special handling instructions, telephone No.) __Yes __No __NA
      8. Is the following certification on each manifest form? __Yes __No __NA

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

9. Does generator retain copies of manifests? ✓Yes __No __NA

If yes, complete a through e.

a. 1. Did generator sign and date all manifests? ✓Yes __No __NA
2. Who signed for generator? __Yes __No __NA

Name John Tolt Title Plant Manager

b. 1. Did generator obtain handwritten signature and date of acceptance from initial transporter? ✓Yes __No __NA
2. Who signed and dated for transporter? __Yes __No __NA

Name John Hill Title _____

c. Does generator retain one copy of manifest signed by generator and transporter? ✓Yes __No __NA
d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? ✓Yes __No __NA
e. Does generator retain copies for 3 years? ✓Yes __No __NA

Section C - Hazardous Waste Determination

1. Does generator generate solid waste(s) listed in Subpart D (List of Hazardous Waste)? (261.30) ✓Yes __No __NA

a. If yes, list waste and quantities (include EPA Hazardous Waste No.) K051 16 yards

2. Does generator solid waste(s) listed in Subpart C that exhibit hazadous characteristics? (corrosivity, ignitability, reactivity, EP toxicity) (261.20) __Yes __No __NA

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.) _____ ?

b. Does generator determine characteristics by testing or by applying knowledge of processes? _____ ?

1. If determined by testing, did generator use test methods in Part 261, Subpart C (or equivalent)? __Yes __No __NA

a. If equivalent test methods used, attach copy of equivalent methods used.

3. Are there any other solid wastes generated by generators? __Yes __No __NA

   a. If yes, did generator test all wastes to determine nonhazardous characteristics? __Yes __No __NA

      1. If no, list wastes and quantities deemed nonhazardous or processes from which non-hazardous waste was produced (use additional sheet if necessary).

_____

_____

_____

_____

Section D - Pretransport Requirements

1. Does generator package waste in accordance with 49 CFR 173, 178, and 179 (DOT requirements)? (262.30) ✓Yes __No __NA

2. a. Are containers to be shipped leaking or corroding? ✓Yes __No __NA
   b. Use sheet to describe containers and condition.
   c. Is there evidence of heat generation from incompatible wastes in the containers? (262.31) ✓Yes __No __NA

3. Does generator follow DOT labeling requirements in accordance with 49 CFR 172? ✓Yes __No __NA

4. Does generator mark each package in accordance with 49 CFR 172? ✓Yes __No __NA

5. Is each container of 110 gallons or less marked with the following label? (262.32) ✓Yes __No __NA

   Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest policy or public safety authority or the U.S. Environmental Protection Agency.

   Generator name(s) and address(es) _____

   _____

   Manifest document No. _____

6. Does generator have placards to offer to transporters? (262.33) __Yes __No __NA

7. Accumulation time: (262.34)

a. Are containers used to temporarily store waste before transport? __Yes __No __NA

1. If yes, is each container clearly dated: Also, fill out rest of No. 7 (accum. time) __Yes __No __NA

b. 1. Does generator inspect containers for leakage or corrosion? (265.174 - Inspections) __Yes __No __NA

2. If yes, with what frequency? __Yes __No __NA

c. Does generator locate containers holding ignitable or reactive waste at least 15 meters (50 feet) from the facility's property line? (265.176 - Special Requirements for Ignitable or Reactive Wastes) __Yes __No __NA

NOTE: If tanks are used, fill out checklist for tanks.

d. Are the containers labeled and marked in accordance with Section D-3, D-4, and D-5 of this form? __Yes __No __NA

NOTE: If generator accumulates waste on site, fill out checklist for General Facilities, Subparts C and D.

e. Does generator comply with requirements for personnel training? (Attach checklist for 265.16 - Personnel Training.) __Yes __No __NA

8. Describe storage area. Use photos and narrative explanation sheet.

Section E - Recordkeeping and Records (262.40)

1. Does generator keep the following reports for 3 years?

a. Manifests and signed copies from ✓Yes __No __NA
b. Biennial Reports ✓Yes __No __NA
c. Exception reports ✓Yes __No __NA
d. Test results __Yes __No __NA

2. Where are the records kept (at facility or elsewhere)?

_____

3. Who is in charge of keeping the records?

Name John Fe Title Plant Manager

Section F - Special Conditions

1. Has generator received from or transported to a foreign Administrator? __Yes ✓No __NA

   a. If yes, has he filed a notice with the Regional Administrator? __Yes __No __NA
   b. Is this waste manifested and signed by a foreign cosignee? __Yes __No __NA
   c. If generator transported wastes out of the country, has he received confirmation of delivered shipment? __Yes __No __NA

Appendix II - Less-than-Ninety Day Storage no containers onsite

1. Source/Data: _____

2. Type(s) of waste: _____

3. Condition of containers: _____

   a. Containers closed? __Yes __No __NA
   b. Containers properly labelled? __Yes __No __NA
   c. Accumulation dates? __Yes __No __NA
   d. Area inspected? __Yes __No __NA

RCRA Inspection Report

1. Inspector and Author of Report

Thad Hopper
Mississippi Bureau of Pollution Control (MBPC)

2. Facility Information

Kerr-McGee Chemical Corporation (KMCC)
Forest Products Division
P.O. Box 906
Columbus, Mississippi 39701
EPA I.D. No. MSD990866329

3. Responsible Company Official

Mr. John Getz, Plant Manager

4. Inspection Participants

Mr. Jeffery Bull, KMCC
Mr. John Getz, KMCC
Mr. Thad Hopper, MBPC

5. Date and Time of Inspections

May 31, 1990; 1:00 p.m.

6. Applicable Requirements

Mississippi Hazardous Waste Management Regulations (MHWMR) Parts 262, 265, and 268.

7. Purpose of Inspection

The inspection was performed to determine the facility's compliance with applicable requirements.

8. Facility Description

The site now occupied by Kerr-McGee Chemical Corporation (KMCC) has been used as a wood treating facility since 1928. KMCC acquired the site in 1964 and continues to produce treated railroad ties, switch ties, crossings, and pilings using creosote as a preservative. Pentachlorophenol was also used as a preservative prior to 1976.

As part of the wastewater treatment system, KMCC operated two hazardous waste storage impoundments - an aeration impoundment and a sedimentation impoundment in which bottom sediment sludge from process wastewater accumulated. This sludge is classified as a K001 hazardous

waste. KMCC certified closure of the impoundments on June 19, 1986. Prior to closure, the facility's production process oil/water separators were upgraded to recycle preservatives for reapplication within the production process. During process modification in 1988-1989, a concrete drip track was installed to collect excess preservative dripping from treated wood after removal from the pressure cylinder. Hazardous waste generated currently consists of contaminated soil from remedial activities.

On September 21, 1987, KMCC notified the MBPC that K001 constituents had been detected in monitoring well CMW-4. Subsequently, groundwater assessments conducted at the site have revealed two contaminant plumes - one associated with the process area (and possibly the former surface impoundments) and the second, with a below ground loading dock near the southeastern facility boundary. A draft Post-closure Permit requiring corrective action activities for on-site and off-site contamination is scheduled for public notice July 11, 1990.

9. Findings

All records, including inspections of the closed impoundments, groundwater monitoring data, personnel training, and the contingency plan, were available for review and were found to be in compliance with applicable regulations. Several manifest discrepancies had been identified by the receiving facility (Chemical Waste Management, Emile, Alabama), but documentation resolving the problems was on file.

Inspection of the closed surface impoundments and detection monitoring system indicated that no erosion of the impoundment or damage to the monitoring wells had occurred. A six foot high chain link fence with warning signs provides security for the regulated unit. Monitoring wells were locked and bumper guards had been installed near the wells, as recommended in the December 12, 1988, Compliance Evaluation Inspection.

10. Conclusions

The facility was in compliance with MHWMR 262, 265, and 268 on the day of the inspection.

11. Signed

7-5-90
Date

12. Approval

7/10/90
Date

TH-36:lr
cc: Mr. James H. Scarbrough, EPA

Part 1

1:00
5-31-90

GENERAL SITE INSPECTION INFORMATION FORM

A. Site Name: Ken McLean Chemical Corp.
B. Street (or other identifier): P.O. Box 906
C. City: Columbus
D. State: MS
E. Zip Code: 39701
F. County Name: Lowndes

G. Site Operator Information

1. Name: Ken McLean Chemical Corp.
2. Telephone Number: 601-328-7551
3. Street: P.O. Box 906
4. City: Columbus
5. State: MS
6. Zip Code: 39701

H. Site Description: approx. 90 acres facility producing creosote treated wood products. Regulated units are closed surface impoundments

I. Type of Ownership

__1. Federal __2. State __3. County __4. Municipal ✓5. Private

J.

✓1. Generator __2. Transporter __3. Treatment __4. Storage ✓5. Disposal

K. Regulatory Status

✓1. Interim Status ✓3. Part B Permit Application Submitted

__2. Permitted Facility __4. Part B Permit Application in Preparation

L.

1. Principal Inspector Name: Thad Hopper
2. Title: Environmental Scientist IV
3. Organization: MS Bureau of Pollution Control
4. Telephone No. (area code and No.): 601-961-5171

M. Inspection Participants

1. John Lietz
2. Jeffrey Bull
3. Thad Hopper
4.
5.

Part 2

GENERAL FACILITY CHECKLIST

Section A - General Facility Standards

1. Does facility have EPA Identification No.? ✓Yes __No __

   a. If yes, EPA I.D. No. M S D 9 9 0 8 6 6 3 2 9
   If no, explain. _____

2. Has facility received hazardous waste from a foreign source? __Yes ✓No __

   a. If yes, has it filed a notice with the Regional Administrator? __Yes __No __

Waste Analysis

3. Does facility maintain a copy of the waste analysis plan at the facility? Hazardous Waste Classification ✓Yes __No __NA

   a. If yes, does it include: (264.13) (265.13)

      1. Parameters for which each waste will be analyzed? ✓Yes __No __N
      2. Test methods used to test for these parameters? ✓Yes __No __N
      3. Sampling method used to obtain sample? ✓Yes __No __N
      4. Frequency with which the initial analyses will be reviewed or repeated? ✓Yes __No __N
      5. (For offsite facilities) waste analyses that generators have agreed to supply? __Yes __No ✓N
      6. (For offsite facilities) procedures which are used to inspect and analyze each movement of hazardous waste, including:

         a. Procedures to be used to determine the identity of each movement of waste. __Yes __No ✓N
         b. Sampling method to be used to obtain representative sample of the waste to be identified. __Yes __No ✓N

4. Does the facility provide adequate security through: (264.14) (265.14)

   a. 24-hour surveillance system (e.g., television monitoring or guards)? ✓Yes __No __N

   OR

(continued)

b. 1. Artificial or natural barrier around facility (e.g., fenc or fence and cliff)? ✓Yes __No __NA

Describe 6 foot high chain link fence

AND

2. Means to control entry through entrances (e.g., attendant, television monitors, locked entrance, controlled roadway access)? ✓Yes __No __NA

Describe gate at main entrance

General Inspection Requirements (264.15) (265.15)

5. Does the owner/operator maintain a written schedule at the facility for inspecting:

a. Monitoring equipment? ✓Yes __No __NA
b. Safety and emergency equipment? ✓Yes __No __NA
c. Security devices: ✓Yes __No __NA
d. Operating and structural equipment? ✓Yes __No __NA
e. Types of problems of equipment:

1. Malfunction ✓Yes __No __NA
2. Operator error ✓Yes __No __NA
3. Discharges ✓Yes __No __NA

6. Does the owner/operator maintain an inspection log? ✓Yes __No __NA

a. If yes, does it include:

1. Date and time of inspection? no time included ✓Yes __No __NA
2. Name of inspector? ✓Yes __No __NA
3. Notation of observations? __Yes __No __NA
4. Date and nature of repairs or remedial action? ✓Yes __No __NA

b. Are there any malfunctions or other deficiencies not corrected? (Use narrative explanation sheet.) __Yes ✓No __NA

Personnel Training (264.16) (265.16)

7. Does the owner/operator maintain personnel training records at the facility? ✓Yes __No __NA

(continued)

J. D. Jarbrough [illegible] Morgan Columbus, MS
8-21-89 - John Kelly

Date of most recent training 9-13-89

How long are they kept? 3 yrs

a. If yes, do they include:

1. Job title and written job description of each position? ✓Yes __No __NA
2. Description of type and amount of training? ✓Yes __No __NA
3. Records of training given to facility personnel? ✓Yes __No __NA

Requirements for Ignitable, Reactive, or Incompatible Waste (264.17) (265.17)

8. Does facility handle ignitable or reactive wastes? __Yes ✓No __NA

a. If yes, is waste separated and confined from sources of ignition or reaction (open flames, smoking, cutting and welding, hot surfaces, frictional heat), sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat?

1. If yes, use narrative explanation sheet to describe separation and confinement procedures.
2. If no, use narrative explanation sheet to describe sources of ignition or reaction.

b. Are smoking and open flame confined to specifically designated locations? ✓Yes __No __NA

c. Are "No Smoking" signs posted in hazardous areas? ✓Yes __No __NA
Not applicable for closed surface impoundment.

d. Are precautions documented (Part 264 only)? ✓Yes __No __NA

9. Check containers NA

a. Are containers leaking or corroding? No containers on site during inspection __Yes __No ✓NA

b. Is there evidence of heat generation from incompatible wastes? __Yes __No ✓NA

Section B - Preparedness and Prevention

1. Is there evidence of fire, explosion, or contamination of the environment? (264.31) (265.31) __Yes ✓No __NA

If yes, use narrative explanation sheet to explain.
contamination detected.

(continued)

2. Is the facility equipped with: (264.32) (265.32)

a. Internal communication or alarm system? ✓Yes __No __NA

1. Is it easily accessible in case of emergency? ✓Yes __No __NA

b. Telephone or two-way radio to call emergency response personnel? __Yes __No __NA

c. Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment? ✓Yes __No __NA

d. Water of adequate volume for hoses, sprinklers, or water spray system? __Yes __No __NA

1. Describe source of water Columbus Water Supply

3. Is there sufficient aisle space to allow unobstructed movement of personnel and equipment? (264.35) (265.35) ✓Yes __No __NA

4. Has the owner/operator made arrangements with the local authorities to familiarize them with characteristics of the facility? (Layout of facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, possible evacuation routes.) (264.37) (265.37) ✓Yes __No __NA

5. In the case that more than one police or fire department might respond, is there a designated primary authority? (264.37) (265.37) ✓Yes __No __NA

a. If yes, name primary authority Columbus

6. Does the owner/operator have phone numbers of and agreements with State emergency response teams, emergency response contractors, and equipment suppliers? (264.37) (265.36) ✓Yes __No __NA

a. Are they readily available to all personnel? ✓Yes __No __NA

7. Has the owner/operator arranged to familiarize local hospitals with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility? (264.37) (265.37) ✓Yes __No __NA

8. If State or local authorities decline to enter, is this entered in the operating record? (264.37) (265.37) __Yes __No ✓NA

(continued)

Section C - Contingency Plan and Emergency Procedures

1. Is a contingency plan maintained at the facility? (264.53) (265.53) — ✓ Yes __ No __ NA
   a. If yes, is it a revised SPCC Plan? — __ Yes ✓ No __ NA
   b. Does contingency plan include: (264.52) (265.52)
      1. Arrangements with local emergency response organizations? — ✓ Yes __ No __ NA
      2. Emergency coordinators' names, phone numbers, and addresses? — ✓ Yes __ No __ NA
      3. List of all emergency equipment at facility and descriptions of equipment? — ✓ Yes __ No __ NA
      4. Evacuation plan for facility personnel? — ✓ Yes __ No __ NA
2. Is there an emergency coordinator on site or on call at all times? (264.55) (265.55) — __ Yes __ No __ NA

Section D - Manifest System, Recordkeeping, and Reporting

1. Does facility receive waste from offsite? (264.71) (265.71) — __ Yes ✓ No __ NA
   a. If yes, does the owner/operator retain copies of all manifests? — __ Yes ✓ No __ NA
      1. Are the manifests signed and dated and returned to the generator? — __ Yes __ No __ NA
      2. Is a signed copy given to the transporter? — __ Yes __ No __ NA
2. Does the facility receive any waste from a rail or water (bulk shipment) transporter? (264.71) (265.71) — __ Yes ✓ No __ NA
   a. If yes, is it accompanied by a shipping paper? — __ Yes __ No __ NA
      1. Does the owner/operator sign and date the shipping paper and return a copy to the generator? — __ Yes __ No __ NA
      2. Is a signed copy given to the transporter? — __ Yes __ No __ NA
3. Has the owner/operator received any shipments of waste that were inconsistent with the manifest (manifest discrepancies)? (264.72) (265.72) — __ Yes ✓ No __ NA
   a. If yes, has he attempted to reconcile the discrepancy with the generator and transporter? — __ Yes __ No __ NA
      1. If no, has Regional Administrator been notified? — __ Yes __ No __ NA

(continued)

4. Does the owner/operator keep a written operating record at the facility? (264.73) (265.73) ✓Yes __No __NA

a. If yes, does it include:

1. Description and quantity of each hazardous waste received? __Yes __No ~~NA~~
2. Methods and dates of treatment, storage, and disposal? ✓Yes __No __NA
3. Location and quantity of each hazardous waste at each location? ✓Yes __No __NA
4. Cross-references to manifests/shipping papers? ✓Yes __No __NA
5. Records and results of waste analyses? ✓Yes __No __NA
6. Report of incidents involving implementation of the contingency plan? ✓Yes __No __NA
7. Records and results of required inspections? ✓Yes __No __NA
8. Monitoring or testing analytical data (Part 264)? ✓Yes __No __NA
9. Closure cost estimates and, for disposal facilities, post-closure cost estimates (Part 264)? ✓Yes __No __NA
10. Notices of generators as specified in §264.12(b) (Part 264)? __Yes __No ✓NA

b Does facility have copy of permit on site? __Yes __No ✓NA

5. Does the facility submit a biennial report by March 1 every even-numbered year? (264.75) (265.75) ✓Yes __No __NA

a. If yes, do reports contain the following information:

1. EPA I.D. number? ✓Yes __No __NA
2. Date and year covered by report? ✓Yes __No __NA
3. Description/quantity of hazardous waste? ✓Yes __No __NA
4. Treatment, storage, and disposal methods? ✓Yes __No __NA
5. Monitoring data under §265.94(a)(2) and (b)(2) (Part 265)? __Yes ✓No __NA
6. Most recent closure and post-closure cost estimates? __Yes ✓No __NA
7. For TSD generators, description of efforts to reduce volume/toxicity of waste generated, and actual comparisons with previous year? ✓Yes __No __NA
8. Certification signed by owner/operator? ✓Yes __No __NA

6. Has the facility received any waste (that does not come under the small generator exclusion) not accompanied by a manifest? (264.76) (265.76) __Yes ✓No __NA

a. If yes, has he submitted an unmanifested waste report to the Regional Administrator? __Yes __No __NA

7. Does the facility submit to the Regional Administrator reports on releases, fires, and explosions; contamination and monitoring data; and facility closure? (264.77) (265.77) ✓Yes __No __NA

Part 3 ___Part NA

LAND DISPOSAL RESTRICTIONS CHECKLIST

1. Are hazardous wastes land-disposed on site? ("Land disposal" includes placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, concrete vault, or bunker intended for disposal purposes; and placement in or on the land by means of open detonation and open burning where residues continue to exhibit hazardous characteristics). __Yes ✓No __

   a. If yes, are one or more of the following circumstances true:

      1. Granted extension from effective date pursuant to §268.5? __Yes __No __
      2. Granted exemption from a prohibition pursuant to a petition under §268.6? __Yes __No __
      3. Disposing of soil or debris resulting from a CERCLA response action or a RCRA corrective action, which will not be prohibited until November 8, 1988? __Yes __No __
      4. Facility is a small quantity generator of less than 100 kg of hazardous waste per month? __Yes __No __

2. Are restricted wastes or residuals from treatment of a restricted waste diluted in any way prior to disposal? __Yes ✓No __

3. Are there active surface impoundments used for treatment of hazardous wastes? __Yes ✓No __

   a. If yes, does the unit's design and operation meet the requirements set forth in §268.4? __Yes __No __

4. Has the facility sought exemption from any prohibition under Subpart C of §268 for the disposal of a restricted hazardous waste? __Yes ✓No __

   a. If yes, has the facility's demonstration included the required components (waste I.D., waste analysis, comprehensive environmental characterization of unit site, QA/QC plan, sampling, testing, modeling)? __Yes __No __

5. Has the facility determined whether it generates a restricted waste through waste analysis? (268.7) ✓Yes __No __

   a. If yes, is the facility, in fact, handling a restricted waste(s)? ✓Yes __No __

(continued)

b. If yes, does the restricted waste require treatment? __Yes __No __

c. If yes, has the generator notified the treatment facility in writing, and does the notification include all required components (EPA hazardous waste number, corresponding treatment standard, manifest number of shipment)? __Yes __No __

6. Does the facility handle EPA Hazardous Waste Nos. F001 through F005 (solvent wastes)? (268.10) __Yes ✓No __

a. If yes, do any of the following conditions apply:

1. The generator of the solvent waste is a small quantity generator (not more than 1000 kg/month)? __Yes __No __
2. The solvent waste is generated from a CERCLA response corrective action? __Yes __No __
3. The solvent waste is a solvent-water mixture, solvent-containing sludge, or solvent-contaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001 through F005 solvent constituents. __Yes __No __

b. If no, have any of these restricted wastes been land-disposed (except in an injection well) since November 8, 1986? __Yes ✓No __

7. Does the facility handle EPA Hazardous Waste Nos. F020, F021, F023, F026, F027, or F028 (dioxin-containing wastes)? __Yes ✓No __

a. If yes, do any of the following conditions apply:

1. Wastes are treated to meet standards of Subpart D of §268? __Yes __No __
2. Wastes are disposed of at a facility that has been granted a petition? __Yes __No __
3. An extension has been granted? __Yes __No __

b. If no, will these restricted wastes be land disposed after November 8, 1988? __Yes __No __

8. Are restricted wastes being treated? __Yes ✓No __

a. If yes, have any of their associated hazardous constituents exceeded the "Constituent in Waste Extract" (CWE) levels? __Yes __No __

RCRA LAND DISPOSAL RESTRICTION
GENERATOR CHECKLIST

I. HANDLER IDENTIFICATION

Kerr McGee Chemical Corporation
A. Handler Name B. Street (or other identifier)

Columbus MS 39703
C. City D. State E. Zip Code F. County Name

Wood Treating using Creosote / 2491
G. Nature of Business; Identification/of Operations: SIC Code(s)

MSD 990866329
H. EPA ID #

John Fretz
I. Handler Contact (Name and Phone Number)

II. GENERATOR COMPLIANCE

Comments

A. Waste Identification

1. F-Solvents

a. Does the handler generate the following wastes?

(i) F001, F002, F004, or F005 ___Yes ✓No

(ii) F003 ___Yes ✓No

If an F003 wastestream (listed solely for ignitability) has been mixed with a non-restricted solid or hazardous waste, does the resultant mixture exhibit the ignitability characteristic? ___Yes ___No

b. Sources of the above: Form 8700-12 ✓; Part A ✓; Part B ✓; Biennial/Annual Reports ✓ other (specify) ___

K001 and K051 wastes generated from site clean up activity

Appendix A is intended to assist the inspector and enforcement official in determining whether the facility is generating F-solvent wastes, if such wastes were not identified by the facility previously. If you are concerned that F-solvent wastes may be misclassified or mislabeled, turn to Appendix A-1. To assist in identfying potentially

misclassified F-solvents, Appendix A-2 presents a list of corresponding P and U wastes. Note concerns below: _____

_____

_____

_____

_____

2. Dioxin wastes

a. Does the handler report the generation of the following wastes? (The following industries may generate listed dioxin wastes: organic chemicals, pesticide or formulator.)

(i) F020 - F023, F026 - F027 ___Yes ✓No
(ii) F028 ___Yes ✓No

[F-solvent BDAT standards are presented as Appendix B]

3. California Waste Identification

a. Does the facility handle any of the following wastes?

(i) D002 ___Yes ✓No
(ii) D004 - D011 ___Yes ___No

b. Does the generator handle any hazardous wastes characterized by high concentrations of halogenated organic constituents (HOCs), metals, or cyanides? ___Yes ✓No

[California waste standards are presented as Appendix C]

c. Is the generator handling any of the F, K, P, or U wastes subject to the "soft hammer" that may qualify as California wastes due to HOC, metals, or cyanide content? See Appendix D for a listing of California constituents likely to be found by waste code. ___Yes ✓No

d. Has the generator conducted the paint filter test (Method 9095) [§268.32(i)]? ___Yes ✓No

e. Has the generator conducted any testing of these hazardous wastes to determine whether the concentrations qualify the hazardous wastes as California wastes? ___Yes ✓No

If no, has the generator retained records documenting his "applied knowledge" that the hazardous waste is not a California waste? ✓Yes ___No

Comments

If "no" is answered to both parts of this question, a violation is indicated. [§268.7(a)]

Describe the nature of the records:

_____

f. Source of the above: Form 8700-12 ___✓___; Part A ___✓___; Part B ___✓___; Biennial/Annual Report ___✓___; other (specify) ____.

4. First Third Waste Identification

a. Does the generator handle any of the wastes listed as First Third Wastes in §268.10? See Appendix E for listing. List First Third Wastes handled by the generator here:

K001 generated during clean up of site

b. Does the generator handle any soft-hammer wastes (Appendices D-1, D-2, and F)? If so, list those wastes:

K051

c. Are any of the soft-hammered wastes California wastes (see Appendix G)? ___Yes ___✓No

If yes, the wastes must meet BDAT standards prior to disposal.

d. Has the Regional Administrator received demonstrations/certifications for all soft hammered wastes to be land disposed [§268.8(a)(2)]? ___Yes ___No NA

e. Source of the above: Form 8700-12 ____; Part A ____; Part B ____; Biennial/Annual Report ____; other (specify) ____.

B. BDAT Treatability Group - Treatment Standards Identification

1. Does the generator mix restricted wastes with different treatment standards for constituents of concern? ___Yes ___✓No

2. If yes, did the generator select the most stringent treatment standard for the constituent of concern [§268.41(b)]? ___Yes ___No NA

Comments

3. F Solvents - -

a. Did the generator correctly determine the appropriate treatability group [§268.41] of the waste (e.g., wastewaters containing solvents, nonwastewater (i.e., < 1% TOC), pharmaceutical wastewaters containing spent methylene chloride, all other spent solvent wastes)?
___Yes ✓No

4. California Wastes

a. Did the generator correctly determine the distinction between liquid hazardous wastes and non-liquid hazardous wastes that contain HOCs in concentrations greater than 1,000 mg/kg [§268.32(h)]?
___Yes ___No NA

5. First, 2nd Second Third Wastes

a. Did the generator ascertain whether restricted wastes were appropriately assigned wastewater or nonwastewater designations (nonwastewaters are > 1% TOC and > 1% suspended solids) [§268.7(a)]?
✓Yes ___No

b. Does the facility handle K061 wastes?
___Yes ✓No

If yes, were nonwastewaters appropriately classified in either the high or low zinc subcategories (≥15% Zn) [§268.7(a)] [§268.41(a)]?
___Yes ___No

c. Does the facility handle K101 or K102 wastes?
___Yes ✓No

If yes, were nonwastewaters appropriately classified in either the high or low arsenic subcategories [§268.7(a)] [§268.41(a)]?
___Yes ___No

d. Is there any reason to believe that the generator may have diluted the waste to change the applicable treatment standard (based on review of process operation, pipe routing, point of sampling)?
___Yes ✓No

Comments

C. Waste Analysis

1. Did the generator determine whether the waste exceeds treatment standards based on §268.7(a):

a. Knowledge of wastes ✓ Yes ___ No

(i) List wastes for which "applied knowledge" was used:

K001 / K051

b. TCLP ___ Yes ✓ No

(i) List wastes for which "TCLP" was used:

(ii) lists wastes for which treatment standards are expressed as concentrations in waste extract. Were any wastes handled by the generator subject to waste extract standards not tested using the TCLP? ___ Yes ✓ No

If yes, list:

c. Total waste analysis ___ Yes ✓ No

d. If files were retained, describe content and basis of applied knowledge determination:

Generator has only wood heater operator at site / all waste manifested to Chem Waste when appropriate testing done

If determined by TCLP or total constituent analysis, provide date of last test, frequency of testing, and attach test results.

Dates/frequency:

Note which wastes were subjected to which tests:

Note any problems (e.g., inadequate analysis, variation of waste composition/generation for applied knowledge)

Comments

e. Were wastes tested using TCLP or total constituent analysis when a process or wastestream changed [§264.13(a)(3)(i) or §265.13(a)(3)(i)]?
___Yes ___No

2. Did the restricted wastes exceed applicable treatability group treatment standards upon generation [§268.7(a)(1)]?

List those that exceeded standards: _____

_____

List those that did not exceed standards: _____

_____

3. Did the generator dilute the waste or the treatment residual so as to substitute for adequate treatment [§268.3] ___Yes ___No

D. Management

1. Onsite management

a. Were restricted wastes managed onsite?
___Yes ___No

If no, go to "2".

b. For wastes that exceed treatment standards, was treatment in regulated units, storage for greater than 90 days, and/or disposal conducted? ___Yes ___No

If yes, TSDF checklist must be completed.

2. Offsite Management

a. If restricted wastes exceed treatment standards, did generator provide treatment facility notification with each shipment? [268.7(a)(1)]: NA

(i) EPA Hazardous Waste Number? ___Yes ___No

(ii) Corresponding treatment standard?
___Yes ___No

(iii) Manifest number? ___Yes ___No

(iv) Waste analysis, if available?
___Yes ___No

Comments

Identify offsite treatment facilities Chem Waste Emile - Ak.

b. If restricted wastes do not exceed treatment standards, did generator provide the disposal facility with a notice and certification including:

(i) EPA hazardous waste I.D. number? ✓ Yes ___ No

(ii) Corresponding treatment standard? ✓ Yes ___ No

(iii) Manifest number ✓ Yes ___ No

(iii) Certification regarding waste and that it meets treatment standards? ✓ Yes ___ No

Identify land disposal facilities receiving the BDAT certified wastes _____

c. If the generator's waste is subject to a §268.5 case by case exemption, a §268.6 "no migration" exemption, or a nationwide variance (see Appendix E for restricted wastes subject to nationwide variances), does the generator's records indicate that he or she submits with each waste shipment [§268.7(a)(3)]: NA

(i) EPA Hazardous Waste Number? ___ Yes ___ No

(ii) Corresponding Treatment Standards? ___ Yes ___ No

(iii) All applicable prohibitions? ___ Yes ___ No

(iv) The manifest number? ___ Yes ___ No

(v) The date the wastes are subject to prohibitions? ___ Yes ___ No

(vi) Does generator keep records of all notifications/certifications send to offsite facilities? ___ Yes ___ No

Comments

List all prohibited wastes for which records are not provided per above [§268.7(a)(b):

_____

_____

Identify TSDFs receiving any prohibited wastes subject to any exemptions and variances:

_____

_____

d. If handler generates a "soft hammer" waste, does the generator send with each "soft hammer" waste shipment to a TSDF and retain copies of, a notice that includes [268.7(a)(4)]:

The EPA Hazardous Waste Number? ✓ Yes ___ No

Applicable prohibitions? ✓ Yes ___ No

The manifest number? ✓ Yes ___ No

Waste analysis data, where available? ✓ Yes ___ No

(i) Do the generator's records indicate that any soft-hammer wastes are destined for disposed in a landfill or surface impoundment [§268.33(f)]? ___ Yes ___ No ?

If yes, list facility of destination and waste of concern [§268.8(a)(2)]

Chem Waste Emile Ala

(ii) Has the generator submitted demonstrations and certifications for each "soft-hammered" waste destined to be disposed in landfill or surface impoundment to the Regional Administrator prior to the shipment of waste to the TSDF [§268.7(a)(2)]? ✓ Yes ___ No

(iii) Has the generator retained a copy of the demonstration on site [§268.8(a)(3)-(a)(4)]? ✓ Yes ___ No

(iv) Has the generator retained copies of all §268.8 certifications sent to the TSDF [§268.7(a)(6)] ✓ Yes ___ No

Comments

(v) Did the generator submit the demonstration to the receiving facility upon the intial shipment of the waste [§268.8(a)(3)-(a)(4)]? ✓ Yes ___ No

(vi) If the Regional Administrator has invalidated the certification, has the generator ceased shipment of the waste and do records indicate that the generator has informed all receiving facilities of the invalidation [§268.8(b)(3)]? NA

___ Yes ___ No

E. Storage of Prohibited Waste

1. Were prohibited wastes stored for greater than 90 days? ___ Yes ✓ No

If yes, was facility operating as a TSD under interim status or final permit [§262.34(b)]?

___ Yes ___ No

If yes, TSDF Checklist must be completed.

. Treatment Using RCRA 264/265 Exempt Units or Processes (i.e., boilers, furnaces, distillation units, wastewater treatment tanks, etc.)

1. Were treatment residuals generated from RCRA 264/265 exempt units or processes? ___ Yes ___ No

If yes, list type of treatment unit and processes

_____

_____

_____

If yes, TSDF checklist must be completed.

Part 4

GENERATOR'S CHECKLIST

___ Part NA

Section A - EPA Identification No.

1. Does generator have EPA I.D. No? (262.12) ✓ Yes __ No __ NA

   a. If yes, EPA I.D. No. M S D 9 9 0 8 6 6 3 2 9

Section B - Manifest

1. Does generator ship waste offsite? (262.20) ✓ Yes __ No __ NA

   a. If no, do not fill out Sections B and D.

   b. If yes, identify primary offsite facility(s). Use narrative explanation sheet.

2. Does generator use manifest? (262.20) ✓ Yes __ No __ NA

   a. If no, is generator a small quantity generator (generating between 100 and 1000 kg/month)? __ Yes ✓ No __ NA

   2 90 day

      1. If yes, does generator indicate this when sending waste to a TSD facility? __ Yes __ No __ NA

   b. If yes, does manifest include the following information?

      1. Manifest document No. ✓ Yes __ No __ NA

      2. Generator's name, mailing address, telephone No. ✓ Yes __ No __ NA

      3. Generator EPA I.D. No. ✓ Yes __ No __ NA

      4. Transporter Name(s) and EPA I.D. No.(s) ✓ Yes __ No __ NA

      5. a. Facility name, address, and EPA I.D. No. ✓ Yes __ No __ NA
         b. Alternate facility name, address, and EPA I.D. No. __ Yes __ No __ NA
         c. Instructions to return to generator if undeliverable __ Yes ✓ No __ NA

      6. Waste information required by DOE - shipping name, quantity (weight or vol.), containers (type and number) ✓ Yes __ No __ NA

(continued)

7. Emergency information (optional) (special handling instructions, telephone No.) ___Yes ___No ✓NA

8. Is the following certification on each manifest form? ✓Yes ___No ___NA

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

9. Does generator retain copies of manifests? ✓Yes ___No ___NA

If yes, complete a through e.

a. 1. Did generator sign and date all manifests? ✓Yes ___No ___NA
2. Who signed for generator?

Name John J. Jeetz Title Manager

b. 1. Did generator obtain handwritten signature and date of acceptance from initial transporter? ✓Yes ___No ___NA
2. Who signed and dated for transporter?

Name John Hill Title NA

c. Does generator retain one copy of manifest signed by generator and transporter? ✓Yes ___No ___NA

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? ✓Yes ___No ___NA

e. Does generator retain copies for 3 years? ✓Yes ___No ___NA

Section C - Hazardous Waste Determination

1. Does generator generate solid waste(s) listed in Subpart D (List of Hazardous Waste)? (261.30) ✓Yes ___No ___NA

a. If yes, list waste and quantities (include EPA Hazardous Waste No.) K001 / K051
Creosote contaminated soil -

(continued)

2. Does generator generate solid waste(s) listed in Subpart C? that exhibit hazardous characteristics? (corrosivity, ignitability, reactivity, EP toxicity) (261.20) __Yes ✓No __NA

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.) _____

b. Does generator determine characteristics by testing or by applying knowledge of processes? Knowledge

1. If determined by testing, did generator use test methods in Part 261, Subpart C (or equivalent)? __Yes __No __NA

a. If equivalent test methods used, attach copy of equivalent methods used.

3. Are there any other solid wastes generated by generators? __Yes __No __NA

a. If yes, did generator test all wastes to determine nonhazardous characteristics? __Yes __No __NA

1. If no, list wastes and quantities deemed nonhazardous or processes from which nonhazardous waste was produced (use additional sheet if necessary).

Wastewater from treatment process pretreatment permit PT90021

Section D - Pretransport Requirements

1. Does generator package waste in accordance with 49 CFR 173, 178, and 179 (DOT requirements)? (262.30) __Yes __No ✓NA

No containers available for inspection

2. a. Are containers to be shipped leaking or corroding? __Yes __No ✓NA

b. Use sheet to describe containers and condition.

c. Is there evidence of heat generation from incompatible wastes in the containers? (262.31) __Yes __No ✓NA

3. Does generator follow DOT labeling requirements in accordance with 49 CFR 172? __Yes __No ✓NA

4. Does generator mark each package in accordance with 49 CFR 172? __Yes __No ✓NA

(continued)

5. Is each container of 110 gallons or less marked with the following label? (262.32) __Yes __No ✓NA

Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest policy or public safety authority or the U.S. Environmental Protection Agency.

Generator name(s) and address(es) _____

_____

Manifest document No. _____ _____

6. Does generator have placards to offer to transporters? (262.33) ✓Yes __No __NA

7. Accumulation time: (262.34)

a. Are containers used to temporarily store waste before transport? ✓Yes __No __NA

no containers in use at time

1. If yes, is each container clearly dated: Also, fill out rest of No. 7 (accum. time) __Yes __No ✓NA

b. 1. Does generator inspect containers for leakage or corrosion? (265.174 - Inspections) __Yes __No ✓NA

2. If yes, with what frequency? _____

c. Does generator locate containers holding ignitable or reactive waste at least 15 meters (50 feet) from the facility's property line? (265.176 - Special Requirements for Ignitable or Reactive Wastes) __Yes __No ✓NA

NOTE: If tanks are used, fill out checklist for tanks. NA

d. Are the containers labeled and marked in accordance with Section D-3, -4, and -5 of this form? __Yes __No ✓NA

NOTE: If generator accumulates waste on site, fill out checklist for General Facilities, Subparts C and D.

e. Does generator comply with requirements for personnel training? (Attach checklist for 265.16 - Personnel Training.) ✓Yes __No __NA

8. Describe storage area. Use photos and narrative explanation sheet.

(continued)

Section E - Recordkeeping and Records (262.40)

1. Does generator keep the following reports for 3 years?

   a. Manifests and signed copies from ✓ Yes __ No __ NA
   b. Biennial reports ✓ Yes __ No __ NA
   c. Exception reports ✓ Yes __ No __ NA
   d. Test results __ Yes __ No __ NA

2. Where are the records kept (at facility or elsewhere)?
   at facility

3. Who is in charge of keeping the records?

   Name John Eck Title Manager

Section F - Special Conditions

1. Has generator received from or transported to a foreign Administrator? __ Yes ✓ No __ NA

   a. If yes, has he filed a notice with the Regional Administrator? __ Yes __ No __ NA
   b. Is this waste manifested and signed by a foreign cosignee? __ Yes __ No __ NA
   c. If generator transported wastes out of the country, has he received confirmation of delivered shipment? __ Yes __ No __ NA

Section G - Short-Term Storage (262.34(a))

1. Does generator store wastes on site for less than 90 days? ✓ Yes __ No __ NA

2. Does generator have the waste properly stored? NONE ON SITE __ Yes __ No ✓ NA

3. Does generator have the accumulation date marked on the container and visible for inspection? (262.34(a)(2)) __ Yes __ No ✓ NA

4. Does the generator have each container or tank labeled clearly with the words "Hazardous Waste"? (262.34(a)(3) __ Yes __ No ✓ NA

Section H - Satellite Accumulation (262.34(c))

1. Does generator utilize satellite accumulation? __ Yes ✓ No __ NA

   List source & waste: _____

2. Does generator comply with 265.171, 265.172, and 265.173(a)? __ Yes __ No __ NA

Part V

Section H - Satellite Accumulation Area Section NA ✓

(Complete one sheet for each area)

1. Source/Area: _____

2. Type waste: _____

3. Condition of Containers: _____

   a. Containers Closed? Yes __ No __ NA __
   b. Containers properly labelled? Yes __ No __ NA __

4. If 55 gallons accumulated, has generator complied with 262.34(c)(2)? Yes __ No __ NA __

Part V

Section I - Less-than-Ninety Day Storage
(Complete one sheet for each area)

Section NA ✓

No specific < 90 day storage area

1. Source/Area: _____

2. Type(s) of waste: _____

3. Condition of containers: _____

a.	Containers closed?	Yes __	No __	NA __
b.	Containers properly labelled?	Yes __	No __	NA __
c.	Accumulation dates?	Yes __	No __	NA __
d.	Area inspected?	Yes __	No __	NA __

No containers on site at time of Inspection

Part 6

__Part NA

CONTAINERS CHECKLIST

Section A - Use and Management (264.171) (265.171)

1. Are containers in good condition? __Yes __No __NA

Section B - Compatibility of Waste With Container (264.172)

1. Is container made of a material that will not react with the waste which it stores? __Yes __No __NA

Section C - Management of Containers (264.173) (265.173)

1. Is container always closed while holding hazardous waste? __Yes __No __NA

2. Is container handled so that it will not be opened, handled, or stored in a manner which may rupture it or cause it to leak? __Yes __No __NA

Section D - Inspections (264.174) (265.174)

1. Does owner/operator inspect containers at least weekly for leaks and deterioration? ✓Yes __No __NA

Section E - Containment (Part 264) (264.175)

1. Do container storage areas have a containment system? __Yes __No __NA

   a. Is the base free of cracks or gaps? __Yes __No __NA

   b. Is the base sloped or otherwise designed to drain and remove liquids? __Yes __No __NA

   c. Does the containment system have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container? __Yes __No __NA

   d. Is any method available to prevent run-on into the containment system? __Yes __No __NA

   e. Is spilled or leaked material or accumulated precipitation removed from the containment area in a timely manner? __Yes __No __NA

Section F - Ignitable and Reactive Waste (264.176) (265.176)

1. Are containers holding ignitable and reactive waste located at least 15 m (50 ft) from facility property lines? __Yes __No __NA

Section G - Incompatible Waste (264.177) (265.177)

1. Are incompatible wastes or materials placed in the same containers? __Yes __No __NA

2. Are hazardous wastes placed in washed, clean containers when they previously held incompatible waste? __Yes __No __NA

3. Are incompatible wastes separated from each other by a berm, dike, wall, or other device? __Yes __No __NA

Section H - Closure (Part 264) (264.178)

1. At closure, were all hazardous wastes and associated residues removed from the containment system? __Yes __No __NA

Part 7

___Part NA

SURFACE IMPOUNDMENTS CHECKLIST

Section A - Design Requirements (264.221) (265.221)

.. Does facility operate one or more surface impoundments? 2 closed impoundments ___Yes ✓No ___

a. If yes, has owner/operator installed two or more liners and a leachate collection system for any new units, replacement of any existing units, or lateral expansion of units? ___Yes ___No ✓

b. Is owner/operator exempt from double-liner leachate collection system requirements because Regional Administrator has determined that impoundment's design will prevent the migration of hazardous constituents? ___Yes ___No ✓

c. Did owner/operator notify Regional Administrator 60 days prior to receiving waste (Part 265)? ___Yes ___No ✓

d. If impoundment does not have a double liner, is it exempt due to one of the following reasons? ___Yes ___No ✓

1. Monofill contains only wastes from a foundry furnace emission controls or metal casting molding sand.
2. Monofill has at least one liner for which there is no evidence of leaking.
3. Monofill is located, designed, and operated to ensure that no migration of constituents into ground or surface water occurs.

e. Does owner/operator take measures to prevent overfilling; wind and wave action; rainfall; run-on; malfunctions of level controllers, alarms, and other equipment; and human error (Part 264)? ___Yes ___No ✓N

f. Is impoundment surrounded by dikes (Part 264)? ___Yes ___No ___N

Section B - Operating Requirements

1. Does owner/operator maintain at least 60 cm (2 ft) of freeboard (Part 265)? (265.222) ___Yes ___No ✓N.

(continued)

2. Does owner/operator have certification from a qualified engineer that alternate design features will prevent overtopping? (Part 265) (265.222) NA/ __Yes __No _

Section C - Containment Systems

1. Do all dikes have a protective cover such as grass, shale or rock? (Part 265) (265.223) __Yes __No ✓

Section D - Waste Analysis and Trial Tests NA

1. Will the surface impoundment be used to: (265.225)

   a. chemically treat a hazardous waste which is substantially different from wastes previously treated in the impoundment? (Part 265) __Yes __No _

   b. chemically treat hazardous waste with a substantially different process than any previously used in that impoundment? __Yes __No _

2. If the answer in #1 was yes to any questions, has the owner/operator:

   a. conducted waste analysis or trial treatment tests? __Yes __No _

   b. obtained written, documented information on treatment of similar wastes under similar operating conditions? __Yes __No _

Section E - Inspections and Monitoring NA

1. Does the owner/operator:

   a. inspect the freeboard at least once each operating day? (Part 265) (265.226) __Yes __No _

   b. inspect the surface impoundment including dikes and vegetation at least once per week and after storms? (264.226) (265.226) __Yes __No _

2. Have any deteriorations or malfunctions that have been found been remediated? __Yes __No _

3. Has the owner/operator obtained a certification from a qualified engineer that the impoundments dike has structural integrity? (Part 264) (264.226) __Yes __No _

Section F - Emergency Repairs, Contingency Plans (Part 264) (264.227)

.. Does facility have a contingency plan? ✓Yes __No __N

a. If yes, does plan stipulate that impoundment be removed from service under the following conditions:

1. Sudden drop in liquid level? NA __Yes ✓No __N
2. Leaking dike? NA __Yes ✓No __N

b. Does plan detail the steps to be followed when removing impoundment from service, including: NA

1. Shutting off flow into impoundment? At closure __Yes __No __N
2. Containing any surface leakage? ✓Yes __No __N
3. Stopping the leak? ✓Yes __No __N
4. Notifying Regional Administrator of problems in writing if leaks cannot be contained? ✓Yes __No __N

c. If impoundment was removed from service, did owner/operator take the necessary precautions to rectify problems before restoring impoundment to service? __Yes __No ✓N

d. If impoundment was removed from service and was not restored to service, was impoundment closed in accordance with an approved closure plan? ✓Yes __No __N

Section G - Closure and Post-Closure (264.228) (265.228)

1. Is a closure plan retained at the facility? ✓Yes __No __N

2. At closure, did owner/operator:

a. Remove standing liquids (Part 265)? ✓Yes __No __N

b. Remove waste and waste residue (Part 265)? ✓Yes __No __N

c. Remove liner (Part 265)? __Yes __No ✓N

d. Remove underlying and surrounding contaminated soil? ✓Yes __No __N
to visible clean

(continued)

e. If not, did owner/operator demonstrate to Regional Administrator that the above materials were nonhazardous (Part 265)? __Yes ✓No __NA

1. If no, has owner/operator closed the impoundment and provided post-closure care (Part 265)? ✓Yes __No __NA

3. If regulated under Part 264, has owner/operator: (264.228) NA

a. Removed or decontaminated waste residues, contaminated system components, subsoils, structures, and equipment, and managed them as hazardous waste? __Yes __No __NA

b. Eliminated free liquids by removing or solidifying remaining wastes or waste residues? __Yes __No __NA

c. Stabilized remaining wastes to a bearing capacity sufficient to support final cover? __Yes __No __NA

d. Covered the impoundment with final cover? __Yes __No __NA

4. Did owner/operator leave any residuals in place at closure (Part 264)? (264.228) ✓Yes __No __NA

5. In post-closure, does owner/operator maintain integrity of cover and ground-water monitoring system, and prevent run-on and runoff? (264.228) (265.228) ✓Yes __No __NA

Section H - Ignitable and Reactive Wastes (264.229) (265.229)

1. Are ignitable or reactive wastes placed in the impoundment? __Yes ✓No __NA

a. If no, do not complete b and c.

b. If yes, are they treated, rendered, or mixed before or immediately after placement in the impoundment so it no longer meets the definition of ignitable or reactive? __Yes __No __NA

OR

c. Is the impoundment used solely for emergencies? __Yes __No __NA

Section I - Incompatible Wastes (264.230) (265.230)

1. Are incompatible wastes placed in the impoundment? __Yes __No ✓NA

Revision: 0

Date: July 18, 1989

INSPECTION HEALTH AND SAFETY CHECKLIST

FACILITY NAME: Ken McGee Chemical Corp. Columbus

EPA ID#: MSD 990866329

ADDRESS: Columbus, MS 4 AV N

PHONE: 601-328-9551

J. D. Teets Plant Manager

PERSONNEL LOG

* NAME/SIGNATURE	DATE OF LAST SAFETY TRAINING/ FIT TEST	DATE CHECKLIST PREPARED/ REVIEWED	** CHECKLIST MODIFIED?	SITE VISIT DATE(S)	INSPECTION TYPE (CME, CEI, RFA, ETC.)	SUPERVISOR'S SIGNATURE OF APPROVAL AND DATE	
Thad Hopper							
Thad Hopper	June 7, 1989			11-30-89	VSI	David C Pentecost	11-28-89
Thad Hopper	June 7, 1989	5-30-90	yes	5-31-90	CEI	David C. Pentecost	5-31-90

Place an asterisk (*) before the name of the of the MDEQ person who will be responsible for protection and safety of all MDEQ personnel during the site visit.

