

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

Koppers Industries Inc

Master AI ID: 876**Start Date:** 11/9/1981**Agency Interest Type:** Energy and Transportation Branch**End Date:****SIC 1:** 2491**County:** Grenada**AI Basin:** Yazoo River Basin

File Copy

Alternate/Historic AI Identifiers

Alt/Hist ID	Alternate/Historic Name	User Group	Start	End
876	Koppers Industries, Inc.	Official Site Name	11/9/1981	
04300012	Koppers Industries, Inc.	Air-AIRS AFS	10/12/2000	
MSD007027543	Koppers Industries, Inc.	Hazardous Waste-EPA ID	10/12/2000	
096000012	Koppers Industries, Inc.	Air-Title V Operating	3/11/1997	3/1/2002
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	11/10/1999	9/30/2009
HW8854301	Koppers Industries, Inc.	Hazardous Waste-TSD	6/28/1988	6/28/1998
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	11/14/1995	11/13/2000
MSU081080	Koppers Industries, Inc.	Water-SOP	11/9/1981	11/30/1985
MSP090300	Koppers Industries, Inc.	Water-Pretreatment	9/18/2001	8/31/2006
MSR220005	Koppers Industries, Inc.	GP-Baseline	9/25/1992	3/23/2003
MSR220005	Koppers Industries, Inc.	GP-Baseline	3/24/2003	9/11/2005

Regulatory Programs

Program	Sub-Program
Air	Title V - major
Hazardous Waste	TSD - Not Classified
Water	Baseline Stormwater
Water	PT CIU
Water	PT CIU - Timber Products Processing (Subpart 429)
Water	PT SIU

AI Location and Mailing Information

Physical Address (Primary)

1 Koppers Drive

Mailing Address

PO Box 160

Tie Plant, MS 38960

Tie Plant, MS 38960

Location Information**Section - Township - Range: - -**

Telecommunications**Type****Address or Phone**

Work phone number

(662) 226-4584, Ext. 11

Staff to AI Assignments**Person Name****Assignment**

Lee, David

Compliance, Management

Collier, Melissa

Compliance, Staff

Collier, Melissa

Enforcement

Rao, Maya

Permitting, Branch Manager

Rao, Maya

Permitting, Permit Writer

Whittington, Darryail

Regional Office, Management

Related People**Person****Relationship****Start****End**

Henderson, Thomas

Is Contact For

1/1/1980

Henderson, Thomas

Is Water Permit Contact For

5/28/2001

Basilone, Timothy

Is Title V Fee Assessment Contact For

7/1/2001

Henderson, Thomas

Is Air Permit Contact For

10/12/2001

Basilone, Timothy

Is Contact For

10/12/2001

Collins, Randall

Is Application Signatory for

3/28/2002

Biddy, Haley

Is Air Permit Contact For

5/22/2002

Schaming, M. Claire

Is General Permit Contact For

3/24/2003

Schaming, M. Claire

Is Application Signatory for

3/24/2003

Related Organizations**Organization****Relationship****Start****End**

enSearch

MDEQ OPC



876

July 1, 2003

CERTIFIED MAIL 7000 0520 0021 7551 8951

Koppers Inc.
Utility Poles and Piling
P.O. Box 160
Tie Plant, MS 38960
Tel 662 226 4584
Fax 662 226 4588
www.koppers.com

Ms. Maya Rao
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385

**RE: Title V Operating Permit - #0960-00012
Koppers Inc. – Grenada, Mississippi
Minor Permit Modification, and
Second Revision to Renewal Application**



Dear Ms. Rao,

On March 11, 1997, Koppers Industries, Inc. was issued the Title V Operating Permit No. 0960-00012 for its wood treating plant (the Plant) at Tie Plant, MS. An application for renewal of the Title V permit was submitted on September 26, 2001, in conformance with MDSEQ requirements. Since that time a modification to the renewal application was submitted on October 22, 2002, with regard to several changes at the facility that affected air emissions described in the original Title V Renewal Application. This transmittal contains information pertaining to a second modification to the Title V Renewal Application as a result of facility equipment changes that will occur.

The attached sheets provide revised and updated information and summarize changes in plant equipment that will occur during the summer of 2003. The subject changes affect air emissions in that the overall air emissions for the facility will be less than estimates provided in the Title V Renewal Application. Changes that will be made to the facility are discussed below, and forms and supplemental information for replacement of information submitted in the original Title V Renewal Application are attached.

