

GRENADA COUNTY - TIE PLANT MS
KOPPERS INC
MSU081080

AI 00876

Koppers Inc

General Information

ID	Branch	SIC	County	Basin	Start	End
876	Energy and Transportation	2491	Grenada	Yazoo River	11/09/1981	

Address

Physical Address (Primary)	Mailing Address
1 Koppers Drive Tie Plant, MS 38960	PO Box 160 Tie Plant, MS 38960

Telecommunications

Type	Address or Phone
Work phone number	(662) 226-4584, Ext. 11

Alternate / Historic AI Identifiers

Alt ID	Alt Name	Alt Type	Start Date	End Date
2804300012	Koppers Industries, Inc.	Air-AIRS AFS	10/12/2000	
096000012	Koppers Industries, Inc.	Air-Title V Fee Customer	03/11/1997	
096000012	Koppers Industries, Inc.	Air-Title V Operating	03/11/1997	03/01/2002
096000012	Koppers Industries, Inc.	Air-Title V Operating	01/13/2004	01/01/2009
MSR220005	Koppers Industries, Inc.	GP-Wood Treating	09/25/1992	
MSD007027543	Koppers Industries, Inc.	Hazardous Waste-EPA ID	08/27/1999	
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	06/28/1988	06/28/1998
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	11/10/1999	09/30/2009
876	Koppers Industries, Inc.	Historic Site Name	11/09/1981	12/11/2006
876	Koppers, Inc.	Official Site Name	12/11/2006	
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	11/14/1995	11/13/2000
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	09/18/2001	08/31/2006
MSU081080	Koppers Industries, Inc.	Water-SOP	11/09/1981	11/30/1985

Regulatory Programs

Program	SubProgram	Start Date	End Date
Air	Title V - major	06/01/1900	
Hazardous Waste	Large Quantity Generator	08/27/1999	
Hazardous Waste	TSD - Not Classified	06/28/1988	
Water	Baseline Stormwater	01/01/1900	
Water	PT CIU	11/14/1995	
	PT CIU - Timber Products		

Water	Processing (Subpart 429)	11/14/1995
Water	PT SIU	11/14/1995

Locational Data

Latitude	Longitude	Metadata	S / T / R	Map Links
33 ° 44 ' 3 .00 (033.734167)	89 ° 47 ' 8 .06 (089.785572)	Point Desc: PG- Plant Entrance (General). Data collected by Mike Hardy on 11/8/2005. Elevation 223 feet. Just inside entrance gate. Method: GPS Code (Psuedo Range) Standard Position (SA Off) Datum: NAD83 Type: MDEQ	Section: Township: Range:	SWIMS TerraServer Map It

12/20/2006 12:16:40 PM

MDEQ OPC Locational Data Entry Form

Page 1 of ____

ms0081080

Site Name: KOPPER'S INDUSTRIES INC

Address: 1 KOPPER'S DRIVE, TIE PLANT

City: TIE PLANT State: MS Zip: _____

County: GRENVILLE

Site Unique Identifier: JUST INSIDE ENTRANCE GATE

Site Unique Identifier Description:
(Permit#, EPA ID, Monitoring Station #, etc...)

Latitude: 33 Degrees 44 Minutes 03.0 Seconds

Longitude: 89 Degrees 47 Minutes 08.6 Seconds

Elevation: 223 ft.

Method of Collection: G3 - Differential
 ✓ G5 - Autonomous/SA Off

Point Description: ✓ PG - Plant Entrance (General)
 NE - NE Corner of Land Parcel
 SE - SE Corner of Land Parcel
 NW - NW Corner of Land Parcel
 SW - SW Corner of Land Parcel
 CE - Center of Facility
 WL - Well*
 WM - Ambient Water Mon. Station
 AM - Ambient Air Mon. Station

J.H.
11/16/05

Comments: _____

*This point should be used only for wells in cases where there is no other identifiable facility.

Collected By: MIKE HANCOCK

Date Collected: 11/8/2005



**Mississippi Department of Environmental Quality
Office of Pollution Control**

I-sys 2000 Master Site Detail Report

Site Name: Koppers Industries Inc

PHYSICAL ADDRESS

LINE 1: Tie Plant Road
LINE 2:
LINE 3:
MUNICIPALITY: Tie Plant
STATE CODE: MS
ZIP CODE: 38960-

MAILING ADDRESS

LINE 1: PO Box 160
LINE 2:
LINE 3:
MUNICIPALITY: Tie Plant
STATE CODE: MS
ZIP CODE: 38960-

OTHER INFORMATION

MASTER ID: 000876
COUNTY: Grenada
REGION: NRO
SIC 1: 2491
AIR TYPE: TITLE V
HW TYPE: TSD
SOLID TYPE:
WATER TYPE: INDUSTRIAL
BRANCH: Energy
ECED CONTACT:
Collier, Melissa
BASIN:

AIR PROGRAMS

☒ SIP ☐ PSD ☐ NSPS ☐ NESHAPS ☐ MACT



**Mississippi Department of Environmental Quality
Office of Pollution Control**

Permits

PROGRAM	PERMIT TYPE	PERMIT #	MDEQ PERMIT CONTACT	ACTIVE
AIR	TITLE V	096000012	Burchfield, David	YES
WATER	PRE-TREATMENT	MSP090300	Collins, Bryan	YES
HAZ. WASTE	TSD	HW8854301		NO
HAZ. WASTE	EPA ID	MSD007027543		NO
HAZ. WASTE	TSD	HW8854301	Stover, Wayne	YES
GENERAL	BASELINE	MSR22005		NO
WATER	SOP	MSU081080		NO

Compliance Actions

MEDIA	ACTIVITY TYPE	SCHEDULED	COMPLETED	INSPECTED BY
HAZ WASTE	Financial Record Review	1/18/2000	1/18/2000	Twitty, Russ
WATER	CMI - PRETREATMENT			Whittington, Darryail
WATER	CEI - PRETREATMENT	9/30/2000		Twitty, Russ
WATER	CEI - NA	9/30/2000		Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	9/30/2000		Twitty, Russ
AIR	State Compliance Inspection	9/30/2000		Twitty, Russ
WATER	CEI - NA	3/2/1999	3/2/1999	Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	3/2/1999	3/2/1999	Twitty, Russ
AIR	State Compliance Inspection	3/2/1999	3/2/1999	Twitty, Russ



Koppers Industries Inc

Name: Koppers Industries Inc
Site Tie Plant Road
Location: Tie Plant MS 38960-

Contact Name: Thomas Henderson
Contact Title: Plant Manager
Phone: (601) 226-4584
ECED Contact: Russ Twitty

SIC1: 2491
SIC2:
SIC3:
Timber and Wood Products, Misc Ind

AFS ID: 04300012
EPA ID: MSD007027543
Out of Business: ☐

Air Facility Type: Title V
HW Facility Type: TSD
Water Facility Type: Industrial

Permit Type	SubType	Permit Number	Permit Contact
<input type="checkbox"/> AIR	Title V	096000012	Burchfield, David
<input type="checkbox"/> HW	TSD	HW8854301	
<input type="checkbox"/> WATER	NPDES	MSP090300	Collins, Bryan

Koppers Industries Inc

DATA CODED

Name:	Koppers Industries Inc		
Site	Tie Plant Road		
Location:	Tie Plant	MS	38960-

Contact Name:	Thomas Henderson	SIC1:	2491
Contact Title:	Plant Manager	SIC2:	
Phone:	(601) 226-4584	SIC3:	
ECED Contact:	Russ Twitty	Timber and Wood Products, Misc Ind	

AFS ID:	04300012
EPA ID:	MSD007027543
Out of Business:	<input type="checkbox"/>

Air Facility Type:	Title V
HW Facility Type:	TSD
Water Facility Type:	Industrial

Permit Type	SubType	Permit Number	Permit Contact
<input type="checkbox"/> AIR	Title V	096000012	Burchfield, David
<input checked="" type="checkbox"/> HW	TSD	HW8854301	
<input checked="" type="checkbox"/> WATER	NPDES	MSP090300	Collins, Bryan



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171



MEMORANDUM

TO: Koppers W.P. File - Tie Plant, MS
FROM: Steve Spengler^{SS}
SUBJECT: Inspection at Koppers on July 1, 1983
DATE: July 5, 1983

On July 1, 1983 Walter Huff and I inspected Koppers. At Koppers we met Ray Bartlow, plant manager. This facility seemed to be in good shape. The water level in the spray evaporation had between 2-3 ft. of freeboard. At the time of my inspection they were not spraying in the irrigation field as they were allowing it to dry so they could mow it. Mr. Bartlow showed us their old landfarm plot. Presently the sludge from their WWTP is burned in their wood-fired boilers. The landfarm area was very crusty and no visual signs of contaminated runoff were seen. I will discuss this area with Jerry Cain to see if any action is necessary.

SS:ls
cc: Jerry Cain

December 1, 1981

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. C. Bartlow, Plant Manager
Koppers Company, Inc.
Forest Products Division
P. O. Box 160
Grenada, Mississippi 38901

Bartlow:

P32 0046496

Re: State Operating Permit No. 81-080
Koppers - Grenada, Mississippi

Permit Number 81-080, which is hereby issued
This permit replaces State Operating Permit
26, 1976. Special attention should be given
permit found in Section A, particularly A.1,

in accordance with the Mississippi Air and Water
(Sections 49-17-1 through 49-17-43, Mississippi
regulations adopted and promulgated thereunder.

Inc. desires that a Permit Board hearing be held
it, it should make written application to the Board
days after receipt of this notice; otherwise, the
and limitations in the permit shall become final.

questions, please contact us.

Very truly yours,

Steve Spengler
Industrial Wastewater Control Section

North Regional Office
r. Carl Chaplin

Form 3811, Jan. 1976

1. SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

The following service is requested (check one.)

☒ Show to whom and date delivered. \$

☐ Show to whom, date and address of delivery. \$

☐ RESTRICTED DELIVERY
Show to whom and date delivered. \$

☐ RESTRICTED DELIVERY.
Show to whom, date, and address of delivery. \$

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. R. C. Bartlow, Plant Manager
Koppers Company, Inc.
Forest Products Division
P. O. Box 160
Grenada, Ms. 38901

3. ARTICLE DESCRIPTION:
REGISTERED NO. P32 0046496 CERTIFIED NO. INSURED NO.

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

4. DATE OF DELIVERY
11-4-81

5. ADDRESS (Complete only if requested)

UNABLE TO DELIVER BECAUSE:

POSTMARK
DEC 4 1981
USPO

CLERK'S INITIALS
112

☆ GPO : 1978-300-459

FILE COPY

October 26, 1981

Mr. R. C. Bartlow, Plant Manager
Koppers Company, Inc.
Forest Products Division
P. O. Box 160
Grenada, Mississippi 38901

Dear Mr. Bartlow:

Re: State Operating Permit No. 76-024
Koppers - Grenada, Mississippi

I enjoyed my visit to your facility on October 22, 1981, and appreciate the time you spent with me. I was impressed with the no-discharge treatment system at your facility as it is one of the better systems to be found in this State, for the disposal of wood treating waste. Our Bureau appreciates the consciousness which your company has exhibited in protecting the waters of this State.

The State operating permit for your facility should be forthcoming around the second week of November. If you have any questions, please contact me at 961-5171.

Sincerely,

Steve Spengler
Industrial Wastewater Control Section

SS:hdb



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 354-2550



TO: *File*

FROM: *S. Spengler*

SUBJECT: *Koppers (Grenada)*

DATE: *10-22-81*

On this day I met with Mr. Bartlow of Koppers to inspect their facility. They treat with creosote and oil borne penta. They generate approximately 15,000 gpd of wastewater. The wastewater goes into two large tank for oil water separation. The solution then goes through a coagulant and flocculation system. The clarified effluent is then sprayed into a holding (evaporation) lagoon by means of sprayers. Depending upon weather condit water from this pond is sprayed onto \approx 5-acre irrigation field. This irrigation field had a three foot diked enclosing it. The field looked in good shape with standing water only in one low spot. There was no indication of any recent overflows. Mr. Bartlow said that they haven't experienced any problems in the two years that he has been there. He mentioned that they were considering installing recirculating ^{steam} heat coils in the treating cylinders to reduce the volume of wastewater even further. They have a spec plan with dikes around their storage vessels. I told Mr. Bartlow that they should contact our Bureau if they ever got in a critical situation regarding volume in their holding pond. This facility has a very good no discharge system & will proceed to issue a no-discharge permit.



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171



DW

TO: Wesley Griffith
FROM: David Hall
DATE: October 19th, 1981

SUBJECT: Koppers
Grenada MS
Grenada County

On October 16th, 1981, I went to the above facility to do a scheduled O&M Inspection. I met with Mr. Roy Banplow, the Plant Manager. We went to their treatment facility.

They have one settling basin which is approximately one acre. From there the wastewater goes to a spray irrigation system. The irrigated field is approximately five acres. There is a dike around the field and it appeared to be in good condition. They have some slight ponding in the field, but Mr. Banplow told me that it was caused by a three inch rain they had had. Everything else looked to be in good condition.

If I can be of any further assistance, please let me know.

DH:c

KOPPERS

Architectural and
Construction Materials

July 9, 1981

Mississippi Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, Mississippi 39209

Re: State Operating Permit No. 76-024

Dear Mr. Huff:

Attached is the completed and signed application requested
in your June 15, 1981 letter.

Sincerely,



R.C. Bartlow
Plant Manager

RCB/br
attachments

76-024
JUL 12 1981
DEPT. OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL

June 15, 1981

FILE COPY

Mr. Ray S. Ohlis
Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960

Dear Mr. Ohlis:

Re: Permit Application

The State of Mississippi is authorized to issue State permits in accordance with provisions of the Mississippi Air and Water Pollution Law, Section 49-17-1 through 49-17-43, Mississippi Code of 1972. Therefore, please complete the enclosed State application to the best of your knowledge and submit the signed application to the Bureau of Pollution Control by July 15, 1981.

If I can be of any assistance, please do not hesitate to call me at 961-5171.

Very truly yours,

Walter Huff
Industrial Wastewater Control Section

WH:ls
Enclosure

Grenada County

October 15, 1980

Mr. Ray S. Ohlis
Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960

Dear Mr. Ohlis:

Re: State Operating Permit No. 76-024

On September 16, 1980, I sent your company an application to operate a no discharge permit. Your present permit expired on September 30, 1980. Before I can reissue the permit, you must return the application I have already sent you. Please return the application to this office by October 31, 1980.

If you have any questions, please contact me.

Sincerely,

J. Wesley Griffith, Jr.
Industrial Wastewater Control Section

JWGjr:ls

FILE COPY

September 16, 1980

Mr. Ray S. Ohlis
Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960

Dear Mr. Ohlis:

Re: State Operating Permit No. 76-024

As you are probably aware, your state permit and authorization to operate the wastewater system expires on September 30, 1980. In accordance with Part B.7 of the permit, the Bureau of Pollution Control Permit Board requires that you submit a new state application. The application must be completed before a new state permit can be obtained.

The State of Mississippi is authorized to issue state permits in accordance with provisions of the Mississippi Air and Water Pollution Law, Section 49-17-1 through 49-17-43, Mississippi Code of 1972. Therefore, please complete the enclosed state application to the best of your knowledge and submit the signed application to the Permit Board within thirty (30) days of receipt of this letter.

If you have any questions, please contact us.

Very truly yours,

J. Wesley Griffith, Jr.
Industrial Wastewater Control Section

JWGjr:ls
Enclosures

FW

DW

Air & Water Pollution Control Commission

COMMISSIONERS

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CLYDE R. DAVIS
LOUIS FANCHER, JR.
DENNY KING
RICHARD L. LEARD
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EDDIE PUCHEU
JOE STONE
RAY TRIBBLE

STATE OF MISSISSIPPI



CHARLES H. CHISOLM, ACTING EXECUTIVE DIRECTOR
P. O. BOX 827 - ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205
(601) 354-2550

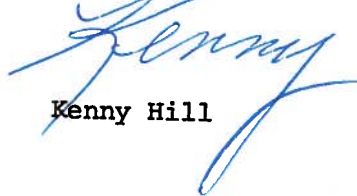
TO: Jerry B. Banks
FROM: Kenny Hill
DATE: September 25, 1978

SUBJECT: Koppers Inc.
Grenada, Mississippi

On September 22, 1978, I inspected the referenced facility. They have two lagoons followed by spray irrigation. This facility appears to be working properly. Also, the spray field is surrounded by a levee and therefore, there was no discharge from it.

If I can be of any further assistance, please advise me.

Respectfully,


Kenny Hill

KH:bc

F-112

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

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RAY TRIBBLE



CHARLES H. CHISOLM, ACTING EXECUTIVE DIRECTOR
P. O. BOX 827 - ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205
(601) 354-2550

TO: Jerry Banks
FROM: Robert Rogers
DATE: December 13, 1977

SUBJECT: Koppers
Grenada, Mississippi

On December 9, 1977, I inspected the waste water treatment facility at Koppers. The system consists of two settling basins connected to two polishing ponds and then spray irrigation. The system appears to be operating to standards at this time and additional steps have been taken to prevent overflow from the settling ponds. The spray system is located on approximately ten acres of grassland, which is completely enclosed by a dike.

If I can be of any further assistance, please let me know.

Respectfully,


Robert Rogers

RR:bc

FILE

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

RAY TRIBBLE, CHAIRMAN
JAMES W. CARRAWAY, VICE CHAIRMAN
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CHARLES H. LYLES
JACK PEPPER
JOE STONE



GLEN WOOD, JR., EXECUTIVE DIRECTOR
P. O. BOX 827 - ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205
(601) 354-2550

TO: Charles Branch
FROM: Kenny Hill
DATE: May 17, 1977

SUBJECT: Koppers, Inc.
Grenada, MS.

On May 17, 1977, I inspected the referenced facility where I met with Mr. Doug Meadows, assistant plant manager. Upon this inspection I found that they have an oil separation unit followed by two settling ponds and then spray irrigation. The oil separation unit appeared to be working properly and the color of the settling ponds was a chalk white or cream color. The effluent from the second pond is then pumped to a spray field. This spray field had very tall grass growing on it and around the spray nozzles the grass was coated with a black material. I thought that the black material was oil but Mr. Meadows said it was not oil because when they do not use the spray field for several days this material will dry to form a powder.

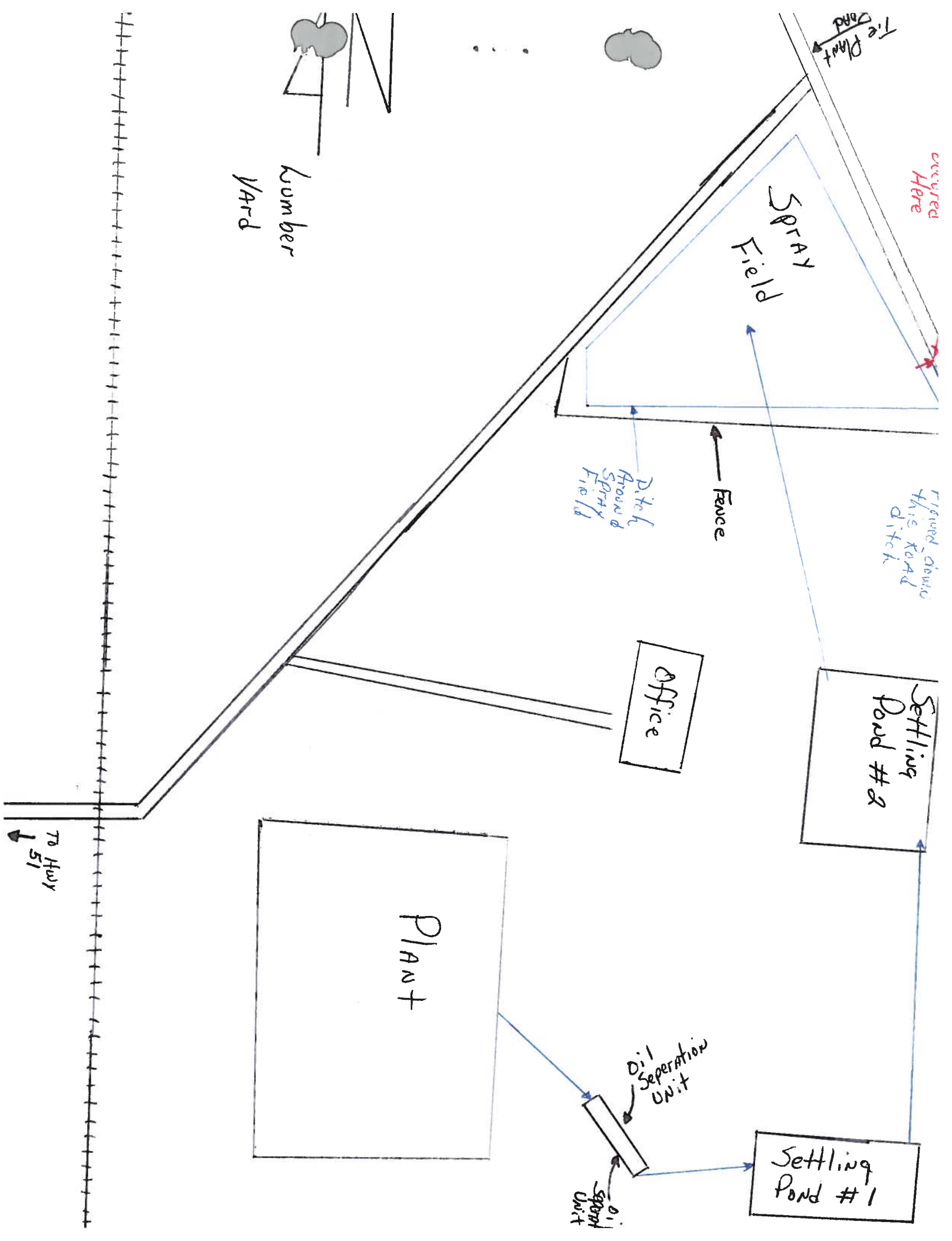
This spray field also has a ditch running all the way around it. Mr. Meadows informed me that at one point the ditch was too far down the slope and water would collect in that low spot and overflow. When he pointed out this low spot to me it was the same spot from which the discharge was coming on May 5, 1977. When told of the discharge on May 5, Mr. Meadows assumed that the ditchwork that was done previously to prevent a discharge had washed out and upon inspection, we found this to be true. Mr. Meadows then assured me that the situation would be remedied immediately.

