GRENADA COUNTY - TIE PLANT MS
KOPPERS INC
0960-00012
1986------1994

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

Mississippi Department of Environmental Quality
Office of Pollution Control

I-sys 2000 Master Site Detail Report

Site Name: Koppers Industries Inc

PHYSICAL ADDRESS		OTHER INFORMATION	
LINE 1:	Tie Plant Road	MASTER ID:	000876
LINE 2:		COUNTY:	Grenada
LINE 3:		REGION	NRO
MUNICIPALITY:	Tie Plant	SIC 1:	2491
STATE CODE:	MS	AIR TYPE:	TITLE V
ZIP CODE:	38960-	HW TYPE:	TSD
		SOLID TYPE:	
MAILING ADDRESS		WATER TYPE:	INDUSTRIAL
LINE 1:	PO Box 160	BRANCH:	Energy
LINE 2:		ECED CONTACT:	
LINE 3:		Collier, Melissa	
MUNICIPALITY:	Tie Plant	BASIN:	
STATE CODE:	MS		
ZIP CODE:	38960-		

AIR PROGRAMS ☑ SIP ☐ PSD ☐ NSPS ☐ NESHAPS ☐ MACT

Mississippi Department of Environmental Quality
Office of Pollution Control

Pemits

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 B
HAZ WASTE	Financial Record Review	1/18/00	1/18/00	Twitty, Russ
WATER	CMI - PRETREATMENT			Whittington, Darryail
WATER	CEI - PRETREATMENT	9/30/00		Twitty, Russ
WATER	CEI - NA	9/30/00		Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	9/30/00		Twitty, Russ
AIR	State Compliance Inspection	9/30/00		Twitty, Russ
WATER	CEI - NA	3/2/99	3/2/99	Twitty, Russ
HAZ WASTE	Compliance Evaluation Inspection	3/2/99	3/2/99	Twitty, Russ
AIR	State Compliance Inspection	3/2/99	3/2/99	Twitty, Russ

Grenada

DWW

INSPECTION REPORT FORM - GENERAL

Facility Name: KOPPERS CO., INC. Date: 4/8/88

Address: P.O. BOX 160

HIGHWAY 51

GRENADA, MS GRENADA COUNTY

Inspected By: STANLEY WATKINS AND RANDY BYARS

Person Contacted: J.D. CLAYTON

Facility No: 130-0960-00012

Is facility major or minor?

Purpose of Inspection:

( )	Compliance Verification	( )	O&M
( )	Performance Evaluation	(X)	VEE
( )	Complaint Investigation	( )	Annual
( )	Surveillance	( )	Follow-up
( )	Other (Explain):		

Current Permit Status: OPERATING PERMIT EXPIRES DEC. 1st, 1988

Source Description: PRESSURE TREATING OF CROSS TIES

Applicable Regulations:

( ) SIP
( ) PSD
( ) NSPS
( ) NESHAPS

Cite regulation by description or regulatory section number:

State any permit conditions not being complied with and describe noncompliance:

DURING THE THIRD SET OF THE VEE, THE READINGS WENT UP SHARPLY SO ANOTHER THREE SETS WERE READ. THE READINGS REMAINED HIGH FOR ANOTHER SET AND THEN DROPPED BACK DOWN. MR. CLAYTON SAID THAT THE STEAM DEMAND HAD WENT UP AND TOO MUCH FUEL WAS FED INTO THE BOILER. THEY WERE BURNING FROM 250 - 400 POUNDS OF PENTA SLUDGE WITH ~~WITH~~ THEIR WOODWASTE AT THIS TIME.

INSPECTION REPORT FORM - BOILERS

Facility Name: KOPPERS INC. **Date:** 4/8/88

Emission Point No./Name: WOODWASTE BOILER

Rated Boiler Size: _____ MMBTUH
OR
30,000 lbs steam/hr @ 180 psig

Operating Rate @ Insp: _____ MMBTUH
OR
28,000 lbs steam/hr @ 150 psig

Fuel(s) Being Used:
( ) Natural Gas @ _____ MCFH
( ) Fuel Oil, No. _____ @ _____ Gal/hr
( ) Coal @ _____ tons/hr; _____ type; _____% ash; _____% sulfur
(X) Woodwaste: (x) Sawdust @ _____ tons/hr
(x) Shavings @ _____ tons/hr
(x) Hogged Fuel @ _____ tons/hr
(x) Bark @ _____ tons/hr

5 TONS HI

(X) **Other Fuels, Explain:** PENTA SLUDGE - 250- 400 POUNDS PER HOUR

For Solid Fuels, Describe Fuel Stoking Method: SCREW CONVEYOR

Soot Blowing: ( ) Periodic (X) Manual
( ) Contimuous ( ) Automatic

Schedule: ONCE A DAY

Air Pollution Controls: (X) None ( ) Baghouse
( ) Cyclone ( ) ESP
( ) Multiclone
( ) Scrubber (For Particulate)

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity _____% By (X) VEE ( ) CEM
Sulfur Dioxide _____ lbs/MMBTU by CEM
Nitrogen Oxides _____ lbs/MMBTU by CEM

SET 1 11.6%
2 20.4%
3 32.7%

SET 1 73.9%
2 11.4%
3 13.1%

Mississippi Department of Natural Resources
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koppers

V. E. Observer: Randy Byars

Address:

Certification Expiration: April 88

City: Grenada

Emission Point: Boiler

Date: 4/8/88

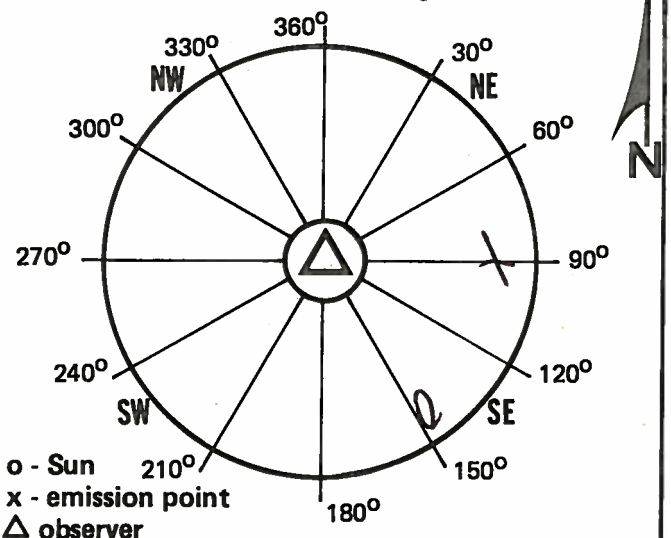
Is emission point operation normal ? yes

Set No.	Time		Opacity	
	Start	End	Sum	Average
	10:40	10:46	280	11.6
	10:47	10:53	490	20.4
	10:54	11:00	785	32.7

	Initial	Final
Distance to discharge	250	250
Height of observation point	Ground	Ground
Height of discharge	40	40
Plume color	Brown	Brown
Plume background	Sky	Sky
Water vapor in plume ?	No	No
Wind direction (from)	North	North
Wind speed	3 to 5	3 to 5
Ambient temperature	65	65
Discharge temperature		
Sky conditions	clear	clear

	Seconds			
Min.	0	15	30	45
0	15	15	15	15
1	10	10	10	10
2	10	10	10	10
3	15	15	15	15
4	10	10	10	10
5	10	10	10	10
0	10	10	10	10
1	15	15	15	15
2	10	15	15	10
3	40	40	40	40
4	35	35	35	35
5	10	10	10	10
0	10	10	10	10
1	10	10	10	10
2	15	10	15	10
3	45	50	45	45
4	40	55	65	70
5	70	70	30	70

Diagram Of Observation/Discharge Point



Remarks:

Received By: J. D. Parker

M[illegible]sippi Department of Natural Resources
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koffers

Address:

City: Grenada

Emission Point: Boiler

Date: 4/8/88

Is emission point operation normal ? yes

V. E. Observer: Rudy Byars

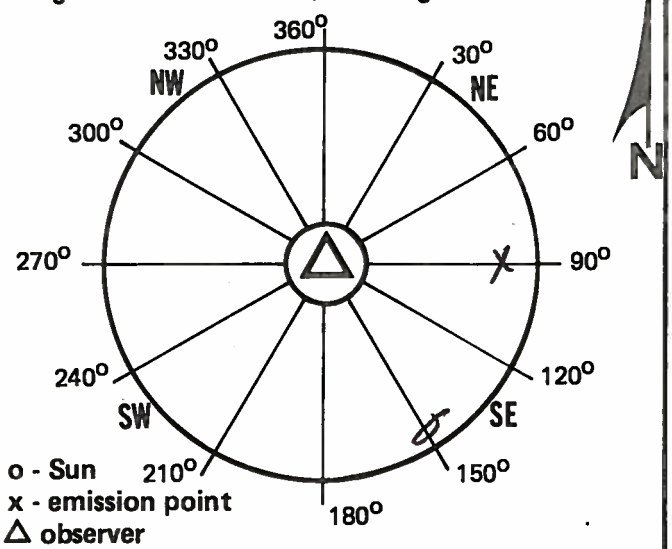
Certification Expiration: April 88

Set No.	Time Start	Time End	Opacity Sum	Opacity Average
	11:04	11:10	1775	73.9 %
	11:11	11:17	275	11.4 %
	11:18	11:24	315	13.1 %

	Initial	Final
Distance to discharge	250'	250'
Height of observation point	Ground	Ground
Height of discharge	40'	40'
Plume color	Black	Black
Plume background	Sky	Sky
Water vapor in plume ?	No	No
Wind direction (from)	~~3 105~~ North	~~3 105~~ North
Wind speed	3 to 5	3 to 5
Ambient temperature	65°	65°
Discharge temperature		
Sky conditions	Clear	Clear

Min.	Seconds 0	15	30	45
0	90	95	95	85
1	90	90	80	70
2	70	70	90	90
3	90	70	90	80
4	70	70	95	75
5	70	20	15	15
0	10	10	15	10
1	10	10	10	15
2	10	10	15	15
3	15	10	15	15
4	15	10	15	10
5	10	10	10	15
0	15	15	15	15
1	15	10	10	15
2	10	15	15	10
3	10	15	10	10
4	15	15	10	10
5	15	15	15	15

Diagram Of Observation/Discharge Point



Remarks:

Received By: J. D. Clayton

INSPECTION REPORT FORM - GENERAL

Facility Name: KOPPERS CO., INC. Date: 1/14/88

Address: P.O. BOX 160
HIGHWAY 51
GRENADA, MS GRENADA COUNTY

Inspected By: RANDY WOLFE

Person Contacted: J.D. CLAYTON

Facility No: 130-0960-00012

Is facility major or minor? ______

Purpose of Inspection:

( ) Compliance Verification
( ) Performance Evaluation
( ) Complaint Investigation
( ) Surveillance
( ) Other (Explain): ______

( ) O&M
(X) VEE
( ) Annual
( ) Follow-up

Current Permit Status: OPERATING PERMIT EXPIRES DE. 1st, 1988

Source Description: PRESSURE TREATING OF CROSS TIES

Applicable Regulations:

( ) SIP
( ) PSD
( ) NSPS
( ) NESHAPS

Cite regulation by description or regulatory section number: ______

State any permit conditions not being complied with and describe noncompliance:

INSPECTION REPORT FORM - BOILERS

Facility Name: KOPPERS INC. Date: 1/14/88

Emission Point No./Name: WOODWASTE BOILER

Rated Boiler Size: _____ MMBTUH
OR
30,000 lbs steam/hr @ 180 psig

Operating Rate @ Insp: _____ MMBTUH
OR
42,000 lbs steam/hr @ 140 psig

Fuel(s) Being Used:
( ) Natural Gas @ _____ MCFH
( ) Fuel Oil, No. _____ @ _____ Gal/hr
( ) Coal @ _____ tons/hr; _____ type; _____ % ash; _____ % sulfur
(X) Woodwaste: (X) Sawdust @ _____ tons/hr
(X) Shavings @ _____ tons/hr } 100/DAY
(X) Hogged Fuel @ _____ tons/hr
(X) Bark @ _____ tons/hr

(X) Other Fuels, Explain: 400 LB/DAY CREOSOTE

For Solid Fuels, Describe Fuel Stoking Method: _____

Soot Blowing: ( ) Periodic (X) Manual
( ) Continuous ( ) Automatic

Schedule: ONE A DAY

Air Pollution Controls: (X) None ( ) Baghouse
( ) Cyclone ( ) ESP
( ) Multiclone
( ) Scrubber (For Particulate)

Complete Appropriate Control Device Sheets

Stack Emissions: Opacity _____ % By (X) VEE ( ) CEM
Sulfur Dioxide _____ lbs/MMBTU by CEM
Nitrogen Oxides _____ lbs/MMBTU by CEM

SET 1. 6.25%
2. 6.25%
3. 7.08%

[redacted]issippi Department of Natural Resou[redacted]
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koppers

Address:

City: Grenada, Ms

Emission Point: Boiler

Date: 1-14-88

Is emission point operation normal ? yes

V. E. Observer: Randy Wolfe

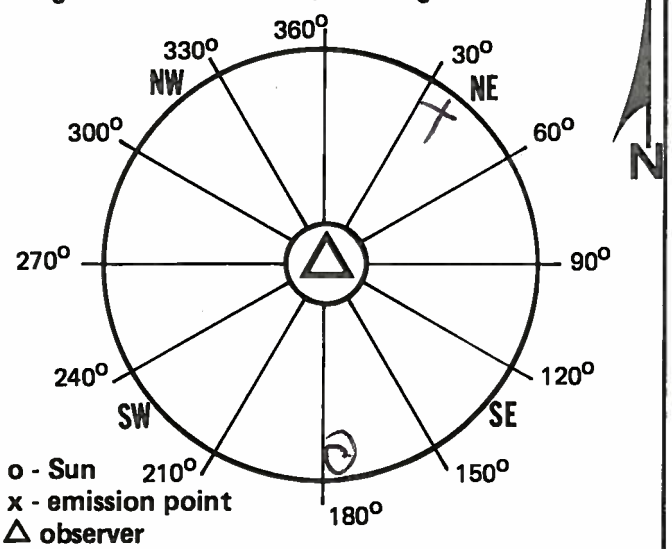
Certification Expiration: April '88'

Set No.	Time		Opacity	
	Start	End	Sum	Average
1	12:10	12:16	150	6.25%
2	12:16	12:24	150	6.25%
3	12:24	12:30	170	7.08%

	Initial	Final
Distance to discharge	300'	"
Height of observation point	0'	"
Height of discharge	30'	"
Plume color	gray	"
Plume background	Sky	"
Water vapor in plume ?	—	"
Wind direction (from)	W-SW	"
Wind speed	3-5	"
Ambient temperature	30	"
Discharge temperature	—	"
Sky conditions	P.C.	"

	Seconds			
Min.	0	15	30	45
0	5	5	5	5
1	5	10	10	10
2	5	5	5	5
3	5	5	10	10
4	10	5	5	5
5	5	5	5	5
0	5	5	5	10
1	10	10	5	5
2	5	5	5	10
3	5	5	5	5
4	5	5	10	10
5	10	5	5	5
0	5	5	5	5
1	5	5	5	5
2	10	10	10	10
3	5	5	5	5
4	5	5	10	10
5	10	10	10	10

Diagram Of Observation/Discharge Point



Remarks:

Received By: E. D. Clayton

DAN

Grenade DWW

DATA CODED

INSPECTION REPORT FORM - GENERAL

Facility Name: KOPPERS CO., INC. Date: 4/2/87

Address: P.O. BOX 160

HIGHWAY 51, GRENADA, MS

GRENADA COUNTY

APR 1987 RECEIVED

Inspected By: STANLEY WATKINS/RANDY BYARS

Person Contacted: J. D. CLAYTON

Facility No: 130-0960-00012

Is facility major or minor? _____

Purpose of Inspection:

( ) Compliance Verification
( ) Performance Evaluation
( ) Complaint Investigation
( ) Surveillance
( ) Other (Explain): _____

(X) O&M
(X) VEE
( ) Annual
( ) Follow-up

Current Permit Status: OPERATING PERMIT EXPIRES DEC. 1st, 1988

Source Description: PRESSURE TREATING OF CROSS TIES.

Applicable Regulations:

( ) SIP
( ) PSD
( ) NSPS
( ) NESHAPS

Cite regulation by description or regulatory section number: _____

State any permit conditions not being complied with and describe noncompliance:

INSPECTION REPORT FORM - BOILERS

Facility Name: KOPPERS INC. Date: 4/2/87

Emission Point No./Name: WOODWASTE BOILER

Rated Boiler Size: _____ MMBTUH
OR
30,000 lbs steam/hr @ 180 psig

Operating Rate @ Insp: _____ MMBTUH
OR
29000 lbs steam/hr @ 140 psig

Fuel(s) Being Used:
( ) Natural Gas @ _____ MCFH
( ) Fuel Oil, No. _____ @ _____ Gal/hr
( ) Coal @ _____ tons/hr; _____ type; _____% ash; _____% sulfur
(x) Woodwaste: (x) Sawdust @ _____ tons/hr
(x) Shavings @ _____ tons/hr
(x) Hogged Fuel @ _____ tons/hr
(x) Bark @ _____ tons/hr

(*) Other Fuels, Explain: _____

For Solid Fuels, Describe Fuel Stoking Method: _____

Soot Blowing: ( ) Periodic (X) Manual
( ) Continuous ( ) Automatic

Schedule: ONCE A DAY

Air Pollution Controls: (X) None ( ) Baghouse
( ) Cyclone ( ) ESP
( ) Multiclone
( ) Scrubber (For Particulate)
Complete Appropriate Control Device Sheets

Stack Emissions: Opacity _____% By (X) VEE ( ) CEM
Sulfur Dioxide _____ lbs/MMBTU by CEM
Nitrogen Oxides _____ lbs/MMBTU by CEM

SET 1	14.4%
2	15.2%
3	14.4%

* THEY WERE NOT BURNING ANY CREOSOTE SLUDGE OR PENTA AT THIS TIME BECAUSE THE CONVEYOR BELT FEEDING THE SLUDGE WAS BROKEN DOWN.

Mississippi Department of Natural Resources
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koppers

Address:

City: Grenada

Emission Point: woodwaste boiler

Date: 4-2-87

Is emission point operation normal ? yes

V. E. Observer: Stanley Watkins

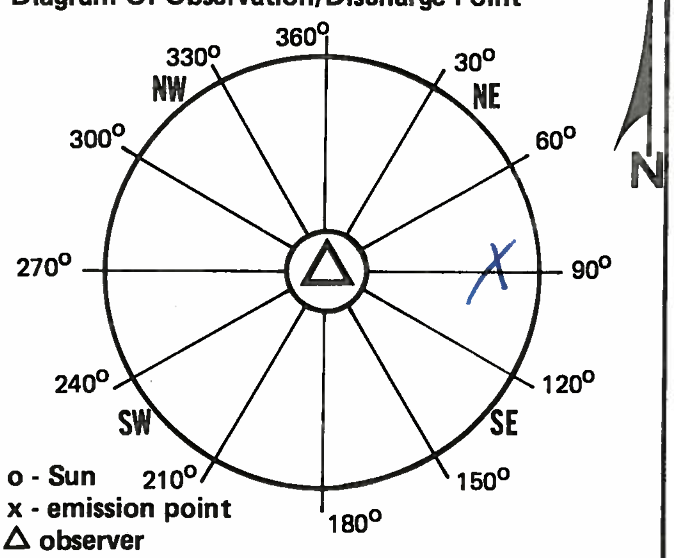
Certification Expiration: April 87

Set No.	Time Start	Time End	Opacity Sum	Opacity Average
1	1:05	1:11	345	14.4%
2	1:12	1:18	365	15.2%
3	1:19	1:25	345	14.4%

	Initial	Final
Distance to discharge	200	same
Height of observation point	ground	"
Height of discharge	35'	"
Plume color	gray	"
Plume background	sky	"
Water vapor in plume ?	no	"
Wind direction (from)	NE	"
Wind speed	8-12	"
Ambient temperature	50°	"
Discharge temperature	320°	"
Sky conditions	cloudy	"

Min.	Seconds 0	15	30	45
0	15	15	15	15
1	15	10	10	15
2	15	15	15	15
3	15	15	15	15
4	15	15	15	15
5	15	15	10	15
0	15	15	15	15
1	15	15	15	15
2	20	20	15	15
3	15	15	15	15
4	15	15	15	15
5	15	10	15	15
0	15	15	15	15
1	15	15	15	15
2	15	10	10	15
3	15	15	15	15
4	10	15	15	15
5	15	15	15	15

Diagram Of Observation/Discharge Point



Remarks: The opacity monitor was reading 14%.

Received By: [signature]

DAW

Grenada

DNW

DATA CODED

INSPECTION REPORT FORM - GENERAL

Facility Name: KOPPERS CO., INC . **Date:** 1/9/87

Address: P.O. BOX 160

HIGHWAY 51

GRENADA, MS GRENADA COUNTY

JAN 1987 RECEIVED

Inspected By: STANLEY WATKINS AND RANDY BYARS

Person Contacted: J. D. CLAYTON

Facility No: 130-0960-00012

Is facility major or minor? _____

Purpose of Inspection:

( ) Compliance Verification	(x) O&M
( ) Performance Evaluation	(x) VEE
( ) Complaint Investigation	( ) Annual
( ) Surveillance	( ) Follow-up
( ) Other (Explain): _____	

Current Permit Status: OPERATING PERMIT EXPIRES DECEMBER 1st, 1988

Source Description: PRESSURE TREATING OF CROSS TIES

Applicable Regulations:

(X) SIP
( ) PSD
( ) NSPS
( ) NESHAPS

Cite regulation by description or regulatory section number: _____

State any permit conditions not being complied with and describe noncompliance:

INSPECTION REPORT FORM - BOILERS

Facility Name: KOPPERS CO., INC. Date: 1/9/87

Emission Point No./Name: WOODWASTE BOILER

Rated Boiler Size: _____ MMBTUH
OR
30,000 lbs steam/hr @ 180 psig

Operating Rate @ Insp: _____ MMBTUH
OR
_____ lbs steam/hr @ 125 psig

Fuel(s) Being Used:
( ) Natural Gas @ _____ MCFH
( ) Fuel Oil, No. _____ @ _____ Gal/hr
( ) Coal @ _____ tons/hr; _____ type; _____% ash; _____% sulfur
(x) Woodwaste: (x) Sawdust @ _____ tons/hr
(x) Shavings @ _____ tons/hr 2.5 TONS HR.
(x) Hogged Fuel @ _____ tons/hr
(x) Bark @ _____ tons/hr

(X) Other Fuels, Explain: 300 LBS PER HOUR OF CREOSOTE SLUDGE

For Solid Fuels, Describe Fuel Stoking Method:

SCREW CONVEYOR

Soot Blowing: ( ) Periodic (X) Manual
( ) Continuous ( ) Automatic

Schedule: ONCE A DAY

Air Pollution Controls: (X) None ( ) Baghouse
( ) Cyclone ( ) ESP
( ) Multiclone
( ) Scrubber (For Particulate)
Complete Appropriate Control Device Sheets

Stack Emissions: Opacity _____% By (X) VEE ( ) CEM
Sulfur Dioxide _____ lbs/MMBTU by CEM
Nitrogen Oxides _____ lbs/MMBTU by CEM

SET 1 5.4%
2 5 %
3 5.6%

ssissippi Department of Natural Resou
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koppers Co. Inc.
Address:
City: Tie Plant
Emission Point: Scrubber
Date: 1-9-87

V. E. Observer: Stanley Watkins
Certification Expiration: April 87

Set No.	Time		Opacity	
	Start	End	Sum	Average
1	10:40	10:46	130	5.4
2	10:47	10:53	120	5
3	10:54	11:00	135	5.6

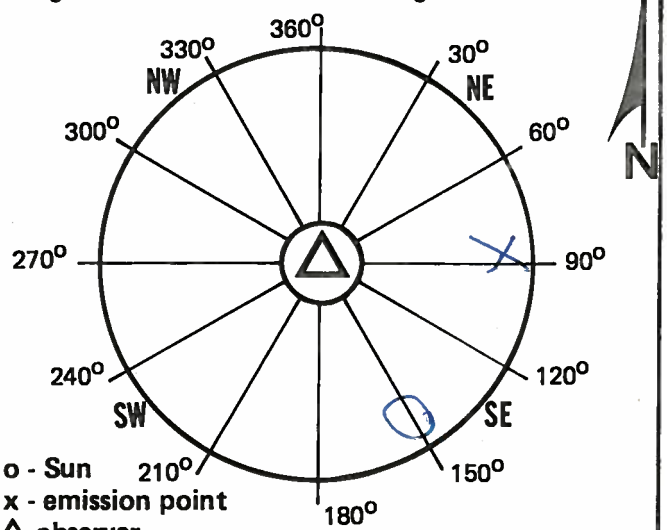
Is emission point operation normal ?

	Initial	Final
Distance to discharge	150'	same

Height of observation point	Ground	"
Height of discharge	40'	"
Plume color	Gray	"
Plume background	sky	"
Water vapor in plume ?	no	"
Wind direction (from)	S	"
Wind speed	10-15	"
Ambient temperature	45°	"
Discharge temperature	370°	"
Sky conditions	cloudy	"

Min.	Seconds 0	15	30	45
0	5	5	5	5
1	5	5	5	5
2	5	5	5	5
3	5	10	10	5
4	5	5	5	5
5	5	5	5	5
0	5	5	5	5
1	5	5	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	5	5
0	5	5	5	5
1	10	10	5	5
2	5	5	5	5
3	5	5	5	5
4	5	5	5	5
5	5	5	10	5

Diagram Of Observation/Discharge Point



Remarks:

Received By: J. D. Clayton

INSPECTION REPORT FORM - GENERAL

Facility Name: KOPPERS COMPANY, INC. Date: 3/5/86

Address: P.O. BOX 160

HIGHWAY 51

GRENADA, MS GRENADA COUNTY

Inspected By: STANLEY WATKINS/RANDY WOLFE

Person Contacted: J.D. CLAYTON

Facility No: 130-0960-00012

Is facility major or minor? _____

Purpose of Inspection:

( ) Compliance Verification
( ) Performance Evaluation
( ) Complaint Investigation
( ) Surveillance
( ) Other (Explain): _____

( ) O&M
(X) VEE
( ) Annual
( ) Follow-up

Current Permit Status: OPERATING PERMIT EXPIRES DECEMBER 1st, 1988.

Source Description: PRESSURE TREATING OF CROSS TIES

Applicable Regulations:

( ) SIP
( ) PSD
( ) NSPS
( ) NESHAPS

Cite regulation by description or regulatory section number: _____

State any permit conditions not being complied with and describe noncompliance:

INSPECTION REPORT FORM - BOILERS

Facility Name: KIPPER'S COMPANY, INC. Date: 3/5/86

Emission Point No./Name: WOODWASTE BOILER

Rated Boiler Size: _____ MMBTUH
OR
30000 lbs steam/hr @ 180 psig

Operating Rate @ Insp: _____ MMBTUH
OR
25000 lbs steam/hr @ 150 psig

Fuel(s) Being Used:
( ) Natural Gas @ _____ MCFH
( ) Fuel Oil, No. _____ @ _____ Gal/hr
( ) Coal @ _____ tons/hr; _____ type; _____% ash; _____% sulfur
(X) Woodwaste: (X) Sawdust @ _____ tons/hr
(X) Shavings @ _____ tons/hr
(X) Hogged Fuel @ _____ tons/hr 3.3 tons/hr
(X) Bark @ _____ tons/hr

(X) Other Fuels, Explain: 400 LBS PER HOUR OF CREOSOTE SLUDGE

For Solid Fuels, Describe Fuel Stoking Method: _____

Soot Blowing: ( ) Periodic (X) Manual
( ) Continuous ( ) Automatic

Schedule: ONCE A DAY

Air Pollution Controls: (X) None ( ) Baghouse
( ) Cyclone ( ) ESP
( ) Multiclone
( ) Scrubber (For Particulate)
Complete Appropriate Control Device Sheets

Stack Emissions: Opacity _____% By (x) VEE ( ) CEM
Sulfur Dioxide _____ lbs/MMBTU by CEM
Nitrogen Oxides _____ lbs/MMBTU by CEM

SET 1 9.6%
2 6.5%
3 8.5%

ssippi Department of Natural Resources
Bureau of Pollution Control
Visible Emissions Evaluation Record

Plant Name: Koppers

Address:

City: Grenada

Emission Point: Treater

Date: 3-5-86

Is emission point operation normal ? yes

V. E. Observer: Stanley Watkins

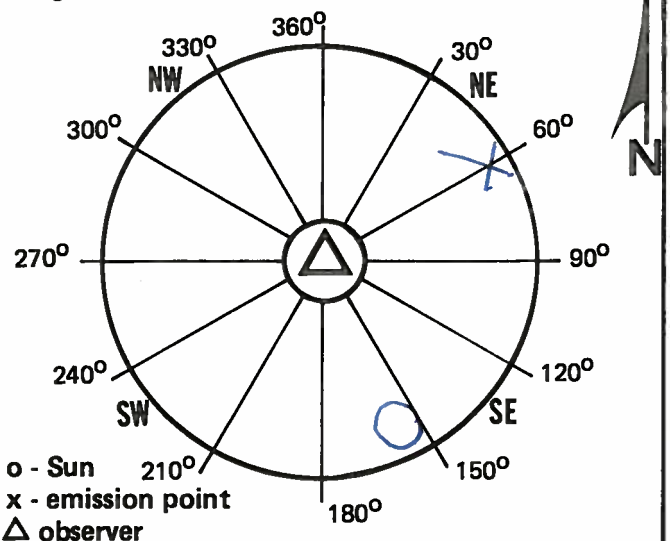
Certification Expiration: April 86

Set No.	Time		Opacity	
	Start	End	Sum	Average
1	10:50	10:56	230	9.6 E
2	10:57	11:03	155	6.5 E
3	11:04	11:10	205	8.5 E

	Initial	Final
Distance to discharge	100'	same
Height of observation point	ground	"
Height of discharge	40'	"
Plume color	white	"
Plume background	sky	"
Water vapor in plume ?	no	"
Wind direction (from)	S	"
Wind speed	5-8	"
Ambient temperature	52°	"
Discharge temperature	400°	"
Sky conditions	clear	"

	Seconds			
Min.	0	15	30	45
0	10	10	10	10
1	10	10	10	10
2	10	10	10	10
3	10	5	5	10
4	10	10	10	10
5	10	10	10	10
0	10	10	5	5
1	5	5	5	5
2	5	5	10	10
3	10	10	10	5
4	5	5	5	5
5	5	5	5	5
0	5	5	5	5
1	10	10	5	5
2	5	10	10	10
3	10	10	10	10
4	10	10	10	10
5	10	10	10	10

Diagram Of Observation/Discharge Point



Remarks:

Received By: J. D. Clayton

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

FILE COPY

October 6, 1994

Mr. Dan Arnold
International Paper
P. O. Box 5550
Moss Point, MS 39563-1550

Dear Mr. Arnold:

Re: Koppers Industries, Inc.
Facility No. 0960-00012

Pursuant to your request, please find enclosed copies of the draft permits, application form, and additional information for the referenced facility.

Also, enclosed is a bill for the copies made. If you have any questions, please contact me.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:vt
Enclosures

10-06-94.1

September 27, 1994

FILE COPY

Mr. Stephen Smith
Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219

Dear Mr. Smith:

Re: Facility No. 0960-00012
Synthetic Minor Operating Permit Program

As of our latest review, your current file indicates that your facility will be required to hold a Title V Operating Permit. This letter is to address the requirements and conditions of the Synthetic Minor Operating Permit Program for potential Title V facilities. After revisions to the State Implementation Plan (SIP) are approved by the United States Environmental Protection Agency (EPA), the Mississippi Department of Environmental Quality (DEQ) will have the authority to issue Synthetic Minor Operating Permits.

In order to receive a Synthetic Minor Operating Permit, your facility must first be classified as a Synthetic Minor Source. A Synthetic Minor Source is any facility which would otherwise constitute a major source under Commission Regulation APC-S-6, "Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act", except that the owner or operator of the facility elects for federally enforceable emissions limitations which may include permit conditions restricting hours of operation; type or amount of material stored, combusted, or processed; or establishing more stringent air pollution control efficiency requirements to lower allowable emissions for air pollutants in the State Permit to Operate below applicability thresholds for a Title V major source. As you may be aware, the current thresholds defining a facility as a Title V major source are 10 tons per year (tpy) or more of any hazardous air pollutant, 25 tpy or more of any combination of hazardous air pollutants, or 100 tpy or more of any air pollutant.

We are trying to determine how many Title V sources are planning to pursue a Synthetic Minor Operating Permit. Therefore, we would like for you to complete and return the enclosed form by October 10, 1994. Your indication is not a commitment; you will still have the opportunity to pursue either a Title V Permit or a Synthetic Minor Permit. This information will simply be used as a tool in planning the most efficient use of our resources.

If you have any questions, please call me at (601)961-5171.

Sincerely,

David Burchfield
Title V Permitting Section

Enclosure

5VSYNTH.FIN.99

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Certified Mail No. P 390 339 925

Ms. Maryhardy McElwain
Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Dear Ms. McElwain:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed is a copy of the public notice for comment on the request by Koppers Industries, Inc. for a permit to fire treated wood in the woodwaste boiler at the facility in Tie Plant, Mississippi. Please post this notice in the library.

Also, enclosed is a copy of information pertinent to Koppers Industries' request. This information should be kept on hand for review by the public until October 27, 1994, after which it may be discarded. The public may photocopy all or any portion of this information, but it should not leave the library.

Finally, enclosed please find a duplication of this letter with a place for your signature and the date acknowledging your receipt of the package and your agreement to carry out our request. A self-addressed stamped envelope is enclosed for your convenience.

We are attempting to better keep the public informed of and involved in this Office's actions regarding permitting of new and expanding industry. Since access to the public library is so convenient for so many we hope to use these facilities as often as possible. Your cooperation in this matter is greatly appreciated.

If you have any questions, please let me know at 961-5171.

Very truly yours,

Don Watts, Chief
Air Permitting Branch

DW:BH:sr
Enclosure

cc: Ms. Susan Royals, OPC

Received & Agreed to By: Maryhardy B McElwain, Director 9-26-94
(Name and Title) **(Date)**

Permit Review Summary

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Ms. Stephanie Nance
Legal Notice Department
The Daily Sentinal-Star
P.O. Box 907
Grenada, MS 38901

Dear Ms. Nance:

Enclosed herewith is a legal notice to be published in your newspaper on Tuesday, September 27, 1994.

Please contact Terry Bailey at 961-5168 for approval if printing of this notice is in excess of $100.00.

Please furnish this office with statement and proof of publication in duplicate.

Very truly yours,

Dwight K. Wylie, P.E.
Chief, Air Division

DKW:BH:sr
Enclosure

cc: Ms. Terry Bailey, OPC
Ms. Susan Royals, OPC

94AMS045.2

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Postmaster
Tie Plant, Mississippi 38960

Dear Sir:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi
Grenada County

Please post the attached public notice in your post office on or before September 27, 1994.

If you are unable to do so or if you have any questions, please advise.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:sr
Attachment
cc: Ms. Susan Royals, OPC

94AMS045.3

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Ms. Jewell A. Harper, Chief
Air Enforcement Branch
Air, Pesticides & Toxics Management Division
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Harper:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed is a copy of a public notice for comment on the above referenced facility.

If you have any questions, please contact us.

Very truly yours,

Don Watts, Chief
Air Permitting Branch

DW:BH:sr
Enclosure

cc: Ms. Susan Royals, OPC

September 22, 1994

94AMS045.4

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

Mr. Stephen Smith, Environmental Manager
Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219

Dear Mr. Smith:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed is a copy of a public notice, Permit Review Summary, and draft permits for comment on the above referenced facility.