Revision: 0 Date: July 18, 1

GENERAL INFORMATION

FACILITY NAME: Ken McEee Chem. Corp. CONTACT: Nick Bock (Corp.) J.J. Eats manager Columbus

DIRECTIONS TO FACILITY: (Attach map if possible)

See attached map

SPECIAL ACCESS REQUIREMENTS: None

EMERGENCY INFORMATION

AMBULANCE: CHI + TELEPHONE: 329 - 9100
HOSPITAL: Golden Triangle TELEPHONE: 243 - 1000
POLICE: Columbus TELEPHONE: 328 - 7511
FIRE DEPARTMENT: Columbus TELEPHONE: 328 - 1441
SITE/FIRE EVACUATION SIGNALS:
Toxic Chemicals 1-800-424-8802

INFORMATION SOURCES

PART B: EPA : CONTINGENCY PLAN:
ESD: RFA: CLOSURE PLAN:
SWMU QUESTIONNAIRE: PART A: OTHER: phone Book

PERMITS

HAZARDOUS WASTE: (Draft) STATUS: interim
WATER: AIR: OTHER:

SUMMARY OF REGULATED UNITS AND SWMUS: (Indicate number of units)

LANDFILLS: INCINERATORS: STORAGE AREAS:
WASTE PILES: OTHER TREATMENT: OTHER:
SURFACE IMPROVEMENTS: 2 (closed) TANK FARMS: SWMUS: 41 identified in RFA

FACILITY PROCESS DESCRIPTION:

Wood treating facility using creosote. Pentx used from 1928-1976. Xylene used as a drying agent 1970-1974

Revision: 0

Date: July 18 1989

PREVIOUS RELEASES/ACCIDENTS OR COMPLAINTS: (Corrected? YES/NO)

AIR _____ _____

SOIL _____ _____

SURFACE WATER _____ _____

INDUSTRIAL ACCIDENTS _____ _____

COMPLAINTS _____ _____

HEALTH AND SAFETY HAZARDS

Briefly indicate hazard type. Attach additional pages if necessary.

EXPLOSION/OXYGEN DEFICIENCY HAZARDS: NONE (Circle if applicable)

RADIATION HAZARDS: NONE (Circle if applicable)

TOXIC HAZARDS: NONE (Circle if applicable)

Briefly summarize chemicals handled on site: Add attachment if necessary. Indicate if these exist in a controlled state. Refer to Part A Application if list is extensive. Facility uses creosote in process.

UNUSUAL PHYSICAL HAZARDS: NONE (Circle if applicable)

UNUSUAL BIOLOGICAL HAZARDS: NONE (Circle if applicable)

CHECK IF PROBLEM EXPECTED: NOISE_____ HEAT STRESS_____ COLD STRESS ?

OVERALL HAZARD RATING: (CIRCLE ONE)

VERY HIGH (LEVEL A) (ASSISTANCE NECESSARY)	HIGH (LEVEL B) (ASSISTANCE NECESSARY)	MEDIUM (LEVEL C) (MONITORING REQUIRED)	LOW (LEVEL D)

Revision: 0 Date: July 18, 1

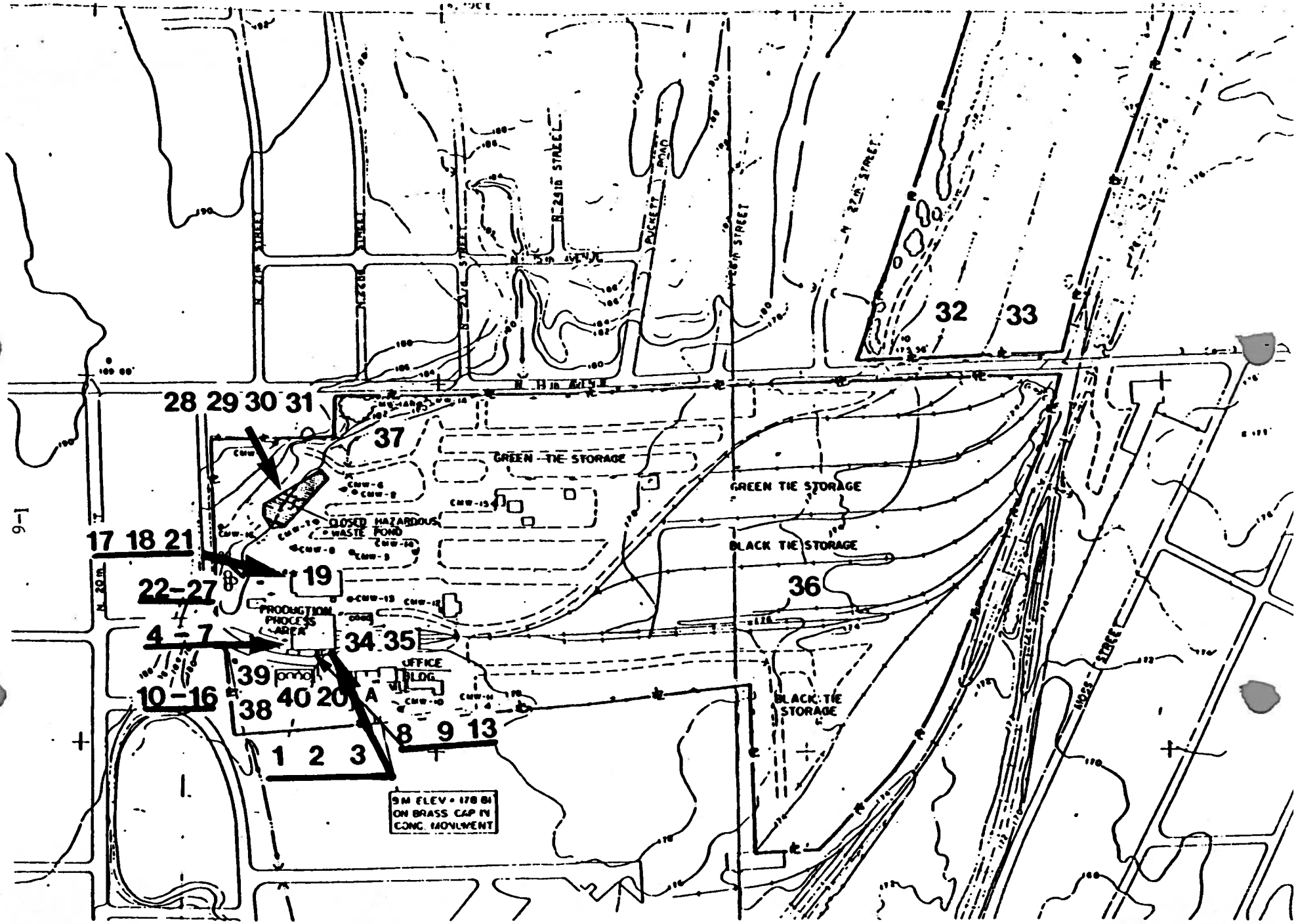
PERSONNEL PROTECTIVE EQUIPMENT

(List equipment needed in addition to safety glasses, hard hat, and steel toed boots)

	Check if Needed		Needed throughout entire facility? (If no, list area(s) or task(s) where nee
HEAD AND EYE:			
FACE SHIELD	____		____
GOGGLES	____		____
NOISE PROTECTION	____		____
OTHER	____		____
RESPIRATORY:		TYPE	
APR			
APR CARTRIDGE	____	____	____
ESCAPE MASK	____	____	____
OTHER	____	____	____
CLOTHING:			
TYVEK COVERALL			
SARANEX COVERALL	____		____
COTTON COVERALL	____		____
SPLASH SUIT	____		____
OVERBOOTS	____		____
RAIN GEAR	____		____
OTHER	____		____
MISCELLANEOUS:			
____	____		____
____	____		____
____	____		____

LEVEL A OR B NEEDED?	Contractor or EPA ?	Areas/tasks where neede
LEVEL A ____	____	____
LEVEL B ____	____	____

AIR MONITORING TYPE	Conducted by:	Areas/tasks where neede
TOXIC ____	FACILITY ____	____
EXPLOSIVE/OXYGEN ____	ESD ____	____
RADIATION ____	CONTRACTOR ____	____
NONE ____	OTHER ____	____


28 29 30 31
37
GREEN TIE STORAGE
GREEN TIE STORAGE
CLOSED HAZARDOUS WASTE POND
17 18 21
19
22-27
BLACK TIE STORAGE
36
PRODUCTION PROCESS AREA
4 - 7
34 35
OFFICE BLDG
39
10-16
38
40
20
A
8 9 13
1 2 3
BLACK TIE STORAGE
32
33
N 22th STREET
N 24th STREET
N 26th STREET
N 28th STREET
N 29th
N 30th STREET
N 31st STREET
N 32nd STREET
N 33rd STREET
N 34th STREET
N 35th AVENUE
BUCKEYE ROAD

REQUIREM	Not in compliance - No Not applicat - NA			COMMENTS
	Yes	No	N/A	
Other questions or standards.				
Are there any other generators transporting their waste to this hazardous waste management facility?			✓	

EPA - Region IV

Preliminary Assessment/Site Investigation (PA/SI)
of
Prior or Continuing Releases from Solid Waste Management Units

I. Facility Information

Facility Name: KERR-McGEE CHEMICAL CORPORATION, WOOD PRODUCTS DIV.

EPA I.D. No.: MSD 990866329

Facility Address: 507 14th. ST. North
Columbus, Ms. 39701

PA/SI Prepared By:

Name: Donald G. McCraw 8-22-85

Agency/Organization: MDNR-BPC-SHWS

Main Components of RCRA PA/SI

1) Questionnaire on Solid Waste Management Units/Prior Releases

2) PA/SI Form Evaluating Solid Waste Management Questionnaire (this form)

3) Summary of Follow-up Inspections and any Analytical-work done to Evaluate Solid Solid Waste Units and known or Suspected releases.

6/30/87

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART B - GENERAL FACILITY STANDARDS				
265.12 Required Notices				
a) The facility owner or operator must notify the Director at least four weeks in advance of receipt of wastes from a foreign source.			✓	
b) Before transferring ownership or operation of a facility, the facility's owner or operator must notify the new owner or operator of the requirements of 40 CFR 265 and 122.			✓	
265.13 General Waste Analysis				
Before treating, storing, or disposing of haardous waste, the facility owner or operator must obtain a detailed chemical and physical analysis of wastes. The analysis must contain all the information which must be known to treat, store, or dispose the waste in accordance with the federal requirements.			✓	Plant recycles all waste.
265.14 Security to Prevent Unknowing and Unauthorized Access to the Facility				
a) The owner or operator must prevent the unknowing entry and minimize the possibility for unauthorized entry unless;	✓			
1) physical contact with the waste, structures, or equipment will not be injurious	✓			
2) disturbance of the waste or equipment will not violate the requirements of Part 265	✓			

Inspector: _____
Address: _____
Telephone No: _____

RCRA LAND DISPOSAL RESTRICTION GENERATOR CHECKLIST

David J. Bockelman, 601-961-5171

I. HANDLER IDENTIFICATION

A. Handler Name: Kerr-McGee Chemical Corp.
B. Street (or other identifier): P.O. Box 906
C. City: Columbus
D. State: MS
E. Zip Code: 39701
F. County Name: Lowndes
G. Nature of Business; Identification of Operations: SIC Code(s): Treat wood products with creosote.
H. EPA ID #: MSD 990866329
I. Handler Contact (Name and Phone Number): Mr. G. Ross Harrod 601-328-7551

II. GENERATOR COMPLIANCE

Comments

A. Waste Identification

1. F-Solvents

a. Does the handler generate the following wastes?

(i) F001, F002, F004, or F005 ___Yes ✓No

(ii) F003 ___Yes ✓No

If an F003 wastestream (listed solely for ignitability) has been mixed with a non-restricted solid or hazardous waste, does the resultant mixture exhibit the ignitability characteristic? N/A ___Yes ___No

b. Sources of the above: Form 8700-12 ✓; Part A ✓; Part B ✓; Biennial/Annual Reports ✓ other (specify) ___

Appendix A is intended to assist the inspector and enforcement official in determining whether the facility is generating F-solvent wastes, if such wastes were not identified by the facility previously. If you are concerned that F-solvent wastes may be misclassified or mislabeled, turn to Appendix A-1. To assist in identfying potentially

Inspector: _____
Date: _____

Comments

misclassified F-solvents, Appendix A-2 presents a list of corresponding P and U wastes. Note concerns below: _____

2. Dioxin wastes

a. Does the handler report the generation of the following wastes? (The following industries may generate listed dioxin wastes: organic chemicals, pesticide or formulator.)

(i) F020 - F023, F026 - F027 ___Yes ✓No
(ii) F028 ___Yes ✓No

[F-solvent BDAT standards are presented as Appendix B]

3. California Waste Identification

a. Does the facility handle any of the following wastes?

(i) D002 ___Yes ✓No
(ii) D004 - D011 ___Yes ✓No

b. Does the generator handle any hazardous wastes characterized by high concentrations of halogenated organic constituents (HOCs), metals, or cyanides? ___Yes ✓No

[California waste standards are presented as Appendix C]

c. Is the generator handling any of the F, K, P, or U wastes subject to the "soft hammer" that may qualify as California wastes due to HOC, metals, or cyanide content? See Appendix D for a listing of California constituents likely to be found by waste code. ___Yes ✓No

d. Has the generator conducted the paint filter test (Method 9095) [§268.32(i)]? N/A
___Yes ___No*

e. Has the generator conducted any testing of these hazardous wastes to determine whether the concentrations qualify the hazardous wastes as California wastes? ✓Yes ___No

Land ban determination submitted on Nov. 22, 198

If no, has the generator retained records documenting his "applied knowledge" that the hazardous waste is not a California waste? N/A
___Yes ___No

*/ A potential violation is indicated

Comments

If "no" is answered to both parts of this question, a violation is indicated. [§268.7(a)]

Describe the nature of the records:

_____

f. Source of the above: Form 8700-12 ✓; Part A ✓; Part B ✓; Biennial/Annual Report ✓; other (specify) ____.

4. First Third Waste Identification

a. Does the generator handle any of the wastes listed as First Third Wastes in §268.10? See Appendix E for listing. List First Third Wastes handled by the generator here: No

_____

b. Does the generator handle any soft-hammer wastes (Appendices D-1, D-2, and F)? If so, list those wastes: yes

U051

c. Are any of the soft-hammered wastes California wastes (see Appendix G)? ___Yes ✓No

If yes, the wastes must meet BDAT standards prior to disposal.

d. Has the Regional Administrator received demonstrations/certifications for all soft hammered wastes to be land disposed [§268.8(a)(2)]? ✓Yes ___No* yes Nov. 22, 1988

e. Source of the above: Form 8700-12 ✓; Part A ✓; Part B ✓; Biennial/Annual Report ✓; other (specify) ___.

B. BDAT Treatability Group - Treatment Standards Identification

1. Does the generator mix restricted wastes with different treatment standards for constituents of concern? ___Yes ✓No

2. If yes, did the generator select the most stringent treatment standard for the constituent of concern [§268.41(b)]? ___Yes ___No* N/A

*/ A potential violation is indicated

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.72(a) Upon discovery of significant manifest discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter.			N/A	
(b) If a significant manifest discrepancy is not resolved, the owner or operator must notify the Director.			N/A	
265.73(b) The owner or operator must keep a written operating record at the facility which meets the requirements of 265.73(b).	✓			
265.74(a) All records must be furnished upon request and available at all times for inspection by the Director or EPA.	✓			
(c) A copy of records of waste disposal locations and quantities must be submitted to the Director and the local land authority upon closure of the facility.	✓			Surface impoundment certified closed.
265.75 The owner or operator must submit an annual report to the Director in compliance with the requirements of 265.75.			N/A	Not a generator.
265.76 The receipt of any unmanifested waste must be reported to the Director.			N/A	
265.77 The owner or operator must submit a report to the Director if any of the following occur:	✓			
a) releases, fires, explosions	✓			
b) groundwater contamination	✓			Facility has groundwater contamination.
c) facility closure.	✓			Surface impoundment closed.

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT.	Yes	No	N/A	COMMENTS
SUBPART F - GROUNDWATER MONITORING				
265.90 Owner or operator must implement a groundwater monitoring program capable of determining the facility's impact on the quality of the upper aquifer within one year of the effective date of 265.90.	✓			
265.91 - 265.94 The owner and operator must install, operate, and maintain a groundwater monitoring system which meets the requirements of 265.91 - 265.94.	✓			
265.90(c) All of the groundwater monitoring requirements may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste constituents from the facility via the uppermost aquifer below the facility to water supply wells or to surface water.			N/A	
SUBPART G - CLOSURE AND POST-CLOSURE				
265.111 The owner or operator must close his facility in a manner that:				
1) minimizes the need for future maintenance, and	✓			Surface impoundment certified closed.
2) controls, minimizes, or eliminates post-closure escape of hazardous waste.	✓			
265.112(a) The owner or operator must have a written closure plan on the effective date of Part 265.	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.112(a) Continued--				
The closure plan must include:				
1) A description of how and when the facility will be partially closed, if applicable, and ultimately closed.	✓			
2) An estimate of the maximum inventory of wastes in storage or treatment at any given time.	✓			
3) Steps to decontaminate facility equipment.	✓			
4) A schedule for final closure which must include, as a minimum, anticipated dates when wastes will no longer be received, anticipated date for completion of final closure, and intervening milestone dates.	✓			
265.113(a) Closure must be initiated within 90 days after receiving the final volume of hazardous wastes.	✓			
(b) The owner or operator must complete closure activities within six months after receiving the final volume of wastes.	✓			
265.114 Upon completion of closure, all equipment and structures must be properly disposed of or decontaminated.	✓			
265.115 The owner or operator and an independent registered professional engineer must certify that the facility has been closed in accordance with the approved closure plan.	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.117(a) Post closure care must consist of at least:				
1) Groundwater monitoring	✓			
2) Maintenance of the contaminant system.	✓			
The owner or operator must have a post-closure plan on the effective date of Part 265 and it must include:	✓			
1) Groundwater monitoring activities and frequency.	✓			
2) Maintenance activities and frequencies to ensure the integrity of the cap, final cover, or other containment structures, and functions of the facilities monitoring equipment.	✓			
265.119 Within 90 days after closure, the owner or operator must submit a survey plat of the facility.	✓			
265.120 The owner or operator must record a notice on the deed that the land has been used to manage hazardous waste.	✓			
SUBPART H - FINANCIAL REQUIREMENTS				
265.142(a) The owner or operator must develop and maintain a current estimate of closure and post-closure costs.	✓			
SUBPART I - OTHER FACILITY STANDARDS				
265.170 - 265.172 The container must be compatible with the waste to be stored.			N/A	

Fin. test for post-closure care
Surface impoundments certified closed.

Add.
265.143 The owner/operator must maintain a financial assurance for closure/post-closure

	closure	post closure
A) Assurance Mechanism		
a) Closure Trust fund	___	___
b) Surety Bond	___	___
c) Letter of Credit	___	___
d) Closure Insurance	___	___
e) Corporate Guaranty	___	___
B) Amount: Current	___	___

Add.
265.147(e) The owner/operator must maintain current liability coverage:
Insurance policy ___
Financial test
Guarantee
The amount must
(MA: M)

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
265.173 Containers holding hazardous waste must be kept closed and must not be opened, handled, or stored in a manner which may cause a rupture or leak.			N/A	
265.174 Areas where containers are stored must be inspected weekly.				
265.176 Containers holding ignitable or reactive waste must be located at least 15 meters from the facility's property line.				
265.177(a) Incompatible wastes must not be placed in the same container.				
(b) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby must be separated or protected from the other materials.				
SUBPART J - TANKS			N/A	
265.192(b) Hazardous waste must be placed in a tank if they could cause the tank or its liner to leak.				
(c) Uncovered tanks must have a least two feet of freeboard unless other containment structures, a drainage control system, or other diversion structures with a capacity that equals or exceeds the volume of the top two feet of the tank.				
(d) Tanks which have a continuous feed system must be equipped with a means to stop the inflow.				

REQUIREM	Not in compliance - No Not applicab - NA Yes	No	N/A	COMMENTS
265.193 Waste analysis must be conducted pursuant to 265.13, and 265.193(a).			N/A	
265.194 Tanks must be inspected in accordance with 265.194.				
265.197 At closure, all hazardous waste and hazardous waste residues must be removed from the tanks.				
265.198 Ignitable or reactive waste should not be placed in a tank unless 265.198 is complied with.				
265.199 Incompatible wastes must not be placed in the same tank unless 265.176 is complied with.				
SUBPART K - SURFACE IMPOUNDMENTS			N/A	Surface impoundment closed.
265.222 Must maintain at least two feet of freeboard.				
265.223 Earthen dikes must have protective cover.				
265.225 Must conduct waste analyses and trial tests in accordance with 265.225.				
265.226(1) Must inspect the freeboard level at least once each operating day.				
(2) Must inspect the surface impoundment at least once a week to detect any leaks, deterioration, or failure.				
265.228 The surface impoundment must close in accordance with 265.228.	✓			

Not in compliance - No
Not applicab - NA

REQUIREI T	Yes	No	N/A	COMMENTS
265.229 Ignitable or reactive waste must not be placed in a surface impoundment unless 265.229 is complied with.			N/A	
265.230 Incompatible wastes must not be placed in the same surface impoundment unless 265.17(b) is complied with.				
SUBPART L - WASTE PILES				
265.251 A waste pile must be protected and managed to control wind dispersal.				
265.252 An owner or operator must conduct waste analyses unless the facility meets the exemptions of 265.252.				
265.253 Within one year after the effective date of the regulations, leachate or run-off from a pile must be controlled pursuant to 265.253.				
265.256 Ignitable or reactive waste must not be placed in a waste site unless 265.256 is complied with.				
265.257 The requirements of 265.257 for incompatible wastes must be complied with.				
SUBPART M - LAND TREATMENT				
265.272(a) Hazardous waste must not be placed at a land treatment facility unless it can be made less hazardous or non-hazardous.				
(b) Run-on must be diverted away from other active portions as of one year after the effective date of Part 265.				

In compliance
Not in compliance - No
Not applica - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.272 -- Continued			N/A	
(c) Run-off from active portions must be collected as of one year after the effective date of Part 265 . . .				
265.273 Waste analyses must be conducted pursuant to 265.273.				
265.276(a) An owner or operator must notify the State Director within 60 days after the effective date of Part 265 if food chain crops are grown on the land treatment facility.				
(b) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless 265.276(b) is complied with.				
(c) Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless 265.276(c) is complied with.				
265.278 The owner or operator must have in writing and must implement an unsaturated zone monitoring plan pursuant to 265.278.				
265.279 The owner or operator must keep records of the application dates, application rates, quantities, and location of each hazardous waste placed in a facility.				
265.280 A land treatment facility must meet the closure and post-closure requirements of 265.280.				

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.281 Ignitable or reactive waste must not be placed in a land treatment facility unless 265.281 is complied with.			N/A	
265.282 Incompatible wastes must not be placed in the same land treatment area unless 265.17(b) is complied with.				
SUBPART N - LANDFILLS				
265.302(a) Run-on must be diverted away from the active portions within one year after the effective date of Part 265.				
(b) Run-off from active portions must be collected within one year after the effective date of Part 265.				
(d) Must control wind dispersal.				
265.309 The owner or operator must meet the surveying and recordkeeping requirements of 265.309.				
265.310 A landfill must comply with closure and post-closure requirements of 265.310.				
265.312 Ignitable or reactive waste must not be placed in a landfill unless 265.312 is complied with.				
265.313 Incompatible wastes must not be placed in a landfill unless 265.17(b) is complied with.				
265.314 Bulk or non-containerized liquid waste, waste containing free-liquids, or containers holding liquid waste should not be placed in a landfill unless the requirements of 265.314				

REQUIREMENT	Not in compliance		Not applicable - NA	COMMENTS
	Yes	No	N/A	
265.315 (i) Empty containers must be reduced in volume as of one year after the effective date of Part 265.			N/A	
SUBPART O - INCINERATORS				
265.343 Must be at steady state conditions before adding hazardous waste.				
265.345 Waste analyses must be conducted pursuant to 265.345.				
265.347 Monitoring and inspections must be conducted as delineated in 265.347.				
265.351 At closure, the owner or operator must remove all hazardous waste and hazardous waste residues.				
SUBPART P - THERMAL TREATMENT				
265.373 Must be at steady state conditions before adding hazardous wastes.				
265.375 Waste analyses must be conducted pursuant to 265.375.				
265.377 Monitoring and inspections must be conducted as delineated in 265.377.				
265.301 At closure, the owner or operator must remove all hazardous waste residues.				
265.382 Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives				

REQUIREM	Not in compliance - No Not applicab - NA Yes	No	N/A	COMMENTS
SUBPART Q - CHEMICAL, PHYSICAL, AND BIOLOGICAL TREATMENT			N/A	
265.401(a) Must comply with 265. 17(b)				
(b) Hazardous waste must not be placed in the treatment process or equipment if any failure of equipment or the process would occur.				
(c) A continuously-fed process must be equipped with a means to stop the inflow.				
265.402 Waste analyses and trial tests must be conducted pursuant to 265. 402.				
265.403 Inspections must be made pursuant to 265.403.				
265.404 At closure, all hazardous waste and hazardous waste residues must be removed.				
265.405 Ignitable or reactive waste must not be placed in a treatment process unless 265.405 is complied with.				
265.406 Incompatible wastes must not be placed in the same treatment process unless 265.17(b) is complied with.				
SUBPART R - UNDERGROUND INJECTION				
265.430(a) underground injection of hazardous waste is not subject to the closure and post-closure or financial requirements of Part 265. Underground injection is subject to the other requirements of Part 265.				

REQUIREMENT	In compliance - Yes	Not in compliance - No	Not applicable - NA	COMMENTS
	Yes	No	N/A	
265.16 Facility Personnel Training				
a) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of Part 265.	✓			Kept for 3 years.
b) The training program must be completed within six months of the effective date of Part 265.	✓			
c) There must be an annual review of the initial training in (a) above.	✓			
d) The owner or operator must maintain records of training.	✓			
e) Training records on current personnel must be kept until closure of the facility.	✓			
265.17 General Requirements for Ignitable, Reactive or Incompatible Wastes				
a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste.			N/A	
b) Treatment, storage, or disposal of ignitable or reactive waste and the mixture or commingling of incompatible wastes must be conducted so that it does not:				
1) Generate extreme heat or pressure, fire or explosion, or violent reaction;				
2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient				

In compliance - Yes
Not in compliance - No
Not applica - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.17 - Continued--				
quantities to threaten human health;			N/A	
3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;				
4) Damage the structural integrity of the device or facility containing waste; or				
5) Through other like means threaten human health or the environment.				
SUBPART C - PREPAREDNESS AND PREVENTION				
Pursuant to 265.30 through 265.37, facilities must be maintained and operated for and prevention of releases of hazardous waste controlled by the State.				
SUBPART D - CONTINGENCY PLANS				
Pursuant to 265.56, facilities must have contingency plans and emergency procedures to be followed in the event of a release of hazardous waste.				
SUBPART E - MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING				
265.71(a)(1-5) If a facility receives hazardous waste accompanied by a manifest, the owner or operator must meet the requirements of 265.71(a)(1-5)			N/A	None received.
265.71(b)(1-5) If a facility receives, from a rail or water transporter, hazardous waste which is accompanied by a shipping paper, the owner or operator must meet the requirements of 265.71.			N/A	

ID Number: _____
Inspector: _____
Date: _____

Comments

3. F Solvents - -

   a. Did the generator correctly determine the appropriate treatability group [§268.41] of the waste (e.g., wastewaters containing solvents, nonwastewater (i.e., < 1% TOC), pharmaceutical wastewaters containing spent methylene chloride, all other spent solvent wastes)? N/A
   ___Yes ___No*

4. California Wastes

   a. Did the generator correctly determine the distinction between liquid hazardous wastes and non-liquid hazardous wastes that contain HOCs in concentrations greater than 1,000 mg/kg [§268.32(h)]? N/A
   ___Yes ___No*

5. First Third Wastes

   a. Did the generator ascertain whether restricted wastes were appropriately assigned wastewater or nonwastewater designations (nonwastewaters are > 1% TOC and > 1% suspended solids) [§268.7(a)]? N/A Creosote contaminated soils.
   ___Yes ___No*

   b. Does the facility handle K061 wastes?
   ___Yes ✓No

   If yes, were nonwastewaters appropriately classified in either the high or low zinc subcategories (≥15% Zn) [§268.7(a)] [§268.41(a)]?
   ___Yes ___No*

   c. Does the facility handle K101 or K102 wastes?
   ___Yes ✓No

   If yes, were nonwastewaters appropriately classified in either the high or low arsenic subcategories [§268.7(a)] [§268.41(a)]? N/A
   ___Yes ___No*

   d. Is there any reason to believe that the generator may have diluted the waste to change the applicable treatment standard (based on review of process operation, pipe routing, point of sampling)?
   ___Yes ✓No

*/ A potential violation is indicated

Inspector: _____
Date: _____

Comments

C. Waste Analysis

1. Did the generator determine whether the waste exceeds treatment standards based on §268.7(a):

a. Knowledge of wastes ✓ Yes ___ No

(i) List wastes for which "applied knowledge" was used: 4051 + waste analysis.

b. TCLP ___ Yes ___ No

(i) List wastes for which "TCLP" was used: _____

(ii) Appendix D lists wastes for which treatment standards are expressed as concentrations in waste extract. Were any wastes handled by the generator subject to waste extract standards not tested using the TCLP? ___ Yes ___ No

If yes, list: _____

c. Total waste analysis ✓ Yes ___ No

d. If files were retained, describe content and basis of applied knowledge determination: Waste analysis - land ban determination

If determined by TCLP or total constituent analysis, provide date of last test, frequency of testing, and attach test results.

Dates/frequency: Do not have test results.

Note which wastes were subjected to which tests: _____

Note any problems (e.g., inadequate analysis, variation of waste composition/generation for applied knowledge) _____

*/ A potential violation is indicated

Comments

e. Were wastes tested using TCLP or total constituent analysis when a process or wastestream changed [§264.13(a)(3)(i) or §265.13(a)(3)(i)]? N/A
___Yes ___No*

2. Did the restricted wastes exceed applicable treatability group treatment standards upon generation [§268.7(a)(1)]? Yes

List those that exceeded standards: U051

List those that did not exceed standards: _____

3. Did the generator dilute the waste or the treatment residual so as to substitute for adequate treatment [§268.3]
___Yes* ✓No

D. Management

1. Onsite management

a. Were restricted wastes managed onsite?
✓Yes ___No

If no, go to "2".

b. For wastes that exceed treatment standards, was treatment in regulated units, storage for greater than 90 days, and/or disposal conducted?
___Yes ✓No

If yes, TSDF checklist must be completed.

2. Offsite Management

a. If restricted wastes exceed treatment standards, did generator provide treatment facility notification with each shipment? [268.7(a)(1)]:

(i) EPA Hazardous Waste Number? ✓Yes ___No*

(ii) Corresponding treatment standard?
✓Yes ___No*

(iii) Manifest number? ✓Yes ___No*

(iv) Waste analysis, if available?
✓Yes ___No

* A potential violation is indicated

Inspector: _____
Date: _____

Comments

Identify offsite treatment facilities Chem. Waste in Emelle Alabama.

b. If restricted wastes do not exceed treatment standards, did generator provide the disposal facility with a notice and certification including: N/A

(i) EPA hazardous waste I.D. number? ___Yes ___No*

(ii) Corresponding treatment standard? ___Yes ___No*

(iii) Manifest number ___Yes ___No*

(iii) Certification regarding waste and that it meets treatment standards? ___Yes ___No*

Identify land disposal facilities receiving the BDAT certified wastes _____

c. If the generator's waste is subject to a §268.5 case by case exemption, a §268.6 "no migration" exemption, or a nationwide variance (see Appendix E for restricted wastes subject to nationwide variances), does the generator's records indicate that he or she submits with each waste shipment [§268.7(a)(3)]: N/A

(i) EPA Hazardous Waste Number? ___Yes ___No*

(ii) Corresponding Treatment Standards? ___Yes ___No*

(iii) All applicable prohibitions? ___Yes ___No*

(iv) The manifest number? ___Yes ___No*

(v) The date the wastes are subject to prohibitions? ___Yes ___No*

(vi) Does generator keep records of all notifications/certifications send to offsite facilities? ___Yes ___No*

*/ A potential violation is indicated

Handler Name: _____
ID Number: _____
Ins[illegible]: _____
Date: _____

Comments

List all prohibited wastes for which records are not provided per above [§268.7(a)(b):

_____

_____

Identify TSDFs receiving any prohibited wastes subject to any exemptions and variances:

_____

_____

d. If handler generates a "soft hammer" waste, does the generator send with each "soft hammer" waste shipment to a TSDF and retain copies of, a notice that includes [268.7(a)(4)]:

The EPA Hazardous Waste Number? ✓ Yes ___ No*

Applicable prohibitions? ✓ Yes ___ No*

The manifest number? ✓ Yes ___ No*

Waste analysis data, where available? ✓ Yes ___ No

(i) Do the generator's records indicate that any soft-hammer wastes are destined for disposed in a landfill or surface impoundment [§268.33(f)]? ✓ Yes ___ No

If yes, list facility of destination and waste of concern [§268.8(a)(2)]
Chem. Waste in Emelle, Alabama.

(ii) Has the generator submitted demonstrations and certifications for each "soft-hammered" waste destined to be disposed in landfill or surface impoundment to the Regional Administrator prior to the shipment of waste to the TSDF [§268.7(a)(2)]? ✓ Yes ___ No*

(iii) Has the generator retained a copy of the demonstration on site [§268.8(a)(3)-(a)(4)]? ✓ Yes ___ No*

(iv) Has the generator retained copies of all §268.8 certifications sent to the TSDF [§268.7(a)(6)] ✓ Yes ___ No*

*/ A potential violation is indicated

ID Number: _____
Inspector: _____
Date: _____

Comments

(v) Did the generator submit the demonstration to the receiving facility upon the intial shipment of the waste [§268.8(a)(3)-(a)(4)]? ✓ Yes ___ No*

(vi) If the Regional Administrator has invalidated the certification, has the generator ceased shipment of the waste and do records indicate that the generator has informed all receiving facilities of the invalidation [§268.8(b)(3)]? N/A

___ Yes ___ No*

E. Storage of Prohibited Waste

1. Were prohibited wastes stored for greater than 90 days? ___ Yes ✓ No

If yes, was facility operating as a TSD under interim status or final permit [§262.34(b)]? N/A

___ Yes ___ No*

If yes, TSDF Checklist must be completed.

F. Treatment Using RCRA 264/265 Exempt Units or Processes (i.e., boilers, furnaces, distillation units, wastewater treatment tanks, etc.)

1. Were treatment residuals generated from RCRA 264/265 exempt units or processes? ___ Yes ✓ No

If yes, list type of treatment unit and processes

_____

_____

_____

If yes, TSDF checklist must be completed.

*/ A potential violation is indicated

INTERIM STATUS COMPLIANCE CHECKLIST

FACILITY Kerr-McGee (Columbus) MSD 990866329
LOCATION Columbus
DATE 12-15-88
INSPECTORS Dave Bockelmann
Karen McKinney

Facility Reps: G. Ross Harrod, Plant Manager
Nick Bock, Staff Environmental Specialist

Recommendations: - Bumper guards around high traffic area wells.
- Container used to store + accumulate contaminated soils from plant upgrade should be included in impoundment inspections + treated as a less than 90 day storage area.

Note: Inspections done 3 times a week.

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART B - GENERAL FACILITY STANDARDS				
265.12 Required Notices				
a) The facility owner or operator must notify the Director at least four weeks in advance of receipt of wastes from a foreign source.			N/A	No offsite Haz. Waste received.
b) Before transferring ownership or operation of a facility, the facility's owner or operator must notify the new owner or operator of the requirements of 40 CFR 265 and 122.			N/A	
265.13 General Waste Analysis				
Before treating, storing, or disposing of haardous waste, the facility owner or operator must obtain a detailed chemical and physical analysis of wastes. The analysis must contain all the information which must be known to treat, store, or dispose the waste in accordance with the federal requirements.	✓			
265.14 Security to Prevent Unknowing and Unauthorized Access to the Facility				
a) The owner or operator must prevent the unknowing entry and minimize the possibility for unauthorized entry unless;	✓			
1) physical contact with the waste, structures, or equipment will not be injurious	✓			
2) disturbance of the waste or equipment will not violate the requirements of Part 265	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.14 - Continued				
b) Unless exempt under 265.14 (a)(1) or 402.7-14(a)(2), a facility must have:				
1) a 24-hour surveillance system	✓			
2) (i) an artificial or natural barrier which completely surrounds the active portion of the facility	✓			
(ii) a means to control entry	✓			
c) A sign warning of the danger of intruding into the facility.	✓			
265.15 Inspection and Monitoring				
a) The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, or discharges which may be causing or lead to release of hazardous waste constituents to the environment or a threat to human health.	✓			
b) The owner or operator must develop and follow a schedule and plan for inspections.	✓			
c) The owner or operator must take remedial action upon the detection of malfunction or the deterioration of equipment and structures when a hazard is imminent.	✓			
d) The owner or operator must record inspections in an inspection log and must keep the records for at least three years from the date of inspection.	✓			

REQUIREM	Not in compliance - No Not applicat - NA			COMMENTS
	Yes	No	N/A	
Other questions or standards.				
Are there any other generators transporting their waste to this hazardous waste management facility?			N/A	

RCRA Inspection Report

1. Inspector and Author of Report

David J. Bockelmann
Environmental Scientist

2. Facility Information

Kerr-McGee Chemical Corporation
P. O. Box 906
Columbus, Mississippi 39701
MSD990866329

3. Responsible Company Official

Mr. G. Ross Harrod
Plant Manager

4. Inspection Participants

Mr. David J. Bockelmann, MDNR
Ms. Kim Ehret, MDNR
Mr. G. Ross Harrod, Kerr-McGee
Mr. Nick Bock, Kerr-McGee

5. Date and Time of Inspections

December 12, 1988, 9:15 a.m. CST

6. Applicable Requirements

Mississippi Hazardous Waste Managment Regulations (MHWMR) Parts 262, 265 and 268.

7. Purpose of Inspection

This was a Compliance Evaluation Inspection to determine the facility's overall compliance with interim status regulations.

8. Facility Description

Kerr-McGee Chemical Corporation is located at 507 14th Street in the Town of Columbus, Lowndes County, Mississippi. The facility uses creosote in the pressure treatment of wood products.

The primary products produced by the facility are treated railroad crossties and switch ties. The main plant site occupies approximately 90 acres. Kerr-McGee

has operated a wood treating plant at the site since 1964. The site has been used for wood treating operations since 1928.

The facility does not currently operate any hazardous waste management units. All waste creosote is recycled through a series of oil/water separators to the work tanks for reuse.

The facility's past hazardous waste activities consisted of operating two surface impoundments which received wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. The bottom sediment sludge which was generated in these impoundments is classified as a K001 hazardous waste. The impoundments were certified closed on June 19, 1986. Contaminant concentration levels remaining in the impoundment soils after closure showed that clean closure of the two impoundments was not accomplished. On September 2, 1987, the facility notified the Mississippi Bureau of Pollution Control of the detection of groundwater contamination at the site. The facility is currently conducting an assessment of the extent of groundwater contamination at the site.

9. <u>Findings</u>

An inspection and review of the facility's records was conducted. These records included inspection logs, groundwater monitoring records, personnel training records, financial assurance and liability insurance records, post-closure plan and the facility contingency plan.

Inspections at the two closed surface impoundments are conducted 3 times per week. Inspection logs were kept up-to-date and in compliance.

Personnel training records were kept for a period of 3 years and were up-to-date and in compliance.

Facility groundwater monitoring records were up-to-date and in compliance.

The facility's financial records, post-closure plan and contingency plan were all up-to-date and in compliance.

A visual site inspection of the hazardous waste management unit containing the two closed surface impoundments was conducted. The unit is covered with gravel and is well graded. Surface drainage is to a ditch which runs along the southeast portion of the unit. Security is provided by a six foot chain link

fence which surrounds the unit. Signs warning against unauthorized entry are approximately placed on the fence around the unit.
The facility has been conducting a general up-grade of the process and work tank areas where visually contaminated soils are removed and concrete bases and berms are being constructed beneath and around the tanks. These contaminated soils are placed in a container on-site and labeled as U051 waste. It is recommended that this container be in the facility's inspections of the closed surface impoundments and that it be treated as a less than ninety day storage area.

A general walk-through of the facility was also conducted. It is recommended that wells constructed in high traffic areas have bumper guards placed around them to prevent possible damage.

10. Conclusions

No violations were found during this inspection.

11. Signed

Kaleel Rahain for Dave Bachelman

12. Approval

Wm Stephen Spaulding 3/7/89

cc: Mr. James H. Scarbrough, EPA

RCRA SITE INSPECTION

1) Inspector and Author of Report

Karen McKinney
Environmental Engineer

2) Facility Information

Kerr McGee Chemical Corporation
MSD 990 866 329
P.O. Box 906
Columbus, MS 39701

3) Responsible Official

G.R. Harrod, Plant Manager

4) Inspection Participants

Karen McKinney, USEPA
Dave Bockelmann, MSDNR
G.R. Harrod, Kerr McGee
Nick Bock, Environmental Specialist, Kerr McGee

5) Date and Time of Inspection

December 15, 1988 - 9:25 a.m. CST

6) Applicable Regulations

Mississippi Hazardous Waste Management Regulations (MHWMR) Sections 262, and 265 (adopted by reference and therefore cited herein as 40 CFR).

7) Purpose of Inspection

This inspection was a USEPA Compliance Evaluation Inspection (CEI) to determine the facility's overall compliance with the applicable regulations.

8) Facility Description

Kerr McGee Chemical Corporation is located within the city of Columbus, Lowndes County, Mississippi. Kerr McGee owns and operates a creosote wood preserving facility which treats railroad crossties, switch ties, and pilings. Prior to 1976, the facility also used pentachlorophenol in oil as a wood preservative. Kerr McGee has occupied this site since 1928. Land use prior to 1928 is not known.