If I can be of further assistance, let me know.

Respectfully,

Kenny Hill
Kenny Hill

KH:br
Enclosure:



FILE COPY

Mr. Othel Anding, North Regional Office

Charles Branch

Koppers, Inc., Grenada, Mississippi

May 10, 1977

Please have someone perform a detailed inspection of the above referenced facility. The subject facility is presently operating under a state "no-discharge" permit with spray irrigation.

This is a follow-up of an inspection performed May 5, 1977, by Kenny Hill. Please refer to this inspection report if questions arise.

CB:BC:ps

cc: Mr. Don Scott

File

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

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JACK PEPPER
JOE STONE



GLEN WOOD, JR., EXECUTIVE DIRECTOR
P. O. BOX 827 - ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205
(601) 354-2550

TO: Charles Branch
FROM: Kenny Hill
DATE: May 5, 1977

SUBJECT: Koppers, Incorporated
Grenada, Mississippi

On May 4, 1977, while making an inspection of Tie Plant Utility Districts lagoon I found a road ditch that was full of black water and covered with oil skim. I then traced this ditch back to where it was running down the road bank into the ditch. This water was coming from a field with several sprayers operating in it. This spray field could have been a spray irrigation or overland flow system, but in any case, it had a positive discharge. This spray field was located behind Koppers, Inc., and appeared to be used for treatment of their process wastewater. I did not contact the company at this time but will be glad to further investigate this situation upon your request.

If I can be of further assistance, let me know.

Respectfully,

Kenny Hill
Kenny Hill

KH:br

FILE COPY

September 29, 1976

Mr. Ray S. Ohlis, Jr.
Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960

Dear Sir:

Re: State Operating Permit No. 76-024

Enclosed please find a copy of the lab analysis results on samples taken at Koppers Company, Inc., on September 8, 1976, pursuant to our compliance monitoring program.

If you have any questions, or we can be of any assistance, please advise.

Very truly yours,

Garry Garretson
Industrial Wastewater Control Section

GG:jm

Enclosure



MISSISSIPPI AIR & WATER POLLUTION CONTROL COMMISSION
CERTIFICATION OF INSPECTION

This is to certify that _____
Inspector
has inspected _____
Facility
located at _____
Street City County
on the date of _____
Month Day Year

for the purpose of determining compliance with the rules and regulations of
the Mississippi Air and Water Pollution Control Commission.

Signature of person contacted

Title

Inspector (Signature)

Division

Type of Inspection

- _____ Compliance Monitoring
- _____ Complaint Investigation
- _____ Site-Inspection
- _____ State O & M Inspection
- _____ Other

File

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

RAY TRIBBLE
CHAIRMAN
MONEY

JAMES W. CARRAWAY
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BASSFIELD

BOARD OF HEALTH
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LAMBERT

CHARLES W. ELSE
YAZOO CITY

GAME & FISH COMMISSION
BARRY O. FREEMAN

OIL & GAS BOARD
QUINCY R. HODGES

HERMIT A. JONES
CANTON



GLEN WOOD, JR., EXECUTIVE DIRECTOR
P. O. BOX 827 - ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205
(601) 354-2550

COMMISSIONERS

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BOARD OF WATER
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HATTIESBURG

ASSOCIATE MEMBERS

STATE PARK SYSTEM
WILLIAM M. BARNETT

A & I BOARD
HAROLD A. CROSS

GEOLOGICAL SURVEY
W. H. MOORE

TO: Charles Branch
FROM: Earl Richard
DATE: September 9, 1976

SUBJECT: Koppers Company
Tie Plant
Grenada, Mississippi

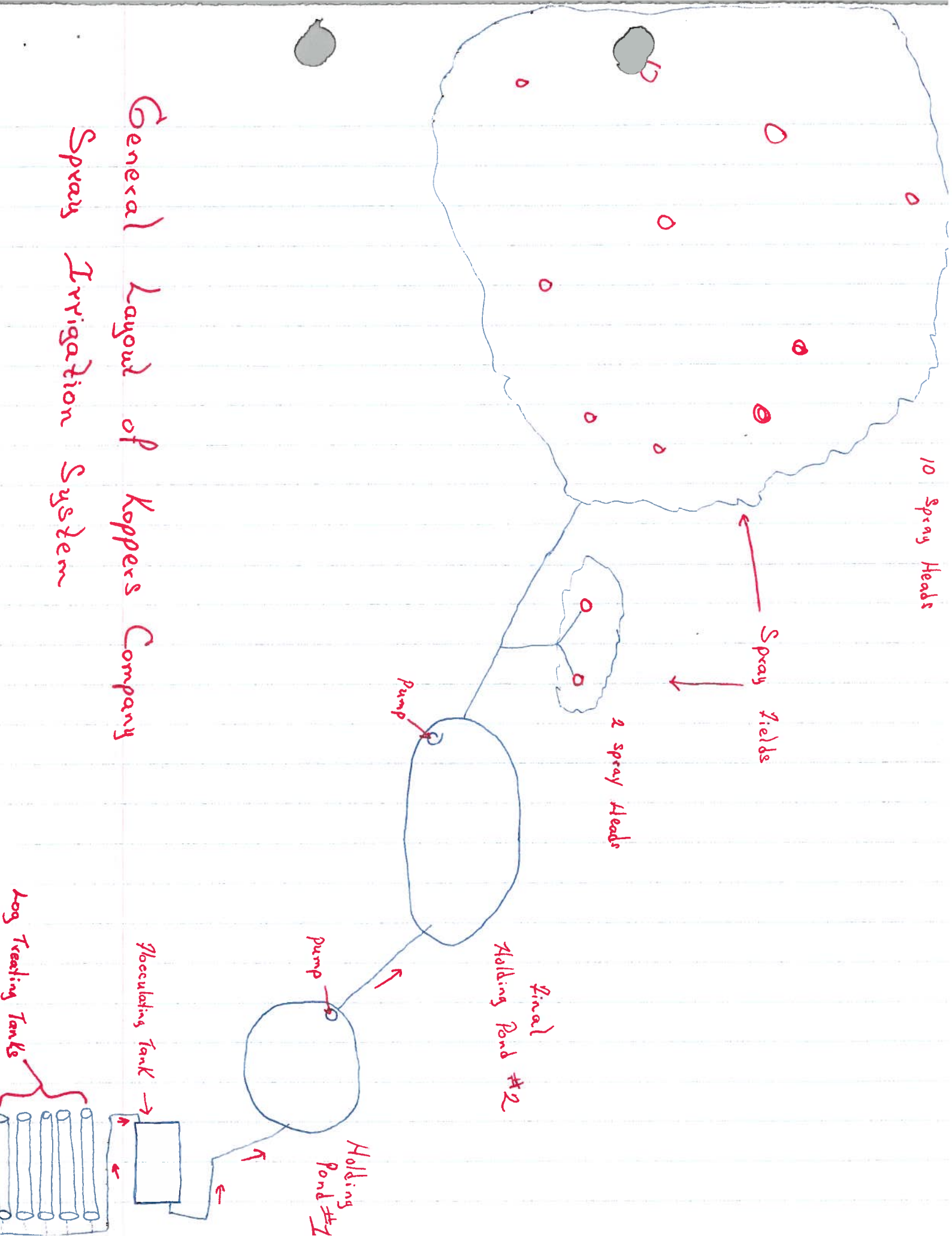
On September 8, 1976, I took compliance monitoring samples and performed an O&M Inspection of Koppers Company. The following is a list of the five questions making up the O&M and their respective answers:

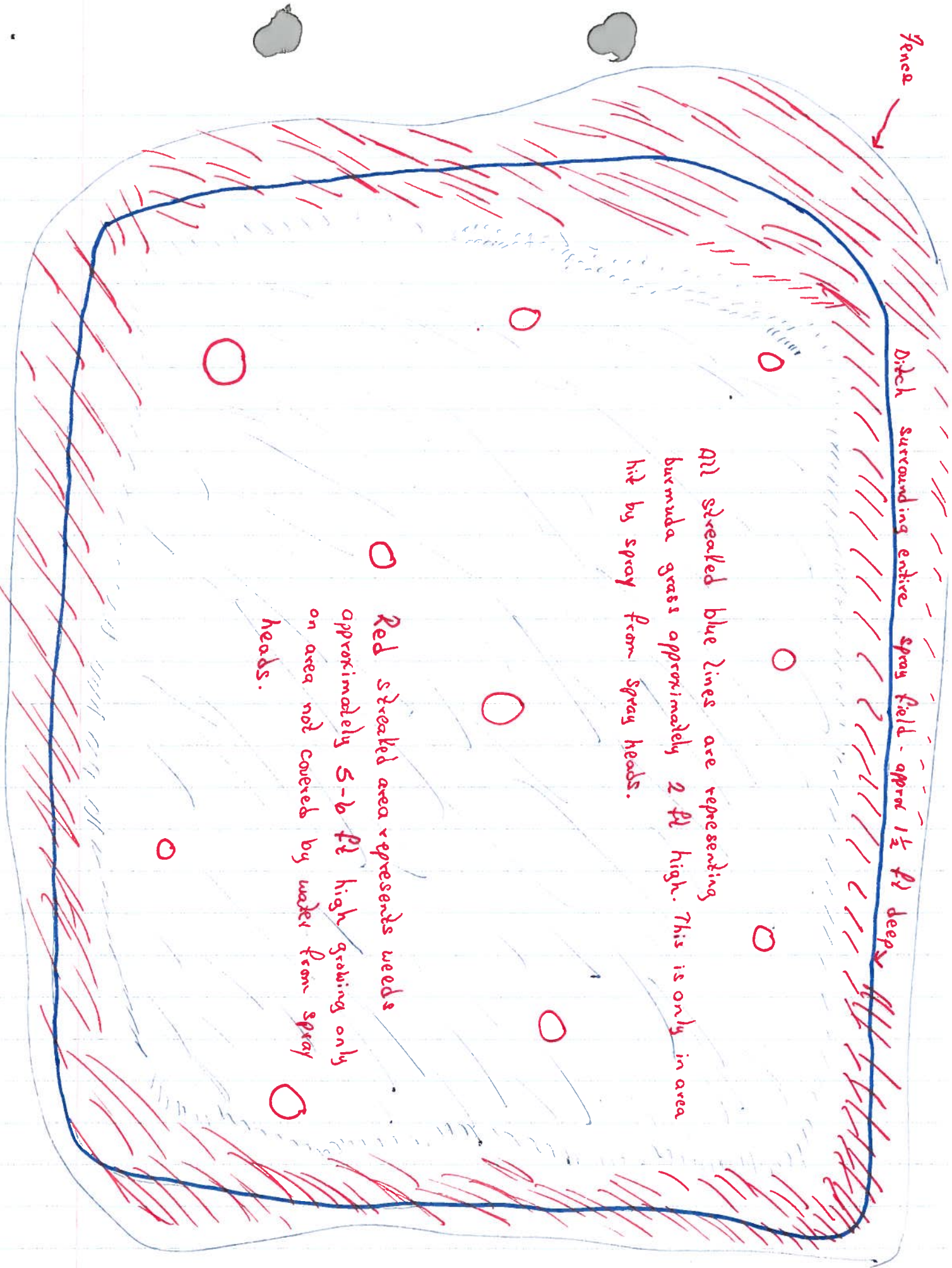
- (1) Are spray heads operating? (ANS). There is an area on the north side of the facility with 10 spray heads, all of which were operating. There is another area on the north east side of this facility with two spray heads both of these were also operating.
- (2) Is spray field cut and maintained? (ANS). The spray field is not cut at this time. (See diagram for more description).
- (3) Is there any evidence of a discharge from the holding pond or spray field? (ANS). There was no evidence of any discharge from either holding pond or from the spray field. The dikes around the holding ponds were maintained and the spray field is ditched to prevent any run-off.
- (4) How much freeboard in holding pond? (ANS). Holding pond #1 had 2½-3½ feet. Holding pond #2 had 4-4½ feet.
- (5) General appearance of entire system. (ANS). The system appeared to work fine. The appearance of the system looked fair. There is a fence surrounding the spray field, and a fence around the last holding pond. The weeds in the spray field could stand to be cut but the bermuda grass looked good.

Respectfully,

[Handwritten signature]

General Layout of Koppers Company Spray Irrigation System





fence

Ditch surrounding entire spray field - approx 1 1/2 ft deep

All streaked blue lines are representing
burmuda grass approximately 2 ft high. This is only in area
hit by spray from spray heads.

Red streaked area represents weeds
approximately 5-6 ft high growing only
on area not covered by water from spray
heads.

file
Grenada County Health Department

Mississippi State Board of Health

GRENADA, MISSISSIPPI

June 10, 1971

RECEIVED

JUN 11 1971

AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Clarence Holloman
Holloman & Gray Construction Company
P. O. Box 236
Grenada, Mississippi 38901

Re: Service Building for Koppers Co.
Grenada, Mississippi 38901

Dear Mr. Holloman:

In order to confirm our conversation of June 10, 1971, concerning the sewage disposal system for your service building, this is to advise that a septic tank and underground absorption field cannot be expected to function properly and is likely to create nuisances and unsanitary conditions. Under these circumstances the Grenada County Health Department will be unable to approve this type sewage disposal system.

The use of any other type system is under the jurisdiction of the Mississippi Air and Water Pollution Control Commission, and it will be necessary for you to contact that agency regarding approval of your proposed sewage disposal system. Their address is P. O. Box 827, Jackson, Mississippi 39205.

Sincerely,


James W. Martin
Registered Sanitarian

TM

cc Mississippi Air and Water Pollution Control Commission
Division of Sanitary Engineering, Mississippi State Board of Health

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

James W. Carraway, Chairman
Bassfield

State Plant Board
O. T. Gulce, Jr., Vice Chairman

Oil & Gas Board
J. F. Borthwick

Board of Health
Joe D. Brown

Marine Conservation
Commission
W. J. Demoran

W. E. Gupton
Jackson

W. P. Harrington
Hattiesburg



Glen Wood, Jr.

EXECUTIVE SECRETARY

POST OFFICE BOX 827 TELEPHONE 354-6783
SIXTH FLOOR ROBERT E. LEE BUILDING
JACKSON, MISSISSIPPI 39205

COMMISSIONERS

Game & Fish Commission
Billy Joe Cross

Board of Water
Commissioners
Jack Pepper

Charles W. Else
Yazoo City

State Park System
Spencer E. Medlin

A & I Board
Paul Burt

Geological Survey
W. H. Moore

September 3, 1970

Mr. R. S. Ohlis, Jr., Plant Manager
Forest Products Division, Koppers Company, Inc.
P. O. Box 160
Grenada, Mississippi 38901

Dear Mr. Ohlis:

I certainly appreciate the opportunity we had the other day of meeting and discussing the waste situation at your Grenada facility.

As I told you then, the initial contact from our agency to you was by two engineers who are no longer with our organization. In an effort to bring myself up to date on your particular proposal, I have reviewed the file and have read the proposed schedule outlined to Mr. Robert S. Wright in your letter of December 9, 1969. I agree with everything in the proposal save one.

The quality of the effluent which you will be discharging, according to the letter, will be 100 BOD. This is much too high, i.e. approximately equivalent to 40% strength of raw domestic sewage. Perhaps Dr. Thompson has revised this figure now. However, I feel it only appropriate at this point to advise you of this point and ask clarification.

If I can be of service, please call on me.

Very truly yours,

David T. Hagerman, P. E.
Senior Engineer
Industrial Waste Section

DTH/ks

KOPPERS

Architectural and
Construction Materials

August 31, 1970

Mr. David T. Haggerman
Senior Engineer Industrial Waste Section
Air & Water Pollution Control Commission
P. O. Box 827
Jackson, Mississippi 39205

Dear Mr. Haggerman,

Please refer to our letter dated December 9, 1969 addressed to Mr. Wright.
(attached is copy for your ready reference).

We have completed all projects except the following:

(8) and (11) - Work is started and completion is scheduled
for January 1, 1971.

(12) - Dr. Thompson is presently conducting his pilot test on
land irrigation at the Grenada Plant.

We trust this brings you up to date on our plan of action to be in
compliance by July 1, 1971.

Yours very truly,



R. S. Ohlis, Jr.,
Plant Manager

RSO:ebq

cc: Mr. J. A. Kennedy
Mr. M. D. Miller

KOPPERS

Architectural and
Construction Materials

March 10, 1970

Mr. Glen Wood, Jr., Acting Executive Sect.
Air & Water Pollution Control Commission
P. O. Box 827
Jackson, Miss. 39205

Dear Mr. Wood:

Attached is photocopy of letter addressed to Mr. Robert S. Wright last December. This letter outlines our plan of action for waste treatment facilities.

If we can be of any further help, please advise.

Yours very truly,



R. S. Ohlis, Jr.
Plant Manager

RSO:ebq

attach.

cc: M. D. Miller
J. A. Kennedy

RECEIVED

MAR 12 1970

AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Air & Water Pollution Control Commission

STATE OF MISSISSIPPI

COMMISSIONERS

James W. Carraway, Chairman
Bassfield

State Plant Board
O. T. Guice, Jr., Vice Chairman

Oil & Gas Board
J. F. Borthwick

Board of Health
Joe D. Brown

Marine Conservation
Commission
E. H. Gautier

W. E. Gupton
Jackson

W. P. Harrington
Hattiesburg



Glen Wood, Jr.

ACTING EXECUTIVE SECRETARY

POST OFFICE BOX 827 416 NORTH STATE STREET

TELEPHONE 354-6783

JACKSON, MISSISSIPPI 39205

COMMISSIONERS

Game & Fish Commission
Billy Joe Cross

Board of Water
Commissioners
Jack Pepper

Charles W. Else
Yazoo City

State Park System
Spencer E. Medlin

A & I Board
Paul Burt

Geological Survey
W. H. Moore

March 4, 1970

Mr. D. L. Wagner, Manager
Koppers Company, Inc.
P. O. Box 160
Grenada, Mississippi 38901

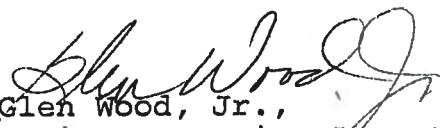
Dear Sir:

This is a reminder that we have not received an answer to our letter of November 5, 1969, requesting a plan of action for waste treatment facilities.

We realize your busy schedule; however, we shall appreciate your cooperation in answering our letter at an early date so that we can meet our obligations to the Federal Water Pollution Control Administration.

If we may be of service, please advise.

Yours very truly,


Glen Wood, Jr.,
Acting Executive Secretary

DTH/mw

R.S. OHLIS
GRENADA

December 9, 1969

Mr. Robert S. Wright
Executive Secretary
State of Mississippi
Air & Water Pollution Control Commission
416 North State Street
Jackson, Mississippi 39205

Dear Mr. Wright:

As per discussions in your offices on July 10, 1969 and your letter of November 5, 1969, I am summarizing status of work and planned work as regards to effluent handling at Koppers Company, Inc., Forest Products plant at Grenada, Mississippi. The plant at Grenada has been in operation since 1905; as with many older plants, considerable efforts are required to have the plant meet the new outfall water requirements. The plant treats wood with creosote and oil-penta using vacuum and pressure treatment in wood treating cylinders. Separate cylinders are used for creosote and oil-penta treatment. The attached Figure 1 gives flow diagram of water leaving plant at the present time. The plant waters drain into a ditch which goes through the plant property, to Batupan Bogue for about five miles, thence to Yalobusha River below Grenada Lake.