If you have any questions, please contact us.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:sr
Enclosure

cc: Ms. Susan Royals, OPC

94AMS045.5

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Certified Mail No. P 390 339 925

Ms. Maryhardy McElwain
Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Dear Ms. McElwain:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed is a copy of the public notice for comment on the request by Koppers Industries, Inc. for a permit to fire treated wood in the woodwaste boiler at the facility in Tie Plant, Mississippi. Please post this notice in the library.

Also, enclosed is a copy of information pertinent to Koppers Industries' request. This information should be kept on hand for review by the public until October 27, 1994, after which it may be discarded. The public may photocopy all or any portion of this information, but it should not leave the library.

Finally, enclosed please find a duplication of this letter with a place for your signature and the date acknowledging your receipt of the package and your agreement to carry out our request. A self-addressed stamped envelope is enclosed for your convenience.

We are attempting to better keep the public informed of and involved in this Office's actions regarding permitting of new and expanding industry. Since access to the public library is so convenient for so many we hope to use these facilities as often as possible. Your cooperation in this matter is greatly appreciated.

If you have any questions, please let me know at 961-5171.

Very truly yours,

Don Watts, Chief
Air Permitting Branch

DW:BH:sr
Enclosure

cc: Ms. Susan Royals, OPC

94AMS045.6

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 22, 1994

Certified Mail No. P 390 339 925

Ms. Maryhardy McElwain
Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Dear Ms. McElwain:

Re: Koppers Industries, Inc.
Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed is a copy of the public notice for comment on the request by Koppers Industries, Inc. for a permit to fire treated wood in the woodwaste boiler at the facility in Tie Plant, Mississippi. Please post this notice in the library.

Also, enclosed is a copy of information pertinent to Koppers Industries' request. This information should be kept on hand for review by the public until October 27, 1994, after which it may be discarded. The public may photocopy all or any portion of this information, but it should not leave the library.

Finally, enclosed please find a duplication of this letter with a place for your signature and the date acknowledging your receipt of the package and your agreement to carry out our request. A self-addressed stamped envelope is enclosed for your convenience.

We are attempting to better keep the public informed of and involved in this Office's actions regarding permitting of new and expanding industry. Since access to the public library is so convenient for so many we hope to use these facilities as often as possible. Your cooperation in this matter is greatly appreciated.

If you have any questions, please let me know at 961-5171.

Very truly yours,

Don Watts, Chief
Air Permitting Branch

DW:BH:sr
Enclosure

cc: Ms. Susan Royals, OPC

Received & Agreed to By: _____

(Name and Title) **(Date)**

Permit Review Summary

FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

September 20, 1994

Mr. Stephen Smith, Environmental Manager
Koppers Industries, Inc.
436 Seventh Avenue
Pittsburg, PA 15219

Dear Mr. Smith:

Re: Facility No. 0960-00012
Tie Plant, MS

We are in receipt of your letter of concurrence with the draft permits, except you propose doubling the carbon monoxide (CO) emission rate and establishing an understanding of the CO limitation as it relates to the CO monitoring system. We have modified the CO emission rate in the draft permits as proposed.

Regarding CO excursions, an excursion above the CO permit limit, or for that matter any other permit limit, is a violation and subject to enforcement action as previously stated in our August 24, 1994 letter. Excursions during upsets, startups, and shutdowns, and maintenance are specifically addressed in Regulation APC-S-1, Section 10 - Provisions for Upsets, Startups, and Shutdowns. A copy of this regulation is enclosed.

Regarding the CO monitoring system, this system can only determine the concentration of CO in the stack gases and is not capable, by itself, of demonstrating compliance or non-compliance with the mass emission rate limitation in the permit. In order to monitor the mass emission rate, the system would also have to monitor, at a minimum, the stack volumetric flowrate. Further, even if the other monitoring equipment were in place, the accuracy of the CO monitoring system would not be adequate for compliance demonstration purposes unless it were capable of and were required to meet EPA's continuous emission monitoring system performance standards (40 CFR 60, App. B) and quality assurance procedures (40 CFR 60, App. F).

Primarily, we consider data from this CO monitoring system as a general performance indicator for use in assessing proper operation of the boiler. Please note that the proposed draft permits specify stack testing by EPA reference methods for demonstrating compliance with the permit emission limitations.

After further consideration of the capabilities of this CO monitoring system we have removed the permit condition requiring the inclusion of data from this system in the quarterly reports. However, the permit requirement to submit CO monitoring data with stack test reports (see PART III, Item 4) remains in the draft permits.

We plan to proceed to public notice on Friday, September 23, 1994, unless you have any written comments.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:vt

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001

~~Copy by FAX, Original by Mail~~

July 25, 1994 see fax. (9/7/94)

Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit

Dear Mr. Hall:

Thank you for faxing the latest draft permit to me for review. As we discussed today, I am concerned that the CO emission rate I previously provided that was based on Koppers Feather River boiler stack test is too low, especially in light of some other stack test results we have seen. Therefore, I have doubled that rate to be the estimated rate for the Grenada boiler. A revised Emission Inventory Calculation spreadsheet is enclosed which will replace previously submitted versions. Only the CO estimates for the wood fired boiler are changed. Thus, changes will be required on pages 4 of 9 of the permit to construct and 4 and 6 of 11 of the operating permit.

As I understand your explanation, the continuous CO emission monitoring will be primarily used as an indicator parameter. As such, CO excursions above the limitation will not be considered violations of the permit. Koppers is confident that our routine operation will be within the permit limit. However, we are also confident that the limit will be exceeded periodically in spikes during upsets and during cell cleanout. Given this understanding of the permit, Koppers agrees to reporting on an hourly rolling average.

Given the about change in CO limitations and understanding of the limitation, Koppers has no additional comments on the draft permit. After this change, Koppers agrees to the permit being advertised for public comment without any further review by us.

Thank you for working with me on this permit.

Sincerely,

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
W. R. Donley, K-1750
W. A. Meisinger, K-2050
J. R. Batchelder, K-1701

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800
Telephone: (412) 227-2001

Copy by FAX. Original by Mail

9/7/94

July 25, 1994

Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit

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Thank you for working with me on this permit.

Sincerely,

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
W. R. Donley, K-1750
W. A. Meisinger, K-2050
J. R. Batchelder, K-1701

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

FILE COPY

August 24, 1994

Mr. Stephen Smith, Environmental Manager
Koppers Industries, Inc.
436 Seventh Ave.
Pittsburg, PA 15219

Dear Mr. Smith:

Re: Facility No. 0960-00012
Grenada County
Tie Plant, Mississippi

This letter is in response to your recent submittal. The following are responses to your questions and comments:

Regarding the Permit to Construct;

1. Emission limitations - Emissions in excess of a permit emission limitation are a violation and subject to enforcement including monetary penalties. The company could propose corrective actions varying from reducing emissions to obtaining increased permit limits.

2. Combustion Temperature - The location of temperature measurement should be consistent with previous permits and stack tests and should be representative of the temperature in the boiler furnace. We concur that the temperature requirement does not apply while only untreated wood is being burned, nor during startup and shutdown conditions while only untreated wood is being burned.

   The facility can request changes (including lowering the minimum combustion temperature) to the permit after it is issued and upon review of the request and supporting documentation this office will indicate its position regarding the request.

3. Operating Limitations - The draft permit will be changed to allow office waste paper generated on-site to be burned in the boiler. However, no provisions have been made to allow non-hazardous combustible waste generated by routine plant operations to be burned.

4. Recordkeeping and Reporting Requirements - Recordkeeking and reporting of woodwaste feedrate will not be required, although the feedrate (treated and untreated) will need to be measured and reported during stack testing.

5. Part III, Other Requirements (Item No. 3) - Testing at maximum production rates and peak pollutant generation rates implies testing at the necessary scenario(s) to demonstrate maximum emissions.

Regarding the Permit to Operate;

1. Emission limitations will be revised per the recently submitted Emission Inventory Calculation sheet.

2. The minimum combustion temperature in the boiler will not apply when only untreated wood is fired.

3. No recordkeeping nor reporting of woodwaste feedrate will be required except during stack testing.

4. Emissions will be revised per your submittal.

5. Any exceedances of the emission limitations are a violation of the permits. If the facility determines after the permits are issued that it cannot comply with a permit condition, the permittee must obtain permits with which it can comply.

6. It is necessary that the permit contains emission limitations for criteria pollutants and the facility must comply with whatever emission limitations are established.

7. Maximum allowable sulfur content of the fuel oil will be changed from 0.3 percent to 0.5 percent and emissions will be revised accordingly.

We are currently preparing new draft permits and will shortly be forwarding these for your review and comments.

If you have any questions or comments, please contact me.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:vt

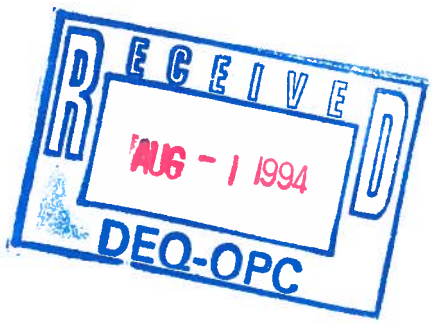
KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001

Copy by FAX, Original by Mail

July 25, 1994



Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit

Dear Mr. Hall:

Thank you for faxing the draft permit copy to me last week. Following are Koppers questions and comments related to this permit. Basically, they are the same as we discussed by phone today.

A. PERMIT TO CONSTRUCT

1. Emission Limitations - Koppers does not anticipate a problem meeting most of the limitations listed. However, please note that only particulate emission levels reported in the application were from testing of this or similar boilers. SO2, NOX, CO, and VOCs were all estimated from AP-42 factors. Thus, although the Wellons combustion systems are clean burning, variations from those projected in the application may be found when stack testing is conducted. If emissions higher than these are determined, what will then be the course of action? Can these levels be modified, based on the stack test results?

   Additionally, in reviewing the emission factors, I realized I had not accounted for sulfur present in treated wood which will result in higher emissions that AP-42 indicates for untreated wood and I reviewed a stack test on a similar Koppers boiler, though about twice as large, which provided a better basis for estimating NOX, CO, and VOCs. Thus, I have attached a revised Emission Inventory Calculation sheet to replace the one at Tab 2 of the application. You will note that SO2 emissions estimate is considerably higher while the CO emissions estimate is much lower than previously estimated. Please substitute these revised emission rates into the draft permit. The new SO2 rate only applies to the boiler when burning treated wood fuel. The previous rate should still apply when untreated wood fuel is burned. Although I have more faith in these revised estimates, we still maintain that some mechanism for revising the permit limits to reflect the stack testing results is necessary.

   Note that in revising the Emission Inventory Calculation, I also added a column for emissions in pounds per hour. For the boilers and cyclone, this rate is calculated from the input process rate, also in units per hour. For the wood treating process, the hourly rate is simply the annual rate divided by hours per year.

2. Combustion Temperature - The permit requires that a temperature of 1600°F or greater. If, during the test burn, complete combustion, as indicated by the DRE, can be demonstrate at a lower temperature, can a lower temperature be allowed? Note that in a boiler such as this one, temperature varies considerably with measurement location. The important factor is to assure that the temperature standard and point of measurement are consistent from the test burn to routine monitoring. Additionally, how does this requirement apply during startup and shutdown conditions when the temperature must be lower? Koppers suggests that the temperature limitation only apply while treated wood fuel is being burned.

3. Operating Limitations - Koppers has instituted a waste minimization plan at our plant. Part of this calls for utilizing office waste paper as boiler fuel, rather than disposing of it at the landfill. Thus, we request that the permit additionally allow non-hazardous combustible waste generated by routine plant operations to be burned.

4. Record Keeping and Reporting Requirements - Woodwaste Feedrate - The plant has no effective way of measuring the fuel feedrate, nor is there equipment available to effectively do so for the type of feed equipment we have. Koppers does monitor total steam generation rate. Steam generation is directly related to the fuel feed rate and fuel feed can be inferred from the steam generation rate. Koppers recommends that the requirement to monitor woodwaste feedrate be changed to require continuous monitoring of the steam generation rate.

5. Part III, Other Requirements (3) - Does the requirement to test emissions and DRE at maximum production rates **and** peak pollutant generation rates imply testing at two different firing rates, probably maximum and minimum fire rates?

B. PERMIT TO OPERATE

Woodwaste boiler firing untreated wood only.

1. Revise emission limitations per attached Emission Inventory Calculation sheet, except for SO2, which should remain unchanged.

2. On page 5, the temperature requirement should not apply in this section where only untreated wood fuel will be burned. See comment A.2. above.

3. Record keeping of woodwaste feedrate should be changed to steam generation rate per comment A.4 above.

Woodwaste boiler firing treated and untreated wood.

4. All comments of section A. above apply. Revise emission limitations per attached Emission Inventory Calculation sheet.

5. To the extent that any emissions may be found to exceed levels in this permit during the test burn and where those high levels are due to inherent equipment design rather than poor operation or adjustment, can permit levels be adjusted? What is the process for doing so?

Oil fired boiler.

6. Emission Limitations - These limitations are all based on emission factors listed in AP-42. If the factors listed in AP-42 are revised upwards, will that lead to apparent violation? Koppers does not see value in listing these limitations for which compliance will not be proven. Instead, a requirement that the equipment be maintained in sound operating condition, along with an opacity limitation, should be adequate to assure minimum emissions.

7. Additional Conditions - Koppers listed the sulfur content of our fuel oil as 0.3 percent based on information provided from our fuel supplier. This is what is typically supplied. However, since this level does change from time to time, Koppers requests that the limitation be increased to 0.5 percent, which is the level allowed by the ASTM specification. Accordingly, I have revised the Emission Inventory Calculation to use 0.5% sulfur in oil fuel.

Thank you for your efforts in preparing this permit. Please call me if you have any questions or need anything else from me. Please note that I will be on vacation starting Wednesday, 7/27 through Wednesday

Sincerely,

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
W. R. Donley, K-1750
J. R. Batchelder, K-1701

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800
Telephone: (412) 227-2001

Copy by FAX; Original by Mail

RECEIVED
AUG 1 1994
DEPARTMENT OF ENVIRONMENTAL QUALITY

July 25, 1994

Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit, Additional Information

Dear Mr. Hall:

This letter will provide the additional information you requested this morning.

Concerning burning waste paper, I suggest the following change be made to Operating Limitations:

> Materials other than untreated wood, creosote treated wood, pentachlorophenol treated wood, or office waste paper are prohibited in the boiler. Such office waste paper shall consist only of waste paper generated by Koppers' office operations and shall not contain plastic or non-combustible wastes and the total amount shall be limited to less than one percent of fuel input.

Concerning the revised emission factors for the wood fired boiler, attached is a copy of my hand written notes and calculation of the factors.

A copy of the Feather River Emission Test Report is attached for your reference. (Results page only by FAX.)

I hope this provides all the information you need. Thank you for your efforts. Call if you have any further questions.

Sincerely,

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
cc w/o attachments:
W. R. Donley, K-1750
J. R. Batchelder, K-1701

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800
Telephone: (412) 227-2001

Copy by FAX, Original by Mail

July 25, 1994

Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit, Additional Information

Dear Mr. Hall:

This letter will provide the additional information you requested this morning.

Concerning burning waste paper, I suggest the following change be made to Operating Limitations:

> Materials other than untreated wood, creosote treated wood, pentachlorophenol treated wood, or office waste paper are prohibited in the boiler. Such office waste paper shall consist only of waste paper generated by Koppers' office operations and shall not contain plastic or non-combustible wastes and the total amount shall be limited to less than one percent of fuel input.

Concerning the revised emission factors for the wood fired boiler, attached is a copy of my hand written notes and calculation of the factors.

A copy of the Feather River Emission Test Report is attached for your reference. (Results page only by FAX.)

I hope this provides all the information you need. Thank you for your efforts. Call if you have any further questions.

Sincerely,

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
cc w/o attachments:
W. R. Donley, K-1750
J. R. Batchelder, K-1701

7/25-26/94

Revisions to Emission Inventory Calculation.

SO_2 – Use average 5 % from SCS fuel monitoring ~~data~~ which was 0.11%. Assume all S converted to SO_2. mw(S) = 32 mw(SO_2) = 32 + 2(16) = 64 = 2X(S)

SO_2 Factor = $(0.11\%)\left(\frac{1}{100}\right)(2)(2000\ lb/TN) = 4.4\ lb\ SO_2/TN$

NO_x = Base on FR test (9/8/83) and SCS monitoring results.

FR factor – 0.72 lb/TN @ ~~3~~ 800 lb/hr = 2.88 lb/hr

SCS plant emis = 24.87 lb/hr (4 x boiler factor)

≅ 6 lb/hr

Probably will be higher than FR because burning Treated wood will be hotter, but lower than SCS because lower temps.

Use 1.4 lb/TN → 5.6 lb/hr NOX.

CO – Use FR factor + 20% = 0.5 x 1.2 = 0.6 lb/TN

VOC – Use FR factor + 20% = 0.76 x 1.2 = 0.91 lb/TN

KOPPERS INDUSTRIES

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436 Seventh Avenue
Pittsburgh, PA 15219-1800
Telephone: (412) 227-2001

Copy by FAX, Original by Mail

July 25, 1994

Bobby Hall
Mississippi Department of Environmental Quality
Office of Pollution Control
P. O. Box 10385
Jackson, MS 39289-0385
FAX (601)354-6612

RE: Koppers Industries, Inc. Air Pollution Control Permit

Dear Mr. Hall:

Thank you for faxing the draft permit copy to me last week. Following are Koppers questions and comments related to this permit. Basically, they are the same as we discussed by phone today.

A. PERMIT TO CONSTRUCT

1. Emission Limitations - Koppers does not anticipate a problem meeting most of the limitations listed. However, please note that only particulate emission levels reported in the application were from testing of this or similar boilers. SO2, NOX, CO, and VOCs were all estimated from AP-42 factors. Thus, although the Wellons combustion systems are clean burning, variations from those projected in the application may be found when stack testing is conducted. If emissions higher than these are determined, what will then be the course of action? Can these levels be modified, based on the stack test results?

   Additionally, in reviewing the emission factors, I realized I had not accounted for sulfur present in treated wood which will result in higher emissions that AP-42 indicates for untreated wood and I reviewed a stack test on a similar Koppers boiler, though about twice as large, which provided a better basis for estimating NOX, CO, and VOCs. Thus, I have attached a revised Emission Inventory Calculation sheet to replace the one at Tab 2 of the application. You will note that SO2 emissions estimate is considerably higher while the CO emissions estimate is much lower than previously estimated. Please substitute these revised emission rates into the draft permit. The new SO2 rate only applies to the boiler when burning treated wood fuel. The previous rate should still apply when untreated wood fuel is burned. Although I have more faith in these revised estimates, we still maintain that some mechanism for revising the permit limits to reflect the stack testing results is necessary.

   Note that in revising the Emission Inventory Calculation, I also added a column for emissions in pounds per hour. For the boilers and cyclone, this rate is calculated from the input process rate, also in units per hour. For the wood treating process, the hourly rate is simply the annual rate divided by hours per year.

2. Combustion Temperature - The permit requires that a temperature of 1600°F or greater. If, during the test burn, complete combustion, as indicated by the DRE, can be demonstrate at a lower temperature, can a lower temperature be allowed? Note that in a boiler such as this one, temperature varies considerably with measurement location. The important factor is to assure that the temperature standard and point of measurement are consistent from the test burn to routine monitoring. Additionally, how does this requirement apply during startup and shutdown conditions when the temperature must be lower? Koppers suggests that the temperature limitation only apply while treated wood fuel is being burned.

3. Operating Limitations - Koppers has instituted a waste minimization plan at our plant. Part of this calls for utilizing office waste paper as boiler fuel, rather than disposing of it at the landfill. Thus, we request that the permit additionally allow non-hazardous combustible waste generated by routine plant operations to be burned.

4. Record Keeping and Reporting Requirements - Woodwaste Feedrate - The plant has no effective way of measuring the fuel feedrate, nor is there equipment available to effectively do so for the type of feed equipment we have. Koppers does monitor total steam generation rate. Steam generation is directly related to the fuel feed rate and fuel feed can be inferred from the steam generation rate. Koppers recommends that the requirement to monitor woodwaste feedrate be changed to require continuous monitoring of the steam generation rate.

5. Part III, Other Requirements (3) - Does the requirement to test emissions and DRE at maximum production rates **and** peak pollutant generation rates imply testing at two different firing rates, probably maximum and minimum fire rates?

B. PERMIT TO OPERATE

Woodwaste boiler firing untreated wood only.

1. Revise emission limitations per attached Emission Inventory Calculation sheet, except for SO2, which should remain unchanged.

2. On page 5, the temperature requirement should not apply in this section where only untreated wood fuel will be burned. See comment A.2. above.

3. Record keeping of woodwaste feedrate should be changed to steam generation rate per comment A.4 above.

Woodwaste boiler firing treated and untreated wood.

4. All comments of section A. above apply. Revise emission limitations per attached Emission Inventory Calculation sheet.

5. To the extent that any emissions may be found to exceed levels in this permit during the test burn and where those high levels are due to inherent equipment design rather than poor operation or adjustment, can permit levels be adjusted? What is the process for doing so?

Oil fired boiler.

6. Emission Limitations - These limitations are all based on emission factors listed in AP-42. If the factors listed in AP-42 are revised upwards, will that lead to apparent violation? Koppers does not see value in listing these limitations for which compliance will not be proven. Instead, a requirement that the equipment be maintained in sound operating condition, along with an opacity limitation, should be adequate to assure minimum emissions.

7. Additional Conditions - Koppers listed the sulfur content of our fuel oil as 0.3 percent based on information provided from our fuel supplier. This is what is typically supplied. However, since this level does change from time to time, Koppers requests that the limitation be increased to 0.5 percent, which is the level allowed by the ASTM specification. Accordingly, I have revised the Emission Inventory Calculation to use 0.5% sulfur in oil fuel.

Thank you for your efforts in preparing this permit. Please call me if you have any questions or need anything else from me. Please note that I will be on vacation starting Wednesday, 7/27 through Wednesday, 8/10/94

Sincerely,

Stephen T. Smith

Stephen T. Smith
Environmental Manager

cc: Ron Murphey, Grenada, MS
W. R. Donley, K-1750
J. R. Batchelder, K-1701

FACSIMILE TRANSMISSION

KOPPERS INDUSTRIES INC
436 Seventh Avenue, K-1800
Pittsburgh, PA 15219

DATE: ~~June 2, 1994~~ July 12 see fax date below

TO: Bobby Hall, MS DEQ
601-354-6612

FROM: Stephen T. Smith

NO. PAGES INCLUDING THIS PAGE: 2

FACS NO.: (412)227-2423
VOICE NO.: (412)227-2677

Subject: Air Permit

Revised page with correct tie mill feed input & product output numbers for your use. The 415 was ties per hour.

thanks.
Steve

Grande

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588

June 15, 1994

Brian Ketchum
State of Mississippi
Department of Environmental Quality
Air Quality Division
P.O Box 10385
Jackson, MS 39289-0385

Re: Title V Permit Program

Dear Mr. Ketchum:

Attached you will find our "Major Air Source Annual Emissions Reporting Form". Also you will find our calculations in determining the inventory.

If there are any questions or comments, please contact me at (601)226-4584.

Sincerely,

Mike Sylvester
Environmental Supervisor

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

May 13, 1994

Mr. Ronald P. Murphay
Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Dear Mr. Murphay:

Re: Title V Air Operating Permit Program

As you are aware, Title V of the Federal Clean Air Act requires all states to develop and implement a Federal Air Operating Permit Program. Sections 49-17-1 through 49-17-43 of the Mississippi Code Annotated establish the legal authority for the DEQ to develop a Title V program. One of the required program elements is a fee program which covers the entire direct and indirect cost of the Title V program. Section 49-17-30 established that this fee would be based on the emissions of regulated air pollutants from all facilities required to hold a Title V permit and would be assessed annually.

A review of your current file indicates that your source will be required to hold a Title V permit. The evaluation of your allowable emissions is shown on the attached reporting form. As provided by Section 49-17-32, you may elect to use either actual or allowable (potential) emissions in determining the annual quantity of emissions to be used in assessing fees. Acceptable methods for calculating actual annual emissions were specified in Section 49-17-32 and are listed on the attachments. If you choose the basis of actual emissions, you must submit the attached reporting form showing your inventory of emissions for the 1993 calendar year by July 1, 1994, along with the calculations and the methodology used in determining the inventory. If an inventory of emissions has not been received by July 1, 1994, the allowable emissions shown on the attached reporting form will be used as the basis for this year's assessment of fees.

Section 49-17-30 established that the interim fee prior to full implementation of the Title V program is $4/ton of emissions of each pollutant for which fees can be assessed under the Title V program. For purposes of fee assessment and collection, the maximum emission rate of each pollutant used in the calculation of fees shall be 4,000 tons per year per facility. Fees will be assessed on all regulated pollutants except carbon monoxide (CO) and CFCs/HCFCs.

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001

April 5, 1994

Mr. Bobby Hall
Air Permitting Branch
Office of Pollution Control
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Application for Modification and Renewal of Air Pollution Control Operating Permit No. 0960-00012

Dear Mr. Hall:

I am writing in response to your letter of March 24, 1994. You requested Koppers projected schedule for completion of construction related to our application to burn treated wood as fuel.

At this time, preliminary design is complete. We will not proceed with final design details, equipment purchasing, and construction until after we have assurance from your agency that a permit will be granted. We do have customers who would like to use our service and we do not wish to miss this business opportunity, so timing is important. Thus if permitting and business agreements can be resolved, our preferred schedule is to complete final design by late spring, start construction this summer, and complete work this fall.

Although not very specific, I hope this provides the information you need. Please call me at (412)227-2677 if you have questions.

Sincerely,

Stephen T. Smith
Environmental Manager

cc with copy of DEQ letter:
Ron Murphey, Grenada, MS
J. R. Batchelder, K-1701
W. R. Donley, K-1750
George Caric, K-2050
Bob Daniel, Columbus, MS

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

FILE COPY

March 24, 1994

Mr. Stephen Smith, Environmental Manager
Koppers Industries, Inc.
436 Seventh Ave.
Pittsburg, PA 15219

Dear Mr. Smith:

Re: Facility No. 0960-00012
Grenada County
Tie Plant, Mississippi

This letter is to acknowledge receipt of your application on 3/11/94, for an initial or modified air permit(s). Within forty-five (45) days after the date of receipt of the application you will be notified either that the application is complete or of the major components required to complete the application.

Please let us know your projected schedule for commencement of construction and completion of construction. We would appreciate your response within a week. If you have any questions, please let me know.

Very truly yours,

Bobby Hall
Air Permitting Branch

BH:vt

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001

via UPS Next Day

March 7, 1994

Mr. Don Watts
Air Permitting Branch
Office of Pollution Control
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Application for Modification and Renewal of Air Pollution Control Operating Permit No. 0960-00012

Dear Mr. Watts:

As we discussed on January 24, enclosed are two copies of an application for Koppers Industries, Inc. (Koppers) wood preserving plant in Tie Plant, MS for the modification and renewal of our existing air pollution control permit. We are seeking to modify the permit to; 1) eliminate the provision allowing burning of wood preserving process waste as fuel additive and 2) allow use as a primary fuel used treated wood containing creosote or pentachlorophenol. In addition, the existing permit, which initially expired on December 1, 1988, was reissued to expire on May 1, 1990, and which, by letter dated September 26, 1990, was further extended indefinitely pending agency action, should be renewed to reflect our current operation.

History and Background

The Grenada Tie Plant was built in 1904 to treat railroad cross ties for the Illinois Central Railroad. The Wellons wood fired boiler was installed in 1978 to provide process heat and utilize wood waste fuel instead of fuel oil or natural gas. A small turbine and generator were installed to reduce electricity cost by utilizing excess steam.

Koppers, employing 60 people locally, produces utility poles, piling, and railroad ties for various customers in Mississippi, the eastern USA, and for export. About 80 percent of the wood we treat is purchased from within Mississippi. These products are wood which is pressure treated with creosote or pentachlorophenol wood preservative solutions.

The boiler burns wood waste derived from untreated wood. Steam is produced to provide process heat for wood preserving processes and for kilns to dry wood prior to treatment. Additionally, a turbine and electric generator utilize excess steam to provide electricity

for Koppers plant and the sale of any excess electricity. Most wood waste fuel is purchased from local industries.

Koppers boiler was permitted to burn wood preserving process waste, containing pentachlorophenol and/or creosote, as fuel additive to the wood waste fuel about 1985. Burning of process waste as fuel additive continued until such wastes became listed hazardous wastes in June 1991. At that time, Koppers stopped such activity until a RCRA hazardous waste permit could be obtained. Koppers attempted to obtain a RCRA permit under the Boiler and Industrial Furnace (BIF) regulations beginning in late 1991. Due to lack of permitting progress and a negative regulatory climate for any hazardous waste combustion systems, the decision was made recently to withdraw our BIF application. A copy of the withdrawal letter, dated October 4, 1993 is included in this application package.

All such hazardous process wastes which are generated by Koppers are now, and will continue to be, disposed off-site. Koppers is no longer seeking any permit to burn hazardous wood preserving process wastes.

Disposal of the treated wood products at the end of their useful lives has become a costly issue for Koppers' customers. Although such materials are clearly not listed or characteristic hazardous waste, disposal options have become limited and costs are rapidly increasing, especially with landfill space becoming more limited. For the last several years, Koppers has been responding to our customers' needs with a program of receiving such used treated wood and recycling it for energy recovery in our industrial boilers. Koppers now operates three boilers which are permitted to burn treated wood and a fourth has obtained a permit, although facility modifications have not yet begun.

The Illinois Central Rail Road (ICRR) has met with Koppers and expressed serious interest in having Koppers provide a used tie disposal/recycling service. They are presently sending their used ties out of state for disposal. As planned, the ICRR would be the major source of used treated wood fuel. We expect to also receive used treated wood from other railroads and utility companies.

<u>Permit Modification Requested</u>

With this application, Koppers is requesting approval to utilize waste treated wood containing creosote and pentachlorophenol preservatives, as a primary boiler fuel. The ability to burn used treated wood as boiler fuel will help Koppers achieve two important goals; helping to reduce plant operating costs and providing

improved service to our customers. Koppers is now paying a significant price for wood fuel for our boiler. We believe that use of creosote treated wood fuel will significantly lower that cost. Most railroads and utilities now dispose of used wood by landfilling at a substantial cost. The reduced disposal cost and elimination of long term liability resulting from burning the used wood as fuel at Koppers' boiler would be a substantial benefit to those customers.

Plant Modifications Required

The only plant modifications required to allow use of treated wood fuel will be for the handling and size reduction of that fuel. No modifications will be required to any part of the combustion system. As now envisioned, Koppers would purchase and install the following additional equipment:

Unloading and In-Feed System Most ties are expected to be delivered by rail car. Ties will be unloaded from rail cars by an hydraulic loader, such as a Prentice. Poles will be delivered both by rail cars and by trucks. Poles will be sheared to length, as required for processing.

Grinder A wood grinder, such as a tub grinder, will be installed to provide gross size reduction and metal removal forthe used treated wood.

Hog A new hog will be installed to replace the existing one. All fuel processed by the grinder will pass through the hog for further size reduction prior to being conveyed to the silos.

Boiler Emissions

We expect that you will have concerns about potential emissions resulting from burning of treated wood. Koppers shares this concern, but believes that creosote and pentachlorophenol treated wood waste can be burned in a boiler without causing any adverse human health or environmental impacts or any significant increase in emissions. To justify this position, considerable data is included in this application package concerning emission tests and their relevance to this project.

At Tab 2, the Emissions Inventory Calculation is provided which summarizes estimated emissions for all processes at the Koppers plant. An analysis of various emission tests for similar boilers is provided titled Grenada Boiler Emissions - Estimate Worksheet

which follows the Inventory sheets. This summarizes results of the May 1988 stack tests for burning untreated wood only, untreated wood fuel with creosote process waste, and untreated wood fuel with pentachlorophenol process waste at the Grenada boiler. It also summarizes test results for burning untreated and treated wood at Koppers Montgomery, AL boiler, and industry pooled testing done in California on wood fired boilers for submission to the CA Air Resources Board (ARB). These reference documents are included at Tab 7.

At the bottom of the worksheet, these results are then used to calculate standardized emission factors, expressed as pounds of pollutant per ton of fuel burned. For comparison, these factors are then each used to predict annual emissions from the Grenada boiler operated at it's rated capacity. Additionally, the ARB results are used to predict metals emissions from the boiler. As you can see, projected annual emissions of constituents of greatest health concern, carcinogenic PAH and pentachlorophenol, are consistent in every test and are very low.

The data indicates that the impact on emissions of burning treated wood versus untreated wood will be negligible. Polycyclic aromatic hydrocarbons (PAH) are considered within the categories of non-carcinogenic and potentially carcinogenic. Although creosote is primarily composed of PAH, PAH emissions are not statistically different for burning treated wood than for burning untreated wood. The tests document overall PAH DRE levels exceeding 99.99%. Emissions of pentachlorophenol, though clearly not associated with burning untreated wood, have been shown in tests to be effectively destroyed by combustion with DRE's greater than 99.99%. Projected emissions, based on the Montgomery tests, are only about 5 pounds per year. Thus, Koppers is confident that burning used treated wood for boiler fuel will not result in any increase in emissions over those now permitted and it will not adversely impact the surrounding population or environment.

As part of our attempt to obtain the RCRA BIF permit, Koppers made some improvements to the boiler system which we expect to benefit this permitting effort. A continuous emission monitoring system, recording CO and O_2 was installed. Information about this unit is included at Tab 4. Boiler refractory was substantially rebuilt and repair and maintenance work performed. The turbine was rebuilt. All of this work will help provide reliable combustion and emissions control and monitoring.

Mr. Don Watts, Air Permitting Branch, MS DEQ March 9, 1994

Wood Preserving Process Emissions

Although the main reason for our submittal of this application is for the boiler fuel change, the application is intended to cover the entire plant. Thus, the Emissions Inventory Calculation at Tab 2 also covers the wood preserving processes. Emissions of creosote and pentachlorophenol are reported. Supporting calculation sheets are included at Tab 5, which are the calculations used to prepare the 1992 Toxic Release Inventory Form R report for this plant. At this tab, supporting worksheets are also included.

Permitting Process

Burning of used treated wood is a very important part of Koppers long term strategy for this plant. Koppers will actively pursue permitting and is dedicated to the safe and compliant combustion of waste treated wood fuel in our boiler.

There will be substantial benefits to the public, as well as to Koppers. Additional employment of two to four full time people will result. Landfill space in the state will be conserved by eliminating disposal of this wood. Energy resources will be conserved by utilizing the energy value of this waste wood.

Proceeding with this project is important to Koppers management and the continuing viability of the plant. We will do all we can to meet your requirements and to work cooperatively with your agency. Your assistance in working through the air permit process is requested and will be greatly appreciated.

I expect that before you take any action on this application, you will want to see our plant. Thus, although we are quite willing to meet you in Jackson, I suggest that after your have had time to review the application, we meet in Tie Plant to discuss the application and tour the plant. At that time, we can decide what next steps will need to be taken.

Please call me at (412)227-2677 if you have questions or would like to arrange a time to meet. If I do not hear from you in the next couple weeks, I will call.