The facility previously maintained two hazardous waste surface impoundments as part of the wastewater treatment system. These impoundments operated in series and settled out solids and preservatives from the process wastewater before final discharge to

the city POTW. The impoundments contained K001 which is defined as a "bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol". The facility closed the impoundments on June 18, 1986, according to the closure plan approved by MSBPC. Clean closure was not achieved and the facility submitted a Part B post-closure permit application.

9) Findings

Kerr McGee recycles all creosote that is used in the process. Therefore no K001 is generated here. The only waste onsite was U051 which contains contaminated soil from the process area. The soils are stored for less than 90-days in a containment bin and shipped to Chemical Waste Management in Emelle, Alabama. The bin is labeled and dated. The facility has also submitted a land ban demonstration to EPA on November 22, 1988 for this waste.

The records were reviewed and found to be in compliance. All records were kept for three years or more.

A site inspection was also conducted and all units were found to be in compliance.

Kerr McGee has taken great efforts to clean up their facility. The drip track areas have had all contaminated soils removed and have been replaced with concrete pads which contain drains to recycle the waste that drips from the treated products. The facility has also removed soils from its process area and has replaced them with concrete pads. Additionally, the facility is in the process of replacing all joints in the piping with welded joints to prevent leakage.

10) Conclusions

No violations of the hazardous waste regulations were found during the inspection.

11) Signed

Karen McKinney

Karen McKinney
Inspector

February 22, 1989
Date

12) Concurrence

Doyle T. Brittain

Doyle T. Brittain, Chief
West Unit

2/24/89
Date

Approval

Allan E. Antley, Chief
Waste Compliance Section

2/24/89
Date

CNW 8

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RCRA INSPECTION REPORT

1. Inspector and Author of Report

   David J. Bockelmann
   Environmental Scientist

2. Facility Information

   Kerr-McGee Chemical Corporation
   MSD 990866329
   P. O. Box 906
   Columbus, Mississippi 39701

3. Responsible Company Official

   Mr. E. L. Creekmore
   Plant Superintendent

4. Inspection Participants

   Dave Bockelmann, MSDNR
   Kim Ehret, MSDNR
   E. L. Creekmore, Kerr-McGee
   Roy Widman, Kerr-McGee

5. Date and Time of Inspections

   August 11, 1988 - 9:00 a. m. CST

6. Applicable Regulations

   Mississippi Hazardous Waste Management Regulations (MHWMR) Part 265.

7. Purpose of Inspection

   This was a Compliance Evaluation Inspection to determine the facility's overall compliance with the applicable interim status regulations.

8. Facility Description

   Kerr-McGee Chemical Corporation is located at 507 14th Street in the Town of Columbus, Lowndes County, Mississippi. The facility uses creosote in the pressure treatment of wood products.

The primary products produced by the facility are treated railroad crossties and switch ties. The main plant site occupies approximately 90 acres. Kerr-McGee has operated a wood treating plant at the site since 1964. The site has been used for wood treating operations since 1928.

The facility does not currently operate any hazardous waste management units. All waste creosote is recycled through a series of oil/water separators to the work tanks for reuse.

The facility's past hazardous waste activities consisted of operating two surface impoundments which received wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. The bottom sediment sludge which was generated in these impoundments is classified as a K001 hazardous waste. The impoundments were certified closed on June 19, 1986. Contaminant concentration levels remaining in the impoundment soils after closure showed that clean closure of the two impoundments was not accomplished. On September 2, 1987 the facility notified the Mississippi Bureau of Pollution Control of the detection of groundwater contamination at the site. The facility is currently conducting an assessment of the extent of groundwater contamination at the site.

9. Findings

An inspection and review of the facility's records was conducted. These records included inspection logs, groundwater monitoring records, financial assurance and liability insurance records, post-closure plan and the facility contingency plan.

The two closed surface impoundments are inspected 3 times per week. Post-closure inspection logs are kept back to March, 1987. Operating inspection logs are kept on file for before closure.

Groundwater monitoring records were on file and up-to-date. A Comprehensive Groundwater Monitoring Evaluation (CME) was also conducted along with the CEI.

A review of the financial records showed that the facility did not have an up-dated post-closure cost estimate on file. However, these records were found to be on file at the Bureau. In a telephone conversation with Mr. Creekmore in September, of 1988 he stated that he had found the up-dated post-closure estimate and that it had been on file at the time of the inspection.

The facility post-closure plan and contingency plan were reviewed and found to be in compliance.

Personnel training records were reviewed and found to be up-to-date and in compliance.

The facility is presently conducting a general up-grade of the process and work tank areas where visually contaminated soils are removed and concrete bases and berms are being constructed beneath and around the tanks. These contaminated soils were manifested off-site by the facility as K001 waste. Manifests for these shipments were maintained on file.

Following the record review a visual site inspection of the hazardous waste management unit containing the two closed surface impoundments was conducted. The unit is covered with gravel and is well graded. Surface drainage is to a ditch which runs along the southeast portion of the unit. Security is provided by a six foot chain link fence which surrounds the unit. Warning signs were appropriately placed on the fence around the unit.

10. Conclusions

No violations were found during this inspection.

11. Signed

David J. Buckelmann
Inspector

12. Approval

Wm Stephen Spyker 11/28/88

cc: Mr. James H. Scarbrough, EPA

INTERIM STATUS COMPLIANCE CHECKLIST

FACILITY Kerr McGee Columbus
LOCATION Columbus MS
DATE 8-11-88
INSPECTORS Dave Bockelmann
Kim Ehret

Pete Creekmore.
Plant Manager

Roy Widman.
Senior Hydrologist

Not in compliance - No
Not applica : - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.14 - Continued				
b) Unless exempt under 265.14 (a)(1) or 402.7-14(a)(2), a facility must have:				
1) a 24-hour surveillance system				
2) (i) an artificial or natural barrier which completely surrounds the active portion of the facility	✓			
(ii) a means to control entry				
c) A sign warning of the danger of intruding into the facility.	✓			
265.15 Inspection and Monitoring				
a) The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, or discharges which may be causing or lead to release of hazardous waste constituents to the environment or a threat to human health.	✓			Closed surface impoundment is inspected 3 times a week. Post-closure inspections go back to 3/87. Lagoon inspections are on file for before that.
b) The owner or operator must develop and follow a schedule and plan for inspections.	✓			
c) The owner or operator must take remedial action upon the detection of malfunction or the deterioration of equipment and structures when a hazard is imminent.	✓			
d) The owner or operator must record inspections in an inspection log and must keep the records for at least three years from the date of inspection.	✓			

REQUIREM...f	Not in compliance - No Not applical - NA Yes	No	N/A	COMMENTS
265.16 Facility Personnel Training				
a) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of Part 265.			✓	Surface impoundment is closed and all wastes are recycled - No wastes generated or handled.
b) The training program must be completed within six months of the effective date of Part 265.			✓	
c) There must be an annual review of the initial training in (a) above.			✓	
d) The owner or operator must maintain records of training.			✓	
e) Training records on current personnel must be kept until closure of the facility.			✓	
265.17 General Requirements for Ignitable, Reactive or Incompatible Wastes				
a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste.			✓	
b) Treatment, storage, or disposal of ignitable or reactive waste and the mixture or commingling of incompatible wastes must be conducted so that it does not:			✓	
1) Generate extreme heat or pressure, fire or explosion, or violent reaction;			✓	
2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient			✓	

In compliance - Yes
Not in compliance - No
Not applica - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.17 - Continued--				
quantities to threaten human health;				
3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;			✓	
4) Damage the structural integrity of the device or facility containing waste; or			✓	
5) Through other like means threaten human health or the environment.			✓	
SUBPART C - PREPAREDNESS AND PREVENTION				
Pursuant to 265.30 through 265.37, facilities must be maintained and operated for and prevention of releases of hazardous wastes controlled by the State.	✓			
SUBPART D - CONTINGENCY PLANS				
Pursuant to 265.56, facilities must have contingency plans and emergency procedures to be followed in the event of a release of hazardous waste.	✓			
SUBPART E - MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING				
265.71(a)(1-5) If a facility receives hazardous waste accompanied by a manifest, the owner or operator must meet the requirements of 265.71(a)(1-5)			✓	
265.71(b)(1-5) If a facility receives, from a rail or water transporter, hazardous waste which is accompanied by a shipping paper, the owner or operator must meet the requirements of 265.71.			✓	

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.72(a) Upon discovery of significant manifest discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter.	✓			Facility is currently upgrading process tank areas etc. and is manifesting off contaminated soils as K001 and is putting in concrete bases & berms around tanks.
(b) If a significant manifest discrepancy is not resolved, the owner or operator must notify the Director.	✓			All manifests were kept and in order.
265.73(b) The owner or operator must keep a written operating record at the facility which meets the requirements of 265.73(b).	✓			
265.74(a) All records must be furnished upon request and available at all times for inspection by the Director or EPA.	✓			
(c) A copy of records of waste disposal locations and quantities must be submitted to the Director and the local land authority upon closure of the facility.			✓	Facility not closed.
265.75 The owner or operator must submit an annual report to the Director in compliance with the requirements of 265.75.				
265.76 The receipt of any unmanifested waste must be reported to the Director.	✓			
265.77 The owner or operator must submit a report to the Director if any of the following occur: a) releases, fires, explosions b) groundwater contamination c) facility closure.	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
SUBPART F - GROUNDWATER MONITORING				
265.90 Owner or operator must implement a groundwater monitoring program capable of determining the facility's impact on the quality of the upper aquifer within one year of the effective date of 265.90.	✓			
265.91 - 265.94 The owner and operator must install, operate, and maintain a groundwater monitoring system which meets the requirements of 265.91 - 265.94.	✓			
265.90(c) All of the groundwater monitoring requirements may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste constituents from the facility via the uppermost aquifer below the facility to water supply wells or to surface water.			✓	Facility has groundwater contamination and is currently doing assessment.
SUBPART G - CLOSURE AND POST-CLOSURE				
265.111 The owner or operator must close his facility in a manner that:	✓			Surface impoundments is closed
1) minimizes the need for future maintenance, and	✓			facility is doing post-closure monitoring - assessment.
2) controls, minimizes, or eliminates post-closure escape of hazardous waste.	✓			
265.112(a) The owner or operator must have a written closure plan on the effective date of Part 265.	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT.	Yes	No	N/A	COMMENTS
265.112(a) Continued--				
The closure plan must include:				
1) A description of how and when the facility will be partially closed, if applicable, and ultimately closed.	✓			
2) An estimate of the maximum inventory of wastes in storage or treatment at any given time.	✓			
3) Steps to decontaminate facility equipment.	✓			
4) A schedule for final closure which must include, as a minimum, anticipated dates when wastes will no longer be received, anticipated date for completion of final closure, and intervening milestone dates.	✓			
265.113(a) Closure must be initiated within 90 days after receiving the final volume of hazardous wastes.	✓			
(b) The owner or operator must complete closure activities within six months after receiving the final volume of wastes.	✓			
265.114 Upon completion of closure, all equipment and structures must be properly disposed of or decontaminated.	✓			
265.115 The owner or operator and an independent registered professional engineer must certify that the facility has been closed in accordance with the approved closure plan.	✓			

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.117(a) Post closure care must consist of at least:				
1) Groundwater monitoring	✓			265.73 + 144 1987 financial test data was available, 1988 update was not available. 1988 Update is in Bureau files. DJB 10-16-88
2) Maintenance of the contaminant system.	✓			
The owner or operator must have a post-closure plan on the effective date of Part 265 and it must include:				Note: Deed revision is in bureau files. DJB 10-16-88
1) Groundwater monitoring activities and frequency.	✓			
2) Maintenance activities and frequencies to ensure the integrity of the cap, final cover, or other containment structures, and functions of the facilities monitoring equipment.	✓			265.120 Plant Manager does not know if deed has been corrected to include Hay. Waste surface impoundment.
265.119 Within 90 days after closure, the owner or operator must submit a survey plat of the facility.	✓			Add. 265.143 The owner/operator must maintain a financial assurance for closure/post-closure. A) Assurance Mechanism: a) Closure Trust fund — closure / post closure; b) Surety Bond; c) Letter of Credit; d) Insurance; e) Corporate Guaranty. B) Amount: current
265.120 The owner or operator must record a notice on the deed that the land has been used to manage hazardous waste.		✓		
SUBPART H - FINANCIAL REQUIREMENTS				
265.142(a) The owner or operator must develop and maintain a current estimate of closure and post-closure costs.				Add. 265.147(e) The owner/operator must maintain current liability [illegible]: Insurance; Financial test; [illegible]
SUBPART I - OTHER FACILITY STANDARDS				
265.170 - 265.172 The container must be compatible with the waste to be stored.			✓	The [illegible] (NA)

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
265.173 Containers holding hazardous waste must be kept closed and must not be opened, handled, or stored in a manner which may cause a rupture or leak.			N/A	Facility does not operate a container storage area.
265.174 Areas where containers are stored must be inspected weekly.				
265.176 Containers holding ignitable or reactive waste must be located at least 15 meters from the facility's property line.				
265.177(a) Incompatible wastes must not be placed in the same container.				
(b) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby must be separated or protected from the other materials.				
SUBPART J - TANKS			N/A	No Haz. Waste Tanks.
265.192(b) Hazardous waste must be placed in a tank if they could cause the tank or its liner to leak.				
(c) Uncovered tanks must have a least two feet of freeboard unless other containment structures, a drainage control system, or other diversion structures with a capacity that equals or exceeds the volume of the top two feet of the tank.				
(d) Tanks which have a continuous feed system must be equipped with a means to stop the inflow.				

Not in compliance - No
Not applicab - NA

REQUIREM	Yes	No	N/A	COMMENTS
265.193 Waste analysis must be conducted pursuant to 265.13, and 265.193(a).			N/A	
265.194 Tanks must be inspected in accordance with 265.194.				
265.197 At closure, all hazardous waste and hazardous waste residues must be removed from the tanks.				
265.198 Ignitable or reactive waste should not be placed in a tank unless 265.198 is complied with.				
265.199 Incompatible wastes must not be placed in the same tank unless 265.176 is complied with.				
SUBPART K - SURFACE IMPOUNDMENTS				
265.222 Must maintain at least two feet of freeboard.			✓	
265.223 Earthen dikes must have protective cover.			✓	
265.225 Must conduct waste analyses and trial tests in accordance with 265.225.			✓	
265.226(1) Must inspect the freeboard level at least once each operating day.			✓	
(2) Must inspect the surface impoundment at least once a week to detect any leaks, deterioration, or failure.			✓	
265.228 The surface impoundment must close in accordance with 265.228.	✓			Surface impoundments is closed and is in assessment.

REQUIREMENT	Not in compliance - No Not applicable - NA Yes	No	N/A	COMMENTS
265.229 Ignitable or reactive waste must not be placed in a surface impoundment unless 265.229 is complied with.			✓	
265.230 Incompatible wastes must not be placed in the same surface impoundment unless 265.17(b) is complied with.			✓	
SUBPART L - WASTE PILES				
265.251 A waste pile must be protected and managed to control wind dispersal.			N/A	
265.252 An owner or operator must conduct waste analyses unless the facility meets the exemptions of 265.252.				
265.253 Within one year after the effective date of the regulations, leachate or run-off from a pile must be controlled pursuant to 265.253.				
265.256 Ignitable or reactive waste must not be placed in a waste site unless 265.256 is complied with.				
265.257 The requirements of 265.257 for incompatible wastes must be complied with.				
SUBPART M - LAND TREATMENT				
265.272(a) Hazardous waste must not be placed at a land treatment facility unless it can be made less hazardous or non-hazardous.			N/A	
(b) Run-on must be diverted away from other active portions as of one year after the effective date of Part 265.				

REQUIREMENT	Not in compliance - No Not applica - NA Yes	No	N/A	COMMENTS
265.272 -- Continued			N/A	
(c) Run-off from active portions must be collected as of one year after the effective date of Part 265 . . .				
265.273 Waste analyses must be conducted pursuant to 265.273.				
265.276(a) An owner or operator must notify the State Director within 60 days after the effective date of Part 265 if food chain crops are grown on the land treatment facility.				
(b) Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless 265.276(b) is complied with.				
(c) Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless 265.276(c) is complied with.				
265.278 The owner or operator must have in writing and must implement an unsaturated zone monitoring plan pursuant to 265.278.				
265.279 The owner or operator must keep records of the application dates, application rates, quantities, and location of each hazardous waste placed in a facility.				
265.280 A land treatment facility must meet the closure and post-closure requirements of 265.280.				

In compliance - Yes
Not in compliance - No
Not applicable - NA

REQUIREMENT	Yes	No	N/A	COMMENTS
265.281 Ignitable or reactive waste must not be placed in a land treatment facility unless 265.281 is complied with.			N/A	
265.282 Incompatible wastes must not be placed in the same land treatment area unless 265.17(b) is complied with.				
SUBPART N - LANDFILLS			N/A	
265.302(a) Run-on must be diverted away from the active portions within one year after the effective date of Part 265.				
(b) Run-off from active portions must be collected within one year after the effective date of Part 265.				
(d) Must control wind dispersal.				
265.309 The owner or operator must meet the surveying and recordkeeping requirements of 265.309.				
265.310 A landfill must comply with closure and post-closure requirements of 265.310.				
265.312 Ignitable or reactive waste must not be placed in a landfill unless 265.312 is complied with.				
265.313 Incompatible wastes must not be placed in a landfill unless 265.17(b) is complied with.				
265.314 Bulk or non-containerized liquid waste, waste containing free-liquids, or containers holding liquid waste should not be placed in a landfill unless the requirements of 265.314				

REQUIREMENT	Not applicable - NA			COMMENTS
	Yes	No	N/A	
265.315 (i) Empty containers must be reduced in volume as of one year after the effective date of Part 265.			N/A	
SUBPART O - INCINERATORS				
265.343 Must be at steady state conditions before adding hazardous waste.			N/A	
265.345 Waste analyses must be conducted pursuant to 265.345.				
265.347 Monitoring and inspections must be conducted as delineated in 265.347.				
265.351 At closure, the owner or operator must remove all hazardous waste and hazardous waste residues.				
SUBPART P - THERMAL TREATMENT				
265.373 Must be at steady state conditions before adding hazardous wastes.			N/A	
265.375 Waste analyses must be conducted pursuant to 265.375.				
265.377 Monitoring and inspections must be conducted as delineated in 265.377.				
265.301 At closure, the owner or operator must remove all hazardous waste residues.				
265.382 Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives				

REQUIREM	Not in compliance - No Not applicab - NA Yes	No	N/A	COMMENTS
SUBPART Q - CHEMICAL, PHYSICAL, AND BIOLOGICAL TREATMENT			N/A	
265.401(a) Must comply with 265. 17(b)				
(b) Hazardous waste must not be placed in the treatment process or equipment if any failure of equipment or the process would occur.				
(c) A continuously-fed process must be equipped with a means to stop the inflow.				
265.402 Waste analyses and trial tests must be conducted pursuant to 265. 402.				
265.403 Inspections must be made pursuant to 265.403.				
265.404 At closure, all hazardous waste and hazardous waste residues must be removed.				
265.405 Ignitable or reactive waste must not be placed in a treatment process unless 265.405 is complied with.				
265.406 Incompatible wastes must not be placed in the same treatment process unless 265.17(b) is complied with.				
SUBPART R - UNDERGROUND INJECTION			N/A	
265.430(a) underground injection of hazardous waste is not subject to the closure and post-closure or financial requirements of Part 265. Underground injection is subject to the other requirements of Part 265.				

REQUIREM	Not in compliance - No Not applicat - NA			COMMENTS
	Yes	No	N/A	
Other questions or standards.				
Are there any other generators transporting their waste to this hazardous waste management facility?			✓	Does not receive any off-site waste.

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

December 18, 1990

Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

RECEIVED
DEC 21 1990
DEQ-OPC

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Bimonthly Progress Report -
Consent Order 1636-89
January 1, 1990 Report

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 agreed consent order between Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) and the Mississippi Commission on Environmental quality.

Corrective Action Assessment - During the week of November 12, 1990, KMCC-FPD completed additional soil borings south of the production process and in the solid waste management unit (SWMU). This boring program, as described to you during our October 30, 1990 meeting in Columbus, confirmed structure of the Eutaw Formation. Recovery wells will be located in formation lows, to provide optimum recovery of free product. A series of 12 soil borings were completed; three soil borings were completed as piezometers (PW6, PWW7 & PW8) and one was completed as a groundwater recovery well (RW8) to provide additional voluntary corrective measures in the process area. All soil boring logs and well completion diagrams are enclosed for your review. Figure 7-1 of the Post-Closure Permit Application, Volume II dated October 30, 1990, has been revised and is enclosed to delineate the locations of additional soil borings and piezometers.

KMCC-FPD is evaluating these data and is preparing an addendum to the Part B application for submittal by March 31, 1991.

Community Relations - KMCC-FPD continues to keep property owners informed of the progress of the assessment. KMCC-FPD met with a Columbus Cemetery & Investment Company board member on October 29, 1990, and reviewed assessment results. On November 26, 1990, KMCC-FPD made a formal offer to purchase approximately 3.4 acres of the cemetery impacted by historical plant operation.

Recovery Systems Operations - The recovery system continues to operate. Recovery data collected for November is attached.

Corrective Action Groundwater Monitoring - Fourth Quarter corrective action groundwater monitoring was accomplished during the week of October 28, 1990. Mr. Thad Hopper of the MBPC conducted a comprehensive groundwater monitoring evaluation on October 30, 1990. KMCC-FPD believes no significant violations were noted during this inspection. The First Quarter 1991 corrective action groundwater monitoring event is scheduled for the week of February 4, 1991.

If you have any questions regarding the January 1, 1991 bimonthly progress report or the facility waste management program, please contact me at (405) 270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCT DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

NB:wpc

Enclosures

cc: J. Getz
R. Jones
J. Poor
C. Trumpolt
R. Widmann

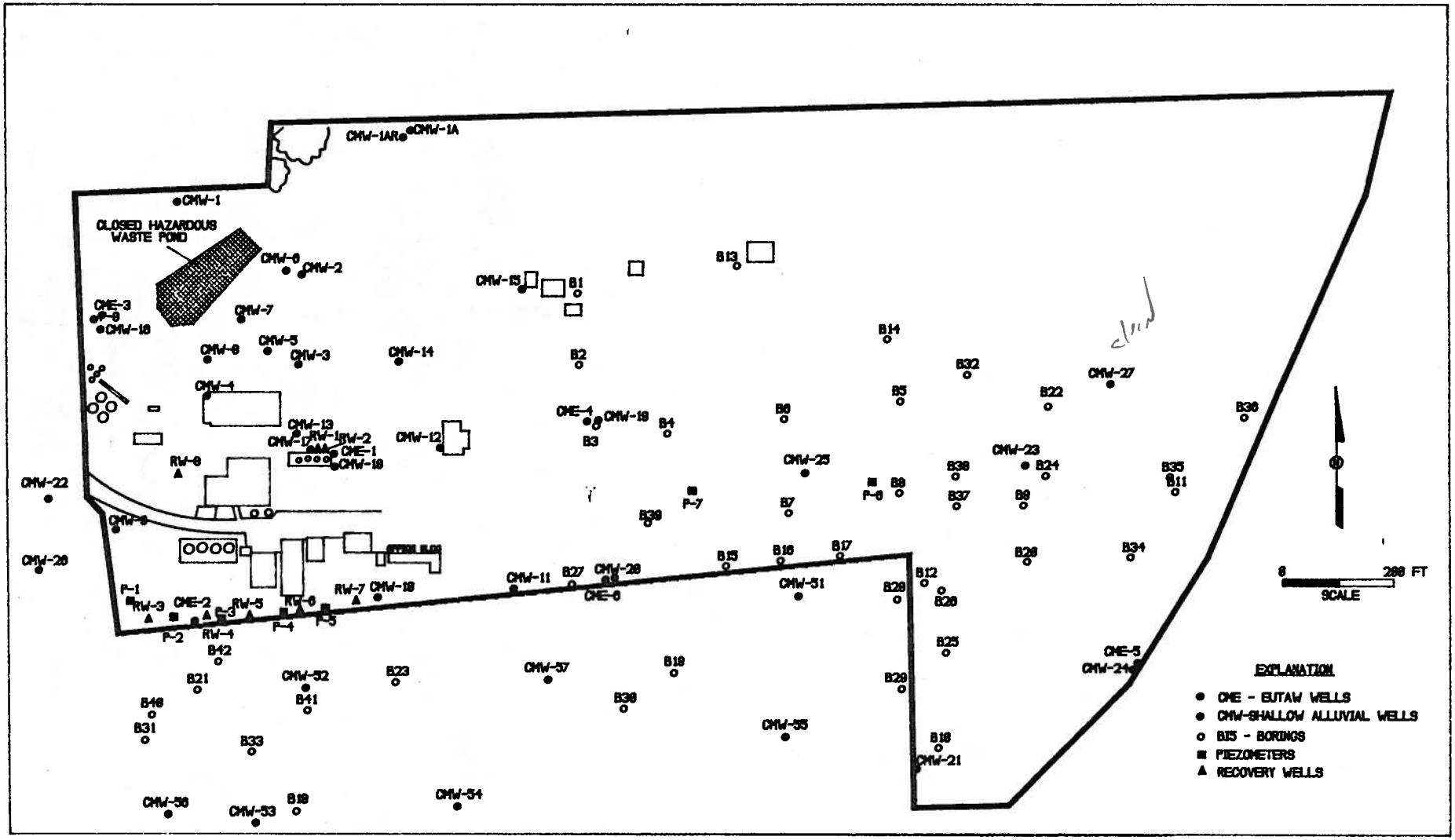


FIGURE 7-1: SOIL BORINGS AND MONITOR WELL LOCATIONS INSTALLED DURING PHASE II 1990 DRILLING PROGRAM, KERR-McGEE CHEMICAL CORPORATION, FOREST PRODUCTS DIVISION, COLUMBUS, MISSISSIPPI

Monitor Well Installation
and
Soil Boring Logs

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION Retaing Wall	BORING NUMBER RW8

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface silts: and gravels, clay									
	Clay:		CL	14	30 70	1	X	2.0	1.5	
	Silt & Sand, v fn		SM							
	Gravel < ¼" fract.									
	Clay:									
	Gravel - dk gray, < ¼" frac		GC	12	50	2	X	4.5	2.0	black product
5	Clay: dk gray, plastic									
	: soft, plastic, gray			3	3	3	X	7.0	1.4	black lenses
	: silty, dk gray, soft, tr. sand,		CH							
	: hd, drs, mot. orang. w/ lt gray			14	10 0	4	X	9.5	1.2	product
10 ▽			CH							
	Sand: lt gray			18	20 70	5	X	12.0	2.0	
	Clay: hd, drs, lt gray mot.		SM CL							
	Sand: fn-med, brn, tan, 10% grvl, < ¼" gravels		SW	19	40	6	X	14.5	2.1	Black Product in sand
15	Sand and gravel; crs to med, w/ 20% grvl, < ½", subrd-ang, fract chert, brn			19	25	7	X	17.0	2.5	thick Black
	Gravel; subrdd, < ½"		GP							Product
	Sand			23	40	8	X	19.5	1.6	
20	Gravel: sandy, lt tan, > ½", w/ subrd frac chert.		SP GP	50+	30	9	X	22.0	1.9	Product Stain
	: 40% crs sand, crs-med, subrd qtz, tn-brn, fract chert < 1" at bottom			48	30 20	10	X	24.5	1.7	Black, thick product
25	Sand: lt gray, tan, fn-med, p. grd.		GP							
	Gravel: 80% > ¼", 10% > 1", p. grd, sandy, gvl; frac, chert, < ¼"		SW	50	30	11	X	27.0	2.1	
			GW							
	Eutaw - 28.6' Green.		ML	53	0	12	X	29.0	2.2	
	TD 29.5									
	Note: no weathered Eutaw									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

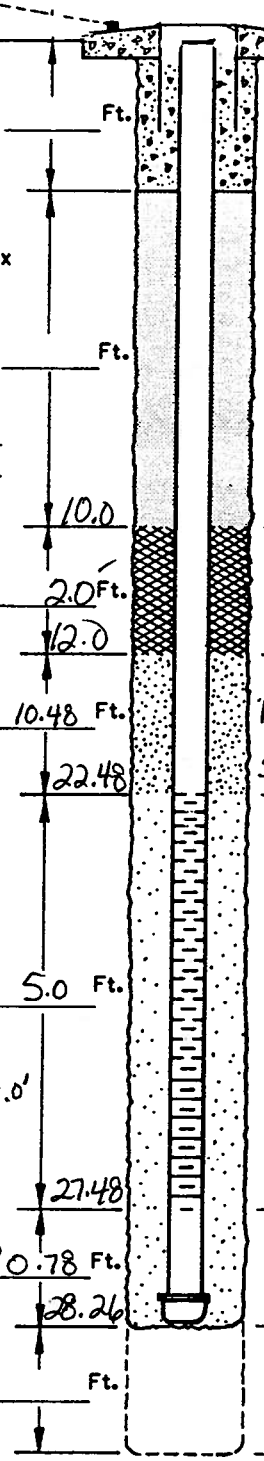
CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/15/90	of
DRILLING METHOD: HSA - SB	
DRILLED BY: C. Lee TTL	
LOGGED BY: J. Poor	
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

Protective Pipe
Yes ☐ No ☑
Steel ☐ PVC ☐
Surveying Pin ?
Yes ☐ No ☐

Casing Cap Vent ? Yes ☐ No ☐
Lock ? Yes ☐ No ☐
Weep Hole ? Yes ☐ No ☐
Concrete Pad _____ Ft. x _____ Ft. x _____ Inches



		DEPTH BELOW GRADE	DEPTH FROM TOP OF CASING
Concrete	Ft.		
Cement/Bentonite Grout Mix Yes ☐ No ☐ 5.5 Gallons Water to 94Lb. Bag Cement & 3-5 Lb. Bentonite Powder Other:	Ft.		
	10.0		
Bentonite Seal Pellets ☑ Slurry ☐	2.0 Ft.		
	12.0		
Filter Pack Above Screen	10.48 Ft.	Native Sand from 12.0 to 21.0'	
	22.48	Sand pack to 21.0' to 28.26'	
FILTER PACK MATERIAL Silica Sand ☐ Washed Sand ☒ Pea Gravel ☐ Other: native sand 12'-21.0' Sand Size 6-14 grade	5.0 Ft.		
	27.48		
Dense Phase Sampling Cup Bottom Plug Yes ☑ No ☐	0.78 Ft.		
	28.26		
Overdrilled Material Backfill Grout ☐ Sand ☐ Caved Material ☑ Others:	Ft.		

DRILLING INFORMATION:

1. Borehole Diameter= 15.25 Inches.
2. Were Drilling Additives Used ? Yes ☐ No ☑
   Revert ☐ Bentonite ☐ Water ☐
   Solid Auger ☐ Hollow Stem Auger ☑
3. Was Outer Steel Casing Used ? Yes ☐ No ☑
   Depth= _____ to _____ Feet.
4. Borehole Diameter for Outer Casing _____ Inches.

WELL CONSTRUCTION INFORMATION:

1. Type of Casing: PVC ☐ Galvanized ☑ Teflon ☐
   Stainless ☐ Other _____
2. Type of Casing Joints: Screw-Couple ☑ Glue-Couple ☐ Other _____
3. Type of Well Screen: PVC ☐ Galvanized ☑
   Stainless ☐ Teflon ☐ Other _____
4. Diameter of Casing and Well Screen:
   Casing 8" Inches, Screen 8" Inches.
5. Slot Size of Screen: 0.030"
6. Type of Screen Perforation: Factory Slotted ☐
   Hacksaw ☐ Drilled ☐ Other wire wound
7. Installed Protector Pipe w/Lock: Yes ☐ No ☑

WELL DEVELOPMENT INFORMATION:

1. How was Well Developed ? Bailing ☐ Pumping ☑
   Air Surging (Air or Nitrogen) ☐ Other _____
2. Time Spent on Well Development ?
   _____ / _____ Minutes/Hours
3. Approximate Water Volume Removed ? 300 Gallons
4. Water Clarity Before Development ? Clear ☐
   Turbid ☑ Opaque ☑
5. Water Clarity After Development ? Clear ☐
   Turbid ☐ Opaque ☑
6. Did Water have Odor ? Yes ☑ No ☐
   If Yes, Describe product
7. Did Water have any Color ? Yes ☑ No ☐
   If Yes, Describe black

WATER LEVEL INFORMATION:

Water Level Summary (From Top of Casing)

During Drilling _____ Ft. Date _____
Before Development _____ Ft. Date _____
After Development _____ Ft. Date _____

Driller/Firm C. Lee
Drill Rig Type CME75
Date Installed 11/15/90
Drill Crew TIL
Well No. RW8
Kerr-McGee Hydrologist J. Poor

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus, Miss	LOCATION 128' W of B 38 100' E of CHW25	BORING NUMBER P6

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface soils: gravel, black Silt: red/brn, fn, moist		ML	7	0	1	X	2.0	1.4	
	Gravel: frac chert, sand - fn-med : >¼", subrdd, w grade, 30% snd : increase sand		GW	7	0 0	2	X	4.5	1.4	
5	Sand: fn - v fn : tan, med, rd chert, gvl 1%		SP	15	0 0	3	X	7.0	1.4	
	: fn - v fn, tan, brn : fn - v fn, black stn			13	17	4	X	9.5	1.4	Stain, black
10	: gray, dk grey stain on tan grains. fn - med, 10% crs. pgrd,		SW	18	15 15	5	X	12.0	2.5	product, black, oil sheen stain
	: gray, fn - med			15	15	6	X	14.5	2.0	Stain, dk gray, brn Odor
15	: med-crs, 10% gvl <¼"		SW	19	15 15	7	X	17.0	2.5	
	: med-crs, subrd, 40% gvl, subrdd, subang frac chert : brn, indian red, w grade,		GW	55	11 14	8	X	19.5	2.2	
20	gravel: frac chert, rd, orange/brn, w/grd		GW	57	13 15	9	X	22.0	2.5	odor
	Weathered Eutaw 22.0' Sandy silt, clay layers, red,		ML	69	10	10	X	24.5	2.5	
	Green Eutaw 24.4 TD 24.5		CL							

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · SILT · SAND · GRAVEL · SILTY CLAY · CLAYEY SILT · DEBRIS FILL · HIGHLY ORGANIC (PEAT) · SANDY CLAY · CLAYEY SAND

DATE DRILLED	PAGE
11/13/90	of

DRILLING METHOD: HSA / Split Barrel

DRILLED BY: Curtis Lee

LOGGED BY: J. Poor

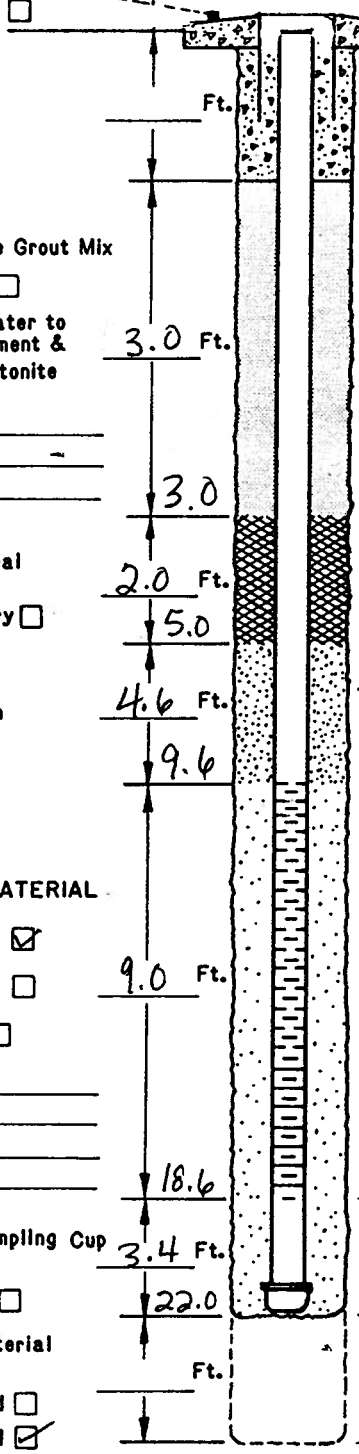
EXISTING GRADE ELEVATION (FT AMSL):

LOCATION OR GRID COORDINATES:

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

Protective Pipe
Yes ☐ No ☐
Steel ☐ PVC ☐
Surveying Pin ?
Yes ☐ No ☐

Casing Cap Vent ? Yes ☐ No ☐
Lock ? Yes ☐ No ☐
Weep Hole ? Yes ☐ No ☐
Concrete Pad _____ Ft. x _____ Ft. x _____ Inches



		DEPTH BELOW GRADE	DEPTH FROM TOP OF CASING
Concrete	_____ Ft.		
Cement/Bentonite Grout Mix Yes ☑ No ☐ 5.5 Gallons Water to 94Lb. Bag Cement & 3-5 Lb. Bentonite Powder Other: _____	3.0 Ft.		
	3.0		
Bentonite Seal Pellets ☑ Slurry ☐	2.0 Ft.		
	5.0		
Filter Pack Above Screen	4.6 Ft.		
	9.6		
FILTER PACK MATERIAL Silica Sand ☑ Washed Sand ☐ Pea Gravel ☐ Other: _____ Sand Size _____	9.0 Ft.		
	18.6		
Dense Phase Sampling Cup Bottom Plug Yes ☐ No ☐	3.4 Ft.		
	22.0		
Overdrilled Material Backfill Grout ☐ Sand ☐ Caved Material ☑ Other: _____	_____ Ft.		

DRILLING INFORMATION:

1. Borehole Diameter= 8 1/4 Inches.
2. Were Drilling Additives Used ? Yes ☐ No ☑
   Revert ☐ Bentonite ☐ Water ☐
   Solid Auger ☐ Hollow Stem Auger ☐
3. Was Outer Steel Casing Used ? Yes ☐ No ☑
   Depth= _____ to _____ Feet.
4. Borehole Diameter for Outer Casing _____ Inches.

WELL CONSTRUCTION INFORMATION:

1. Type of Casing: PVC ☑ Galvanized ☐ Teflon ☐
   Stainless ☐ Other _____
2. Type of Casing Joints: Screw-Couple ☑ Glue-Couple ☐ Other _____
3. Type of Well Screen: PVC ☑ Galvanized ☐
   Stainless ☐ Teflon ☐ Other _____
4. Diameter of Casing and Well Screen:
   Casing 2" Inches, Screen 2" Inches.
5. Slot Size of Screen: 0.01
6. Type of Screen Perforation: Factory Slotted ☑
   Hacksaw ☐ Drilled ☐ Other _____
7. Installed Protector Pipe w/Lock: Yes ☐ No ☑

WELL DEVELOPMENT INFORMATION:

1. How was Well Developed ? Bailing ☐ Pumping ☑
   Air Surging (Air or Nitrogen) ☐ Other _____
2. Time Spent on Well Development ?
   _____ 1 hr. Minutes/Hours
3. Approximate Water Volume Removed ? 69 Gallons
4. Water Clarity Before Development ? Clear ☐
   Turbid ☑ Opaque ☐
5. Water Clarity After Development ? Clear ☐
   Turbid ☐ Opaque ☑
6. Did Water have Odor ? Yes ☑ No ☐
   If Yes, Describe gray-black product
7. Did Water have any Color ? Yes ☑ No ☐
   If Yes, Describe gray-black

WATER LEVEL INFORMATION:

Water Level Summary (From Top of Casing)

During Drilling _____ Ft. Date _____
Before Development _____ Ft. Date _____
After Development _____ Ft. Date _____

Driller/Firm C. Lee - TTL Drill Rig Type CME75 Date Installed 11/14/90
Drill Crew TTL Well No. P6 Kerr-McGee Hydrologist J Poor

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION 200' W of CMW 28	BORING NUMBER P7

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Soil: debris, silt, dk brn, fn, dns				0					
	Silt: fn snd dk brn		MH	18	3	1	X	2.0	1.7	Surface product
	Clay: plastic, soft, dk brn									odor
5	Clay: silty, a/a		CL	8	21	2	X	4.5	2.0	product stain
	Gravel: frac chert, <½", 10% snd		GM	13	21 22	3	X	7.0	1.2	
	Silt & clay									
	Sand: brn, fn-vfn, p. grd		MH	19	40	4	X	9.5	1.5	sand stained w/ dk lenses of product
10	Sand: fn-vfn		SP	21	41 42	5	X	12.0	1.9	
	Sand: black									dk stn
	Gravel: sub ang, w/ Snd, crs, black : 10% crs snd		GM	34	41	6	X	14.5	2.5	odor product - blk stn
15	Sand & gravel: < 1", 40% gvl, well graded		SW	32	42 38	7	X	17.0	2.3	stn: black product
	Sand: med w/ 20% gvl, subrd, med, brn - dk brn.									
	Gravel: w/ crs-med sand		GM	33	33	8	X	19.5	2.5	stained sand grains
20	Sand: lt grey, med gravel: 10% > 1", crs snd : 40% crs snd			50+	40 41	9	X	22.0	2.4	odor product black product
	Weathered Eutaw; orange, silty, vfn snd, clay Ins, glauc, mica.		ML	50+	42	10	X	24.5	1.8	
25	Green Eutaw 25.7		ML	50+	0	11	X	27.0	1.6	
	TD 27.0									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/14/90	of

DRILLING METHOD: Hollow Stem Auger - Split B

DRILLED BY: Curtis Lee

LOGGED BY: Jami Poor

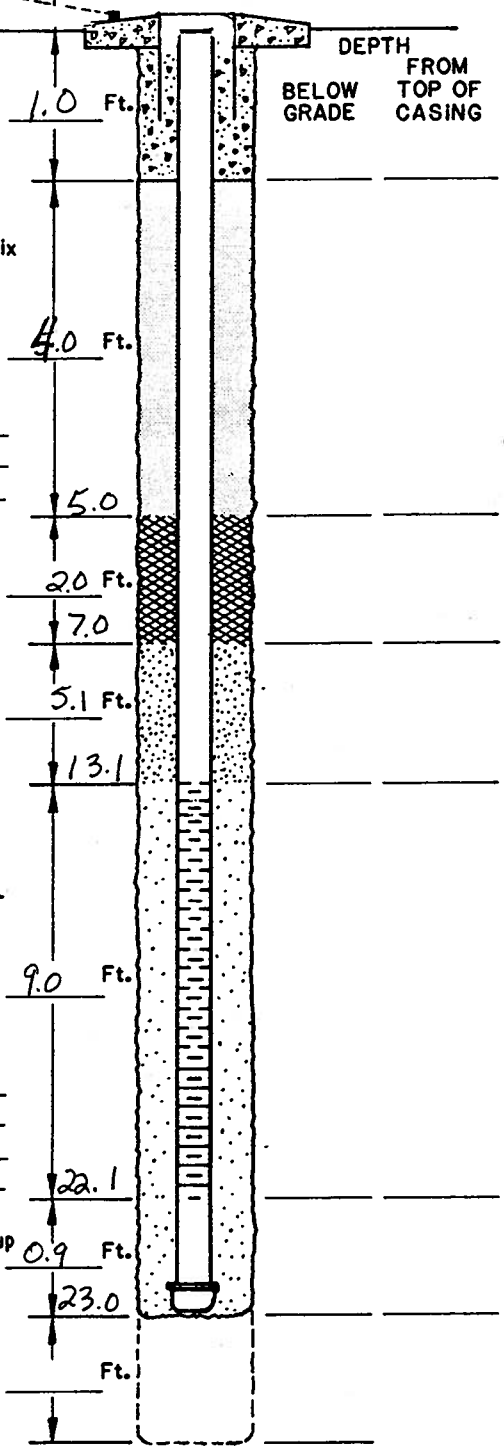
EXISTING GRADE ELEVATION (FT. AMSL)

LOCATION OR GRID COORDINATES

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATIOII DIAGRAM

Protective Pipe
Yes ☐ No ☐
Steel ☐ PVC ☐
Surveying Pin ?
Yes ☐ No ☐

Casing Cap Vent ? Yes ☑ No ☐
Lock ? Yes ☑ No ☐
Weep Hole ? Yes ☐ No ☑
Concrete Pad 4 Ft. x 4 Ft. x 4 Inches



		DEPTH BELOW GRADE	DEPTH FROM TOP OF CASING
Concrete	1.0 Ft.		
Cement/Bentonite Grout Mix (Yes ☑ No ☐; 5.5 Gallons Water to 94Lb. Bag Cement & 3-5 Lb. Bentonite Powder; Other:)	4.0 Ft.		
	5.0		
Bentonite Seal (Pellets ☑ Slurry ☐)	2.0 Ft.		
	7.0		
Filter Pack Above Screen	5.1 Ft.		
	13.1		
FILTER PACK MATERIAL (Silica Sand ☑; Washed Sand ☐; Pea Gravel ☐; Others:; Sand Size)	9.0 Ft.		
	22.1		
Dense Phase Sampling Cup (Bottom Plug Yes ☑ No ☐)	0.9 Ft.		
	23.0		
Overdrilled Material Backfill (Grout ☐ Sand ☐ Caved Material ☑; Other:)	Ft.		

DRILLING INFORMATION:

1. Borehole Diameter= 8 1/4 Inches.
2. Were Drilling Additives Used ? Yes ☐ No ☑
   Revert ☐ Bentonite ☐ Water ☐
   Solid Auger ☐ Hollow Stem Auger ☐
3. Was Outer Steel Casing Used ? Yes ☐ No ☑
   Depth= _____ to _____ Feet.
4. Borehole Diameter for Outer Casing _____ Inches.