For several years the plant has had certain decanting and lagooning facilities to aid in operations for the plants effluent handling. To further improve operations of effluent handling, a program was instituted early in 1968 making processing changes to reduce volume of process effluent waters, provide more modern and efficient decanting facilities and providing other plant changes to reduce chances of product loss to public waterways. Specific plant changes and additions made, plus planned additions are listed below:

- 1) Provide a separate decanting system for penta-oil effluent waters. This was placed in operation in December, 1968. Penta and creosote collecting facilities are separated now, which reduces emulsion problems when a common decanting system is used.

Mr. Robert S. Wright

December 9, 1969

2.

- 2) Cleaned out old decanting system and this unit is used now only for creosote containing process effluent waters. This work was completed December, 1968.
- 3) Using of closed steam system for conditioning of wood was placed in operation April, 1969. This sharply reduced quantities of process effluent waters produced during this operation.
- 4) Have started general clean up of operating area.
- 5) Started drying up and draining of decanting lagoons. Started work in December, 1968.
- 6) Automating of certain operations and thus reducing personnel errors and upsets. This work completed in July, 1969.
- 7) Plans to revamp oil transfer lines so all oil lines are visible, thus reducing unnoticed oil leaks. Work has been engineered and material ordered. Scheduled completion of work by March, 1970.
- 8) Plan to provide recirculating cooling water rather than once through water as at present. This will reduce possibility of contaminants leaving property in water outfall. Scheduled for completion by September, 1970.
- 9) Provide a new creosote process effluent water blowdown system prior to going to creosote decanter. This will reduce creosote carry over to decanter. Now completed.
- 10) Redirect flow of steam condensate to water recirculating system. Scheduled for completion November, 1970.
- 11) Plan recycle of penta-oil steam jet ejector water with recirculation of all plant waters. Scheduled for completion September, 1970. Presently the waters from this jet ejector system do go to a 100,000 gallon decanting tank, which recovers penta oil solution for reuse. The steam ejectors at the creosote cylinders are provided with indirect condensers and the small amount of steam condensate goes to the creosote decanting system.
- 12) Proposed final process effluent water treatment would be lagooning of process effluent water for thirty days retention followed by land irrigation. The process effluent waters will be reduced in volume to approximately 10,000 gallons per day. Thus lagooning would be provided for 300,000 gallons of effluent waters and an irrigation area provided for application rate of 4,000 gallons per acre per day. It is planned to have this in operation by July, 1971.

Mr. Robert S. Wright
December 9, 1969
3.

This time schedule is based on major processing changes required at the plant to reduce volumes of waters leaving the plant and reduce possibilities for losses of treating materials. The plant may also require additional land acquisition for irrigation of process effluent waters.

As discussed, the amount of organics in effluent waters, and the possibility of chemical loss, have been greatly reduced by changes made during past two years. Samples of the plant effluent streams will be collected and checked as to quality at Koppers Research Laboratories in Monroeville, Pa. This data will be forwarded to you after test work has been completed. Present water discharge from the plant is about 50,000 gallons per day.

After completion of above described plant changes and additions, it is expected that the waters leaving Kopper's property would be as follows:

Flow - (Dry Weather) - gpd - 20,000

Quality:	pH	6.5 - 9
	Chemical Oxygen Demand (COD) ppm	200
	5-day biochemical oxygen demand (BOD) ppm	100
	Phenols, ppm	1

Trusting that the above information presents the schedule and action for pollution control from this plant.

Very truly yours,

J. A. Kennedy
Manager - Engineering Department

Dictated by:
Marvin D. Miller
Project Engineer

MDM/pc

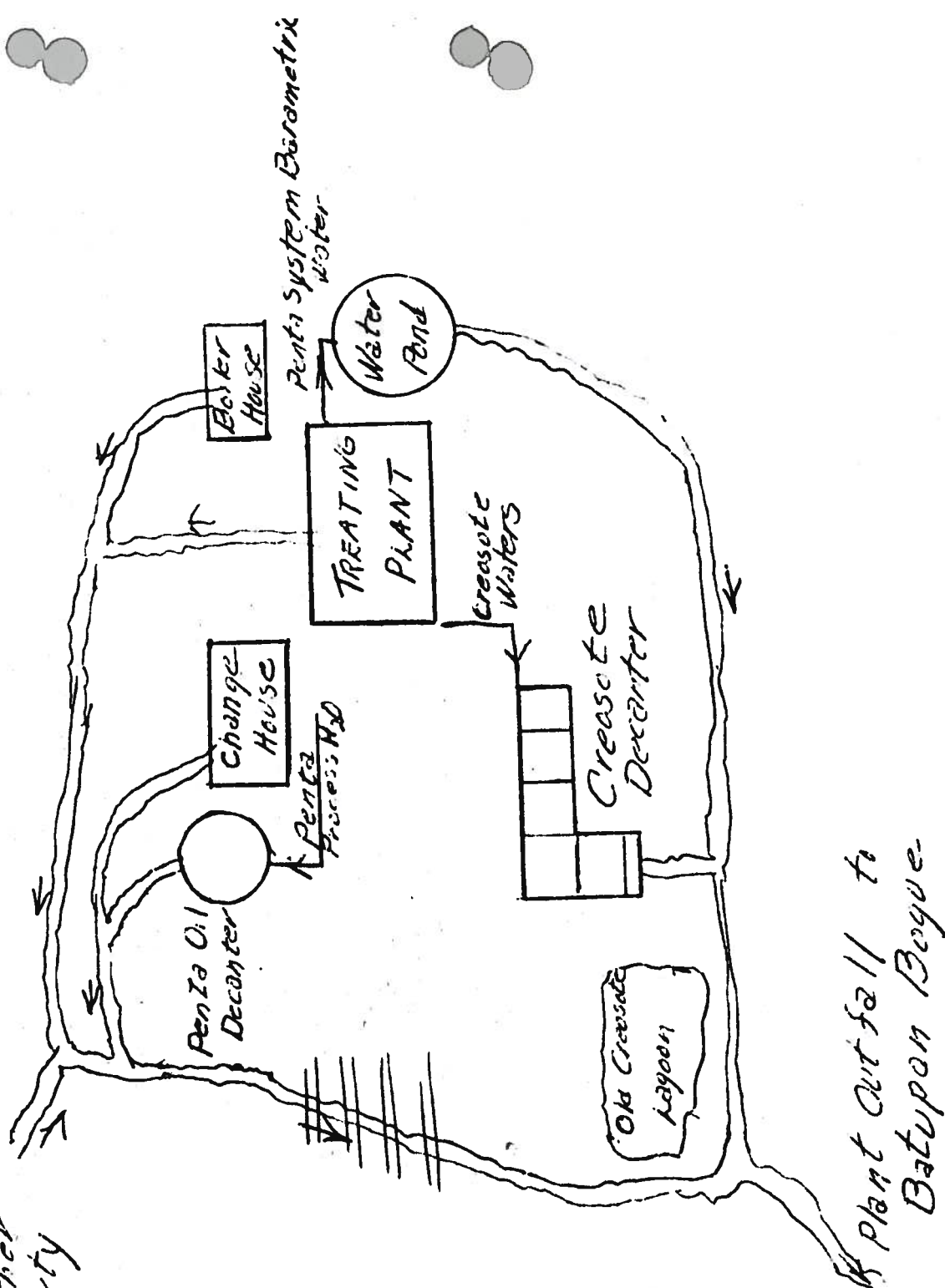
FIGURE 1

KOPPERS COMPANY INC

FOREST PRODUCTS PLANT

GREENADA, MISS

Storm Drain
From other
Property



DATE

10M-5-51



KOPPERS COMPANY, INC.
PITTSBURGH • 19 • PA.

SKETCH

Sheet.....

KOPPERS

Architectural and
Construction Materials

December 9, 1969

RECEIVED
DEC 15 1969
AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Robert S. Wright
Executive Secretary
State of Mississippi
Air & Water Pollution Control Commission
416 North State Street
Jackson, Mississippi 39205

Dear Mr. Wright:

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Mr. Robert S. Wright
December 9, 1969
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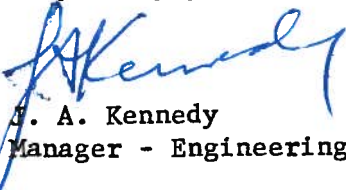
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	Chemical Oxygen Demand (COD) ppm	200
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	Phenols, ppm	1

Trusting that the above information presents the schedule and action for pollution control from this plant.

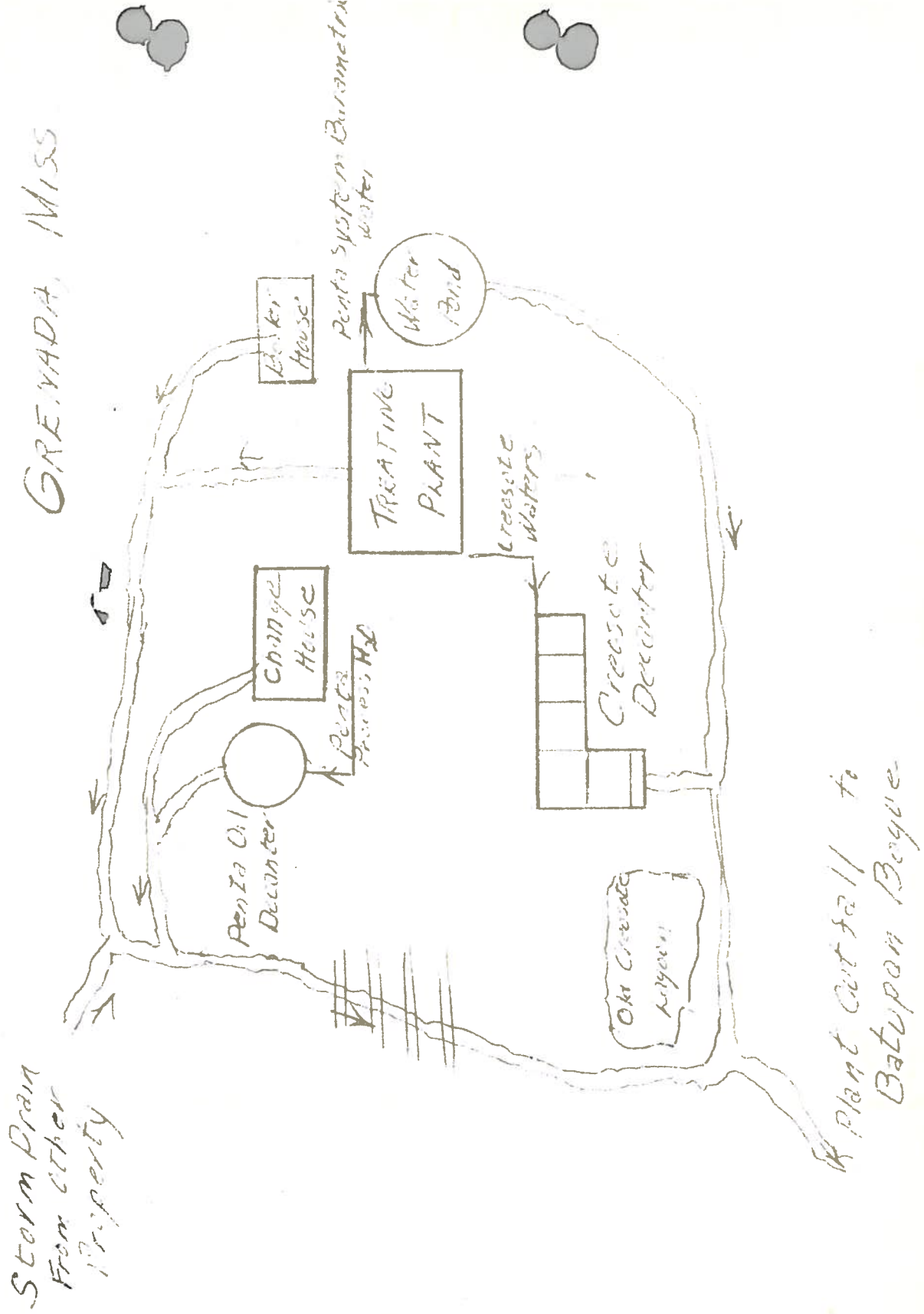
Very truly yours,


J. A. Kennedy
Manager - Engineering Department

Dictated by:
Marvin D. Miller
Project Engineer

MDM/pc

FIGURE 1
 KOPPERS COMPANY INC
 FOREST PRODUCTS PLANT
 GRENADA, MISS



DATE _____



KOPPERS COMPANY, INC.
 PITTSBURGH • 19 • PA.

SKETCH No. _____
 Sheet _____ of _____



**State of Mississippi
Water Pollution Control
PERMIT**

TO OPERATE A WASTEWATER DISPOSAL SYSTEM WITH NO DISCHARGE

THIS CERTIFIES THAT

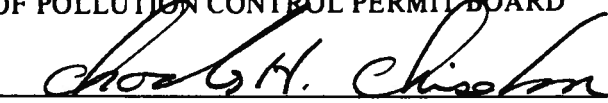
Koppers Company, Inc.
(Forest Products Division)
Grenada, Mississippi

in accordance with Sections A, B, C, and D set forth in this permit, has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein which will result in no discharge of treated or untreated wastewater into the surface waters of the State of Mississippi. Operation of such a facility shall be in accordance with the Mississippi Air and Water Pollution Control Law, (Section 49-17-1 through 49-17-43, Mississippi Code of 1972) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Department of Natural Resources Bureau of Pollution Control Permit Board. The plans, specifications, and other data submitted to the Commission are filed and considered as part of this permit.

The Mississippi Department of Natural Resources Bureau of Pollution Control Permit Board reserves the right to withdraw or modify this permit if it is found that additional treatment of alterations are necessary to prevent a discharge of wastewater to the waters of the State.

Issued this 11th day of November, 19 81

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL PERMIT BOARD


Charles H. Chisolm, P. E., Director

Expires 30th day of September, 19 85

Permit No. 81-080

CONDITIONS OF PERMIT

This permit has been granted in accordance with the provisions of the Mississippi Air and Water Pollution Law, Section 49-17-1 through 49-17-43, Mississippi Code of 1972, and is subject to the following conditions:

A. MANAGEMENT REQUIREMENTS

1. No Discharge of Wastewater to Surface Water

The discharge of any wastewater from this facility to the waters of the State of Mississippi except as provided in the permit conditions on "Bypassing" shall constitute a violation of this permit.

2. Change in Wastewater Source

Any anticipated facility expansions or production increases, which will result in new, different, or increased wastewater flows, must be reported to the Mississippi Air and Water Pollution Control Commission Permit Board. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Bypassing

Any diversion from or bypass of wastewater collection and treatment or control facilities is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall notify the Mississippi Air and Water Pollution Control Commission Permit Board in writing of each such diversion or bypass in advance where practicable but in any case, within 72 hours of the diversion or bypass, and shall submit to the Permit Board a plan to prevent recurrence of the diversion or bypass within thirty (30) days of the incident.

5. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from such materials from entering State waters.

6. Power Failures

In order to maintain compliance with the conditions and prohibitions of this permit, the permittee shall either:

- a. Provide an alternative power source to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Section D of this permit,

- b. Halt, reduce, or otherwise control production and/or all wastewater flows upon reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Mississippi Air and Water Pollution Control Commission and/or its authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a wastewater source is located or in which records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any wastewater generated at this facility.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of permitted facilities, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Mississippi Air and Water Pollution Control Commission Permit Board.

3. Availability of Records

Except for data determined to be confidential under the Mississippi Air and Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Air and Water Pollution Control Commission.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

7. Expiration of Permit

In order to receive authorization to operate the wastewater control facility beyond the expiration date, the permittee shall submit such information, and forms as are required by the Mississippi Air and Water Pollution Control Commission Permit Board, no later than 180 days prior to the expiration date.

C. MONITORING AND REPORTING

1. Reporting

Such test results, reports, or other data as the Commission may determine to be necessary shall be submitted on a regular basis as required by this permit in Section D.

2. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (g) of the Federal Water Pollution Control Act, as amended. (U.S.C. 1314 (g)).

3. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored wastewater.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Permit Board.

D. OTHER REQUIREMENTS

1. The permittee shall maintain a minimum of 2.5 feet of freeboard in the holding pond at all times. Koppers shall notify this Bureau if the water level in this pond exceeds this freeboard.
2. The sludge generated from the flocculation system must be handled and disposed of in an environmentally safe manner and in accordance with any State or Federal regulations.

For Agency Use

Application Number

Date Received

STATE OF MISSISSIPPI
AIR AND WATER POLLUTION CONTROL COMMISSION
P.O. Box 827
JACKSON, MISSISSIPPI 39205

APPLICATION FOR A PERMIT TO OPERATE A
WASTEWATER DISPOSAL SYSTEM WITH NO DISCHARGE

I. APPLICANT: (Please type or print)

A. Name: Koppers Company, Inc.

B. Mailing Address:

1. Street Address: P.O. Box 160

2. City: Tie Plant 3. State: Mississippi

4. County: Grenada 5. ZIP: 38960

C. Location:

1. Street Address Tie Plant Road

2. City: Tie Plant 3. County: Grenada

4. Section, Township, and Range: Sec. 33 T'Ship T-22 Range 5

D. Telephone Number: (601) 226-4584

II. CHARACTERISTICS OF WASTEWATER:

A. Sanitary Wastes Only: Number of persons served by the disposal system: _____

B. Commercial or Industrial Wastes:

1. Indicate strength and constituents of wastewater on separate sheets. (B.O.D., Suspended Solids, Heavy Metals, Oil, etc.)

2. Does the industrial wastewater contain sanitary wastes?

Yes _____ No X

If no, how are the sanitary wastes handled? Septic Tanks

7-9-81
Koppers Co., Inc.
P.O. Box 160
Tie Plant, Ms. 38960

111. TREATMENT UNITS

- A. Primary and secondary gravity sepatators with flocculation followed by spray areation and evaporation and spray irrigation.



MID-SOUTH TESTING LABORATORIES, INC.

P. O. Box 147 - 415 First Street
Grenada, Mississippi 38901

SOILS INVESTIGATION WATER AND WASTE ANALYSIS

PHONE 226-7415

June 30, 1981

Lab No. 00996

Koppers Co. Inc.
Tie Plant, Ms. 38960

Attention: Mr. Ray Bartlow

Dear Sir:

The following results were obtained on the water sample submitted to this laboratory on June 25, 1981:

Site: Secondary Separator

<u>Test</u>	<u>Results</u>
BOD ₅	620 mg/l
Suspended Solids	200 mg/l
Oil & Grease	25.8 mg/l
COD	8060 mg/l
Phenols	200 mg/l
pH	4.20 Std Units

All tests were performed in accordance with the procedures in the 14th Ed. of Standard Methods and EPA's Laboratory Procedures.

Thank you.

Sincerely,

Mid-South Testing Laboratories, Inc.

Shirley A. Harrison
Shirley A. Harrison

Attachment

SAMPLE REQUEST

Requested By: Compliance Monitoring Date Requested: _____
 Identification of Sample Point: Koppers Co., Inc., Grenada, MS. (Grenada Co.)

Type of Sample: Grab (x) Composite (Flow) (Time) Other ()
 Data to: Main Office

I. SAMPLE IDENTIFICATION

Where Taken: Effluent- at pump from last holding pond where effluent goes to spray nozzle
 Collected By: Earl Richard

Sample No.	TYPE	PARAMETER	DATE	TIME
1.	Grab	BOD,SS(T), TS	9-8-76	1145
2.	Grab	COD	9-8-76	1148
3.	Grab	Oil & Grease	9-8-76	1155
4.	GRAB	Phenol	9-8-76	1150
5.	Grab	Oil & Grease	9-8-76	1157

Condition of Sample Environment: _____

II. FIELD

Analysis	Request	Result	Analyst	Date Measured
pH	(x)	3.5	Richard	9-8-76
D.O.	()			
Temperature	()			
Residual Chlorine	()			
Flow	()			
Specific Conductivity	()			

III. TRANSPORTATION OF SAMPLE

To Lab: Bus (x) Regional Office Vehicle () Other () _____

IV. LAB WORK

Received By: Phillip Bass Date: 9-9-76 Time: 1300
 Recorded By: Pat Hodge Date Data Sent to State Office: 9-17-86

V. LABORATORY

Analysis	Request	Result	Analyst	Date Measured
----------	---------	--------	---------	---------------

STATE OF MISSISSIPPI
AIR AND WATER POLLUTION CONTROL COMMISSION

PERMIT

To Operate a Wastewater Disposal System with No Discharge

This Certifies That

Koppers Company, Inc.
Forest Products Division

Grenada, Mississippi

in accordance with Sections A, B, C, and D set forth in this permit, has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein which will result in no discharge of treated or untreated wastewater into the surface waters of the State of Mississippi. Operation of such a facility shall be in accordance with the Mississippi Air and Water Pollution Control Law, (Sections 49-17-1 through 49-17-43, Mississippi Code of 1972) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Air and Water Pollution Control Commission Permit Board. The plans, specifications, and other data submitted to the Commission are filed with and considered as part of this permit.