Sincerely,

Stephen T. Smith

Stephen T. Smith
Environmental Program Manager

Mr. Don Watts, Air Permitting Branch, MS DEQ March 9, 1994

cc: Ron Murphey, Grenada, MS
Dan McLeod, MS DEQ, Jackson, MS

cc w/o attachments:
W. R. Donley, K-1750
J. R. Batchelder, K-1701

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001

via UPS Next Day

March 7, 1994

Mr. Don Watts
Air Permitting Branch
Office of Pollution Control
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Application for Modification and Renewal of Air Pollution Control Operating Permit No. 0960-00012

Dear Mr. Watts:

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The data indicates that the impact on emissions of burning treated wood versus untreated wood will be negligible. Polycyclic aromatic hydrocarbons (PAH) are considered within the categories of non-carcinogenic and potentially carcinogenic. Although creosote is primarily composed of PAH, PAH emissions are not statistically different for burning treated wood than for burning untreated wood. The tests document overall PAH DRE levels exceeding 99.99%. Emissions of pentachlorophenol, though clearly not associated with burning untreated wood, have been shown in tests to be effectively destroyed by combustion with DRE's greater than 99.99%. Projected emissions, based on the Montgomery tests, are only about 5 pounds per year. Thus, Koppers is confident that burning used treated wood for boiler fuel will not result in any increase in emissions over those now permitted and it will not adversely impact the surrounding population or environment.

As part of our attempt to obtain the RCRA BIF permit, Koppers made some improvements to the boiler system which we expect to benefit this permitting effort. A continuous emission monitoring system, recording CO and O_2 was installed. Information about this unit is included at Tab 4. Boiler refractory was substantially rebuilt and repair and maintenance work performed. The turbine was rebuilt. All of this work will help provide reliable combustion and emissions control and monitoring.

Mr. Don Watts, Air Permitting Branch, MS DEQ March 9, 1994

Wood Preserving Process Emissions

Although the main reason for our submittal of this application is for the boiler fuel change, the application is intended to cover the entire plant. Thus, the Emissions Inventory Calculation at Tab 2 also covers the wood preserving processes. Emissions of creosote and pentachlorophenol are reported. Supporting calculation sheets are included at Tab 5, which are the calculations used to prepare the 1992 Toxic Release Inventory Form R report for this plant. At this tab, supporting worksheets are also included.

Permitting Process

Burning of used treated wood is a very important part of Koppers long term strategy for this plant. Koppers will actively pursue permitting and is dedicated to the safe and compliant combustion of waste treated wood fuel in our boiler.

There will be substantial benefits to the public, as well as to Koppers. Additional employment of two to four full time people will result. Landfill space in the state will be conserved by eliminating disposal of this wood. Energy resources will be conserved by utilizing the energy value of this waste wood.

Proceeding with this project is important to Koppers management and the continuing viability of the plant. We will do all we can to meet your requirements and to work cooperatively with your agency. Your assistance in working through the air permit process is requested and will be greatly appreciated.

I expect that before you take any action on this application, you will want to see our plant. Thus, although we are quite willing to meet you in Jackson, I suggest that after your have had time to review the application, we meet in Tie Plant to discuss the application and tour the plant. At that time, we can decide what next steps will need to be taken.

Please call me at (412)227-2677 if you have questions or would like to arrange a time to meet. If I do not hear from you in the next couple weeks, I will call.

Sincerely,

Stephen T. Smith

Stephen T. Smith
Environmental Program Manager

Mr. Don Watts, Air Permitting Branch, MS DEQ March 9, 1994

cc: Ron Murphey, Grenada, MS
Dan McLeod, MS DEQ, Jackson, MS

cc w/o attachments:
W. R. Donley, K-1750
J. R. Batchelder, K-1701

FILE COPY

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

November 9, 1994

Certified Mail No. P 390 339 974

Mr. Ron Murphy, Plant Manager
Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Dear Mr. Murphy:

Re: Facility No. 0960-00012
Tie Plant, Mississippi

Enclosed please find Construction Permit No. 0960-00012 for the construction of the air emissions equipment and air pollution control equipment.

Also enclosed is Operating Permit No. 0960-00012 issued for the operation of air emissions equipment. Operation of the air emissions equipment at the facility shall be in accordance with the terms, conditions, and limitations of the permit. This permit expires on November 1, 1999. A new permit application must be submitted one hundred and eighty (180) days prior to this date in order to renew this permit.

Any significant modification to this process or facility which will alter the rate or composition of air pollutant emissions will cause this permit to become invalid. Should you wish to make such a modification, it will be necessary to submit a new application for a construction permit.

Prior to startup of the new air emissions equipment at this facility, it will be necessary to submit certification that construction was completed in accordance with the approved plans and specifications. Upon receipt of the certification of construction, the applicable Emission Points in the referenced Operating Permit will become effective.

Any appeal of this permit action must be made within the 30 day period provided for in Section 49-17-29(4)(b) Mississippi Code of 1972.

If you have any questions or if we can be of any service, please let me know.

Very truly yours,

Bobby G. Hall
Air Permitting Branch

BGH:sr
Enclosure

11-08-PL.7

BK

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588

June 29, 1993

Certified Mail # P 140 485 501

Brian Ketchum
State of Mississippi
Department of Environmental Quality
Air Quality Division
P.O. Box 10385
Jackson, MS 39289-0385

Re: Title V Permit Program

Dear Mr. Ketchum:

Attached you will find our "Major Air Source Annual Emissions Reporting Form". Also you will find our calculations in determining the inventory.

If there are any questions or comments, please contact me at (601)226-4584.

Sincerely,

Mark Good

Mark Good
Environmental/OH&PS Supervisor

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

June 8, 1993

KOPPERS INDUSTRIES, INC
P.O. BOX 160
TIE PLANT, MS 38960

Dear Madam or Sir:

Re: Title V Permit Program

As you may be aware, the Federal Clean Air Act was amended in 1990, and, under Title V of the Act, states are required to develop and implement a Federal Air Operating Permit Program. In 1993, the Mississippi legislature passed SB 2649 which established the legal authority needed for the DEQ to develop a Title V program that EPA can approve. One of the required program elements is a fee program which covers the entire direct and indirect cost of the Title V program. SB 2649 established that this fee would be based on the emissions of regulated air pollutants from all facilities required to hold a Title V permit and would be assessed annually on the previous year's emissions.

A review of your current permit and file indicates that your source will be required to hold a Title V permit. Our evaluation of your allowable emissions is shown on the attached form. As provided by SB 2649, you may elect to use either actual or allowable (potential) emissions in determining the annual quantity of emissions to be used in assessing fees. Acceptable methods for calculating actual annual emissions were specified in SB 2649 and are listed on the attachments. If you choose the basis of actual emissions, you must submit your inventory of emissions for the previous calendar year (1992), by July 1, 1993, along with the methodology used in determining the inventory. If we do not receive an inventory of emissions from you by July 1, 1993, we will assume that you have elected to use the allowable emissions we have determined as the basis for this year's assessment of fees.

We have identified the pollutants which your files indicate that your source emits. It is your responsibility by law to report any and all pollutants emitted, not just those we identified. The attached list of regulated pollutants should be reviewed to make sure all

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
JAMES I. PALMER, JR.
EXECUTIVE DIRECTOR

FILE COPY

January 22, 1993

Ms. Beverly D. McKeone, Engineer I
Enforcement and Permits Section
West Virginia Office of Air Quality
Division of Environmental Protection
1558 Washington Street, East
Charleston, WV 25311-2599

Dear Ms. McKeone:

Re: Koppers
Facility No. 0960-00012
Grenada County, Mississippi

Enclosed please find a copy of Permit No. 0960-00012 and other documents that may be of use to you. We do not have any specific regulations as requested in #1 of your letter.

If I can be of further service please contact me at (601) 961-5090.

Very truly yours,

J. Dewayne Headrick
Stationary Source Compliance Section

JDH/sse
Enclosure:

1-21-93.1

File

DeWayne

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
1558 Washington Street, East
Charleston, WV 25311-2599

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

WEST VIRGINIA OFFICE OF AIR QUALITY

December 16, 1992

Don Watts, Permitting
Dept. of Environmental Quality
Office of Pollution Control
Air Division
P.O. Box 10385
Jackson, MS 39289

Dear Mr. Watts:

The West Virginia Office of Air Quality is currently searching for information regarding regulations and permit requirements from states that allow the burning of creosote and/or pentachlorophenol treated wood, particularly as it concerns Koppers Industries, Inc. With this in mind we request the following information from your office.

1) A copy of the Air Division Regulation(s) for industrial boilers burning other than virgin fuel.

2) A copy of Permit #0960-00012.

3) Any other information that you believe to be helpful.

Thank you for your cooperation. If you have any questions, please contact me at (304) 558-4022.

Sincerely,

Beverly D. McKeone

Beverly D. McKeone
Engineer I,
Enforcement and Permits Section

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001
Fax: (412) 227-2423

September 8, 1992

via FEDERAL EXPRESS

Ms. Elizabeth Ketcham
U. S. EPA Region 4
RCRA and Federal Facilities Branch
Second Floor
345 Courtland Street
Atlanta, GA 30365

---AND---

Wayne Stover
Hazardous Waste Division
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Class 3 Permit Modification Application and Request for Temporary Authorization to Operate, Koppers Industries, Inc. Grenada Plant, Industrial Boiler, MSD 007 027 543

Dear Ms. Ketcham and Mr. Stover:

The public notice for Koppers application for permit modification appeared in The Daily Sentinel Star, Grenada, MS on September 1, 1992. A copy of the paper is enclosed, along with a separate copy of the notice from the paper, as proof of publication. Koppers had made arrangements with the paper for this to be published on August 27, but due to a mistake at the newspaper office, publishing was delayed.

Notices were sent today to all persons on the facility mailing list provided by Mississippi DEQ. I did not receive the mailing list until last week while I was out of town. Therefore, today was the soonest I could make the mailing. A copy of the mailing list and of the notice are enclosed for your information.

I believe the appropriate end of the public comment period will be November 1, 1992.

Please call at (412)227-2677 if you have questions.

Sincerely,

Stephen T. Smith
Environmental Program Manager

cc with copy of notice and mail list:
Ron Murphy, Grenada, MS

cc with copy of notice only:
Jim Bassett, MS DEQ
Duane Headrick, MS DEQ
Jim Werling, Beazer East Inc., K-1450
W. R. Donley, K-1750
R. S. Ohlis, K-1750
J. R. Batchelder, K-1701
Anaxis Duhon, Woodward Clyde Consultants, Baton Rouge, LA

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001
Fax: (412) 227-2423

NOTICE OF PERMIT MODIFICATION REQUEST AND 60-DAY COMMENT PERIOD KOPPERS INDUSTRIES, INC.- GRENADA, MS.

August 27, 1992

This notice is to inform the public of the following facility's request for a Class 3 permit modification to it's existing hazardous waste permit and to announce the commencement of the 60 day public comment period for that permit modification.

GENERAL FACILITY INFORMATION

Facility Owner/Operator:	Koppers Industries, Inc.
Location Address:	P.O. Box 160 Tie Plant Road Tie Plant, MS 38960

PROPOSED MODIFICATION

Koppers Industries operates a wood preserving plant south of Grenada, MS which produces primarily utility poles and railroad ties. The plant has an existing permit from Mississippi Department of Environmental Quality (DEQ) to conduct post closure care of a previously operated surface impoundment. A wood fired boiler produces steam for the wood preserving process heating. Waste materials from the wood preserving processes were previously burned as a supplemental fuel in the boiler in accordance with the facility air permit. The wood preserving process wastes were recently listed as hazardous waste by the U. S. EPA.

Koppers is a generator of hazardous waste resulting from the wood preserving and coal tar processing operations. Treatment and disposal of this waste poses a severe economic burden on Koppers. Koppers is also buying boiler fuel for the Grenada plant boiler for process heating requirements. The ability to utilize Koppers generated hazardous waste as fuel will significantly reduce treatment and disposal costs while also utilizing the fuel value of those wastes. Since the boiler and storage facility are not currently included in the RCRA permit, the permit needs to be modified to allow these operations.

Additionally, Koppers is requesting temporary authorization to operate. This would allow Koppers to burn hazardous waste fuel in the boiler and store hazardous waste in the storage facility while the permit modification is being evaluated by the EPA.

NOTICE OF PERMIT MODIFICATION REQUEST
AND 60-DAY COMMENT PERIOD
KOPPERS INDUSTRIES, INC.- GRENADA, MS.

PUBLIC MEETING

Koppers will hold a public meeting to provide information and answer questions about this modification request and the proposed operations. The meeting will include a visit to the boiler. The meeting will be held on Thursday, September 17, 1992 at 6:00 P.M. at the Tie Plant Elementary School, Tie Plant, MS.

COMMENT PERIOD

Commensing on the date of this announcement, the EPA will accept comments on the requested permit modification for 60 days. Comments should be sent to the EPA contact listed below:

Ms. Elizabeth Ketcham
U. S. EPA Region 4
RCRA and Federal Facilities Branch
Second Floor
345 Courtland Street
Atlanta, GA 30365

INFORMATION SOURCES

Copies of the modification request and supporting documents will be available for viewing and copying at the following locations:

Elizabeth Jones Public Library
1050 Fairfield Ave.
Grenada, MS

Koppers Grenada Plant
Tie Plant Road
Tie Plant, MS

Questions may be directed to the following contacts:

Koppers Industries, Inc.	Ron Murphey	601-226-4584
U. S. EPA, Region 4	Elizabeth Ketcham	404-347-3433
MS DEQ	Jim Bassett	601-961-5171

The permittee's compliance history during the life of the permit being modified is available from the EPA contact person.

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001
Fax: (412) 227-2423

via FEDERAL EXPRESS

January 28, 1992

David Peacock
Hazardous Waste Division
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Koppers Industries, Inc. Grenada Plant, Industrial Boiler, MSD 007 027 543

Dear Dave:

This letter is in response to my conversation with Steve Spangler on January 23, 1992. In my earlier letter of December 13, 1991, I had provided Koppers Industries, Inc. (Koppers) proposal to continue operation of our industrial boiler under the new BIF permitting program. Your response to that letter of January 3, 1992 stated that, if the boiler was operated as described by Koppers, DEQ would determined that Koppers boiler would be considered to be a "commercial" hazardous waste facility. I am now presenting revisions to Koppers plans for operating the boiler, as first outlined in our December 13 proposal, designed to allow operation of the boiler without triggering the "commercial" status.

Your letter stated that Mississippi State law defines a commercial hazardous waste facility as one that receives hazardous waste from more than one generator and receives a fee for receiving this waste. Koppers original proposal was to charge an internal fee to each Koppers plant which generated the waste on a per drum basis. Instead, Koppers proposes to operate the hazardous waste burning at the Grenada boiler as a separate cost center. Costs will be absorbed by the company. No fee will be charged to the generating plants nor will any proportional cost sharing device be used which would amount to a fee. Thus, the facility will not be operated for a fee or for profit nor will costs be backcharged to Koppers' generating locations.

All other provisions of my December 13 proposal remain unchanged. Based on your letter of January 3, Koppers expects that the boiler can be operated as now proposed without being considered a commercial hazardous waste facility. Please let me know as soon as possible of Mississippi's opinion in this matter. Koppers must proceed promptly with our program in order to meet the required permitting deadlines.

The Grenada plant manager and I would like very much to present our case in person if there are other concerns about our proposal held by you or other DEQ staff. Please call at (412)227-2677 if you have questions, comments, or would like to arrange a meeting.

Sincerely,

Stephen T. Smith
Environmental Program Manager

cc: Dan McLeod, MS DEQ
Ron Murphy, Grenada, MS
W. R. Donley, K-1750
R. S. Ohlis, K-1750
J. R. Batchelder, K-1701
Anaxis Duhon, Woodward Clyde Consultants, Baton Rouge, LA

KOPPERS INDUSTRIES

Koppers Industries, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219-1800

Telephone: (412) 227-2001
FAX: (412) 227-2423

via FEDERAL EXPRESS

December 13, 1991

David Peacock
Hazardous Waste Division
Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

Re: Koppers Industries, Inc. Grenada Plant, Industrial Boiler, MSD 007 027 543

Dear Dave:

I am glad that we were able to meet on November 19, 1991 and thank you for sending me the copy of the Mississippi laws and regulations. At our meeting, a question arose as to whether or not the Koppers boiler would be considered a "commercial" hazardous waste facility. I am now writing to address that issue and to seek the state's determination that the facility is not "commercial" as Koppers proposes to operate it.

History

The Grenada wood preserving plant was constructed in 1904. Koppers Company, Inc. acquired the plant in 1944. Kopper Industries, Inc. purchased the plant in Dec. 1988. The plant consists of approximately 171 acres.

Industrial operations include wood preserving, a pole peeler, dry kiln operation, rail road tie sorting and milling, and trucking. Energy needs for these operations are provided by a wood fired steam boiler and a cogeneration turbine generator system. Plant employment is approximately 70 people. The Wellons wood fired boiler was constructed in 1979 to replace the oil fired boiler and provide a more economical source of energy. Wood waste from the peeler and tie mills and from other local lumber mills is used to fuel the boiler.

In 1982, based on stack test results showing 99.99% destruction and removal efficiency in wood preserving constituents burned, the air permit was modified to allow cofiring of fuel additive with the wood waste fuel. Since 1982, Koppers has used wood preserving process wastes from other Koppers owned facilities as a fuel additive in this boiler. The fuel additive program at the Grenada boiler has been valuable to Koppers by providing an alternative to land disposal of our process wastes while reducing the Grenada plant's need to purchase supplementary fuel. These process wastes were not RCRA hazardous wastes.

RCRA Listings

On June 6, 1991, new RCRA hazardous waste listings became effective which defined wood preserving wastes from plants utilizing pentachlorophenol as F032 hazardous waste. This listing was made under HSWA authority which made the listing effective immediately in RCRA both authorized and unauthorized states. Additionally, wastes from wood preserving operations using creosote were listed as F034 hazardous waste and wastes from arsenical and chromium preservative operations were listed as F035 hazardous waste. These were not HSWA regulations, though, so will become effective in Mississippi when implementing regulations are passed.

These new listings mean that to continue burning Koppers generated process wastes, the boiler must be permitted as a hazardous waste facility.

Proposed Operation

It is Koppers intention to proceed with permitting the Grenada boiler in accordance with the new Boiler and Industrial Furnace (BIF) regulations, 40 CFR 266. The first steps of this process have already been completed, including submission of a revised Part A Application, submission of a Precompliance Certification, and public notice.

Koppers proposes to continue operation of the boiler and fuel additive program as in the past, with modifications as necessary to comply with the BIF operating requirements. The process wastes which we will use for fuel additive are wood preserving wastes from Koppers operated plants using pentachlorophenol and/or creosote and process wastes from Koppers operated coal tar plants. The coal tar plants manufacture creosote and other coal tar derivative products. Thus, these wastes consist of the same constituents and have similar fuel values as the creosote wood preserving wastes. The only fuel additive wastes to be accepted will be process wastes generated at plants operated by Koppers Industries, Inc.

The Grenada plant boiler will not be operated "for profit." For the purpose of balancing expenses, handling and permitting costs incurred by Grenada plant will be transferred to the other Koppers generator locations. These will only be internal accounting transfers and will not be true income for Koppers. Wastes from other companies will not be accepted.

Non-Commercial

The Koppers Grenada boiler will not be operated as a commercial facility. No new business will accrue to Koppers do to the fuel additive program. Only internally generated wastes from Koppers operated locations will be used for fuel additive. The volume of waste handled will be much less than that normally associated with a commercial facility. In this case, a maximum of three truckloads of material per week will be brought into the plant. The "wastes" to be used are actually high BTU value fuel which will be beneficially used to produce needed steam and electricity for the Grenada plant. Wastes will not be accepted from any company or location external to Koppers. The fuel additive program will not be a "for profit" operation. The boiler will be a non-commercial facility.

Remaining Issues

Assuming that your agency determines that the boiler, operated as described above, is non-commercial, then Koppers will proceed with the remaining permitting and operational issues as follows:

Boiler cleanout procedures - Koppers recognizes your concerns about the cleanout procedures previously submitted. Procedures will be rewritten to incorporate your comments and we will work with you in developing a mutually acceptable cleanout procedure.

Facility Improvements - Based on the initial precompliance certification, we realized that the boiler stack is to low to provide a reasonable mixing zone. A higher stack will be installed according to good engineering practice. Other RCRA facility improvements will also be made, including fencing the fuel additive and ash handling areas, improve storm water runoff containment, and posting of warning signs. A stack gas emission monitoring system will be installed.

Compliance Certification - A test burn will be conducted to include the BIF and MS DEQ requirements. Following the test burn, the Compliance Certification will be prepared and submitted.

Koppers views this project as important in allowing us to be a responsible corporate citizen by safely managing our own wastes our selves, to avoid long term liability and environmental damage by minimizing land disposal, and to assure Koppers long term economic health by having an alternative to the exorbitant costs of hazardous waste disposal and incineration. Additionally, Koppers will be beneficially using these residuals to recover there inherent fuel value. I look forward to your response to this letter and working with you more in the future. Please call at (412)227-2677 if you have questions, comments, or would like to discuss any of these issues. Koppers can also meet with you again either in Jackson or at the Grenada plant.

Sincerely,

Stephen T. Smith
Environmental Program Manager

cc: Dan McLeon, MS DEQ
Ron Murphy, Grenada, MS
W. R. Donley, K-1750
R. S. Ohlis, K-1750
J. R. Batchelder, K-1701
Anaxis Duhon, Woodward Clyde Consultants, Baton Rouge, LA

FILE COPY

Grenada

September 26, 1990

Mr. J. D. Clayton
Koppers Industries, Inc.
P. O. Box 160
Tie Plant, Mississippi 38960

Dear Mr. Clayton:

Re: Operating Permit No. 0960-00012
Tie Plant, Mississippi

We have received your application for renewal of the referenced Operating Permit. In accordance with Regulation APC-S-2, Section 3.1.2, your existing Operating Permit "shall remain in effect until final action on the application is taken by the Permit Board", even if the permit expires prior to the final action.

If you have any questions, please contact us.

Very truly yours,

Tim Parrish
North Air Emissions Section

TP:vb

DATA CODED

Grenada

FILE COPY

STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS
GOVERNOR

MEMORANDUM

TO: File

FROM: Danny S. Jackson

RE: Koppers Industries

DATE: July 15, 1990

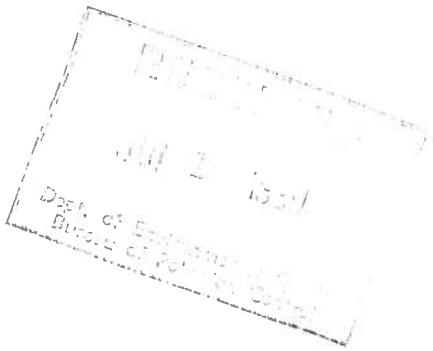
On July 13, 1990, this company (Mr. J. D. Clayton) was contacted by telephone and advised that the material it wishes to burn (coal tar distillate bottoms) is not a material currently authorized or allowed by the source's PTO. One time permission to burn such material was therefore denied.

Grenada

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588



July 6, 1990

Mr. Danny Jackson
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Ms. 39289-0385

Re: Koppers Industries, Inc.
Grenada, Ms. Facility
Boiler Permit No. 0960-00012

Dear Mr. Jackson:

As we discussed by phone and in letters dated April 17 from KII to your office and May 30, 1990 from you to KII, Koppers remains very interested in obtaining your office's one time permission to burn coal tar distillate bottoms as fuel additive at our Grenada industrial boiler.

This material orgininated from the cleanout of a creosote storage tank at KII's Carbondale, Ill. wood treatment plant. The drums were labeled as coal tar distillate bottoms, which seemed most appropriate because our plan was to recover the material as product or to use as fuel. As explained in our previous letter to you, we have not been able to recover the material as product and, due to it's crystalline nature, the only suitable combustion system is our Grenada boiler.

This material, although labeled differently, is really not a different material than we are currently burning as fuel additive. Attached is a comparative analysis of the Carbondale, Illinois bottoms material and typical creosote process waste which we will be burning at Grenada from another KII treating plant. As you can see, there is no significant chemical difference between the two materials.

Koppers Industries, Inc. (KII) request a one time variance on our permit to burn this coal tar distillate bottoms in our boiler under our existing permit. We do not expect to generate this material again.

KII believes that burning this material for energy recovery as fuel in our boiler is the most appropriate use for the material. Further, as this material is chemically the same as the creosote waste we currently are permitted to burn, there will be no increase in emissions or different compounds emitted than are now with our permitted fuel additive use. Lastly, our remaining options of land disposal or incineration are much less appropriate and no more enviromentally protective.

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588

We would very much appreciate your prompt review and approval of this request as we now have the capacity and need for this additional fuel source. Please call me at (601)226-4584 or Stephen Smith in Pittsburgh at (412)227-2677 if you have questions.

Sincerely,

J. D. Clayton
Plant Manager

CC: J. R. Batchelder, K-1700
Dave Kerschner, K-1450
Stephen Smith, K-1801

National Laboratories, Inc.
3210 Claremont Avenue
Evansville, IN 47712
Telephone (812) 422-4119

Kopper Company, Inc.
Attn: Mr. Clark Mitchell
P. O. Box 270
Carbondale, IL 62918

LOCATION:

DATE RECEIVED: 7-19-88
DATE REPORTED: 7-28-88
P.O. NUMBER:

SAMPLE #: 31003

PARAMETERS	
Copper	5.08 mg/kg
Chromium	0.88 mg/kg
Arsenic	1.7 mg/kg
Zinc	7.92 mg/kg
Boron	3.1 mg/kg
BTU	13,300 BTU/lb
Moisture %	22.5 %

Analyses Reference: Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1985

National Laboratories, Inc.

Eula Megli, M.S.
Lab Supervisor

JUL 00

KOPPERS INDUSTRIES

INTEROFFICE CORRESPONDENCE

To:	Steve Smith	From:	R. T. Baileys
Location:	KII, K-1801	Location:	KII, Technical
Subject:	Comparison of Process Wastes	Date:	July 6, 1990

Samples of Carbondale tank residue and Susquehanna process waste from creosote treating have been analyzed as per your request and results are on the attached table. Content of both samples is very similar and the materials can be considered equivalent (Jim McFadden agrees with this assessment). Variation of a few percentage points on GC analysis can be expected, even on creosote work tank samples. My opinion of the differences here are that light solvent oils (quinoline thru fluorene) have been milked from the Carbondale tank residue leaving a PAC rich material behind which also explains the higher PAC percentages for these components. Very little difference shows on heavy end components with boiling points higher than carbazole. Susquehanna's sample is a truer mix of all components that were originally in the creosote product. Naphthalene adhering to walls of the tank (and roof) as crystals and removed with other tank residue at Carbondale would explain this difference.

Randy

R. T. Baileys

RTB/pks

cc: J. R. Batchelder
J. E. McFadden
D. A. Webb

FAX

DEPARTMENT OF ENVIRONMENTAL QUALITY
Bureau of Pollution Control
P. O. Box 10385
2380 Hwy 80 West
Jackson, MS 39289-0385
FAX Number: (601)961-5190

Date 5/30 19 90

Please deliver the following 3 pages including transmittal sheet to:

Name Steve Smith Phone (412) 227-2423

Location _____

☑ Routine ☐ Priority

From:

Name Danny Jackson Phone (601) 961-5171

Location _____

Message

If all pages are not received or are not legible please call us as soon as possible at (601)961-5139.

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
RAY MABUS
GOVERNOR

FILE COPY

May 30, 1990

Mr. J. D. Clayton
Koppers Industries, Inc.
P.O. Box 160
Tie Plant, Mississippi 38960

Dear Mr. Clayton:

Re: Operating Permit No. 0960-00012
Grenada, Mississippi

We understand from your letter dated April 17, 1990, that your company wishes to burn a new material as a fuel additive in the boiler at the Grenada plant. Please be advised that this material, coal tar distillate bottoms, is not authorized by the facility's air pollution permit and therefore is restricted until such time as necessary permits are obtained.

To pursue required air pollution permits, you should apply using the enclosed permit application and identify the operations and all pollutants. As a minimum, each pollutant and pollutant emission rate from each burning condition (new and existing) must be provided. Pollutant emission rates will need to be given in units of lbs/hr and tons/year based on capacity operations and at proposed operations, if different. Supportive assumptions, bases, and calculations should be provided. Also, the exhaust or stack parameters for each pollutant (height, velocity, diameter, and temperature) must be identified.

Also, for your information, enclosed please find a copy of procedures that will be used as a part of our evaluation of toxic pollutants.

If you have questions, please advise.

Sincerely,

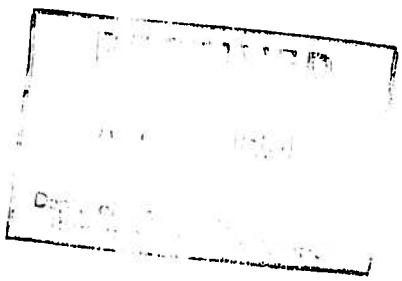
Danny S. Jackson, Coordinator
North Air Emissions Section

DSJ:sr

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588



April 17, 1990

Mr. Sam Mabry
Mississippi Dept. of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Ms. 39289-0385

Dear Mr. Mabry:

This refers to our telephone conversation on April 4, 1990 regarding fuel additive burning at our industrial boiler at Grenada.

The material in question is coal tar distillate bottoms with properties essentially of creosote. This material was drummed as such with the intent to recover as product or to burn as fuel. Recovery to specification product proved infeasible so we are considering the fuel option. Because of the crystalline nature of the material, it would handle best as a fuel additive onto the woodwaste chip feed of our Grenada boiler. There are approximately 1800 drums involved.

This material closely resembles the creosote process wastes typically used in the boiler, with high BTU content. I have attached the characterization analysis demonstrating the compliance of this material with the permit requirements.

The reason we called you regarding this was because the permit references "creosote waste", and the material in question is technically not considered to be a "waste". We do feel that this material fits the intent of the permit, which allows the co-firing of high BTU materials as fuel additives.

It is our intent to use this material in exactly the same manner as the creosote process waste in full accordance with the conditions of the permit. We would appreciate receiving your concurrence to use this material as a fuel additive.

Sincerely,

J. D. Clayton

J. D. Clayton

cc: Mr. James R. Batchelder
Koppers Industries, Inc.

National Laboratories, Inc.
3210 Claremont Avenue
Evansville, IN 47712
Telephone (812) 422-4119

Kopper Company, Inc.
Attn: Mr. Clark Mitchell
P. O. Box 270
Carbondale, IL 62918

LOCATION:

DATE RECEIVED: 7-19-88
DATE REPORTED: 7-28-88
P.O. NUMBER:

SAMPLE #: 31003

PARAMETERS	
Copper	5.08 mg/kg
Chromium	0.88 mg/kg
Arsenic	1.7 mg/kg
Zinc	7.92 mg/kg
Boron	3.1 mg/kg
BTU	13,300 BTU/lb
Moisture %	22.5 %

Analyses Reference: Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1985

National Laboratories, Inc.

Eula Megli

Eula Megli, M.S.
Lab Supervisor

KOPPERS INDUSTRIES

Koppers Industries, Inc.
P.O. Box 160
Tie Plant, MS 38960

Telephone: (601) 226-4584
FAX: (601) 226-4588

February 15, 1990

Mr. C. Adam Smith
Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Ms. 39289-0385

Re: Koppers Industries, Inc.
Grenada, Ms. Facility
Boiler Permit No. 0960-00012 Renewal

Dear Mr. Smith:

The completed reapplication form for the Koppers Industries, Inc. wood fired boiler operating permit is attached. Results of the emission test was forwarded to you in July,1988.

If you have any questions, please call me or Mr. Steve Smith of Koppers Industries, Inc. at (412) 227-2677.

Sincerely,

J. D. Clayton
Plant Manager

JDC/jrb
Attachment

CC: S. Smith
W. R. Donley

FILE COPY

June 29, 1989

DATA CODED

Mr. J. D. Clayton, Acting Plant Manager
Koppers Company
P. O. Box 160
Tie Plant, Mississippi 38950

Dear Mr. Clayton:

Re: Operating Permit No. 0960-00012
Tie Plant, Mississippi

This letter is to inform you that the above referenced operating permit has been reissued, and the new expiration date is May 1, 1990.

Any appeal of this permit action must be taken in accordance with Section 49-17-29(4)(b) Mississippi Code of 1972.

If you have questions or if we can be of any service, please let me know.

Very truly yours,

C. Adam Smith
Air Emissions Section

CAS:els

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

MEMORANDUM

TO: Koppers Compliance File

FROM: Kaleel Rahaim KR

SUBJECT: Beazer Materials & Services, Inc.; Koppers Industries, Inc. Meeting Concerning Apparent Violations cited at December, 1988 Compliance Evaluation Inspection (CEI)

DATE: May 26, 1989

A meeting was held May 24, 1989, with representatives of Beazer Materials & Services, Inc. and Koppers Industries, Inc. The purpose of the meeting was to resolve the status of apparent violations cited during a CEI conducted at the facility December, 1988.

The first topic of discussion was the matter of sprayfield status at the facility. Because of recent court rulings, it was indicated that the Bureau of Pollution Control (BPC) will consider this unit a Solid Waste Management Unit (SWMU). Modification of the Hazardous Solid Waste Amendment (HSWA) permit will probably be needed to address groundwater contamination from this unit. Since the most recently submitted Part A does not refer to the sprayfield, no revision is necessary.

We notified Beazer Materials and Services, Inc. (BMC) and Koppers Inudstries, Inc. (KII) that the Mississippi Natural Resources Permit Board approved the Closure Plan for the Boiler Ash Landfill and modification to the Permit concerning cap construction on the closing surface impoundment. BMS indicated that they would maintain financial assurance responsibility for the Boiler Ash Landfill as well as the Surface Impoundment. Dave Bockelmann of BPC indicated that on the post closure permit, it did not matter that BMS would not be the operator of that unit. The post closure permit will be drafted after completion of the Groundwater Quality Assessment Program to be done by BMS.

A review of apparent violations and proposed penalties followed. The summary of the apparent violations and penalty calculations follows:

1. For storage of six drums of U051 hazardous waste for longer than ninety days in a less than ninety day storage area, a penalty of $3,749 was calculated. BMS indicated that they would submit additional documentation outlining their attempts

to dispose of this "soft hammer" waste. BPC responded with a $750 reduction in penalty if the documentation warranted. The new penalty would be $2,999.00.

2. For failure to construct a replacement well for well #R-1 in a timely manner as required by Permit #88-543-01, the penalty assessed was $3,479.00. Matt Plautz of BMS will review the delayed cost component of this penalty within 2-3 days to ascertain if adjustment is warranted. Barring adjustment this amount will stand.

3. For failure to maintain adequate run-on/run-off control over ashes at the Boiler Ash Landfill Area, a penalty of $313.00 was calculated. No discussion ensued on this issue.

4. Failure to notify for groundwater contamination at the Surface Impoundment and Boiler Ash Landfill Area resulted in a calculated penalty of $17,500. Neither BMS nor KII commented on this issue.

5. Oil/water separator sludge handling, burning and ash disposal violations resulted in a penalty calculation of $51,453. Results of discussions between BPC and BMS are summarized in the following paragraphs.

   Sam Mabry of BPC reviewed the previous discussion between BMS and BPC on oil/water separator sludges. He proposed a settlement in lieu of a financial penalty pending approval from US Environmental Protection Agency (EPA), Region IV.

   The proposed alternative included:

   a) An agreement between BMS, KII and BPC that from this point forward, oil/water separator sludge either generated on-site at the Grenada, Mississippi facility or brought in from off-site be labeled and treated as hazardous waste K001.

   b) An assessment of impact on human health and the environment be conducted on the Grenada Landfill (site of ash disposal from the burning of oil/water separator sludge). Depending on initial evaluations, a groundwater monitoring program at the site may be necessary. This, too, would be conducted by BMS.