WELL CONSTRUCTION INFORMATION:

1. Type of Casing: PVC ☑ Galvanized ☐ Teflon ☐
   Stainless ☐ Other _____
2. Type of Casing Joints: Screw-Couple ☑ Glue-Couple ☐ Other _____
3. Type of Well Screen: PVC ☑ Galvanized ☐
   Stainless ☐ Teflon ☐ Other _____
4. Diameter of Casing and Well Screen:
   Casing 2" Inches, Screen 2" Inches.
5. Slot Size of Screen: 0.010"
6. Type of Screen Perforation: Factory Slotted ☑
   Hacksaw ☐ Drilled ☐ Other _____
7. Installed Protector Pipe w/Lock: Yes ☐ No ☑ Meter Box

WELL DEVELOPMENT INFORMATION:

1. How was Well Developed ? Bailing ☐ Pumping ☐
   Air Surging (Air or Nitrogen) ☐ Other _____
2. Time Spent on Well Development ?
   _____ / 1 hr Minutes/Hours
3. Approximate Water Volume Removed ? 58 Gallons
4. Water Clarity Before Development ? Clear ☐
   Turbid ☑ Opaque ☐
5. Water Clarity After Development ? Clear ☑
   Turbid ☐ Opaque ☐
6. Did Water have Odor ? Yes ☑ No ☐
   If Yes, Describe _____
7. Did Water have any Color ? Yes ☐ No ☑
   If Yes , Describe _____

WATER LEVEL INFORMATION:

Water Level Summary (From Top of Casing)

During Drilling 9.5 Ft. Date 11/14/90
Before Development _____ Ft. Date _____
After Development _____ Ft. Date _____

Driller/Firm Curtis Lee / TTL Drill Rig Type CME 75 Date Installed 11/14/90
Drill Crew TTL Well No. P7 Kerr-McGee Hydrologist J. Poor

SOIL BORING LOG KM—5655

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus, Miss	LOCATION 70' from CME3 10' East of CMW16	BORING NUMBER P8

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Gravel: surface cinders & gvl				No PID Readings Due to Heavy Rain			2.5	1.4	
	Sawdust: black weathered									
	Cinders: black, silty							4.5	1.4	NOTE: Lithology taken from CME3
5								7.0	1.0	
	Sand: 7.5YR 7/0 med-crs w/ 5% gvl		SW					9.0	1.5	
10	Clay: 7.5YR 7/0 sndy, soft Gravel: 7.5YR 6/6 w/ crs sand									
	Sand: crs, subang, 20% gvl		SW					12.0	1.3	
	Gravel: 7.5YR 6/6, subang, fract, brn chert, w/ crs sand, sub rd.		GM					14.5	2.0	
15	: sub rd, ½"-1" chert									
	: ⅛"-½" w/crs white snd, gte		GM					17.0	1.4	
	Sand: med-crs, subrd, 10YR 7/3, w/ 10% gvl., w.graded		SW					19.5	2.3	
20	: vfn-crs, w.graded									
	Gravel: 10YR 6/3, fract., w/ crs sand		GM					22.0	2.0	
	Sand: crs w/ 30% gvl									
	: fn-med, 5YR 6/8 glauc mica,		SW					24.5	2.5	Weathered Eutaw 23.4'
25										
			ML					27.0	2.5	
	: vfn-fn, 5Y 5/3, glauc, mica silty		CL							Eutaw Formation 28.4'
30										
	Total Depth 39.0									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method
- SPLIT-BARREL
- AUGER
- ROCK CORE
- THIN-WALLED TUBE
- CONTINUOUS SAMPLER
- NO RECOVERY
- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

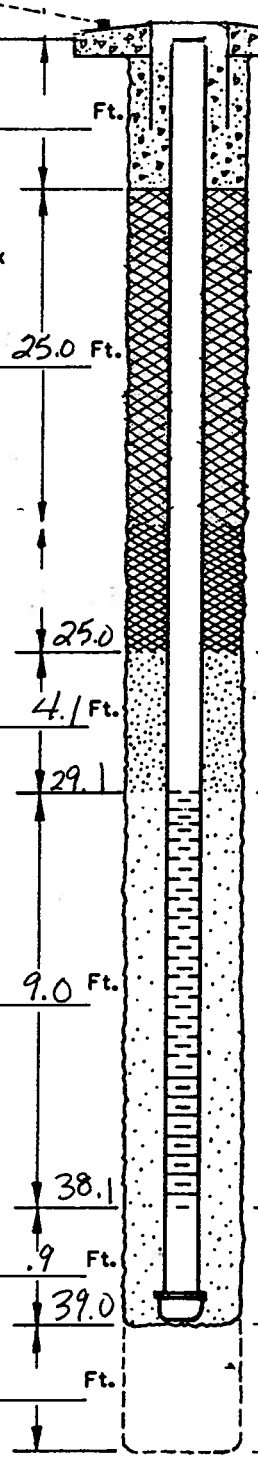
- CLAY
- SILT
- SAND
- GRAVEL
- SILTY CLAY
- CLAYEY SILT
- DEBRIS FILL
- HIGHLY ORGANIC PEAT
- SANDY CLAY
- CLAYEY SAND
- ____
- ____

DATE DRILLED	9/22/89
PAGE	1 of 1
DRILLING METHOD	Hollow Stem Auger
DRILLED BY	TTL, Inc. – C. Lee
LOGGED BY	J.M. Poor
EXISTING GRADE ELEVATION (FT AMSL):	
LOCATION OR GRID COORDINATES	

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

Protective Pipe
Yes ☐ No ☑
Steel ☐ PVC ☐
Surveying Pin ?
Yes ☐ No ☐

Casing Cap Vent ? Yes ☐ No ☐
Lock ? Yes ☑ No ☐
Weep Hole ? Yes ☐ No ☑
Concrete Pad 4 Ft. x 4 Ft. x 6 Inches



DEPTH FROM TOP OF CASING BELOW GRADE

Concrete _____ Ft.

Cement/Bentonite Grout Mix
Yes ☒ No ☐
5.5 Gallons Water to 94Lb. Bag Cement & 3-5 Lb. Bentonite Powder
25.0 Ft.
Other: _____

Bentonite Seal
Pellets ☐ Slurry ☒
25.0

Filter Pack Above Screen
4.1 Ft.
29.1

FILTER PACK MATERIAL
Silica Sand ☐
Washed Sand ☐
9.0 Ft.
Pea Gravel ☐
Other: _____
Sand Size _____
38.1

Dense Phase Sampling Cup
.9 Ft.
Bottom Plug
Yes ☐ No ☐
39.0

Overdrilled Material Backfill
_____ Ft.
Grout ☐ Sand ☐
Caved Material ☐
Other: _____

DRILLING INFORMATION:

1. Borehole Diameter= 8 1/4 Inches.
2. Were Drilling Additives Used ? Yes ☐ No ☑
   Revert ☐ Bentonite ☐ Water ☐
   Solid Auger ☐ Hollow Stem Auger ☐
3. Was Outer Steel Casing Used ? Yes ☐ No ☑
   Depth= _____ to _____ Feet.
4. Borehole Diameter for Outer Casing _____ Inches.

WELL CONSTRUCTION INFORMATION:

1. Type of Casing: PVC ☑ Galvanized ☐ Teflon ☐
   Stainless ☐ Other _____
2. Type of Casing Joints: Screw-Couple ☑ Glue-Couple ☐ Other _____
3. Type of Well Screen: PVC ☑ Galvanized ☐
   Stainless ☐ Teflon ☐ Other _____
4. Diameter of Casing and Well Screen:
   Casing 2" Inches, Screen 2" Inches.
5. Slot Size of Screen: 0.01"
6. Type of Screen Perforation: Factory Slotted ☑
   Hacksaw ☐ Drilled ☐ Other _____
7. Installed Protector Pipe w/Lock: Yes ☑ No ☑
   meter box w/lock

WELL DEVELOPMENT INFORMATION:

1. How was Well Developed ? Bailing ☐ Pumping ☑
   Air Surging (Air or Nitrogen) ☐ Other _____
2. Time Spent on Well Development ?
   _____ / 1 hr. Minutes/Hours
3. Approximate Water Volume Removed ? 90 Gallons
4. Water Clarity Before Development ? Clear ☑
   Turbid ☑ Opaque ☐
5. Water Clarity After Development ? Clear ☑
   Turbid ☐ Opaque ☐
6. Did Water have Odor ? Yes ☐ No ☑
   If Yes, Describe _____
7. Did Water have any Color ? Yes ☐ No ☑
   If Yes , Describe _____

WATER LEVEL INFORMATION:

Water Level Summary (From Top of Casing)

During Drilling _____ Ft. Date _____
Before Development _____ Ft. Date _____
After Development _____ Ft. Date _____

Driller/Firm C. Lee / TTL
Drill Rig Type CME 75
Date Installed 11/14/90
Drill Crew TTL
Well No. P8
Kerr-McGee Hydrologist J. M. Poor

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION S of B34	BORING NUMBER B34

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Gravel: surface silt Sand: fn, lt brn, tan			38	0 0	1	X	2.0	1.1	
	Sand: fn, lt brn/orange, silty		SM	16	0 0	2	X	4.5	2.4	
5	Sand: lt brn-brn, tr gvl : fn, p grd			28	0 0	3	X	7.0	0.6	
▽	Sand & gvl: med, gvl<½", w grd Subrd, lt brn, tan		SW	34	0	4	X	9.5	1.7	slt odor
10	Sand: orange, frac chert, med : vcrs, subrd, lt brn-tan : med-vcrs, gvl : orange, gvl >½"		SW	21	0	5	X	12.0	2.3	
	Gravel: >½", subrd, frac, orange			13	0	6	X	14.5	1.8	
15	Sand: med, orange, subrd, gvl Gravel;		SW GM	12	0	7	X	17.0	1.4	
	Weathered Eutaw 16.3. silt, orange, w/clay, silt, glauc, snd & gvl		ML							
	Green Eutaw 18.0, glauc, mica		CL	?	0	8	X	19.5	2.1	
	TD 19.5									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/12/90	of

DRILLING METHOD: Hollow Stem - Split Barrel

DRILLED BY: C. Lee / TTL

LOGGED BY: J Poor

EXISTING GRADE ELEVATION (FT. AMSL):

LOCATION OR GRID COORDINATES:

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION NW- between tracks	BORING NUMBER B 35

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface Gravels				0 1.0	1	X	2.0		dk soils odor
	Silt/vfn Snd, lt gray, tr. clay		ML	10		2	X	4.5	1.6	
5	Clay: firm, dns, plast, dry, tr mottle orange, pred gray		CL	14	1.0	3	X	7.0	0.4	slt odor
▽	Silt: vfn Snd, lt gray		ML	8		4	X	9.5	1.5	
10	Sand: fn-med, lt gray-lt brn, : med, subrd Clay: fn gn Snd, plastic, soft, gray rolls balls		SM CH	5	1.0	5	X	12.0	1.8	
	Green Entrau 11.9									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/12/90	of

DRILLING METHOD: HSA - Split Spoon

DRILLED BY: C. Lee - TTL

LOGGED BY: J. Poor

EXISTING GRADE ELEVATION (FT AMSL)

LOCATION OR GRID COORDINATES

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION N. of B34	BORING NUMBER B-36

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface gravels & silts.			15	0	1	X	2.0	1.8	
	Clay: lt gray/tan, dry, slty, mot w/ orange, dry; hd dns, dry, slty, tan tr gvl <1/4", 1%; w vfn snd		CL	24	0	2	X	4.5	1.3	
5	Silt: lt tan/white, vfn snd, tr gvl		ML	55	7 12	3	X	7.0	2.5	odor
▽	Sand: fn, med, tan/orange, mot, fract chert		SM							
	Silt: vfn snd lt brn, clay			53	12 12	4	X	9.5	1.8	odor & discoloration
	Sand & gravel: crs-med, lt brn, subrd w/ fract chert.		SW							
10	Silt: dk brn		ML		8					
	Sand & gravel: fn, fract chert, subrd,		SW	19	12	5	X	12.0	1.7	slt brn stn on top of W. Eutaw clay plug
	Weathered Eutaw: 11.7' clay, red, glauc,		ML							
	Green Eutaw: 12.5', green, glauc, fn slt, clay, dns.		CL	50	1 1	6	X	14.5	2.2	
	TD 14.5									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method
  - SPLIT-BARREL
  - AUGER
  - ROCK CORE
  - THIN-WALLED TUBE
  - CONTINUOUS SAMPLER
  - NO RECOVERY
- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

- CLAY
- SILT
- SAND
- GRAVEL
- SILTY CLAY
- CLAYEY SILT
- DEBRIS FILL
- HIGHLY ORGANIC (PEAT)
- SANDY CLAY
- CLAYEY SAND
- ____
- ____

DATE DRILLED	11/13/90
PAGE	of
DRILLING METHOD	HSA-SB
DRILLED BY	C. Lee - TTL
LOGGED BY	J. Poor
EXISTING GRADE ELEVATION (FT AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION E. of B8	BORING NUMBER B 37

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	debris, wood, gravel									
	Silt: brn, indian red, firm, fn snd		ML	37	5 12	1		2.0	1.7	
	: orange									
	Sand: fn, orange/brn, p grd.			25	5 10	2		4.5	2.1	
5	: fn-vfn, tan, w rd-rd, p grd		SP	20	0 0	3		7.0	1.8	
	: w/ gravel - med-crs, w.grd gvl > 1/4", w. rd, lt brn-gry		SW	20	2 2	4		9.5	1.5	odor
10 ▽	: w/ fn gvl, brn, sub rd, : fn-med, rd, brn w/ gry stn.		SW	15	2 2	5		12.0	1.2	Stain dk gray
	: w/ gvl, white w/ fract chert gvl > 1/4", crs snd, rd, w.grd			72	1 2	6		14.5	2.0	odor
15	gravel: > 1/8" < 1/2", w.rd, w.grd, w/ sand - fn-med, brn, indian red		GM	80	1 0	7		17.0	1.8	odor
	Sand: - fn-med, crs, tan, rd-s.rd, w.grd		SW							
	Gravel: w/ crs snd, gvl up to 2", brn, tn		GW	34	0	8		19.5	2.0	
20	Sand: crs, tan/white, sub ang		SW							
	: fn-med, tan p.grd									
	Weathered Eutaw 21.0', silty fn sand, sub rd, sub ang w/ silt		ML	24	0	9		22.0	2.5	
24.5	Eutaw - green 24.0		ML	52	0	10		24.0	2.5	

Located 3' South of untreated ties between rows B-78 & B 79

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method
- SPLIT-BARREL
- AUGER
- ROCK CORE
- THIN-WALLED TUBE
- CONTINUOUS SAMPLER
- NO RECOVERY
- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

- CLAY
- SILT
- SAND
- GRAVEL
- SILTY CLAY
- CLAYEY SILT
- DEBRIS FILL
- HIGHLY ORGANIC (PEAT)
- SANDY CLAY
- CLAYEY SAND
- _____
- _____

DATE DRILLED	PAGE
11/13/90	of
DRILLING METHOD: HSA- SB	
DRILLED BY: C. Lee	
LOGGED BY: Jami Poor	
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION 104' West of GMW 23	BORING NUMBER B 38

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface debres: wood, silt gravel			21	0	1	X	2.0	0.3	
	Silt: firm, dns, clay		ML		0					
	Sand: brn, dk, fn-v fn, dry pgrd		SM	21	4	2	X	4.5	2.0	
5	Silt: -brn, tan, w/ stn,		ML		4					
	Sand: fn-med			25	0	3	X	7.0	2.0	
	Silt: fn-snd		SM		0					
	Sand: fn-med, tan			38	0	4	X	9.0	2.1	Stn, lenses of blk product, no odor
10 ▽	: brn-red		SM		0					
	Gravel: sndy		GM	17	0	5	X	12.0	1.6	oil odor/product
	Sand: crs, med, subrd, fn gvl		SW	?	1	6	X	14.5	2.0	product stain
	Gravel: subrd, w/ snd, w/grd									
15	Sand & gravel: fn-med, w/gvl up to 1", fract.		GP	34	1	7	X	17.0	1.8	black product staining
	Gravel, sand, tan, lt brn		GP		0					
	Sand & gravel			44	0	8	X	19.5	2.0	
	Weathered Eutaw: orange, fn, silt,		ML		0					
20				50	0	9	X	22.0	2.0	
	Eutaw 21.9 - Green									

Located 3' north of untreated ties Between rows B78 and B79 (between tracks and ties)

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL; AUGER; ROCK CORE; THIN-WALLED TUBE; CONTINUOUS SAMPLER; NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY; SILT; SAND; GRAVEL; SILTY CLAY; CLAYEY SILT; DEBRIS FILL; HIGHLY ORGANIC (PEAT); SANDY CLAY; CLAYEY SAND; ____; ____

DATE DRILLED	11/13/90
PAGE	of
DRILLING METHOD	HSA - SB
DRILLED BY	C. Lee - TTL
LOGGED BY	J. Poor
EXISTING GRADE ELEVATION (FT AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION Road Intersection-N of A22	BORING NUMBER B39

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Silt: frac chert, sand, silty snd, road gravel			16	0	1	X	2.0	1.8	
	: brn, tan, dry									
	: red, indian red, sandy, vfn		ML	60	0	2	X	4.5	2.0	Gravel, oils & silts
5										
	Gravel: frac, <1", 40% sand, crs		GP	21	0	3	X	7.0	2.3	
	Sand: fn, lt brn, med, w/rcl, p.grd				0					
			SP	22	0	4	X	9.5	2.0	slt stain - no odor
10 ▽	Sand: med, p.grd, w/1% gvl >½"									
			SP	27	1	5	X	12.0	1.3	
	Sand: crs-med, pgrd, w/2% gvl >1"									
	: fn-med, tan			21	2	6	X	14.5	2.1	
15	Sand: crs, tan, 2% gvl <¼		SW							
	gravel: w/ crs sand		GP		14					odor - slt discolor
	Sand: fn-med, tan lt brn		SM	27	13	7	X	17.0	2.3	
	Gravel: subrd		GP		15					odor
	Sand: lt gray, subrd, w/grd			50	15	8	X	19.5	2.5	odor
	: lt brn, chert fract, 30%		SW							
20	Gravel: frac chert w/ 60% sand, med-crs		GP	52	10	9	X	22.0	2.5	
	Weathered Eutaw: silty sand, vfn, lt brn/orange, clay, silt		ML	65	15	10	X	24.5	2.0	
25	Silt: orange w/ vfn clay varves			54	14	11	X	27.0	2.1	
	: lt brn orange			52	14	12	X	29.5	2.3	
30	Green Eutaw 29.0		CL							
	TD 29.5									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · SILT · SAND · GRAVEL · SILTY CLAY · CLAYEY SILT · DEBRIS FILL · HIGHLY ORGANIC (PEAT) · SANDY CLAY · CLAYEY SAND

DATE DRILLED	PAGE
11/16/90	of

DRILLING METHOD: Hollow Stem-Split Barrel

DRILLED BY: C. Lee TTL

LOGGED BY: J Poor

EXISTING GRADE ELEVATION (FT. AMSL)

LOCATION OR GRID COORDINATES

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION S of B21	BORING NUMBER B40

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Sand, surface debres, lt brn, orange suto rd, med-fn. slty		SM	16	10	1	X	2.0	1.7	odor
	Silt: dk, blk, organic		ML	12	13	2	X	4.5	1.6	
5 ▽	Clay: slty, lt gray, wet, 2% gvl : soft, plastic, silt,		CH	3	15	3	X	7.0	1.2	odor
	Sand: lt gray, med, p.grd, w/1% gvl 1/2"		SM	27	15	4	X	9.5	1.9	odor
10	: lt brn, fn-med : lt brn, med-fn, p grd, rd. : med-crs, lt gray, w grd			7	14	5	X	12.0	2.1	
	Gravel: 90% fract. chert, >1/4", crs sand, rd qtz, w.grd		GW	29	14	6	X	14.5	1.9	
15	: 90% <1/4" frac. chert, & rd qtz, lt brn, crs snd.			49	13	7	X	17.0	1.8	slt stain odor odor
	Gravel: 90% <1/4" sndy crs, w grd.		GW	41	14	8	X	19.5	2.5	
	: 90% >1/4", lt brn, p.grd.									
20	Sand: lt brn, med-fn Gravel: crs. snd, lt brn Clay: lt gray, w/gvl Gravel: >1/4", fn snd, lt gray		SW CL GM	50	15	9	X	22.0	1.8	odor
	Weathered Eutaw 23.0 orange, mica, slty, vfn snd, glauc, tough		ML	51	12 12	10	X	24.5	2.5	Stain 0.4' dk gray
25	Eutaw 26.0 - green glauc, tough		CL	53	14	11	X	27.0	2.0	
	TD 27.0									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/16/90	of
DRILLING METHOD: HSA-SB	
DRILLED BY: C. Lee - TTL	
LOGGED BY: J. Poor	
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION S of CMW 52 & B23	BORING NUMBER B41

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
5										
10	Sand: med-fn, 2% gvl <1/4"		SM							
	Gravel: orange/tan		GM	23	0	1	X	12.0	1.7	
	Sand & gravel, fract chert		SW	23	1	2	X	14.5	2.0	Orange Stains
15	Sand: lt gray, med-crs, gvl, 20% < 1/2"		SP							
	Gravel: fn, 90% < 1/2", 5% > 1 1/2", snd		GL	3	0 0	3	X	17.0	1.2	
	Clay: crs, w/ gvl Sand: crs-med, lt blue/gray, fn-med		SW	47	2 19	4	X	19.5	1.8	Odor -
20	Gravel: lt blue/gray, fn-med, 90% < 1/4" : frac Chert		GW							Odor
	Sand: fn-med : w/ gvl, lt brn, fn, gd grd.		SW	50	33	5	X	22.0	2.3	
	22.9' Weathered Eutaw Orange, slty, fn clay varves, mica,		ML	50	1 1	6	X	24.5	2.1	black product
25				50+	1 1	7	X	27.0	1.5	
	Green Eutaw 28.0'		ML	50	1 1	8	X	29.5	2.5	

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

- DEPTH Depth Top and Bottom of Sample
- REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/16/90	of
DRILLING METHOD: HSA - SB	
DRILLED BY: C. Lee - TTL	
LOGGED BY: J. Poor	
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—5655-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY Columbus	LOCATION West of CMW52	BORING NUMBER B42

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	Surface gravels, silts, tan, brn orange			41	0	1	X	2.0	1.7	
	Silt: black, ash : lt gray, fn snd, moist		ML	33	0 3	2	X	4.5	1.6	
5	Clay: silty, brn/gray, moist : hd, plastic		CH	10	0	3	X	7.0	1.4	
▽	Silt: dk gray, w/clay Sand: dk gray, w/orange brn, : fn, lt gray		ML SP	18	0 0	4	X	9.5	2.1	
10	Clay: dk gray, hd, gvl Gravel: <1/4" 90%, crs snd, subrd, gry		CL GP	37	0 2	5	X	12.0	1.9	
	Clay: silty Gravel: fn, <1/2", subrd, crs snd, 90% > 1/2", 50% snd : subrd, 5% snd.		CL GW	17	0 0	6	X	14.5	2.2	Stain, odor
15	Sand: fn-med, tr gvl, lt brn, Gravel: subrd, sand.		SW GP	27	1	7	X	17.0	2.1	Stain odor
	Sand: lt gray, v crs, subrd w/grd Gravel: >1/4", w/crs snd, rd, wgrd Sand: fn-v fn w/20% gvl		SW GW	15	1 2	8	X	19.5	2.0	odor
20	Clay: w/gvl, gray >1" gvl Sand: fn-v fn, 30% add gvl lt gray, fn-v fn.		SW CL SP	48	2 2	9	X	22.0	2.3	odor, product
	Weathered 22.25		ML	53	29	10	X	24.5	2.5	stain, odor
25				50	8	11	X	27.0	1.7	
	Entry 28.3		OL	51	1	12	X	29.5	2.5	
	TD 29.5									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · DEBRIS FILL · SILT · HIGHLY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · CLAYEY SILT

DATE DRILLED	PAGE
11/16/90	of
DRILLING METHOD: HSA-SB	
DRILLED BY: C. Lee	
LOGGED BY: Jami Boor	
EXISTING GRADE ELEVATION (FT AMSL)	
LOCATION OR GRID COORDINATES	

Recovery System Production

November 1990

NOVEMBER 1990 PRODUCTION DATA FOR TOTAL RECOVERY SYSTEM

DATE	RECOVERY TANK (TOTAL 5 WELL RECOVERY)			
	PUMPED HOURS	READING TIME	HOURS/ READING	GALLONS/ HOUR
01-Nov	128.70	1200	26	254.35
02-Nov	129.90	1200	24	236.19
05-Nov	133.20	1100	71	219.55
06-Nov	134.00	1200	25	151.16
07-Nov	135.90	1100	23	390.22
08-Nov	137.60	800	21	382.40
09-Nov	139.30	1100	27	297.42
12-Nov	145.10	1300	74	370.24
13-Nov	149.50	1400	25	831.37
14-Nov	151.10	1300	23	328.61
15-Nov	152.60	1300	24	295.23
16-Nov	155.20	1500	26	472.37
20-Nov	162.70	1000	91	389.32
21-Nov	164.20	700	21	337.41
26-Nov	171.40	1100	124	274.28
27-Nov	173.20	1000	23	369.68
28-Nov	174.80	1300	27	279.92
29-Nov	177.90	1200	23	636.67
30-Nov	179.70	1000	22	386.49

NOVEMBER 1990 PRODUCTION DATA FOR RECOVERY WELL RW3.

DATE	RW3 DRAW DOWN	WATER ELEV.	DEPTH TO WATER	PUMPED HOURS	READING TIME	HOURS/ ELAPSED	GALLONS/ HOUR	SINKER THICKNESS
01-Nov	-1.90	162.76	16.40	74.60	1200.00	26	5.85	0.50
02-Nov	1.60	161.16	18.00	74.70	1200.00	24	3.94	0.40
05-Nov	2.20	158.96	20.20	75.00	1100.00	71	6.04	0.60
06-Nov	-3.10	162.06	17.10	75.10	1200.00	25	3.15	0.80
07-Nov	0.50	161.56	17.60	75.30	1100.00	23	19.51	1.00
08-Nov	-1.10	162.66	16.50	75.40	800.00	21	14.16	0.80
09-Nov	1.80	160.86	18.30	75.60	1100.00	27	16.08	1.00
12-Nov	-1.10	161.96	17.20	76.10	1300.00	74	19.91	0.70
13-Nov	1.80	160.16	19.00	76.40	1400.00	25	67.41	0.80
14-Nov	-0.60	160.76	18.40	76.40	1400.00	24	0.00	0.50
15-Nov	2.00	158.76	20.40	76.50	1400.00	24	10.93	0.50
16-Nov	-20.40	179.16		76.70	1600.00	26	24.86	
20-Nov	2.60	159.16	20.00	77.30	1000.00	90	10.03	0.40
21-Nov	-2.60	161.76	17.40	77.40	700.00	21	8.65	0.40
26-Nov	3.60	158.16	21.00	78.20	1300.00	126	8.78	5.50
27-Nov	-3.20	161.36	17.80	78.30	1000.00	21	7.54	1.60
28-Nov	2.70	158.66	20.50	78.50	1300.00	27	7.46	0.30
29-Nov	0.00	158.66	20.50	78.70	1200.00	23	22.74	0.40
30-Nov	-0.30	158.96	20.20	78.80	1000.00	22	7.29	0.40

NOVEMBER 1990 PRODUCTION DATA FOR RECOVERY WELL RW4.

DATE	RW4 DRAW DOWN	WATER ELEV.	DEPTH TO WATER	PUMPED HOURS	READING TIME	HOURS/ ELAPSED	GALLONS/ HOUR	SINKER THICKNESS
01-Nov	-0.20	160.42	18.20	300.70	1200.00	26	154.95	0.80
02-Nov	0.80	159.62	19.00	304.00	1200.00	24	129.90	0.60
05-Nov	-0.90	160.52	18.10	348.50	1100.00	71	120.85	0.90
06-Nov	-13.10	173.62	5.00	372.40	1200.00	25	62.98	0.80
07-Nov	13.70	159.92	18.70	373.40	1100.00	23	97.55	2.10
08-Nov	-12.30	172.22	6.40	373.70	800.00	21	42.49	2.10
09-Nov	-0.60	172.82	5.80	373.90	1200.00	28	16.08	2.70
12-Nov	-1.00	173.82	4.80	373.90	1300.00	73	0.00	1.60
13-Nov	5.50	168.32	10.30	374.60	1400.00	25	157.29	0.50
14-Nov	5.70	162.62	16.00	374.70	1400.00	24	10.27	0.30
15-Nov	-11.30	173.92	4.70	374.70	1400.00	24	0.00	0.30
16-Nov	-4.70	178.62		374.70	1600.00	26	0.00	
20-Nov	16.80	161.82	16.80	382.90	1000.00	90	137.01	0.80
21-Nov	0.90	160.92	17.70	384.10	800.00	22	103.82	0.80
26-Nov	1.80	159.12	19.50	392.70	1300.00	125	94.35	1.00
27-Nov	-1.80	160.92	17.70	394.40	1000.00	21	128.26	0.40
28-Nov	1.60	159.32	19.30	396.70	1300.00	27	85.84	0.40
29-Nov	-0.40	159.72	18.90	398.60	1200.00	23	216.01	1.70
30-Nov	0.40	159.32	19.30	400.20	1000.00	22	116.67	0.40

NOVEMBER 1990 PRODUCTION DATA FOR RECOVERY WELL RW5.

DATE	RW5 DRAW DOWN	WATER ELEV.	DEPTH TO WATER	PUMPED HOURS	READING TIME	HOURS ELAPSED	GALLONS/ HOUR	SINKER THICKNESS
01-Nov	-4.20	168.69	9.00	124.20	1200.00	26	35.08	?
02-Nov	7.80	160.89	16.80	125.30	1200.00	24	43.30	3.70
05-Nov	1.80	159.09	18.60	128.30	1100.00	71	60.43	1.20
06-Nov	-1.20	160.29	17.40	129.40	1200.00	25	34.64	0.01
07-Nov	0.90	159.39	18.30	130.50	1100.00	23	107.31	0.00
08-Nov	-0.70	160.09	17.60	131.40	800.00	21	127.47	0.40
09-Nov	0.40	159.69	18.00	132.80	1100.00	27	112.54	0.90
12-Nov	-0.40	160.09	17.60	136.20	1300.00	74	135.36	0.40
13-Nov	-0.60	160.69	17.00	137.10	1400.00	25	202.23	0.70
14-Nov	0.70	159.99	17.70	138.10	1400.00	24	102.69	0.50
15-Nov	-6.40	166.39	11.30	139.10	1400.00	24	109.35	0.50
16-Nov	-11.30	177.69		140.60	1600.00	26	186.46	
20-Nov	14.70	162.99	14.70	148.00	1000.00	18	123.65	3.30
21-Nov	2.90	160.09	17.60	149.10	700.00	21	95.17	1.20
26-Nov	1.10	158.99	18.70	155.10	1300.00	126	65.83	1.90
27-Nov	-1.30	160.29	17.40	156.00	1000.00	21	67.90	1.30
28-Nov	-0.30	160.59	17.10	157.50	1300.00	27	55.98	4.10
29-Nov	-0.10	160.69	17.00	158.50	1200.00	23	113.69	0.80
30-Nov	0.00	160.69	17.00	159.50	1000.00	22	72.92	4.00

NOVEMBER 1990 PRODUCTION DATA FOR RECOVERY WELL RW6.

DATE	RW6 DRAW DOWN	WATER ELEV.	DEPTH TO WATER	PUMPED HOURS	READING TIME	HOURS ELAPSED	GALLONS/ HOUR	SINKER THICKNESS
01-Nov	-0.40	160.69	17.20	98.10	1200.00	26	20.47	2.10
02-Nov	0.00	160.69	17.20	98.60	1200.00	24	19.68	0.80
05-Nov	2.50	158.19	19.70	100.20	1100.00	71	32.23	2.10
06-Nov	-3.00	161.19	16.70	100.80	1200.00	25	18.89	2.20
07-Nov	-1.60	162.79	15.10	101.40	1100.00	23	58.53	2.00
08-Nov	1.60	161.19	16.70	101.90	800.00	21	70.81	2.40
09-Nov	1.10	160.09	17.80	102.60	1100.00	27	56.27	1.90
12-Nov	-1.40	161.49	16.40	104.50	1300.00	74	75.64	0.90
13-Nov	2.70	158.79	19.10	105.30	1400.00	25	179.76	1.00
14-Nov	-0.90	159.69	18.20	106.00	1400.00	24	71.88	0.80
15-Nov	-0.90	160.59	17.30	106.60	1400.00	24	65.61	0.50
16-Nov	-17.30	177.89		107.30	1600.00	26	87.02	
20-Nov	14.90	162.99	14.90	109.90	1000.00	18	43.44	2.00
21-Nov	2.80	160.19	17.70	110.40	700.00	21	43.26	1.60
26-Nov	1.60	158.59	19.30	113.90	1300.00	126	38.40	2.20
27-Nov	-1.60	160.19	17.70	115.20	1000.00	21	98.08	1.30
28-Nov	-0.50	160.69	17.20	117.30	1300.00	27	78.38	1.90
29-Nov	1.20	159.49	18.40	118.70	1200.00	23	159.17	1.80
30-Nov	0.10	159.39	18.50	120.20	1000.00	22	109.38	1.20

NOVEMBER 1990 PRODUCTION DATA FOR RECOVERY WELL RW7.

DATE	RW7 DRAW DOWN	WATER ELEV.	DEPTH TO WATER	PUMPED HOURS	READING TIME	HOURS ELAPSED	GALLONS/ HOUR/	SINKER THICKNESS
01-Nov	-2.00	162.48	15.80	165.10	1200.00	26	38.01	0.70
02-Nov	0.50	161.98	16.30	166.10	1200.00	24	39.36	1.60
05-Nov	1.60	160.38	17.90	169.10	1100.00	71	60.43	1.70
06-Nov	2.10	158.28	20.00	170.10	1200.00	25	31.49	0.70
07-Nov	-3.80	162.08	16.20	171.20	1100.00	23	107.31	0.80
08-Nov	1.00	161.08	17.20	172.10	800.00	21	127.47	1.00
09-Nov	1.00	160.08	18.20	173.30	1100.00	27	96.46	0.80
12-Nov	-0.70	160.78	17.50	176.80	1300.00	74	139.34	0.50
13-Nov	-2.60	163.38	14.90	177.80	1400.00	25	224.70	0.90
14-Nov	1.40	161.98	16.30	179.20	1400.00	24	143.77	0.40
15-Nov	0.50	161.48	16.80	180.20	1400.00	24	109.35	0.20
16-Nov	-16.80	178.28		181.60	1600.00	26	174.03	
20-Nov	16.90	161.38	16.90	186.10	1000.00	18	75.19	0.50
21-Nov	0.80	160.58	17.70	187.10	800.00	22	86.51	0.90
26-Nov	-0.20	160.78	17.50	193.20	1300.00	125	66.92	6.70
27-Nov	0.50	160.28	18.00	194.10	1000.00	21	67.90	0.80
28-Nov	-1.30	161.58	16.70	195.50	1300.00	27	52.25	0.80
29-Nov	0.70	160.88	17.40	196.60	1200.00	23	125.06	0.70
30-Nov	-0.30	161.18	17.10	197.70	1000.00	22	80.21	0.40

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

October 10, 1990

RECEIVED
OCT 11 1990
DEPT. OF ENVIRONMENTAL QUALITY

Charles Chisolm, Head
Office of Pollution Control
Mississippi Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE Oct 11, 1990
COMMENTS extension approved
mailed copy to EPA.

Re: Kerr-McGee Corporation Forest Products Division
Columbus, Mississippi Facility
Consent Order 1636-89
Hazardous Waste Permit HW-90-329-01

Dear Mr. Chisolm:

Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) is under an Administrative Consent Agreement (1636-89) requiring KMCC-FPD to identify the nature and extent of hazardous constituents in the groundwaters at our Columbus, Mississippi Facility. The consent agreement also requires an offsite groundwater quality assessment, a groundwater quality assessment for an onsite Solid Waste Management Unit (below ground loading dock), and a plan for groundwater corrective action proposed on November 1, 1990. In addition, Hazardous Waste Permit HW-90-329-01 prescribes a schedule of implementation for onsite corrective action for the production process area/Hazardous Waste Management Unit.

KMCC-FPD has completed both an onsite and offsite groundwater quality assessment and will prepare and submit a groundwater quality assessment report on November 1, 1990. This addendum to the previously submitted RCRA Part B Permit application of April 12, 1990 will incorporate assessment results into the RCRA Part B Permit. However, KMCC-FPD requests an extension from November 1, 1990 to March 31, 1991 to propose a plan for corrective action offsite and for the SWMU. KMCC-FPD is requesting this extension for the following reasons:

1) Corrective action onsite was implemented on August 20, 1990. The implementation schedule for onsite corrective action contained in Hazardous Waste Permit HW-90-329 required startup of corrective action on December 10, 1990. Preliminary indications are that the recovery wells are performing well, and KMCC-FPD will provide performance data of the operating system on November 1, 1990. KMCC-FPD desires to use data gathered from the operating system to finalize design for the offsite and SWMU corrective action systems.

2) An additional onsite corrective action recovery well has been installed in Well RW2. Operational data from this well will also be used to design the expanded system.

3) Two new Eutaw (CME5, CME6) monitoring wells have been installed and sampled six months ahead of schedule and show no detectable concentration of Appendix VII constituents indicating that the deep zone has not been impacted.

4) KMCC-FPD obtained access to private property located South of the facility to perform the assessment. However, KMCC-FPD does not have an access agreement to the private property for installation of recovery wells, pipelines, utilities and structures. KMCC-FPD has met with a representative of the owners of the property to pursue arrangements which will allow construction of a recovery system. KMCC-FPD will continue discussions with the owners of the property in regard to securing access for a corrective action system.

Based on the aforementioned reasons, I believe KMCC-FPD can propose an expansion of the existing corrective action system designed and constructed on sound technically supportable criteria on March 31, 1991.

In a telephone conversation on October 10, 1990, with Mr. Thad Hopper of your staff, I outlined KMCC-FPD's request to extend from November 1, 1990 to March 31, 1991, the schedule of implementation for the proposal to extend the corrective action system. In addition, KMCC-FPD committed to meet with Mr. Hopper on October 30, 1990 in Columbus, Mississippi to discuss in detail the results of the groundwater assessment.

Your prompt consideration of this request for an extension will be greatly appreciated. In the interim, if I can provide you with additional information, please telephone me at (405) 270-2391, or Nick Bock at 405-270-2394.

Very truly yours,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Jeffrey H. Bull (NCB)

Jeffrey H. Bull
Manager, Environmental Control,
Regulatory Affairs, Operations East

JHB:wpc

cc: N. Bock
J. Getz, Facility
J. Poor, KM Hydrology
S. Spengler, MBPC

Comp #4

FILE COPY

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

September 20, 1990

Mr. Nick Bock
Staff Environmental Specialist
Forest Products Division
Kerr-McGee Chemical Corporation
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

Re: Office of Land and Water Resources
Applications for Permitting Recovery
Wells at Columbus, MS

Enclosed, as per our conversation on September 20, 1990, are the applications for permitting groundwater recovery wells at Kerr-McGee's Columbus, Mississippi, facility. According to regulations adopted by Mississippi Department of Environmental Quality, all wells of six inches or greater in diameter are required to be permitted with the Office of Land and Water Resources.

The forms are largely self-explanatory; however, please be sure to include a $10.00 fee per well, the landowner's social security or tax ID number (for computer tracking purposes), and a map indicating the locations of the wells. If you have questions concerning this matter, please contact Mr. Jamie Crawford, Office of Land and Water Resources, (601) 961-5200.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-3:lr
Enclosure
pc: Mr. Jamie Crawford, Environmental Administrator
Division of Permitting and Monitoring

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

August 31, 1990

RECEIVED
SEP - 4 1990
DEPT. OF ENVIRONMENTAL QUALITY

Federal Express - Overnight

Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau Of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

OF SOLID WASTE
VIEWED BY TH
DATE Sept 6, 1990
COMMENTS Mail copy
to EPA.

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Bimonthly Progress Report -
Consent Order 1636-89
September 1, 1990 Report

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 agreed consent order between Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) and the Mississippi Commission on Environmental Quality.

Off-site exploratory field work to determine locations of releases of hazardous constituents began on July 23rd and concluded August 3rd. A total of 15 soil borings were drilled and sampled for both lithology and visual observations. Eight alluvial monitor wells were placed off-site, south of the property line. Five alluvial wells were placed in the black tie storage area to the east of the process area. In addition, two Eutaw wells were installed in areas uncontaminated by overlying free creosote product, as replacement monitor wells for CME1 and CME2. Figure 1 locates all new soil borings and monitor wells installed during this field work. An inventory of each of these wells and borings is tabulated on Table 1. Groundwater samples from the new stainless steel wells were collected during the third quarter sampling program of the compliance wells and were submitted for analysis. Soils were collected from borings and are presently being analyzed with a gas chromatograph for the qualitative presence of creosote constituents.

Water levels of all wells were measured on August 3rd, and August 7th so that potentiometric maps can be constructed on the static water conditions. Water levels on predetermined wells will then be measured periodically to determine the pumping effects of the recovery system to the potentiometric surface.

Five recovery wells spaced at 100 foot intervals along the facility's southwestern property boundary will be pumped at a sufficient rate to form a hydrological barrier to prevent groundwater from leaving the site. Piezometers, placed between these recovery wells will be measured periodically to determine the radius of influence caused by the pumping wells. Individual pumps were installed in each recovery well and groundwater pumping was initiated August 20th. Presently, the recovery system is in the start-up phase.

Based on your letter of approval for the 1990 third and fourth quarterly sampling programs, third quarter sampling was conducted August 6, 1990 for the following monitor wells: CMW1AR, CMW6, CMW7, CMW8, CMW14, CMW16, CMW22, CMW3, CMW4, CMW9, CMW10, CMW11, and CME3, CME4. Newly installed monitor wells CMW53, CMW54, CMW55, CMW56, CMW57, CMW24, CMW26, CMW27, CME5 and CME6 were also sampled and submitted for analyses. The results of the third quarter event will be included in the October bimonthly report after KMCC-FPD has received and reviewed the groundwater analyses.

The schedule of implementation of the Groundwater Quality Assessment Program is progressing as planned. Data from the recent field investigation and from the pumping of the recovery wells is presently under evaluation and the off-site and on-site corrective action addendum will be submitted November 1, 1990. As discussed with Mr. Hopper, KMCC-FPD plans to schedule a meeting in Columbus, the week of October 29 to discuss the contents of the report. Your participation would be appreciated.