The Mississippi Air and Water Pollution Control Commission Permit Board reserves the right to withdraw or modify this permit, if it is found that additional treatment or alterations are necessary to prevent a discharge of wastewater to the waters of the State.

Issued this 26th day of March, 19 76.

AIR AND WATER POLLUTION CONTROL COMMISSION

ORIGINAL SIGNED BY GLEN WOOD, JR.

Glen Wood, Jr. Executive Director

Expires 30th day of September, 19 80.

Permit No. 76-024

MISSISSIPPI AIR AND WATER POLLUTION CONTROL COMMISSION

April 19, 1972

Report on Status of Compliance
March 31, 1972, Deadline for Wood Pressure Treaters

I. The pressure treaters listed below are in full compliance with the deadline.

1. Prentiss Creosote Materials, Prentiss
2. Hinds Wood Preserving Company, Learned
3. Follen Wood Preserving Company, Jackson
4. Gulfport Creosoting Company, Gulfport
5. Koppers Company, Inc., Tie Plant
6. Attala Wood Preservers, McCool
7. Woody Jones Creosoting Company, Macon
8. Smith Wood Preserving, Hattiesburg
9. Sanders Lumber Company, Meridian
10. Moss-American, Inc., Meridian
11. Joslyn Manufacturing and Supply Company, Richton
12. Mississippi Wood Preserving Company, Brookhaven

II. The companies listed below are technically in compliance with the deadline. However, to provide some assurance that they will cause no future problems, we would like to issue them a tolerance permit for 90 days and require additional safeguards.

1. American Creosote Works, Inc. in Louisville has installed a closed circuit. However, we would like to see them phase out their old cooling water pond and clean up the former discharge path.
2. Southern Pine Wood Preserving Company in Wiggins has the facilities to contain all of its wastes. However, we would like to insure that all potential rainwater run-off problems are eliminated.

MISSISSIPPI AIR AND WATER POLLUTION CONTROL COMMISSION
April 19, 1972

III. The companies listed below are not in compliance, even though some progress has been made by each of them. We would like to call each of these in for a hearing.

1. Delta Creosoting Company in Gautier has crude separation of oils and creosote and has submitted plans for a secondary waste treatment system. However, we are not in a position to approve this treatment system until more technical information has been presented to us. We have reservations as to the mechanical soundness of the proposed system as well as the design effluent limits. These people have a temporary permit.
2. Follen Wood Preserving Company, Inc. in Elliott has submitted plans for a treatment system which have been approved by us for construction. Construction has begun, and equipment has been ordered. Follen has good removal of oils now. They have a tolerance permit which expired on March 31, 1972.
3. Moss-American, Inc. in Columbus is planning to discharge into the city sewer system and has begun construction on pre-treatment facilities. However, they are not discharging into the city sewers yet. Moss-American has a tolerance permit which expired on March 31, 1972, and an Order for them to have in adequate facilities by March 31, 1972.
4. Interpine in Picayune plans to discharge into the city sewer system and has completed construction of pre-treatment facilities. However, they are not discharging into the city sewers yet. Interpine has a temporary permit and a letter from us requiring them to have adequate facilities by March 31, 1972.
5. Fernwood Industries in Fernwood has installed a closed circuit on the steaming process, but barometric condenser cooling water is still being discharged untreated. The people from Fernwood contend that they will close the cooling water up as soon as they receive the pumps which they ordered in the fall of 1971. Fernwood has

MISSISSIPPI AIR AND WATER POLLUTION CONTROL COMMISSION
April 19, 1972

no permit. They have a letter from us requiring adequate facilities by March 31, 1972.

6. Weyerhaeuser in Philadelphia is in compliance now, but we feel that the two holding ponds which they have installed will give only a temporary solution to the problem. Weyerhaeuser has a tolerance permit which expired on March 31, 1972.
- IV. Dickson Treating Company in Canton is not in compliance and has made no effort to comply with our stipulations. They are in violation of an Order. We recommend that these people be prosecuted.

TRIP REPORT


DATE: April 2, 1972

SUBJECT: Koppers Company, Tie Plant, Mississippi

BY: Dwight K. Wylie

* * * * *

On the above date Charles Chisolm, Bill Pen, and I investigated the above plant for compliance with the March 31, 1972, deadline for adequate treatment or containment of wastes. Koppers was in compliance with the deadline. Construction of the physical-chemical treatment soil irrigation system had been completed and was in operation. On the above date, the holding pond (which stores the physically-chemically treated wastes to be irrigated) had not filled to a high enough level to begin irrigation. It is possible that the holding pond will never fill up.


Dwight K. Wylie
Chemical Engineer
Industrial Waste Section

DKW:er

STATE OF MISSISSIPPI
COUNTY OF HINDS

PERSONALLY CAME before me, the undersigned, a notary public in and for HINDS county, Missis-

LEGAL NOTICE

LEGAL NOTICE
PUBLIC NOTICE OF REQUEST
FOR STATE CERTIFICATION OF
ACTIVITIES REQUIRING A FEDERAL
LICENSE OR PERMIT

The Koppers Company, Inc. (Applicant) hereby gives public notice of the proposed construction of Lagoons and Soil Bed Biological Degradation Unit for handling industrial waste water (Description of Project). In compliance with requirements of Section 21 (b) of the Federal Water Pollution Control Act, 33 U.S.C.A. 1171 (b), the Koppers Company, Inc. (Applicant) has requested certification from the Mississippi Air and Water Pollution Control Commission that there is reasonable assurance that the above mentioned activity will be conducted in a manner that will not violate applicable water quality standards of the State of Mississippi. Any persons wishing to make comments pertinent to this certification must submit such comments in writing to the Mississippi Air and Water Pollution Control Commission at P.O. Box 827, Jackson, Mississippi, 39205, before 10:00 A.M. on the third Tuesday following the publication of this notice; at such time, certification will be considered.
July 16, 1971.

ssippi, the CLERK of THE CLARION LEDGER, a newspaper published in the City of Jackson, First Judicial District of Hinds County, in said state, who, being duly sworn, deposes and says that

THE CLARION LEDGER is a newspaper as defined and prescribed in Senate Bill No. 203 enacted at the regular session of the Mississippi Legislature of 1948, amending Section 1858, of the Mississippi Code of 1942, and that the publication of notice of which the annexed is a copy, in the matter of

Request for State Certification

has been in said paper 1 times consecutively, to-wit:

On the 16th day of July, 19 71

On the _____ day of _____, 19 _____

On the _____ day of _____, 19 _____

On the _____ day of _____, 19 _____

On the _____ day of _____, 19 _____

On the _____ day of _____, 19 _____

SWORN TO and subscribed before me, this

16th day of July, 19 71
Ernest H. Hester
My Commission Expires April 15, 1975 Notary

ms. Lazelle Bryant
Clerk

Jackson, Miss., July 16, 19 71

Kopper Company

TO THE CLARION LEDGER, DR.
(Name Newspaper)

TO PUBLISHING _____

case of _____

Basin _____

Stream _____

County _____

This Space For Use By Approving Agency

MISSISSIPPI
AIR AND WATER POLLUTION CONTROL COMMISSION
P. O. Box 827
JACKSON, MISSISSIPPI 39205

APPLICATION
FOR A CONSTRUCTION PERMIT FOR
A WASTE DISPOSAL SYSTEM

(Submit in Duplicate)

This Space For Use By The Approving Agency

Approval Date JUL 9 1971

Approval No. 001519

1520 Intermittent stream 000000

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS
APPLICATION FORM FOR DISCHARGES OR WORK IN NAVIGABLE WATERS AND THEIR TRIBUTARIES

SECTION I. GENERAL INFORMATION

1. State MISS. Application Number (to be assigned by Corps of Engineers)
Div. 074 Dist. 028 Type 2 Sequence No. 000121

2. Name of applicant and title of signing official

Koppers Company, Inc. - Vice President

3. Mailing address of applicant

Koppers Company, Inc.
Forest Products Division
1800 Koppers Building
Pittsburgh, Pennsylvania 15219

4. Name, address, telephone number and title of applicant's authorized agent for permit application coordination and correspondence.

Mr. R. S. Ohlis, Jr.
Koppers Company, Inc.
Forest Products Division
P.O. Box 160
Grenada, Mississippi 38901
Phone: 601-226-4584

NOTE TO APPLICANT: Refer to the Information Pamphlet before attempting to complete this form.

Signature

- a. If a discharge is involved, an application submitted by a corporation must be signed by the principal executive officer of that corporation or by an official of the rank of corporate vice president or above who reports directly to such principal executive officer and who has been designated by the principal executive officer to make such applications on behalf of the corporation. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor.
- b. If no discharge is involved, an application may be signed by the applicant or his authorized agent.

Required Information

- a. All information contained in this application will, upon request, be made available to the public for inspection and copying. A separate sheet entitled "Confidential Answers" must be used to set out information which is considered by the applicant to constitute trade secrets or commercial or financial information of a confidential nature. The information must clearly indicate the item number to which it applies. Confidential treatment can be considered only for that information for which a specific written request of confidentiality has been made on the attached sheet. However, in no event will identification of the contents of a discharge be recognized as confidential or privileged information.
- b. The applicant shall furnish such supplementary information as is required by the District Engineer in order to evaluate fully an application.
- c. If additional space is needed for a complete response to any item on this form, attach a sheet entitled "Additional Information." Indicate on that sheet the item numbers to which answers apply.
- d. Drawings required by Items 20 and 21 should be attached to this application. Other papers which must be attached to this application include, if applicable, copies of a water quality certification or a written communication which describes water quality impact (see Item 22 and Item 9 of Section II below), the additional information sheet(s) in "c" above, and the confidential information sheet described in "a" above.

Fees

If any discharge or deposit is involved, an application fee of \$100 must be submitted with this application. An additional \$50 is required for each additional discharge or deposit. This provision does not apply to agencies or instrumentalities of the Federal, State, or local governments.

Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information provided above, and that to the best of my knowledge and belief such information is true, complete, and accurate.

Burnell D. Bantley
Signature of Applicant

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Acronym name of applicant

Koppers Co-Grenada
Date received, form not complete
Date received, form complete but without certificate
Date received, form complete
Date of Cert./Ltr

FOR CORPS OF ENGINEERS USE ONLY

Are discharge structures

Major? ☐ Minor? ☐ N/A? ☒

Date sent to EPA form not complete

Date sent to EPA, NOAA, D/I, AEC, FPC in complete form

06 JUL 71
29 JUN 71
day mo yr

day mo yr

5. Date

June 29 71
mo day yr

(Office use only)

1522-15-000121

6. Check type of application:

a. Original



b. Revision



7. Number of original application

8. Name of facility where discharge or construction will occur.

Grenada

9. Full mailing address of facility named in Item 8 above.

Koppers Company, Inc.
Forest Products Division
P.O. Box 160
Grenada, Mississippi 38901

10. Names and mailing addresses of all adjacent property owners whose property adjoins the waterway.

Hayes Branscome
Grenada, Miss.

11. Check to indicate the nature of the proposed activity:

a. Dredging



b. Construction



c. Construction with Discharge



d. Discharge only



12. If activity is temporary in nature, estimate its duration in months.

Not applicable

If application is for a discharge:

13. List discharges other than into navigable waters.

Location	Volume	mgd (million gallons per day)
Municipal waste treatment system	0 0 1	mgd
Surface containment		mgd
Underground disposal		mgd
Waste Acceptance firms		mgd

14. List intake sources

Type	Volume	mgd
Municipal or private water supply system	0 0 4	mgd
Surface water body		mgd
Ground water		mgd
Other		mgd

15. Describe water usage within the plant

Type	Volume	mgd
Cooling water	0 0 1	mgd
Boiler Feed water	0 0 3	mgd
Process water		mgd
Sanitary system *	0 0 1	mgd
Other		mgd

* Indicate number employees served per day

130

If structures exist, or dredging, filling or other construction will occur, the precise location of the activity must be described.

(Office use only)

1522-15-000121

- a. Name the corporate boundaries within which the structures exist or the activity will occur.

State

County

City or Town

16. Mississippi

17. Grenada

18. Tie Plant

- b. Name of waterway at the location of the activity

19. Intermittent Stream

20. Maps which show the location of each structure or activity, including any and all outfall devices, dispersive devices, and non-structural points of discharge, must be attached to this application.

21. The character of each structure must be fully shown on plans to be submitted with this application. Note on the drawings those structures for which separate discharge information (Section II of this form) has been submitted.

22. List all approvals or denials granted by Federal, interstate, State or local agencies for any structures, construction, discharges or deposits described in this application.

Type of document

Id. No.

Date

Issuing Agency

Tolerance
Permit

000120

3-19-71

State of Miss.
Air & Water Pollution
Control Board

23. Check if facility existed or was lawfully under construction prior to April 3, 1970.

☒

24. If dredging or filling will occur:

State the type of materials involved, their volume in cubic yards, and the proposed method of measurement.

Not applicable

25. Describe the proposed method of instrumentation which will be used to measure the volume of any solids deposited and to determine its effect upon the waterway.

Not applicable

26. State rates and periods of deposition described in Item 25.

Not applicable

PART B DISCHARGE DESCRIPTION

1522-15-000121

(Note: Submission of Part B is required of all applicants who are also required to submit Part A. Only those parameters specifically indicated in the instructions are to be reported by a particular industry)

(Office use only)

1522-15-000121

Discharge Serial No.
001

B-1. PHYSICAL AND BIOLOGICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-1)

Intake	Discharge						
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY) (OPERATING YEAR)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
COLOR 00080	20		300			500	0 A
SPECIFIC CONDUCTANCE 00095	600						
TURBIDITY 00070	.454		100			150	
FECAL STREPTOCOCCI BACTERIA 74054	0						
FECAL COLIFORM BACTERIA 74055	0						
TOTAL COLIFORM BACTERIA 74056	0						

REMARKS: Column 5 is estimated - Sampling is occasional about twice per year

PART B

(Office use only)

1522-15-000 (2-1)

Discharge Serial No.

001

B-2. CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	METHOD OF ANALYSIS	SAMPLE FREQUENCY	CONTINUOUS MONITORING	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
ACIDITY (as CaCO ₃) 00435	0										
TOTAL ORGANIC CARBON (T.O.C.) 00680	<10		80	.00303	40	40	10	A	O	S	A
TOTAL HARDNESS 00900											
NITRITE (as N) 00615											
ORGANIC NITROGEN 00605											
PHOSPHORUS-ORTHO (as P) 70507											
SULFATE 00945											
SULFIDE 00745											
SULFITE 00740											
BROMIDE 71870											

PART B

(Office use only)

1522-15-000121

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	SAMPLE FREQUENCY	METHOD OF ANALYSIS	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
CALCIUM-TOTAL 00916			5	.00038	2.5	2.5	.625	A	O	S	A
CHROMIUM-TOTAL 01034			<.005	-	.0025	<.005	.000125	A	O	S	A
COBALT-TOTAL 01037											
COPPER-TOTAL 01042			<.005	-	.0025	<.005	.000125	A	O	S	A
IRON-TOTAL 01045											
LEAD-TOTAL 01051											
MAGNESIUM-TOTAL 00927											
MANGANESE-TOTAL 01055											
MERCURY-TOTAL 71900			<.0001	-	.00005	<.0001	Nil	A	O	S	A
MOLYBDENUM-TOTAL 01062											

PART B

(Office use only)

1522-15-000 21

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake

Discharge

UNTREATED INTAKE WATER
TREATED INTAKE WATER
MAXIMUM CONCENTRATION
MAXIMUM POUNDS PER PROCESS UNIT
MAXIMUM POUNDS PER DAY
DAILY AVG. CONCENTRATION
AVERAGE POUNDS PER DAY
METHOD OF ANALYSIS
SAMPLE FREQUENCY
CONTINUOUS MONITORING
SAMPLE TYPE

PARAMETER AND CODE

(1)

(2)

(3)

(4)

(5)

(6)

(7)

(8)

(9)

(10)

(11)

CHLORIDE
00940

112

112

.085

66

60

15

A

O

S

A

CYANIDE
00720

FLUORIDE
00951

.50

.000038

.25

.37

.09

A

O

S

A

ALUMINUM-TOTAL
01105

ANTIMONY-TOTAL
01097

ARSENIC-TOTAL
01002

BARIUM-TOTAL
01007

BERYLLIUM-TOTAL
01012

BORON-TOTAL
01022

CADMIUM-TOTAL
01027

PART B

(Office use only)

1522-15-000121

Discharge Serial No.

001

B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER DAY PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	SAMPLE FREQUENCY	METHOD OF ANALYSIS	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
PHENOLS 32730			.8	.00006	.4	.20	.05	A	O	S	A
SURFACTANTS 38260											
ALGICIDES* 74051											
CHLORINATED HYDRO-CARBONS* (EXCEPT PESTICIDES) 74052											
PESTICIDES* 74053											

*Name specific compound(s) and fill in the required data for each. Use extra blanks at the end of the form and the "Remarks" space as necessary.

Columns 3, 4, and 5 are estimated

PART B

(Office use only)

1522-15-000121

Discharge Serial No.
001

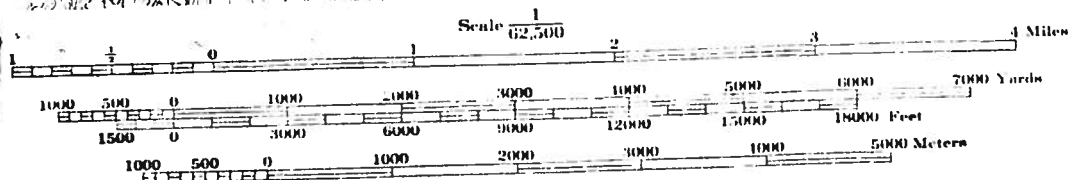
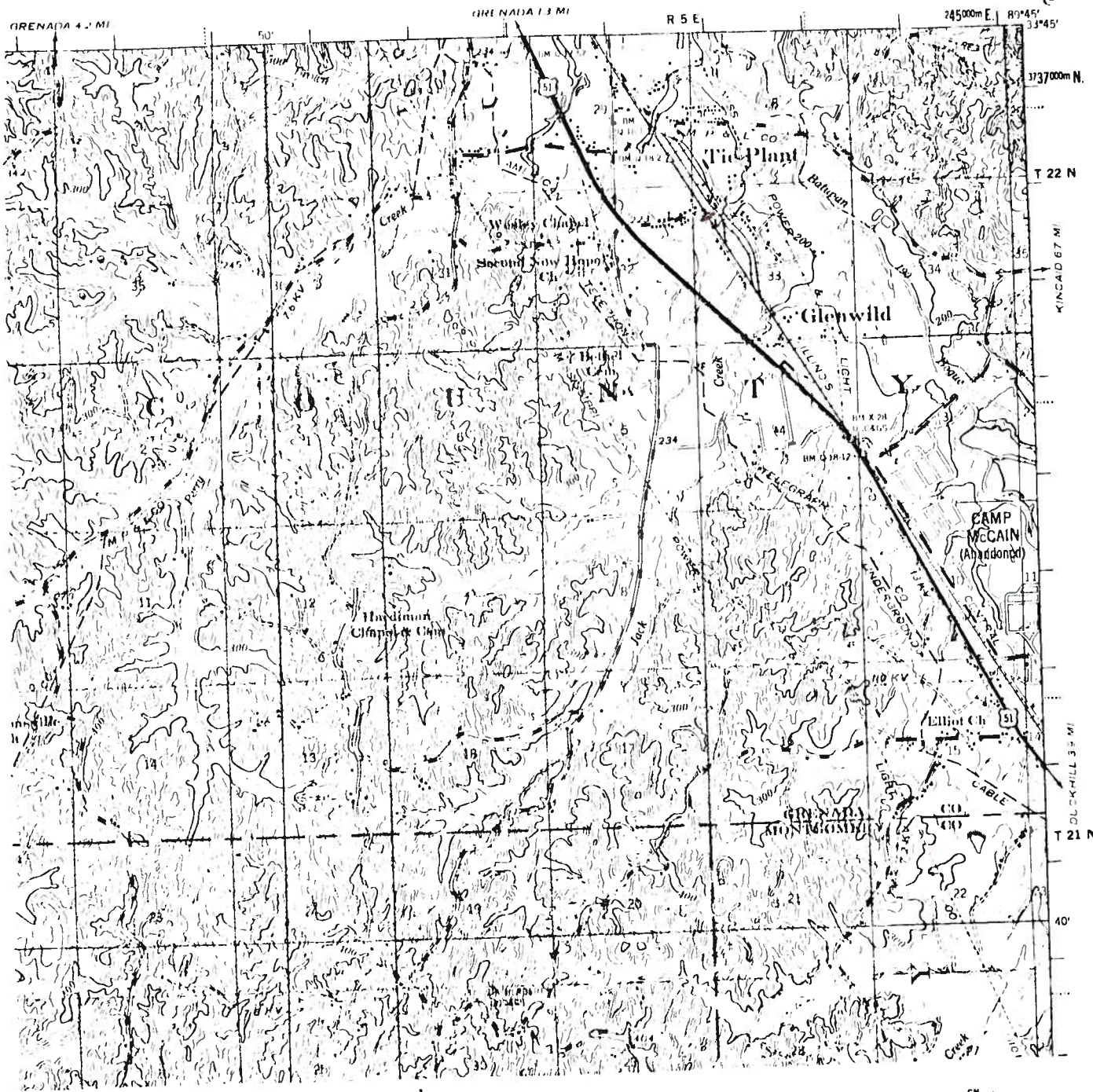
B-2. (cont.)