Details of the proposed alternative would be negotiated pending an agreement in principal between BMS and BPC. Mr. Mabry will review with EPA, Region IV and Billie Nolan will review with BMS. A timetable of two weeks from the date of the meeting has been set as an action date for this issue.

Another issue discussed was the burning of process residues from off-site, non-Koppers facilities in the boilers at the Grenada, Mississippi facility. Ms. Nolan indicated that this practice was recently initiated by KII in response to some competitive pressures. She felt that upon review of the various permits involved, nothing in those permits precluded such action. Mr. Mabry indicated concern that the Hazardous Waste Permit specifically mentioned, in the Fuel Additives Program (FAP) section, that only waste from Koppers facilities would be burned in this program. In addition, the Air Permit writers apparently were not aware that off-site materials were to be burned. Ms. Nolan will refer this matter to Mr. James Batchelder of KII for his involvement in these discussions.

Summary of a request made by Kaleel Rahaim of BPC concerning descriptions of wastes manifested to this facility was made. KII and BMS feel that being more specific as to the source of the waste manifested in to the facility would be no problem.

List of Attendees

Ms. Billie Nolan - Manager, Environmental and Administration Law Department - BMS

Mr. Matthews Plautz, P.E. - Program Manager - Environmental Services - BMS

Mr. J.D. "Rock" Clayton - Plant Manager - Grenada, MS - KII

Mr. Sam Mabry - Administrator - Hazardous Waste Division - BPC

Mr. Steve Spengler - Section Chief - TSD Facilities - BPC

Mr. David Bockelmann - Branch Chief - Hydrology - BPC

Mr. Kaleel Rahaim - Environmental Engineer, BPC

KR:lr

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

January 31, 1989

FILE COPY

Mr. Robert K. Wagner, Vice-President
Koppers Industries, Inc.
486 Seventh Avenue
Pittsburgh, PA. 15219

Dear Mr. Wagner:

This is to acknowledge receipt of Mr. Robert J. Anderson's letter dated December 20, 1988, your company's submittal of an application for renewal of the referenced permit, and submittal of results of compliance testing.

We plan to reflect your company's name change when permit renewal occurs. Also, since application for permit renewal has been made, your company's existing permit will continue in effect until your application is acted upon by the Mississippi Natural Resources Permit Board. We had hoped to have completed our review for permit renewal by now, but resource limitations have caused delays. We apologize for any inconvenience.

Very truly yours,

Jay H. Barkley
North Air Emissions Section

JHB:sr
cc: Robert J. Anderson
Jackie D. Clayton

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

Phone: 412/227-2694 436 Seventh Avenue, Suite 1940, Pittsburgh, PA 15219 Fax: 412/227-2436

December 20, 1988

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Mr. Daniel Jackson
Bureau of Pollution Control
Mississippi Department of Natural Resources
2380 Highway 80 West
Jackson, MI 39204

Dear Mr. Jackson:

Please be advised that, effective December 28, 1988, the assets at the Koppers Company, Inc. wood treating plant located on Tie Plant Road, Tie Plant, Mississippi are scheduled to be sold by Koppers Company, Inc. to Koppers Industries, Inc. The address of Koppers Industries, Inc. will be 436 Seventh Avenue, Pittsburgh, PA 15219.

It is hereby requested that, as of December 28, the following permit be transferred to Koppers Industries, Inc:

Boiler Operating Permit No. 0960-00012

Page 1 of the application form identifying the name of the new owner is attached. Should there be any questions or additional information required, please contact me at 412-227-2683.

Sincerely,

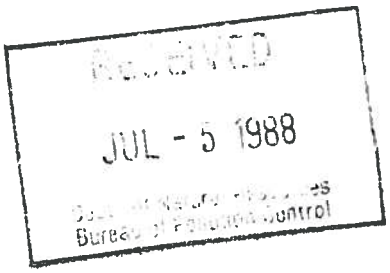
Robert J. Anderson
Staff Program Manager
Koppers Treated Wood Products

RJA/cr
Attachment

cc: J. Batchelder
B. Magee
G. Edwards
J. Clayton

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

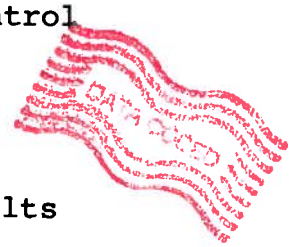
Phone: 412/227-2694 436 Seventh Avenue, Suite 1940, Pittsburgh, PA 15219 Fax: 412/227-2436



July 1, 1988

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Mr. Dan Jackson
Mississippi Department of Natural Resources
Bureau of Air Pollution Control
2380 Highway 80 West
Jackson, MS 39209



Re: Koppers Company, Inc.
Grenada Facility
Boiler Stack Test Results

Dear Mr. Jackson:

As stipulated by the air operating permit for the Koppers Company, Inc,. Grenada, MS facility, please find enclosed the results for the boiler stack test performed during the week of May 2, 1988. These results show that the boiler is well within compliance with regards to particulate emissions, and that the boiler effectively destroys constituents associated with using wood treating wastes as fuel additive material.

If you would like additional information or have any questions, please call.

Sincerely,

Robert J. Anderson
Staff Program Manager
Koppers Treated Wood Products

RJA/cr
Enclosure

cc: J. D. Clayton
J. Batchelder
J. Kane (w/o enclosure)
J. Lampe (w/o enclosure)

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

Phone: 412/227-2694 436 Seventh Avenue, Suite 1940, Pittsburgh, PA 15219 Fax: 412/227-2436

July 1, 1988

CERTIFIED MAIL
RETURN RECEIPT
REQUESTED

Mr. Dan Jackson
Mississippi Department of Natural Resources
Bureau of Air Pollution Control
2380 Highway 80 West
Jackson, MS 39209

Re: Koppers Company, Inc.
Grenada Facility
Boiler Stack Test Results

Dear Mr. Jackson:

The Appendices to the stack test report for the Koppers Grenada facility are enclosed. Please attach these to the report.

If you would like additional information or have any questions, please call.

Sincerely,

Robert J. Anderson

Robert J. Anderson
Staff Program Manager
Koppers Treated Wood Products

RJA/cr
Enclosure

cc: J. D. Clayton
J. Batchelder
J. Kane (w/o enclosure)
J. Lampe (w/o enclosure)

Koppers Company, Inc.
436 Seventh Avenue
Pittsburgh, PA 15219
Telephone 412-227-2000

KOPPERS

April 22, 1988

Mr. Kenneth L. Petre
Mississippi Department of Natural Resources
Bureau of Pollution Control
Box 2380 HWY 80 West
Jackson, MS 39209

Re: Koppers Company, Inc.
Grenada, MS Facility
Boiler Permit No. 0960-00012 Renewal

Dear Mr. Petre:

The completed reapplication form for the Koppers Company, Inc. wood-fired boiler operating permit is attached. Results of the emission test will be forwarded to you by July 1, 1988, as stipulated in the current permit.

If you have any questions, please call me or Mr. Robert Anderson of Keystone Environmental Resources, Inc. at (412) 227-2683.

Sincerely,

J. D. Clayton,
Plant Manager

JDC/cr
Attachment

cc: J. T. Kane
R. Anderson
J. Batchelder
D. King

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

MEMORANDUM

TO: Danny S. Jackson

FROM: Kenneth L. Petre

SUBJECT: Koppers Co., Inc.
Source No. 0960-00012
Grenada County
Grenada, Mississippi
Minor/North

DATE: May 9, 1988

Koppers Co., Inc., of Grenada has completed the attached stack testing plan as required by their present operating permit. A total of four tests at different fuel rates were conducted.

The tests should be classified as follows:

The number one series was a back ground level test with no pentachlorophenol (PCP) or creosote feed, also it should be noted that no soot blowing was conducted during this series; the number two series was conducted with a feed rate of 400 pounds per hour of creosote, soot blowing was conducted during the second test run of the particulate tests; the number three series was conducted with a feed rate of 800 pounds per hour of creosote, soot blowing was conducted during the second test run of the particulate tests; the number four series was conducted with a PCP feed rate of 400 pounds per hour and soot blowing was conducted during the second run of the series.

Soot blowing normally takes place six minutes per 24 hour period. The soot blowing during each run took approximately three minutes from start to finish.

Also, Hydrocarbon testing was conducted during each separate feed rate to calculate Destruction and Removal Efficiencies (DRE) of the POHC's. Feed samples were taken for BTU content analysis as well as to calculate DRE's.

All testing procedures used by Keystone Environmental Resources, Inc., appeared acceptable and conformed to operating procedures used in normal testing. Therefore, I recommend that the field portion of this test is acceptable.

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS

Architectural and
Construction Materials

May 3, 1988

Mr. Ken Petre
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms.
Source No. 0960-0012

Dear Mr. Petre:

As required by our operating permit, the following are enclosed for April, 1988:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

440 College Park Dr., Monroeville, PA 15146

April 20, 1988

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

RE: Permit NO 0960-00012

Dear Ken:

As we discussed, the attached document is the test plan for the Koppers Grenada boiler permit renewal. Please review the document and notify us if you feel there are any deficiencies in the proposed program. As I explained we are on a tight schedule as we would like to perform the tests the week of May 2nd.

I can be reached at the above address or at my direct number which is 412-733-9427.

Sincerely,

John T. Kane, Jr.

JTK/smj

Attachment

cc: R. Anderson
J. Batchelder
R. Clayton

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

November 4, 1987

Mississippi Department of Natural Resources
Bureau of Pollution Control
P. O. Box 10385
Jackson, Ms. 39209
ATTN: Mr. Kenneth L. Petre

Dear Mr. Petre:

In response to your letter dated October 22, 1987, we had to put in a new thermocouple to the recorder several months ago and they used the wrong kind of wire.

We replaced this with the right wire on October 28, 1987, and the recorder is working right at the present time. If I can be of any further assistance please let me know.

Sincerely,

J. D. Clayton
Plant Manager

JDC/dm

cc: File

File

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

Granada

KOPPERS
Architectural and
Construction Materials

November 3, 1987

Mr. Dan McLeod
Mississippi Department of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for October, 1987:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip charts of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

FILE
COPY

October 22, 1987

Mr. J. D. Clayton
Koppers, Inc.
Treated Wood Products Division
P.O. Box 160
Tie Plant, MS 38960

Dear Mr. Clayton:

Re: Koppers, Inc.
Permit No. 0860-00012
Crenpon, MS

The information submitted in the past few months is not evidencing acceptable boiler operations. The charts used in recording temperatures in the boilers are not showing any boiler temperatures exceeding 1000°F. As you know, to obtain required Destruction and Removal Efficiencies (DRE) for toxic emissions, temperatures must be in excess of 1600°F with a 2 second retention time. Also reporting is indicating that visible emissions are exceeding the opacity standard.

Your investigation of these apparent problems and action to assure compliance is needed. Also, we ask that you write us as soon as possible to explain these problems and any needed improvements.

Should you have questions, please let us know.

Sincerely,

Kenneth L. Petre
North Air Emissions Section

KLP:ef

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

October 19, 1987

Mr. Robert Anderson
1940 Koppers Building
Pittsburg, PA. 15219

Dear Mr. Anderson:

Our review and any subsequent permit approval for an industry to utilize a chemical or waste derived fuel must involve considerations for air toxics. Our procedures for review of toxic emissions are identified in the enclosed summary.

Also, there are regulations for the incineration of hazardous waste and proposed regulations for the burning of hazardous waste in boilers and industrial furnaces. Compliance with these regulations will be necessary.

Should you have further questions, please let us know.

Very truly yours,

Danny S. Jackson, Coordinator
North Air Emissions Section

DSJ:sr

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

October 5, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for September, 1987:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton /rt

J. D. Clayton

JDC/rt

cc: File

Enclosures

Forest Products Division, Koppers Company, Inc.
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

Grenada

KOPPERS
Architectural and
Construction Materials

September 3, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for August, 1987:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

Amended

KOPPERS
Architectural and
Construction Materials

July 8, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for June, 1987.

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/rt

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

June 2, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P.O. Box 10385
Jackson,Ms. 39205

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for May, 1987.

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hestitate to call if you need anything further.

Sincerely,

J.D. Clayton

JDC/jrb

cc: File

Enclosures

Forest Products Division, Koppers Company, Inc.
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

May 1, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for April, 1987.

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS

Architectural and
Construction Materials

March 4, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for February, 1987:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/rt

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

Grenada

KOPPERS
Architectural and
Construction Materials

February 5, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for January, 1987:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

FILE COPY

Grenada

January 30, 1987

Mr. J. D. Clayton
Acting Plant Manager
Koppers Company, Inc.
P. O. Box 160
Tie Plant, Mississippi 38950

Dear Mr. Clayton:

Re: Facility No. 0960-00012
Tie Plant, Mississippi

On January 9, 1987, Bureau personnel performed an inspection of the referenced facility. There were no apparent air pollution problems.

If you have any questions, please contact us.

Very truly yours,

Dan N. McLeod
North Air Emissions Section

DNM:els

Grenada

January 27, 1987

Mr. David L. King, Regional
Environmental Coordinator
Keystone Environmental Resources, Inc.
P. O. Box 15490
North Little Rock, Arkansas 72231

Dear Mr. King:

Re: Koppers Company, Inc.
Facility No. 130-0960-00012
Tie Plant, Mississippi

In response to your letter of January 7, 1987, the staff has reviewed your request and have concluded that weighing drums in lots of three would not create any significant problems.

Should you like to discuss this matter further, please feel free to contact me at 961-5171.

Sincerely,

Dan N. McLeod
North Air Emissions Section

DNM:cm
cc: Mr. J. D. Clayton, Koppers Company, Inc.

Grenada

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

436 Seventh Avenue, Suite 1940, Pittsburgh, PA 15219

January 23, 1987

Mr. Dan N. McLeod
North Emission Section
Mississippi Department of Natural Resources
Bureau of Pollution Control
Post Office Box 10385
Jackson, MS 39209

Re: Koppers Company, Inc.
Tie Plant, Mississippi
Operating Permit #0960-00012

Dear Mr. McLeod:

As we discussed on January 20, 1987, Keystone Environmental Resources (KER) was formally Koppers' Environmental Division and now is a wholly-owned subsidiary of Koppers Company, Inc. Therefore, if your department receives any correspondence in the future with a KER letterheading, you will know that we are representing the Koppers Grenada, Mississippi facility.

I hope this clarifies your concerns. If you have any further questions, please call me.

Sincerely,

David L. King

David L. King
Regional Environmental Coordinator

DLK/lf

cc C. P. Markle
J. D. Clayton

Grenada

KEYSTONE
ENVIRONMENTAL RESOURCES, INC.

436 Seventh Avenue, Suite 1940, Pittsburgh, PA 15219

January 7, 1987

Mr. Dan N. McLeod
North Emission Section
Mississippi Department of Natural Resources
Bureau of Pollution Control
Post Office Box 10385
Jackson, Mississippi 39209

RE: Koppers Company, Inc.
Tie Plant, Mississippi
Operating Permit Number 0960-00012

Dear Mr. McLeod:

Please refer to Part III entitled "Other Requirements, Section 2 (f) 7 of the above operating permit, which pertains to weighing individual containers of waste. As we discussed on January 6, 1987, the Koppers Grenada plant would like to receive approval from your department to weigh containers in lots of three, with the understanding that the contents of these same drums would be burned in lots of three in a manner that would not exceed maximum feed rates. Since truckload shipments are unloaded three drums at a time, this method would be more efficient from an equipment unloading standpoint compared to weighing each individual drum.

I would appreciate your consideration of this request. If you have any further questions, please do not hesitate to call me at 501-945-4581.

Sincerely,

David L. King

David L. King
Regional Environmental Coordinator

DLK/lf

cc C. P. Markle
J. D. Clayton

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

January 9, 1987

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for December, 1986:

1) Weight of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

December 18, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for November, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton/rt

J. D. Clayton

JDC/rt

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

November 12, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for October, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/djm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

October 8, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for September, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton/rt

J. D. Clayton

JDC/rt

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

September 16, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for August, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/djm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

August 13, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for July, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

J. D. Clayton

JDC/rt

cc: File
Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS

Architectural and
Construction Materials

July 17, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for June, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File
Enclosures

Koppers Company, Inc., Forest Prod[illegible] Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

June 4, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for May, 1986:

1) Weights of each container of waste with the sludge feeder rate.

2) In stack opacity strip chart.

3) Strip chart of the six boiler temperature sensors.

4) Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need anything further.

Sincerely,

J. D. Clayton

JDC/dm

cc: File
Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

April 4, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for March, 1986:

1. Weights of each individual container of waste with the sludge feeder rate.

2. In stack opacity strip chart.

3. Strip chart of the six boiler temperature sensors.

4. Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need any further information.

Sincerely,

J. D. Clayton

J. C. Clayton

JDC/rt

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

March 11, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for February, 1986:

1. Weights of each individual container of waste with the sludge feeder rate.

2. In stack opacity strip chart.

3. Strip chart of the six boiler temperature sensors.

4. Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need any further information.

Sincerely,

J. D. CLayton

JDC/djm

cc: File

Enclosures

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

DWW

TO: Dan McLeod
FROM: Stanley Watkins, NRO
DATE: March 5th, 1986

SUBJECT: Koppers Co., Inc.
P.O. Box 160
Highway 51
Grenada, MS
Grenada County #130-0960-00012

At the time of this inspection, they were burning pure creosote sludge with the woodwaste in the boiler. There was no evidence of plastic, metal or other foreign materials in the creosote sludge.

The gas fired boiler was not being used on this date.

There were no visible emissions from any of the plant's three cyclones. There were no fugitive emission problems from the plant.

SW:c

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

Amada

KOPPERS

Architectural and
Construction Materials

February 10, 1986

RECEIVED
FEB 11 1986
DEPT. OF NATURAL RESOURCE
BUREAU OF POLLUTION CONTROL

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for January, 1986:

1. Weights of each individual container of waste with the sludge feeder rate.

2. In stack opacity strip chart.

3. Strip chart of the six boiler temperature sensors.

4. Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need any further information.

Sincerely,

J. D. Clayton

J. D. Clayton

JDC/dm

cc: File

Enclosures

Koppers Company, Inc., Forest Products Group
P.O. Box 160, Tie Plant, MS 38960
Telephone 601-226-4584

KOPPERS
Architectural and
Construction Materials

January 8, 1986

Mr. Dan McLeod
Ms. Dept. of Natural Resources
Bureau of Pollution Control
North Air Emission Section
P. O. Box 10385
Jackson, Ms. 39205

RE: Koppers Company, Inc.
Tie Plant, Ms. 38960
Source No. 0960-0012

Dear Mr. McLeod:

As required by our operating permit, the following are enclosed for December, 1985:

1. Weights of each individual container of waste with the sludge feeder rate.

2. In stack opacity strip chart.

3. Strip chart of the six boiler temperature sensors.

4. Boiler operating capacity charts.

I have retained copies for my records. Please do not hesitate to call if you need any further information.

Sincerely,

J. D. Clayton/djm

J. D. Clayton

JDC/djm

cc: File

Enclosures

EMISSION INVENTORY - GENERAL

County ID: 0960 Facility ID: 00012 Date: 11/10/94

Facility Name: Koppers Industries, Inc.

Mailing Address: P.O. Box 160

City: Tie Plant State: MS Zip: 38960

Contact & Title: Ron Murphy, Plant Manager Phone: 601-226-4584

Facility/Plant Type: Wood Preserving Operation utilizing creosote & Pentachlorophenol SIC Code: 2491

Emissions Summary (Total for Each Pollutant From All Sources)			
Pollutant	Actual TPY	Potential TPY	
Particulate Matter	40.21	40.21	
PM_{10}	40.21	40.21	
SO_2	157.81	157.81	
NO_x	47.74	47.74	
CO	29.37	29.37	
VOC	18.88	18.88	
LEAD	0.0008	0.0008	
TRS	—	—	
HAP (Total for all Em. Pts.)	0.411	0.411	
HAP >10 TPY Each (List Below)			
OTHER:			
OTHER:			

REGULATION APPLICABILITY:

(X) SIP Only
( ) PSD
( ) NESHAP: Subpart _____
( ) NSPS: Subpart _____
( ) MACT; Source Category _____
( ) Other: _____

EMISSION INVENTORY - SOURCES

County ID: 0960 Facility I.D. 00012

AQCR: 135 UTM ZONE: — UTM EAST: — UTM NORTH: —

Sources		UTM Coordinates		Stack Parameters			
ID#	Description	East	North	Height (ft)	Diameter (ft)	Velocity (ft/sec)	Temp. (°F)
AA-001	37.5 MMBTUH Wood-Waste Boiler			80	3.0	55	350
AA-002	28.5 MMBTUH oil fired Boiler			36	2.5	32	520
AA-003	Wood Treatment Facility			—	—	—	—
AA-004	Tie Mill w/ cyclone			—	—	—	—

EMISSION INVENTORY - HAZARDOUS AIR POLLUTANTS

COUNTY ID: 0960 FACILITY ID: 00012

Source ID#	Operating Schedule			Emissions					
	h/d	d/wk	wk/yr	HAP		Actual		Potential	
				CAS #	NAME	lb/hr	ton/yr	lb/hr	ton/yr
AA-001	24	7	52		Mercury	2E-4	7E-4	2E-4	7E-4
AA-001	24	7	52		Various Metals	0.094	0.41	0.094	0.41
					TOTAL		0.411		0.411

EMISSION INVENTORY - CRITERIA POLLUTANTS

COUNTY ID: 0960 FACILITY ID: 00012

Source ID #	Hours per day	Days per week	Weeks per year	ACTUAL EMISSIONS															
				PM		PM_{10}		SO_2		NO_x		CO		VOC		TRS		LEAD	
				PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
			See	Page	5.														
TOTALS																			

EIF.4

EMISSION INVENTORY - CRITERIA POLLUTANTS

COUNTY ID: 0960

FACILITY ID: 00012

Source ID #	Hours per day	Days per week	Weeks per year	POTENTIAL EMISSIONS															
				PM		PM_{10}		SO_2		NO_x		CO		VOC		TRS		LEAD	
				PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
AA-001	24	7	52	6.75	29.57	6.75	29.57	20.63	90.36	6.56	28.73	5.63	24.64	4.27	18.70			2E-4	8E-4
AA-002	24	7	52	0.43	1.88	0.43	1.88	15.40	67.45	4.34	19.01	1.08	4.73	0.04	0.18				
AA-003	24	7	52	N/A															
AA-004	24	7	52	2.0	8.76	2.0	8.76												
TOTALS					40.21		40.21		157.81		47.74		29.37		18.88		—		8E-4

EIF.5

FILE COPY

The Daily Sentinel-Sta

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

Sonny J. Wolfe

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

Managing Editor

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

Vol. 140 No. 61 on the 27 day of Sept 1994

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Sonny J. Wolfe

Sworn to and subscribed before me, this 28th day of October, 1994

Stephanie Nance

My Commission Expires Sept. 5, 1995

(SEAL)

PUBLIC NOTICE

Mississipp[illegible] Environmental Quali[illegible]t Board
P.O. Box 10385
Jackson, MS 39289-0385
Telephone No. (601) 961-5171

Public Notice No. 94A-MS-045

Koppers Industries, Inc., P.O. Box 160, Tie Plant, MS 38960, (601) 226-4584 has applied to the Mississippi Department of Environmental Quality for a Permit to Construct Air Emissions Equipment. The applicant's facility (Facility No. 0960-00012) is a wood preserving operation. This facility is located on Tie Plant Road in Tie Plant, Mississippi. Koppers Industries, Inc. proposes the firing of treated wood in the existing woodwaste boiler. This will not be a major modification as defined by the Prevention of Significant Deterioration (PSD) Regulations, Regulation APC-S-5.

The impact of the emissions of air contaminants from the project has been evaluated and the staff of the Department believes that, with proper constraints and limitations on Koppers Industries, Inc., this project will operate within all State and Federal air pollution control laws and standards and will protect health and welfare. Therefore, the staff of the Board has preliminarily decided, based on available information, to recommend to the Board that a permit be issued containing numerous regulatory constraints specifically stated in the draft permit. However, before proceeding further with the staff evaluation, public comments are being solicited. The staff recommendation to the Board, as well as the Board decision, will be made only after a thorough consideration of all public comments.

Persons wishing to comment upon or object to the proposed determinations are invited to submit comments in writing to Bobby Hall at the above Permit Board address no later than (30) thirty days from the date of publication of this notice. All comments received by that date will be considered in the formulation of final determinations regarding the application. A public hearing will be held if the Permit Board finds a significant degree of public interest in the proposed permit. The Permit Board is limited in the scope of its analysis to environmental impact. Any comments relative to zoning or economic and social impacts are within the jurisdiction of local zoning and planning authorities and should be addressed to them.

Additional details about the application, including a copy of the draft permit, are available by writing or calling Bobby Hall at the above Permit Board address and telephone number. This information is also available for review at the following location(s) during normal business hours.

Mississippi Department of Environmental Quality
Office of Pollution Control
Southport Center Building
2380 Highway 80 West
Jackson, MS 39204

Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Please bring the foregoing to the attention of persons whom you know will be interested.

09/27/94

Susan Loyals

Bobby Hall

FILE COPY

Mississippi Environmental Quality Permit Board
P.O. Box 10385
Jackson, MS 39289-0385
Telephone No. (601) 961-5171

Public Notice No. AIA-MS-045

Koppers Industries, Inc., P.O. Box 160, Tie Plant, MS 38960, (601) 226-4584 has applied to the Mississippi Department of Environmental Quality for a Permit to Construct Air Emissions Equipment. The applicant's facility (Facility No. 0960-00012) is a wood preserving operation. This facility is located on Tie Plant Road in Tie Plant, Mississippi. Koppers Industries, Inc. proposes the firing of treated wood in the existing woodwaste boiler. This will not be a major modification as defined by the Prevention of Significant Deterioration (PSD) Regulations, Regulation APC-S-5.

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Mississippi Department of Environmental Quality
Office of Pollution Control
Southport Center Building
2380 Highway 80 West
Jackson, MS 39204

Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Please bring the foregoing to the attention of persons whom you know will be interested.

09/27/94

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

Tommy J. Wolfe

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

Managing Editor

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

Vol. 140 No. 61 on the 27 day of 09 199 4

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol. ..... No. ..... on the ..... day of ..... 199 .....

Vol ..... No. ..... on the ..... day of ..... 199 .....

Tommy J. Wolfe

Sworn to and subscribed before me, this 28th day of September, 19 94

Stephanie Nance

My Commission Expires Sept. 5, 1995

(SEAL)

BUREAU OF POLLUTION CONTROL
APPROVED FOR PAYMENT
DIVISION _____
TO BE USED BY _____
DATE _____
SIGNED _____

FILE COPY

Public Notice
Mississippi Environmental Quality Permit Board
P. O. Box 10385
Jackson, MS 39289-0385
Telephone No. (601) 961-5171

Public Notice No. 94A-MS-045

Koppers Industries, Inc., P.O. Box 160, Tie Plant, MS 38960, (601) 226-4584 has applied to the Mississippi Department of Environmental Quality for a Permit to Construct Air Emissions Equipment. The applicant's facility (Facility No. 0960-00012) is a wood preserving operation. The facility is located on Tie Plant Road in Tie Plant, Mississippi. Koppers Industries, Inc. proposes the firing of treated wood in the existing woodwaste boiler. This will not be a major modification as defined by the Prevention of Significant Deterioration (PSD) Regulations, Regulation APC-S-5.

The impact of the emissions of air contaminants from the project has been evaluated and the staff of the Department believes that, with proper constraints and limitations on Koppers Industries, Inc., this project will operate within all State and Federal air pollution control laws and standards and will protect health and welfare. Therefore, the staff of the Board has preliminarily decided, based on available information, to recommend to the Board that a permit be issued containing numerous regulatory constraints specifically stated in the draft permit. However, before proceeding further with the staff evaluation, public comments are being solicited. The staff recommendation to the Board, as well as the Board decision, will be made only after a thorough consideration of all public comments.

Persons wishing to comment upon or object to the proposed determinations are invited to submit comments in writing to Bobby Hall at the above Permit Board address no later than thirty (30) days from the date of publication of this notice. All comments received by that date will be considered in the formulation of final determinations regarding the application. A public hearing will be held if the Permit Board finds a significant degree of public interest in the proposed permit. The Permit Board is limited in the scope of its analysis to environmental impact. Any comments relative to zoning or economic and social impacts are within the jurisdiction of local zoning and planning authorities and should be addressed to them.

Additional details about the application, including a copy of the draft permit, are available by writing or calling Bobby Hall at the above Permit Board address and telephone number. This information is also available for review at the following location(s) during normal business hours.

Mississippi Department of Environmental Quality
Office of Pollution Control
Southport Center Building
2380 Highway 80 West
Jackson, MS 39204

Elizabeth Jones Library
P.O. Box 130
Grenada, MS 38901-0130

Please bring the foregoing to the attention of persons whom you know will be interested.

94AMS045.1

Company Name: Koppers Industries, Inc.

Source Number: 0960-00012

County: Grenada

PROJECT DESCRIPTION, INCLUDING SITE INFORMATION

Koppers Industries, Inc., located on Tie Plant Road in Tie Plant, Mississippi, has applied for a permit to modify the operation of the existing woodwaste boiler (Emission Point AA-001) such that creosote treated wood and pentachlorophenol treated wood may be used as fuel. This will not be a major modification as defined by the Prevention of Significant Deterioration (PSD) Regulations, Regulation APC-S-5.

AIR QUALITY IMPACT ANALYSIS

This project will have minimal impact on air quality.

PUBLIC PARTICIPATION

The 30-day public notice began with publication of a notice in the newspaper on September 27, 1994, and ends October 27, 1994.

RECOMMENDATION

The staff has preliminarily decided to recommend issuance of the permit to the Permit Board as shown in the draft permit. However, the staff recommendation to the Board will be made only after a thorough consideration of all public comments.

STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT
THIS CERTIFIES THAT

Koppers Industries, Inc.
Tie Plant Road
Tie Plant, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this _____ day of _____, 19__

Effective Date: As specified herein.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

_____
HEAD, OFFICE OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Expires _____ day of _____, 19__

Permit No. 0960-00012

SR-1259O.1

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PART I
GENERAL CONDITIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any air pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or modifications which will result in new, different, or increased emission of air pollutants must be reported by submission of a new application.

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

3. Solids removed in the course of control of air emissions shall be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering state waters without the proper environmental permits.

4. Any diversion from or bypass of collection and control facilities is prohibited except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Environmental Quality Permit Board.

5. Whenever any emergency, accidental or excessive discharge of air contaminants occurs, the Mississippi Department of Environmental Quality Office of Pollution Control shall be notified immediately of all information concerning cause of the discharge, point of discharge, volume and characteristics, and whether discharge is continuing or stopped.

6. Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule.

7. The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their authorized representatives, upon the presentation of credentials:

   a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit, and

   b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.

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

   a. Violation of any terms or conditions of this permit.

   b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

   c. A change in any condition that required either a temporary or permanent reduction or elimination of authorized air emissions.

9. For renewal of this permit the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board.

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

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

12. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.

13. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

14. This permit is for air pollution control purposes only.

15. This permit is not a Federally approved operating permit under Title V of the Federal Clean Air Act as amended in 1990. This permit is a transitional operating permit to satisfy the requirements of State Law only. After new State operating permit regulations are developed and adopted to satisfy the conditions of Title V of the Federal Act, the permittee will be required to submit an updated application to comply with said regulations and this permit may be modified, suspended, or revoked as necessary to comply with said regulations.

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PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning ISSUANCE DATE, and lasting until EXPIRATION DATE, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-001, the 37.5 MMBTU/hr Wellons/Nebraska Woodwaste Boiler (firing treated and untreated wood) with multiclone collector (Reference No. 01).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	**0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.**
PM_{10}	**0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.**
Sulfur Dioxide	**20.63 lbs/hr and 90.36 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.**
Nitrogen Oxides	**6.56 lbs/hr and 28.73 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.**
Carbon Monoxide	**5.63 lbs/hr and 24.64 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.**
Volatile Organic Compounds	**4.27 lbs/hr and 18.70 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.**
Opacity	**40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.**

All test methods specified above shall be those versions, or their approved equivalents, which are in effect ISSUANCE DATE.

PART II
EMISSION LIMITATIONS & MONITORING REQUIREMENTS

Continued from Previous Page

The temperature in the Woodwaste Boiler must be maintained at 1600°F or greater when firing treated wood.

The Woodwaste Boiler shall comply with a minimum destruction removal efficiency (DRE) of 99.9% for all principal organic hazardous components (POHC).

OPERATING LIMITATIONS

Materials other than untreated wood, creosote treated wood, pentachlorophenol treated wood, or office waste paper are prohibited in the boiler. The office waste paper shall be limited to waste paper generated on site by Kopper's office operations and shall not contain plastic or non-combustible wastes and the total amount fired shall be less than one percent (1%) of total fuel input.

Total woodwaste feed rate shall not exceed 9,375 lbs/hr.

RECORDKEEPING & REPORTING REQUIREMENTS

The permittee shall monitor and document with recordkeeping the following operating parameters:

- Temperature in the woodwaste boiler, on a continuous basis, with notations indicating when treated wood is being fired.
- In-stack opacity.
- CO concentration at the exit of the boiler stack, on a continuous basis.

  The CO continuous monitoring system shall include the capacity to correct the CO concentrations to a reference O_2 concentration and shall be collocated with the stack sampling ports.

These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing the temperature and opacity monitoring data shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

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PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning ISSUANCE DATE, and lasting until EXPIRATION DATE, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-002, the 28.5 MMBTU/hr fuel oil fired Murray Boiler (Reference No. 02).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	**0.43 lbs/hr and 1.88 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.**
PM_{10}	**0.43 lbs/hr and 1.88 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.**
Sulfur Dioxide	**15.40 lbs/hr and 67.45 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.**
Nitrogen Oxides	**4.34 lbs/hr and 19.01 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.**
Carbon Monoxide	**1.08 lbs/hr and 4.73 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.**
Volatile Organic Compounds	**0.04 lbs/hr and 0.18 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.**
Opacity	**40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.**

All test methods specified above shall be those versions, or their approved equivalents, which are in effect ISSUANCE DATE.

ADDITIONAL CONDITIONS

The sulfur content of the fuel oil shall not exceed 0.5% by weight.

The permittee shall monitor and document with recordkeeping the sulfur content of all fuel oil fired in Emission Point AA-002. These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing this information shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

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PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning ISSUANCE DATE, and lasting until EXPIRATION DATE, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-003, the Wood Treatment Facility including tanks and five (5) treating cylinders (Reference No. 03).

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning ISSUANCE DATE, and lasting until EXPIRATION DATE, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-004, the Tie Mill with cyclone (Reference No. 04).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	**2.0 lbs/hr and 8.76 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.**
PM_{10}	**2.0 lbs/hr and 8.76 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.**
Opacity	**40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.**

All test methods specified above shall be those versions, or their approved equivalents, which are in effect ISSUANCE DATE.

PART III
OTHER REQUIREMENTS

(1) The permittee shall demonstrate compliance with PM, SO_2, NO_x, CO, & NMVOC lbs/hr emission limitations, opacity limitations, and minimum DRE in PART II for Emission Point AA-001 by stack testing in accordance with applicable EPA Reference Methods and submittal of a test report(s).

(2) The permittee shall demonstrate compliance as set forth in Item (1), above, within 60 days after achieving the maximum production rate at which Emission Point AA-001 will be operated firing treated wood, but no later than 180 days after initial startup firing treated wood.

(3) Testing for the purpose of demonstrating compliance with the lb/hr emission limitations and minimum DRE shall be conducted at maximum production rates and peak pollutant generation rates.