If you have any questions regarding this project or this report, feel free to contact me at (405) 270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCT DIVISION

Nick Bock / NB

Nick Bock
Staff Environmental Specialist

JMP/NB/ww
Enclosures

CC: J. Getz
R. Jones
R. Widmann
J. Poor

TABLE 1. INVENTORY OF NEWLY INSTALLED WELLS (JULY-AUGUST, 1990)
KMCC-FPD
Columbus, Mississippi

Well Number	Depth of Well Below TOC (ft.)	Depth of Well Below Ground Surface (ft.)	Height of Casing Above Grade (ft.)	Screened Internal (ft.)	Elevation Top of Eutaw Weathered	Elevation Top of Eutaw Green	Top of Casing Elevation (ft.)	Surveyors Pin Elevation (ft.)	Surface Elevation (ft.)
CMW-23	13.95	14.00	-0.05	4.2-13.2		162.35	175.50	175.91	175.55
*CMW-24	19.22	19.50	-0.28	9.0-18.7	158.03	157.13	173.35	173.73	173.63
CMW-25	22.57	23.00	-0.43	13.2-22.2	157.93	154.13	180.30	180.79	180.73
CMW-26	25.45	25.80	-0.35	15.2-24.2	156.14	152.14	181.29	181.75	181.64
*CMW-27	14.06	14.80	-0.74	8.15-12.85	162.91	161.51	176.07	176.82	176.81
CMW-51	24.18	24.50	-0.32	12.0-21.0	159.46	154.46	181.14	181.54	181.46
CMW-52	20.45	21.00	-0.55	11.2-20.2	157.14	156.44	177.09	177.68	177.64
CMW-53	20.50	20.70	-0.20	10.9-19.9	156.04	152.64	175.84	176.07	176.04
*CMW-54	21.63	22.00	-0.37	11.2-20.2	155.83	152.63	176.26	176.65	176.63
*CMW-55	24.28	24.50	-0.22	13.6-22.6	156.19	152.39	178.97	179.29	179.19
*CMW-56	21.11	21.50	-0.39	10.55-19.55	158.35	155.95	176.26	176.67	176.65
*CMW-57	23.59	24.00	-0.41	13.2-22.2	156.92	154.32	180.31	180.79	180.72
*CME-5	47.72	47.80	-0.08	36.0-45.9	155.48	154.58	173.40	173.64	173.48
*CME-6	52.88	53.00	-0.12	41.4-51.1	158.91	156.61	179.49	179.76	179.61
B-15			-180.93		157.43	154.63			180.93
B-16			-181.63		-----	158.63			181.63
B-17			-181.37		158.37	152.77			181.37
B-18			-176.00		156.00	153.00			176.00
B-19			-181.10		157.60	157.40			181.10
B-20			-175.27		157.27	156.47			175.27
B-21			-177.82		154.40	153.82			177.82
B-22			-176.65		163.75	160.65			176.65
B-23			-179.20		156.00	152.20			179.20
B-24			-174.43		158.83	157.93			174.43
B-25			-179.46		156.26	150.71			179.46
B-26			-179.88		158.88	157.78			179.88
B-27			-179.08		157.53	155.58			179.08
B-28			-180.55		162.05	157.05			180.55
B-29			-179.19		156.19	153.49			179.19
B-30			-180.18		157.38	156.08			180.18
B-31			-177.59		154.69	153.29			177.59
B-32			-178.89		165.24	162.39			178.89
B-33			-176.32		153.07	152.72			176.32

*CMW = Shallow Alluvial Stainless Steel Monitor Well
CMW = Shallow Alluvial PVC Corrective Action Well - Interior to the Plume
*CME = Eutaw Formation Stainless Steel Monitor Well
B - Soil Borings

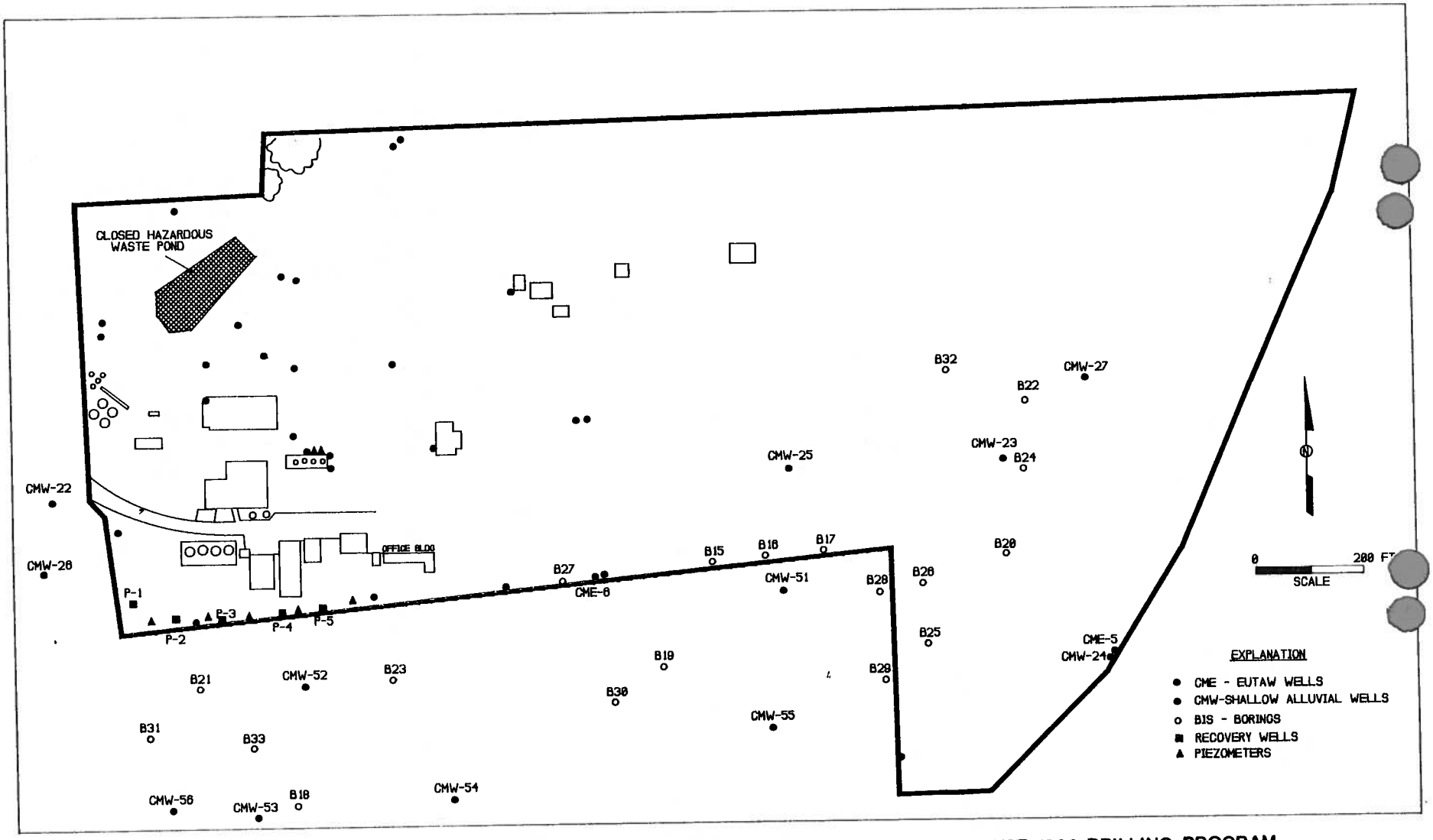


FIGURE 1: SOIL BORINGS AND MONITOR WELL LOCATIONS INSTALLED DURING JULY/AUGUST 1990 DRILLING PROGRAM, KERR-McGEE CHEMICAL CORP.-FPD, COLUMBUS, MS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

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

AUG 27 1990

4WD-RCRAFFB

Mr. Jeffrey H. Bull
Environmental Control & Regulatory Affairs
Kerr-McGee Chemical Corporation
Forest Products Division
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

RE: Receipt of Certification/Demonstration Submitted Pursuant to 40 CFR 268.8
Facility EPA ID No.: MSD081387730;

Transmittal of Outreach on Final Rules for Toxicity Characteristic (TC) and Land Disposal Restrictions (LDR) Third Third Scheduled Wastes

Dear Mr. Bull:

This letter is to acknowledge receipt by the Director of the Waste Management Division, of the certifications and demonstrations submitted pursuant to 40 CFR 268.8 by Kerr-McGee Chemical Corporation.

The certification and demonstration for "soft hammer" waste, as outlined in 40 CFR 268.8, is self-implementing. Section 268.8(e) states that:

> Once the certification is received by EPA, and provided that the wastes have been treated by the practically available technology (if any), determined by the generator to yield the greatest environmental benefit, the wastes may be disposed in a landfill or surface impoundment unit meeting the requirements of 40 CFR 268.5(h)(2), unless otherwise prohibited by EPA.

Effective May 8, 1990, 40 CFR 268.8 is no longer in effect (Federal Register, Vol. 55, 22688, June 1, 1990).

A second purpose of this letter is to offer guidance on the following subjects:

- LDR regulations for Third Third Scheduled Wastes (3rd 3rds) promulgated in the Federal Register, Vol. 55, 22520-22720, June 1, 1990; and

- Wastes subject to the TC Rule (TC wastes).

As a result of regulations promulgated in the Federal Register referenced above, almost all RCRA hazardous wastes are now subject to LDR treatment standards. The "soft hammer" regulations of 40 CFR §§268.8, 268.33(f), and 268.34(h) are no longer in effect. However, all other parts of 40 CFR 268 (the LDR regulations) are still in effect, and some additional requirements and parts have been added. All wastes addressed in the Third Third Rule have been granted a national capacity variance of at least three months. Therefore, the earliest effective date for Third Third wastes is August 8, 1990. Please note that all such wastes which contain halogenated organic compounds listed in Appendix III of 40 CFR 268 are currently California List wastes, subject to 40 CFR §268.32 and the treatment technology of §268.42. On August 8, 1990, these wastes are prohibited from land disposal unless the specific treatment standards promulgated for their waste codes in the Third Third Rule are met.

The Third Third Rule has made major amendments and additions to LDR requirements, including those in the following sections:

- §268.7: Notices, certifications, waste analysis;

- §268.3: The dilution prohibition;

- §268.2: Definitions;

- §§268.41 through 268.43: Tables of treatment standards: hundreds of added waste codes plus format changes; all previously set standards are repeated in 55 FR 22689-22714, June 1, 1990; many metal-containing wastes and some organic wastes have recovery as the LDR treatment standard.

- 40 CFR 268 Appendices IV and V: Treatment technologies as LDR standards for lab packs containing certain kinds of wastes.

- §148: LDR Requirements for underground injection wells (UIC program);

- §262.11: Generators must determine if a listed waste also has a characteristic that is not addressed by the listing: *major change in the way generators determine what waste codes to assign to their wastes.*

The TC Final Rule was signed by EPA Administrator William Reilly on March 5, 1990, and was published in the Federal Register, Vol. 55, 11789-11877, March 29, 1990. A correction to this final rule was published in the Federal Register, Vol. 55, 26986-26998, June 29, 1990. A second technical correction is scheduled for publication shortly. TC waste handlers who had not previously notified EPA and obtained an EPA ID Number were required to notify of regulated waste activity by June 23, 1990. Treatment, storage, and disposal facilities (TSDFs) and large quantity generators (total hazardous waste greater than or equal to 1000 kg, approximately 2200 lb, in a calendar month) must begin managing TC wastes as hazardous wastes by September 25, 1990. By March 29, 1991, TC waste must be managed as hazardous waste by small quantity generators (total hazardous waste greater than 100 kg but less than 1000 kg in a calendar month).

On September 25, 1990, the TC will replace the Extraction Procedure Toxicity Characteristic (EP Tox) for determining whether a solid waste is hazardous by the characteristic of toxicity, due to the presence of leachable hazardous constituents. The Toxicity Characteristic Leaching Procedure (TCLP), Method 1311, is the leach test which will replace the EP Toxicity leach test, Method 1310, for producing a waste extract to be analyzed for the presence of hazardous constituents.

The TC Rule adds 25 additional organic constituents to the 8 metals and 6 pesticide/herbicide constituents of EP Tox. The TC waste codes for the 14 EP Tox constituents remain the same (D004-D017). The new TC waste codes range from D018 through D043, and are in effect on September 25, 1990.

To summarize briefly the TC requirements:

- On September 25, 1990, the TC Rule adds new requirements for existing facilities, both permitted and interim status; newly regulated facilities; and large quantity generators.

- The notification date for all newly regulated generators and TSDFs was June 23, 1990.

- The effective date for small quantity generators to manage their TC wastes as hazardous is March 29, 1991.

- Also by March 29, 1991, newly regulated land disposal facilities must submit Part B applications and demonstrate compliance with groundwater monitoring, financial assurance and insurance requirements; or lose interim status (similar to the LOIS of 1985).

The new TC wastes, D018-D043, do not have LDR treatment standards at the present time. The RCRA statute requires EPA to set LDR treatment standards for newly listed or identified wastes within six months of the date of promulgation (by September 25, 1990 for TC wastes). No "hard hammer" prohibiting land disposal is specified by the statute if the Agency fails to meet this deadline. LDR treatment standards for the current EP Tox wastes, D004-D017, are those promulgated in the Third Third Rule. The number of wastes containing EP Tox constituents that, as generated, would fail the TCLP and pass the EP, is expected to be small. Until the Agency sets LDR treatment standards for TC wastes, the wastes just described, which fail only the TCLP, would not be subject to LDR.

Enclosed are copies of the following documents which provide information on the LDR Third Third Final Rule and the TC Rule:

Third Third:

1. 55 FR 22520-22720, June 1, 1990
2. Environmental Fact Sheet

TC Rule:

1. 55 FR 11798-11877, March 29, 1990
2. 55 FR 26986-26998, June 29, 1990
3. Environmental Fact Sheet
4. Tips for Generators
5. Guidance for Small Quantity Generators
6. Industry-Specific Informational Brochures

If you have questions, please contact Dr. Judy Sophianopoulos of my staff at (404) 347-7603.

Sincerely yours,

Doyle T. Brittain
Chief, West Unit
Waste Compliance Section

Enclosures

cc: Sam Mabry, Director, MDEQ, Hazardous Waste Division

Kerr-McGee Columbus Comp. #4

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

July 25, 1990

Mr. Nick Bock
Staff Environmental Specialist
Kerr-McGee Chemical Corporation
Forest Products Division
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

Re: Analytical Schedule for 3rd and 4th Quarter of 1990 for Columbus, MS Facility MSD990866329

The above referenced document, received on July 10, 1990, is approved. We anticipate, as stated in your letter, that the Post-closure Permit for Kerr-McGee, Columbus, will be in effect for fourth quarter sampling.

If you have questions or comments, please call me at (601) 961-5171.

Sincerely,

Thad Hopper

Thad Hopper
Hazardous Waste Division

TH-5:lr
pc: Mr. James H. Scarbrough, EPA

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

July 7, 1990

RECEIVED
JUL 1 1990
Dept. of Environmental Quality
Bureau of Pollution Control

Mr. Thad Hopper
Environmental Scientist
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Analytical Schedule for 3rd and
4th Quarters of 1990

Dear Mr. Hooper:

As a follow-up to our telephone conversation on July 6, 1990, Kerr-McGee Chemical Corporation Forest Products Division (KMCC-FPD) has prepared the analytical groundwater monitoring schedule for the third and fourth quarter of 1990 for our Columbus, Mississippi wood treating facility. KMCC-FPD will, in the third quarter 1990, begin the analytical schedule outlined in the draft RCRA Post-Closure Permit of the closed surface impoundments with the exception of quantification of benzene and total xylene. The following analytical schedule is provided for the third and fourth quarters of 1990:

Third Quarter 190 Analytical Schedule - August 6, 1990

Well Number	Parameters*
CMW1AR	ADE
CMW6	ADE
CMW7	ADE
CMW8	ADE
CMW14	DE
CMW16	DE
CMW22	DE
CME3	DE
CME4	DE

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE July 24, 1990
COMMENTS Approved, KMCC will be under Permit 4th Quarter / Copy to EPA.

A - Indicators in Quad
D - Base/Neutral extractable K001 Appendix VII Constitutents
E - Acid extractable K001 Appendix VII Constitutents

* Water levels and product thickness will be measured.
Field pH and field specific conductance will be determined.

FOREST PRODUCTS

Third Quarter 190 Analytical Schedule - August 6, 1990
(Continued)

Well Number	Parameters*
CMW3	H**
CMW4	H**
CMW9	H**
CMW10	H**
CMW11	H**

H - Naphthalene/Acenaphalene (using GC method proposed July 3, 1990)
- Total Phenol (Method 420.2 Standard Method)

** Quantified in the absence of free product.

Fourth Quarter 1990 Analytical Schedule - November 1990

Monitoring wells and parameters as specified by the Post-Closure Permit for the closed impoundments.

If you have questions or if I may provide additional information, please telephone me at (405) 270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environment Specialist

NB:wpc

cc: J. Getz, Facility
J. Poor, Hydrology

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

July 5, 1990

CERTIFIED MAIL NO. P 443 383 162

Mr. John Getz, Plant Manager
Kerr-McGee Chemical Corporation
Forest Products Division
P.O. Box 906
Columbus, Mississippi 39701

Dear Mr. Getz:

Re: May 31 RCRA Compliance
Evaluation Inspection

Enclosed please find an inspection report and checklist that was completed as a result of a Compliance Evaluation Inspection at Kerr-McGee on May 31, 1990.

The inspection was performed to determine the facility's compliance with Mississippi Hazardous Waste Management Regulations Parts 262, 265, and 268. No deficiencies or violations were found during the inspection.

If you have any questions, do not hesitate to contact me at (601) 961-5171.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-37:lr
Enclosures
pc: Mr. James H. Scarbrough, EPA (w/enclosures)

ETC

DATA MANAGEMENT

SUMMARY REPORT

FOR

KERR-MCGEE CHEMICAL CORPORATION

KMCCFPDCOL

RECEIVED
JUL - 3 1990
DEPT. OF ENVIRONMENTAL QUALITY

MAY, 1990

ETC

DM-OL

Summary of results for all parameters tested, by order link.

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
JUL - 3 1990
DEPT. OF ENVIRONMENTAL QUALITY

Federal Express - Overnight

July 2, 1990

Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau Of Pollution Control
P.O. Box 10385
Jackson, Ms. 39289-0385

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE July 24, 1990
COMMENTS Copy to EPA.

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Bimonthly Progress Report - Consent Order 1636-89
July 1, 1990 Report

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 agreed consent order between Kerr-McGee Chemical Corporation, Forest Products Division and the Mississippi Commission on Environmental Quality.

Second quarter sampling was conducted May 1, 1990 for the following monitor wells; CMW1AR, CMW6, CMW7, CMW8, CMW15, CMW16, CMW20, CMW21, CMW22, and CME1, CME2, CME3, and CME4. The results of the second quarter event are enclosed and KMCC-FPD is reviewing the groundwater analyses.

Geophysical International performed a geophysical (Petro Sonde) survey of on-site and off-site areas from May 14th through May 18th. A total of 30 sites (see attached map) were recorded to obtain both Eutaw formation and water level depths. The resulting information is being utilized to obtain access agreements for the placement of off-site monitor wells and soil borings. KMCC-FPD is currently pursuing access agreements with adjacent property owners.

Five recovery wells spaced at 100 foot intervals were placed along the facility's southwestern property boundary. A location map and well completion details for these recovery wells are attached. Individual pumps will be installed in each recovery well later in July for free creosote product recovery. The wells will be pumped at a sufficient rate to form a hydrological barrier to prevent groundwater from leaving the site. Piezometers, placed between these recovery wells will be measured periodically to determine the radius of influence caused by the pumping wells.

FOREST PRODUCTS

Recovery wells were not placed south of the black tie storage area as previously planned. Three soil borings drilled to the Eutaw formation proved this area to be visually clean of creosote product. A piezometer was installed in this area to periodically record water levels.

KMCC-FPD received the transmittal of the Draft RCRA Post-Closure Permit on May 29, 1990. Comments to the draft permit attachments were addressed in a letter dated June 14, 1990. A meeting with Mr. David Pentacost and Mr. Thad Hopper of your staff was held on June 28th in Jackson, Mississippi to discuss modules I-IV of the draft permit.

As a result of our June 28th meeting, KMCC-FPD understands that the MBPC is evaluating:

*The requirements of Contingence and Waste Analysis Plans for the Closed Waste Management Unit

*Corrective action activities resulting from the release of hazardous constitutents from the treatment/ processing of wood products

*Groundwater monitoring of total phenol and naphthalene as indicators of wood preserving constitutents for corrective action effectiveness monitoring wells until such time that K001 Appendix VII constitutents require quantification

*No requirement to routinely monitor background water quality until ongoing corrective measures approach clean up standards

*Replacement of deep monitoring wells CME-1 and CME-2 to areas uncontaminated by free cresote product

*Adoption of analytical methods currently performed by KMCC-FPD's contract laboratory

*Submittal of a corrective action feasibility study to address potential contamination in the Eutaw aquifer.

Off-site exploratory field work will begin in late July or early August. Approximately 20 soil borings will be drilled and sampled for both lithology and free product presence. Approximately three to five monitor wells will be installed off-site.

The schedule of implementation of the Groundwater Quality Assessment Program is progressing as planned. The off-site and on-site corrective action addendum will be submitted November 1, 1990. If you have any questions regarding this project or this report, feel free to contact me at 405 (270-2394).

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCT DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

JMP/NB/ww

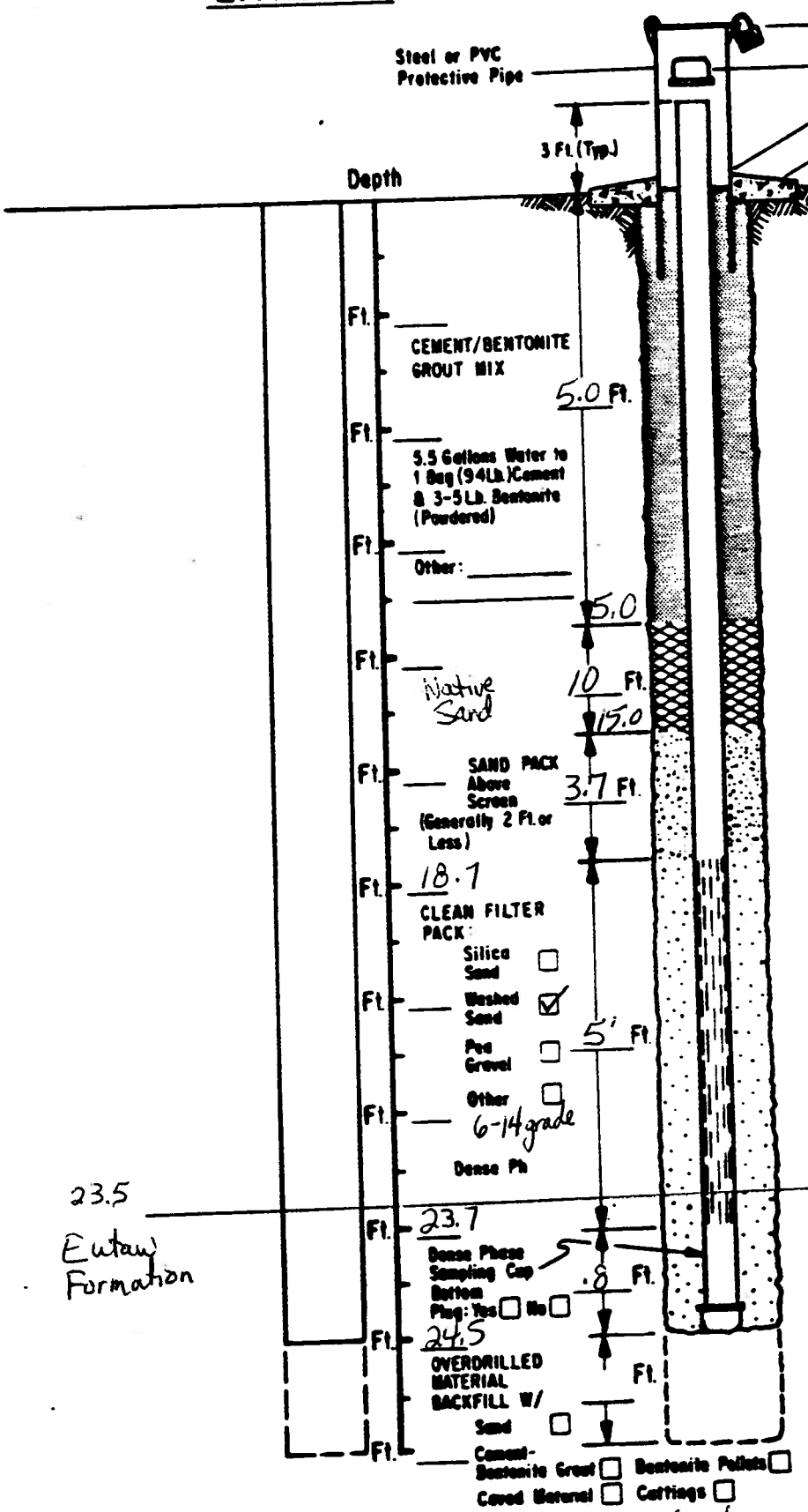
Enclosure

CC: w/o enclosures

J. Getz
R. Jones
R. Widmann
J. Poor
K. Saffell

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☐ No ☐

Casing Cap w/Vent: Yes ☐ No ☐

Weep Hole: Yes ☐ No ☐

Concrete Pad: Yes ☐ No ☐

1. Type of Casing: PVC ☐ Galvanized ☒ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☒ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☒ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 10" inches, Screen 10" inches
5. Slot Size of Screen: .030"
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ wire wound
7. Installed Protector Pipe w/Lock: Yes ☐ No ☒
8. Borehole Diameter = 13 3/4 Inches.
9. Were Drilling Additives Used? Yes ☐ No ☒ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☒ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☒ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☒ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 13 hr Minutes/Hours
14. Approximate Water Volume Removed? 250 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ☒
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ☒
17. Did the Water have Odor? Yes ☒ No ☐ If Yes, Describe creosote product
18. Did Water have any Color? Yes ☒ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development _____ Ft. Date _____
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

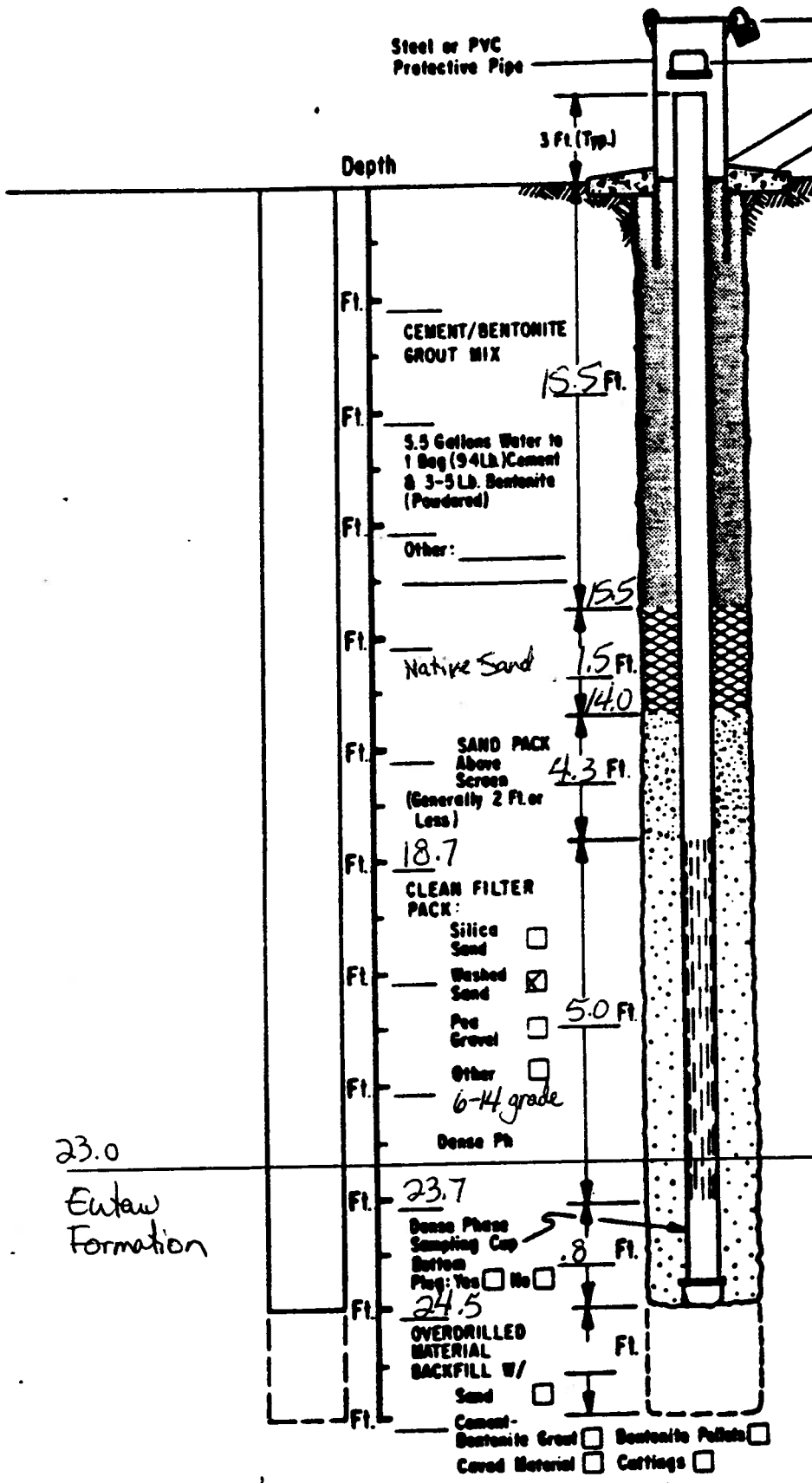
Well No. RW3 | Date Installed 5/23/90 | Drill Rig Type CME 75

Driller/Firm Curtis Lee / TTL | Drill Crew TTL | Kerr-McGee Hydrologist J. Poor

Columbus, Mississippi

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☐ No ☑

Casing Cap w/Vent: Yes ☐ No ☑

Weep Hole: Yes ☐ No ☑

Concrete Pad: Yes ☐ No ☑

1. Type of Casing: PVC ☐ Galvanized ☑ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☑ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☑ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 10.0 inches, Screen 10.0 inches
5. Slot Size of Screen: 0.030"
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ wire wound
7. Installed Protector Pipe w/Lock: Yes ☑ No ☐
8. Borehole Diameter = 13 3/4 Inches.
9. Were Drilling Additives Used? Yes ☐ No ☑ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☑ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☑ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☑ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 3 HRS Minutes/Hours
14. Approximate Water Volume Removed? 300 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ☑
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ☑
17. Did the Water have Odor? Yes ☑ No ☐ If Yes, Describe creosote product
18. Did Water have any Color? Yes ☐ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development _____ Ft. Date _____
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

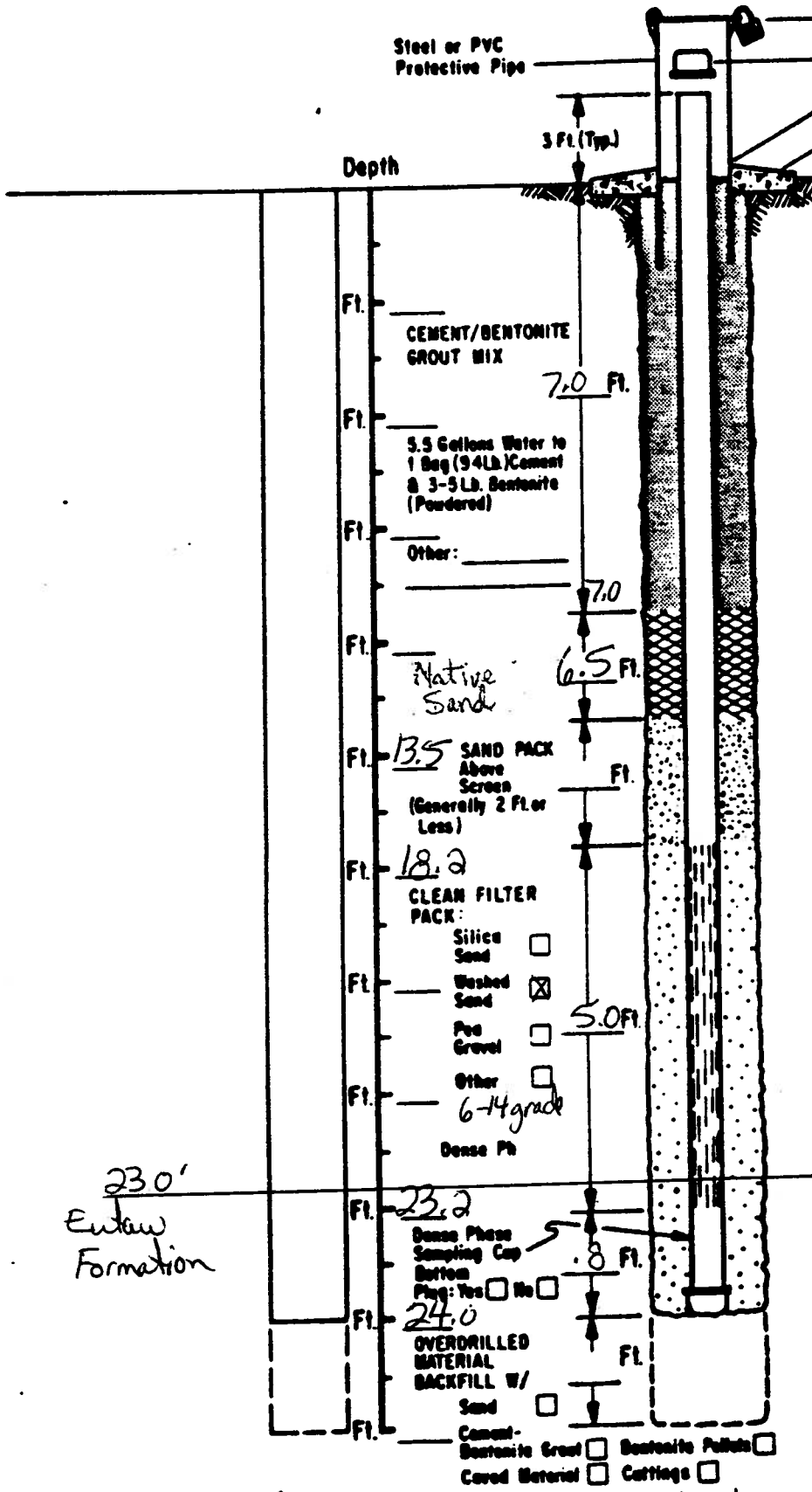
Well No. RW4 | Date Installed 5/22/90 | Drill Rig Type CME 75

Driller/Firm TTL/Curtis Lee | Drill Crew TTL | Kerr-McGee Hydrologist J. Poor

Columbus, Mississippi

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☐ No ☑

Casing Cap w/Vent: Yes ☐ No ☑

Weep Hole: Yes ☐ No ☑

Concrete Pad: Yes ☐ No ☑

1. Type of Casing: PVC ☐ Galvanized ☑ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☑ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☑ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 10.0" inches, Screen 10." inches
5. Slot Size of Screen: .030"
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ wire wound
7. Installed Protector Pipe w/Lock: Yes ☐ No ☑
8. Borehole Diameter = 13 3/4 Inches.
9. Were Drilling Additives Used? Yes ☐ No ☑ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☑ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☑ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☑ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 3 HRS Minutes/Hours
14. Approximate Water Volume Removed? 265 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ☑
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ☑
17. Did the Water have Odor? Yes ☑ No ☐ If Yes, Describe creosote product
18. Did Water have any Color? Yes ☑ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development _____ Ft. Date _____
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

Well No. RWS

Driller/Firm Curtis Lee / TTL

Date Installed 5/22/90

Drill Crew TTL

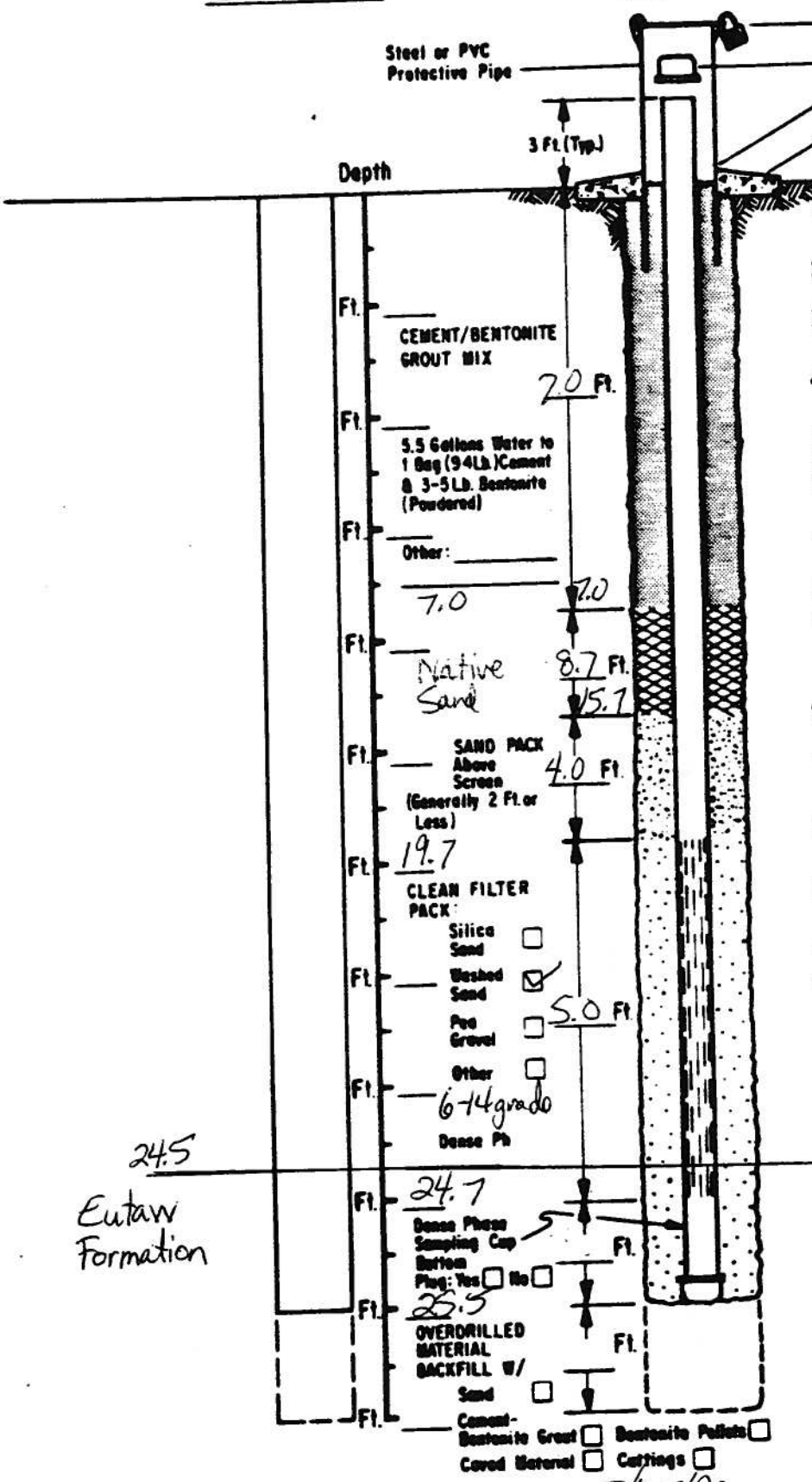
Drill Rig Type CME 75

Kerr-McGee Hydrologist J. Poor

Columbus Mississippi

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☐ No ☐

Casing Cap w/Vent: Yes ☐ No ☐

Weep Hole: Yes ☐ No ☐

Concrete Pad: Yes ☐ No ☐

1. Type of Casing: PVC ☐ Galvanized ☑ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☑ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☑ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 10.0 inches, Screen 10.0 inches
5. Slot Size of Screen: 0.030"
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ wire wound
7. Installed Protector Pipe w/Lock: Yes ☐ No ☑
8. Borehole Diameter = 13 3/4 Inches.
9. Were Drilling Additives Used? Yes ☐ No ☑ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☑ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☑ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☑ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 3 HRS Minutes/Hours
14. Approximate Water Volume Removed? 300 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ☑
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ☑
17. Did the Water have Odor? Yes ☑ No ☐ If Yes, Describe creosote product
18. Did Water have any Color? Yes ☑ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development _____ Ft. Date _____
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

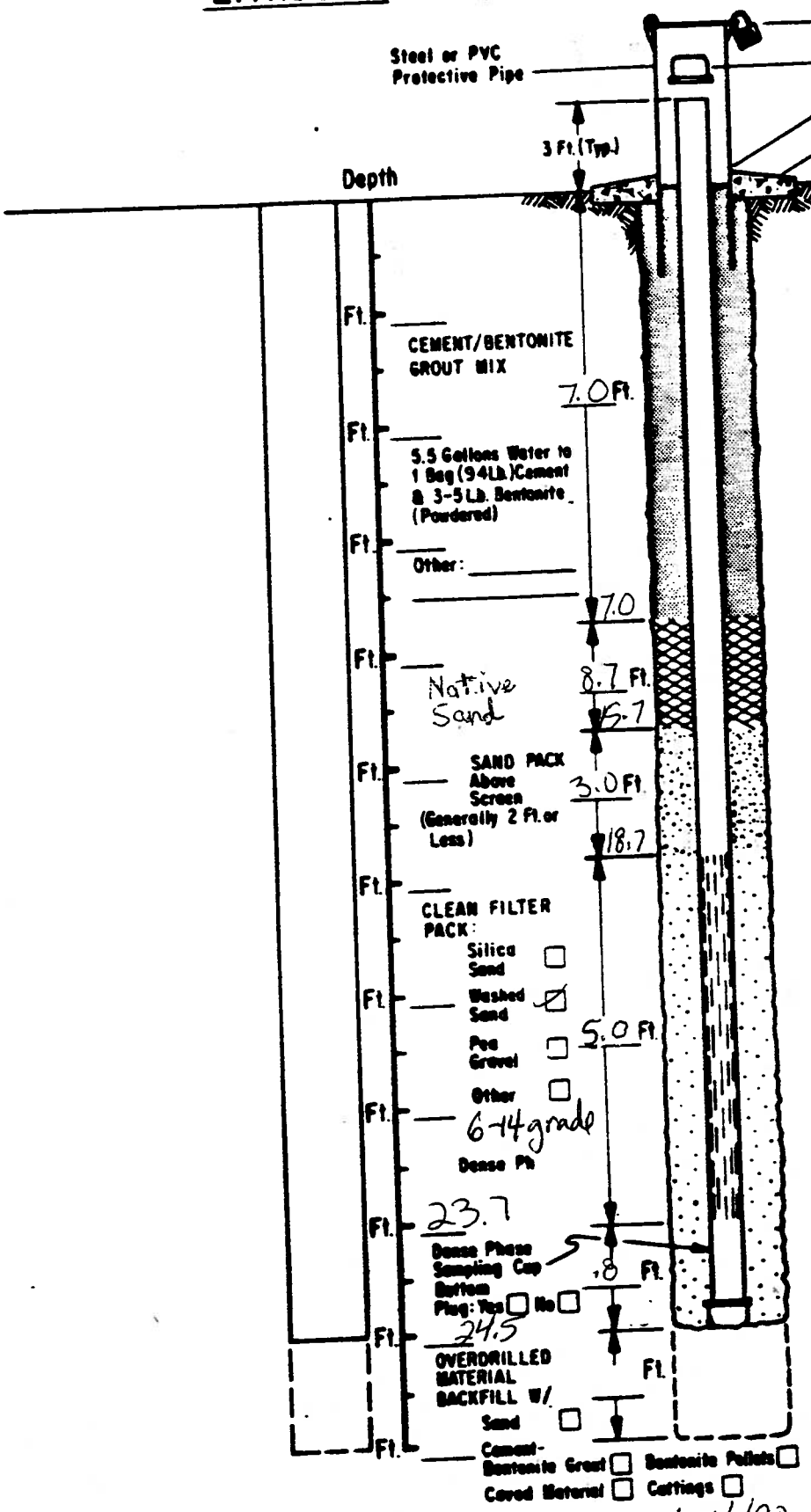
Well No. RW6 | Date Installed 5/25/90 | Drill Rig Type CME 75

Driller/Firm Curtislee/TTL | Drill Crew TTL | Kerr-McGee Hydrologist J. Poor

Columbus, Mississippi

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☐ No ☐

Casing Cap w/Vent: Yes ☐ No ☐

Weep Hole: Yes ☐ No ☐

Concrete Pad: Yes ☐ No ☐

1. Type of Casing: PVC ☐ Galvanized ☒ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☒ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☒ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 10.0 inches, Screen 10.0 inches
5. Slot Size of Screen: 0.030"
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ wire wound
7. Installed Protector Pipe w/Lock: Yes ☐ No ☒
8. Borehole Diameter: 13 3/4 inches.
9. Were Drilling Additives Used? Yes ☐ No ☒ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cup Installed? Yes ☒ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☒ Depth: _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☑ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 3 HRS Minutes/Hours
14. Approximate Water Volume Removed? 300 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ☑
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ☑
17. Did the Water have Odor? Yes ☑ No ☐ If Yes, Describe creosote odor
18. Did Water have any Color? Yes ☑ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development _____ Ft. Date _____
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

Well No. RW7

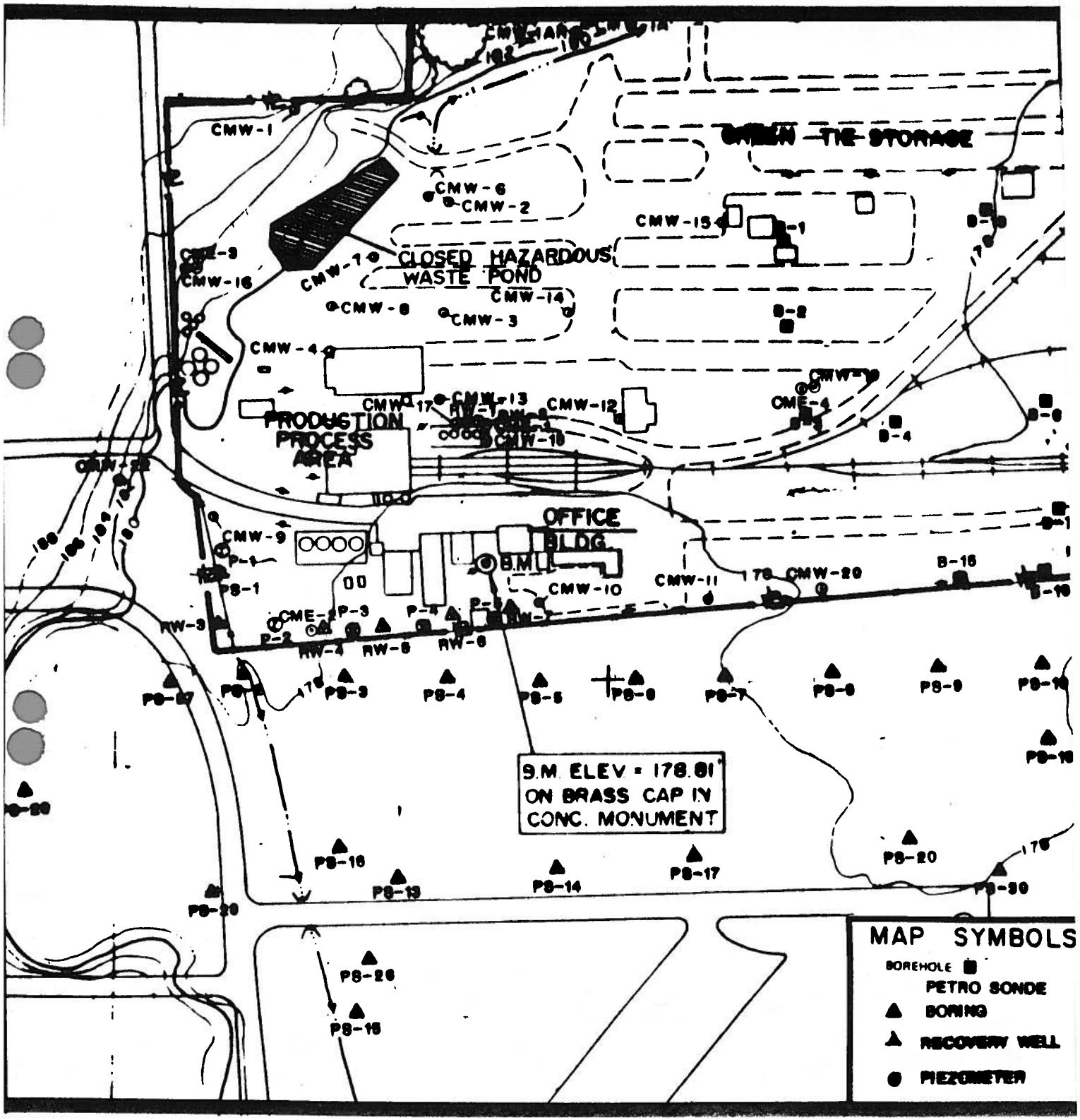
Driller/Firm Curtis Lee / TTL

Date Installed 5/24/90

Drill Crew TTL

Drill Rig Type CME 75

Kerr-McGee Hydrologist J. Poor


CMW-1
CMW-6
CMW-2
CMW-15
B-1
CLOSED HAZARDOUS WASTE POND
CMW-16
CMW-14
CMW-8
CMW-3
B-2
CMW-4
CMW-13
CMW-12
CMW-19
CME-4
B-4
PRODUCTION PROCESS AREA
CMW-18
CMW-22
OFFICE BLDG.
CMW-9
B.M.
CMW-10
CMW-11
CMW-20
B-15
PS-1
P-1
P-2
P-3
P-4
P-5
RW-3
RW-4
RW-5
RW-6
PS-3
PS-4
PS-5
PS-6
PS-7
PS-8
PS-9
PS-10
PS-11
PS-12
PS-13
PS-14
PS-15
PS-16
PS-17
PS-18
PS-19
PS-20
PS-21
PS-22
PS-23
PS-24
PS-25
PS-26
B.M. ELEV = 178.81' ON BRASS CAP IN CONC. MONUMENT
MAP SYMBOLS
BOREHOLE
PETRO SONDE
BORING
RECOVERY WELL
PIEZOMETER

FILE COPY

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

June 27, 1990

Mr. Nick Bock
Staff Environmental Speciliast
Kerr-McGee Chemical Corp.
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

This letter serves as formal notice that Kerr-McGee's Post-Closure application for the Columbus, Mississippi, facility is complete, following review of the revisions received on June 15, 1990, and also serves to confirm several items which we have previously discussed. As per our discussions, Kerr-McGee's request to extend the comment period on the draft Post-Closure permit until June 29, 1990, was approved.