CHEMICAL PARAMETERS OF INTAKE WATER AND DISCHARGE (See Table B-2)

Intake	Discharge										
PARAMETER AND CODE	UNTREATED INTAKE WATER	TREATED INTAKE WATER	MAXIMUM CONCENTRATION	MAXIMUM POUNDS PER PROCESS UNIT	MAXIMUM POUNDS PER DAY	DAILY AVG. CONCENTRATION	AVERAGE POUNDS PER DAY	SAMPLE TYPE	SAMPLE FREQUENCY	METHOD OF ANALYSIS	CONTINUOUS MONITORING
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NICKEL-TOTAL 01067											
POTASSIUM-TOTAL 00937											
SELENIUM-TOTAL 01147											
SILVER-TOTAL 01077											
SODIUM-TOTAL 00929			200	.151	100	159	39.75	A	O	S	A
THALLIUM-TOTAL 01059											
TIN-TOTAL 01102											
TITANIUM-TOTAL 01152											
ZINC-TOTAL 01092			<.005	-	<.0025	<.005	.000125	A	O	S	A
OIL AND GREASE 00550			70	.0053	35	30	7.5	A	O	S	A

1522-15-000

McCARLEY QUADRANGLE
MISSISSIPPI



Contour interval 20 feet
With supplementary contours at 10 foot intervals

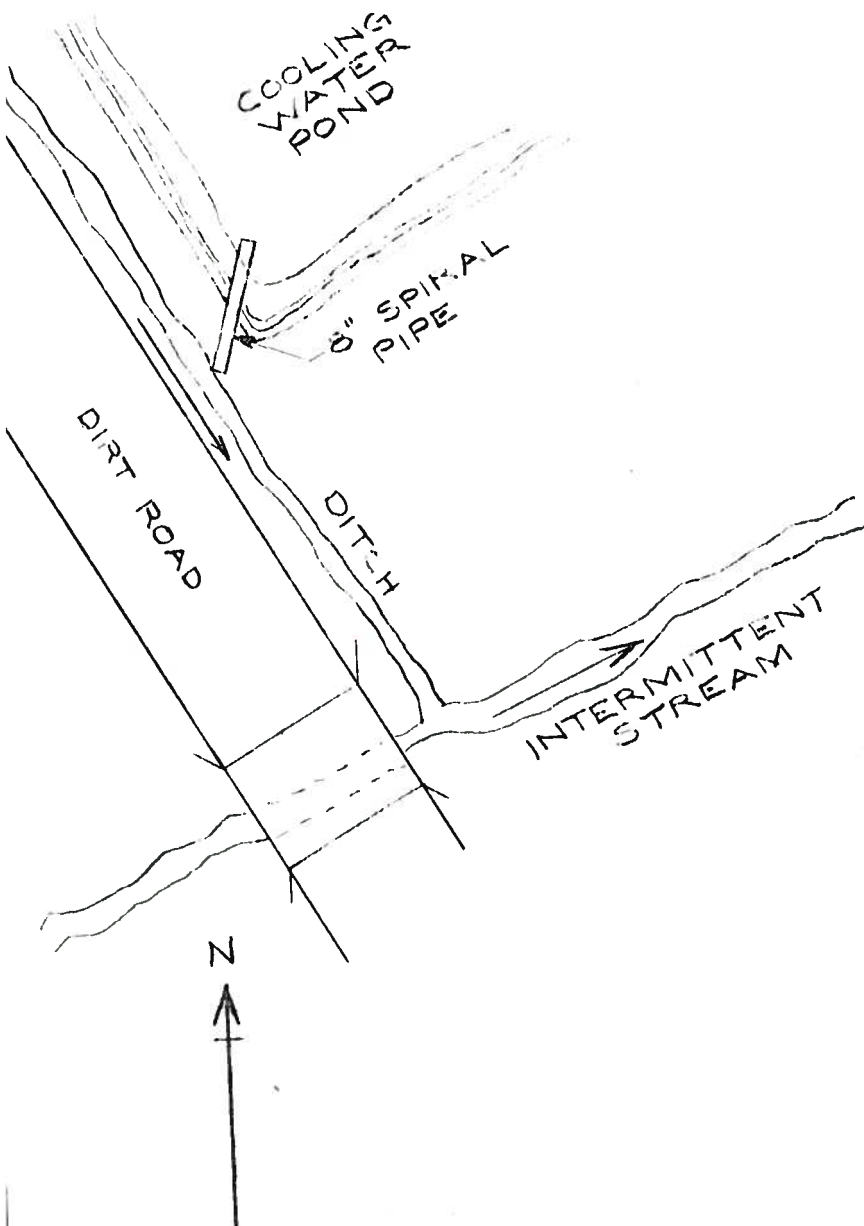
DATUM IS MEAN SEA LEVEL

ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID
ZONE 18 IS INDICATED BY TICKS OUTSIDE THE NEATLINE
BLUE NUMBERED TICKS INSIDE THE NEATLINE INDICATE THE 1000 METER
UNIVERSAL TRANSVERSE MERCATOR GRID ZONE 15
MISSISSIPPI STATE GRID ZONE WEST IS INDICATED BY DOTTED
LINES INSIDE THE NEATLINE AT 10,000 FOOT INTERVALS



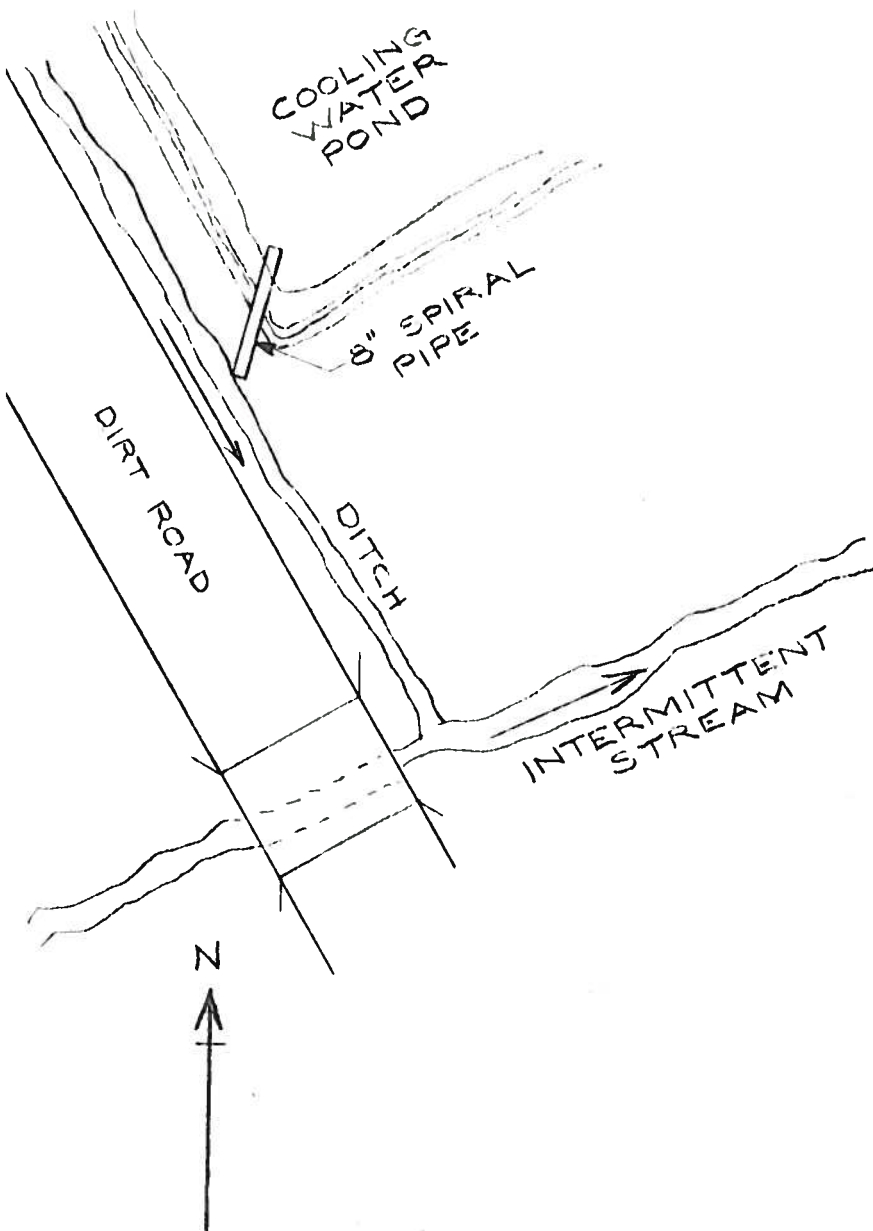
APPROXIMATE MEAN DECLINATION 1950
FOR CENTER OF SHEET
ANNUAL MAGNETIC CHANGE 1" EASTERLY

1522-15-000121



PROPOSED OUTFALL
KOPPERS CO. INC.
GRENADA PLANT
GRENADA CO., MISS.
JUNE 4, 1971

1522-15-000 121



PROPOSED OUTFALL
KOPPERS CO. INC.
GRENADA PLANT
GRENADA CO., MISS.
JUNE 4, 1971

SECTION 1 PLANT PROCESS AND DISCHARGE DESCRIPTION

1. Discharge described below is

a. Present ☐

b. Proposed new
or changed ☒

2. Implementation
schedule ☐

(Office use only)

1522-15-000(2)

Name of corporate boundaries within which the point of discharge is located.

State

County

City or
Town

6. Discharge Serial No.

001

3. Mississippi

4. Grenada

5. Tie Plant

State the precise location of the point of discharge.

7. Latitude 33 Degrees; 44 Min; 10 Sec.

8. Longitude 89 Degrees; 46 Min; 55 Sec.

9. Name of waterway at the point of discharge.

Intermittent

10. Has application for water quality certification or description of impact been made? If so, give date:

Date

Check if certificate
is attached to form ☐

Name Issuing Agency

May 26 71
mo day yr

11. Narrative description of activity (include terms of general 4-digit Standard Industrial Classification, and specific manufacturing process).

Wood Preserving SIC 2491

Pressure treatment of cross ties, lumber, and poles

12. Standard industrial classification number.

SIC 2491

13. Principal product.

Cross Ties

Lumber

Poles

14. Amount of principal product produced
per day.

6300 cu. ft.

3500 cu. ft.

3400 cu. ft.

15. Principal raw material.

Forest Products

Liquid Preservative

16. Amount of principal raw material
consumed per day.

13,200 cu. ft.

12,000 gpd

17. Number of batch discharges per day.

None

18. Average gallons per batch discharge.

19. Date discharge began.

20. Date discharge will begin.

02
mo day yr

mo day yr

21. Describe waste abatement practices.

ESEPAR, ESEGRE, ESURFA, EOTHER, DDOWNG, DHYSIC, RECOVE, RECYCL,

RHEATR, LOTHER, PEQUAL, PSEDIM, PFIOAT, BSTABI, BAPOND

PHY DESCRIPTION OF INTAKE WATER AND DISCHARGE

GRENADA

(Office use only)

1522-15-000 121

Discharge Serial No.

001

CORRECTED COPY

CONTINUOUS
MONITORING

Intake	Discharge					
Parameter and (Code)	(1)	(2)	(3)	(4)	(5)	(6)
UNTREATED INTAKE WATER	TREATED INTAKE WATER	AVERAGE (DAILY)	MINIMUM (OPERATING YEAR)	MAXIMUM (OPERATING YEAR)	SAMPLE FREQUENCY	
Flow (Gallons per day) 00056		40,000	30,000	20,000	60,000	OTHR
pH 00400		6.6	6.8	6.0	8.0	"
Temperature (Winter) (°F) 74028		58	Ambient	32	58	"
Temperature (Summer) (°F) 74027		64	A	58	95	"

23.

DISCHARGE CONTENTS

PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT	PARAMETER	PRESENT	ABSENT
Color 00080	X		Aluminum 01105		NA	Nickel 01067		NA
Turbidity 00070	X		Antimony 01097		NA	Selenium 01147		NA
Radioactivity 74050		NA	Arsenic 01002	X		Silver 01077		NA
Hardness 00900	X		Beryllium 01012		NA	Potassium 00937		NA
Solids 00500	X		Barium 01007		NA	Sodium 00929	X	
Ammonia 00610		NA	Boron 01022		NA	Titanium 01152		NA
Organic Nitrogen 00605		NA	Cadmium 01027		NA	Tin 01102		NA
Nitrate 00620		NA	Calcium 00916	X		Zinc 01092	X	
Nitrite 00615		NA	Cobalt 01037		NA	Alcicides 74051		NA
Phosphorus 00665		NA	Chromium 01034	X		Oil and Grease 00550	X	
Sulfate 00345		NA	Copper 01042	X		Phenols 32730	X	
Sulfide 00745		NA	Iron 01045	X		Surfactants 38260		NA
Sulfite 00740		NA	Lead 01051		NA	Chlorinated Hydrocarbons 74052	X	
Bromide 71870		NA	Magnesium 00927		NA	Pesticides 74053		NA
Chloride 00940	X		Manganese 01055		NA	Fecal Streptococci Bacteria 74054	X	
Cyanide 00720		NA	Mercury 71900		NA	Coliform Bacteria 74056	X	
Fluoride 00951	X		Molybdenum 01062		NA			

24a. Have all known hazardous or potentially hazardous substances in your plant been inventoried?



Yes



No

24b. If yes, have steps been taken to insure that there exists no possibility of any such known hazardous or potentially hazardous substance entering this discharge?



Yes



No

25. Remarks.

NA Item 23 indicates parameter has not been analyzed for.

Part A, Item 4 uses Item 15 for base.

The information above completes the basic reporting requirements which are required of all applicants. Those applicants whose discharge results from an activity included within any of the Standard Industrial Classification Code (SIC Code) categories listed below must complete Part A of this form as well.

CRITICAL INDUSTRIAL GROUPS

SIC 098	FISH HATCHERIES, FARMS, AND PRESERVES	SIC 285	PAINTS, VARNISHES, LACQUERS, ENAMELS, AND ALLIED PRODUCTS
SIC 10-14	DIVISION B - MINING	SIC 2871	FERTILIZERS
SIC 201	MEAT PRODUCTS	SIC 2879	AGRICULTURAL PESTICIDES, AND OTHER AGRICULTURAL CHEMICALS, NOT ELSEWHERE CLASSIFIED
SIC 202	DAIRY PRODUCTS	SIC 2891	ADHESIVES AND GELATIN
SIC 203	CANNED PRESERVED FRUITS, VEGETABLES (EXCEPT SEAFOODS, SIC 2031 AND 2036)	SIC 2892	EXPLOSIVES
SIC 2031, 2036	CANNED AND CURED FISH AND SEAFOODS; FRESH OR FROZEN PACKAGED FISH AND SEAFOODS	SIC 29	PETROLEUM REFINING AND RELATED INDUSTRIES
SIC 204	GRAIN MILL PRODUCTS	SIC 3011, 3069	TIRES AND INNER TUBES; FABRICATED RUBBER PRODUCTS, NOT ELSEWHERE CLASSIFIED
SIC 206	SUGAR	SIC 3079	MISCELLANEOUS PLASTICS PRODUCTS
SIC 207	CONFECTIONARY AND RELATED PRODUCTS	SIC 311	LEATHER TANNING AND FINISHING
SIC 208	BEVERAGES	SIC 32	STONE, CLAY, GLASS, AND CONCRETE PRODUCTS
SIC 209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS	SIC 331	BLAST FURNACES, STEEL WORKS, AND ROLLING AND FINISHING MILLS
SIC 22	TEXTILE MILL PRODUCTS	SIC 332	IRON AND STEEL FOUNDRIES
SIC 23	APPAREL AND OTHER FINISHED PRODUCTS MADE FROM FABRICS AND SIMILAR MATERIALS	SIC 333, 334	PRIMARY SMELTING AND REFINING OF NON-FERROUS METALS; SECONDARY SMELTING AND REFINING OF NONFERROUS METALS
SIC 242	SAWMILLS AND PLANING MILLS	SIC 336	NONFERROUS FOUNDRIES
SIC 2432	VENEER AND PLYWOOD	SIC 347	COATING, ENGRAVING, AND ALLIED SERVICES
SIC 2491	WOOD PRESERVING	SIC 35	MACHINERY, EXCEPT ELECTRICAL
SIC 26	PAPER AND ALLIED PRODUCTS	SIC 36	ELECTRICAL MACHINERY, EQUIPMENT, AND SUPPLIES
SIC 281	INDUSTRIAL INORGANIC AND ORGANIC CHEMICALS (EXCEPT SIC 2818)	SIC 37	TRANSPORTATION EQUIPMENT (EXCEPT SHIP BUILDING AND REPAIRING, SIC 3731)
SIC 2818	INDUSTRIAL ORGANIC CHEMICALS	SIC 3731	SHIP BUILDING AND REPAIRING
SIC 282	PLASTICS MATERIALS AND SYNTHETIC RESINS, SYNTHETIC RUBBER, SYNTHETIC AND OTHER MAN-MADE FIBERS, EXCEPT GLASS	SIC 491	ELECTRIC COMPANIES AND SYSTEMS
SIC 283	DRUGS	SIC 493	COMBINATION COMPANIES AND SYSTEMS
SIC 284	SOAP, DETERGENTS, AND CLEANING PREPARATIONS, PERFUMES, COSMETICS, AND OTHER TOILET PREPARATIONS		

PART A

(Note: Submission of Part A is required of all applicants whose processes are listed on page 3 above.)