(4) During emission testing, the permittee shall document the following operating parameters:

- Boiler operating temperature via continuous monitoring, with notations indicating when treated wood is being fired.
- Treated and untreated woodwaste feedrate during each hour of testing, lbs/hr.
- CO concentration at the exit of the boiler stack via continuous monitoring.
- In-stack opacity.

This data shall be included in the test report required in Item (1) above.

(5) A pretest conference at least thirty (30) days prior to the scheduled test date is needed to ensure that all test methods and procedures are acceptable to the Office of Pollution Control. Also, the Office of Pollution Control must be notified prior to the scheduled test date. At least TEN (10) DAYS notice should be given so that an observer may be scheduled to witness the test(s).

(6) All records shall be maintained at the facility for at least (2) years and shall be made available to the Office of Pollution Control upon request.

(7) The permittee shall handle, store, and transport all materials in such a manner as to minimize fugitive emissions.

(8) For Emission Point AA-001, the permittee must provide in writing the date of startup and the date maximum production rates are reached for the firing of treated wood. Each date must be provided no later than ten days after the actual date.

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Koppers Industries, Inc. 0960-00012

8/9

Emission Calculations

AA-001 : 37.5 MMBTu/HR Woodwaste Boiler

- Max. feedrate = 9375 lbs/hr (based on 4,000 Btu/lb - untreated wood

Pollutant	lb/ton	Basis	lbs/hr	Tons/yr
PM/PM10	1.44	Stack Test	6.75	29.57
SO_2	4.4	Sulfur Calculation*	20.63	90.36
NO_x	1.4	Calculation*	6.56	28.73
CO	~~1.2~~ ~~0.6~~ 5.63	Calculation*	~~2.81~~	~~12.31~~ 24.6
VOC	0.91	Calculation*	4.27	18.70
Lead	3.95×10^{-5}	Test Data	0.0002	0.0008
Mercury	3.43×10^{-6}	"	0.00002	0.00007
Other HAP Metals	0.02	"	0.094	0.41

* Calculations using Test Data from Kopper's Feather River facility and Susquehanna facility.

1. CO Rate doubled per 9/12/94 submittal.

Allowable by Regs

PM - 0.30 gr/dscf.

SO_2 - 4.8 lbs/MMBTu/HR x 37.5 MMBTu/HR

= 180 lbs/hr & 788.4 TPY

Koppers Industries, Inc. 0960-00012 (2/3

8/94

Emission Calculations

AA-002: 28.5 MMBtu/HR Fuel Oil Fired Murray Boiler
- 216.9 gals/hr fuel rate (based on 18,000 Btu/lb & 7.3 lbs/gal density for fuel oil.
- Fuel oil contains ≤ 0.5% Sulfur.

Pollutant	lb/1000 gal	Basis	lbs/hr	Tons/yr
PM/PM10	2.0	AP-42	0.43	1.88
SO_2	71	"	15.40	67.45
NO_x	20.0	"	4.34	19.01
CO	5.0	"	1.08	4.73
VOC	0.2	"	0.04	0.18

Allowable by Regs

PM - $E = 0.8808\ (28.5)^{-.1667} = 0.504$ lbs/hr / MMBTU

$(.504)(28.5) = 18.9$ lbs/hr & 82.77 TPY

SO_2 - $(4.8$ lbs/MMBTU/HR$)(28.5$ MMBTU/HR$) = 180$ lbs/hr & 788.4 TPY

AA-003: Wood Treatment Facility

HAP's (Creosote/VOC's) 13.85 tons/yr } based on inventory

Pentachlorophenol 0.015 tons/yr }

Koppers Industries, Inc. 0760-00012

8/94

Emission Calculations

AA-004 : Tie Mill w/ Cyclone

- Capacity = 1400 cu ft. wood/hr (70,000 lbs/hr)
  (200 cu ft. / 10,000 lbs)

Using AP-42, Table 10.4-1 :
2.0 lbs/hr & 8.76 TPY

Allowable by PW Equation @ 70,000 lbs/hr:
44.39 lbs/hr & 194.44 TPY

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA

BOILER, WOOD FIRED

Wood Burned (tn/yr): 37580 (lb/hr): 8000

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	1.44	lb/tn	5/88 Test	27.06	5.76
SO2	4.4	lb/tn	Calculation	82.68	17.60
NOX	1.4	lb/tn	FR Test	26.31	5.60
CO	1.2	lb/tn	FR Testx2	22.55	9.60
VOC	0.91	lb/tn	FR Test	17.10	3.64
Arsenic	8.24E-06	lb/tn	CA-ARB	0.0002	0.000
Cadmium	4.61E-05	lb/tn	CA-ARB	0.0009	0.000
Chromium	5.44E-05	lb/tn	CA-ARB	0.0010	0.000
Lead	3.95E-05	lb/tn	CA-ARB	0.0007	0.000
Manganese	1.99E-02	lb/tn	CA-ARB	0.3738	0.080
Nickel	1.02E-04	lb/tn	CA-ARB	0.0019	0.000
Selenium	0.00E+00	lb/tn	CA-ARB	0.0000	0.000
Mercury	3.43E-06	lb/tn	CA-ARB	0.0001	0.000
Total HAP Metals				0.38	0.081

BOILER, FUEL OIL

Fuel Use Rate(MGal/hr) 0.25

Oil Burned(MGal/yr): 104.8 Sulfur Content: 0.500 %

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	0.10	0.50
SO2	71	lb/MGal	AP-42	3.72	17.75
NOX	20	lb/MGal	AP-42	1.05	5.00
CO	5	lb/MGal	AP-42	0.26	1.25
VOC	0.2	lb/MGal	AP-42	0.01	0.05

WOOD PRESERVING PROCESSES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr ave)
VOC(as Creosote)	N/A		Form R	13.85	3.16
HAPs contained in creosote:					
Benzene	22	% in vapor	Calculation	3.05	0.69
Biphenol	0.16	% in vapor	Calculation	0.02	0.01
Cresols	0.46	% in vapor	Calculation	0.06	0.01
Dibenzofurans	0.61	% in vapor	Calculation	0.08	0.02
Naphthalene	17	% in vapor	Calculation	2.35	0.54
P-Xylenes	4.5	% in vapor	Calculation	0.62	0.14
Phenol	1.4	% in vapor	Calculation	0.19	0.04
Quinoline	1.5	% in vapor	Calculation	0.21	0.05
Toluene	26	% in vapor	Calculation	3.60	0.82
TOTAL CREO. HAP	73.63	% in vapor		10.20	2.32
Pentachlorophenol (VOC)	N/A		Form R	0.015	0.00
TOTAL VOC				13.86	3.16

CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	160
Total Hours:	1280

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	1.28	2

TOTAL PLANT EMISSIONS

Particulate	.....	28.44	tn/yr
SO2	.....	86.40	tn/yr
NOX	.....	27.35	tn/yr
CO	.....	22.81	tn/yr
VOC	.....	30.97	tn/yr
HAPs(Organics/VOC)	.....	10.21	tn/yr
HAP Metals	.....	0.38	tn/yr
TAXABLE TOTAL (exc CO,HAP VOCs		173.54	tn/yr

07-Sep-94 emis-inv

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA

BOILER, WOOD FIRED

Wood Burned (tn/yr): 37580 (lb/hr): 8000

Pollutant	Emission Factor	Units	Basis	Estimated Emissions (tn/yr)	Emissions (lb/hr)
Particulate	1.44	lb/tn	5/88 Test	27.06	5.76
SO2	4.4	lb/tn	Calculation	82.68	17.60
NOX	1.4	lb/tn	FR Test	26.31	5.60
CO	1.2	lb/tn	FR Testx2	22.55	9.60
VOC	0.91	lb/tn	FR Test	17.10	3.64
Arsenic	8.24E-06	lb/tn	CA-ARB	0.0002	0.000
Cadmium	4.61E-05	lb/tn	CA-ARB	0.0009	0.000
Chromium	5.44E-05	lb/tn	CA-ARB	0.0010	0.000
Lead	3.95E-05	lb/tn	CA-ARB	0.0007	0.000
Manganese	1.99E-02	lb/tn	CA-ARB	0.3738	0.080
Nickel	1.02E-04	lb/tn	CA-ARB	0.0019	0.000
Selenium	0.00E+00	lb/tn	CA-ARB	0.0000	0.000
Mercury	3.43E-06	lb/tn	CA-ARB	0.0001	0.000
Total HAP Metals				0.38	0.081

BOILER, FUEL OIL

Fuel Use Rate(MGal/hr) 0.25

Oil Burned(MGal/yr): 104.8 Sulfur Content: 0.500 %

Pollutant	Emission Factor	Units	Basis	Estimated Emissions (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	0.10	0.50
SO2	71	lb/MGal	AP-42	3.72	17.75
NOX	20	lb/MGal	AP-42	1.05	5.00
CO	5	lb/MGal	AP-42	0.26	1.25
VOC	0.2	lb/MGal	AP-42	0.01	0.05

WOOD PRESERVING PROCESSES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)ave)
VOC(as Creosote)	N/A		Form R	13.85	3.16
HAPs contained in creosote:					
Benzene	22	% in vapor	Calculation	3.05	0.69
Biphenol	0.16	% in vapor	Calculation	0.02	0.01
Cresols	0.46	% in vapor	Calculation	0.06	0.01
Dibenzofurans	0.61	% in vapor	Calculation	0.08	0.02
Naphthalene	17	% in vapor	Calculation	2.35	0.54
P-Xylenes	4.5	% in vapor	Calculation	0.62	0.14
Phenol	1.4	% in vapor	Calculation	0.19	0.04
Quinoline	1.5	% in vapor	Calculation	0.21	0.05
Toluene	26	% in vapor	Calculation	3.60	0.82
TOTAL CREO. HAP	73.63	% in vapor		10.20	2.32
Pentachlorophenol (VOC)	N/A		Form R	0.015	0.00
TOTAL VOC				13.86	3.16

CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	160
Total Hours:	1280

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	1.28	2

TOTAL PLANT EMISSIONS

Particulate	28.44	tn/yr
SO2	86.40	tn/yr
NOX	27.35	tn/yr
CO	22.81	tn/yr
VOC	30.97	tn/yr
HAPs(Organics/VOC)	10.21	tn/yr
HAP Metals	0.38	tn/yr
TAXABLE TOTAL (exc CO HAP VOCs	173.54	tn/yr

Koppers Industries, Inc.
Pittsburgh, PA 15219

Bobby Hall

62-4
311

Location No. 477/240 Date 08/24/94 No. 225949

Pay
to the order of

$250.00

$ 250.00
Not valid over $3500.00

Dept. of Environmental quality

P.O. Box 10305

Jackson, Ms. 39289-0385

Dorothy Malone
MMurphy

Payable through Mellon Bank (DE) N.A., Wilmington, DE 19899
Mellon Bank (East) N.A., Philadelphia, PA 19102

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General Ledger	Detail	Sub Detail	Location or Contract	Dept. or Orig. Loc.	Tax Codes	Emp. No.	Purchase Order No. Rec. Id	Br.	P.O. No.	P.O. Add.	P.O. Add or Resource	Quantity	Unit Code	Amount Distributed Dollars	Cents
00	391	054			0230									250	.00

Vendor No.	Description
40505015	Interim Title V Air Fee

0960-0001-2

Bobby H

DEPT OF ENVIRONMENTAL QUALITY
INTERIM TITLE V AIR FEE
P. O. Box 10305
Jackson, MS 39289-0385

** INVOICE **

** INTERIM TITLE V AIR OPERATING PERMIT FEE **

BILL TO:
KOPPERS INDUSTRIES INC

P O BOX 160
TIE PLANT, MS 38960

INVOICE # 54
INVOICE DATE: 8/01/94

CONTACT PERSON: Cheryl Shelby
TELEPHONE: 601-961-5381

FACILITY I.D. # 0960-00012

TERMS: Due 9/1/94

POLLUTANT	ACTUAL OR ALLOWABLE EMISSIONS	TONS OF EMISSIONS BILLED	FEE PER TON OF EMISSIONS	TOTAL FEE
PARTICULATE MATTER	17.220	17.220	4.00	68.88
SO2	2.400	2.400	4.00	9.60
NOX	8.530	8.530	4.00	34.12
CO	220.000	0.000	4.00	0.00
VOC	29.270	29.270	4.00	117.08
LEAD	0.000	0.000	4.00	0.00
TRS	0.000	0.000	4.00	0.00
TOTAL HAP's (VOC)	10.210	0.000	4.00	0.00
TOTAL HAPs (Non-Voc)	0.220	0.220	4.00	0.88
CFC's / HCFC's	0.000	0.000	4.00	0.00

ADJUSTMENT FOR $250 MINIMUM FEE 19.44

TOTAL ANNUAL FEE DUE 250.00

As defined in Senate Bill # 2649, a minimum fee of $250 shall be assessed to and collected from the owner or operator of each facility that is required to hold a Title V Permit.

* * * FAILURE TO REMIT PAYMENT BY THE DUE DATE MAY * * *
* * RESULT IN SUBSTANTIAL PENALTY AND INTEREST CHARGES* *

FILE COPY

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA

BOILER, WOOD FIRED

Wood Burned (tn/yr): 37580 (lb/hr): 8000

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	1.44	lb/tn	5/88 Test	27.06	5.76
SO2	4.4	lb/tn	Calculation	82.68	17.60
NOX	1.4	lb/tn	FR Test	26.31	5.60
CO	0.6	lb/tn	FR Test	11.27	2.40
VOC	0.91	lb/tn	FR Test	17.10	3.64
Arsenic	8.24E-06	lb/tn	CA-ARB	0.0002	0.000
Cadmium	4.61E-05	lb/tn	CA-ARB	0.0009	0.000
Chromium	5.44E-05	lb/tn	CA-ARB	0.0010	0.000
Lead	3.95E-05	lb/tn	CA-ARB	0.0007	0.000
Manganese	1.99E-02	lb/tn	CA-ARB	0.3738	0.080
Nickel	1.02E-04	lb/tn	CA-ARB	0.0019	0.000
Selenium	0.00E+00	lb/tn	CA-ARB	0.0000	0.000
Mercury	3.43E-06	lb/tn	CA-ARB	0.0001	0.000
Total HAP Metals				0.38	0.081

BOILER, FUEL OIL

Oil Burned(MGal/yr): 104.8 Fuel Use Rate(MGal/hr) 0.25

Sulfur Content: 0.500 %

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	0.10	0.50
SO2	71	lb/MGal	AP-42	3.72	17.75
NOX	20	lb/MGal	AP-42	1.05	5.00
CO	5	lb/MGal	AP-42	0.26	1.25
VOC	0.2	lb/MGal	AP-42	0.01	0.05

WOOD PRESERVING PROCESSES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr|ave)
VOC(as Creosote)	N/A		Form R	13.85	3.16
HAPs contained in creosote:					
Benzene	22	% in vapor	Calculation	3.05	0.69
Biphenol	0.16	% in vapor	Calculation	0.02	0.01
Cresols	0.46	% in vapor	Calculation	0.06	0.01
Dibenzofurans	0.61	% in vapor	Calculation	0.08	0.02
Naphthalene	17	% in vapor	Calculation	2.35	0.54
P-Xylenes	4.5	% in vapor	Calculation	0.62	0.14
Phenol	1.4	% in vapor	Calculation	0.19	0.04
Quinoline	1.5	% in vapor	Calculation	0.21	0.05
Toluene	26	% in vapor	Calculation	3.60	0.82
TOTAL CREO. HAP	73.63	% in vapor		10.20	2.32
Pentachlorophenol (VOC)	N/A		Form R	0.015	0.00
TOTAL VOC				13.86	3.16

CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	160
Total Hours:	1280

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	1.28	2

TOTAL PLANT EMISSIONS

Particulate	.....	28.44	tn/yr
SO2	.....	86.40	tn/yr
NOX	.....	27.35	tn/yr
CO	.....	11.54	tn/yr
VOC	.....	30.97	tn/yr
HAPs(Organics/VOC)	.....	10.21	tn/yr
HAP Metals	.....	0.38	tn/yr
TAXABLE TOTAL (exc CO,HAP VOCs		173.54	tn/yr

7/25-26/94

Revisions to Emission Inventory Calculation -

SO_2 - Use average S % from SUS fuel monitoring ~~[illegible]~~ which was 0.11%. Assume all S converted to SO_2. mw(S) = 32 mw(SO_2) = 32+2(16) = 64 = 2X(S)

SO_2 Factor = (0.11%)($\frac{1}{100}$)(2)(2000 lb/TN) = 4.4 lb SO_2/TN ww

($\frac{64 \text{ lb } SO_2}{32 \text{ lb } S}$)

NO_x = Base on FR test (9/8/83) and SUS monitoring results.

FR factor = 0.72 lb/TN @ 3 ~~[illegible]~~ 800 lb/hr = 2.88 lb/hr

SUS plant emis = 24.87 lb/hr (4 X bigger boiler)

≅ 6 lb/hr

Probably will be higher than FR because burn Treated wood will be hotter, but lower than SUS because lower temp.

Use 1.4 lb/TN → 5.6 lb/hr NOx.

CO - Use FR factor + 20% = 0.5 X 1.2 = 0.6 lb/TN

VOC - Use FR factor + 20% = 0.76 x 1.2 = 0.91 lb/TN

STACK TEST
9/8/83 @
60,000 lb/hr

BAA
ASSOCIATES
VVR

Environmental Consultants

EMISSION TEST REPORT

KOPPERS COMPANY, INC.
WESTERN WOOD PRODUCTS DIVISION
OROVILLE, CALIFORNIA.

WELLONS WOOD WASTE FIRED
COGENERATION SYSTEM

CERTIFICATION SHEET

I hereby certify that the sampling and analytical procedures, and data presented in this report are authentic and accurate.

By: _____
Test Team Leader

I hereby certify that the testing details and conclusions reported herein are, to the best of my knowledge, accurate and valid.

By: _____
President, BNR Associates, Inc.
Oregon Reg.No: 00042EM
Board of Engineering Examiners

EDWARD C. BUTCHINO
598 Vista Park Drive
Eagle Point, Oregon 97524
503/826-5679

BAA ASSOCIATES WR
Environmental Consultants

EUGENE A. WELLMAN
Route 5 Box 1405
Klamath Falls, Oregon 97601
503/884-7538

COMPANY NAME: KOPPERS COMPANY, INC.
OROVILLE, CALIFORNIA.

TYPE OF SOURCE: WELLONS WOOD FIRED COGENERATION SYSTEM.

DATE OF TESTS: SEPTEMBER 9, 1983

1.0 EMISSION TEST REPORT

1.1 Introduction:

On the above date, particulate emission tests were conducted for the purpose of demonstrating compliance with applicable air contaminant discharge regulations. All tests were performed in accordance with appropriate emission test methods utilizing an E.P.A. Method 5 sampling train operated under isokinetic conditions.

Results indicate that the above source is in compliance with New Source Performance Standards. Particulate loading was found to be 0.044 grains per dry standard cubic foot of stack gas effluent. Total mass emission rate was 7.46 pounds per hour. Average Equivalent Opacity was observed to be <10 percent.

1.2 Description of Source:

See 1.2.1 "Identification & Description Sheet"

1.3 Sampling and Analytical Methods:

1.3.1 Field Equipment: Misco Mod.7200
Sample unit. #7271
Calibrated: 9-5-83

1.3.2 Field Methods: As prescribed in E.P.A. Methods 1,2,3,5,&9.

1.3.3 Analytical Methods: As prescribed.

1.3.4 Special Problems: None.

$= \frac{(60{,}000 \frac{\#S}{hr})(1000 \frac{BTU}{lb\text{-}S})(\frac{1}{0.8 eff.})}{4500 \frac{BTU}{\#\text{-}W}}$

$= 16{,}667 \frac{lb\text{-}W}{hr}$

$= 8.33 \frac{TN\text{-}W}{hr}$

1.4 Sample Point Description:

See 1.4.1 "Sample and Traverse Point Determination Sheet".

1.5 Detailed Results:

1.5.1 Summary Report

RESULTS

	RUN #1	RUN #2	RUN #3	AVERAGE	
Time Start	1020	1242	1440	-	
Duration Minutes	64	64	64	64	
Process Rate lbs/hour-steam	60000	60000	60000	60000	
Ave. Stack Temperature F	369	375	380	375	
Ave. Stack Velocity fpm	3261	3118	3104	3161	
Ave. Stack Flow scfm	20644	19226	19020	19630	
Ave. Stack Moisture %	19.9	21.4	21.4	20.9	
Grain Loading gr/dscf	0.045	0.050	0.038	0.044	
Corrected gr/dscf at 12% CO2	0.038	0.043	0.034	0.039	
Emission Rate lbs/hr	7.88	8.27	6.23	7.46	0.90 lb/TN
Emission Rate lbs/day	189	199	150	179	250 ppm
Isokinetic Sampling Rate %	108.7	104.1	104.3	105.7	
NOx Emissions lbs/hr	6.62	5.97	5.78	6.03	= 0.72 lb/TN
Nox Emissions lbs/day	158.9	143.2	138.7	146.9	350 ppm
Carbon Monoxide lbs/hr	4.68	4.61	3.15	4.14	= 0.50 lb/TN
Carbon Monoxide lbs/day	112	111	76	100	1000 ppm
Total Hydrocarbons lbs/hr	7.56	8.05	9.39	8.33	
Total Hydrocarbons lbs/day	181	193	225	200	250 ppm
V.O.C.'s lbs/hr	5.25	6.71	6.93	6.30	= 0.76 lb/TN
V.O.C.'s lbs/day	126	161	166	151	150 ppm

1.2.1

COMBUSTION SOURCE IDENTIFICATION And DESCRIPTION SHEET

Name of Company: KOPPERS COMPANY
Location of Source: OROVILLE, CALIFORNIA

Name of Company Contact: CECIL COLEMAN
Regulatory Agents Present: CRAIG J. GILMOUR
BUTTE COUNTY A.P.C.D.
Stack Identification: POWER PLANT
Number of Boilers Ducted to Stack: ONE

Sample Point Description:
Circular: X Rectangular:
Diameter 48" Length Width
Unobstructed downstream distance: 96"
Unobstructed upstream distance: 270"

Boiler Identification and Description:

Boiler Identification Number:
Manufacturer: NEBRASKA MFG. CO
Installation Date: 1982 Revision Date
Namplate Capacity or Rating: 60000 lbs/hr at 450 psig.
Other Nameplate Data

Type of Furnace: WELLONS QUAD CELL

Controls & Instrumentation:
X F.D. Fan X [illegible] Collector
X Auto. F.D. Control [illegible]
X I.D. Fan [illegible]
X Auto. I.D. Control [illegible]
X Rec. Steam Flow [illegible]
Rec. 02 Analyzer Other:

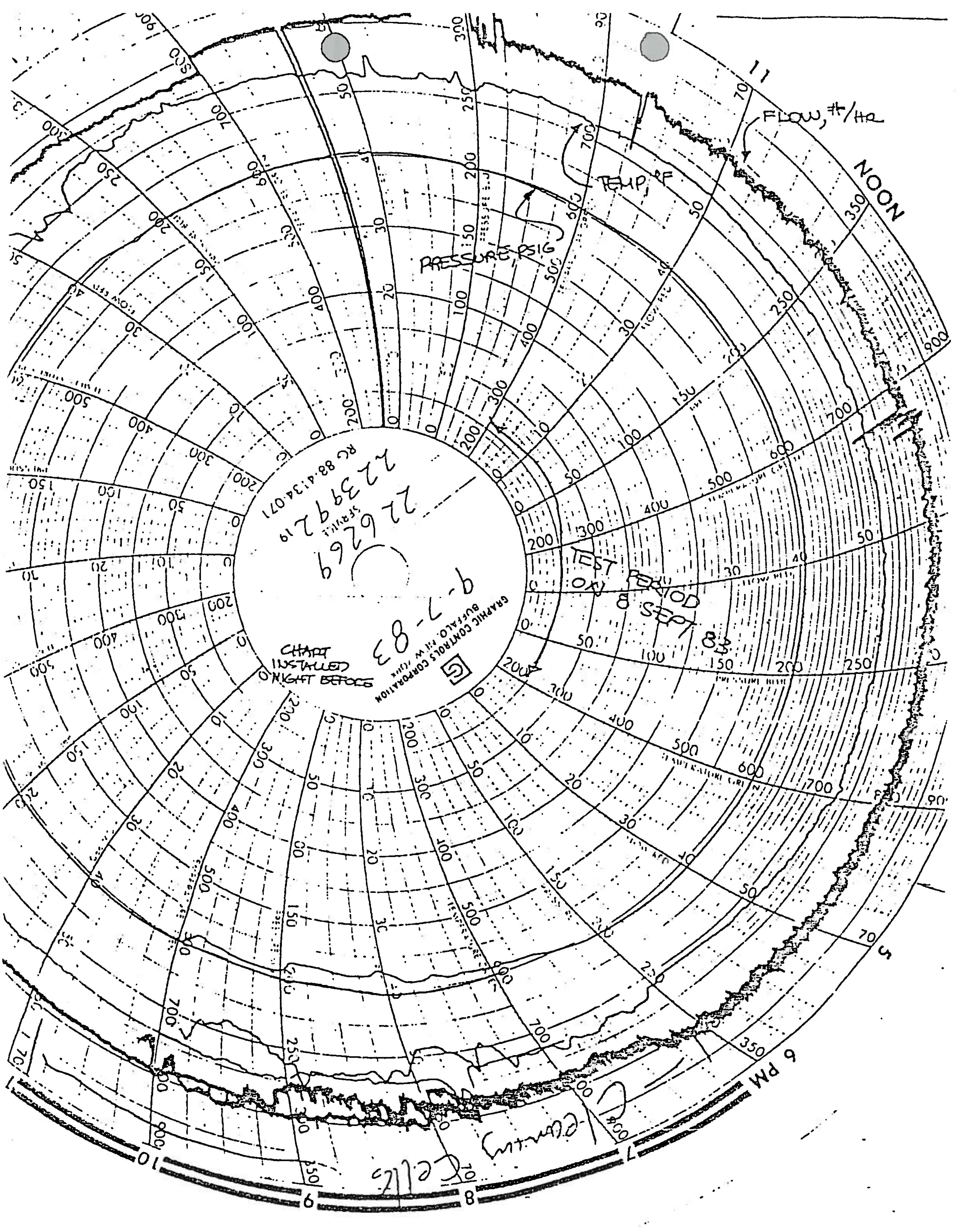
Steam Generation Rate Data:

Date: SEPT. 8, 1983	RUN #1	RUN #2	RUN #3	AVE.
Average flow lbs/hr	58000	58000	58000	58000
Peak flow lbs/hr	61000	61000	60500	60500
Minimum flow lbs/hr	56500	57000	57000	56500

How determined? CALIBRATED ORIFICE FLOW METER
CHART RECORDING ENCLOSED

BY: Edd Wellman

BWR ASSOCIATES, INC.


FLOW, #/HR
TEMP, °F
PRESSURE, PSIG
NOON
6 PM
TEST PERIOD ON 8 SEPT 83
CHART INSTALLED NIGHT BEFORE
9-7-83
226269
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
RC 88-4134-071

& PRESSURE
PRESSURE PSIG
FLOW, #/HR
40,000 #/HR
30,000
20,000
10,000
6 PM
9-7-83

1st SHIFT OPERATOR — STEVENS

R	MEGA WATTS	KILOWATT HOUR	D.C. AMPS	A.C. VOLTS	A.C. AMPS	GENERATOR A.C. VOLTS	POWER FACTOR	WATERTEMP in	WATERTEMP out	COMMENTS
00	4.0	0711	162	4000	625	4000	1	66	67	40°
00	4.0	0712	162	4000	625	4000	1	66	67	40°
00	4.3	0715	158	4000	700	4000	1	67	68	40°
00	4.1	0719	152	4000	625	4000	1	68	69	40°
00	4.2	0720	152	4000	625	4000	1	68	69	40°
00	4.2	0722	152	4000	625	4000	1	68	69	40°
00	4.2	0725	152	4000	625	4000	1	68	69	40°
00	4.4	0727	155	4000	725	4000	1	69	70	45°

2nd SHIFT OPERATOR — Wolf

OUR	MEGA WATTS	KILOWATT HOUR	D.C. AMPS	A.C. VOLTS	A.C. AMPS	GENERATOR A.C. VOLTS	POWER FACTOR	WATERTEMP in	WATERTEMP out	COMMENTS
00	4.3	0729	160	4000	700	4000	1	69	70	45° CALLED PGE
00	4.3	0732	175	4100	575	4100	.99	70	72	42°
00	4.2	0734	170	4100	575	4100	1	70	72	44°
00	4.1	0737	170	4100	575	4100	1	70	72	43°
00	4.0	0739	175	4100	550	4100	.99	68	70	41°
00	3.8	0741	185	4100	550	4100	.96	67	69	40°
00	3.8	0744	170	4100	550	4100	.97	67	69	39°
00	4.2	0746	180	4050	550	4050	.97	67	69	40°

3rd SHIFT OPERATOR — Dennis J. — Les

ER	MEGA WATTS	KILOWATT HOUR	D.C. AMPS	A.C. VOLTS	A.C. AMPS	GENERATOR A.C. VOLTS	POWER FACTOR	WATERTEMP in	WATERTEMP out	COMMENTS
0	3.0	0748	165	4050	450	4050	.97	66	68	39°
0	3.2	0751	165	4000	500	4000	.99	66	68	42°
0	3.2	0753	165	4000	500	4000	.99	66	68	38°
0	3.4	0755	165	4000	500	4000	.99	64	66	38°
0	3.4	0756	165	4000	500	4000	.99	62	66	38°
0	3.4	0758	160	4000	500	4000	.99	62	66	36°
0	3.2	0760	160	4000	500	4000	.99	60	66	36°
0	4.0	0762	165	4000	550	4000	.99	60	66	36°

ALL O'COGEN DUE TO TEST

WELDONS

ENGINEERING • MANUFACTURING

P.O. BOX 381 • 14440 S.W. EDY ROAD

SHERWOOD, OREGON 97140 • 503-625-6131

September 13, 1983

Mr. Eugene Wellman
BWR Associates
Route 5, Box 1405
Klamath Falls, Oregon 97601

Dear Gene:

Enclosed is a data sheet that indicates the moisture content of the fuel samples that were taken during the emissions test at Koppers Company in Oroville, California.

If you need any further information, please give us a call.

Sincerely,

WELDONS, INC.

Richard N. Hune

RNH/C
Enclosure

LAB REPORT - FUEL SAMPLE MOISTURE CONTENT

COMPANY KOPPERS INC. DATE SEPT 9, 1983

LOCATION OROVILLE, CALIFORNIA 5-0610

SAMPLES SUBMITTED BY: DICK KUHE

SAMPLE NO.	DESCRIPTION
1. BAG	SAWDUST, BARK - WET SILO 9/8/83 11:30
2. "	" " - MAIN FUEL CONVEYOR 9/8/83 3:00
3. "	" " - METERING BIN N°1 9/8/83 11:30
4. "	" " - " " N°4 9/8/83 11:30
5. /	
6. /	

TYPE OF FUEL:

TEST SAMPLES IN OVEN AT 8:30 A M DATE SEPT. 9, 1983

TEST SAMPLES OUT OF OVEN 2:00 P M DATE SEPT. 12, 1983

OVEN TEMP. 215 °F. TOTAL DRYING TIME _____ HOURS

1	2	3	4	5	6	7	8	9
Sample Number	Can Number	Can Weight	Wet Fuel & Can Wt	Dry Fuel & Can Wt	Wet Fuel Weight	Dry Fuel Weight	Water Weight	Percent Moisture
1	1	23.75	92.50	63.15	68.75	39.40	29.35	43 %
2	2	24.20	78.10	57.90	53.90	33.70	20.20	37 %
3	7	23.70	87.70	61.95	64.00	38.25	25.75	40 %
4	8	24.40	91.80	63.45	67.40	39.05	28.35	42 %
5	/							
6	/							

TEST RESULTS: FUEL SAMPLE AVERAGE MOISTURE CONTENT = 41 %

NOTES:

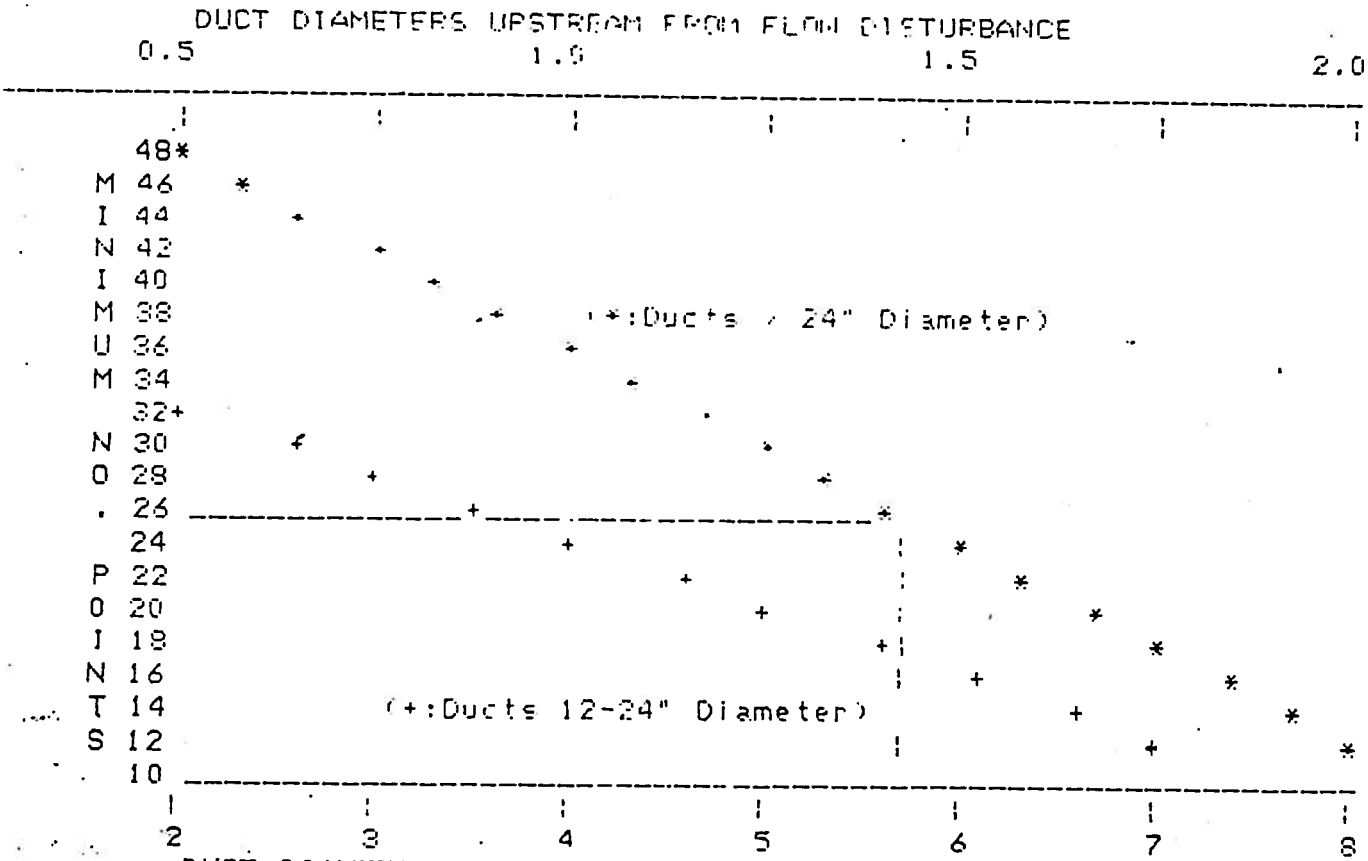
1. All weights in Grams.
2. Percent Moisture on Wet Basis.