In addition, sampling of MW-1A and MW-3A for Appendix IX Part 264 constituents at Kerr-McGee's Meridian facility, will be required following modification of the facility's permit to reflect changes in the monitoring system. If you have questions or comments regarding these matters, please call me at (601) 961-5171.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-31:lr
pc: Mr. James H. Scarbrough, EPA

REVIEWED BY T.H.
DATE 6-28-90
COMMENTS Hand delivered to Nick B. during meeting at BPC / Copy to EPA.

OHM Corporation

RECEIVED
JUN 22 1990
KMCC-FOREST PRODUCTS DIVISION
ENVIRONMENTAL & QUALITY CONTROL

Environmental Testing
and Certification Corp.

June 18, 1990

Mr. Nick Bock
Kerr-McGee Chemical Corporation
Kerr-McGee Center
123 Robert S. Kerr Avenue
Oklahoma City, OK 73125

Dear Nick:

This letter is to confirm our recent discussion regarding the methodology used by ETC to perform Base/Neutral and Acid Extractable analysis. ETC routinely performs water analysis for several different regulatory programs using 600 series methods and SW-846. For Base/Neutral and Acid Extractable analysis we employ either USEPA 625 or SW-846 method 8270. Because these method are mechanically identical, we have merged the analytical requirements from each into a single protocol. In combining these methods, ETC meets or exceeds the protocol requirements of each individual method.

SW-846 Method 8250 and 8270 are designed for the same group of target compounds. The differences between the two methods are the choice of chromatographic columns used in the gas chromatograph. Method 8250 employs packed column technology. Method 8270 employs capillary column technology. ETC/Edison has utilized Method 8270 for all analyses of Base/Neutral and Acid Extractable compounds since 1981.

The performance characteristics of the two methods are virtually identical with one exception. The capillary column (Method 8270) has superior resolution capabilities and is considered to be the state-of-the-art separation technique for organic compounds. The resolving capabilities of the capillary column far exceed those of the packed column used in Method 8250. Improved resolution means that the compounds present in the sample extract are more easily separated. This in turn results in greatly improved qualitative accuracy.

284 Raritan Center Parkway ■ CN 7808 ■ Edison, New Jersey 08818-7808 ■ 201-225-5600

If you have any additional questions regarding these methodologies, please give me a call.

Sincerely,

Denise A. Bernacki

Denise A. Bernacki
Program Manager

cc: Christine Hettinger

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

May 30, 1990

Thad Hopper
Environmental Scientist
Mississippi Bureau Of Pollution Control
P.O. Box 10385
Jackson, Ms. 39289-0385

Re: Revision to Report:
Annual Groundwater Monitoring Report
For 1989
Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi
EPA I.D. NO. MSD990866329
March 1, 1990

Dear Mr. Hopper:

As a follow-up to our March 28, 1990 meeting in Columbus, Mississippi, the following revisions have been made to the Annual Groundwater Monitoring Report for 1989:

Figure 17 (page 38) has been re-drafted to exclude monitor wells CMW-4, CMW-7 and CMW-8 from the free product plume. All these borings had no visible free product in the soils. The verbiage on page 37 has been changed to reflect this change.

The soil boring log B1 (Appendix A) has had the "penta detected" comment removed from the remark section. The gas chromatograph analysis of boring B1 indicated a peak at the 272 seconds retention time. This unknown detection did not correspond with the penta standard's retention time.

Three copies of each set of changes has been enclosed for each of the three copies submitted to the MBPC. If you have any questions regarding these changes, feel free to contact me at 405 (270-2394).

Sincerely,

KERR-McGEE CHEMICAL
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE Jun 14, 1990
COMMENTS Hand delivered to Nancy Bellue, EPA

JMP/mm

CC: N. Bock (2 sets)
J. Getz (1 set)

FOREST PRODUCTS

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

May 29, 1990

FILE COPY

Mr. James H. Scarbrough, P.E., Chief
RCRA Branch
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Dear Mr. Scarbrough:

Re: Transmittal of Draft RCRA Permit
Kerr-McGee Chemical Corporation
Columbus, Mississippi
EPA I.D. No. MSD990866329

Enclosed please find a copy of the draft RCRA Permit for post-closure care and corrective action activities at Kerr-McGee Chemical Corporation's wood treating facility in Columbus, Mississippi. The 45-day public notice will begin on July 1, 1990; therefore, we request comments be submitted to the Bureau of Pollution Control by June 18, 1990.

Copies of the draft Fact Sheet and Public Notice will be forwarded under separate cover. If you have questions, please call me at (601) 961-5171.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-24:lr
Enclosure

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

May 17, 1990

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jackson, Mississippi 39289-0385

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Consent Agreement 1636 89
RCRA Part B Modification/
Engineering Feasibility Plan

Dear Mr. Spengler:

Enclosed are two additional copies for your files of a revised Resource Conservation and Recovery Act Post-Closure Permit Application, Part B which incorporates a groundwater assessment and engineering feasibility plan. This submittal is identical to the single issue we submitted on April 12, 1990. Duplicating delays precluded us from submitting three copies at the same time last month.

We apologize for any inconvenience this may have caused you. Feel free to call me at (405) 270-2394 if you have any questions.

Sincerely,

KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock /RKW

Nick Bock
Staff Environmental Specialist

NB/mm

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 5-22-90
COMMENTS B Mailed to
N. Bethune, EPA

FOREST PRODUCTS

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
MAY - 7 1990
Dept. of Environmental Quality
Bureau of Pollution Control

May 4, 1990

Mr. Thad Hopper
Environmental Scientist
Mississippi Bureau Of Pollution Control
P.O. Box 10385
Jackson, Ms. 39289-0385

Re: Recovery Well Design and Installation
Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Consent Order 1636-89

Dear Mr. Hopper:

Kerr-McGee Chemical Corporation - Forest Product Division will install a pumping system for the purpose of groundwater and creosote recovery. The system is designed to maintain a drawdown in the pumping wells that will result in an overlap of the cones of influence. Because of the low viscosity of the creosote, cycling of the pumps will enable the creosote to accumulate in the well.

The system will consist of approximately 5 recovery wells on the southwest property boundary. Each well bore will be approximately 14" in diameter, and will have a galvanized steel casing diameter of 8". A five (5) foot section of galvanized wire-wrapped 0.030" (30 slot) screen, packed in 6-20 filter sand, will be placed at the Eutaw/Alluvial contact.

A variety of pumps and pumping designs were evaluated to accomplish the goals of producing a minimum of groundwater and maximum of creosote, while still maintaining constant drawdown. Because electric submersible pumps have limited suction lift, air injection pumps will most probably be utilized. Each well will contain either two separate pumps, or one pump with a double suction pump. This will allow drawdown of groundwater and allow the creosote to enter the well bore.

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 5-7-90
COMMENTS Mail to EPA

FOREST PRODUCTS

A Petro Sonde Study is scheduled for May 14th through the 18th, 1990. So that you may be familiar with the processes involved in a Petro Sonde study, I have enclosed a brochure. The electrotelluric study utilizes a passive geophysical tool that can delineate depth, thickness and fluid content of specific lithologic units. From the evaluated subsurface conditions, the placement locations for the recovery wells will be confirmed.

The schedule of implementation in the Groundwater Quality Assessment Program is progressing as planned. If you have any questions regarding this project, feel free to contact me at 405 (270-2675).

Sincerely,

Jami M. Poor

Jami M. Poor
Hydrologist

JMP/mm

Enclosures

cc: J. Getz, Plant
N. Bock
R. Widmann

Kerr-McGee Comp. #4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MAY - 5 1989

4WD-RCRA

Mr. Sam Mabry, Chief
Hazardous Waste Branch
Bureau of Pollution Control
Mississippi Department of Natural
Resources
P.O. Box 10385
Jackson, Mississippi 39209

RE: Post Closure Permit Application
Draft Post-Closure Permit:

Kerr-McGee Chemical Corporation
Forest Product Division
Columbus, Mississippi
MSD 990 866 329

Dear Mr. Mabry:

EPA has reviewed the post-closure application and the draft Post-Closure Permit for the Kerr-McGee facility in Columbus, Mississippi. Based on the review of these materials, EPA has concluded that significant deficiencies for groundwater assessment remain under the requirements of 40 CFR §265.93 and §270.14(c). It is this agency's position that facilities must be in full compliance with all applicable interim status requirements and general application requirements prior to permit issuance: regulatory deficiencies shall not be corrected through permit conditions. Enclosed is a list of the deficiencies which must be addressed.

It is our understanding, per the April 26, 1989, phone conversation of Ms. Beverly Foster of my staff and Mr. David Bockelmann of MDNR, that Kerr McGee will meet these requirements prior to permit issuance and that Kerr McGee has been so informed. We also understand that the State will be issuing a schedule of compliance in a consent agreement with the facility.

Please notify Ms. Beverly Foster, at (404) 347-3433, as to the accuracy of our understanding within five (5) working days of the receipt of this letter.

Sincerely yours,

James H. Scarbrough

James H. Scarbrough, P.E.
Chief, RCRA Branch
Waste Management Division

Enclosure

DIVISION OF SOLID WASTE
REVIEWED BY KR
DATE 5/15/89
COMMENTS

ENCLOSURE

Regulation	Requirement	Comment
§265.93	Ground-water quality assessment program	The assessment program outline submitted by Kerr McGee is not sufficiently comprehensive to define the full vertical and horizontal extent, or the rate of flow, of the contaminant plume.
§270.14(c)(2)	Identification of uppermost Aquifer	Kerr-McGee must identify the uppermost aquifer and aquifers hydraulically interconnected beneath the facility. Unless a pumping test proves otherwise, the Eutaw formation should be considered as an hydraulically interconnected aquifer.
§270.14(c)(4)	Plume Definition	Kerr-McGee must identify the concentrations of each Appendix IX constituent (ii) and delineate the extent of any plume of contamination on the required topographic map (i).
§270.14(c)(5)	Monitoring System	Kerr-McGee must install additional wells, at appropriate locations and depths to evaluate the vertical extent of contamination at the point of compliance.
§270.14(c)(1)	Summary of Interim Status Monitoring	Since the ground-water flow direction in the alluvium is to the east, and the regional flow direction for the Eutaw is to the southwest, Kerr-McGee may find it necessary to define additional point of compliance wells to address the deeper groundwater flow.

A Petro Sonde Study is scheduled for May 14th through the 18th, 1990. So that you may be familiar with the processes involved in a Petro Sonde study, I have enclosed a brochure. The electrotelluric study utilizes a passive geophysical tool that can delineate depth, thickness and fluid content of specific lithologic units. From the evaluated subsurface conditions, the placement locations for the recovery wells will be confirmed.

The schedule of implementation in the Groundwater Quality Assessment Program is progressing as planned. If you have any questions regarding this project, feel free to contact me at 405 (270-2675).

Sincerely,

Jami M. Poor

Jami M. Poor
Hydrologist

JMP/mm

Enclosures

cc: J. Getz, Plant
N. Bock
R. Widmann

Kerr-McGee Chem. - Columbus

FILE COPY

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

May 1, 1990

Ms. Charlotte D. Hix
Coordinator Risk Management Department
Kerr-McGee Chemical Corporation
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Dear Ms. Hix:

Re: Demonstration of Post-Closure Cost Estimates for Kerr-McGee Chemical Corporation
Columbus and Meridian, MS

The above referenced document has been reviewed. References to the Mississippi Department of Natural Resources (DNR) should be changed to the Mississippi Department of Environmental Quality (DEQ). Please submit the corrected document within twenty (20) working days of receipt of this letter.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-14:lr
pc: Mr. James H. Scarbrough, EPA

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

April 23, 1990

RECEIVED
APR 26 1990
Dept. of Environmental Quality
Bureau of Pollution Control

Mr. Steve Spengler
RCRA TSD Cooridnator
Mississippi Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385

RE: Kerr-McGee Chemical Corporation - Forest Products Division Columbus, Mississippi Facility
Bimonthly Progress Report, Consent Order 1636-89 - May 1, 1990 Report

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 Agreed Consent Order between Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) and the Mississippi Commission on Environmental Quality.

During the week of April 9, 1990 a recovery pump was installed in recovery well RW-2. This well is recovering creosote product and groundwater as an interim corrective action measure. Recovered groundwater is being discharged to the production process for creosote recovery and reuse as a commercial chemical product.

KMCC-FPD is preparing a bid package for installation of recovery wells as proposed in the engineering feasbility plan proposed April 14, 1990 to the Mississippi Bureau of Pollution Control. This bid package is scheduled to go out in early May.

On April 12, 1990 KMCC-FPD submitted a Revised RCRA Part B Post-Closure Permit application incorporating a groundwater quality assessment and engineering feasbility plan for on-site corrective action for the solid waste management unit located south of the production process area.

On November 1, 1990 KMCC-FPD will submit an addendum to the previous submitted Part B application incorporating an off-site groundwater quality assessment and a plan for off-site corrective action. Additionally, a plan for on-site corrective action of the solid waste management area associated with the below ground loading dock will be proposed November 1, 1990.

In mid May, Geophysical International will conduct a petrosonde geophysical survey of on-site and off-site areas. Results from this survey will be used to determine boring/well locations during the confirmatory boring program.

KMCC-FPD is in receipt of the first quarter groundwater analyses. The results of analyses are enclosed for your review.

If you have any questions, or if I may provide additional information, please telephone me at 405-270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock
Staff Environmental Specialist

NB/bfl

Enclosure

cc w/o enclosure:

J. J. Getz
R. Jones
J. Poor
K. Saffell
R. Widmann

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 5-1
COMMENTS mailed copy
to EPA

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

March 30, 1990

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 4-5-90
COMMENTS What is relationship of studies for detection in MW4 + MW-8? mailed copy to EPA

RECEIVED
APR - 5 REC'D
Dept. of Environmental Quality
Bureau of Pollution Control

Mr. Thad Hopper
Environmental Scientist
Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39209

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi
Consent Order 1636 89

Dear Mr. Hopper:

As a follow-up to our March 28, 1990 meeting in Columbus, Mississippi and based upon our discussions at this meeting, it is understood that Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) will provide the Mississippi Bureau of Pollution Control with the following items:

1. A complete groundwater quality assessment and engineering feasibility plan for on-site corrective action by April 15, 1990 as provided by Item D of Consent Order 1636 89.

2. A complete off-site groundwater quality assessment and a plan for off-site groundwater corrective action by November 1, 1990 as provided by Item E of Consent Order 1636 89.

3. KMCC-FPD further understands a complete groundwater assessment and a plan for corrective action shall be submitted on November 1, 1990 for the on-site solid waste management unit groundwater contamination associated with the historical below-ground level tie loading dock located in the eastern one-half of the Columbus, Mississippi facility as part of Item E of Consent Order 1639 89.

As we discussed in our March 28, 1990 meeting KMCC-FPD will provide MBPC a revised post-closure plan for the closed surface impoundments. A revised Post-Closure Care Plan is required since the closed surface impoundments are not the source of a release to groundwater of creosote product delineated in the February 28, 1990 Groundwater Assessment Report. Production process solid waste management units are the source of the release of creosote product to groundwaters as evidenced by the ability to excavate to visible clean during impoundment closure, free product has never been detected in any down gradient impoundment compliance well (CMW-6, CMW-7, CMW-8) and monitoring well CMW7 and CMW8 have detected only soluble K001 constituents and are in close proximity to the production process area. Monitoring well CMW7 detected napthalene only in two quarters at concentrations approaching the detection limit.

Figure 14 Assessment Report of February 28, 1990 has been revised for your review.

If you have any questions or if I may provide any information, please telephone me at 405-270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

NB/bfl

Enclosure

cc: R. Jones
M. Logan
J. Poor
K. Saffell

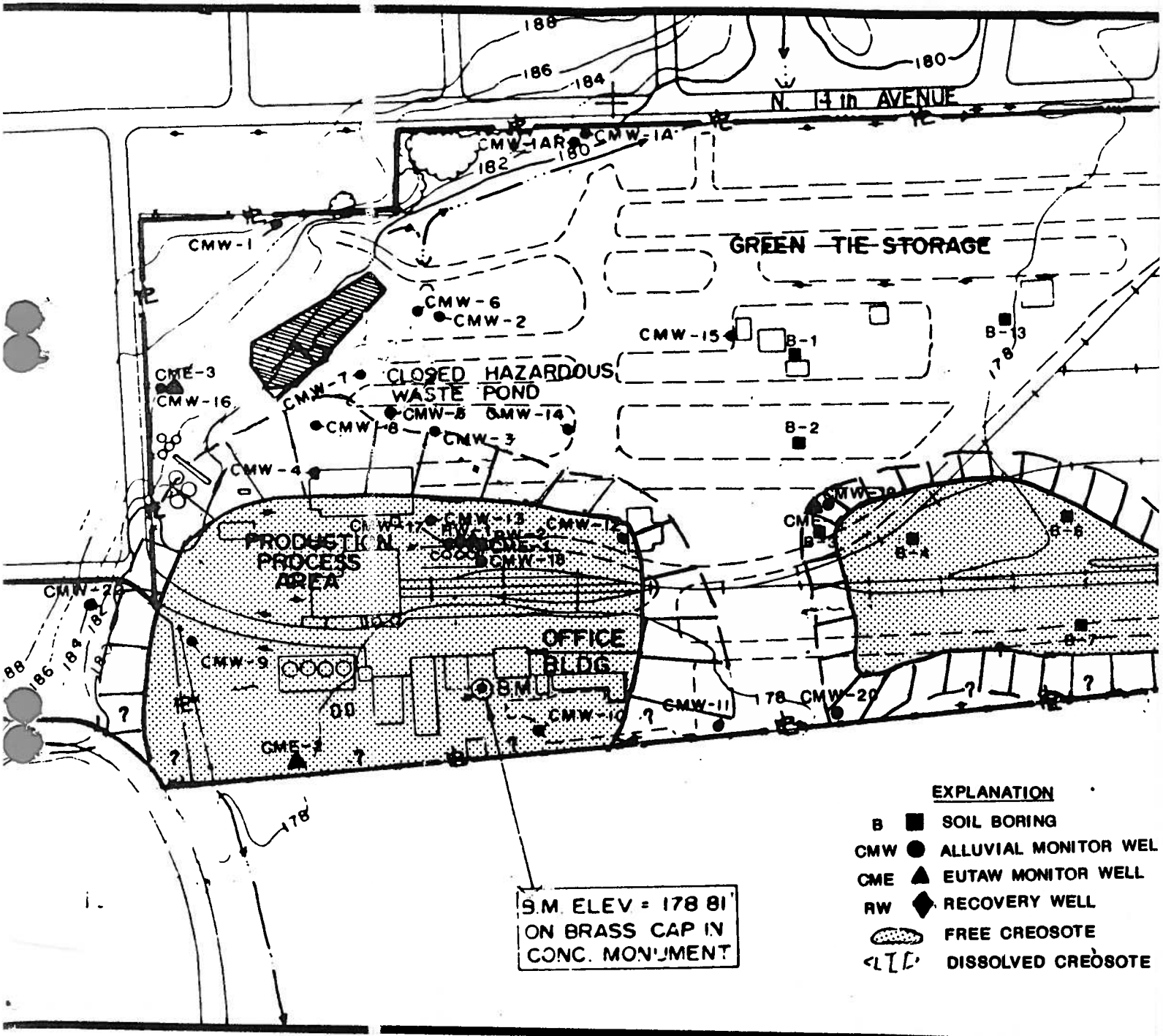


FIGURE 14: IMPACT MAP – CREOSOTE AND DISSOLVED CONSTITUENTS, FOREST PRODUCTS DIVISION, COLUMBUS, MISSISSIPPI

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
MAR - 1 1990
DEPT. OF ENVIRONMENTAL QUALITY

February 28, 1990

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385

RE: Kerr-McGee Chemical Corporation - Forest Products Division Columbus Mississippi Facility
Bimonthly Progress Report, Consent Order 1636-89 - March 1, 1990

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 Order Agreement between Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) and the Mississippi Commission on Environmental Quality.

KMCC-FPD received approval of the analytical schedule for the first and second quarter of 1990 for groundwater monitoring from Mr. Thad Hopper, dated January 31, 1990. First quarter sampling was conducted January 29 through 31, 1990 for the following compliance monitor wells: CMW1AR, CMW6, CMW7, CMW8, CMW15, CMW16, CMW20, CMW21, CMW22, CME1, CME2, CME3 amd CME4.

The Annual Groundwater Monitoring Report for 1989 was submitted March 1, 1990 to the Missouri Bureau of Pollution Control.

The Groundwater Quality Assessment Report was submitted February 28, 1990) according to the schedule submitted in the Groundwater Quality Assessment Plan. The report delineates the on-site horizontal extent of the alluvial and discusses the impact of wood preserving constituents to the underlying Eutaw formation.

The schedule of implementation of the Groundwater Quality Assessment Program is progressing as planned. An addendum to the RCRA Part B Permit Application will be submitted on April 15, 1990 to incorporate on-site groundwater quality assessment and an engineering feasibility plan for on-site groundwater corrective action.

If you have any questions or if I may provide you with additional information, please contact me at 405-270-2394.

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 4-3-90
COMMENTS Mailed to CRE Sept
- Nancy B.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

NB/bfl
cc: J. J. Getz
R. Jones
J. Poor
K. Saffell
R. Widmann

FOREST PRODUCTS

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

February 28, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Thad Hopper
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jacksonville, Mississippi 39209

RE: Kerr-McGee Chemical Corporation
Forest Product Division
Groundwater Quality Assessment
Report as required under
Consent Order No. 1636-89

Dear Mr. Hopper:

Enclosed are three (3) copies of the Groundwater Quality Assessment Report for the Kerr-McGee Chemical Corporation, Forest Product Division facility located in Columbus, Misssissippi. This report was required under Consent Order No. 1636-89.

If you have any questions, please feel free to contact me at (405) 270-2391.

Sincerely,

Jeffrey H. Bull (NCB)

Jeffrey H. Bull
Manager, Environmental Control
and Regulatory Affairs

JHB/JMP/mm

DIVISION OF SOLID WASTE
REVIEWED BY TH
2-28-90
Copy to EPA by hand

FOREST PRODUCTS

KERR-McGEE CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

ENGINEERING SERVICES DIVISION

RECEIVED
FEB 12 REC'D
Dept. of Environmental Quality
Bureau of Pollution Control

February 7, 1990

Mr. Thad Hopper
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39289-0385

Dear Mr. Hopper:

As promised, enclosed please find two copies of an updated facility map for the Kerr-McGee Chemical Corporation - Forest Products Division, Columbus, Mississippi facility. The map has been updated to include the monitor wells which were installed in late 1989.

We are in the process of preparing the groundwater assessment report per Order No. 1635-89, a copy of which will be submitted to you by February 28, 1990.

Please don't hesitate to call either myself or Nick Bock if you have any questions.

Sincerely,

Roy

Roy K. Widmann
Staff Hydrologist

RKW/mm

Enclosures

cc: N. Bock

2-26-90
To EPA
Mailed Copy
COMMENTS
TH

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

January 31, 1990

Mr. Nick Bock
Staff Environmental Specialist
Kerr-McGee Chemical Corp.
Forest Products Division
Kerr-McGee Center
P.O. Box 25861
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

Re: Monitoring Schedule for First and Second Quarter, 1990
Columbus, Mississippi

This letter serves to formally approve the monitoring schedule established on January 22, 1990, as per our conversation. It is our understanding that the following analytical schedule is to be conducted for the first and second quarters of 1990:

	First Quarter January 29, 1990	Second Quarter Not Scheduled
Monitoring Wells		
CMW 1AR CMW 6 CMW 7 CMW 8	K001 Appendix VII Constituents and Indicator Parameters	
Monitoring Wells		
CMW 15 CMW 16 CMW 20 CMW 21 CMW 22 CME 1 CME 2 CME 3 CME 4	K001 Appendix VII Constituents	

According to the compliance schedule established in the Mississippi Commission on Environmental Quality Order No. 1635-89, a report detailing the findings of the assessment should be submitted by February 28, 1990.

The report should delineate the horizontal and vertical, on-site extent of the contaminant plume within the alluvial aquifer and the the Eutaw Aquifer. Groundwater flow directions in the Eutaw and Alluvial aquifers should also be designated. If you have questions or comments concerning this, please do not hesitate to call.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH-18:lr
pc: Mr. James H. Scarbrough, EPA

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

January 11, 1990

RECEIVED
JAN 16 1990
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Thad Hopper
Environmental Scientist
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Re: Kerr-McGee Chemical Corp.
Forest Products Division
Columbus, Mississippi
Groundwater Quality
Assessment Program

Dear Mr. Hopper:

Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) submitted a Groundwater Quality Assessment Program (GWQAP) for our Columbus, Mississippi facility on July 28, 1989 to the Mississippi Bureau of Pollution Control (MBPC) for approval. KMCC-FPD received approval of the GWQAP on August 15, 1989. This GWQAP required that KMCC-FPD propose an analytical schedule for the calendar year 1990.

On January 9, 1990, Mr. Roy Widmann and I telephone you and proposed the following analytical schedule to be conducted at our Columbus, Mississippi facility during the first and second quarters of 1990:

	First Quarter 1990	Second Quarter 1990
Start Date:	January 29, 1990	Not Yet Scheduled
	Parameters	Parameters
Monitoring Wells		
CMW1AR	K001 Apendix VII Constituents	K001 Apendix VII Constituents
CMW 6		
CMW 7		
CMW 8	Indicator Parameters in Quad	Indicator Parameters in Quad
Monitoring Wells		
CMW 15	K001 Appendix VII Constituents	K001 Appendix VII Constituents
CMW 16		
CMW 21		
CMW 22		

SOLID WASTE
REVIEWED BY TH
DATE 1-22-90
COMMENTS Add wells (CmE-1) - (CmE-4) + CMW 20 for VII K001 Confirmed with Nick Bock / Mailed copy to EPA.

FOREST PRODUCTS

3129C

As we indicated in our discussion, analyses of these monitoring wells will provide monitoring of the Hazardous Waste Management Unit and facility wide monitoring.

KMCC-FPD has scheduled the first quarter monitoring event for January 29, 1990. Changes to the monitoring schedule will require that the contract laboratory be notified by January 22, 1990.

After submittal of the GWQAP report and review of the first and second quarter 1990 groundwater monitoring data, KMCC-FPD will propose an analytical schedule for the third and fourth quarters of 1990.

If I may provide you with additional information, please telephone me at (405) 270-2394.

Sincerely,

KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff, Environmental Specialist

NB:wpc

cc: J. Getz
R. Widmann
R. Jones

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

December 15, 1989

RECEIVED
JAN - 2 1990
Dept. of Environmental Quality
Bureau of Pollution Control

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jackson, MS 39289-0385

Re: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Consent Agreement
Bimonthly Progress Report
January 1, 1990

Dear Mr. Spengler:

This serves as a bimonthly progress report for January 1, 1990 and is submitted in compliance with the August 21, 1989 consent agreement between Kerr-McGee Chemical Corporation, Forest Products Division (KMCC-FPD) and the Mississippi Commission Natural Resources (MCNR).

On November 30, 1989, Mr. Thad Hopper of the Mississippi Bureau of Pollution Control (MBPC) visited the Columbus, MS facility. Mr. Hopper was given a site tour and inspected new groundwater monitoring wells installed during September, 1989.

Fourth quarter sampling, completed November 3, 1989, revealed that grout had penetrated the screen of Eutaw monitor well CME-3. CME-3 was grouted from total depth to surface using a tremie line. A new monitor well was then drilled approximately 5 feet away from the previous site. The well was constructed with stainless steel to a depth of 52 feet.

Groundwater replacement CME-3 was sampled November 30 for submittal to ETC Laboratories for K001 Base/Neutral and Acids analysis. All analytical data will be submitted with the Groundwater Quality Assessment Report. Groundwater monitoring wells CMW-6 and CMW-7 were resampled on November 30, 1989 due to the contract laboratory exceeding the analytical holding times for sample preparation. Mr. Thad Hopper of the MBPC observed resampling of one of the monitoring wells.

At the present time all analytical data from the fourth quarter groundwater monitoring event has not been received. KMCC-FPD has scheduled the first quarter groundwater monitoring event for week of January 29, 1990 and will propose the analytical schedule to the MBPC approval prior to sampling.

FOREST PRODUCTS

The schedule of implementation of the Groundwater Quality Assessment Program is on schedule. If you have any questions or desire additional information please contact me at (405) 270-2394.

Sincerely,

KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

NB:wpc

cc: R. Jones
K. Saffell
R. Widmann
J. Getz

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

MEMORANDUM

TO: File

FROM: Thad Hopper

SUBJECT: Site Visit Kerr-McGee
Meridian and Columbus

DATE: December 13, 1989

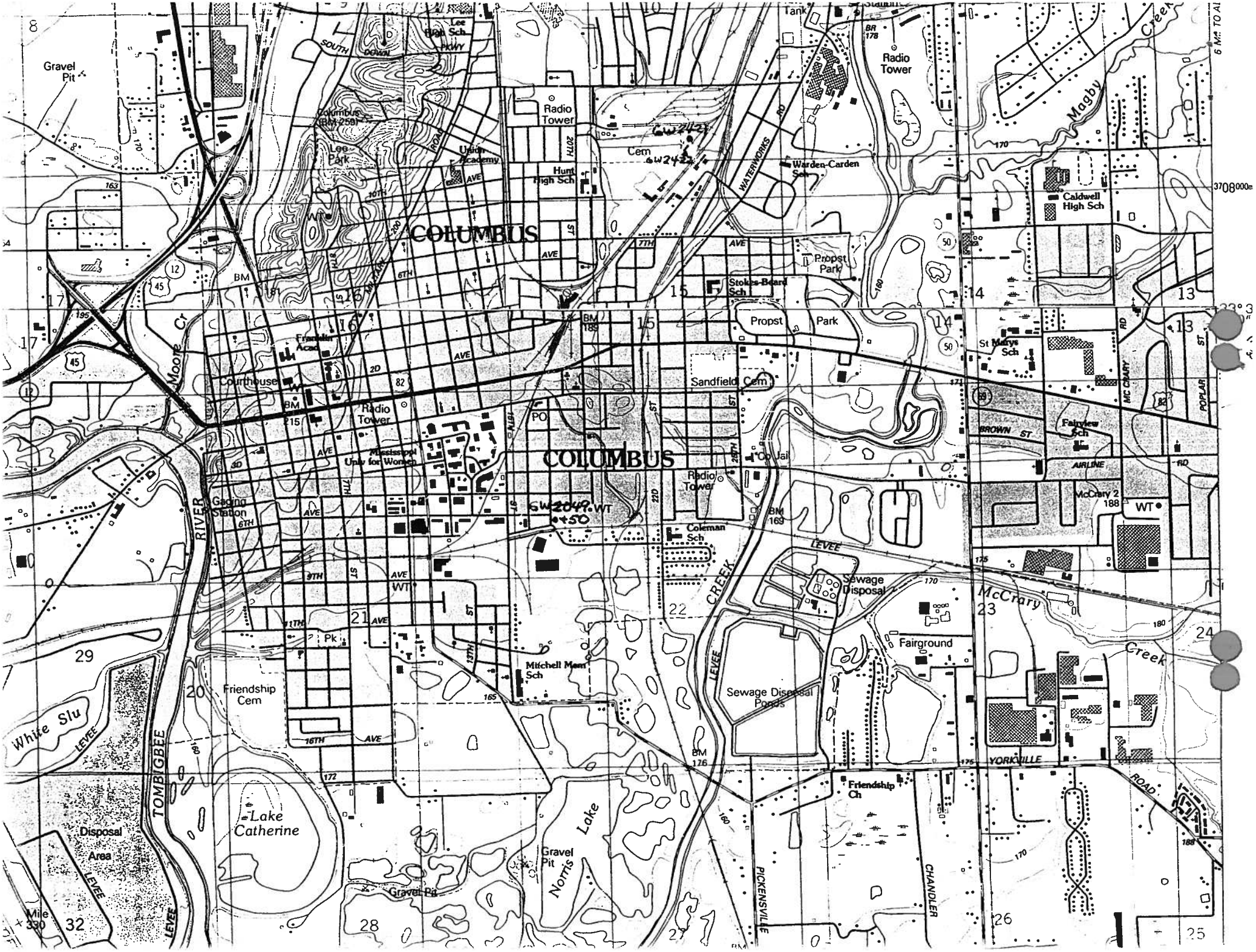
On November 29 and 30, 1989, I visited Kerr-McGee Chemical Corporation`s closed wood treating facility in Meridian and their operating wood treating facility in Columbus. The Meridian site visit was requested by Kerr-McGee to demonstrate the feasibility of grouping SWMU`s, identified by the RFA, into CAMU`s (Corrective Action Management Units). Participants in the site visit included: Nancy Bethune, EPA and Nick Bock, Roy Widman, and Robin Gough, Kerr-McGee Corporation.

The discussion following the Meridian site walk-over centered around grouping SWMU`s into three areas: (1) black tie storage area, (2) process area, and (3) the abandoned sewer line. Kerr-McGee indicated that they would prefer to perform a confirmatory sampling program before a formal RFI. This confirmatory sampling program would be included in the HSWA permit. Time limits will also be adjusted from those set in the draft HSWA permit to allow for more reasonable sample turnaround times.

The Columbus site visit was requested by the State to gain a better understanding of plant process and plant layout. The site walk-through was conducted by Nick Bock. It was noted that the facility is bounded on the north and west by a housing project and that a school is located approximately 1/4 mile southwest of the facility.

A survey of water wells within a one mile radius of the Columbus facility was compiled in October, 1989, and indicates that the closest wells are owned by Sanderson Plumbing, Inc. (formerly Benke Corporation). According to Bureau of Land and Water records, these wells produce from the Gordo Formation which is the uppermost aquifer in the Tuscaloosa Group. The Gordo is subdivided into upper clay and lower sand and gravel units. The Gordo Formation is overlain by the McShan Formation of the Eutaw Group. Both wells at Sanderson Plumbing are in excess of 500 feet deep. Location of these wells and the Kerr-McGee plant are indicated on the attached map. The contact for Sanderson Plumbing is Jim Leitheiser, Manager of Environmental Affairs (601-328-4000) and Mr. Pittman for Columbus Water and Sewer Administration (601-328-7192). A U.S.G.S. printout of water wells on record within a one mile radius is attached.

TH-6:lr
Attchment


COLUMBUS
COLUMBUS
Gravel Pit
Lee High Sch
SOUTH DOWN PKWY
Columbus (BM 259)
Lee Park
Union Academy
Radio Tower
Hunt High Sch
Cem
GW2422
WATERWORKS RD
Warden-Carden Sch
Radio Tower
Tank
Magby Creek
Caldwell High Sch
Propst Park
Stokes-Beard Sch
Propst Park
St Marys Sch
Moore Cr
Courthouse
Sandfield Cem
Radio Tower
Mississippi Univ for Women
Co Jail
Radio Tower
Fairview Sch
BROWN ST
AIRLINE RD
McCrary 2
WT
Gaging Station
RIVER
GW2049
Coleman Sch
LEVEE
Sewage Disposal
McCrary
Creek
Fairground
Mitchell Mem Sch
Friendship Cem
Sewage Disposal Ponds
White Slu
LEVEE
TOMBIGBEE
Lake Catherine
Disposal Area
Mile 330
Gravel Pit
Norris Lake
Gravel Pit
Friendship Ch
YORKVILLE ROAD
PICKENSVILLE
CHANDLER
POPLAR ST
MC CRARY RD

MEMO FOR FILE

Terr McTee
Columbus

DATE: 11-20-89

NAME: Thad Hopper

SUBJECT: Conversation w/ Nick Bock 11-17-89

Nick Bock telephoned on 11-17-89 concerning the site investigation at Ken-Mcee Columbus. The following information was obtained:

1.) CME-3, near the closed surface impoundment was improperly installed (the grout had not been properly mixed/installed) a replacement well has been drilled but not sampled

2.) The sample for MW-7 TOX was broken

3.) The lab "hold time" for MW-6 & MW-7 exceeded the 7 day period for KOOI analysis. These wells have a history of being clean, according to Mr. Bock.

4.) I strongly recommended re-sampling MW6 & MW7 at the same time the replacement well for CME-3 was sampled. Mr. Bock indicated this would be done on NOV. 30, 1989. I plan to visit Ken-Mcee Meridian on NOV. 29 with EPA and then drive to Columbus to observe sampling on the 30th.

Thad Hopper

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
OCT 30 1989
DEPARTMENT OF
ENVIRONMENTAL QUALITY

October 27, 1989

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jackson, Mississippi 39289-0385

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Bimonthly Progress Report
Consent Order
EPA Facility Number: MSD 990866329

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the August 21, 1989 consent order between Kerr-McGee Chemical Corporation, Forest Products Division and the Mississippi Department of Natural Resources.

A field investigation to determine the vertical and horizontal extent of the plume underlying the Columbus Facility occurred from September 19-28, 1989. Kerr-McGee Hydrologist, J. Poor, supervised Tuscaloosa Testing Laboratories (TTL) in the drilling and installation of three (3) Eutaw formation monitor wells, four (4) alluvial monitoring wells, and performed the sampling of fourteen (14) soil borings as located on Attachment A. The locations of both the monitor wells and borings were surveyed and will be mapped when the survey information is submitted.

Third Quarter analytical data for the following monitoring wells has returned from ETC Laboratories: CMW1AR, CMW6, CMW7, CMW8, CMW15, CMW16, CME1. This information is presently being scrutinized and will be submitted by March, 1990, in the Annual Groundwater Monitoring Report for 1989.

DIVISION OF SOLID WASTE
RECEIVED BY TH
DATE 10-30-89
COMMENTS called Nick Bock for sampling results / copied to Nancy Esther EPA

Kerr-McGee Forest Products

Fourth Quarter Sampling has been scheduled for October 30 to November 3, 1989. The following wells are scheduled for analyses:

	Indicators in Quad	Water Quality	KO01 Base/Neut. KO01 Acid	Appendix IX
CMW1AR	X	X		X
CMW5	X	X	X	
CMW6	X	X	X	
CMW7	X	X	X	
CMW8				X
CMW12				X
CMW16			X	
CMW19			X	
CMW20			X	
CMW21			X	
CMW22			X	
CME1			X	
CME2			X	
CME3			X	
CME4			X	

The schedule of implementation of the Groundwater Quality Assessment Program is progressing as planned. If you have any questions regarding this project or this report, feel free to contact me at (405)270-2394.

Sincerely,

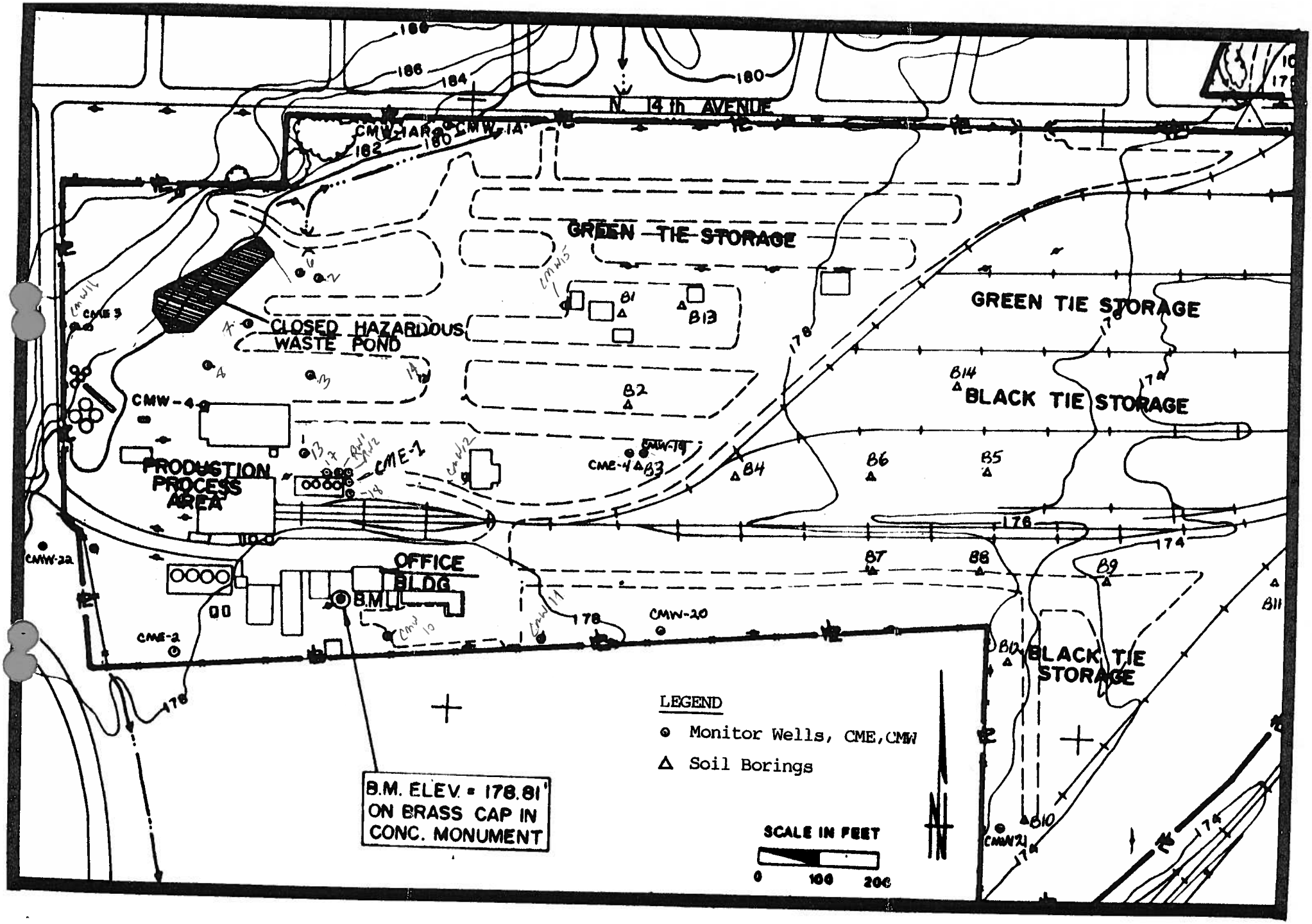
KERR-McGEE CHEMICAL CORPORATION
FOREST PRODUCT DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

JMP/NB/mm

cc: B. Lamansky, Plant
K. Saffell
R. Widmann
J. Poor



Attachment A: Location of 9/89 Soil Borings and Monitor Wells.

As per 10-30-89 conversation with Nick Bock PRV

CM E 1	Flouranthene	3.2	ug/l	2.3	200 Det. limit
	Phenanthrene	19.0	ug/l	5.7	" "

PAH 200 ug/l

Will recample

CMW-6 - clear

CMW-7	Flouranthene	4.2	ug/l
CMW-8	Acenaphthylene	63	ug/l
	Flouranthene	16	ug/l
	Naphthalene	4,160	ug/l
	phenanthrene	185	ug/l

CMW-15 no hits

CMW-16 no hits

CMW 1AR Flouranthene 4.2 ug/l

Sampling Ken McEau Meridian Nov. 2.

42-381 50 SHEETS 5 SQUARE
42-382 100 SHEETS 5 SQUARE
42-389 200 SHEETS 5 SQUARE
NATIONAL Made in U.S.A.

MEMO FOR FILE

DATE: 10-27-87

NAME: Thad Hogan

SUBJECT: Private wells in vicinity of Kerr-McGee / Columbus

Called City of Columbus Water / Sewer Admin talked to a Mr. Pittman inquiring about private wells in vicinity of Kerr-McGee. Mr. Pittman stated that the only wells he was aware of were at the Sanderson Plumbing Co. but stated the plant itself was on city water supply. He said he would look into the matter further and call back if he came up with additional information.

Columbus Water / Sewer 328-7192

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

September 11, 1989

FILE COPY

CERTIFIED MAIL NO. P 962 285 032

Kerr-McGee Chemical Corporation
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

Attention Mr. N. E. Bock, Staff Environmental Specialist

Dear Sir:

In order to settle certain environmental issues regarding your Columbus, Mississippi facility, you have agreed to the conditions of Administrative Order No. 1636-89. As requested, two copies of the executed order are enclosed.