(Office use only)

1522-15-000 (2)

Discharge Serial No.
001

INFORMATION REQUIRED OF SPECIFIED INDUSTRIES

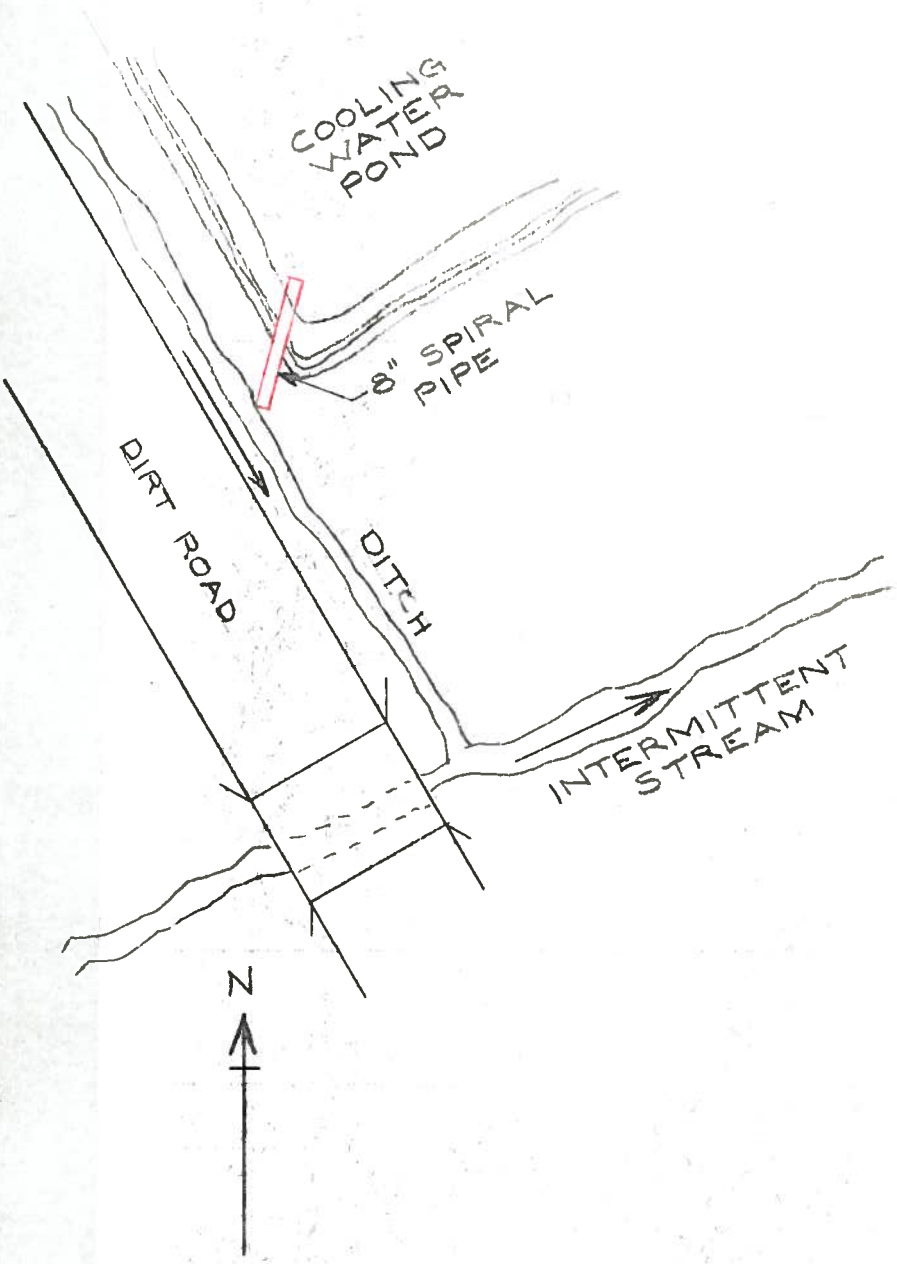
Intake	13,200 cu. ft.				Discharge		30 M	20 M			
PARAMETER AND CODE	(DAILY AVG. CONCENTRATION) (1)	(DAILY AVG. CONCENTRATION) (2)	MAXIMUM CONCENTRATION (3)	MAXIMUM POUNDS PER DAY (4)	DAILY AVG. CONCENTRATION (5)	AVERAGE POUNDS PER DAY (6)	SAMPLE TYPE (7)	SAMPLE FREQUENCY (8)	METHOD OF ANALYSIS (9)	CONTINUOUS MONITORING (10)	(11)
ALKALINITY (as Ca CO ₃) 00410		60	300	0.0057	75.	180	32.4	AVER	OTHR	STD. METHODS	ABS
B.O.D. 5-DAY 00310		< 5	25	0.0004	6	< 5	.9				
CHEMICAL OXYGEN DEMAND (C.O.D.) 00340		< 10	70	0.001	175	20	3.5				
TOTAL SOLIDS 00500		100	1000	0.018	250	500	9.0.				
TOTAL DISSOLVED SOLIDS 70300		50	900	0.017	225.	400	7.2.				
TOTAL SUSPENDED SOLIDS 00530		20	100	0.002	25.	20	3.6				
TOTAL VOLATILE SOLIDS 00505		10	50	0.001	13.	5	.9				
AMMONIA (as N) 00610		NA	N11	N11		N11					
KJELDAHL NITROGEN 00625		NA	.25	N11	.0006	.10	0.018				
NITRATE (as N) 00620		NA	N11	N11		N11					
PHOSPHORUS TOTAL (as P) 00665		NA	5.0	N11	.0013	1.8	0.32				

(offset)

On N

N

N



PROPOSED OUTFALL
 KOPPERS CO. INC.
 GRENADA PLANT
 GRENADA CO., MISS.
 JUNE 4, 1971

N 1110
 1110
 1110
 1110

1522-15-000121

DEPARTMENT OF THE ARMY, CORPS OF ENGINEERS

APPLICATION FOR PERMIT TO DISCHARGE OR WORK IN
NAVIGABLE WATERS AND THEIR TRIBUTARIES


PART "B" OF ENG FORM 4345-1

NOTE TO APPLICANT: Refer to the pamphlet entitled "Permits for Work and Structures in and for Discharges or Deposits into Navigable Waters" - Part "B" Instructions before attempting to complete this form.

SIGNATURE: This application must be signed by the same person who signed the original application or by another official meeting the same qualifications as the original signatory.

I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate.

(Official Use Only)


SIGNATURE OF APPLICANT

Treatment Units and Control Facilities

Koppers' Grenada Mississippi Waste Disposal System

1. General Description of Industrial Waste Disposal System

The various wastes created throughout the plant during processing are collected in an equalizing and primary treatment lagoon. These wastes reach the lagoon by gravity after decanting and reclaiming useful materials. Cooling water is recirculated from a separate large pond and any overflow due to rain is discharged by ditch to a creek. The major portion of steam condensate is returned to boilers.

The handling of the waste waters is done in three steps:

A. Collection, Equalizing, and Primary Treatment Lagoon

All waste water except boiler blowdown and recirculated cooling water is directed to a lagoon (marked equalizing lagoon on plant map). This lagoon has approximately 50 days capacity with a 2' freeboard. No reduction is expected through this lagoon, however, it is open to sunlight and will no doubt have some aerobic and anaerobic activity.

B. Solar Oxidation Secondary Treatment Lagoon

Water from the primary lagoon is pumped regularly to this lagoon which has approximately 130 days retention time and is available for aerobic and anaerobic activity. Flow will be through the lagoon longitudinally for greatest possible retention.



C. Soil Irrigation (Tertiary)

Water from the secondary treatment lagoon will be pumped regularly to one or more of three irrigation areas. Nominal rate of application is 3500 gallons per acre per day. The system is variable so that all or part of the day's volume can be applied to any portion of the system. This allows for freezing weather and poor conditions which can change assimilative ability of the area. Also, should resting time be necessary it can be arranged. The backup volume of the two lagoons will be maintained to allow for upset in plant operation, power failures, or continued poor irrigation weather.

D. Aerated Lagoon

The size of the secondary treatment lagoon is such that it will lend itself to use as a facultative lagoon or as an aerated lagoon with floating aerators. This provides alternate means of treatment should the soil irrigation system fail or at such times as it may be inadvisable to utilize it. Effluent from the lagoon would probably not reach the average quality as stated below but would be within the maximums noted.

2. General Raw Waste Characteristics and Reduction Expected Through the System as follows:

<u>Quality</u>	<u>Raw*</u>	<u>Final*</u>	<u>%Reduction</u>
ph	4-6.5	6.8	-
Color Units	Very Turbid	200	-
Turbidity	1600	170	90
Oil (Petroleum Ether)	240	70	70
TOC	1200	55	97
COD	3200	85	97
BOD (5 day)	2000	70	96
Phenols	140	.8	99
Solids on Evaporation	1200	7000	-

*ppm, average

Physical Character and Chemical Quality
of Waste After Treatment

<u>Quality</u>	<u>Parts Per Million</u>		
	<u>Average</u>	<u>Maximum</u>	<u>Minimum</u>
Color	200	390	160
Turbidity	170	310	100
Temperature	Ambient	Ambient	Ambient
BOD	70 (6.0#/day)	100 (16.68 #/day)	< 40 (2.68 #/day)
COD	85	200	< 40
Total Solids	7,000	12,000	< 1,000
Volatile Solids	3,500	6,000	< 2,000
ph	6.8	9	6.0
Phenols	0.8	1.0	< .005
Oils	70	100	< 10
TOC	55	150	< 40

The Daily Sentinel - Star

Proof of Publication

STATE OF MISSISSIPPI
COUNTY OF GRENADA

Before me, the undersigned authority in and for the
County and State aforesaid, this day personally appeared

Judy Carls

who, being duly sworn, states on oath that she is the

Bookkeeper

of The Daily Sentinel-Star, a newspaper published in the
city of Grenada, state and county aforesaid, with a gener-
al circulation in said county, and which has been publish-
ed for a period of more than one year, and that the publi-
cation of the notice, a copy of which is hereto attached
has been made in said paper 1 times, at weekly in-
tervals and in the regular entire issue of said newspaper
for the numbers and dates hereinafter named, to-wit:

Vol. 116 No. 340 on the 9 day of June 19611
Vol. No. on the day of 196.....
Vol. No. on the day of 196.....
Vol. No. on the day of 196.....
Vol. No. on the day of 196.....
Vol. No. on the day of 196.....
Vol. No. on the day of 196.....

Judy Carls

Sworn to and subscribed before me, this 25th day
of June, 19611

Elizabeth H. Lee

My Commission Expires July 1, 1972

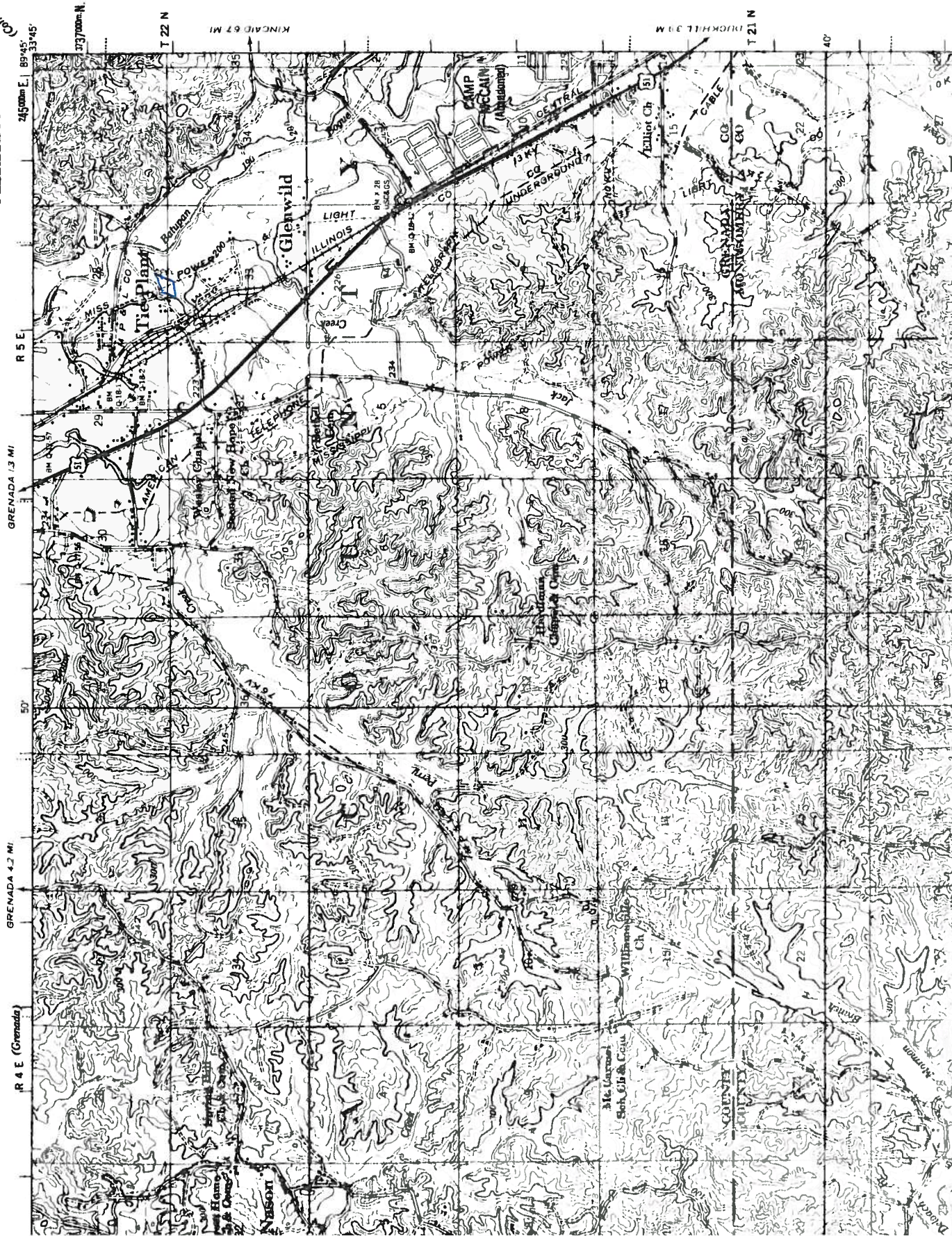
(SEAL)

Legal Notice

PUBLIC NOTICE OF REQUEST FOR STATE CERTIFICATION OF AC- TIVITIES REQUIRING A FEDERAL LICENSE OR PERMIT

The Koppers Company, Inc.
(Applicant) hereby gives public
notice of the proposed con-
struction of Lagoons and Soil Bed
Biological Degradation Unit for
handling industrial waste
water (Description of Project). In
compliance with requirements of
Section 21 (b) of the Federal
Water Pollution Control Act, 33
U.S.C.A 1171 (b), the Koppers
Company, Inc. (Applicant) has
requested certification from the
Mississippi Air and Water
Pollution Control Commission
that there is reasonable
assurance that the above men-
tioned activity will be conducted
in a manner that will not violate
applicable water quality stan-
dards of the State of Mississippi.
Any persons wishing to make
comments pertinent to this cer-
tification must submit such
comments in writing to the
Mississippi Air and Water
Pollution Control Commission at
P.O. Box 827, Jackson,
Mississippi, 39205, before 10:00
A.M. on the third Tuesday
following the publication of this
notice; at such time, certification
will be considered.

(Confidential)



REPORT OF ORAL CONVERSATION

Date 1-27-71 Telephone _____ Visit _____

File YES Circulate _____

Company Koppers Co.

Location Grenada

Representing Person Marvin Miller @ Koppers

Telephone Number _____

Purpose of Conversation _____

MAWPCC Representative _____

DETAILS OF CONVERSATION

100 P.M. →

Been playing w/ fellow next
door - need a lease on the
land next door for 25 yrs - negative

7111
WOOD PRESERVERS QUESTIONNAIRE

NAME Koppers, Inc. GRENADA

Do you treat lumber with

Creosote YES?
Pentachlorophenol or Sodium Pentachlorophenate YES?
Copper, Chromium, Arsenic Salts NO?

Describe topography (Number of basins, on hill, amount of extra land available) LOCATED ON GENTLE SLOPE TOWARD BOGUE CREEK

Yard Drainage--Where does it go INTO DITCH AND INTO BOGUE CREEK

Can it be segregated from other blow downs? YES

Does Penta cylinder blow down mix with creosote cylinder blow down? NO

If not, describe SEPARATE SYSTEMS

Does plant belong to Southern Pressure Treaters Association? YES

Has the company retained a professional engineer for waste water services? CO. HAS OWN ENGINEERS.

What are the company plans with respect to the waste water problem? Describe AWAITING RESULTS OF DR. THOMPSON'S PILOT PROJECT.

Does the company have a permit? EXPIRED

If yes, TYPE _____ NUMBER _____ DATE OF ISSUE _____

EXPIRATION _____

Does the company have an air pollution problem? NO

Describe existing treatment or control devices _____

HOLDING PONDS FOR ALL BUT YARD DRAINAGE.

MISSISSIPPI
AIR AND WATER POLLUTION CONTROL COMMISSION
P. O. Box 827
Jackson, Mississippi 39205

**APPLICATION FOR AN OPERATING PERMIT FOR AN EXISTING WASTE
DISPOSAL SYSTEM**

Koppers Company, Inc.

(Title of Body Making Application, i.e., Municipality, Corporation or other)

Date November 21, 1968

Location of Waste Treatment Facility: Tie Plant, Miss.

(Section, Township, Range)

(Other)

Type of Treatment Provided: Settling basins for creosote.

(Lagoon, Activated Sludge, etc.)

Sanitary Waste: Number of Persons Served by the Disposal System _____

Design Capacity of Treatment Facility (number of persons) _____

Commercial or Industrial Waste: Indicate Strength of Waste by Population Equivalent, B.O.D., Solids Content, or
Applicable Criteria; Laundries or Washaterias Give Number and Size of Machines and Water Usage _____

Stream Data:

How Disposal System Effluent Reaches State Waters: () Directly (X) By Ditch () By Public

Sewers () Other

Waste Flows: (1) Ditch (2) Thence into Bogue Creek

(Stream)

(Stream)

(3) Thence into Yalobusha River

(River)

Use of the Effluent Receiving Waters: Unknown

(Irrigation, Livestock Watering, Recreation, etc.)

Distance to the Nearest Downstream User (Name): Unknown

Creosote - Effluent waters pass through "L" shaped decanter sump 20' wide by about 60' overall length and about 6' working depth. At the outlet end of the decanter is a carbon filter and overflow goes to the ditch. Any creosote in the decanter is pumped to dehydrater for reclaiming.

Penta - Effluent is piped to a concrete pit about 20' diameter by 18' deep. The floating oil is recovered and pumped into the working tank. The water layer is pumped out from the bottom of the pit into the ditch.

➤ Sanitary Waste - Company houses and office building - waste goes directly to ditch.

Service building - waste goes into septic tank and thence to ditch.

Grenada - gw



KOPPERS COMPANY, INC.

FOREST PRODUCTS DIVISION

P. O. BOX 160

GRENADA, MISS. 38901

RECEIVED

4-11-67

APR 12 1967

AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Mr. Robert S. Wright, Executive Secretary
Air & Water Pollution Control Commission
P. O. Box 827
Jackson, Mississippi 39205

Dear Mr. Wright:

I acknowledge your letter of April 10th with your request as to what steps we are taking to eliminate any pollution of streams from which a run-off of our plant can be harmful to fish. We endeavor at all times to keep any accumulation of solutions where it cannot be discharged into streams. However, after a heavy rain, some of the solution is washed off our yard and into streams. We are taking every precaution possible to eliminate the cause of stream pollution. Our company is also making a study of several types of filters which will be installed if they meet with your commission's approval. We have been working on this for several months and hope to have some solution to offer the commission in the very near future.

As you know, we now treat wood products with creosote and creosote-penta solutions and any loss or drainage from our cylinders is run through a filtering system consisting of coke, sand and shavings. This system is cleaned and the coke, sand and shaving renewed every sixty (60) days. However, as you know, this plant has been operating here for many years and some discharge has possibly accumulated in the sand which, after a heavy rain, is stirred up and any solution to this you can offer, we will be glad to hear.

Again I wish to assure you we are doing all possible to eliminate any stream pollution and will continue to do so in the future.

Yours very truly,

KOPPERS CO., INC., F. P. D.

D. L. Wagner
D. L. Wagner,
Plant Manager

DLW:ebq

cc: Mr. J. L. Campbell

April 10, 1967

Mr. D. L. Wagner, Manager
Coppers Company, Inc.
P. O. Box 160
Grenada, Mississippi

Dear Mr. Wagner:

As you know, several weeks ago a fish kill occurred in the stream below your plant and below the dam at the Grenada Reservoir.

The Game & Fish Commission made investigation of this fish kill and it was apparent that it was caused by the run-off from your plant site as a result of recent rainfall.

We have received several complaints in regard to this and also inquiry from the local newspaper. I would like to ask that you send me information regarding the operations of your plant and the types of products which would possibly cause this type of problem. Also, I would like to have any information you might have in regard to what you are doing to eliminate further problems that could result in fish kills in your area.

Please be assured that this information will be kept in strict confidence and would be very helpful for background information prior to any conferences with you and your company.

I will appreciate an early reply and if we can be of any service to you please let me know.

Very truly yours,

Robert S. Wright
Executive Secretary

RSW:js

Game & Fish Commission

STATE OF MISSISSIPPI

PAUL B. JOHNSON

GOVERNOR



BILLY JOE CROSS
EXECUTIVE DIRECTOR

JOHN P. CAMP, JR.
ASST. EXEC. DIRECTOR

P. O. BOX 451 • PHONE 355-9361

Jackson, Mississippi 39205

March 16, 1967

COMMISSIONERS

RAY R. CANNADA, CHAIRMAN
EDWARDS

TOM RIDDELL, JR., VICE CHAIRMAN
CANTON

J. C. AINSWORTH
TAYLORSVILLE

E. A. SMITH
YAZOO CITY

T. C. ROUNSAVILLE
LEAKESVILLE

PERCY PIERCE
LIBERTY

COMMISSIONERS

W. M. BALDWIN
PONTOTOC

L. D. MCDADE
DEKALB

R. B. KIRKSEY
TUPELO

DR. I. W. BUSH
NORTH CARROLLTON

STEVE T. MISTILIS
OXFORD

Mr. Robert Wright
Executive Secretary
Mississippi Air and Water Pollution
Control Commission
P. O. Box 827
Jackson, Mississippi 39205

Dear Bob:

This is the map and fish kill data on the Grenada fish kill.

Very truly yours,

Barry O. Freeman
Chief of Fisheries

BOF:nj

Enc.