SIGNATURE: Robert A. Burrell DATE Sept 12, 1983

@*(

1.4.1 SAMPLE AND TRAVERSE POINT DETERMINATION SHEET

MINIMUM NUMBER OF TRAVERSE POINTS FOR PARTICULATE TRAVERSES
EPA METHOD 1



DISTANCE "A":	96.00
DISTANCE "B":	270.00
STACK DIAMETER IN.:	48.00
POINTS REQUIRED:	26.00 WILL DO 32

:s&t sheet.bwr

1.4.1(B) SAMPLE AND TRAVERSE POINT DETERMINATION SHEET

TABLE 1.2. LOCATION OF TRAVERSE POINTS IN CIRCULAR STACKS

POINT NUMBER	PERCENT OF STACK DIAMETER TO POINT LOCATION — NUMBER OF TRAVERSE POINTS ON A DIAMETER										POINT LOCATION
	6	8	10	12	14	16	18	20	22	24	inches
1	4.4	3.3	2.5	2.1	1.8	1.6	1.4	1.3	1.1	1.1	0.8
2	14.7	10.5	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2	2.4
3	29.5	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5	4.1
4	70.5	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9	6.0
5	85.3	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5	8.1
6	95.6	80.6	65.8	35.5	26.9	22.0	18.8	16.5	14.6	13.2	10.5
7		89.5	77.4	65.5	36.6	28.3	23.6	20.4	18.0	16.1	13.6
8		96.7	85.4	75.0	63.4	37.5	29.6	25.0	21.8	19.4	16.0
9			91.8	82.3	73.1	62.5	38.2	30.6	26.1	23.0	20.0
10			97.5	88.2	79.9	71.7	61.8	38.8	31.5	27.2	24.4
11				93.3	85.4	78.0	70.4	61.2	39.3	32.3	27.4
12				97.9	90.1	83.1	76.4	69.4	60.7	39.8	39.9
13					94.3	87.5	81.2	75.0	68.5	60.2	42.0
14					98.2	91.5	85.4	79.6	73.9	67.7	43.9
15						95.1	89.1	83.5	78.2	72.8	45.6
16	STACK DIAM:			48.0		98.4	92.5	87.1	82.0	77.0	47.2
17							95.6	90.3	85.4	80.6	0
18	DISTANCE "A":			96			98.6	93.3	88.4	83.9	0
19								96.1	91.3	86.8	0
20	DISTANCE "B":			270				98.7	94.0	89.5	0
21									96.5	92.1	0
22	NO. PTS.REQ.:			32					98.9	94.5	0
23										96.8	0
24	COMPANY NAME:		KOPPERS COMPANY							98.9	0

LOCATION: OROVILLE, CALIF. DATE: SEPT. 8, 1983

BY:_____

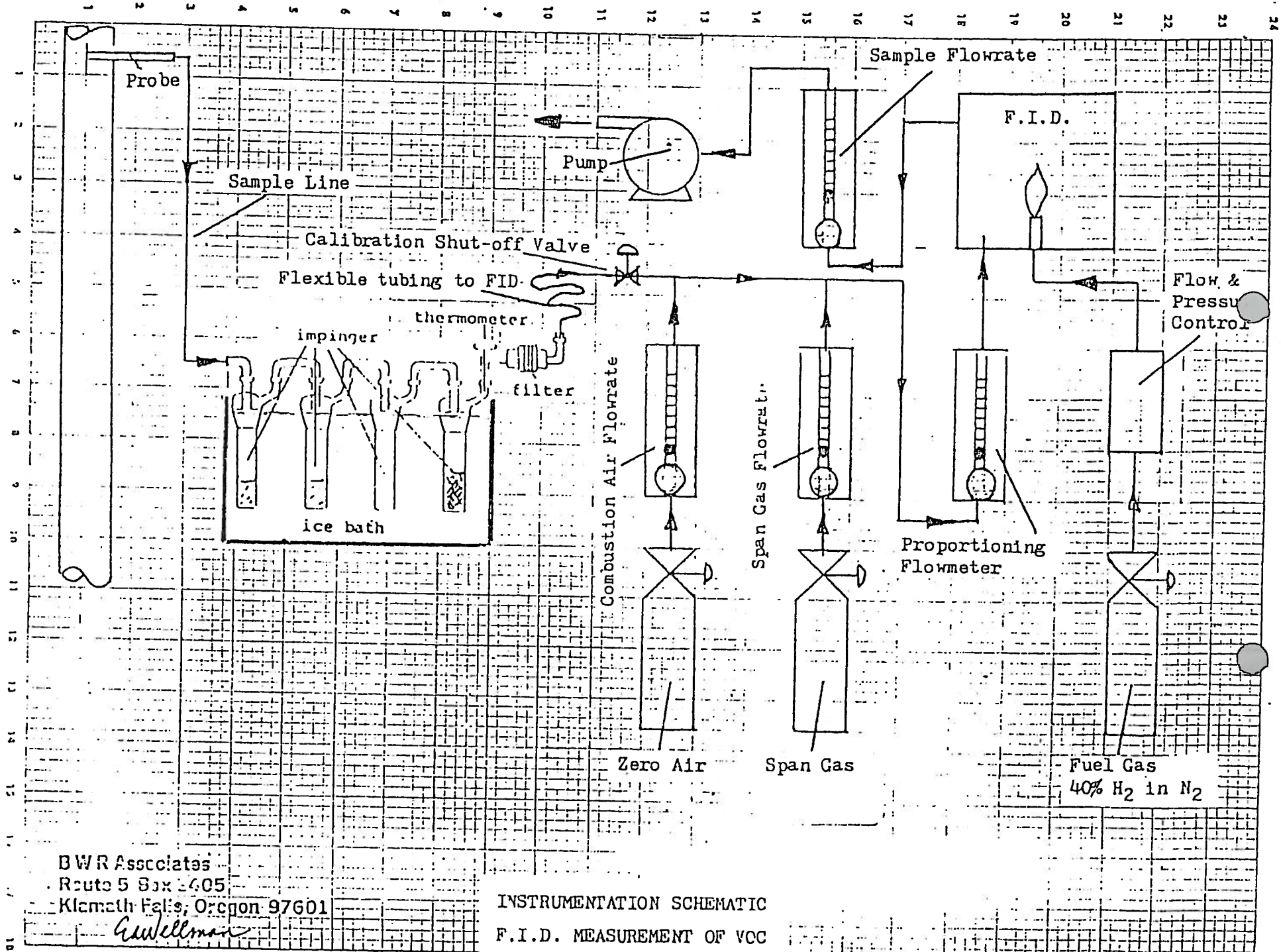
FORMULA: (x9/100)*e24

a:traupts.bwr

1.6 Gaseous Component Analysis - Discussion of Methods:

Analysis of Hydrocarbons and Volatile Organic Compounds from wood fired combustion sources has been a subject of controversy for several years. EPA Method 25 has been evaluated by researchers from the National Council for Air and Stream Improvement of the Pulp and Paper Industry on a number of combustion sources and other timber products processes with varying degrees of success. It is felt by some that the CO2 - CO interferences make the method unsuitable for combustion sources while most appropriate when used to evaluate organic emissions of single species from processes in the coatings industry as an example. BWR Associates has had the opportunity to compare direct FID analysis methodology with EPA Method 25 while sampling simultaneously with the NCASI reaserchers on several projects and have found better correlation than some other teams have experiences with simultaneous Method 25 tests.

We have proposed in several cases that the direct method is probably as good a method as any currently available and is considerably less involved, not requiring the complicated analytical methods of Method 25. In order to apply the data, several assumptions have to be made and the samples must be conditioned prior to analysis. The first thing necessary is to arrive at a definition of Volatile Organic Compounds. We have chosen to define VOC's as any organic material that is in the gaseous phase at or near ambient conditions. We have therefore utilized an impinger train with a glass fiber filter between the third and fourth impinger to pre-condition the sample before it is introduced into the Flame Ionization Detection system. The rational for this approach is that condensable organic materials present in the sample will be removed in the wet impinger system and any organic aerosol formed by condensation will be removed by the back-up filter leaving the gaseous organics still in the sample stream.
The instrument is standardized against a Methane in Air span gas and results are expressed as ppm Methane based on the FID response. To minimize baseline drift problems, the sample for analysis is collected in a tedlar bag by standard integrated gas sampling methodology using an oil-less diaphragm pump downstream of the impinger train. Any condensation which occurs in the sample line is not felt to be of any consequence to the VOC content as the gas stream is reduced to near ambient conditions in a short distance from the duct sampling point. Under extremes of cold weather, the sample line should probably be heat traced to insure that the sample is maintained at or near 70 degrees F.



BWR Associates
Route 5 Box 2405
Klamath Falls, Oregon 97601

INSTRUMENTATION SCHEMATIC

F.I.D. MEASUREMENT OF VOC

FID ANALYSIS ON INTEGRATED BAG SAMPLES COLLECTED FROM
EXHAUST STACK OF KOPPERS COMPANY COGENERATION SYSTEM
OROVILLE, CALIFORNIA SEPTEMBER 8, 1983

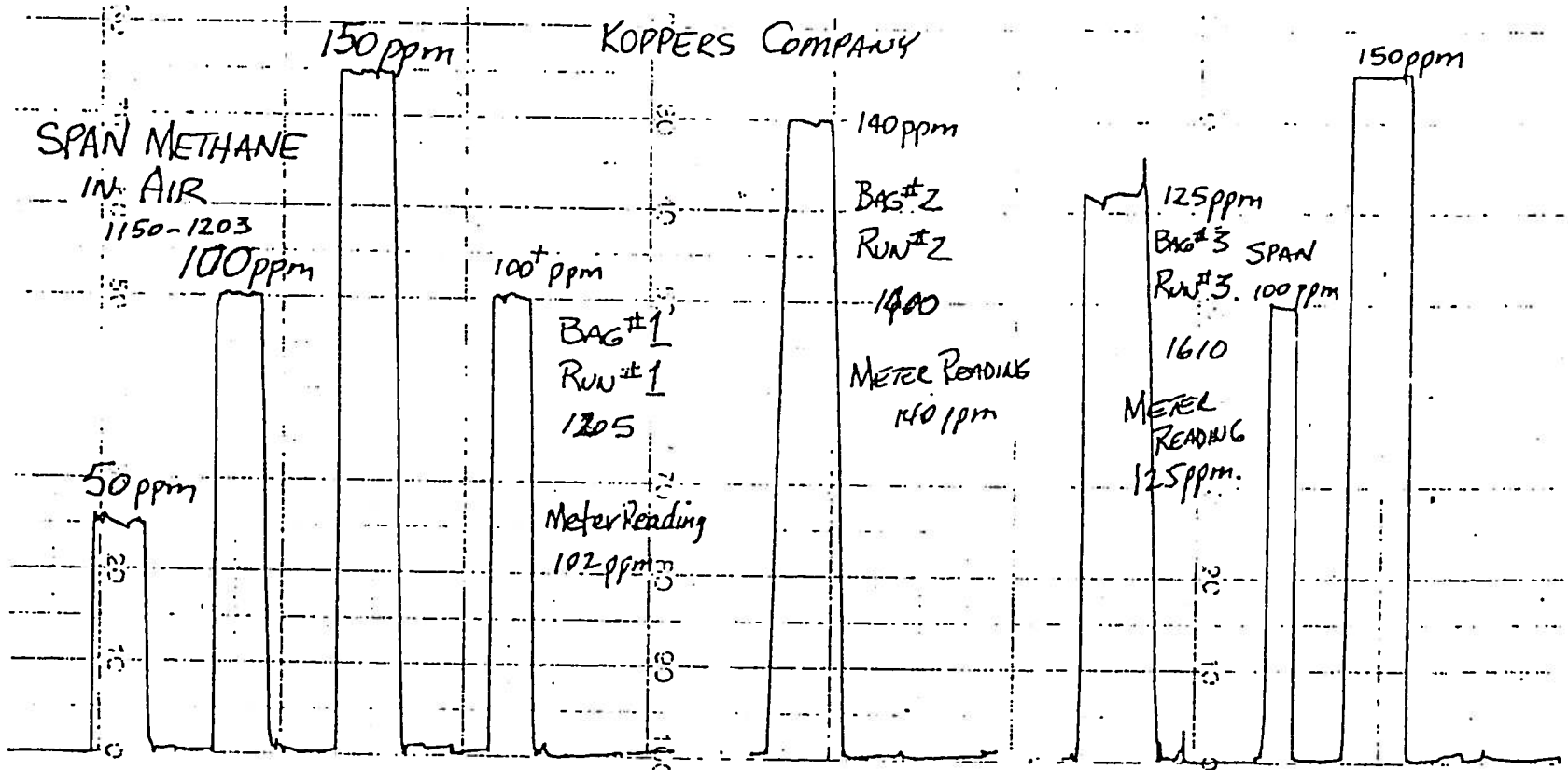


CHART NO. LIC-54-100 PRINTED IN U.S.A.

- VOC DETERMINATION -

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B W R A S S O C I A T E S I N C.

COMBUSTION SOURCE EVALUATION
SUMMARY OF GASEOUS COMPONENTS

	RUN #1	RUN #2	RUN #3	AVE
Stack Flow dscfm	20644	19226	19020	19630
Sample Volume dscf	39.74	85.44	35.12	36.77
Carbon Monoxide ppm by NDIR	52	55	38	48
Carbon Monoxide lbs/hr	4.68	4.61	3.15	4.15
Carbon Monoxide lbs/day	112	111	76	100
Total Hydrocarbons ppm as Methane by NDIR	129.1	199.5	173.3	147
Total Hydrocarbons lbs/hr	7.56	8.05	9.39	8.33
Total Hydrocarbons lbs/day	181	193	225	200
Organic Condensables gr/dscf from Back-half	.0054	.0067	.0064	.0062
Organic Condensables lbs/hr	0.95	1.10	1.04	1.03
Organic Condensables lbs/day	22.8	26.4	25.0	24.7
VOC as Methane ppm by Direct FID	102	140	125	122
VOC as Methane lbs/hr	5.25	6.71	6.93	6.30
VOC as Methane lbs/day	126	161	166	151

3*(

OXIDES OF NITROGEN
FIELD DATA & CALCULATION SHEET

CLIENT: KOPPERS CORP
SOURCE: WELLONS COGEN.SYSTEM

LOCATION: OROVILLE, CAL
DATE OF SAMPLES: 9-8-83
DATE OF ANALYSIS: 9-10-83
ANALYSIS BY:

SYMBOL	DATA DETAIL	SAMPLE 1	SAMPLE 2	SAMPLE 3
#	SAMPLE FLASK NUMBER	2	3	4
t	TIME OF SAMPLING	R-1 INT.	R-2 INT.	R-3 INT.
Po	BAROMETRIC PRESSURE "Hg	29.40	29.40	29.40
Vf	SAMPLE FLASK VOLUME ML.	2128.00	2155.00	2136.00
Va	ABSORBING RGT.VOLUME ML.	25.00	25.00	26.00
Vn	NET FLASK VOLUME ML.	2103.00	2130.00	2110.00
Pi	INITIAL FLASK PRESSURE "Hg	3.96	4.05	4.00
Pf	FINAL FLASK PRESSURE "Hg	29.40	29.40	29.40
Ti	INITIAL FLASK TEMP. R	532.00	538.00	542.00
Tf	FINAL FLASK TEMP. R	532.00	538.00	542.00
Qs	STACK GAS VOLUME SCFM	20644.00	19226.00	19020.00

STANDARD CURVE PREPARATION

CONC.uG	ABSORBANCE	
100	0.19	A1
200	0.39	A2
300	0.56	A3
400	0.77	A4

CALIBRATION FACTOR CALCULATION:

Kc= 523.87
(EPA EQUATION 7-1)

SAMPLE ANALYSIS DATA

SYMBOL	UNITS OF EXPRESSION	SAMPLE#1	SAMPLE#2	SAMPLE#3
A	ABSORBANCE - DIMENSIONLESS	0.145	0.140	0.135
m	MICROGRAMS NO 2 (EPA EQUATION 7-3)	151.92	146.68	141.45
Vsc	SAMPLE VOLUME STD.ML (EPA EQUATION 7-2)	1773.96	1770.41	1744.28
Clbs	SAMPLE CONC. LBS/DSCF	*00005347	*00005173	*00005063
Ct	EMISSION RATE LBS/HR	6.62	5.97	5.78
Ct'	EMISSION RATE LBS/DAY	158.94	143.20	138.66

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

OTHER PARAMETERS NOTED

Ts	STACK TEMPERATURE F	369.00	375.00	380.00
% O2	STACK OXYGEN CONC. %VOL	6.25	6.28	6.95
% EA	EXCESS AIR CONC. %	44.00	44.00	50.00

BY: EWellman

:nox-calc.bwr

1.7 Inorganic Fuel Contaminants - Nature and Significance:

As early as 1972, it was recognized that there could be a significant emission problem in wood fired combustion sources when certain inorganic contaminants were present in the fuel. Our first experience was while testing an older Dutch-oven boiler which had been equipped with an over-fire sanderdust burning system utilizing sanderdust from a particleboard plant. The almost white combustion particulate collected while performing method 5 tests was unlike the usual carbonaceous filter catch we had seen in the past. Shortly thereafter, a suspension burning system was tested which used plywood trim for fuel after processing through a hammermill and screen system. At this point the white filter catch was identified by microscopic analysis and recrystalization techniques as Sodium Oxide derived from the Caustic Soda utilized in the glue formulation for the plywood lay-up.

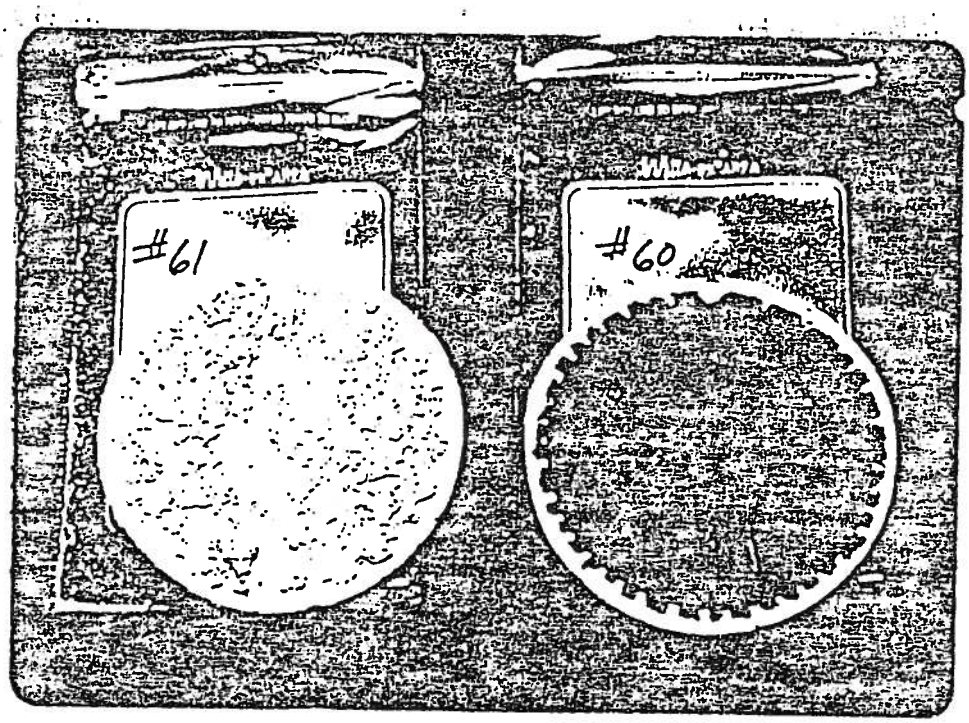
More recently, we have found a similar problem with sub-micron particulate of Potassium Oxide from walnut shell fuel in cogeneration systems. Sea salts also result in a similar emission problem when the fuel being burned is derived from logs which have been rafted in salt water or river-mouth estuaries. In all cases, these oxides or in the case of salt-water contamination, chlorides, are emitted as a very fine particle which due to its light refracting qualities, imparts a blue color to the plume. Many agency personnel were heard to comment that the plume was not due to a condensable organic "blue haze" such as is seen from a variety of timber products dryers. Particle size distribution studies have disclosed a mass median diameter in the 0.2-0.3 micro meter size range. Control strategies for particulate in this size category usually hinge on the installation of a baghouse if the contaminant cannot be eliminated from the fuel source.

In rarer instances, some timber species seem to concentrate Sodium, Potassium, Calcium or Magnesium in the wood and bark when grown in unusual soil or groundwater conditions. This was the initial problem experienced with the first attempt at compliance demonstration. Fortunately, personnel involved with the plant operations were able to identify the source of the fuel used during those tests so that its use could be discontinued. Laboratory analysis of fuel verified the presence of higher than usual concentrations of Potassium, Calcium, and Magnesium. The later two elements have sufficiently high sublimation temperatures to not be a problem, however, Potassium compounds will be emitted as a fine oxide fume rather than slagging out in the furnace. Attached is a preliminary report of fuel analyses performed by the Koppers research laboratories. Also included is a photocopy of a photograph of two filters collected sequentially from an Oregon combustion source; firing rate and steam load were the same. The difference in the two samples was fuel composition only. The black filter was collected while burning only hogged wood and bark. The light colored sample was collected while utilizing sanderdust and plywood trim for approximately 10% of the total Btu input to the furnace. The dark sample calculated at approximately .05 gr/dscf; the light colored sample calculated at approximately .12 gr/dscf.

FIGURE 1.7.1 EFFECTS OF FUEL COMPOSITION ON BOILER EMISSIONS

Filter #60: Sample taken from spreader-stoker boiler stack, multiclone and Burley 4 stage scrubber. Steam load 50000 lbs/hr. Fuel: hogged white wood and bark with moisture content of approximately 50% by weight.

Filter #61: Sample taken from same system under same operating parameters. The only difference being fuel composition. Approximately 10% of heat input derived from particle board trim and board sanderdust firing. Sample volumes essentially identicle. Grain loading approximately 2.5X that measured when firing hog fuel only.



1.7.1

REPORT OF CHEMICAL ANALYSIS OF FUEL SAMPLES

(ALL DATA IN $\frac{\text{milligrams}}{\text{kilogram}}$)

FUEL SAMPLED ON AUG 19, 1983 DURING EMISSION TEST
FUEL = WHOLE TREE CHIPS FROM SINGLE SOURCE

ELEMENT	#1 "WET BIN"	#2 "DRY BIN"	#3 "AS BURNED" MIXTURE
Calcium	394	256	307
Magnesium	132	36	106
Potassium	500	219	338
Sodium	58	152	69

SUBSEQUENT TESTS MADE ON VARIOUS FUELS:

ELEMENT	TEST #4 PONDEROSA PINE SAWDUST	#5 PONDPINE & D.FIR SAWDIST	#6 P.PINE, D.FIR SAWDUS & BARK
Calcium	191	204	145
Magnesium	80	24	53
Potassium	171	73	138
Sodium	39	57	27

MATERIAL BURNED DURING EMISSION TEST ON SEPT 8 WAS A COMBINATION OF #5 & #6.

KOPPERS LABS.

SAMPLE RECOVERY AND INTEGRITY DATA FORM

PLANT:
Koppers Company, Inc.
LOCATION:
Oroville, California

SAMPLE DATE: 9-8-83
RECOVERY DATE: 9-8-83
RECOVERED BY: ECB.

	RUN #1	RUN #2	RUN #3	
IMPINGER MOISTURE				
FINAL VOLUME	397.0	393.0	384.0	ml
INITIAL VOLUME	200.0	200.0	200.0	ml
NET VOLUME	197.0	193.0	184.0	ml
SILICA GEL FINAL WEIGHT	274.0	269.5	294.0	g
INITIAL WEIGHT	255.0	250.0	266.0	g
NET WEIGHT	19.0	19.5	28.0	g
TOTAL CONDENSATE VOLUME	216.0	208.5	202.0	ml
SAMPLE CONTAINER NUMBER	KC 101	KC 104	KC 107	
RECOVERED SAMPLE				
FILTER NUMBER	289	290	291	
FRONT WASH BOTTLE NUMBER	KC 103	KC 106	KC 109	
BACK WASH BOTTLE NUMBER	KC 102	KC 105	KC 108	
LIQUID LEVELS MARKED ?	yes	yes	yes	
SAMPLES STORED & SECURED?	yes	yes	yes	

DATE OF LABORATORY CUSTODY: 9-9-83 BY: ECB.

DATE OF LABORATORY ANALYSIS 9-11-83 BY: ECB.

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

ANALYTICAL PROCEDURES FOR EPA METHOD 5 SAMPLES

Oregon D.E.Q. Source Test Manual, Pgs.8 & 9. Rev.#2 Aug 1981

11. Analysis

11.1 Dessicate the filter in the field container for 24 hours and weigh to constant weight.

11.2 Transfer the acetone rinse (from front-half components) into a tared beaker or evaporating dish. Be sure all particulate is removed from the container. Evaporate the solvent at laboratory temperature and pressure, dessicate for 24 hours and weigh to constant weight (+/- 0.5 mg change in 6 hours or more).

11.3 Transfer the acetone rinse from the back-half to a tared beaker or weighing dish. Evaporate as in 11.2 and weigh to constant weight.

11.4 Transfer the water in the impingers to a separatory funnel (Teflon stoppered). Rinse the container with distilled water and add to the seperatory funnel. Add 50 ml of dichloromethane, stopper and shake vigorously for one minute, let separate and transfer the dichloromethane into a tared beaker or evaporating dish. Repeat twice more.

11.5 Transfer the remaining water in the separatory funnel to a tared beaker or evaporating dish and evaporate at 105 C. Dessicate for 24 hours and weigh to constant weight.

11.6 Evaporate the combined extracts from section 11.4 at laboratory temperature and pressure, dessicate for 24 hours and weigh to constant weight.

11.7 Evaporate portions of the solvents used in a manner similar the the sample evaporation to determine the solvent blanks.

11.8 Record all laboratory data on the Laboratory Data Reporting Sheet.

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BNR ASSOCIATES, INC
LABORATORY ANALYSIS DATA FORM

PLANT KOPPERS COMPANY SAMPLE DATE: 9-8-83
LOCATION OROVILLE, CAL. RECD. IN LAB DATE: 9-9-83

	RUN 1	RUN 2	RUN 3
FILTER NUMBER	289	290	291
FILTER GROSS WT.	2.6125	2.5690	2.6037
FILTER TARE WT	2.5430	2.5035	2.5490
FILTER NET WT.	0.0695	0.0655	0.0547
FRONT WASH CONTAINER NO:	KC 103	KC 105	KC 109
BEAKER NUMBER	18	60	52
BEAKER GROSS WT.	96.8676	96.9179	98.6012
BEAKER TARE WT.	96.8515	96.8986	98.5945
FRONT WASH NET WEIGHT:	0.0161	0.0193	0.0067
BACK WASH CONTAINER NO:	KC 102	KC 105	KC 108
BEAKER NUMBER	41	47	45
BEAKER GROSS WT.	96.0913	97.4552	95.9235
BEAKER TARE WT.	96.0913	97.4552	95.9235
BACK WASH NET. WEIGHT:	0	0	0
TOTAL IMPINGER VOL. ML	397.0	393.0	384.0
ALIQUOT VOL. ML	100	100	100
ORGANICS EXTRACT BEAKER NO.	226	503	204
BEAKER GROSS WT.	66.8565	63.1215	65.8295
BEAKER TARE WT.	66.8530	63.1176	65.8257
ORGANICS EXTRACT NET WT:	0.0035	0.0039	0.0038
ADJUSTED NET WT.	0.0139	0.0153	0.0146
WATER RESIDUAL BOTTLE NO.	KC 101	KC 104	KC 107
BEAKER NUMBER	251	211	1011
BEAKER GROSS WT.	63.7990	66.6259	64.1706
BEAKER TARE WT.	63.7951	66.6220	64.1677
INORGANIC RESIDUAL NET WT:	0.0039	0.0039	0.0029
ADJUSTED NET WT.	0.0155	0.0153	0.0111
TOTAL FRONT & BACK HALF GR:	0.1150	0.1155	0.0871
ACETONE BLANK WT.	0	0	
ORG. SOL. BL. WT.	0	0	
TOTAL FRONT & BACK HALF NET WEIGHT MG.	0.1150 115.0	0.1155 115.5	0.0871 87.1

ANALYST: E.C.B. BUTCHINO REV'D. BY: E. Gelt.

PARTICULATE SAMPLING CALCULATIONS

1.0 Definition of Terms

Symbol	Definition/Units	Calculation Equation
Qm	Metered sample vol. acf	
tm	Gas Meter Temp. R.	F+460
dH	Orifice Pressure drop "H20	
Po	Barometric Pressure "Hg	
Vv	Total Vol. Condensate ml	
MW	Dry Molecular Weight gas	
Ps	Abs. Stack Pressure "Hg	
S	Velocity Factor	sqrt(TsxdP)
Cp	Pitot Tube Coefficient	
As	Stack Area sq.in.	
Ts	Stack Gas Temp. R.	F+460
Dn2	Nozzle Diameter squared	
dt	Total Sample Time min.	
W	Particulate Weight mg.	
CO2	Percent CO2	

The Following are Program Calculated by Computer

Qd	Dry Gas Sample Volume scf	= 17.65(Qm)[Po+dH/13.6] / Tm
Qv	Water vapor Vol scf	= Vv x 0.0474
mv	Stack Gas Moisture % Vol.	= 100 Qv/Qv+Qd
md	Mole Fraction dry gas	= Qd/Qv+Qd
Ms	Stack Gas Molecular wt.	= (md)(Md)+18(1-md)
Vs	Stack Gas Velocity fpm	= 5129(Cp)(S)(sqrt 1/(Ps)(Ms)
qs	Stack Gas Flow dscfm	=0.123(Vs)(As)(md)(Ps)/Ts
I	Isokinetic Sampling Rate=	1039(Ts)(Qd)/ (Vs)(Ps)(md)(Dn2)(dt)
Cg	Grain Loading gr/dscf	= 0.0154(W)/Qd
Cg'	Corrected gr/dscf at 12% CO2	= Cg(12)/CO2
Ct	Mass Emission Rate lbs/hr	= 0.00857(Cg)(qs)

BWR ASSOCIATES, INC.
PARTICULATE SAMPLING CALCULATIONS

SYMBOL	DEFINITION	UNITS	RUN 1	RUN 2	RUN 3	AVERAGE
Qm	Gas Sample Volume	acf	41.60	37.80	38.00	
tm	Gas Meter Temp	R	545.0	555.0	563.0	
dH	Orifice Pres.	"H2O	1.370	1.060	1.090	
Po	Baro. Pres.	"Hg	29.40	29.40	29.40	
Vv	Vol. Condensate	ml	209.0	203.5	202.0	
Md	Dry Molecular Wt.	-	30.48	30.48	30.42	
Ps	Abs. Stack Pres.	"Hg	29.43	29.43	29.43	
S	Gas Velocity Fac.	-	21.47	20.46	20.35	
As	Stack Area	sq.in.	1809.6	1809.6	1809.6	
Ts	Stack Gas Temp.	R	829.0	835.0	840.0	
Dn sq	Nozzle Diam. Sqd.	sq.in.	0.0640	0.0640	0.0640	
dt	Sampling Time	min.	64.0	64.0	64.0	
W	Particulate Weight	mg	115.0	115.5	87.1	
CO2	Stack Gas CO2	%	13.95	13.95	13.38	
Cp	Pitot Cal. Factor	-	0.85	0.85	0.85	
Qd	Gas Sample Volume	dscf	39.74	35.44	35.12	36.77
QdM	Gas Sample Volume	dscm	1.12	1.00	0.99	1.04
Qv	Volume Water Vapor	scf	9.86	9.65	9.57	9.69
mv	Volume Water Vapor	%	19.88	21.40	21.42	20.90
md	Mole Frac.Dry Gas	-	0.80	0.79	0.79	0.79
Ms	Stack Gas Mol. Wt.	-	28.00	27.81	27.76	27.86
Vs	Stack Gas Velocity	fpm	3260.7	3117.9	3104.0	3160.9
VsM	Stack Gas Velocity	mpm	993.87	950.34	946.09	963.43
qs	Stack Gas Flowrate	dscfm	20643.8	19226.4	19020.1	19630.1
qsM	Stack Gas Flowrate	dscmm	584.22	544.11	538.27	555.53
I	Isokinetic Sampl.Rate	%	108.7	104.1	104.3	105.7
Cg	Grain Loading	gr/dscf	0.045	0.050	0.038	0.044
CgM	Emissions	mg/dscm	102.24	115.17	87.64	101.68
Cg'	Corr. to 12% CO2	gr/dscf	0.038	0.043	0.034	0.039
Cg'M	Corr. to 12% CO2	mg/dscm	87.95	99.07	78.60	88.54
Ct	Mass Emission Rate	lb/hr	7.88	8.27	6.23	7.46
CtM	Mass Emission Rate	kg/hr	3.58	3.76	2.83	3.39
E	Total Emissions	lbs/day				179.0

CLIENT NAME: HOPPERS CORP
SOURCE: WELLONS COGEN. SYSTEM
DATE: SEPT. 8, 1993

By: E. A. Wellman
Ckd. By: E.C.B.

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BWF ASSOCIATES, INC.

CALCULATION OF FUEL CONSUMPTION
FROM FLUE GAS VOLUME

SYMBOL	DEFINITION	CALCULATING EQUATION	VALUE
EAf	EXCESS AIR FACTOR	%Excess Air/100+1	1.457
Mf	FUEL MOISTURE FACTOR	1-%Fuel Moisture/100	0.595
qs	STACK GAS VOL. USCFM	Program Calculated*	19630
qs/lbF	STACK GAS VOL. lb FUEL	Program Calculated	66.71
F/min	FUEL USE lbs/min wet	Program Calculated	294.3
F/hr	FUEL USE lbs/hr wet	Program Calculated	17656
F t/hr	FUEL USE tons/hr wet	Program Calculated	8.8
Btu/lb	FUEL Btu/wet lb	Program Calculated	5236
Btu/hr	HEAT INPUT Million Btu/hr	Program Calculated	92.45
	MMBtu/hr adj.for superheat	Program Calculated	99.38

DATE: Sept. 2, 1988 By: e.a.w & e.c.b.

PLANT: KOPPERS C SOURCE: WELDONS

STEAM FLD N. RATE 40000 LBS/HR

FLUE GAS VOL.USCFM 19620.00* %CO2 13.76
% EXCESS AIR: 45.7% %O2 6.54

(Calcs. based on wood fuel assumed heating value of
8809 Btu/bone dry lb.)
*From Particulate Calculation program data sheet.