If you have questions about this matter, please contact Mr. Steve Spengler at telephone #601/961-5171.

Sincerely,

Charles H. Chisolm
Bureau Director

CHC:mh

Enclosures

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
SEP - 5 1989
Dept. of Natural Resources
Bureau of Pollution Control

August 31, 1989

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jackson, MS 39289-0385

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Administrative Consent
Agreement

Dear Mr. Spengler:

Please find enclosed 3 copies of the Administrative Consent Agreement between Kerr-McGee Chemical Corporation, Forest Products Division, KMCC-FPD and the Mississippi Commission on Environmental Quality, MCEQ, executed by Mr. A. L. Martin, Vice President, KMCC-FPD. This Consent Agreement requires KMCC-FPD to define the full extent of groundwater contamination and MHWMR Part 264 Constituents at our Columbus Mississippi Wood Treating Facility in accordance with the Groundwater Quality Assessment Program dated July 28, 1989 as amended by Mr. Thad Hopper's approval letter of August 10, 1989.

KMCC-FPD would appreciate the return of 2 copies of the Consent Agreement, to my attention, after execution by the Executive Director of the MBPC.

I greatly appreciate your individual effort and the efforts of your staff over the past six months working towards permitting of KMCC-FPD's Columbus Facility. I look forward to working closely with you and your staff in the future. In the interim, if I may provide you with additional information or if you have any questions, please contact me at 405-270-2394.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

N. E. Bock
Staff Environmental Specialist

NEB/bfl

Enclosure

cc: G. R. Harrod
K. Saffell
R. Widmann

FOREST PRODUCTS

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

August 16, 1989

RECEIVED
SEP - 5 1989
Dept. of Natural Resources
Bureau of Pollution Control

CERTIFIED MAIL NO. P 965 303 975

Mr. Jeffrey Bull, Manager
Environmental Control & Regulatory
Compliance
Kerr-McGee Chemical Corporation
Forest Products Division
P.O. Box 25861
MT 1206
Oklahoma City, Oklahoma 73125

Dear Mr. Bull:

Re: Kerr-McGee Chemical Corp.
Columbus, MS Facility
MSD990866329

Enclosed is an agreed order which contains a compliance schedule for conducting groundwater assessment activities at the above referenced facility. Please review this document and if the wording and conditions contained within it are agreeable to Kerr-McGee Chemical Corporation, have it signed and dated by the responsible company official and returned to my attention at the above address by September 1, 1989. If the wording or conditions are not agreeable to Kerr-McGee Chemical Corporation, please contact me at your earliest convenience so that we can discuss any changes that may be necessary.

If you should have any questions or if you should require any additional information, please contact me at (601) 961-5171.

Sincerely,

Wm. Stephen Spengler, P.E., Coord.
RCRA TSD Branch

WSS:lr
Enclosure
cc: Mr. Nick Bock, Kerr-McGee Chemical Corp.

AUG 21 1989
Operations [illegible] Procurement

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

August 30, 1989

Mr. Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
Post Office Box 10385
Jackson, MS 39289-0385

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Bimonthly Progress Report,
Consent Order

Dear Mr. Spengler:

The following bimonthly progress report is submitted in compliance with the consent order received by Kerr-McGee Chemical Corporation, Forest Products Division on August 21, 1989.

The "Groundwater Quality Assessment Program" prepared by J. M. Poor was submitted July 29, 1989 to the Mississippi Bureau of Pollution Control (MBPC). This program proposed a field investigation to determine the vertical and horizontal extent of the plume underlying the Columbus Facility, as well as a sampling analytical schedule outlined to the first quarter of 1990. The proposed Groundwater Quality Assessment Program has been implemented.

The Groundwater Quality Assessment Program approval was received as amended by the MBPC on August 15, 1989. Modifications to the Groundwater Quality Assessment Program will be made to the location of proposed well CMW-19, and an additional Eutaw well will be installed.

Bids requested from three environmental drilling firms to perform the proposed field work were received and evaluated. The bid was awarded to TTL, Inc. of Tuscaloosa, Alabama and the field work is scheduled to begin by mid October 1989.

If you have any questions of if I may provide you with additional information please contact me at (405) 270-2394.

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 9-6-89
COMMENTS Rec'd to EPA

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

N. E. Bock
Staff Environmental Specialist

NEB/bfl
Enclosure

cc: R. Harrod, Plant
K. Saffell
R. Widmann

FOREST PRODUCTS

Kerr McGee

August 10, 1989

FILE COPY

Mr. Nick Bock
Kerr McGee Chemical Corporation
Kerr McGee Center
Oklahoma City, Oklahoma 73125

Dear Mr. Bock:

Re: Review of July 28, 1989
Groundwater Quality
Assessment Program

As per our conversation on August 4, 1989, the above referenced assessment program is approved with the following modifications:

1) An additional Eutaw well (CME-4) will be drilled in the vicinity of proposed well CMW-20, and

2) the location of proposed well CMW-19 will be moved approximately 100 feet to the north - northeast to provide additional control in the area of CMW-15.

Regarding fourth quarter sampling, it is our understanding that the following wells will be analyzed for indicator parameters: CMW-1AR, CMW-5, CMW-6, and CMW-7. These wells should also be analyzed for water quality parameters as specified by Mississippi Hazardous Waste Management Regulations 265.93 and the facility's post-closure application.

Based on the findings of this program, additional assessment may be required. If you have questions or comments regarding this matter, please contact me at (601)961-5171. Your continued cooperation is appreciated.

Sincerely,

Thad Hopper
Hazardous Waste Division

TH:cm
cc: Mr. James Scarbrough, EPA

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

RECEIVED
AUG 02 1989
Dept. of Natural Resources
Bureau of Pollution Control

August 1, 1989

FEDERAL EXPRESS - OVERNIGHT

Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
2380 Highway 80 West
Jackson, Mississippi 39204

RE: Kerr-McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Groundwater Quality Assessment Program

Dear Mr. Spengler:

Enclosed are two copies of a replacement page for Appendix A, Page 13 in the Groundwater Quality Assessment Program, submitted on July 28, 1989.

If we may provide you with any additional information, please contact Mr. Nick Bock at (405) 270-2394.

Sincerely,

Jami Poor

Jami Poor
Hydrologist

JMP/mm

enclosures

DIVISION OF SOLID WASTE
REVIEWED BY TH
DATE 8-3-89
COMMENTS No changes indicated from forms p. 13. mailed to EPA

Kerr-McGee FOREST PRODUCTS

pumping rate of 0.5 gallon per minute was established. The discharge consisted of clear water with a slight odor of creosote.

At 1512 hours a decrease in pumping rate to 0.4 gallon per minute was noted, commensurate with a rise in the pumping level. Inspection of the discharge showed a marked increase in creosote contamination. The gate valve was subsequently opened slightly to compensate for the reduction in discharge rate.

At 1523 hours another decrease in pumping rate and related rise in pumping level was noted. Again the discharge showed an increase in creosote. Before the gate valve could be opened further to compensate for the reduction in discharge rate, the pumping level in the test well began dropping, indicating an increase in the discharge rate.

Maintaining a constant pumping rate proved to be an insurmountable problem as the creosote contamination continued to increase in the discharge. At 1608 hours the pump began cycling on and off as the discharge rate again decreased. It is believed that the pressure switch engaged as the pump tried to force the heavier, creosote-contaminated groundwater through the gate valve. The discharge rate at this point was found to be 0.25 gallon per minute. Adjustment of the gate valve reestablished a discharge rate

TABLE 1 (APPENDIX J)

APR 19 '89 09: ENVIRONMENTAL TE CERTIFICATION

Seal No. ____ ETC Job # ____

CHAIN OF CUSTODY FORM (CC1)

Date Sealed ____ By: ____

Company: ____ Attn.: ____

Facility/Site: ____ Phone: ____

Address: ____

SAMPLE IDENTIFICATION

Facility: ____ (Facility/Site Code) ____ (Optional Sample Point Descriptions)

Sample Point: ____ - ____ ____ ____ ____

Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YY/MM/DD) | Start Time (2400 hr clock) | Elapsed Hours (composite)

Source Codes

Well	(W)	Outfall	(O)	Bottom Sediment	(B)	Surface Impoundment	(I)	Leachate Collection Sys.	(C)	Other	(X:
Soil	(S)	River/Stream	(R)	Generation Point	(G)	Treatment Facility	(T)	Lake/Ocean	(L)	Specify ____	

SHUTTLE CONTENTS

BOTTLE				ANALYSIS	SAMPLER		LAB
No	Type	Size	Preserv.		Fill. (Y/N)	Observations	Observations

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) ____ Date: ____ Time: ____
   Signature: ____ Seal #: ____ Intact: ____

2. I have received these materials in good condition from the above person.
   Name: ____ Signature: ____
   Date: ____ Time: ____ Remarks: ____

3. I have received these materials in good condition from the above person.
   Name: ____ Signature: ____
   Date: ____ Time: ____ Remarks: ____

4. Shuttle Sealed By: (print) ____ Date: ____ Time: ____
   Signature: ____ Seal #: ____ Intact: ____

LAB USE ONLY Opened By: ____ Date: ____ Time: ____

SHUTTLE # ____ TEMP. °C ____ SEAL # ____ COND. ____

A chain of custody will accompany all samples. The form includes the following information:

- sample number
- date and time of collection
- sample type (e.g., groundwater)
- number of containers and necessary preservatives
- dates of possession
- signature of collector
- signature(s) of all involved in the chain of possession

Table 3 shows how a typical chain of custody form would be completed.

LABORATORY QA/QC

The contract laboratory will base its quality assurance protocols on the following government guidelines:

- "Methods for Chemical Analyses of Water and Wastes", EPA-600/4-79-020, Revised March 1983;
- National Enforcement Investigation Center Policies, and Procedures Manual, EPA-330/9/79/001-R, October 1979;
- "Test Methods for Evaluating Solid Waste", SW-846 Third Edition, US EPA, September 1986;
- "Standard Methods for the Examination of Water and Wastewater", 1985, 16th Edition; and
- USEPA Contract Laboratory Program Statement of Work, Soil/Sediment and Water Matrices, Multi-Concentration, Selected Ion Monitoring (SIM), GC/MS Analysis for 2,3,7,8-TCDD, USEPA, 3/84 with 12/86 modifications.

<u>Analysis of Volatile Organic Compounds (SW846 Method 8240)</u>

- Each Quality Control batch consists of 20 client samples (at maximum), one method blank, one spiked blank, and one spiked sample and spiked sample duplicate.
- Three surrogate compounds are added to each sample in the batch. Results are compared to the acceptance criteria given in the method.
- Each GC/MS is checked every 12 hours to ensure that its performance on bromofluorbenzene (BFB) meets method criteria. The instrument is retuned if the criteria is not satisfied.

- A calibration curve for quantitation is prepared using standard reference solutions containing volatile organic compounds at five concentration levels and three internal standards compounds at constant concentrations. Acceptance is based on method criteria.
- The calibration curve is verified every 12 hours using a calibration standard reference solution. A full calibration is performed if the criteria is not satisfied.

Analysis of Organic Compounds Extracted in Acid or Base/Neutral - Solutions (SW846 Method 8270)

- Each Quality Control batch consists of 20 client samples (at maximum), one method blank, one spiked blank, and one spiked sample and spiked sample duplicate.
- Six surrogate compounds are added to each sample in the batch. Results are compared to the acceptance criteria given in method.
- Each GC/MS is checked every 12 hours to ensure that its performance on decafluorotriphenylphosphine (DFTPP) meets the method criteria. The instrument is retuned if the criteria is not satisfied.
- A calibration curve for quantitation is prepared using standard reference solutions containing the organic acid and base/neutral extractable compounds at five concentration levels and six internal standard compounds at constant concentrations. Acceptance is based on method criteria.
- The calibration curve is verified every 12 hours using a calibration standard reference solution. A full calibration is performed if the criteria is not satisfied.

Analysis of Pesticides and PCB's (SW846 Method 8080)

- Each Quality Control batch consists of 20 client samples (at maximum), one method blank, one spiked blank, and one spiked sample and spiked sample duplicate.
- Two surrogate compounds are added to each sample in the batch. Results are compared to the acceptance criteria given in the method.
- The percent breakdown for 4,4-DDT and Endrin are calculated. If the degradation exceeds criteria, corrective action is taken prior to instrument calibration.
- A calibration curve for quantitation is prepared using standards reference solutions containing the analytes at five concentration levels. Acceptance is based on method criteria.
- A mid-level standard reference solution is analyzed every ten samples and at the end of the analysis to evaluate retention time shift. If any analyte peaks fall outside of the daily R.T. window, corrective action is taken after the cause is determined.

Analysis of Herbicides (SW846 Method 8150)

- Each Quality Control batch consists of 20 client samples (at maximum), one method blank, one spiked blank, and one spiked sample and spiked sample duplicate.
- A calibration curve for quantitation is prepared using standards reference solutions containing the analytes at five concentration levels. Acceptance is based on method criteria.
- A mid-level standard reference solution is analyzed every ten samples and at the end of the analysis to evaluate retention time shift. If any analyte peaks fall outside of the daily R.T. window, corrective action is taken after the cause is determined.

Analyses of 2,3,7,8-TCDD (Dioxin) by GC/MS (SIM)

- Each sample is dosed with a known quantity of $^{13}C2$,3,7,8-TCDD as internal standard (ISTD) and $^{37}CL_4$2,3,7,8-TCDD as surrogate standard. For each sample, the surrogate must have a signal to noise of greater than or equal to 2.5. If not the sample is re-extracted.
- A laboratory "method blank" is run along with each set of 24 or fewer samples. The method blank is also dosed with the internal standard and surrogate standard.
- At least one per set of 24 samples is run in duplicate to determine intralaboratory precision.
- Qualitative Requirements. The following are met in order to confirm the presence of native 2,3,7,8-TCDD:
  a. Isomer specificity must be demonstrated initially and verified every 12 hours. The verification consists of injecting a mixture containing TCDD isomers which elute close to 2,3,7,8-TCDD. The 2,3,7,8-TCDD must be separated from interfering isomers, with no more than 25% valley relative to the 2,3,7,8-TCDD peak.
  b. The 320/322 ratio is within the range of 0.67 to 0.87.
  c. Ions 320, 322, and 257 are all present and the signal-to-mean-noise ratio must be 2.5 to 1 or better for all 3 ions.
  d. The retention time is equal (within 3 seconds) to the retention time for the isotopically labeled 2,3,7,8-TCDD.
- One sample is spiked with native 2,3,7,8-TCDD for each set of 24 or fewer samples.
- In cases where no native 2,3,7,8-TCDD is detected, the maximum possible concentration (MPC) is estimated and reported based on a signal-to-noise ratio of 2.5 to 1 at ions 320 and 322. Samples with MPC's exceeding 1.0 ppb in soil or 10 ppt in H_2O are re-extracted.

- For each sample, the internal standard is present with at least 10 to 1 signal-to-noise ratio for both mass 322 and mass 334. Also, the internal standard 332/334 ratio must be within the range of 0.67 to 0.87.
- To each sample, $^{13}C_{12}$1,2,3,4-TCDD recovery standard (RSTD) is added after extraction/cleanup. The RSTD is used to calculate ISTD recoveries with a minimum guideline value of 40%.

Analysis of Metals

Graphite Furnace Atomic Absorption Parameters (SW846 Methods - 7000 Series)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank, one metrix spike, one unspiked duplicate sample, and one external QC check sample per every 20 sample.
- A linear calibration curve is constructed by using absorbance from four standards and a blank. The coefficient of correlation must be <0.995 with an intercept <MDL.
- A calibration check standard is analyzed every ten determinations.

ICP Emission Spectrometry Parameters (SW846 Method 6010)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank, one matrix spike, one unspiked duplicate sample, and one external QC check sample per every 20 samples.
- A linear calibration curve is constructed by using raw data readout in concentration from five standards and a blank. The coefficient of correlation must be <0.995 with an intercept <MDL.

- A calibration check standard is analyzed every ten determinations.

Mercury (SW846 Method 7470)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank, one matrix spike, one unspiked duplicate sample, and one external QC check sample per every 10 samples.
- A linear calibration curve is constructed by using peak height from six standards and a blank. The coefficient of correlation must be <0.995 with an intercept <MDL.
- A calibration check standard is analyzed every ten determinations.

Analysis of Wet Chemistry Parameters

Chloride	(EPA Method 325.2)
Fluoride	(SM Method 413E)
Cyanide	(EPA Method 333.5)
Phenols	(EPA Method 420.2)
Nitrate	(EPA Method 353.2)
Nitrite	(EPA Method 353.2)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank, one spiked blank, one external QC check sample, and spiked samples and unspiked duplicate samples at ten percent frequency.
- A calibration curve for quantitation is prepared using standard reference solutions containing the analytes of interest at four concentration levels.
- Continuing calibration check standards and blanks are analyzed every fifteen samples.

Total Organic Carbon - TOC (EPA Method 415.1)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank, one spiked blank, check standards at four concentrations levels, one EPA reference sample, and spiked samples and unspiked duplicate samples at the percent frequency.
- The sample is run in duplicate or quadruplicate.
- A calibration curve for quantitation is prepared using standard reference solutions at five concentration levels.
- Continuing calibration check standards and blanks are analyzed every ten samples.

Total Organic Halide - TOX (EPA Method 450.1)

- Each Quality Control batch contains the following QC components which are analyzed with the samples: one method blank per four determinations, one calibration blank per four determinations.
- The sample is run in duplicate or quadruplicate.
- The calibration standard is analyzed every four determinations.

ISION OF SOLID WASTE
REVIEWED BY WSS - Compliance
DATE 8/1/89
COMMENTS copy to EPA. Compliance

KERR-McGEE CHEMICAL CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

July 28, 1989

RECEIVED
JUL 31 1989
Dept. of Natural Resources
Bureau of Pollution Control

FEDERAL EXPRESS - OVERNIGHT

Steve Spengler
RCRA TSD Coordinator
Mississippi Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39289-0385

Re: Kerr McGee Chemical Corporation
Forest Products Division
Columbus, Mississippi Facility
Groundwater Quality Assessment Program

Dear Mr. Spengler:

On July 19, 1989, I telephoned Mr. Kaleel Rahaim of the Mississippi Bureau of Pollution Control MBPC and tentatively outlined a Groundwater Quality Assessment Implementation Schedule for Kerr-McGee Chemical Corporation, Forest Products Division, Columbus, Mississippi Wood Treating Facility. KMCC-FPD proposed a Groundwater Quality Assessment Implementation Schedule for our Columbus, Mississippi Facility which included the following milestones:

1) Submit a Groundwater Assessment Program to the MBPC on July 28, 1989

2) Approval by the MBPC of the Groundwater Assessment Program within 15 days

3) Submit a Groundwater Assessment Report to the MBPC on February 28, 1990

4) Submit a revised RCRA Part B Permit application which includes the groundwater assessment report and an engineering feasibility plan for onsite corrective action on April 15, 1990

5) Write the Post-Closure Permit during May, 1990

6) The Post-Closure Permit would be available for public notice in mid-June.

On June 21, 1989, Mr. Rahaim telephoned me and informed me that the MBPC essentially was in agreement with the Implementation Schedule as proposed by KMCC-FPD.

KMCC-FPD therefore is submitting the enclosed Groundwater Quality Assessment Program and Implementation Schedule for MBPC's review and approval. Upon MBPC's approval of the Groundwater Quality Assessment Program, KMCC-FPD will implement the groundwater quality implementation schedule and execute an Administrative Consent Agreement between KMCC-FPD and the MBPC to institute the enclosed Groundwater Assessment Program defining the full onsite vertical and horizontal extent or rate of contaminant plume and delineate MHWMR Part 264 Appendix IX constituents in groundwaters.

FOREST PRODUCTS
2590C

KMCC-FPD submits that accomplishment of the enclosed implementation schedule requires the Groundwater Quality Assessment Program be performed on a very restrictive time table with no contingency for any extenuating circumstances or unexpected conditions occurring in the field. KMCC-FPD wishes to emphasize that the completion and submittal of the Groundwater Quality Assessment Program is contingent upon swift approval of the implementation scheduled by the MBPC. In addition, KMCC-FPD believes the 45 days allotted in the implementation schedule between submittal of the assessment plan and submittal of the RCRA modified Part B/engineering feasibility plan for onsite groundwater corrective action, will be a monumental task, requiring dedication of all of our resources to meet this deadline. We are confident, through our mutual cooperation, a Post-Closure Care Permit for the Hazardous Waste Management Unit for our Columbus, Mississippi Facility can be executed by September 30, 1990, as prescribed by U.S. EPA, Region IV.

If I may provide you with additional information or if you have questions, please contact me at (405) 270-2394 or Jeffrey Bull at (405) 270-2391. I will be out of the office during the week of August 7, 1989.

Sincerely,

KERR-MCGEE CHEMICAL CORPORATION
FOREST PRODUCTS DIVISION

Nick Bock

Nick Bock
Staff Environmental Specialist

NB:wpc

cc: G. H. Harrod
K. Saffell

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171

MEMORANDUM

TO: Kerr McGee, Columbus, Mississippi (MSD990866329)
Permit File

THRU: Steve Spengler

FROM: Kaleel Rahaim KR

SUBJECT: Meeting - July 12, 1989

DATE: July 17, 1989

A meeting was held with represenatives of Kerr McGee (KM) Chemical Company at the Mississippi Bureau of Pollution Control (MBPC) conference room on July 12, 1989. Attendees included:

Mr. Nick Bock - Kerr McGee, ~~Tulsa~~ ok. city, Ok., Oklahoma
Mr. Roy Widmann - Kerr McGee, ~~Tulsa~~, Oklahoma
Mr. Dave Bockelmann, MBPC
Mr. Steve Spengler, MBPC
Mr. Thad Hopper, MBPC
Mr. Kaleel Rahaim, MBPC

Preliminary discussions centered around the results of the pump tests done during June, 1988. Apparently, good pumping rates could not be sustained and the test was suspended after approximately 30-40 minutes. Flow rates of 0.4-0.5 gallons per minute were observed. Some free produce was encountered during the abbreviated pump test. Transmisivity was calculated to be approximately 96 gal/day $\cdot$ ft^2.

From the limited pump test, there appears to be some limited interconnectivity between the Eutaw and Alluvial aquifers. KM has plans to sample the Eutaw Aquifer at the end of July. The number of wells screened in the Eutaw Aquifer will also be increased. KM is also planning a second possible recovery well (RW2) for the facility.

Another consideration presented to KM from the MBPC was a proposed timetable ending in permit issuance by August, 1990. The steps to attain this end result were outlined and discussed. KM felt that the proposed timetable did not allow sufficient time for new well construction, groundwater analysis and other raw data generation. Based upon KM's proposed plan, timing may not be adequate. Other possible plans were discussed that would net the same or similar informational results, but which could possibly be completed at the projected times.

One basis for determining the number and location of additional wells will be the results of groundwater analysis from the current Eutaw well. The purpose of this investigation will be to determine the horizontal and vertical extent of on-site contamination at the facility. Other requirements will be a workplan for delineating off-site contamination and a corrective action plan to address on-site contamination once defined.

Mr. Bock will return to ~~Tulsa~~ OK. City, OK. and review the possibilities as discussed with his management. He is scheduled to reply on July 19, 1989.

KR:lr

cc: EPA

Hydrological Investigation and Phase Proposal
Forest Product Facility
Columbus, Mississippi

A. Determine vertical extent of the plume by analyzing Eutaw monitor well CMW-19 for Appendix VII KOOl (as well as the compliance wells for third quarter sampling).

B. Determine horizontal extent of the plume by defining the limits

I. On-site

A. Soil Borings
1. Drilling
a. Along west property line.
Beginning at southwest corner of property, ~~50' north of CMW-9~~, and continued northward every 50'-100' until no visual impact or, PID or portable gas chromatograph readings.
b. Along the south property line.
Beginning at southwest corner of property and continued eastward every 50'-100' until no visual impact, PID or portable gas chromatograph readings.
2. Sampling
a. Water sample will be taken from each boring having no visual contamination and will be analyzed for KOOl base-neutral and acid extractable fraction.
3. Piezometers (3 on south property, 1 on west) converted from borings for water level control.

B. Monitor Wells
1. Drilling
a. Along west property line.
Approximately fifty (50) feet north of the last clean soil boring (visually or no PID readings).
b. Along the south property line.
Approximately fifty (50) feet east of the last clean soil boring (visually or no PID readings).
2. Sampling
a. Water sample submitted from each completed monitor well for KOOl for first quarter analyzed.
b. CMW-9, CMW-10, CMW-11 for KOOl for first quarter analyzed.
c. Subsequent quarters, analyze only those wells with no free oil.

C. Eutaw monitor wells (if CMW-19 proves to be impacted)
1. Drilling
a. Along the west property (one)
b. Along the south property (one)
2. Sampling
a. For KOOl (if clean, then sampled annually)

II. Off-site

A. Petro-Sonde Survey

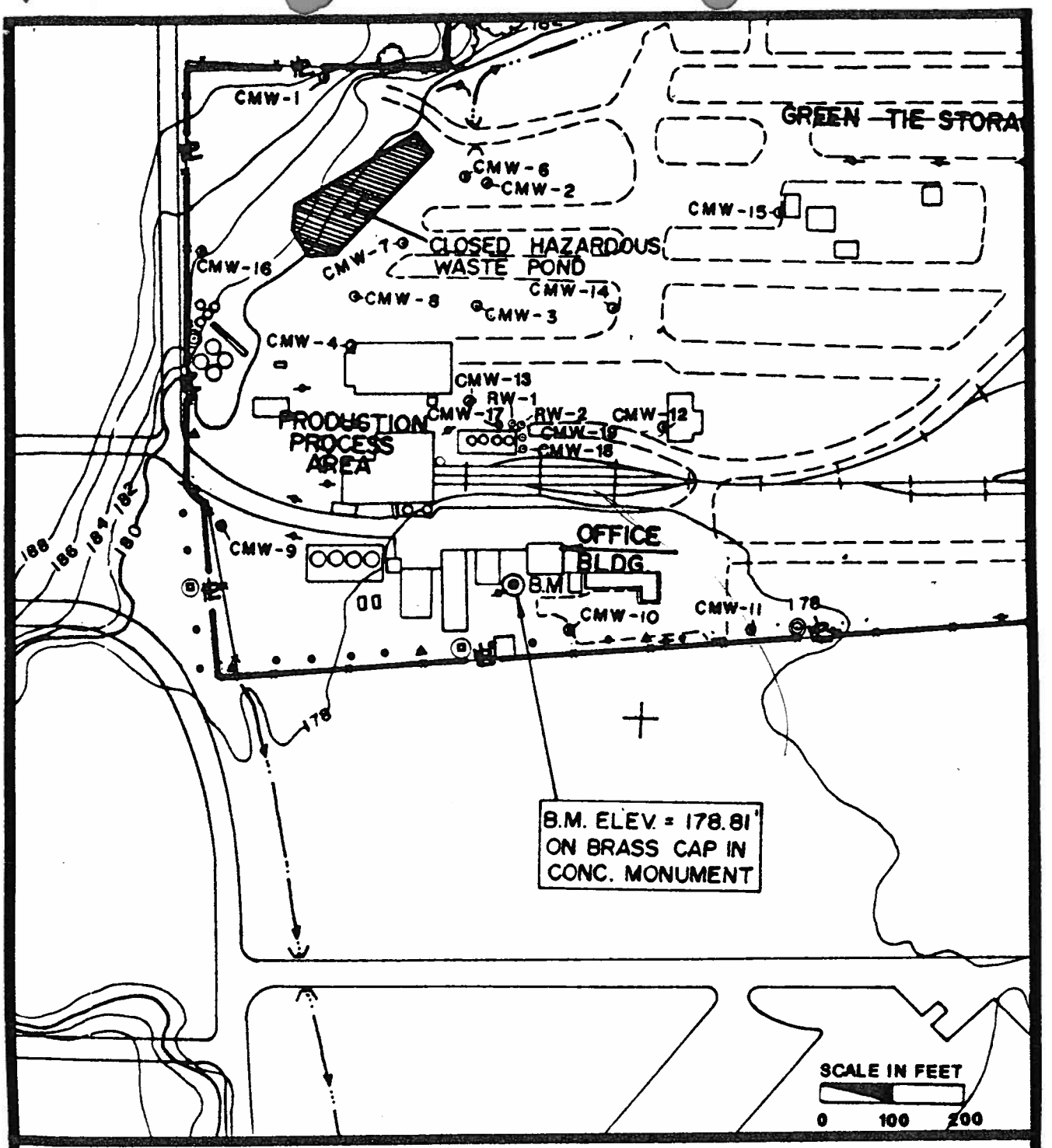
B. Access agreements for further investigations
   1. Borings
   2. Monitor wells
   3. Piezometers

III. Concurrent Recovery

A. Pump RW-2

B. Observe water levels in Eutaw well CMW-19

C. Propose a Corrective Action Program.



KMCC-FPD COLUMBUS, MISSISSIPPI

PROPOSED DRILLING LOCATIONS

LEGEND

- Monitor Well
- Soil Boring
- Proposed Eutaw Monitor Well
- Piezometer
- Proposed Monitor Well

Meeting to discuss Kerr-McGee audit by EPA
6/30/89

Bill Austin - MEMA
Pat Steed - Waste Div, Superfund, Preparedness + Planning
Title III

D. Lee, S. Mabry, E. Mahaffey, Dwight Wylie, J. Tillman
Chemical Process Safety Audit - Kerr-McGee Pigment plant - July 17

Normally Try to get voluntary permission for audit,
but, EPA has authority to audit anytime, however, under
CERCLA 104 (b) + (e)

Tentative date to review files - July 13 - DNK.

Chemical Safety Audit Preparation

1. **Research The Facility**
   A. Establish a list of needed information
   B. Collect information from whatever sources are available such as:
      1. ARIP questionnaire
      2. Dun & Bradstreet
      3. Air, water, waste permits
      4. State and local emergency management offices
      5. The TRI-NET list
      6. The Title III list of Section 302 notifications
      7. Etc.

2. **Identify team members**
   Select the appropriate skills for the particular facility from among the following technical/management types:
      1. Process
      2. Safety
      3. Operating
      4. Planning
      5. Toxicological
      6. Management
      7. Etc.

3. **Assemble the team to develop a plan of attack and to assign a specific task to each team member.** Designate sub-team leadership, making certain that there is a clear line of authority throughout the sub-teams and the major team.

4. **Review applicable regulations and inspection authority.**

5. **Call the facility contact.** This may be the plant manager, the emergency coordinator, or someone else but in any event, verify the most appropriate contact. Explain the purpose of the proposed inspection.

6. **Pre-inspect the Facility.** A pre-inspection visit by two or three team members will greatly enhance the potential for success of the subsequent full scale audit, particularly with the larger facilities.

7. **Adjust the Plan of Attack.** Item #6 above may require an adjustment.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MAY - 5 1989

4WD-RCRA

Mr. Sam Mabry, Chief
Hazardous Waste Branch
Bureau of Pollution Control
Mississippi Department of Natural
Resources
P.O. Box 10385
Jackson, Mississippi 39209

RE: Post Closure Permit Application
Draft Post-Closure Permit:

Kerr-McGee Chemical Corporation
Forest Product Division
Columbus, Mississippi
MSD 990 866 329

Dear Mr. Mabry:

EPA has reviewed the post-closure application and the draft Post-Closure Permit for the Kerr-McGee facility in Columbus, Mississippi. Based on the review of these materials, EPA has concluded that significant deficiencies for groundwater assessment remain under the requirements of 40 CFR §265.93 and §270.14(c). It is this agency's position that facilities must be in full compliance with all applicable interim status requirements and general application requirements prior to permit issuance: regulatory deficiencies shall not be corrected through permit conditions. Enclosed is a list of the deficiencies which must be addressed.

It is our understanding, per the April 26, 1989, phone conversation of Ms. Beverly Foster of my staff and Mr. David Bockelmann of MDNR, that Kerr McGee will meet these requirements prior to permit issuance and that Kerr McGee has been so informed. We also understand that the State will be issuing a schedule of compliance in a consent agreement with the facility.

Please notify Ms. Beverly Foster, at (404) 347-3433, as to the accuracy of our understanding within five (5) working days of the receipt of this letter.

Sincerely yours,

James H. Scarbrough

James H. Scarbrough, P.E.
Chief, RCRA Branch
Waste Management Division

Enclosure

ENCLOSURE

Regulation	Requirement	Comment
§265.93	Ground-water quality assessment program	The assessment program outline submitted by Kerr McGee is not sufficiently comprehensive to define the full vertical and horizontal extent, or the rate of flow, of the contaminant plume.
§270.14(c)(2)	Identification of uppermost Aquifer	Kerr-McGee must identify the uppermost aquifer and aquifers hydraulically interconnected beneath the facility. Unless a pumping test proves otherwise, the Eutaw formation should be considered as an hydraulically interconnected aquifer.
§270.14(c)(4)	Plume Definition	Kerr-McGee must identify the concentrations of each Appendix IX constituent (ii) and delineate the extent of any plume of contamination on the required topographic map (i).
§270.14(c)(5)	Monitoring System	Kerr-McGee must install additional wells, at appropriate locations and depths to evaluate the vertical extent of contamination at the point of compliance.
§270.14(c)(1)	Summary of Interim Status Monitoring	Since the ground-water flow direction in the alluvium is to the east, and the regional flow direction for the Eutaw is to the southwest, Kerr-McGee may find it necessary to define additional point of compliance wells to address the deeper groundwater flow.

KERR-McGEE CORPORATION
KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

ENGINEERING SERVICES DIVISION

RECEIVED
MAY - 5 1989
Dept. of Natural Resources
Bureau of Pollution Control

May 4, 1989

Federal Express - Overnight

Mr. David J. Bockelmann
Bureau of Pollution Control
2380 Highway 80 West
Jackson, Mississippi 39204

Dear David,

Attached for your information is an outline of the pumping test procedure to be followed for the upcoming test at the Columbus facility. Ms. Jami Poor, hydrologist from this office is at the Columbus facility this week for a pre-test set-up to establish a constant rate. She called earlier today to report that the best rate that she could establish was approximately 0.15 gpm with indications of well loss and/or casing storage effects and not aquifer yield. The three day pumping test, scheduled for next week may be delayed now as we contemplate additional well development before commencing the test. We will keep you apprised of the pumping test date.

Don't hesitate to call me at (405) 270-2663 if you have any questions.

Sincerely,

Roy

Roy K. Widmann
Staff Hydrologist

Attachment

cc: N. Bock
S. M. Logan
J. Poor

DIVISION OF SOLID WASTE
REVIEWED BY KR
DATE 5/5/89
COMMENTS Copy sent to EPA 5/5/89

Kerr-McGee Forest Product Facility
Columbus, Mississippi

Aquifer Production Test

A. Goals

1. Measure aquifer properties
   a. transmissivity
   b. storage values of the aquifer
   c. specific capacity of the recovery well.

2. Determine if the deltaic Eutaw Formation and the overlying alluvial flow systems are hydraulically connected.

3. Determine the amount of recovery wells needed and the placement distances for the removal of creosote from the groundwater.

B. Well installation and soil lithology (Appendix A)
1. Recovery well (one)
   a. 4" stainless steel, screened with 5' of .020" wire wound screen, above the Eutaw Formation

2. Observation wells (total of four)
   a. shallow piezometers (three)
      1. 2" PVC screened with 9' of .010" factory slotted screen. Slotted at depths ranging between 14-27 feet below grade.
   b. deep piezometer (one)
      1. 2" PVC screened with 9' of .010" factory slotted screen, surface cased with 4" PVC to a depth of 8.6' into the Eutaw Foundation.

3. Placement (figure 1) of piezometers
   a. water table wells in radial lines

C. Hydrological trends

1. Non-pumping water levels will be measured prior to pumping using electric probe measuring tape to determine regional water table.

   a. observation wells
   b. recovery well

D. Pumping well
1. Centrifical 110 volt pump installed in RW1 to a depth of approximately 26'.
2. 2" PVC flexible tubing as conductor pipe for discharge into the facility water treatment system, equipped with gate valve
   a. discharge measurements made using a 5 gallon bucket and a watch equipped with a second hand.

3. Water level measurement obtained using In-Situ, Inc. transducer of 50 psi range.

E. Observation well
   a. water level measurements obtained using In-Situ, Inc. tranducer 50 psi range, 10 psi range, and 2 electric dropline measuring tape.

F. Procedures
   1. Constant rate pre-test.
      a. recovery well is pumped at a fixed, known rate held constant by constant engine speed and adjusted valve.
      b. measurements made in recovery and observation wells will be recorded at logarithmic time increments with a SE-1000B data logging unit employed in collecting storing and reproducing the test data.
         every 1 minute, 0 to 10 minutes into test
         every 2 minutes, 10 to 20 minutes into test
         every 5 minutes, 20 to 50 minutes into test
         every 10 minutes, 50 to 90 minutes into test
         every 15 minutes, 90 to 180 minutes into test
         every 60 minutes, 180 minutes to end of test
      c. data used to determine aquifer properties.

   2. Constant rate pump test.
      a. recovery well is pumped at a fixed known rate held constant
      b. measurements made in recovery and observation well will be recorded at logarithmic time increments with a SE-1000B data logging unit employed in collecting, storing, and reproducing the test data.
         every 1 minute, 0 to 10 minutes into test
         every 2 minutes, 10 to 20 minutes into test
         every 5 minutes, 20 to 50 minutes into test
         every 10 minutes, 50 to 90 minutes into test
         every 15 minutes, 90 to 180 minutes into test
         every 60 minutes, 180 minutes to 3 days into test

   3. Recovery Test
      a. the pump is turned off and the groundwater level rises within 1/10th of the original depth
      b. groundwater depths in recovery well and observation wells are recorded in the same frequency of the constant rate pump test.

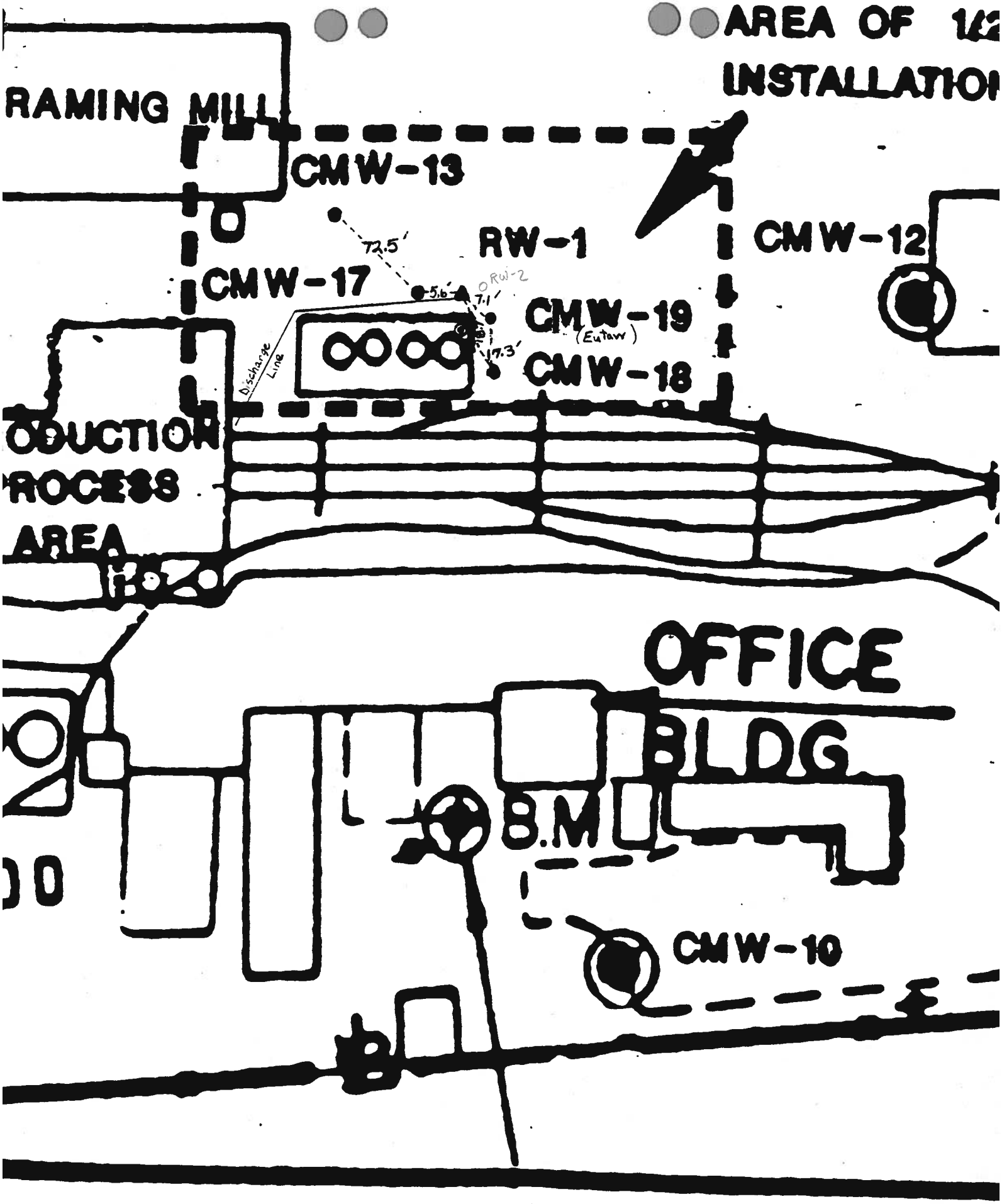


Figure 1.