RECEIVED

MAR 17 1967

AIR & WATER POLLUTION
CONTROL COMMISSION
STATE OF MISSISSIPPI

Game & Fish Commission

STATE OF MISSISSIPPI

PAUL B. JOHNSON

GOVERNOR



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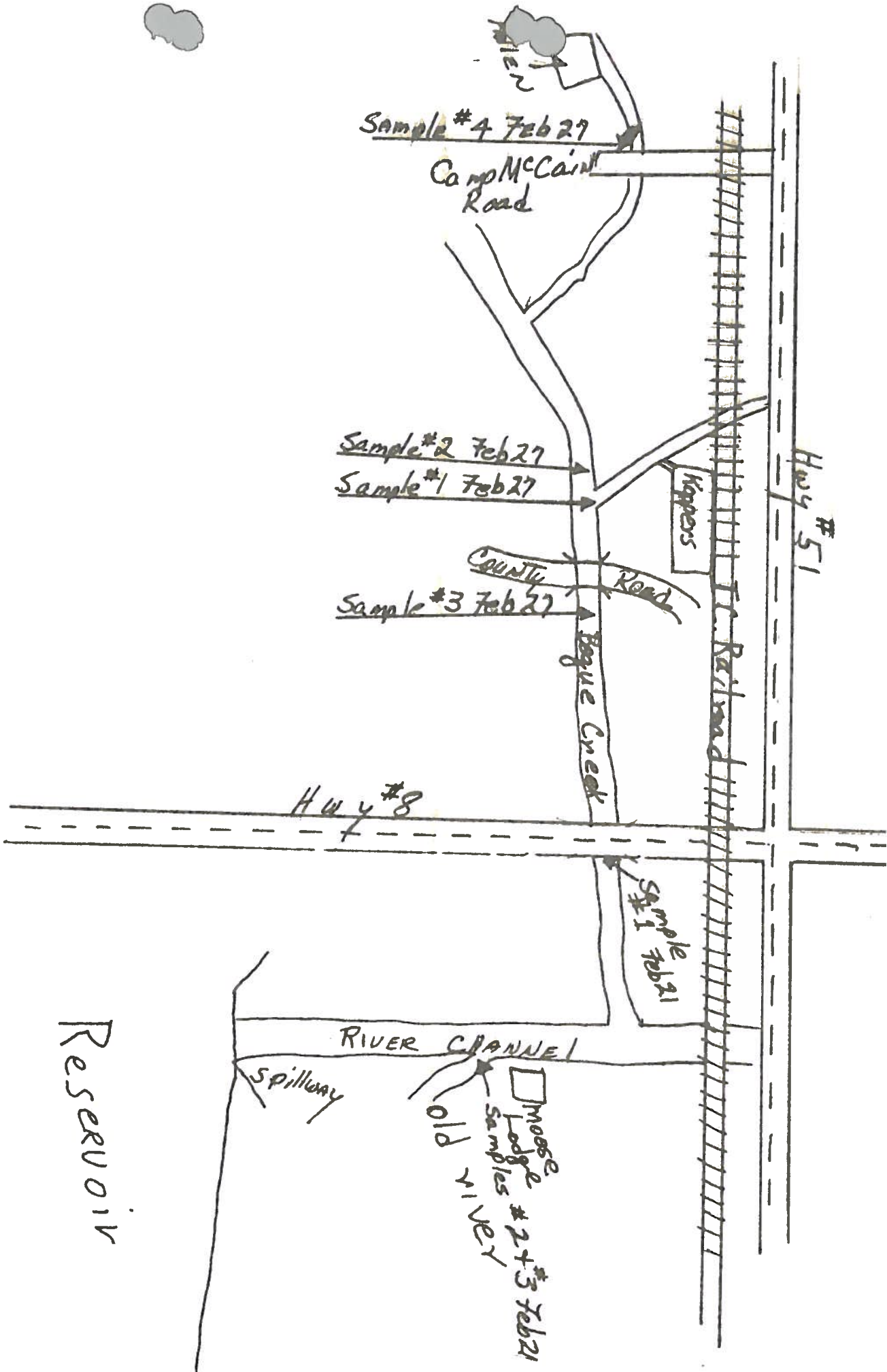
DR. I. W. BUSH
NORTH CARROLLTON

STEVE T. MISTILIS
OXFORD

FISH KILL INVESTIGATION

From an inspection of the dead fish remaining in the old river run, behind the Moose Lodge, on February 27th. I would estimate that approximately 2,000 fish had been killed, approximating 1,000 pounds. Dead fish of the following species were observed: white bass, white crappie, black crappie, buffalo, carp, shad, and bullhead catfish. Most abundant kill were crappie of both species.

Attached is a sketch of the area investigated.



KOPPERS' EXPERIENCE REGARDING IRRIGATION OF
INDUSTRIAL EFFLUENT WATERS AND
ESPECIALLY WOOD TREATING PLANT EFFLUENTS
(SOIL PERCOLATION AND/OR IRRIGATION)

For Presentation at Mississippi State University
State College, Mississippi
November 17 - 19, 1970

Contribution No. RP-70-11

by

C. W. Fisher
Koppers Company, Inc.
Research Department
Monroeville, Pa. 15146

KOPPERS' EXPERIENCE REGARDING IRRIGATION OF INDUSTRIAL EFFLUENT WATERS
AND ESPECIALLY WOOD TREATING PLANT EFFLUENTS
(SOIL PERCOLATION AND/OR IRRIGATION)

C. W. Fisher
Koppers Company, Inc.
Research Department
Monroeville, Pa.

For Presentation at Mississippi State University
State College, Mississippi
November 17 - 19, 1970

Koppers Company operates several types of plants. Many plants produce effluent waters containing organics which are difficult to degrade by the usual activated sludge process. Several of these effluent waters would require considerable dilution water to make them biodegradable when using an activated sludge or trickling filter process. There can be difficulties in operating a biological plant on an industrial effluent water. Thus, other methods of treatment, which are less subject to upsets, and easier to operate than by normal biological processes, are desirable.

For a biological process using the activated sludge or trickling filter process to operate efficiently, the requirements are for rather uniform feed and close control of some of the chemical properties, such as pH, oil content, and toxic metals. Metals such as copper, chromium, zinc, etc. have been found in several wood plant waters in concentrations which are toxic to an activated sludge plant. The sources of these metals have been copper and brass valves or pump parts which are dissolved by the acid waters of a wood treating plant. Pretreatment of the plant wastewaters must be provided to reduce toxic metals if they are present, before feeding to a biological unit.

An activated sludge process will very frequently produce a discharge water of quite dark brown color which may not be acceptable for discharge by many states, thus requiring post treatment. Several organic compounds of high molecular weight are present in various wood treating plant wastewaters which are not degraded in a water phase biological process. Many compounds are also partially digested to a biological resistant form. Operation of an activated sludge treatment plant usually requires considerable test data to adequately follow operating efficiency.

Considering all of these factors, soil irrigation and/or percolation of process effluent waters was investigated. A literature survey was made, followed by bench scale tests. With encouraging results, effluent waters from a variety of plants were investigated. The degree of treatment possible by soil percolation indicated several advantages over that possible by other means of biological treatment. This may be due to the higher forms of life present in an aerobic soil type environment rather than in a water solution - as it was possible to find bacteria, molds, actinomycetes, algae, protozoa, etc. present in the soil being irrigated with process effluent waters.

One of the first effluent waters to be studied in some detail was from a chemical plant operation that had wastewaters with the following characteristics:

pH	9 to 10
Color	5,000 to 42,000 (APHA) units
COD	1,600 to 5,000 ppm
BOD	800 to 2,000 ppm

These waters were high in color, oxygen demand values and phenolic compounds.

Soil percolation bench scale investigations were made, followed by two-acre field studies. One year later, a full scale plant irrigation system for plant effluent waters was placed in operation.

Operating data from the plant, when irrigating at the rate of 2,000 to 3,000 gallons/day/acre for a year, indicated color removal of 88 to 99% and COD removal of 85 to 99%.

The wastewaters were high in sodium, thus lime was added to the soil along with other nutrients to increase the growth of the vegetation. It was noted that bacteria, molds, and actinomycetes were three to ten times more numerous in the soil on areas that were irrigated as compared to an adjacent control area that had not been irrigated. The irrigation area was a hillside which had rock under about 6 to 24 inches of soil. Runoff water from the hillside appeared as two springs near a creek, and it was possible to account for most of the sodium applied to the field in these discharge waters. Thus, the reductions in organic content of the waters were by degradation on passage over the ground and through the soil.

Some plants investigated have effluent waters with extremely high polluttional properties. By reducing the volume of these effluent waters to a minimum, these polluted waters can be irrigated as a means of disposal. Process effluent waters from these operations have the following characteristics:

pH	9.0 to 9.8
COD	30,000 to 54,000 ppm
BOD	20,000 to 43,000 ppm
Phenols	7,000 to 15,000

The waters were found to be biodegradable in activated sludge or trickling filter units when diluted with three volumes of clean or once-through cooling

water. Bench scale activated sludge studies indicated that phenols were reduced to 2 ppm or less and BOD and COD reductions were 80 to 99%. There was, however, an increase in color and a dark brown effluent water was produced.

Bench scale soil percolation tests of the effluent waters were tried in the laboratory using a 3-ft depth of soil. A rich garden type soil, and mixtures of this soil with various amounts of sand, were investigated. The above process effluent waters were applied to the soil at the rate of 3,000 gallons/day/acre, and once a week an equal amount of distilled water was added to simulate rainfall. Pure sand and percolation beds with less than 25% loamy soil gave low or no organic reductions on passage through the column. After 90 days of operation, when using a column with one part soil and two parts sand, phenols were reduced to less than 20 ppm and usually less than 3 ppm.

Outdoor tests were then conducted in a 55-gal drum. After 90 days of operation, again at the rate of 3,000 gallons/day/acre, phenols were reduced to 480 ppm and COD to 1,800 ppm. The test was discontinued in late December when freezing weather was encountered. The low temperatures and rusting of the drum were responsible for the lower reductions of COD and phenol of the effluent waters going through the unit.

Presently we have two tar plants irrigating wastewaters of the above quality. One of the plants has a clay soil that is nearly impermeable to water. However, vegetation and a type of grass does grow in this area. The wastewaters are spread on the soil from a truck, again at approximately 2,000 to 3,000 gallons/day/acre and any of the runoff from this area combines with other plant water which in dry weather amounts to 10 gallons per minute.

The total waters leaving the plant area have a BOD of 19 to 50 ppm, COD of 40 to 80 ppm, and phenols usually at less than 1 ppm. This plant has been irrigating its effluent waters for approximately four years. The quality of outfall water is checked by a local analytical laboratory and flow volume is recorded. To date, this method of effluent water handling has proved satisfactory at this plant and also at one other tar plant.

Another variety of process effluent water containing high phenols and having high organics is that which results from coke plant operations. Bench scale laboratory investigations were followed by larger test units using 3-ft diameter sewer pipes with sloped concrete bottoms having an outlet for collecting discharge waters. These pipes were filled with 36 inches of a mixture of top soil and sand. The effluent waters used for irrigation had the following composition:

pH	8.7 to 9.0
BOD	4,500 to 5,500 ppm
TOC	900 to 2,000 ppm
Phenols	1,400 to 1,700 ppm
Ammonia	3,500 to 4,300 ppm

After 109 days of irrigation at a rate of 3,500 gallons/acre/day plus the once a week addition of an equal volume of tap water (to simulate rain), the following reductions and quality of outfall water were noted:

BOD	95+ per cent reduction to 5 ppm
TOC	99 per cent reduction to 10 ppm
Phenols	99+ per cent reduction to less than 0.2 ppm

The waters being irrigated contained nitrogen in the form of free and fixed ammonia. In the percolated water, nitrogen was present largely as nitrates and some nitrites; however, the total nitrogen was essentially unchanged.

Coke plant effluent waters to be treated by a biological process must be diluted with a water of high quality, and after treatment the waters will have a brown color of 1,000 to 3,000 units. The soil-irrigated waters had a color of less than 150 units at the end of the test period.

The above background data are given as all of these effluent waters were:

- High in oxygen demand values
- High in phenols
- And produced highly colored effluents when treated in activated sludge units.

The process effluent waters from wood treating plant operations have several of the same objectionable properties as those waters noted above. Thus, it was of interest to investigate this mode of treatment for wood treating plant effluent waters.

The plant for which we have considerable data is a wood treating plant having four cylinders. The property is located near the head waters of a river. Water from this area originates in a spring on an adjacent farm. This stream then flows through the wood treating plant property. The ground has a hard rock layer two to eight feet under the top soil. Thus, water does not percolate into a subsurface stream.

Early in the '60s, the plant reduced the quantity of process wastewater, and these plant process effluent waters, ranging from 1,000 to 5,000 gallons per day, were transported to lagoons located on the high elevation portion of the plant property. The lagoons hold several months effluent

production. This provides for equalization of effluent waters and settling of carried over creosote. The overflow from the lagoons goes through an area with dense vegetation and combines with the small spring coming off the farm land adjacent to the property. The combined waters then flow through the operating area of the plant, where the treating cylinders are located, and leaves the property going under a public roadway. Since this plant is located at the head waters of a river, the State has followed closely the quality of waters discharged from the plant.

Following are some of the qualities of the wastewaters as well as the quality of the main plant outfall. Normal dry weather flow of the spring water leaving this plant, including steam condensate, boiler blowdown, irrigation area outfall, etc. is approximately 15,000 to 50,000 gallons per day, but usually in the lower range.

ANALYSIS OF WATERS

<u>Date</u>	<u>Sample Location</u>	<u>COD, ppm</u>	<u>BOD, ppm</u>	<u>PHENOL, ppm</u>
September 1961	Main outfall	45	-	0.5
November 1961	Lagoon outfall	1,530	-	100
	Ditch below lagoon outfall	710	-	50
	Main outfall	108	-	3.7
Summer 1962	Main outfall	46	-	0.2

(Slide 5)

May 1963	Process waters to lagoon	2,700	1,675	-
	40 yds below lagoon	425	72	-
	Main outfall	83	9	0.28
July 1963	Process waters to lagoon	4,000	1,850	900
	Main outfall	330	155	45

During 1964 and 1965, changes were made at the plant in the method of process effluent water decantations and in yard drainage to further improve methods of handling and irrigating plant process effluent waters.

Most samples of water below the lagoon were obtained from 1-ft diameter by 1-ft deep test holes dug in the normal flow of the irrigation water.

More detailed tests and surveys were then made starting in 1966. For August 1966 the following are characteristics of the wastewaters:

<u>Date</u>	<u>Sample Location</u>	<u>COD, ppm</u>	<u>PHENOL, ppm</u>	<u>COLOR, Units</u>
August 1966	Process waters to lagoon	1,420	230	3,000
	50 yds below lagoon	540	1.9	3,200
	100 yds below lagoon	40	0.008	100
	Plant outfall	30	0.18	50

In December 1966, December 1967 and June 1968, analyses again were made as to qualities of effluent waters and outfall waters, and the following characteristics were observed:

<u>Date</u>	<u>Sample Location</u>	<u>COD, ppm</u>	<u>BOD, ppm</u>	<u>PHENOL, ppm</u>	<u>COLOR, Units</u>
December 7, 1966	Process waters to lagoon	1,750	920	210	320
	100 yds below lagoon	280	70	1.6	280
	Plant outfall	173	35	1.5	105

Good reductions of organics, including phenol, are indicated.

<u>Date</u>	<u>Sample Location</u>	<u>COD,</u> <u>ppm</u>	<u>BOD,</u> <u>ppm</u>	<u>PHENOL,</u> <u>ppm</u>	<u>COLOR,</u> <u>Units</u>
December 15, 1967	Process waters to lagoon	940	350	120	1,040
	100 yds below lagoon	20	1	0.2	40
	Plant oufall	110	15	0.2	70

Additional pick-up of organics in water from yard drainage in operating area is indicated.

June 14, 1968	Process waters to lagoon	1,500	920	140	2,300
	100 yds below lagoon	20	2	0.2	50
	Plant oufall	50	4	0.2	60

Again, some pick-up of organics in water from the operating area is suggested. Quality of discharge water was meeting State standards.

During some of the above test programs, samples of soil were taken from the area receiving irrigated waters. All samples receiving the waters had higher counts of bacteria, molds, etc. than adjacent areas receiving no process waters. Vegetation in the irrigated area has been very lush, thus indicating a minimum of toxic effects.

Starting in 1968, the State in which this plant is located has required rather frequent reporting of BOD and pH of the plant outfall waters. The BOD seldom has been over 20 ppm, and usually less than 10 ppm; phenols have usually been less than 1 ppm. It is believed that the soil percolation mode of operation at this plant has produced a quality of water on leaving the property which would be acceptable by many states.

To generate the effluent discharge quality data for reports being required by the States, BOD information has been obtained by having sample analyses test work performed by a local sewage treating plant operator. This service is usually readily available and the fees are nominal for this type of service. The BOD test requires considerable specialized equipment and is time consuming. It is usually more economical to have this work performed by an outside consultant or by the chemist at a local sewage treatment plant.

I am now privileged to present data which has been developed by Dr. Warren Thompson of Mississippi State University in connection with his studies on the irrigation of effluent waters from a wood preserving plant. If the data are not being interpreted correctly, or if a different phase should be emphasized, I am going to ask that Dr. Thompson or one of his co-workers please stop me and comment.

Soil percolation test columns were set up in the Forest Products Utilization Laboratory using 30-inch diameter columns packed with soil to a depth of 24 inches. Figure 1 shows the quality of outfall waters as to COD and phenols during 18 weeks of the test period at a loading rate of 3,500 gallons/day/acre. COD after 18 weeks was reduced 99+ per cent, to average values of 40 to 60 ppm. Phenols were reduced 96.8 per cent, to values of less than 10 ppm.

The test was continued as shown in Figure 2. After eight additional weeks or 26 weeks of irrigation, a breakthrough occurred on COD values. The decline in treatment efficiency may have been due to a build-up of salts and non-biodegradable organic substances in the soil environment. An outdoor treatment system with leaching effects of rainfall

might be useful for years, particularly if vegetation were maintained and periodic plowing were used to maintain good soil permeability. Phenols removal remained good throughout the full 30-week study at concentrations of less than 5 ppm.

Other soil percolation columns were operated at higher loading rates. Figure 3 shows data when operating at an irrigation rate of 5,250 gallons/day/acre. For the 13-week duration of this test, COD and phenol removal were quite satisfactory.

Figure 4 shows data when operating at a loading rate of 8,750 gallons/day/acre. Breakthrough of COD occurred within four weeks of start-up. Phenol removal remained good throughout the test period of 14 weeks.

I believe this data points up the feasibility of handling wood treating plant effluent waters by this method.

A program was started in June of 1969 by Dr. Thompson and his group on the irrigation of wood treating plant process effluent waters at Koppers Grenada, Mississippi Plant. This was set up on a three-quarter acre plot of ground about 150 ft by 200 ft. The land sloped about 4 ft in length of plot, and there was about an equal length of wooded area before runoff to a creek. The land was planted in Bermuda grass initially, however, a local grass growth took over and this vegetation was maintained on the area during the test period.

Water was irrigated onto the high side of the test area from plant lagoons at the rate of about 3,500 gallons/day/acre, one to three times daily through pipes with 1/8-inch holes bored every three feet.

Samples of percolated effluent were gathered at several sites from the irrigation area. The sample sites were prepared by augering a hole for 3-inch diameter plastic pipes which were inserted to various depths - 1 ft, 2 ft, 3 ft, and 4 ft. A total of 20 sampling sites were made. The pipes were capped on the top and open at the bottom; thus, only water which traveled through the ground would be collected. These sites were located in about four rows, each 50-ft apart on down the slope.

Chemical oxygen demand and phenol concentration data for the wood treating plant wastewater to the irrigation area and of waters gathered at various test sites at the 1-foot and 4-foot depths are as follows:

FROM 1-FOOT DEPTH

<u>DATE</u>	<u>INFLUENT</u>		<u>EFFLUENT</u>	
	<u>PHENOL</u>	<u>COD</u>	<u>PHENOL</u>	<u>COD</u>
June 22	50	1,500	0	258
July 13	-	-	7.7	-
16	127	2,140	0	259
19	-	2,120	0	232
23	262	2,480	19.2	324
30	315	2,200	11.5	323
Aug. 6	339	1,890	0	479
17	477	1,760	0	319
24	461	2,130	0	358
31	769	2,350	7.7	326
Sept. 8	800	2,400	3.8	296
14	739	2,300	11.5	350

FROM 4-FOOT DEPTH

<u>DATE</u>	<u>INFLUENT</u>		<u>EFFLUENT</u>	
	<u>PHENOL</u>	<u>COD</u>	<u>PHENOL</u>	<u>COD</u>
June 22	50	1,500	0	30
26	-	-	0	15
July 2	-	-	3.9	33
23	262	2,480	0	52
30	315	2,200	0	32
Aug. 17	477	1,760	0	173
24	461	2,130	0	43

The effluent water from various sample holes at the 1-foot depth had a COD range of 232 to 479 mg/liter when applying waters containing 1,500 to 2,480 mg/liter. The phenols in the collected effluent waters ranged from 0 to 19.2 mg/liter when applying influent waters with phenols of 50 to 800 mg/liter.

Effluent waters were also sampled from the 4-ft depth. COD values of effluent waters varied from 15 to 173 mg/liter, while the influent waters had COD values of 1,500 to 2,480 mg/liter. At this depth only one sample had detectable phenol level. At some sampling times many sites had no collectable water in the test hole and data could not be obtained.

I want to thank Dr. Thompson and his group for performing these tests on Koppers Grenada Plant effluent waters. After my concluding remarks I would appreciate any other comments and interpretation of the data from the University team that performed the test work, and I want to thank them for allowing me to present their results.