ALLOWABLE EMISSIONS BASED ON BTU INPUT

Emission standard in lbs Btu/hr allowed: 0.10

ALLOWABLE EMISSIONS (lbs/hr) 9.94

[redacted] ASSOCIATES, INC. FIELD DATA SHEET

PLANT: KOPPERS COR[redacted]
LOCATION: OROVILLE, CA
DATE : 9-8-83
START: 1020
RUN NO: 1 dN": 0.2530
DELTA Ha: 1.73 Cp: 0.85
"C"FACTOR . 0.84
NO.PTS. 32.00/RUN 16/TRAV. TIME/PT 2 TOTAL TIME-min. 64.00

AMBIENT [redacted]MP F. 68.00
BARO.PRESS. "Hg. 29.40
STATIC PRESS."H20 29.43
STACK DIAM. in. 48.00
ASSUMED H20 % 20.00
DELTA H FACTOR 2.44
PROCESS RATE 60K

PNT. NO.	TIME min	METER VOLcf	dP	SQRT dP	dH	METER T IN	METER T OUT	STACK TEM	IMP TEM	VAC "Hg	%CO2	%O2
BEGIN	0	236.70										
1	2	38.30	0.600	0.7746	1.46	74	74	376	74	2	13.90	6.40
2	4	39.60	0.620	0.7874	1.51			370				6.25
3	6	41.00	0.650	0.8062	1.59	74	74	372	62	3		6.10
4	8	42.40	0.650	0.8062	1.59			376			13.40	6.90
5	10	43.80	0.650	0.8062	1.59	79	76	370	62	3		6.75
6	12	45.00	0.620	0.7874	1.51			370				6.60
7	14	46.20	0.633	0.7956	1.54	80	76	376	62	3	14.10	6.20
8	16	47.60	0.600	0.7746	1.46			370				6.25
9	18	48.60	0.590	0.7681	1.44	82	78	370	62	3		6.30
10	20	50.00	0.610	0.7810	1.49			372				6.00
11	22	51.50	0.610	0.7810	1.49	84	78	374	63	3	14.00	6.30
12	24	52.60	0.610	0.7810	1.49			373				6.60
13	26	53.80	0.530	0.7280	1.29	87	82	370	64	3		6.60
14	28	55.10	0.450	0.6708	1.10			370			13.50	6.75
15	30	56.30	0.380	0.6164	0.93	88	83	370	64	2		6.30
16	32	57.40	0.350	0.5916	0.85			371				6.00
17	34	58.80	0.290	0.5385	0.71	90	80	370	65	2	14.00	6.30
18	36	59.90	0.360	0.6000	0.88			370				6.40
19	38	61.00	0.420	0.6481	1.02	90	86	368	65	2	13.80	6.50
20	40	62.30	0.620	0.7874	1.51			366				6.40
21	42	63.60	0.640	0.8000	1.56	92	86	365	65	2		6.20
22	44	65.10	0.620	0.7874	1.51			367				6.20
23	46	66.40	0.620	0.7874	1.51	92	88	368	65	3	14.00	6.20
24	48	68.80	0.620	0.7874	1.51			365				6.25
25	50	69.20	0.600	0.7746	1.46	93	89	360	62	3		6.60
26	42	70.50	0.630	0.7937	1.54			362				5.60
27	54	71.90	0.580	0.7616	1.42	94	90	360	62	2	14.50	5.80
28	56	73.20	0.560	0.7483	1.37			370				6.00
29	58	74.50	0.560	0.7483	1.37	94	90	370	62	2		6.00
30	60	75.70	0.580	0.7616	1.42			372				5.60
31	62	77.00	0.560	0.7483	1.37	95	90	370	62	2		5.90
32	64	78.30	0.530	0.7280	1.29			370			14.30	5.90
END		278.30										
TOTAL		41.60		2E+01	43.78							
AVG.		0.65		0.7455	1.37	87	83	369			13.95	6.25
							545	829				

LEAK TESTS: INITIAL: O.K. FINAL: 0 CFM AT (-10) IN Hg

IMP.#1 170.00ML
#2 25.00ML
#3 2.00ML
#4 11.00GR
TOTAL 208.00ML

IMPINGER WATER BOTTLE NO:(KC 101) CO2% 13.95
BACK WASH BOTTLE NO: (KC 102) O2 6.25
PROBE WASH BOTTLE NO: (KC 103) CO 52ppm
FILTER NO: (289) N2 79.80
Md 30.48
"S" 21.47

fd sheet.bwr

PLANT: KOPPERS CORP

LOCATION: OROVILLE, CAL.

DATE : 9-8-83

START: 1242

RUN NO: 2 dN": 0.2530

DELTA Ha: 1.73 Cp: 0.85

"C"FACTOR 0.840

NO.PTS. 32.00/RUN 16/TRAV. TIME/PT 2 TOTAL TIME-min. 64.00

AMBIENT TE										F.		78.00
BARO.PRESS.										"Hg.		29.40
STATIC PRESS.										"H20		29.43
STACK DIAM.										in.		48.00
ASSUMED H20										%		20.00
DELTA H FACTOR												2.20
PROCESS RATE												60K

PNT. NO.	TIME min	METER VOLcf	dP	SQRT dP	dH	METER T IN	METER T OUT	STACK TEM	IMP TEM	VAC "Hg	%CO2	%O2
BEGIN	0	279.40										
1	2	80.30	0.320	0.5657	0.70	94	94	374	72	0	14.00	6.40
2	4	81.40	0.380	0.6164	0.84			372				6.60
3	6	82.50	0.430	0.6557	0.95	93	92	374	70	1		6.60
4	8	83.80	0.500	0.7071	1.10			374				6.30
5	10	84.90	0.500	0.7071	1.10	94	92	372	66	1	14.20	6.00
6	12	86.10	0.540	0.7348	1.19			372				6.30
7	14	87.30	0.540	0.7348	1.19	94	92	372	66	1		6.25
8	16	88.50	0.520	0.7211	1.14	94	92	372	68	1		6.26
9	18	89.70	0.550	0.7416	1.21			373			13.90	6.25
10	20	90.90	0.550	0.7416	1.21	94	92	375	68	2		6.50
11	22	92.10	0.550	0.7416	1.21			375				6.50
12	24	93.30	0.550	0.7416	1.21	96	92	376	68	2	14.20	6.00
13	26	94.60	0.550	0.7416	1.21			375				5.80
14	28	95.80	0.540	0.7348	1.19			375			14,30	6.00
15	30	97.00	0.540	0.7348	1.19	96	93	377	68	2		6.10
16	32	98.20	0.420	0.6481	0.92			375				6.00
17	34	99.50	0.300	0.5477	0.66	96	94	370	68	1	14.50	5.80
18	36	300.60	0.350	0.5916	0.77			375				6.00
19	38	1.20	0.500	0.7071	1.10	96	94	375	68	2		6.80
20	40	2.50	0.560	0.7483	1.23			375				5.90
21	42	3.70	0.570	0.7550	1.25	98	96	375	68	3		5.60
22	44	5.00	0.590	0.7681	1.30			377			14.00	6.20
23	46	6.30	0.570	0.7550	1.25			375				6.20
24	48	7.50	0.550	0.7416	1.21	99	96	377	67	3		6.25
25	50	8.70	0.550	0.7416	1.21			379				6.25
26	42	9.90	0.530	0.7280	1.17	100	96	375	66	3		6.30
27	54	11.20	0.540	0.7348	1.19			375			13.90	6.25
28	56	12.40	0.540	0.7348	1.19	100	96	376	66	3		6.40
29	58	13.60	0.510	0.7141	1.12			375				6.65
30	60	14.80	0.510	0.7141	1.12	100	96	375	66	3	13.30	7.00
31	62	16.00	0.510	0.7141	1.12			378				6.50
32	64	17.20	0.480	0.6928	1.06	100	96	377	66	3	13.20	7.00
END		317.20										
TOTAL		37.80		2E+01	35.51							
AVG.		0.59		0.7081	1.11	97	94	375			13.95	6.28
							555	835				

LEAK TESTS: INITIAL: O.K. FINAL: 0 CFM AT (-8) IN Hg

IMP.#1	160.00ML	IMPINGER WATER BOTTLE NO:	(KC	104)	CO2% 13.95
#2	30.00ML	BACK WASH BOTTLE NO:	(KC	105)	O2 6.28
#3	3.00ML	PROBE WASH BOTTLE NO:	(KC	106)	CO 55ppm
#4	10.50GR	FILTER NO:	(	290)	N2 79.77
TOTAL	203.50ML			Md	30.48
				"S"	20.46

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PLANT: KOPPERS CORP
LOCATION: OROVILLE, C
DATE : 9-8-83
START: 1440
RUN NO: 3 dN": 0.2530
DELTA Ha: 1.73 Cp: 0.85
"C"FACTOR 0.840
NO.PTS. 32.00/RUN 16/TRAV. TIME/PT 2 TOTAL TIME-min. 64.00

AMBIENT TEMP F. 88.00
BARO.PRESS. "Hg. 29.40
STATIC PRESS."H2O 29.43
STACK DIAM. in. 48.00
ASSUMED H2O % 20.00
DELTA H FACTOR 2.20
PROCESS RATE 60K

	PNT. NO.	TIME min	METER VOLcf	dP	SQRT dP	dH	METER T IN	METER T OUT	STACK TEM	IMP TEM	VAC "Hg	%CO2	%O2
BEGIN		0	17.60										
	1	2	18.70	0.320	0.5657	0.70	100	100	382	82	1	13.30	7.00
	2	4	19.70	0.380	0.6164	0.84			382				7.00
	3	6	20.80	0.460	0.6782	1.01	100	98	380	70	2		6.90
	4	8	22.00	0.560	0.7483	1.23			382			13.00	7.20
	5	10	32.30	0.550	0.7416	1.21	102	99	380	66	2		7.10
	6	12	24.60	0.560	0.7483	1.23			380				6.95
	7	14	25.70	0.560	0.7483	1.23	102	100	380	66	2	13.50	6.80
	8	16		0.560	0.7483	1.23			385				7.10
	9	18	28.20	0.570	0.7550	1.25	102	100	384	66	2		7.25
	10	20	29.50	0.550	0.7416	1.21			382			13.70	6.65
	11	22	30.70	0.540	0.7348	1.19	103	100	380	66	2		7.00
	12	24	31.90	0.540	0.7348	1.19			380				6.60
	13	26	33.10	0.500	0.7071	1.10	104	102	378	66	2	13.60	6.60
	14	28	34.30	0.500	0.7071	1.10			378				7.10
	15	30	35.50	0.500	0.7071	1.10	105	102	380	66	2		7.00
stop	16	32	36.70	0.500	0.7071	1.10			380			13.60	6.70
	17	34	37.90	0.520	0.7211	1.14	104	102	380	66	2		7.00
	18	36	39.00	0.540	0.7348	1.19			380				7.00
	19	38	40.20	0.540	0.7348	1.19	105	101	378	66	2	13.20	7.00
	20	40	41.40	0.500	0.7071	1.10			382				6.60
	21	42	42.60	0.500	0.7071	1.10	105	101	379	66	2		6.30
	22	44	43.80	0.500	0.7071	1.10			378			13.70	6.65
	23	46	45.10	0.520	0.7211	1.14	106	102	378	65	2		6.50
	24	48	46.30	0.520	0.7211	1.14			380				7.00
	25	50	47.50	0.520	0.7211	1.14	106	103	380	65	2	13.00	7.30
	26	42	48.70	0.560	0.7483	1.23			382				7.60
	27	54	50.00	0.500	0.7071	1.10	107	103	380	65	3		6.80
	28	56	51.20	0.520	0.7211	1.14			382			13.20	7.10
	29	58	52.50	0.480	0.6928	1.06	107	103	382	65	3		6.90
	30	60	53.60	0.420	0.6481	0.92			379				6.80
	31	62	54.70	0.340	0.5831	0.75	107	103	380	65	3		7.20
	32	64	55.60	0.250	0.5000	0.55			382				7.60
END			55.60										
TOTAL			38.00		2E+01	34.94							
AVG.					0.7021	1.09	104	101	380			13.38	6.95
								563	840				

LEAK TESTS: INITIAL: O.K. FINAL: 0 CFM AT (-10) IN Hg

IMP.#1	162.00ML	IMPINGER WATER BOTTLE NO:	(KC 107) CO2% 13.38
#2	21.00ML	BACK WASH BOTTLE NO:	(KC 108) O2 6.95
#3	1.00ML	PROBE WASH BOTTLE NO:	(KC 109) CO 38ppm
#4	18.00GR	FILTER NO:	(291) N2 79.67
TOTAL	202.00ML		Md 30.42
			"S" 20.35

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BWR ASSOCIATES, INC.
NOZZLE CALIBRATION FORM

DATE: SEPT. 8,1983 CALIBRATED BY: E.C.B. BUTCHINO

NOZZLE I.D.	D1 "	D2 "	D3 "	VAR. D"	D AVG."
#25	0.2530	0.2530	0.2530	0	0.2530

WHERE:
D1, D2, D3, = NOZZLE DIAMETER MEASURED ON DIFFERENT DIAMETERS
TOLERANCE = MEASUREMENT TO 0.001"
VAR. D" = MAXIMUM DIFFERENCE BETWEEN ANY TWO MEASUREMENTS
TOLERANCE = NOT MORE THAN 0.004"
D AVG. " = AVERAGE OF D1, D2, D3

BWR ASSOCIATES INC. PITOT TUBE CALIBRATION FORM

FORWARD			REVERSE		
dP S	dP Std	Cp	dP S	dP Std	Cp
0.280	0.210	0.8574	0.070	0.050	0.8367
0.580	0.430	0.8524	0.650	0.480	0.8507
0.950	0.690	0.8437	0.330	0.240	0.8443
1.080	0.790	0.8467	1.300	0.940	0.8418
0.140	0.100	0.8367	2.600	1.870	0.8396
0.475	0.350	0.8498	0.170	0.120	0.8318
0.070	0.050	0.8367	0.035	0.025	0.8367
	AVERAGE	0.8481		AVERAGE	0.8402

BY: e.ECB butchino DATE: SEPT. 5, 1983

BWR ASSOCIATES INC. CALIBRATION DATA SHEET
DRY GAS METER & ORIFICE METER

DATE OF CALIBRATION: SEPT. 5, 1983
BAROMETRIC PRESSURE: 28.58"Hg.

ORIFICE dH "H20	0.50	1.00	2.00	4.00
WET TEST METER CF	2.03	2.91	4.08	5.81
DRY GAS METER CF	2.08	2.98	4.15	5.92
WET TEST METER T.	68.00	70.00	70.00	70.00
DRY TEST METER T.				
INLET	88.00	89.00	90.00	92.00
OUTLET	76.00	77.00	77.00	78.00
AVERAGE	82.00	83.00	83.50	85.00
TIME - MINUTES	5.0	5.0	5.0	5.0
GAS METER FACTOR	1.0008	0.9979	1.0030	0.9989
ORIFICE DELTA Ha	1.750	1.713	1.743	1.716
AVERAGE GAS METER FACTOR				1.0002
AVERAGE ORIFICE DELTA Ha				1.730

CONTROL UNIT: MISCO UNIT #1 MOD: 7200

SERIAL NUMBER: 7271 BY: ECB B.

Fuel Use Rate
$\frac{(60{,}000 \frac{lbs}{hr})(1,000 \frac{BTU}{lbs})(\frac{1}{.8\ eff})}{4500 \frac{BTU}{lb\text{-}w}}$
= 16,667 lb-w/hr
= 8.33 TN-w/hr

1.4 Sample Point Description:

See 1.4.1 "Sample and Traverse Point Determination Sheet".

1.5 Detailed Results:
1.5.1 Summary Report

RESULTS

	RUN #1	RUN #2	RUN #3	AVERAGE	
Time Start	1020	1242	1440	-	
Duration Minutes	64	64	64	64	
Process Rate lbs/hour-steam	60000	60000	60000	60000	
Ave. Stack Temperature F	369	375	380	375	
Ave. Stack Velocity fpm	3261	3118	3104	3161	
Ave. Stack Flow scfm	20644	19224	19020	19630	
Ave. Stack Moisture %	19.9	21.4	21.4	20.9	
Grain Loading gr/dscf	0.045	0.050	0.039	0.044	
Corrected gr/dscf at 12% CO2	0.038	0.043	0.034	0.039	
Emission Rate lbs/hr	7.88	8.27	6.23	7.46	0.10 lb/TN
Emission Rate lbs/day	189	199	150	179	250 [illegible]
Isokinetic Sampling Rate %	109.7	104.1	104.3	105.7	
NOx Emissions lbs/hr	6.62	5.97	5.72	6.03	= 0.72 lb/TN
Nox Emissions lbs/day	158.9	143.2	138.7	146.9	350 [illegible]
Carbon Monoxide lbs/hr	4.68	4.61	3.15	4.14	— 0.50 lb/TN
Carbon Monoxide lbs/day	112	111	76	100	1000 [illegible]
Total Hydrocarbons lbs/hr	7.56	8.05	9.39	8.33	
Total Hydrocarbons lbs/day	181	193	225	200	[illegible]
V.O.C.'s lbs/hr	5.25	6.71	6.93	6.30	- 0.76 lb/TN
V.O.C.'s lbs/day	126	161	166	151	[illegible]

26-Jul-94 emis-inv

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA

BOILER, WOOD FIRED

Wood Burned (tn/yr): 37580 (lb/hr): 8000

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	1.44	lb/tn	5/88 Test	27.06	5.76
SO2	4.4	lb/tn	Calculation	82.68	17.60
NOX	1.4	lb/tn	FR Test	26.31	5.60
CO	0.6	lb/tn	FR Test	11.27	2.40
VOC	0.91	lb/tn	FR Test	17.10	3.64
Arsenic	8.24E-06	lb/tn	CA-ARB	0.0002	0.000
Cadmium	4.61E-05	lb/tn	CA-ARB	0.0009	0.000
Chromium	5.44E-05	lb/tn	CA-ARB	0.0010	0.000
Lead	3.95E-05	lb/tn	CA-ARB	0.0007	0.000
Manganese	1.99E-02	lb/tn	CA-ARB	0.3738	0.080
Nickel	1.02E-04	lb/tn	CA-ARB	0.0019	0.000
Selenium	0.00E+00	lb/tn	CA-ARB	0.0000	0.000
Mercury	3.43E-06	lb/tn	CA-ARB	0.0001	0.000
Total HAP Metals				0.38	0.081

BOILER, FUEL OIL

Oil Burned(MGal/yr): 104.8 Sulfur Content: 0.500 % Fuel Use Rate(MGal/hr) 0.25

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	0.10	0.50
SO2	71	lb/MGal	AP-42	3.72	17.75
NOX	20	lb/MGal	AP-42	1.05	5.00
CO	5	lb/MGal	AP-42	0.26	1.25
VOC	0.2	lb/MGal	AP-42	0.01	0.05

WOOD PRESERVING PROCESSES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr ave)
VOC(as Creosote)	N/A		Form R	13.85	3.16
HAPs contained in creosote:					
Benzene	22	% in vapor	Calculation	3.05	0.69
Biphenol	0.16	% in vapor	Calculation	0.02	0.01
Cresols	0.46	% in vapor	Calculation	0.06	0.01
Dibenzofurans	0.61	% in vapor	Calculation	0.08	0.02
Naphthalene	17	% in vapor	Calculation	2.35	0.54
P-Xylenes	4.5	% in vapor	Calculation	0.62	0.14
Phenol	1.4	% in vapor	Calculation	0.19	0.04
Quinoline	1.5	% in vapor	Calculation	0.21	0.05
Toluene	26	% in vapor	Calculation	3.60	0.82
TOTAL CREO. HAP	73.63	% in vapor		10.20	2.32
Pentachlorophenol (VOC)	N/A		Form R	0.015	0.00
TOTAL VOC				13.86	3.16

CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	160
Total Hours:	1280

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	1.28	2

TOTAL PLANT EMISSIONS

Particulate	28.44	tn/yr
SO2	86.40	tn/yr
NOX	27.35	tn/yr
CO	11.54	tn/yr
VOC	30.97	tn/yr
HAPs(Organics/VOC)	10.21	tn/yr
HAP Metals	0.38	tn/yr
TAXABLE TOTAL (exc CO,HAP VOCs	173.54	tn/yr

MANUFACTURING PROCESS OPERATIONS

COMPANY NAME	ADDRESS	For Agency Use Only
Koppers Industries Inc	Tie Plant Road Tie Plant, MS	
FACILITY NUMBER	**Information for Calendar Year** / **DATE**	
0960-00012	1992 / 11/ 193	

Reference Number	Process or Unit Operation Name	Rated Process Capacity Tons/Hour	Feed Input: Quantity Per Hour	Feed Input: Quantity Per Year	Number of Emission Points to Air	Product Output*: Quantity Per Hour	Product Output*: Quantity Per Year
03	Wood Preserving			2,332,000 Cubic Feet	23 *		2,332,000 cubic feet
	* Number of emission points is per flow diagram and						
	includes fugitive emissions.						
04	Tie Mill		1400 C.F.	2,800,000 C.F.	1	1400 CF	2,000,000 CF.

* Specify Units of Measure Used

Revised 7-12-
STJ

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS REPORTING FORM

P.O. BOX 10385

JACKSON, MS 39289-0385

In accordance with Section 49-17-32, Mississippi Code of 1972, as amended, all sources which choose to base their Annual fee on actual emissions shall submit, by July 1 of each year, an inventory of emissions for the previous calendar year.

Calendar Year Reported: 1993 **MDEQ Facility ID #:** 0960 - 00012 **Date:** 6/15/94 **SIC Code:** 2491

Facility Name: KOPPERS INDUSTRIES, INC.

Mailing Address: P.O Box 160 (Street or P.O. Box) Tie Plant (City) MS (State) 38960 (Zip)

Site Address: Tie Plant Road (Street Location) Tie Plant (City) Grenada (County)

Contact and Title: Stephen Smith, Environmental Mgr. **Contact's Phone #:** 412-227-2677

(1) Pollutant	(2) Annual Allowable (Potential) Emission Rate (TPY)	(3) Actual Annual Emission Rate (TPY)
Particulate Matter (PM)	187.54	17.22
SO2	786.24	2.40
NOX	~~0~~	8.53
CO	0	220.0
VOC*	0	29.27
LEAD	0	0.0004
TRS	0	0
Total HAPs (Voc)	0	10.21
Total HAPs (Non-Voc)	0	0.22
CFCs/HCFCs	0	0
Other	0	0

* Reflects Total VOC from the facility including VOCs that are HAPs.

Attach calculations, monitoring data, measurements, etc. from which actual emission rates were determined. Actual emission rates will not be accepted unless the method of calculation is attached.

I, the undersigned, am the owner or authorized representative of the facility described on this fee form. I certify that the statements and calculations made on this form are complete and accurate to the best of my knowledge.

Ronald P Murphy PLANT MANAGER 6/16/94

Signature and Title Date

15-Jun-94 emis-inv

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA
REPORTING YEAR: 1993

BOILER, WOOD FIRED
Wood Burned (tn/yr): 22000

Pollutant	Emission Factor	Units	Basis	Estimated Emission	Units
Particulate	1.44	lb/tn	5/88 Test	15.84	tn/yr
SO2	0.015	lb/tn	AP-42	0.17	tn/yr
NOX	0.68	lb/tn	AP-42	7.48	tn/yr
CO	20	lb/tn	AP-42	220.00	tn/yr
VOC	1.4	lb/tn	AP-42	15.40	tn/yr
Arsenic	8.24E-06	lb/tn	CA-ARB	0.0001	tn/yr
Cadmium	4.61E-05	lb/tn	CA-ARB	0.0005	tn/yr
Chromium	5.44E-05	lb/tn	CA-ARB	0.0006	tn/yr
Lead	3.95E-05	lb/tn	CA-ARB	0.0004	tn/yr
Manganese	1.99E-02	lb/tn	CA-ARB	0.2188	tn/yr
Nickel	1.02E-04	lb/tn	CA-ARB	0.0011	tn/yr
Selenium	0.00E+00	lb/tn	CA-ARB	0.0000	tn/yr
Mercury	3.43E-06	lb/tn	CA-ARB	0.0000	tn/yr
Total HAP Metals				0.22	tn/yr

BOILER, FUEL OIL
Oil Burned(MGal/yr): 104.8 Sulfur Content: 0.300 %

Pollutant	Emission Factor	Units	Basis	Estimated Emission	Units
Particulate	2	lb/MGal	AP-42	0.10	tn/yr
SO2	42.6	lb/MGal	AP-42	2.23	tn/yr
NOX	20	lb/MGal	AP-42	1.05	tn/yr
CO	5	lb/MGal	AP-42	0.26	tn/yr
VOC	0.2	lb/MGal	AP-42	0.01	tn/yr

WOOD PRESERVING PROCESSES

Pollutant	Emission Factor	Units	Basis	Estimated Emission	Units
VOC(as Creosote)	N/A		Form R	13.85	tn/yr
HAPs contained in creosote:					
Benzene	22	% in vapor	Calculation	3.05	tn/yr
Biphenol	0.16	% in vapor	Calculation	0.02	tn/yr
Cresols	0.46	% in vapor	Calculation	0.06	tn/yr
Dibenzofurans	0.61	% in vapor	Calculation	0.08	tn/yr
Naphthalene	17	% in vapor	Calculation	2.35	tn/yr
P-Xylenes	4.5	% in vapor	Calculation	0.62	tn/yr
Phenol	1.4	% in vapor	Calculation	0.19	tn/yr
Quinoline	1.5	% in vapor	Calculation	0.21	tn/yr
Toluene	26	% in vapor	Calculation	3.60	tn/yr
TOTAL CREO. HAP	73.63	% in vapor		10.20	tn/yr
Pentachlorophenol (VOC)	N/A		Form R	0.015	tn/yr
TOTAL VOC				13.86	tn/yr

CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	160
Total Hours:	1280

Pollutant	Emission Factor	Units	Basis	Estimated Emission	Units
Particulate	2	lb/hr	AP-42	1.28	tn/yr

TOTAL PLANT EMISSIONS

Particulate		17.22	tn/yr
SO2		2.40	tn/yr
NOX		8.53	tn/yr
CO		220.26	tn/yr
VOC		29.27	tn/yr
HAPs(Organics/VOC)		10.21	tn/yr
HAP Metals		0.22	tn/yr
TAXABLE TOTAL (exc CO)	HAP VOCs	57.64	tn/yr

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS REPORTING FORM

P.O. BOX 10385

JACKSON, MS 39289-0385

In accordance with Section 49-17-32, Mississippi Code of 1972, as amended, all sources which choose to base their Annual fee on actual emissions shall submit, by July 1 of each year, an inventory of emissions for the previous calendar year.

Calendar Year Reported: _____ **MDEQ Facility ID #:** 0960 - 00012 **Date:** _____ **SIC Code:** 2491

Facility Name: KOPPERS INDUSTRIES, INC.

Mailing Address: _____ _____ _____ _____
(Street or P.O. Box) (City) (State) (Zip)

Site Address: _____ _____ _____
(Street Location) (City) (County)

Contact and Title: _____ **Contact's Phone #:** _____

(1) Pollutant	(2) Annual Allowable (Potential) Emission Rate (TPY)	(3) Actual Annual Emission Rate (TPY)
Particulate Matter (PM)	187.54	
SO2	788.24	
NOX	0	
CO	0	
VOC*	0	
LEAD	0	
TRS	0	
Total HAPs (Voc)	0	
Total HAPs (Non-Voc)	0	
CFCs/HCFCs	0	
Other	0	

* Reflects Total VOC from the facility including VOCs that are HAPs.

Attach calculations, monitoring data, measurements, etc. from which actual emission rates were determined. Actual emission rates will not be accepted unless the method of calculation is attached.

I, the undersigned, am the owner or authorized representative of the facility described on this fee form. I certify that the statements and calculations made on this form are complete and accurate to the best of my knowledge.

_____ _____
Signature and Title Date

STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT
TO CONSTRUCT AIR EMISSIONS EQUIPMENT
THIS CERTIFIES THAT

Koppers Industries, Inc.
Tie Plant Road
Tie Plant, Mississippi

has been granted permission to construct air emissions equipment to comply with the emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this 8th day of November, 1994

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

_____

HEAD, OFFICE OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Permit No. 0960-00012

PART I
GENERAL CONDITIONS

1. The plans, specifications, schedules, dates and other data submitted to the Permit Board are filed with and considered as a part of this permit.

2. All air pollution control facilities shall be designed and constructed such as to allow proper operation and maintenance of the facilities.

3. The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters without the proper environmental permits.

4. The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Environmental Quality Permit Board.

5. The construction of facilities shall be performed in such a manner as to reduce both point source and fugitive dust emissions to a minimum.

6. The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their representatives upon presentation of credentials:

   a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and

   b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emissions.

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

   a. Violation of any terms or conditions of this permit.

   b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts, or

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of authorized air emissions.

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

9. 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.

10. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.

11. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

12. This permit is for air pollution control purposes only.

13. Approval to construct will expire should construction not begin within eighteen (18) months of the issuance of this permit, or should construction be suspended for eighteen (18) months.

14. Prior to startup of air emissions equipment at this source, the permittee must obtain a Permit to Operate and submit certification that construction was completed in accordance with the approved plans and specifications.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning November 8, 1994, the permittee is authorized to construct modifications (change in the method of operation by the addition of creosote and pentachlorophenol treated wood as fuel) to air emissions equipment for the emission of air contaminants from Emission Point AA-001, the 37.5 MMBTU/hr Wellons/Nebraska Woodwaste Boiler with multiclone collector (Reference No. 01).

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	20.63 lbs/hr and 90.36 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.
Nitrogen Oxides	6.56 lbs/hr and 28.73 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	5.63 lbs/hr and 24.64 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	4.27 lbs/hr and 18.70 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.
Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

PART II
EMISSION LIMITATIONS & MONITORING REQUIREMENTS

Continued from Previous Page

The temperature in the Woodwaste Boiler must be maintained at 1600°F or greater when firing treated wood.

The Woodwaste Boiler shall comply with a minimum destruction removal efficiency (DRE) of 99.9% for all principal organic hazardous components (POHC).

OPERATING LIMITATIONS

Materials other than untreated wood, creosote treated wood, pentachlorophenol treated wood, or office waste paper are prohibited in the boiler. The office waste paper shall be limited to waste paper generated on site by Kopper's office operations and shall not contain plastic or non-combustible wastes and the total amount fired shall be less than one percent (1%) of total fuel input.

Total woodwaste feed rate shall not exceed 9,375 lbs/hr.

RECORDKEEPING & REPORTING REQUIREMENTS

The permittee shall monitor and document with recordkeeping the following operating parameters:

- Temperature in the woodwaste boiler, on a continuous basis, with notations indicating when treated wood is being fired.
- In-stack opacity.
- CO concentration at the exit of the boiler stack, on a continuous basis.

  The CO continuous monitoring system shall include the capacity to correct the CO concentrations to a reference O_2 concentration and shall be collocated with the stack sampling ports.

These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing the temperature and opacity monitoring data shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

PART III
OTHER REQUIREMENTS

(1) The permittee shall demonstrate compliance with PM, SO_2, NO_x, CO, & NMVOC lbs/hr emission limitations, opacity limitations, and minimum DRE in PART II for Emission Point AA-001 by stack testing in accordance with applicable EPA Reference Methods and submittal of a test report(s).

(2) The permittee shall demonstrate compliance as set forth in Item (1), above, within 60 days after achieving the maximum production rate at which Emission Point AA-001 will be operated, but no later than 180 days after initial startup.

(3) Testing for the purpose of demonstrating compliance with the lb/hr emission limitations and minimum DRE shall be conducted at maximum production rates and peak pollutant generation rates.

(4) During emission testing, the permittee shall document the following operating parameters:

- Boiler operating temperature via continuous monitoring, with notations indicating when treated wood is being fired.
- Treated and untreated woodwaste feedrate during each hour of testing, lbs/hr.
- CO concentration at the exit of the boiler stack via continuous monitoring.
- In-stack opacity.

This data shall be included in the test report required in Item (1) above.

(5) A pretest conference at least thirty (30) days prior to the scheduled test date is needed to ensure that all test methods and procedures are acceptable to the Office of Pollution Control. Also, the Office of Pollution Control must be notified prior to the scheduled test date. At least TEN (10) DAYS notice should be given so that an observer may be scheduled to witness the test(s).

(6) All records shall be maintained at the facility for at least (2) years and shall be made available to the Office of Pollution Control upon request.

(7) The permittee shall handle, store, and transport all materials in such a manner as to minimize fugitive emissions.

(8) Approval to construct air emissions equipment and modify Emission Point AA-001 has been granted contingent upon the permittee complying with the emission limitations and monitoring requirements for the existing air emissions equipment set forth in the following pages.

PART III
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Air emissions from Emission Point AA-002, the 28.5 MMBTU/hr fuel oil fired Murray Boiler (Reference No. 02), shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	0.43 lbs/hr and 1.88 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	0.43 lbs/hr and 1.88 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	15.40 lbs/hr and 67.45 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.
Nitrogen Oxides	4.34 lbs/hr and 19.01 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	1.08 lbs/hr and 4.73 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.04 lbs/hr and 0.18 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.
Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

ADDITIONAL CONDITIONS

The sulfur content of the fuel oil shall not exceed 0.5% by weight.

The permittee shall monitor and document with recordkeeping the sulfur content of all fuel oil fired in Emission Point AA-002. These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing this information shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

PART III
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Air emissions from Emission Point AA-003, the Wood Treatment Facility including tanks and five (5) treating cylinders (Reference No. 03), shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

PART III
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Air emissions from Emission Point AA-004, the Tie Mill with cyclone (Reference No. 04), shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	**2.0 lbs/hr and 8.76 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.**
PM_{10}	**2.0 lbs/hr and 8.76 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.**
Opacity	**40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.**

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT
THIS CERTIFIES THAT

Koppers Industries, Inc.
Tie Plant Road
Tie Plant, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972) and the regulations and standards adopted and promulgated thereunder.

Issued this 8th day of November, 1994

Effective Date: As specified herein.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

HEAD, OFFICE OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Expires 1st day of November, 1999

Permit No. 0960-00012

DATA CODED

PART I
GENERAL CONDITIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any air pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or modifications which will result in new, different, or increased emission of air pollutants must be reported by submission of a new application.

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

3. Solids removed in the course of control of air emissions shall be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering state waters without the proper environmental permits.

4. Any diversion from or bypass of collection and control facilities is prohibited except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Environmental Quality Permit Board.

5. Whenever any emergency, accidental or excessive discharge of air contaminants occurs, the Mississippi Department of Environmental Quality Office of Pollution Control shall be notified immediately of all information concerning cause of the discharge, point of discharge, volume and characteristics, and whether discharge is continuing or stopped.

6. Should the Executive Director of the Mississippi Department of Environmental Quality declare an Air Pollution Emergency Episode, the permittee will be required to operate in accordance with the permittee's previously approved Emissions Reduction Schedule.

7. The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their authorized representatives, upon the presentation of credentials:

   a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit, and

   b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.

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

   a. **Violation of any terms or conditions of this permit.**

   b. **Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or**

   c. **A change in any condition that required either a temporary or permanent reduction or elimination of authorized air emissions.**

9. **For renewal of this permit the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Environmental Quality Permit Board.**

10. **Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Environmental Quality Office of Pollution Control.**

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

12. **Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.**

13. **This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.**

14. **This permit is for air pollution control purposes only.**

15. **This permit is not a Federally approved operating permit under Title V of the Federal Clean Air Act as amended in 1990. This permit is a transitional operating permit to satisfy the requirements of State Law only. After new State operating permit regulations are developed and adopted to satisfy the conditions of Title V of the Federal Act, the permittee will be required to submit an updated application to comply with said regulations and this permit may be modified, suspended, or revoked as necessary to comply with said regulations.**

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning November 8, 1994, and lasting until November 1, 1999, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-001, the 37.5 MMBTU/hr Wellons/Nebraska Woodwaste Boiler (firing treated and untreated wood) with multiclone collector (Reference No. 01).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	0.30 gr/dscf, per APC-S-1, Section 3.4(b), not to exceed 6.75 lbs/hr and 29.57 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	20.63 lbs/hr and 90.36 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.
Nitrogen Oxides	6.56 lbs/hr and 28.73 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	5.63 lbs/hr and 24.64 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	4.27 lbs/hr and 18.70 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.
Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

PART II
EMISSION LIMITATIONS & MONITORING REQUIREMENTS

Continued from Previous Page

The temperature in the Woodwaste Boiler must be maintained at 1600°F or greater when firing treated wood.