KMCC-FPD COLUMBUS, MISSISSIPPI

SOIL BORING LOG KM-0000-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY KMCC FPD	LOCATION Columbus, Miss	BORING NUMBER RW1

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
.75	FILL: cinders, blk w/ fn snd									
	SAND: gray, fn grn, p. graded, silt		SM							
	CLAY: lt gray, m plastic w/ silty snd		C							
5.0 ▽	SAND: lt gray w/ mottled rust color, subrounded, fn, p. grade w/ 40% gravel, subrounded, pink & white chert to 1" size		SP							
10	: tan, lt gray, med to coarse subang., quartz w/ 50% gravel to 1" size, w. grade, sub round.		SW							
15	: tan, subrounded, med to coarse, p. graded.		SP							
	: rust color, fine to sub round, w graded, w/ increasing gravel, sub round, ½" cobbles		GM							
	: med-coarse									
20	CLAY: gray, lt plastic w/ silt/sand		CH							
	GRAVEL: w. graded, subrounded, gray & brn cobbles to 1" size w/ gray sand		GM							
	EUTAW FORMATION 23.2' SAND: green/glauc, fn grn, silty, mica,		SM							
25	Total Depth-									
	Note: Lithologic Description taken from CMW 17 (distance of 5.6' away)									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

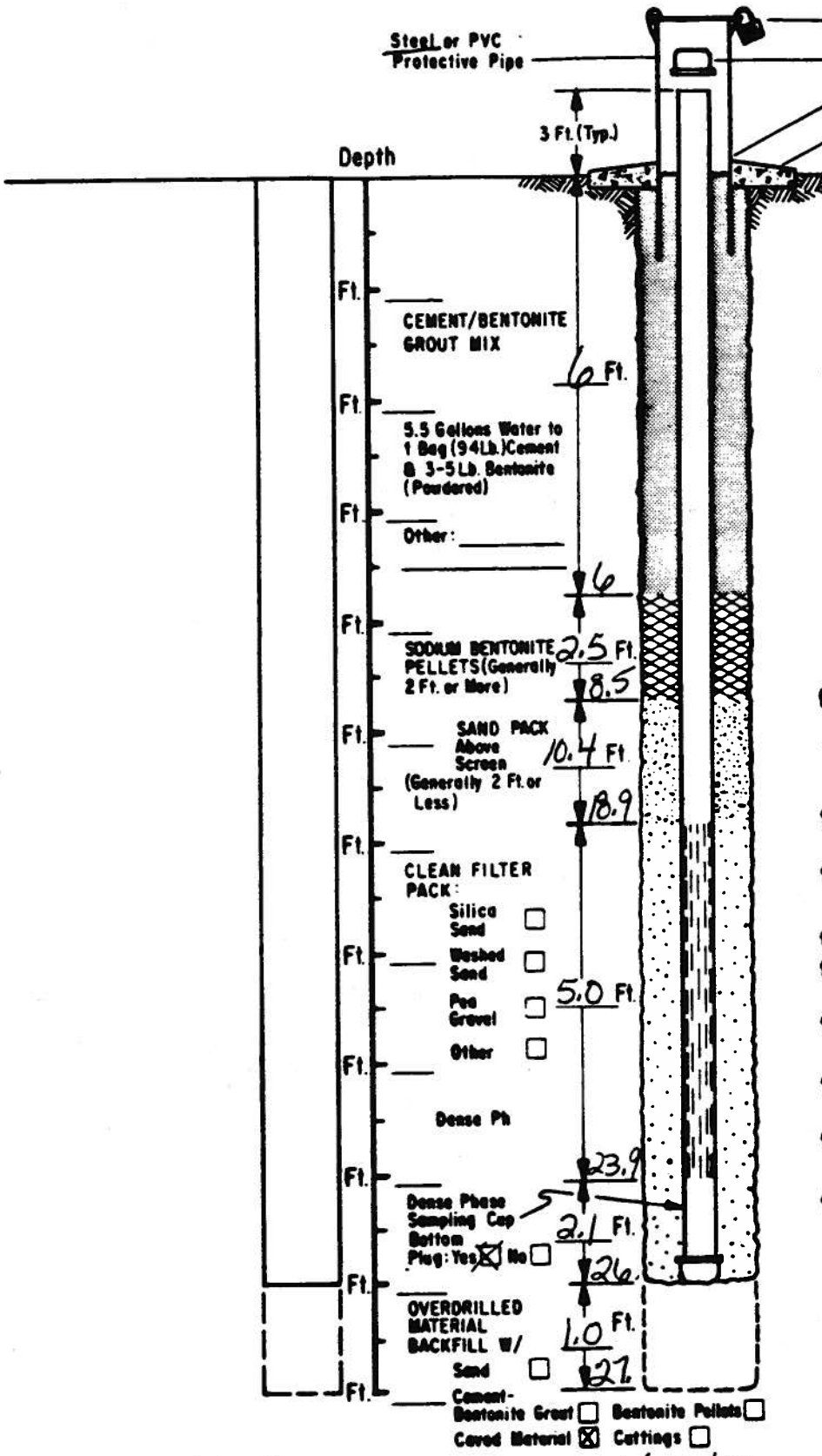
CLAY · DEBRIS FILL · SILT · HIGHY ORGANIC (PEAT) · SAND · SANDY CLAY · GRAVEL · CLAYEY SAND · SILTY CLAY · ____ · CLAYEY SILT · ____

DATE DRILLED	PAGE
1/23/89	of

DRILLING METHOD: Hollowstem auger
DRILLED BY: Curtis Lee TTL
LOGGED BY: Widmann / Poor
EXISTING GRADE ELEVATION (FT. AMSL):
LOCATION OR GRID COORDINATES:

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☒ No ☐

Casing Cap w/Vent: Yes ☒ No ☐

Weep Hole: Yes ☒ No ☐

Concrete Pad: Yes ☒ No ☐

1. Type of Casing: PVC ☐ Galvanized ☐ Teflon ☐ Stainless ☒ Other ☐
2. Type of Casing Joints: Screw-Couple ☒ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☐ Galvanized ☐ Stainless ☒ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 4 inches, Screen 4 inches
5. Slot Size of Screen: 0.020
6. Type of Screen Perforation: Factory Slotted ☐ Hacksaw ☐ Drilled ☐ Other ☐ Wire wound
7. Installed Protector Pipe w/Lock: Yes ☒ No ☐
8. Borehole Diameter = 10.75 Inches.
9. Were Drilling Additives Used? Yes ☐ No ☒ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☒ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☒ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☒ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? _____ / 3 hr. Minutes/Hours
14. Approximate Water Volume Removed? 50 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☒ Opaque ☐
16. Water Clarity After Development? Clear ☒ Turbid ☐ Opaque ☐ ☒ Creosote
17. Did the Water have Odor? Yes ☒ No ☐ If Yes, Describe _____
18. Did Water have any Color? Yes ☒ No ☐ If Yes, Describe _____
19. Water Level Summary (From Top of Casing) Before Development 6.05 Ft. Date 1/24/89 After Development _____ Ft. Date _____ Water Level _____ Ft. Date _____ _____ Ft. Date _____

Well No. RW1 Date Installed 1/23/89 Drill Rig Type CME-55

Driller/Firm TTL Drill Crew Curtis Lee Kerr-McGee Hydrologist Widmann/Poor

SOIL BORING LOG 104-0000-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY KMCC FPD	LOCATION Columbus, Miss	BORING NUMBER CM-W17

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	HNU PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
.75	FILL: Cinders, blk w/ fn snd				-1					
	SAND: gray, fn grn, p. graded, silt		SM		-1			4	3	
	CLAY: lt gray, m plastic w/ silty snd		CH		-1					
5.0 ▽	SAND: lt gray w/ mottled rust color, subrounded, fn, p. grade w/ 40% gravel, subrounded, pink & white chert to 1" size		SP		-1			9	1.4	
10	: tan, lt gray, med to coarse subang., quartz w/ 50% gravel to 1" size, w. grade, sub round.		SW		-1			14	1.0	
15	: tan, subrounded, med to coarse, p. graded.		SP	17 17	-1			16.5	1.1	
	: rust color, fine to sub round, w graded, w/ increasing gravel, subround, ½" cobbles		GM	8 18	-1			19.0	1.5	
	: med-coarse									
20	CLAY: gray, lt plastic w/ silt		CH	3 19	7			21.5	1.8	Creosote at 21'
	GRAVEL: w. graded, subrounded, gray & brn cobbles to 1" size w/ gray sand		GM	21 22	5			24.0	.85	
	EUTAW FORMATION 23.2'									
25	SAND: green/glauc, fn grn, silty, mica,		SM	41 42	15			26.5	1.1	Creosote at 23.6
	Total Depth									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · SILT · SAND · GRAVEL · SILTY CLAY · CLAYEY SILT · DEBRIS FILL · HIGHLY ORGANIC (PEAT) · SANDY CLAY · CLAYEY SAND · ____ · ____

DATE DRILLED	PAGE
1/23/89	of

DRILLING METHOD: Hollowstem auger

DRILLED BY: Curtis Lee TTL

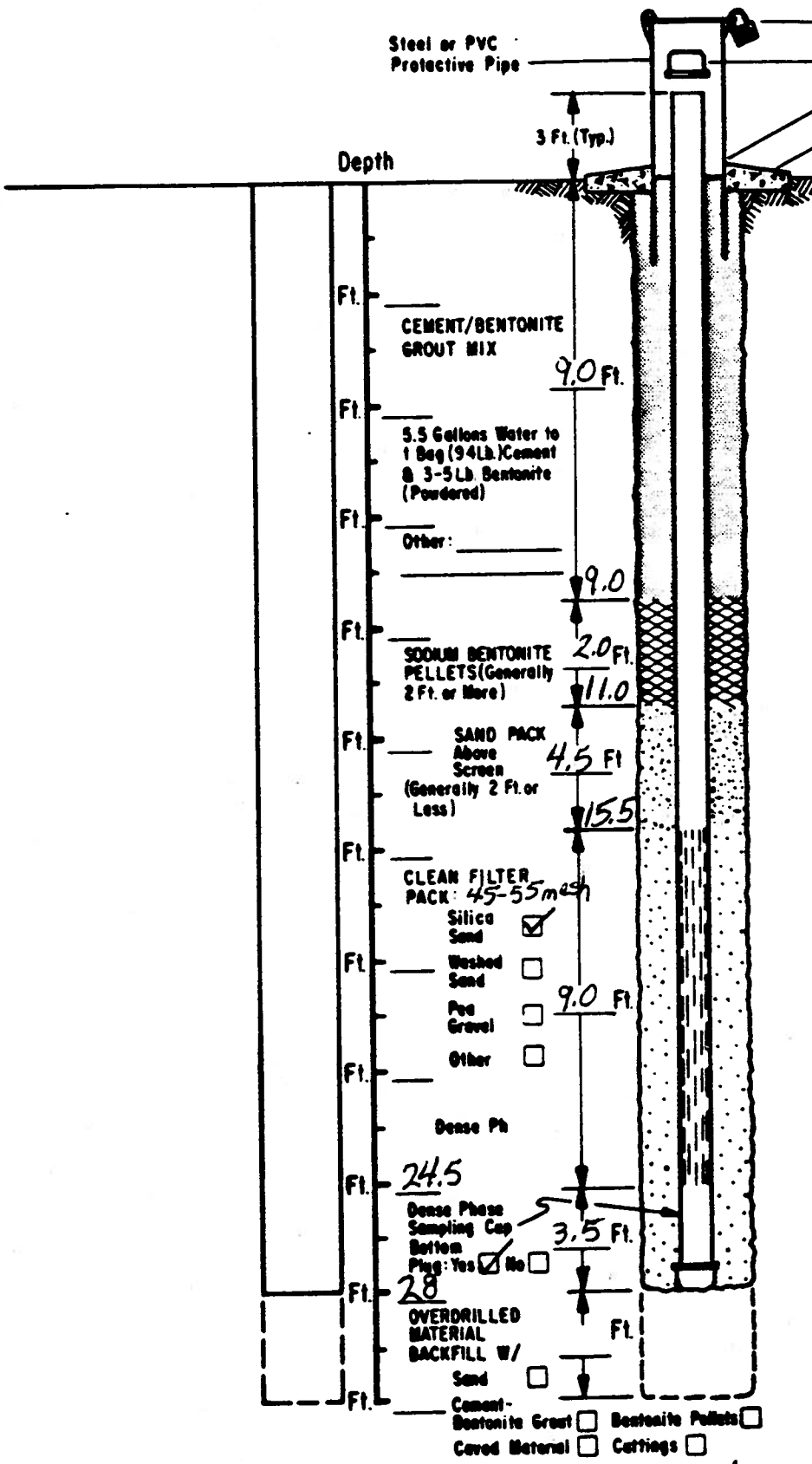
LOGGED BY: Widmann / Poor

EXISTING GRADE ELEVATION (FT. AMSL):

LOCATION OR GRID COORDINATES:

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ■ No ☐
Casing Cap w/Vent: Yes ■ No ☐
Weep Hole: Yes ■ No ☐
Concrete Pad: Yes ■ No ☐

1. Type of Casing: PVC ■ Galvanized ☐ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ■ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ■ Galvanized ☐ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 2" inches, Screen 2" inches
5. Slot Size of Screen: 0.010
6. Type of Screen Perforation: Factory Slotted ■ Hacksaw ☐ Drilled ☐ Other ☐
7. Installed Protector Pipe w/Lock: Yes ■ No ☐
8. Borehole Diameter = 10.75 Inches.
9. Were Drilling Additives Used? Yes ☐ No ■ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ■
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ■ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ■ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ■ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? _____ / _____ Minutes/Hours
14. Approximate Water Volume Removed? 112 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ■ Opaque ☐ Creosote ■
16. Water Clarity After Development? Clear ■ Turbid ☐ Opaque ☐ Creosote ■
17. Did the Water have Odor? Yes ■ No ☐ If Yes, Describe Creosote
18. Did Water have any Color? Yes ■ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development 4.79 Ft. Date 1/24/89
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

Well No. CMW17 | Date Installed 12/23/89 | Drill Rig Type CME-55
Driller/Firm TTL | Drill Crew Curtis Lee | Kerr-McGee Hydrologist Widmann/Poor

SOIL BORING LOG 1021—0000-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY KMCC - FPD	LOCATION Columbus, Miss	BORING NUMBER CMW 18

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	A-Nu PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	FILL: Cinder, ash & gravel,				-1					
	SILT: dk brown/black, organic, sndy, fn grained		OL		-1			4	2.1	
5	CLAY: lt gray, silty w/ to 1/2" gravel		CL		-1					
	SAND: gray, med grains, p. graded, sub round, to 1/2" gravel		SP		-1			9	2.45	
10					-1			14	1.1	
	: silty sand, gray/brown p. graded, fn. grain, subround w/ gravel lenses of 1/2-1/4", subang, 40% gravel		GM	9 10	-1			16.5	1.5	
15	: increase in gravel size to 1", 50% gravel, subround		CH	8 6 23	-1			19.0	1.35	
	: lt gray, fn grained w/ clay lenses, m. plastic			3 6	-1			21.5	1.70	
20	: tan/lt brn med-coarse, sub angular, p. graded w/ 40-50% gravel, 1/2", fractured, sub ang, increasing gravel content		GM	36 25 13	-1			24.0	1.3	
25				15 20 27	20			26.5	1.05	.8' of creosote at 25.4-26.2
	EUTAW FORMATION 26.4' SAND - green/glauc. fngrn, p. graded, mica		SM	34 73	-1			29.0	.2	
30	Total Depth									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL; AUGER; ROCK CORE; THIN-WALLED TUBE; CONTINUOUS SAMPLER; NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

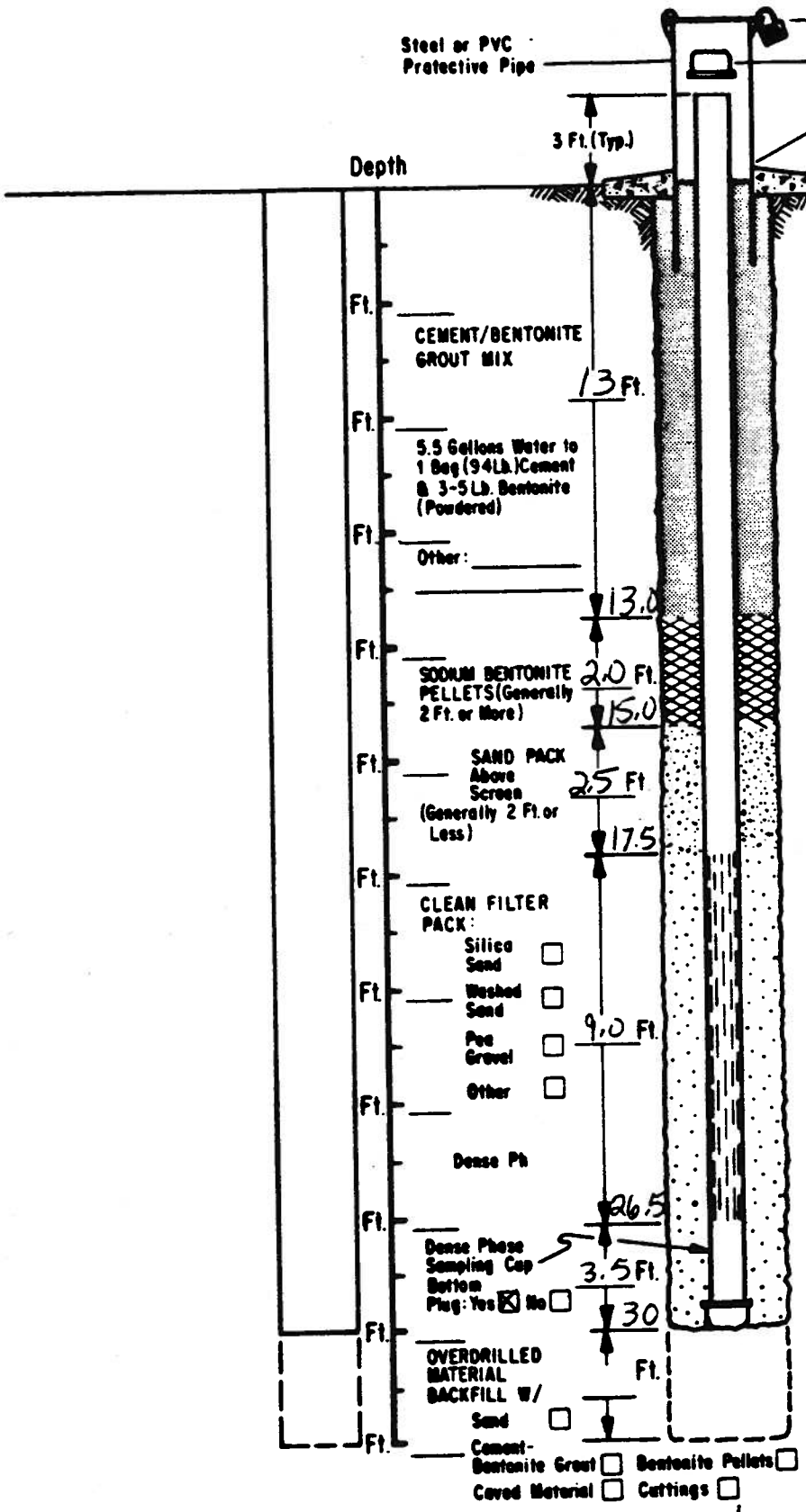
GRAPHIC LOG LEGEND

CLAY; SILT; SAND; GRAVEL; SILTY CLAY; CLAYEY SILT; DEBRIS FILL; HIGHLY ORGANIC (PEAT); SANDY CLAY; CLAYEY SAND; ____; ____

DATE DRILLED	PAGE
1/24/89	of
DRILLING METHOD: Hollowstem auger	
DRILLED BY: Curtis Lee TTL	
LOGGED BY: Widman / Poor	
EXISTING GRADE ELEVATION (FT AMSL)	
LOCATION OR GRID COORDINATES	

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☒ No ☐

Casing Cap w/Vent: Yes ☒ No ☐

Weep Hole: Yes ☒ No ☐

Concrete Pad: Yes ☒ No ☐

1. Type of Casing: PVC ☒ Galvanized ☐ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☒ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☒ Galvanized ☐ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 2 inches, Screen 2 inches
5. Slot Size of Screen: 0.010
6. Type of Screen Perforation: Factory Slotted ☒ Hacksaw ☐ Drilled ☐ Other ☐
7. Installed Protector Pipe w/Lock: Yes ☒ No ☐
8. Borehole Diameter = 10 3/4 inches.
9. Were Drilling Additives Used? Yes ☐ No ☒ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☒ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ☒ Depth = _____ to _____ Feet.
12. How was Well Developed? Bailing ☐ Pumping ☒ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 1.5 hr Minutes/Hours
14. Approximate Water Volume Removed? 100 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☒ Opaque ☐
16. Water Clarity After Development? Clear ☒ Turbid ☐ Opaque ☐
17. Did the Water have Odor? Yes ☐ No ☒ If Yes, Describe _____
18. Did Water have any Color? Yes ☐ No ☒ If Yes, Describe _____
19. Water Level Summary (From Top of Casing)
    Before Development 6.72 Ft. Date 1/25/88
    After Development _____ Ft. Date _____
    Water Level _____ Ft. Date _____
    _____ Ft. Date _____

Well No. CMW18 | Date Installed 12/24/89 | Drill Rig Type CME-55

Driller/Firm TTL | Drill Crew Curtis Lee | Kerr-McGee Hydrologist Widmann/Poor

SOIL BORING LOG 124—0000-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KMCC - FPD	Columbus, Miss	CMW 19

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	FILL: Cinder, ash & gravel,									
	SILT: dk brown/black, organic, sndy, fn grained		OL							
5 ▽	CLAY: lt gray, silty w/ to 1/2" gravel		CL							
	SAND: gray, med grain, p. grade, sub round, to 1/2" gravel		SP							
10										
	: silty sand, gray/brown p. graded, fn. grain, subround w/ gravel lenses of 1/2-1/4", subang, 40% gravel		GM							
15	: increase in gravel size to 1", 50% gravel, subround		CH							
	: lt gray, fn grained w/ clay lenses, m. plastic									
20	: tan/lt brn med-coarse, sub angular, p. graded w/ 40-50% gravel, 1/2", fractured, sub ang, increasing gravel content		GM							
25	EUTAW FORMATION 26.4' SAND - green/glauc. fngrn, p. graded, mica		SM							
30										
35	Note: Lithologic Description taken from CMW 18 (distance of 17.3' away)									

EXPLANATION

- ▼ Water Table (24 Hour)
- ▽ Water Table (Time of Boring)
- PID Photoionization Detection (ppm)
- NO. Identifies Sample by Number
- TYPE Sample Collection Method

SPLIT-BARREL · AUGER · ROCK CORE · THIN-WALLED TUBE · CONTINUOUS SAMPLER · NO RECOVERY

DEPTH Depth Top and Bottom of Sample
REC. Actual Length of Recovered Sample in Feet

GRAPHIC LOG LEGEND

CLAY · SILT · SAND · GRAVEL · SILTY CLAY · CLAYEY SILT · DEBRIS FILL · HIGHLY ORGANIC (PEAT) · SANDY CLAY · CLAYEY SAND · ____ · ____

DATE DRILLED	1/24/89
PAGE	1 of 2
DRILLING METHOD	Hollowstem auger
DRILLED BY	Curtis Lee TTL
LOGGED BY	Widman / Poor
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

SOIL BORING LOG KM—0085-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY KMCC - FPD	LOCATION Columbus, Miss.	BORING NUMBER CMW 19

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO.	TYPE	DEPTH	REC.	REMARKS OR FIELD OBSERVATIONS
	SAND: green, glauc, fine grained, p. graded, silty, subrd, mica		SM	43				37.5	2.5	
				80						
				37				40.0	2.5	
				39						
40				63				42.5	2.5	
				52						
				56				45.0	2.5	
				37						
				120						
45				101	-1					
50										
	Total Depth									

EXPLANATION

- Water Table (24 Hour)
- Water Table (Time of Boring)
- PID — Photoionization Detection (ppm)
- NO. — Identifies Sample by Number
- TYPE — Sample Collection Method
- SPLIT-BARREL
- AUGER
- ROCK CORE
- THIN-WALLED TUBE
- CONTINUOUS SAMPLER
- NO RECOVERY
- DEPTH — Depth Top and Bottom of Sample
- REC. — Actual Length of Recovered Sample in Feet

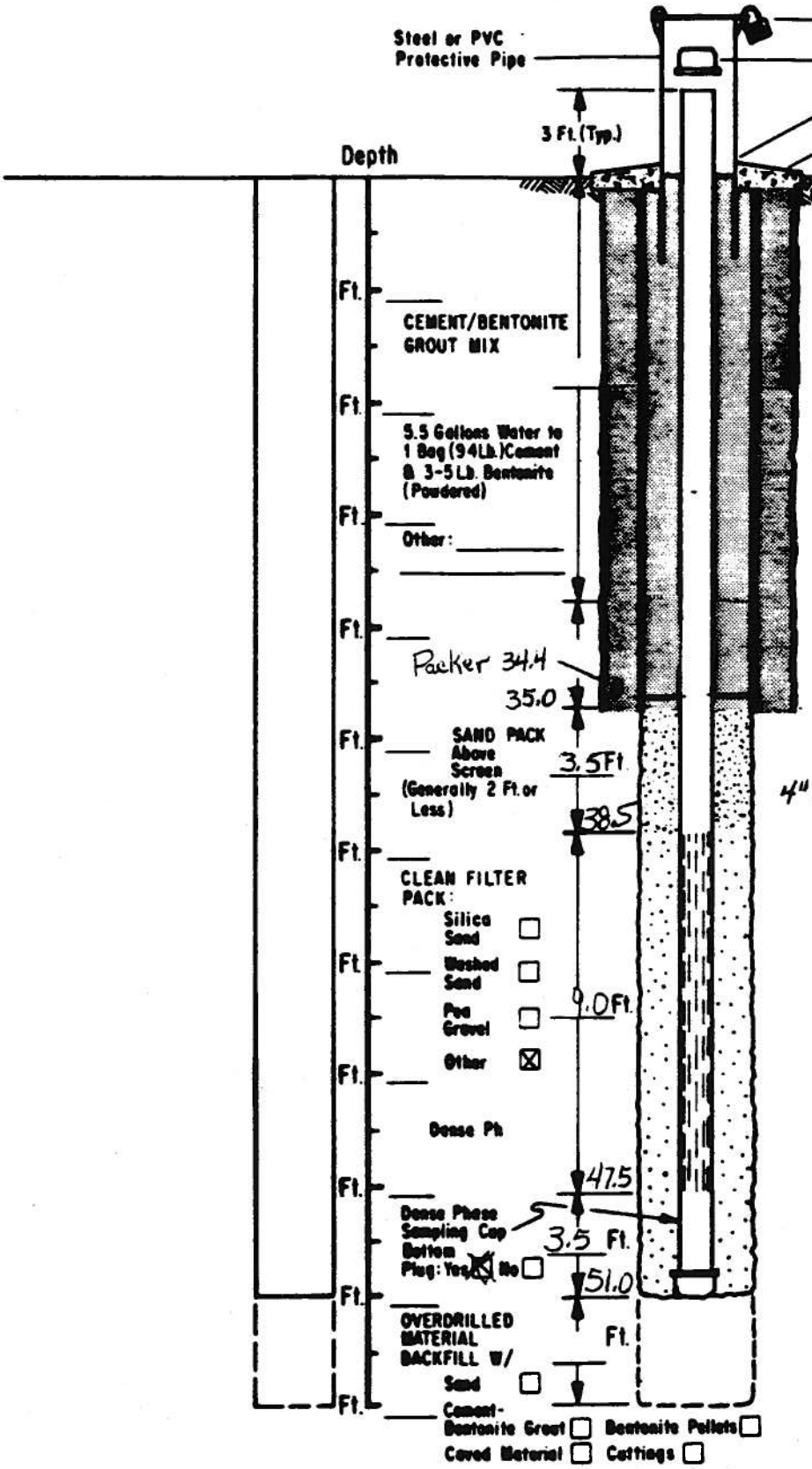
GRAPHIC LOG LEGEND

- CLAY
- SILT
- SAND
- GRAVEL
- SILTY CLAY
- CLAYEY SILT
- DEBRIS FILL
- HIGHY ORGANIC (PEAT)
- SANDY CLAY
- CLAYEY SAND
- _____
- _____

DATE DRILLED	1/25/8
PAGE	2 of 2
DRILLING METHOD	Hollow stem auger
DRILLED BY	Curtis Lee T TL
LOGGED BY	Poor
EXISTING GRADE ELEVATION (FT. AMSL)	
LOCATION OR GRID COORDINATES	

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



Lock: Yes ☑ No ☐
Casing Cap w/Vent: Yes ☑ No ☐
Weep Hole: Yes ☑ No ☐
Concrete Pad: Yes ☐ No ☐

1. Type of Casing: PVC ☒ Galvanized ☐ Teflon ☐ Stainless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ☒ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ☒ Galvanized ☐ Stainless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 2" inches, Screen 2" inches
5. Slot Size of Screen: 0.010
6. Type of Screen Perforation: Factory Slotted ☒ Hacksaw ☐ Drilled ☐ Other ☐
7. Installed Protector Pipe w/Lock: Yes ☒ No ☐
8. Borehole Diameter = 6.25 inches.
9. Were Drilling Additives Used? Yes ☐ No ☒ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ☐
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ☒ No ☐
11. Was Outer ~~Steel~~ Casing Used? Yes ☒ No ☐
    4" PVC Depth: 0.0 to 34.5 Feet
    Borehole Diameter 10.75 Feet
12. How was Well Developed? Bailing ☐ Pumping ☒ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 1 Hr. Minutes/Hours
14. Approximate Water Volume Removed? 21 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☒ Opaque ☐
16. Water Clarity After Development? Clear ☒ Turbid ☐ Opaque ☐
17. Did the Water have Odor? Yes ☐ No ☒
    If Yes, Describe _____
18. Did Water have any Color? Yes ☐ No ☒
    If Yes, Describe _____
19. Water Level Summary (From Top of Casing)
    Before Development ____ Ft. Date ____
    After Development ____ Ft. Date ____
    Water Level ____ Ft. Date ____
    ____ Ft. Date ____

Well No. CMW 19 | Date Installed 1/25/89 | Drill Rig Type CME-55

Driller/Firm Curtis Lee TTL | Drill Crew Curtis Lee TTL | Kerr-McGee Hydrologist Widman / Poor

SOIL BORING LOG KM—5688-A

KERR-McGEE CORPORATION Hydrology Dept. Engineering Services	KM SUBSIDIARY KMCC-FPD	LOCATION Columbus, MS	BORING NUMBER

DEPTH IN FEET	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	UNIFIED SOIL FIELD CLASS.	BLOWS PER FOOT	PID (ppm)	SOIL SAMPLE NO	TYPE	DEPTH	REC.	PI
	FILL, cinders				1	1		0.6	3.4	
1.6	SAND, Gry, M, Wsrtd, w/Grv 5% to 1/4" Rnd.				1			4.0		
5	W/Grv 25% to 3/4" subrund, subang, slightly Cly		SP	6 5	1 1	2		5.5 6.5	1.0	
	Sd, Gry, C, subrnd w/ Grv 10% to 1/2"			7 10	1 1	3		7.7 9.0	1.3	
10	Becoming Y			20 15	1 1	4		9.5 11.5	2.0	
	Sd, Gry, C, 10% Grv to 1/4" Sd, buff to Y, VC, Psrtd Grv 25% to 1/2"			17 17	1 1	5		12.0 14.0	2.0	
15	GRAVEL, 50% to 75% Ang, w/F Wht Sd, Rnd		GM	17 14	1 1	6		15.1 16.5	1.4	
	SAND CLAY GRAVEL, Gry, F Cl Sd Stf. w/Grv 20% to 1/2" subrnd		SC	7 12	1 1	7		17.2 19.0	1.8	
20	SAND, Gry, C, Psrtd w/Grv 50% to 3/4"		GM	12 18	1 1	8		19.5 21.5	2.0	
23.5				9 21	1 1	9		22.5 24.0	1.5	
25	EUTAW Formation at 23.5									

NOTE: An H-Nu meter was used to determine PID readings

EXPLANATION

- Water Table (24 Hour)
- Water Table (Time of Boring)
- PID — Photoionization Detection (ppm)
- NO. — Identifies Sample by Number
- TYPE — Sample Collection Method
- SPLIT-BARREL
- AUGER
- ROCK CORE
- THIN-WALLED TUBE
- CONTINUOUS SAMPLER
- NO RECOVERY
- DEPTH — Depth Top and Bottom of Sample
- REC. — Actual Length of Recovered Sample in Feet

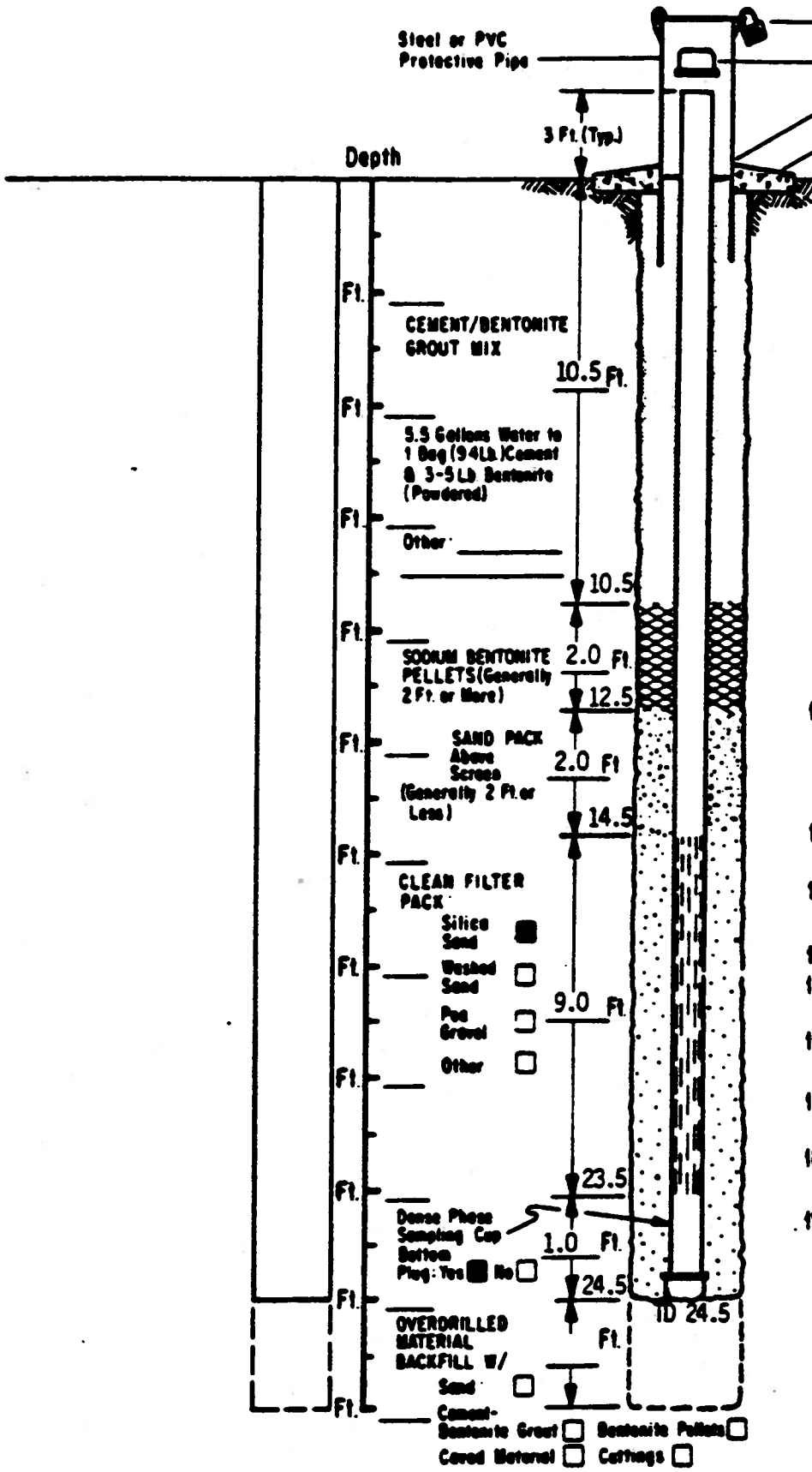
GRAPHIC LOG LEGEND

CLAY, SILT, SAND, GRAVEL, SILTY CLAY, CLAYEY SILT, DEBRIS FILL, ORGANIC, SANDY CLAY, CLAYEY SAND

DATE DRILLED	3/17/8
DRILLING CO.	Holla
DRILLED BY	TTL,
LOGGED BY	S. F.
EXISTING	178
LOCATION	N44

KERR-McGEE CORPORATION
HYDROLOGY DEPARTMENT
MONITORING WELL INSTALLATION DIAGRAM

LITHOLOGY | **WELL** | **SPECIFICATIONS**



SPECIFICATIONS

Lock: Yes ■ No ☐
Casing Cap w/Vent: Yes ■ No ☐
Weep Hole: Yes ■ No ☐
Concrete Pad: Yes ■ No ☐

1. Type of Casing: PVC ■ Galvanized ☐ Teflon ☐ Steinless ☐ Other ☐
2. Type of Casing Joints: Screw-Couple ■ Glued-Couple ☐ Other ☐
3. Type of Well Screen: PVC ■ Galvanized ☐ Steinless ☐ Teflon ☐ Other ☐
4. Diameter of Casing and Well Screen: Casing 2.0 inches, Screen 2.0 inches
5. Slot Size of Screen: .010
6. Type of Screen Perforation: Factory Slotted ■ Hacksaw ☐ Drilled ☐ Other ☐
7. Installed Protector Pipe w/Lock: Yes ■ No ☐
8. Borehole Diameter: 10¼ Inches
9. Were Drilling Additives Used? Yes ☐ No ■ Revert ☐ Bentonite ☐ Water ☐ Solid Auger ☐ Hollow Stem Auger ■
10. Was Sump or Dense Phase Sampling Cap Installed? Yes ■ No ☐
11. Was Outer Steel Casing Used? Yes ☐ No ■ Depth: _____ to _____ Feet
12. How was Well Developed? Bailing ☐ Pumping ■ Air Surging (Air or Nitrogen) ☐ Other ☐
13. Time Spent on Well Development? 18 / _____ Minutes/Hours
14. Approximate Water Volume Removed? 55 Gallons
15. Water Clarity Before Development? Clear ☐ Turbid ☐ Opaque ■
16. Water Clarity After Development? Clear ☐ Turbid ☐ Opaque ■
17. Did the Water have Odor? Yes ■ No ☐ If Yes, Describe creosote
18. Did Water have any Color? Yes ■ No ☐ If Yes, Describe black
19. Water Level Summary (From Top of Casing)
    Before Development 6.10 Ft Date 3/23/88
    After Development _____ Ft Date _____
    Water Level _____ Ft. Date _____
    _____ Ft Date _____

Well No. CMW-13 | Date Installed 3/17/88 | Drill Rig Type CME-55

Driller/Firm TTI INC | Drill Crew CURTIS LEE | Kerr-McGee Hydrologist S.F. LOOSBROCK

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

April 28, 1989

Mr. Jim Fiorillo
5816 S. 1325 E
Ogden, Utah 84405

FILE COPY

Dear Mr. Fiorillo:

Enclosed is a copy of Kerr-McGee, Hamilton, Mississippi's 1987 Biennial Report for your information.

If I may be of further assistance, please advise.

Sincerely,

Jerry B. Banks

Jerry B. Banks, P.E., Coordinator
RCRA Generator Branch

JBB:lr
Enclosure

Kerr-McGee Comp. #4

KERR-McGEE CHEMICAL CORPORATION

KERR-McGEE CENTER • OKLAHOMA CITY, OKLAHOMA 73125

April 24, 1989

RECEIVED
APR 28 1989
Dept. of Natural Resources
Bureau of Pollution Control

Mr. Kaleel Rahaim
Hazardous Waste Division
Mississippi Dept. of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Re: Comments on Draft Permit
Kerr-McGee Chemical Corporation-Forest Products Division
Columbus, Mississippi Wood Treating Facility; MSD990866329

Dear Mr. Rahaim:

Kerr-McGee Chemical Corporation, Forrest Products Division (KMCC-FPD) has reviewed the Draft Permit submitted by you on March 20, 1989. Subsequent conversations with Mr. David Bockelmann of your staff indicate that our commenting period has been extended to April 28, 1989. KMCC-FPD wishes to make the following specific comments in regard to our Columbus, Mississippi wood preserving facility.

Permit Conditions I.A. and II.B.2. permits hazardous storage only in areas described in the permit. To clarify this Condition, we believe hazardous waste storage should comply with applicable hazardous waste regulation as provided in MHWMR Section 262.

Permit Condition I.F., Signatory Requirements, requires <u>all</u> applications, reports or information submitted to or requested by the Director, his designee or authorized representative shall be signed and certified in accordance with MHWMR 270.11 and 270.30 (K). We believe that, with the exception of the permit, this requirement will significantly impact the timeliness and impede the flow of routine submittals and information between MBPC and KMCC-FPD since a responsible corporate officer or authorized representative must sign and certify all information submitted to the MBPC.

KMCC-FPD is committed to expeditiously assess groundwater quality and conduct an assessment of contaminant plume with the goal of developing and implementing a Corrective Action Program as soon as practicable. Permit Condition II.L., Corrective Action Program, specifies that within one year of the effective date of the permit for KMCC-FPD to submit to the MBPC an application to modify the permit to include a Corrective Action Program. KMCC-FPD believes the assessment phase will require contaminant plume definition beyond the facility boundary; consequently, due to the uncertainties of obtaining off site access agreements to perform drilling, we feel the one year stipulated by the permit to develop a Corrective Action

DIVISION OF SOLID WASTE
REVIEWED BY KR
DATE 4/28/89
COMMENTS sent to EPA 4/28/89

FOREST PRODUCTS

APPENDIX J

GROUNDWATER MONITORING PROCEDURES

Forest Products Division has established formal quality assurance sampling and analysis protocols for groundwater samples taken from the waste management area based on EPA standards. The strict use of these protocols by the contracted sampling and analytical personnel is mandatory when monitoring groundwater quality beneath or issuing from the facility.

GROUNDWATER SAMPLING

Following is a detailed description of the procedures to collect the groundwater samples from the monitor wells at the facility.

Initial Observations: The Sampling Specialist initially makes note of the general monitor well and site conditions upon arrival on a field parameter form such as that presented in Table 1. For example, general comments about the weather conditions for each sampling date are recorded. Specific comments concerning each of the wells are then made, with typical notations to include, but not limited to, whether a well is in a flooded area, the presence of nearby dessication cracks, etc. A notation concerning missing well locks or caps is made if appropriate. It is then up to the field person to replace whatever is missing before he leaves the site. Observations related to the physical condition of the well are recorded if it appears the well has been damaged.

The integrity of the cement pad around each steel protective well casing and the near-surface well seal is verified by noting the general condition of the cement. Loose or severely cracked cement is immediately replaced.

Measurement of Static Water Level: After all of the general and pertinent observations are recorded, the Sampling Specialist measures the static water level in the well. The well cap is removed and laid up-side down on the ground or placed in the field vehicle. An electric water level indicator is tested to make sure it is operable, and the detection probe is thoroughly rinsed with deionized water. The probe is lowered into the well casing until the fluid level is detected. The depth to fluid is then recorded (field parameter form) to the nearest 0.01 foot with respect to the reference point (either a mark or a notch) at the top of the casing. All reference points have been measured in relation to mean sea level.

Total well depth is then measured with respect to the top of the casing for each well using a weighted steel tape. Again, the measurement is recorded (field parameter form) to the nearest 0.01 foot. The tape is removed from the well, rinsed with deionized water, and dried with a paper towel.

The presence of a floating or settled immiscible liquid in a well is recorded. Floating liquids are often detected visually by looking down a well, but a settled liquid may only be obvious from the steel tape used to measure total well depth. An estimate as to the thickness of each layer is made using the steel tape or by lowering a conductivity probe downhole.

FILE COPY

December 5, 1988

Mr. Jeffrey H. Bull, Manager
Environmental Control and Regulatory
Kerr-McGee Chemical Corporation
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

Dear Mr. Bull:

Re: Comprehensive Groundwater
Monitoring Evaluation (CME)
Kerr-McGee Chemical Corporation
Columbus, Mississippi
MSD990866329

On August 11, 1988, a Comprehensive Groundwater Monitoring Evaluation (CME) was performed at the above referenced facility. This evaluation was conducted to determine the adequacy of the facility's groundwater monitoring system with respect to the requirements of Mississippi Hazardous Waste Management Regulations (MHWMR) Part 265, Subpart F. Enclosed is a copy of the CME Report. No deficiencies or violations were found as a result of this evaluation.

If you should have any questions or if you should require any additional information, please contact me at (601) 961-5171.

Sincerely,

David J. Bockelmann
Hazardous Waste Division

DJB:lr
Enclosure
cc: Mr. G. Ross Harrod, Kerr-McGee (w/enclosure)
Mr. James H. Scarbrough, EPA (w/enclosure)

November 28, 1988

Mr. Jeffrey H. Bull, Manager
Environmental Control and
Regulatory Affairs
Kerr-McGee Chemical Corporation
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

FILE COPY

Dear Mr. Bull:

Re: Compliance Evaluation
Inspection (CEI)
Kerr-McGee Chemical Corporation
Columbus, Mississippi
MSD990866329

On August 11, 1988 a Compliance Evaluation Inspection (CEI) was performed at the above referenced facility. This inspection was conducted to determine the facility's compliance with Mississippi Hazardous Waste Management Regulations. Enclosed are copies of the Interim Status Compliance Checklist and the RCRA Inspection Report. No deficiencies or violations were found during this inspection.

If you should have any questions or if you should require any additional information, please contact me at (601) 961-5171.

Sincerely,

David J. Bockelmann
Hazardous Waste Division

DJB:cm
Enclosure
cc: Mr. G. Ross Harrod (w/enclosure)
Mr. James H. Scarbrough, EPA (w/enclosure)

MISS[illegible]I DEPARTMENT OF NATURAL R[illegible]RCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

M E M O R A N D U M

TO: Hazardous Waste TSD Facilities

FROM: Hazardous Waste Division

DATE: March 31, 1988

SUBJECT: Annual Closure Cost Estimate Update

1. The closure cost estimate must be updated by May 19, 1988. This estimate must be submitted to this office by May 28, 1988.

2. Financial assurance mechanism must be update as follows:

   A. Facilities that use the Financial Test must resubmit financial information incorporating the closure cost estimate update within 90 days after the end of their fiscal year;

   B. Facilities that use the Trust Fund must update Schedule A of the Trust Fund by July 18, 1988. Annual payments into the Trust Fund must be made by December 1, 1988.

   C. Facilities that use the Surety Bond must increase the amount of the bond and submit evidence of such increase to our office or obtain alternate financial assurance by July 18, 1988.

   D. Facilities that use the Letter of Credit must cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to our office or obtain other financial assurance by July 18, 1988; and

   E. Facilities that use Closure Insurance must either cause the face amount of the insurance to be increased to the current closure cost estimate and submit evidence to our office or obtain other financial assurance by July 18, 1988.

To update your closure cost estimate, you must multiply the current closure cost estimate (1987 estimate) times 1.027. The new figures will become the updated closure cost estimate for which you must demonstrate financial assurance.

Example:

Original closure cost estimate - $10,000 (1981)
1982 update $10,000 x 1.09 = $10,900
1983 update $10,900 x 1.07 = $11,663
1984 update $11,663 x 1.04 = $12,130
1985 update $12,130 x 1.038 = $12,594
1986 update $12,594 x 1.033 = $13,009
1987 update $13,009 x 1.026 = $13,347
1988 update $13,347 x 1.027 = $13,707

Should you have any questions, please contact the Bureau at (601) 961-5171.

CE:sae

FILE COPY

February 9, 1988

Mr. Jeffrey H. Bull, Manager
Environmental Control and
Regulatory Affairs
Kerr-McGee Chemical Corp.
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

Dear Mr. Bull:

Re: Groundwater Assessment Plan
Kerr-McGee Chemical Corp.
Columbus, Mississippi
MSD990866329

I have recently reviewed the above referenced Groundwater Assessment Plan which we received on September 29, 1987. In general I find that this plan is satisfactory as an initial phase in the site assessment. Additional assessment, based on the findings of this initial investigation, may be necessary in order to fully characterize the contaminant plume both horizontally and vertically.

It is recommended that upgradient well CMW-1A and downgradient well CMW-2 not be plugged and abandoned until after the site assessment is complete and a corrective action plan formulated. Maintaining these wells during the assessment period would allow for the continued sampling (if necessary) of the existing system of wells which are all similarly constructed (PVC casing and screens vs stainless steel casing and screens).

If you should have any questions, please call me at (601) 961-5171

Sincerely,

David J. Bockelmann

David J. Bockelmann, Hydrologist
Hazardous Waste Division

DJB/vlb

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171

February 9, 1988

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Regulatory Affairs
Kerr-McGee Chemical Corp.
Kerr-McGee Center
Oklahoma City, Oklahoma 73125

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If you should have any questions, please call me at (601) 961-5171

Sincerely,

David J. Bockelmann

David J. Bockelmann, Hydrologist
Hazardous Waste Division

DJB/vlb

DIVISION OF SOLID WASTE
REVIEWED BY
DATE 2-9-88
COMMENTS Sent to EPA
DJB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

JAN 12 1988

4WD-RCRA

JAN 14
Dept
Bureau of Pollution Control

Mr. Sam Mabry, Director
Hazardous Waste Division
Bureau of Pollution Control
Mississippi Department of Natural Resources
P.O. Box 10385
Jackson, Mississippi 39209

Dear Mr. Mabry:

I am forwarding a copy of a letter we recently received pertaining to availability of liability insurance for hazardous waste storage and treatment facilities, for your information. You may wish to provide this information to facilities which don't have the required coverage, and are under order to continue to try and obtain it. Of course, EPA does not endorse or recommend any company's products. I am passing this along to you for informational purposes only.

Sincerely yours,

Allan E. Antley

Allan E. Antley, Chief
Waste Compliance Section

Enclosure