Conclusion

Our company has irrigated process effluent waters at several of its plants. Presently it is in the initial stages of providing irrigation for process effluent waters at several other wood preserving plants. Our experience to date indicates that irrigation of process effluent waters will provide a high degree of treatment for these waters, and this method of effluent treatment is one of the easier methods to operate.

We have studied irrigation and percolation of effluent waters on a variety of soils under several operating methods. There are definite limits as to the rate of application, quality of water being irrigated, type of soil, etc.

Some requirements for irrigation are:

1. Adequate land must be available. Our test work to date indicates limiting application to 2,000 to 4,000 gallons per day per acre.
2. Quality of effluent waters must not damage the soil.
 - a. Discharge or spills of creosote or petroleum oil will make an irrigation area ineffective for long periods of time.
 - b. If waters contain suspension of oils, emulsions or solids, the soil may become clogged and become ineffective. Pre-treatment of these waters may be required so as not to damage the irrigation area.
 - c. The irrigated waters should not contain toxic metals such as copper, chromium, etc. which would kill vegetation and biological life in the soil. Some preliminary tests have indicated that higher levels of metals can be tolerated for irrigation over that used for the activated sludge process. It is believed the metals may oxidize on the surface of the vegetation of the irrigation area and become nearly insoluble.

3. Continuous inundation of the infiltrative surface must be avoided as soil will become septic and odor may develop.
4. Avoid excessive runoff.
5. Vegetative growth is contributive to soil irrigation. Vegetation can provide evapo-transpiration of 0.1 to over 0.5 inches of water per day. Roots of vegetation also tend to keep soil more permeable.
6. A gravel or sand area could allow water to infiltrate to great depths and mix with ground waters before wastes are degraded, thus contaminating underground water.

It is believed that irrigation of process effluent waters from a wood preserving plant may be applicable to several plant sites. Precautions as to irrigation area must be followed so as not to contaminate ground waters. Necessary in-plant operations and possible pretreatment of effluent waters are required to keep irrigated areas from becoming sterile.

C. W. Fisher

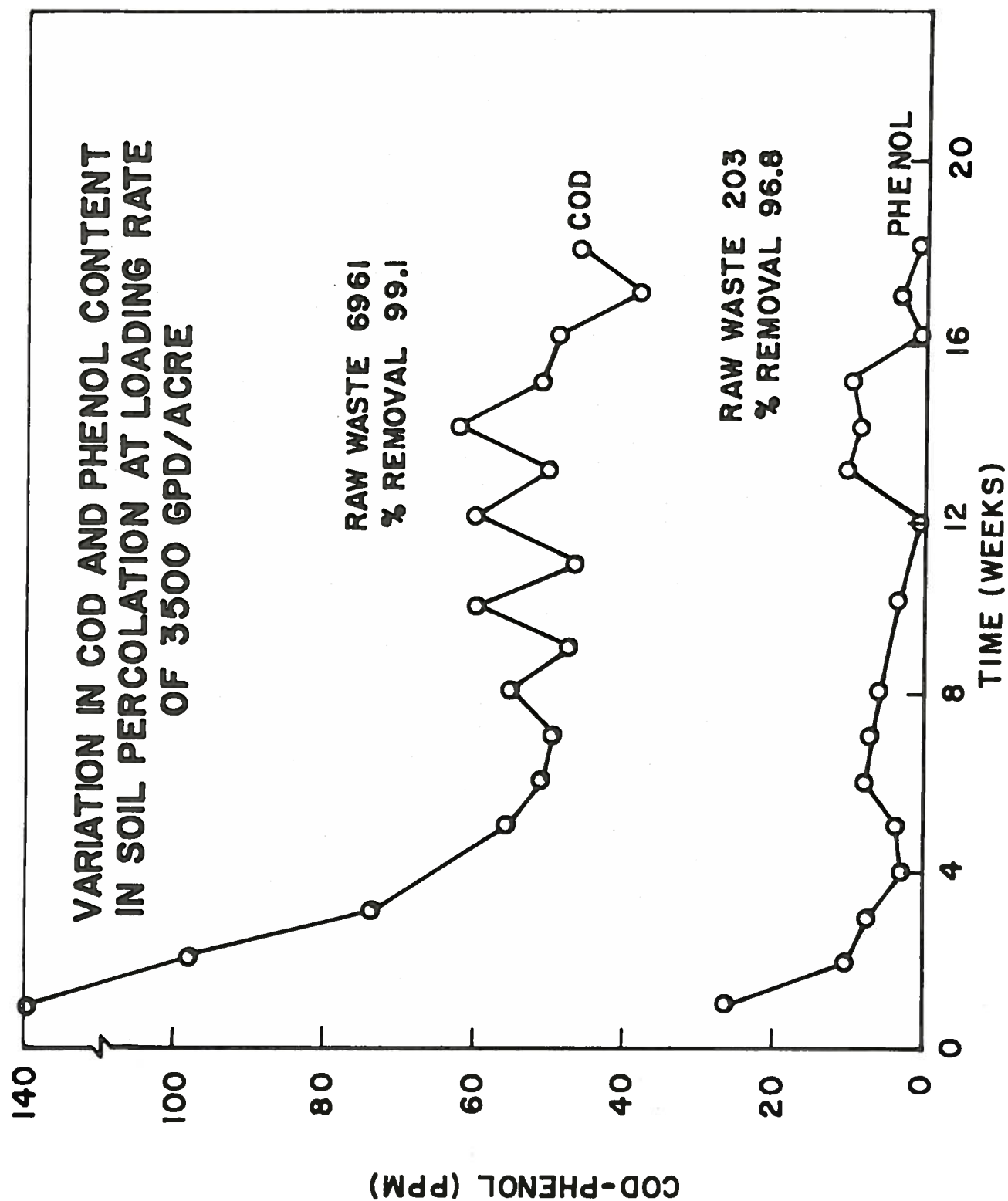


Figure 1

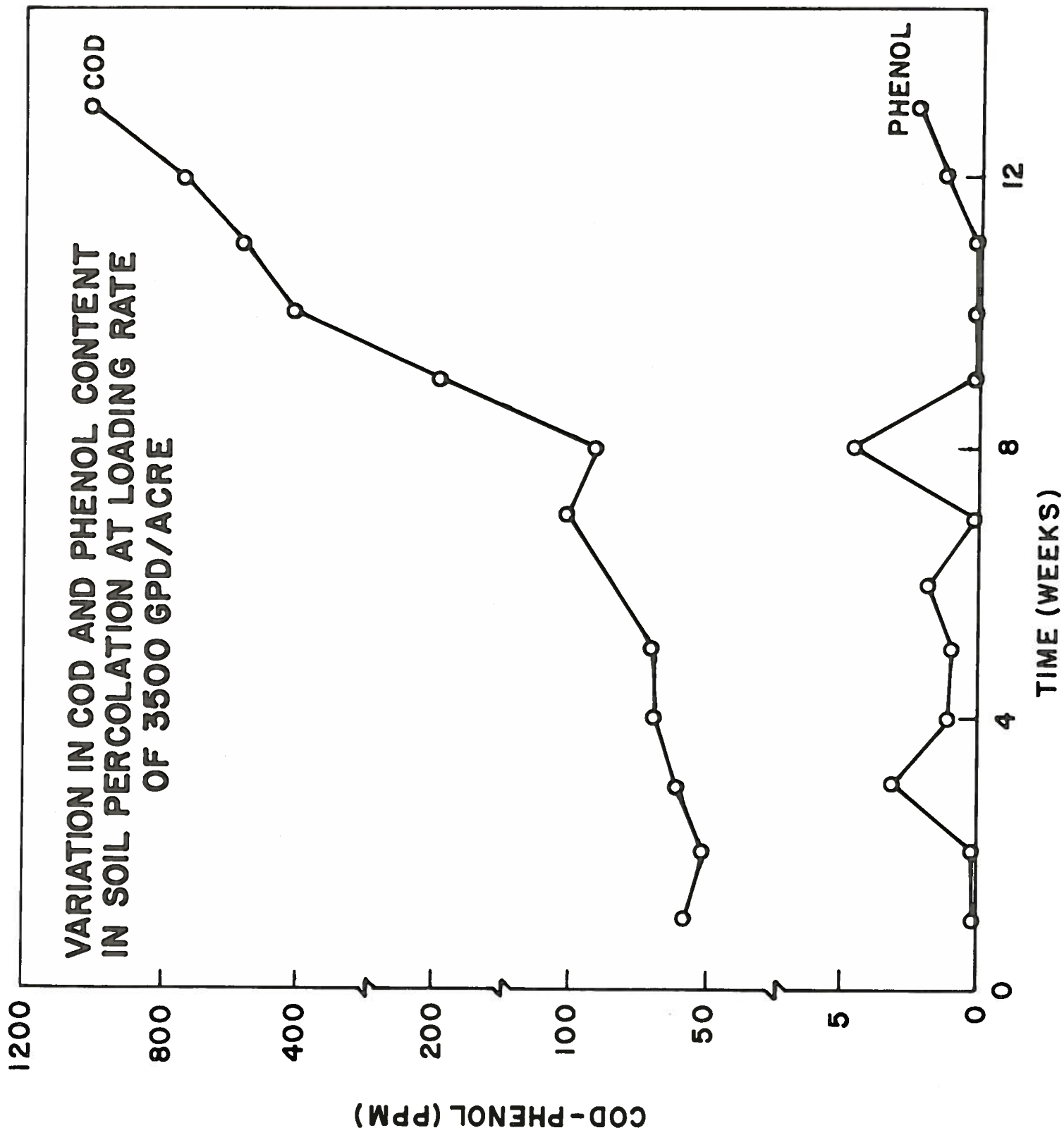


Figure 2

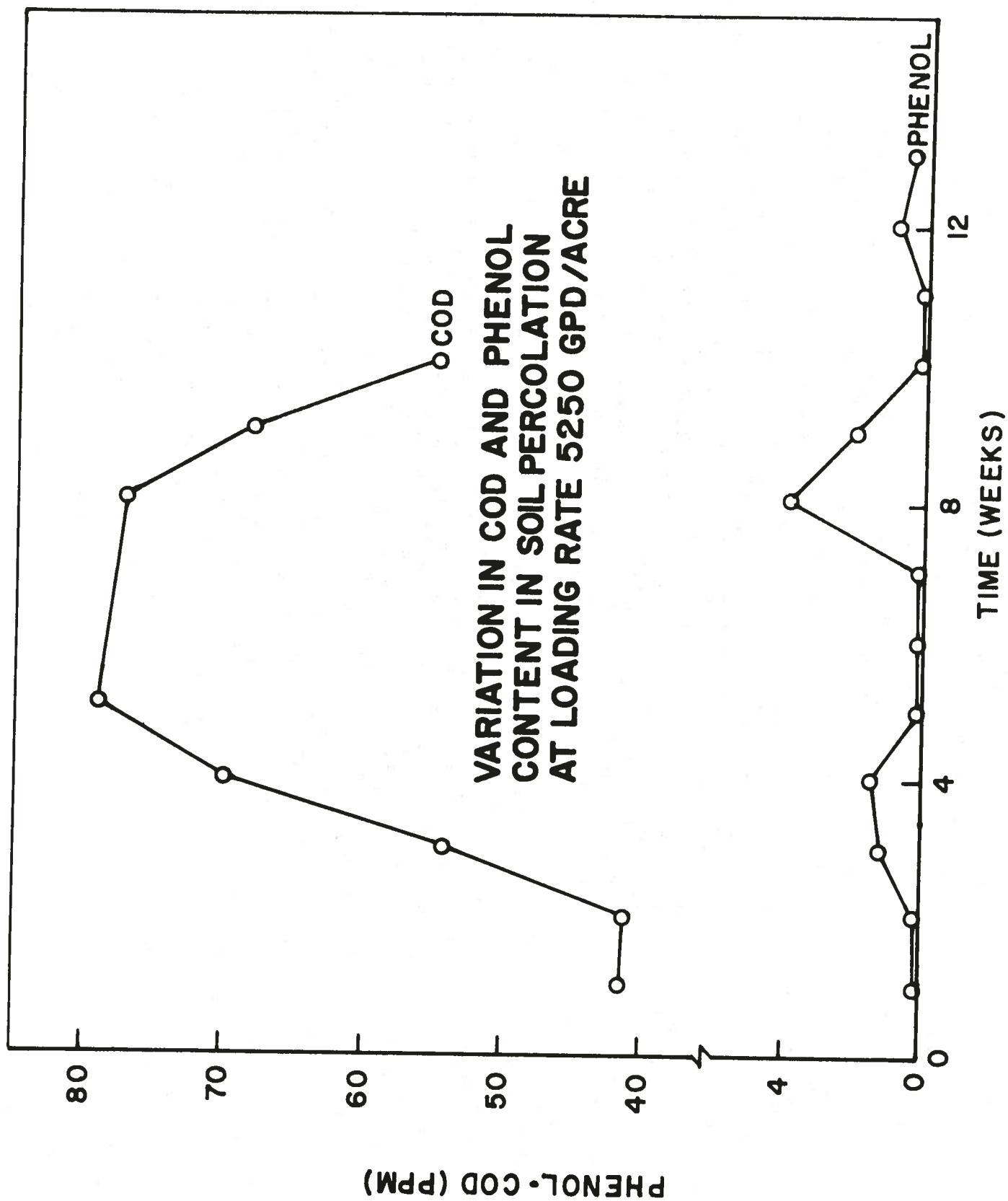


Figure 3

VARIATION IN COD AND PHENOL
CONTENT IN SOIL PERCOLATION
AT LOADING RATE OF
8750 GPD/ACRE

COD - PHENOL (PPM)

PHENOL

1000

600

200

120

40

2

0

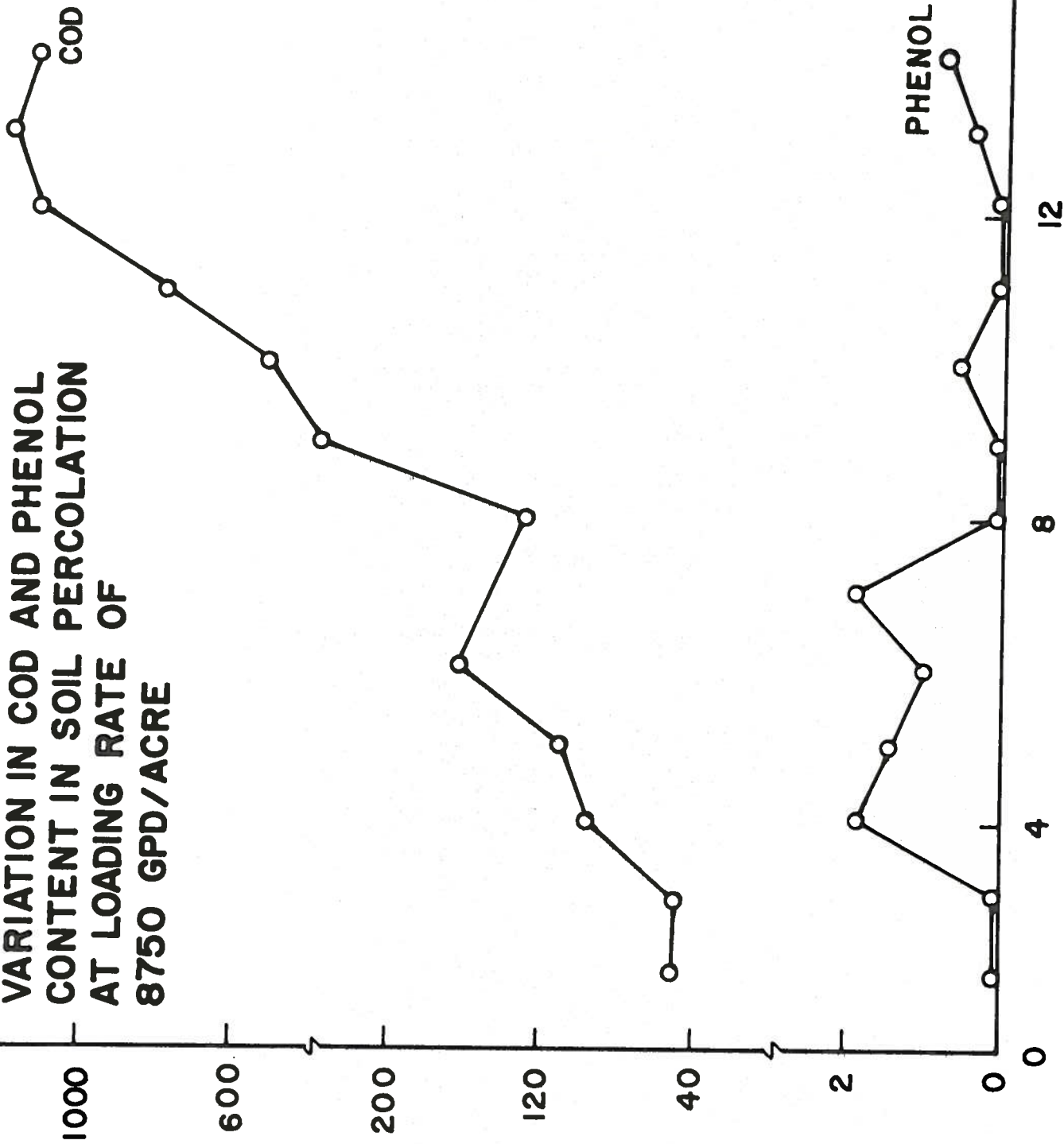
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4

8

12

TIME (WEEKS)



**State of Mississippi
Air and Water Pollution Control Commission**

**TOLERANCE
PERMIT**

**To Operate a Waste Disposal System
This Certifies That**

**KOPPERS COMPANY, INC.
Grenada, Mississippi**

has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein, prior to discharging the waste into—
Bogue Creek

Operation of such a facility shall be in accordance with the provisions of the Mississippi Air and Water Pollution Control Act, (Mississippi Laws, 1966, ch. 258) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Air and Water Pollution Control Commission. The plans, specifications and other data submitted to the Commission are filed with and considered as a part of this permit.

Issued this 19th day of MARCH, 19 71.

AIR AND WATER POLLUTION CONTROL COMMISSION

Glen Wood, Jr.

Executive Secretary

Expires 31st day of JULY, 19 71.

Tolerance Permit No. 000120

**State of Mississippi
Air and Water Pollution Control Commission**

**TOLERANCE
PERMIT**

**To Operate a Waste Disposal System
This Certifies That**

**KOPPERS, COMPANY, INC.
Grenada, Mississippi**

has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein, prior to discharging the waste into—

Bogue Creek

Operation of such a facility shall be in accordance with the provisions of the Mississippi Air and Water Pollution Control Act, (Mississippi Laws, 1966, ch. 258) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Air and Water Pollution Control Commission. The plans, specifications and other data submitted to the Commission are filed with and considered as a part of this permit.

Issued this 30th day of August, 19 71.

AIR AND WATER POLLUTION CONTROL COMMISSION

Glen Wood, Jr.

Executive Secretary

Expires 31st day of March, 19 72.

Tolerance Permit No.

000120

State of Mississippi
Air and Water Pollution Control Commission

PERMIT

To Operate a Waste Disposal System
This Certifies That

KOPPERS COMPANY, INC.
Tie Plant, Mississippi

has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein, prior to discharging the waste into____
"Soil Irrigation Fields"

Operation of such a facility shall be in accordance with the provisions of the Mississippi Air and Water Pollution Control Act, (Mississippi Laws, 1966, ch. 258) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Air and Water Pollution Control Commission. The plans, specifications and other data submitted to the Commission are filed with and considered as a part of this permit.

The Mississippi Air and Water Pollution Control Commission reserves the right to withdraw this permit, after due notice, if it is found that additional treatment or alterations are necessary to prevent pollution of the waters of the state as defined in the Mississippi Air and Water Pollution Control Act, (Mississippi Laws, 1966, ch. 258) and the regulations or standards adopted and promulgated thereunder.

Issued this 1st day of MAY, 1972.

AIR AND WATER POLLUTION CONTROL COMMISSION

Glen Wood, Jr.

Executive Secretary

001519

**State of Mississippi
Air and Water Pollution Control Commission**

**TOLERANCE
PERMIT**

**To Operate a Waste Disposal System
This Certifies That**

KOPPERS COMPANY, INC.

has been granted permission to operate a waste disposal system for the collection and treatment of the wastewater generated therein, prior to discharging the waste into—
BOGUE CREEK

Operation of such a facility shall be in accordance with the provisions of the Mississippi Air and Water Pollution Control Act, (Mississippi Laws, 1966, ch. 258) and the rules adopted and promulgated thereunder, or this permit may be revoked by the Mississippi Air and Water Pollution Control Commission. The plans, specifications and other data submitted to the Commission are filed with and considered as a part of this permit.

Issued this 22ND day of JANUARY, 1969.

AIR AND WATER POLLUTION CONTROL COMMISSION

Robert A. Wright
Executive Secretary

Expires 31ST day of JULY, 1969.

Tolerance Permit No. 000120