The Woodwaste Boiler shall comply with a minimum destruction removal efficiency (DRE) of 99.9% for all principal organic hazardous components (POHC).

OPERATING LIMITATIONS

Materials other than untreated wood, creosote treated wood, pentachlorophenol treated wood, or office waste paper are prohibited in the boiler. The office waste paper shall be limited to waste paper generated on site by Kopper's office operations and shall not contain plastic or non-combustible wastes and the total amount fired shall be less than one percent (1%) of total fuel input.

Total woodwaste feed rate shall not exceed 9,375 lbs/hr.

RECORDKEEPING & REPORTING REQUIREMENTS

The permittee shall monitor and document with recordkeeping the following operating parameters:

- Temperature in the woodwaste boiler, on a continuous basis, with notations indicating when treated wood is being fired.

- In-stack opacity.

- CO concentration at the exit of the boiler stack, on a continuous basis.

  The CO continuous monitoring system shall include the capacity to correct the CO concentrations to a reference O_2 concentration and shall be collocated with the stack sampling ports.

These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing the temperature and opacity monitoring data shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning November 8, 1994, and lasting until November 1, 1999, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-002, the 28.5 MMBTU/hr fuel oil fired Murray Boiler (Reference No. 02).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	0.43 lbs/hr and 1.88 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	0.43 lbs/hr and 1.88 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	15.40 lbs/hr and 67.45 tons/year, as determined by EPA Reference Method 6, 40 CFR 60, Appendix A.
Nitrogen Oxides	4.34 lbs/hr and 19.01 tons/year, as determined by EPA Reference Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	1.08 lbs/hr and 4.73 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.04 lbs/hr and 0.18 tons/year, as determined by EPA Reference Method 25, 40 CFR 60, Appendix A.
Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

ADDITIONAL CONDITIONS

The sulfur content of the fuel oil shall not exceed 0.5% by weight.

The permittee shall monitor and document with recordkeeping the sulfur content of all fuel oil fired in Emission Point AA-002. These records shall be maintained at the facility and made available to the Office of Pollution Control (OPC) upon request. In addition, a quarterly report summarizing this information shall be submitted to the OPC within thirty (30) days of the close of the calendar quarter.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning November 8, 1994, and lasting until November 1, 1999, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-003, the Wood Treatment Facility including tanks and five (5) treating cylinders (Reference No. 03).

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning November 8, 1994, and lasting until November 1, 1999, the permittee is authorized to operate air emissions equipment and emit air contaminants from Emission Point AA-004, the Tie Mill with cyclone (Reference No. 04).

Such emissions shall be limited by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	2.0 lbs/hr and 8.76 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	2.0 lbs/hr and 8.76 tons/year as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect November 8, 1994.

PART III
OTHER REQUIREMENTS

(1) The permittee shall demonstrate compliance with PM, SO_2, NO_x, CO, & NMVOC lbs/hr emission limitations, opacity limitations, and minimum DRE in PART II for Emission Point AA-001 by stack testing in accordance with applicable EPA Reference Methods and submittal of a test report(s).

(2) The permittee shall demonstrate compliance as set forth in Item (1), above, within 60 days after achieving the maximum production rate at which Emission Point AA-001 will be operated firing treated wood, but no later than 180 days after initial startup firing treated wood.

(3) Testing for the purpose of demonstrating compliance with the lb/hr emission limitations and minimum DRE shall be conducted at maximum production rates and peak pollutant generation rates.

(4) During emission testing, the permittee shall document the following operating parameters:

- Boiler operating temperature via continuous monitoring, with notations indicating when treated wood is being fired.
- Treated and untreated woodwaste feedrate during each hour of testing, lbs/hr.
- CO concentration at the exit of the boiler stack via continuous monitoring.
- In-stack opacity.

This data shall be included in the test report required in Item (1) above.

(5) A pretest conference at least thirty (30) days prior to the scheduled test date is needed to ensure that all test methods and procedures are acceptable to the Office of Pollution Control. Also, the Office of Pollution Control must be notified prior to the scheduled test date. At least TEN (10) DAYS notice should be given so that an observer may be scheduled to witness the test(s).

(6) All records shall be maintained at the facility for at least (2) years and shall be made available to the Office of Pollution Control upon request.

(7) The permittee shall handle, store, and transport all materials in such a manner as to minimize fugitive emissions.

(8) For Emission Point AA-001, the permittee must provide in writing the date of startup and the date maximum production rates are reached for the firing of treated wood. Each date must be provided no later than ten days after the actual date.

FILE COPY

NEW SOURCE PERMIT REVIEW SUMMARY

Company Name: Koppers Industries, Inc.

Source Number: 0960-00012

Site Address: Tie Plant Road, Tie Plant, Mississippi - Grenada County

PERMIT TYPE: Construction / Operating

SOURCE CLASS: A

For November 8, 1994, Permit Board

Review Engineer: Bobby Hall

Date: November 1, 1994

APPLICABLE REGULATIONS:

X APC-S-1, Section(s): 3.6(a), 4-1(a)

____ NSPS, Subpart(s):

____ NESHAP, Subpart(s):

____ PSD, Pollutant(s)

____ Other:

FACILITY DESCRIPTION:

Koppers is an existing facility on Tie Plant Road in Tie Plant, Mississippi. The facility proposes to fire the existing woodwaste boiler with creosote and pentachlorophenol treated woodwaste in addition to the current firing of untreated woodwaste. The woodwaste feed rate will not increase, and very small amounts of lead and HAP's will be emitted as a result of firing treated wood. This proposal is not a major modification.

PROJECT DESCRIPTION, IF DIFFERENT:

SITING CRITERIA:

Applicable Criteria:

Siting Criteria Met? NA

If no, have they requested a variance?

If no, have they submitted letters of no objection?

PUBLIC NOTICE:

Did we go to notice? Yes

Why? Potential uncontrolled PM is greater than 250 TPY.

Comment Period: 09/27/94 - 10/27/94

Were Comments Received? No

If so, give brief description of comments & responses:

AIR QUALITY IMPACT ANALYSIS:

Has modelling been performed? No

By Whom?

If modelling was not performed, why? Criteria for modelling not met.

PERMIT LIMITS

Are any permit emission limitations based on something other than uncontrolled emissions or an applicable regulation? No

Is this an existing facility? Yes

If so, is the facility a major stationary source as defined by PSD? No

Is this a project a major source?

Is this project a major modification? No

Is this project a moderate source?

Is this project a moderate modification? No

Are potential uncontrolled emissions (as defined in APC-S-2) less than the applicable PSD thresholds? Yes

RECOMMENDATION:

I recommend that Permits to Construct and Operate air emissions equipment be granted.

Koppers Industries, Inc.
Facility No. 0960-00012
Emissions Data for Proposed Source
November 1, 1994

Emission Point	Pollutants	Emission Rate Allowed by Regulations		Emission Rate Without Controls		Emission Rate Proposed as Allowable	
		lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY
AA-001	PM/PM_{10}	18.05	79.07	6.75	29.57	6.75	29.57
	SO_2	NA	---	20.63	90.36	20.63	90.36
	NO_x	NA	---	6.56	28.73	6.56	28.73
	CO	NA	---	5.63	24.64	5.63	24.64
	VOC	NA	---	4.27	18.70	4.27	18.70
	Lead			0.0002	0.0008		
	Mercury			0.0002	0.0007		
	Other HAP Metals			0.094	0.41		
AA-002*	PM/PM_{10}	18.9	82.77	0.43	1.88	0.43	1.88
	SO_2	136.8	599.2	>137	>600	15.40	67.45
	NO_x	NA	---	11.93	52.28	4.34	19.01
	CO	NA	---	1.08	4.73	1.08	4.73
	VOC	NA	---	0.056	0.25	0.04	0.18
AA-003*	NA- Fugitive	NA	NA	NA	NA	NA	NA
AA-004*	PM/PM_{10}	2.0**	8.76	71.5	313.2	2.0	8.76

* Existing sources. No changes. Previous permits did not have specific emission limitations.
**Total PM allowed by APC-S-1 for all manufacturing process operations.

Grenada

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS REPORTING FORM

P.O. BOX 10385

JACKSON, MS 39289-0385

In accordance with Section 49-17-32, Mississippi Code of 1972, as amended, all sources which choose to base their Annual fee on actual emissions shall submit, by July 1 of each year, an inventory of emissions for the previous calendar year.

Calendar Year Reported: _____ **MDEQ Facility ID #:** 0960 - 00012 **Date:** _____ **SIC Code:** 2491

Facility Name: KOPPERS INDUSTRIES, INC

Mailing Address: _____ _____ _____ _____
(Street or P.O. Box) (City) (State) (Zip)

Site Address: _____ _____ _____
(Street Location) (City) (County)

Contact and Title: _____ **Contact's Phone #:** _____

(1) Pollutant	(2) Annual Allowable (Potential) Emission Rate (TPY)	(3) Actual Annual Emission Rate (TPY)
Particulate Matter (PM)	187.54	
SO2	786.24	
NOX	0	
CO	0	
VOC*	0	
LEAD	0	
TRS	0	
Total HAPs (Voc)	0	
Total HAPs (Non-Voc)	0	
CFCs/HCFCs	0	
Other	0	

* Reflects Total VOC from the facility including VOCs that are HAPs.

Attach calculations, monitoring data, measurements, etc. from which actual emission rates were determined. Actual emission rates will not be accepted unless the method of calculation is attached.

I, the undersigned, am the owner or authorized representative of the facility described on this fee form. I certify that the statements and calculations made on this form are complete and accurate to the best of my knowledge.

_____ _____
Signature and Title Date

Grenada

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

MAJOR AIR POLLUTION SOURCE ANNUAL EMISSIONS REPORTING FORM

P.O. BOX 10385

JACKSON, MS 39289-0385

In accordance with Section 49-17-32, Mississippi Code of 1972, as amended, all sources which choose to base their Annual fee on actual emissions shall submit, by July 1 of each year, an inventory of emissions for the previous calendar year.

Calendar Year Reported: 1992 **MDEQ Facility ID #:** 0960 - 00012 **Date:** 6-29-93 **SIC Code:** 2491

Facility Name: KOPPERS INDUSTRIES, INC

Mailing Address: P.O. Box 160 (Street or P.O. Box) | TIE PLANT (City) | MS (State) | 38960 (Zip)

Site Address: 543 TIE PLANT Rd. (Street Location) | TIE PLANT (City) | MS - GRENADA (County)

Contact and Title: Ronald P. Murphey **Contact's Phone #:** (601) 226-4584

(1) Pollutant	(2) Annual Allowable (Potential) Emission Rate (TPY)	(3) Actual Annual Emission Rate (TPY)
Particulate Matter (PM)	187.54	27.72
SO2	786.24	0.07
NOX	0	3.91
CO	0	99.70
VOC*	0	13.78
LEAD	0	0
TRS	0	0
Total HAPs (Voc)	0	6.80
Total HAPs (Non-Voc)	0	0
CFCs/HCFCs	0	0
Other	0	0

* Reflects Total VOC from the facility including VOCs that are HAPs.

Attach calculations, monitoring data, measurements, etc. from which actual emission rates were determined. Actual emission rates will not be accepted unless the method of calculation is attached.

I, the undersigned, am the owner or authorized representative of the facility described on this fee form. I certify that the statements and calculations made on this form are complete and accurate to the best of my knowledge.

Ronald P. Murphy PLANT MANAGER — Signature and Title

6-29-93 — Date

28-June-93 Emission-Inventory

Emission Inventory Calculation
Koppers Industries, Inc. - Grenada

Boiler, Wood Fired
Wood Burned(tn/yr.): 9957

Boiler Emissions

Pollutant	Emission Factor	Units	Basis	Estimated Emission Unit
Particulate	5.3	lb/tn	AP-42	26.39 tn/yr
SO2	0.015	lb/tn	AP-42	0.07 tn/yr
NOX	0.68	lb/tn	AP-42	3.39 tn/yr
CO	20	lb/tn	AP-42	99.87 tn/yr
VOC	1.4	lb/tn	AP-42	6.97 Tn/yr

Boiler, Fuel Oil
Oil Burned (MCF/yr): 52.9

Pollutant	Emission Factor	Units	Basis	Estimated Emission Unit
Particulate	2	lb/MMcf	AP-42	0.05 tn/yr
SO2	0	lb/MMcf	AP-42	0.00 tn/yr
NOX	20	lb/MMcf	AP-42	0.53 tn/yr
CO	5	lb/MMcf	AP-42	0.13 tn/yr
VOC	0.2	lb/MMcf	AP-42	0.01 tn/yr

Wood Preserving Processes

Pollutant	Emission Factor	Units	Basis	Estimated Emission Unit
HAPs(VOC)	N/A		Form R	6.80 tn/yr

Cyclones for Wood Milling
Number of Cyclones: 1
Avg. Hours/Day: 8
Avg. Days/Yr. Each: 160
Total Hours: 1280

Pollutant	Emission Factor	Units	Basis	Estimated Emission Unit
Particulate	2	lb/hr	AP-42	1.28 tn/yr

TOTAL PLANT EMISSIONS

Particulate	27.72
SO2	0.07
NOX	3.91
CO	99.70
VOC	13.78
HAPs(VOC)	6.80
Taxable Total (exc CO,HAP)	45.48

KOPPERS INDUSTRIES, INC.

TECHNICAL SERVICES GROUP
ANALYSIS REPORT

DATE 7/6/90

G.C. ANALYSIS:

COMPONENT	SUSQUEHANNA	CARBONDALE
INDENE %	0.19	0.24
NAPHTHALENE %	1.34	3.22
QUINOLINE %	0.64	0.27
2-METHYL NAPHTHALENE %	4.21	1.64
1-METHYL NAPHTHALENE %	1.59	0.48
BIPHENYL %	2.05	0.78
ACENAPHTHENE %	5.64	2.86
DIBENZOFURAN %	5.55	2.89
FLUORENE %	9.01	7.00
PHENANTHRACENE %	17.75	20.94
ANTHRACENE %	12.85	16.51
CARBAZOLE %	5.20	8.06
FLUORANTHRENE %	5.38	6.47
PYRENE %	4.05	4.61
BENZ A ANTHRACENE %	0.77	1.03
CHRYSENE %	0.73	1.20
ASH %	1.35	1.79
XYLENE INSOLUBLE %	3.35	3.21

STATE OF MISSISSIPPI
DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL
P.O. BOX 10385
JACKSON, MISSISSIPPI 39209

For Agency Use
FACILITY NUMBER

0960 - 00012
Date Received

2-20-90
Month Day Year

APPLICATION FOR PERMIT TO CONSTRUCT AND/OR
OPERATE AIR EMISSIONS EQUIPMENT - GENERAL FORM

APPLICATION FOR: ____ CONSTRUCTION X PERMIT RENEWAL - PLEASE CHECK APPROPRIATE BOX

1. Name, Address, Location, and Telephone Number
   A. Name Koppers Industries, Inc.
   B. Mailing Address of Applicant
      1. Street Address or P.O. Box 160
      2. City Tie Plant 3. State MS
      4. Zip Code 38960 5. Telephone No. (601) 226-4584
   C. Location of Facility
      1. Street Off of Highway 51 S., Tie Plant Road
      2. City Tie Plant 3. State MS
      4. Zip Code 38960 5. Telephone No. (601) 226-4584
   D. If the facility is located outside the City limits, please provide a sketch or description showing the approximate location and attach to this application.

DATA CODED

2. SIC Code 2491
3. Number of Employees 70
4. Principal Product Creosote or pentachlorophenol-treated railroad ties and utility poles
5. Principal Raw Materials Creosote, pentachlorophenol, lumber
6. Principal Process Lumber is pressure treated with pentachlorophenol or creosote.
7. Maximum amount of principal product produced or raw material consumed per day 13,000 cubic feet of wood are treated each day.
8. (A) Check here if operation which generates air pollutant emissions occurs all year X, or specify the months the operation occurs: ____
   (B) Specify how many days per week the operation occurs: 7
   (C) Specify how many hours per day the operation occurs: 24
9. If this application is for existing facility permit renewal only, has the facility been modified in any way (including production rate, fuel, and/or raw material changes) during period covered by the Operating Permit ____ Yes X No or since 1972? ____ Yes ____ No If Yes, give year(s) in which modification(s) occurred. ____
10. ALL APPLICATIONS MUST BE SIGNED BY THE APPLICANT.

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate, and that I am the owner or chief corporate officer, or his designated representative, responsible for complying with air pollution control laws and regulations.

J. D. Clayton
Printed Name of Person Signing

Plant Manager
Title

February 15, 1990
Date Application Signed

Jackie D. Clayton
Signature of Applicant

PLEASE COMPLETE FOLLOWING PAGES WHERE APPLICABLE

FOR ALL APPLICANTS, WHETHER NEW CONSTRUCTION, EXISTING FACILITY, OR RENEWAL

CONTROL EQUIPMENT COVERED UNDER THIS APPLICATION - PLEASE CHECK ALL APPLICABLE AND INDICATE NUMBER OF UNITS.

PARTICULATE EMISSIONS CONTROL EQUIPMENT

1. Cyclone(s) 1 multicone
2. Water Scrubber -
3. Baghouse -
4. Electrostatic Precipitator -
5. Venturi Scrubber -
6. Cyclonic Baghouse -
7. Cyclonic Scrubber -
8. Other -

GASEOUS EMISSIONS CONTROL EQUIPMENT

1. Water Scrubber -
2. Activated Carbon Bed -
3. Other -

WASTE DISPOSAL SYSTEMS

1. Solid Waste Incinerator -
2. Liquid Waste Incinerator -
3. Wood or Other Waste Fuel Recovery Boiler 1
4. Gaseous Waste Flare -
5. Liquid Waste Flare -
6. Other -

Pneumatic Conveying System -

Other (please describe)

None.

FOR ALL APPLICANTS

FUEL BURNING EQUIPMENT
(Except for Refuse Disposal)

This form has 3 pages; each is a continuation of the equipment information from the page before. Please fill in as completely as possible, listing all fuel burning equipment. Reasons should be given explaining any data not filled in.

PAGE 1

1. Fill in company name and address, plus year for which data is given (if existing facility) at top of page. Use data for most recent calendar year available.
2. Reference Number. Use an identifying number for each boiler, furnace, kiln, etc., and use the same reference number on each of the three pages to identify information for the same unit.
3. Manufacturer and Model Number. Nameplate data for boiler, furnace, kiln, etc. Waste gas flares and stationary internal combustion engines should also be included on this form.
4. Rated Capacity in Millions of BTU per hour.
5. Type of Burner Unit. Use Codes (1*) at bottom of form. If not listed put (11) and specify.
6. Usage. Type of fuel burning equipment. Use codes (2*) at bottom of form. If not listed put (5) and specify.
7. Heat Usage. Percent of heat used for process and percent for space heating.

FUEL BURNING EQUIPMENT
(Except for Refuse Disposal)

1 FACILITY NAME	Address	for Agency use Only
Koppers Company, Inc.	Tie Plant Road Tie Plant, MS 38960	

FACILITY NUMBER	Information for Calender Year	Date
0960-00012	19 89	02/15/90

2 Reference Number	3 Manufacturer and Model Number	4 Rated Capacity 10^6BTU/hr	5 Type of Burner Unit (use code 1*)	6 Usage (use code 2*)	7 Most Usage % Process	% Space heat
01	Wellons/Nebraska Wood Fired Boiler, Model No. WTS-2-45-SH	37.5	1	1	100	0
02(a) (	Murray Boiler, Model M64C	28.5	7	1	100	0
02(b) (	Size 13S	28.5	8	1	100	0
(	Both Murray Boilers are used as standby boilers.					

1* BURNER CODES

1. Cyclone furnace
2. Pulverized coal
3. Spreader Stoker
4. Hand fired
5. Other stoker (specify)
6. Multiple port gas
7. Forced draft gas
8. Atomizing Oil (Steve of Air)
9. Atomizing Oil (Mechanical)
10. Rotary Cup Oil
11. Others (specify)

2* USAGE CODES

1. Boiler, Steam
2. Boiler, Other (specify)
3. Air Heating for Space Heating
4. Air Heating for Process Usage
5. Others (specify)

(FOR AGENCY USE ONLY)

FUEL BURNING EQUIPMENT

Reference Number	Stack Parameters				Fuel Data					
	Stack Height Feet	Inside Exit Dia. Feet	Exit Gas Velocity Feet/Sec.	Exit Gas Temperature Degree F.	Fuel Type	Maximum Amount Per Hour (Specify Units)	Amount Per Year (Specify Units)	Heat Content BTU/Gal, etc. (Specify Units)	Percent Sulfur	Percent Ash
01	41	3	55	350	Process waste mixed with wood waste	5.95 Tn	21,840 Tn	5,000 Btu/lb	0	4.5
02(a)	36	2.5	32	570	Natural Gas	28,000 ft^3/hr	-	1,000 Btu/ft^3	0	
02(b)	36	2.5	32	570	#2 Oil	3.4 gpm	10,000 g/yr	18,000 Btu/lb	0	0

FUEL SUPPLIERS:

Fuel Type	Supplier
Natural Gas	None
#2 Oil	Griffs Oil, Grenada
Wood Waste	Fisackerly - Winona
" "	Hankins Lumber-Elliot
" "	Carter-Houston
" "	Dyer-Houston
" "	Koppers-Grenada

FUEL BURNING EQUIPMENT

(FOR AGENCY USE ONLY)

11 12 13

Reference Number	Air Pollution Control Equipment: Manufacturer and Model Number	Type* (Use Table 1)	Efficiency: Design	Efficiency: Actual	Emissions (Tons/Year): Particulate	Emissions (Tons/Year): SO_2	Emissions (Tons/Year): Other (specify)	Basis of Estimate
01	Wellons, Inc. Multicone Collector	32, 31	90%	90%	36.8	-	-	7-84 Tests
02(a)	No air pollution control							
02(b)	equipment							

*For Wet Scrubber give Gallons per minute Water Flow and Water Pressure if known.

FOR ALL APPLICANTS

MANUFACTURING PROCESS OPERATIONS

Page 1

1. Company Name and Address, plus year for which information is given (if existing facility) at top of page. Use data for must recent calendar year available.
2. Reference Number. Use an identifying number for each manufacturing process which emits matter to the air and use the same number on all three pages of this form to identify information for the same operation.
3. Process or Unit Operation Name. Identify the unit or process section for which information is given by name.
4. Rated Process Capacity. Give in tons per hour the maximum rated capacity of the process or unit identified, wet weight.
5. Feed Input. Process rate in wet tons per hour and wet tons per year of materials fed to the operation.
6. Number of Emission Points to Air. Number of stacks, vents, etc., which emit materials to air.
7. Product Output. Product rate in wet tons per hour and wet tons per year from the operation.

Page 2

8. Reference Number. Use same number as on Page 1 of form to identify information for same process or operation.
9. Stack Data (or outlet of air cleaning device).
   Stack Height in feet above ground.
   Stack Inside Diameter in Feet.
   Exit Gas Velocity in feet per second. (SCFM may be used if velocity is not known; specify units as SCFM if used).
   Exit Gas Temperature in degrees F.
10. Air Pollution Control Equipment.
    Manufacturer and Model Number. Nameplate Data.
    Type. Use Table 1, Page 16. If a wet scrubber, give water flow in GPM and water pressure.
    Collection efficiency. Design and actual collection efficiency if known.

Page 3

11. Reference Number. Use same number as on Pages 1 & 2 of form to identify information for same process or operation.
12. Process Emissions. Give in pounds per hour and tons per year the amount of emissions from the process or operation of each of the two pollutant categories so that process rates versus emission rates may be compared with Regulations. Identify the units of measure used.
    Give the basis of the estimates of pollutants emitted (stack tests, material balance, emission factors, etc.)

MANUFACTURING PROCESS OPERATIONS

Company Name	Address	FOR AGENCY USE
Koppers Company, Inc.	Tie Plant Road Tie Plant, MS 38960	

FACILITY NUMBER	Information for Calendar Year	Date
0960-00012	19 89	02/15/90

Reference Number	Process or Unit Operation Name	Rated Process Capacity Tons/Hour	Feed Input		Number of Emission Points To Air	Product Output*	
			Quantity Per Hour	Quantity Per Year		Quantity Per Hour	Quantity Per Year
01	Wood Preserving	24		3.59 mm C.F. of wood products			4mm C.F. of wood products
				3 mm gal. of preservative	4 storage tanks		

*Specify Units of Measure Used

(FOR AGENCY USE ONLY)

MANUFACTURING PROCESS OPERATIONS

Reference Number	Stack Data				Air Pollution Control Equipment			
	Height Feet	Inside Unit Dia. Feet	Exit Gas Velocity Feet/Sec.	Exit Gas Temperature °F	Manufacturer and Model Number	Type* (use Table 1)	Collection Efficiency	
							Design	Actual
01	None							

*For Wet Scrubbers Give Gallons per minute Water Flow and Water Pressure if known.

PAGE 3

(FOR AGENCY USE ONLY)

MANUFACTURING PROCESS OPERATIONS

11 12

Reference Number	Process Emissions*			Basis for Estimation	(Agency Comments Only)
	Particulates	Sulfur Oxides	Others (Specify by chemical composition)		
01	25.6 Tn fugitive emissions from storage tk. breathing losses			API storage tank breathing losses (AP-42)	

*Please Express Emissions as Tons per Year and Pounds per Hour and Identify Units Being Used.

FOR ALL APPLICANTS

REFUSE DISPOSAL AND INCINERATION

A. Company Name & Address plus year for which information is given if for renewal of permit, at top of page.

B. Type Waste. Describe type of waste materials (paper, garbage, wood crates, sawdust, coal refuse, etc.)

C. Maximum amount per day in pounds.

D. Average amount per year in tons.

E. Method of Disposal. Use codes at bottom of Form (1*).

Page 2

1. Type of Incinerator. Check which applies.

2. Manufacturer, Model Number, Capacity in pounds per hour and type waste on which capacity is based (Nameplate Data).

3. Average Quantity Burned in pounds per year.

4. Operating Schedule for Incinerator. Hours per day and days per year incinerator is in operation.

5. Auxiliary Fuel Data.
   Type. (Natural Gas, #2 Oil, etc.)
   Amount per year. Specify gallons, cubic feet, etc.
   Heat Content of Fuel. BTU per gallon, cubic feet, etc.
   Percent Sulfur. Average sulfur content of auxiliary fuel.
   Percent Ash. Average ash content of auxiliary fuel.
   Fuel supplier's name if ash and sulfur content are not known.

6. Pollution Control Equipment on Incinerator.
   Manufacturer of Control Device.
   Model Number of Control Device.
   Percent efficiency of control if known.
   Type. Venturi Scrubber, Baghouse, etc., as outlined on other forms.
   GPM water flow if control device is a wet scrubber.

7. Stack Data.
   Height in Feet above Ground.
   Inside Exit Diameter in Feet.
   Exit Gas Velocity in Feet per Second.
   Exit Gas Volume if Velocity not known.
   Exit Gas Temperature in Degrees F if known.

8. Estimated Emission from Refuse Incineration. Give amounts in tons per year and basis of estimates for each of the five listed pollutants.

A

Company Name	Information for Year	(Agency Use Only)
Koppers Industries, Inc.	1989	
Address	**Date**	
Tie Plant Road Tie Plant, MS 38950	02/15/90	

B — Description of Waste Materials

Type (Describe)	C Maximum Amount Per Day (Pounds)	D Amount Per Year (Tons)	E Method of Disposal 1*
Wood Chips	10,000	1,200	5
Wood Treating Process Wastes	-	974	5

If Waste Disposal is by Incineration, Specify the Following:

1. Type of Incinerator:

N/A

- single chamber ☐
- multiple Chamber ☐
- Modified (describe) ☐
- Other (describe) ☐
- Rotary ☐
- Flue Fed ☐

2. Manufacturer's Name: _____
   Model Number _____
   Rated Capacity _____ Pounds / Hour _____ Type Waste
3. Quantity Burned: _____ Pounds / Day
   _____ Tons / Year
4. Operating Schedule _____ Hours / Day
   _____ Days / Year

*1 Disposal Method Codes

1. Open Burning
2. Landfill (No Burning)
3. Incinerator (Complete rest of Form)
4. Conical Burner (TeePee)
5. Burned in Boiler or Furnance
6. Other (Specify)

(AGENCY USE ONLY)

5. Auxiliary Fuel:

Type	N/A
Amount/Year (Specify Units)	"
Heat Content	"
Percent Sulfur	"
Percent Ash	"
Supplier's Name	"

6. Pollution Control Equipment:

Manufacturer	"
Model Number	"
% Efficiency	"
Type	"
GPM Water Flow (If Wet Scrubber)	"

7. Stack Data:

Height	"	Feet
Inside Exit Diameter	"	Feet
Exit Gas Velocity	"	Feet/Sec.
Exit Gas Volume	"	SCFM
Exit Gas Temp.	"	^{o}F.

8. Estimated Emissions From Refuse Incineration:

Name:			Basis of Estimates:
Particulates	N/A	Tons/Year	N/A
Sulfur Oxides	N/A	"	N/A

ADDITIONAL INFORMATION REQUIRED FOR APPROVAL TO CONSTRUCT

The following additional information must be submitted. Failure to submit any of the additional information or to conform to the instructions will result in initial denial of the application.

1. Site Plan - The drawing or sketch submitted must be to scale and show at least the following:

   A. The property involved and outlines and heights of all buildings. Identify property lines plainly.

   B. Location and identification of all existing or proposed points of discharge of air contaminants to the atmosphere.

   C. Location of streets and all adjacent properties. Show location of all buildings outside the property that are within 150 feet of the equipment involved in the application. Identify all such buildings (as a residence, apartment, warehouse, etc.), specifying number of stories. Indicate north, and prevailing wind direction.

2. Drawings of Equipment (See Note Below) - Supply an assembly drawing, dimensioned and to scale, and plan elevation in as many sections as are needed to show clearly the design and operation of the equipment and the means by which air contaminants are controlled. The following must be shown:

   A. Size and shape of equipment. Show exterior and interior dimensions and features.

   B. Locations, sizes, and shape details of all features which may affect the production, collection, conveying or control of air contaminants of any kind; location, size and shape details concerning all materials handling equipment.

   C. All data and calculations used in selecting or designing the equipment.

   D. Horsepower rating of all motors driving the equipment.

   NOTE: Structural design calculations and details are not required.

ADDITIONAL INFORMATION MAY BE REQUIRED.

3. Description of Process and Control equipment - The application must be accompanied by two copies of a written description of each process to be carried out in the facility and the function of the equipment used in the process. The descriptions must be complete and particular attention must be given to explaining all stages in the process where the discharge of any materials might contribute in any way to air pollution. Control procedures must be described in sufficient detail to show the extent of control of air contaminants anticipated in the design, specifying the expected efficiency of the control devices. All obtainable data must be supplied concerning the nature, volumes, particle size, weights, chemical composition and concentrations of all types of air contaminants.

4. Two copies of a block flow diagram showing the steps of the process and the flow of materials through the process and any control devices must be supplied.

NOTE: THE APPLICATION FORM, SITE PLAN, AND EQUIPMENT MUST BE SIGNED AND STAMPED BY AN ENGINEER REGISTERED IN THE STATE OF MISSISSIPPI.

ADDITIONAL INFORMATION

1. Two copies of construction site plot plan.
2. Two copies of detailed equipment drawings.
3. Two copies of a detailed explanation of the process and control equipment.
4. Two copies of a flow diagram of the of the process or operation showing control devices.

SIGNATURES: If for construction, the application must be submitted in duplicate and both copies should also be signed and stamped by an engineer registered in the State of Mississippi. If application is for Existing Facility or Renewal of Permit to Operate, registered engineer's signature not required. All signatures and stamps must be originals on all copies, not photocopies.

N/A
TYPED NAME & MISSISSIPPI REGISTRATION NUMBER

N/A
SIGNATURE OF ENGINEER REGISTERED IN MISSISSIPPI

Seal of Engineer
Registered in Mississippi

TABLE 1

CODE NUMBERS FOR CONTROL DEVICES

Vapor Control Equipment

00 Group – CONTROL BY COMBUSTION

01 catalytic combustion
02 furnace combustion
03 boiler firebox
04 steam injection flare
05 venturi flare
06 direct flame combustion (afterburner)

10 Group – ADSORBERS

10 activated carbon – nonregenerative
11 activated carbon – regenerative
12 silica gel – nonregenerative
13 silica gel – regenerative
14 lithium chloride
15 activated alumina
16 activated bauxite

20 Group – ABSORBERS

20 sieve plate tower
21 bubble-cap tower
22 packed tower

Particulate Matter – Liquid Mist Control Equipment

30 Group – DRY SEPARATORS AND FILTERS

30 simple cyclones
31 high efficiency cyclones
32 settling chamber
33 simple filters
34 baghouse (shaking)
35 baghouse (reverse jet)
36 dry collector (dynamic)

40 Group – WET COLLECTORS

40 spray chamber – no baffles
41 spray chamber – with baffles
42 wet cyclones – rotoclone
43 wet dynamic precipitator
44 venturi scrubber
45 spray tower (not absorption – scrubbers)
46 packed tower (not absorption – scrubbers)
47 condensors (tube and shell); air
48 barometric condensor with hot wells

50 Group – ELECTRICAL PRECIPITATORS

50 single stage
51 double stage
52 precipitron

60 Group

60 Counteractant

70 Group – SPECIAL

71 Jet exhausters (air dilution)
72 Mist eliminators

80 Group – Other
Specify

STATE OF MISSISSIPPI
DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL
P.O. BOX 10385
JACKSON, MISSISSIPPI 39209

For Agency Use
FACILITY NUMBER

Date Received

Month Day Year

APPLICATION FOR PERMIT TO CONSTRUCT AND/OR
OPERATE AIR EMISSIONS EQUIPMENT - GENERAL FORM

(NOTIFICATION OF CHANGE OF OWNERSHIP

APPLICATION FOR: ____ CONSTRUCTION __X__ PERMIT RENEWAL - PLEASE CHECK APPROPRIATE BOX

1. Name, Address, Location, and Telephone Number
   A. Name Koppers Industries Inc.
   B. Mailing Address of Applicant
      1. Street Address or P.O. Box P. O. Box 160
      2. City Tie Plant 3. State Mississippi
      4. Zip Code 38950 5. Telephone No. 601-226-4584
   C. Location of Facility
      1. Street Off of Highway 51 South, Tie Plant Road
      2. City Tie Plant 3. State Mississippi
      4. Zip Code 38960 5. Telephone No. 601-226-4584
   D. If the facility is located outside the City limits, please provide a sketch or description showing the approximate location and attach to this application.
2. SIC Code _____
3. Number of Employees _____
4. Principal Product _____
5. Principal Raw Materials _____
6. Principal Process _____
7. Maximum amount of principal product produced or raw material consumed per day _____
8. (A) Check here if operation which generates air pollutant emissions occurs all year ____, or specify the months the operation occurs: _____
   (B) Specify how many days per week the operation occurs: _____
   (C) Specify how many hours per day the operation occurs: _____
9. If this application is for existing facility permit renewal only, has the facility been modified in any way (including production rate, fuel, and/or raw material changes) during period covered by the Operating Permit ____Yes ____No or since 1972? ____Yes ____No
   If Yes, give year(s) in which modification(s) occurred. _____
10. ALL APPLICATIONS MUST BE SIGNED BY THE APPLICANT.

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate, and that I am the owner or chief corporate officer, or his designated representative, responsible for complying with air pollution control laws and regulations.

Robert K. Wagner
Printed Name of Person Signing

President
Title

12/22/88
Date Application Signed

RK Wagner
Signature of Applicant

PLEASE COMPLETE FOLLOWING PAGES WHERE APPLICABLE