Three tanks located at the Plant will be removed from service and dismantled, including the #4 Work Tank, Creosote Measuring Tank, and the Creosote Dehydrator. Reference Numbers for these tanks in the Renewal Application (Section H, Tank Summary Table) are GRN-09, GRN-11, and GRN-29, respectively. All three of the tanks to be removed are equipment included under Emission Point Number AA-003 in the Renewal Application. Only one of the tanks, the #4 Work Tank, will be replaced at this time. The new tank will be named "#4 Work Tank", and will be referenced as GRN-09 on the Tank Summary Table.

The attached sections contain information that was modified as a result of the changes described above. These sections should be used to replace sections of the renewal application submitted earlier. The following table serves as a guide for making these replacements.

Attached Information	Replacement For: (Sections in the original renewal application and/or the first modification request dated 10/12/02 to be removed and replaced with the attached information)
Renewal Application Narrative - Section 2.1 (2 Pages).	Information provided in original application, and the first modification request on 10/28/02.
Section H (2 Pages), and the referenced Tank Summary Table (3 Pages)	Section H (2 Pages), and the Tank Summary Table (3 Pages).

In addition to information referenced above, a cover page indicating the permitting activity (modification) and a completed Section B, Owners Information (2 Pages), are attached.

Please note that information contained in the Tank Summary Table for Section H was revised to include information on the new Work Tank #4 (GRN-09) that will be installed in July 2003. Information required on the Section H form for the new tank is highlighted in bold print under reference GRN-09 on the Tank Summary Table. Also, information for the Creosote Dehydrator (GRN-29) and the Creosote Measuring Tank (GRN-11) was removed from the Tank Summary Table.

Koppers understands that the new tank will be regulated under 40 CFR 60 Subpart Kb, which requires that a strapping table and a construction drawing of the tank are maintained on file at the facility. The full requirements of Subpart Kb are not applicable because the vapor pressure of the material stored in the tank is below the pressure criteria for Subpart Kb.

If you have any questions or require additional information, please call me at (662) 226-4584 extension 11.

Yours truly,


Thomas L. Henderson

Plant Manager

Enc.

cc. Steve Spengler – Environmental Permits Division MSDEQ
Tim Basilone – KII, Pittsburgh

2.1 Changes in Equipment Reference Numbers

Several of these Reference Numbers have been changed to incorporate the numbering system used in the SPCC Plan for the Plant. Other Reference Numbers have been changed because the 1997 Title V Permit had duplicate Reference Numbers. For example, in the 1997 Title V Permit, both Emission Points AA-003 and AA-0010 had a Reference No. 32. By revising the Reference Number system used in this renewal application, this and other duplicate reference numbers have been avoided.

Emission Point	Description (1997 Title V References)	Proposed Ref. No	Comments
AA-001	Title V, Ref. No. 1 - the 60.0 MMBTUH Wellons/Nebraska Woodwaste Boiler	40	See also Section 4
AA-002	Title V, Ref. No. 26 - the 28.5 MMBTUH fuel oil fired Murray Boiler	41	
AA-003	SPCC, Ref. No. 5 - the 34,000 gal treatment cylinder containing Penta in oil.	1	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	2	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	3	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	4	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote.	5	Changed from Creosote to Penta use
	SPCC, Ref. No. 6 - the 29,7786 gal #1 Work Tank containing Penta in oil.	6	
	SPCC, Ref. No. 7 - the 29,786 gal #2 Work Tank containing Creosote	7	
	SPCC, Ref. No. 8 - the 29,786 gal #3 Work Tank containing Creosote	8	
	SPCC, Ref. No. 9 - the 29,786 gal #4 Work Tank containing Creosote	9	Original tank replaced in July 2003
	SPCC, Ref. No. 10 - the 29,786 gal #5 Work Tank containing Creosote/Water.	10	
	SPCC, Ref. No. 11 - the 4,200 gal Measuring Tank containing Creosote	---	Removed in July 2003, not replaced
	SPCC, Ref. No. 12 - the 100,000 gal #1 Storage Tank containing Creosote	12	Changed from creosote storage to a storm water surge tank
	SPCC, Ref. No. 13 - the 100,000 gal #2 Surge Tank containing Process water	13	
	SPCC, Ref. No. 14 - the 100,000 gal #5 Storage Tank containing Diesel #2 fuel oil	14	
	SPCC, Ref. No. 15 - the 105,000 gal #6 Storage Tank containing creosote	15	
	SPCC, Ref. No. 16 - the 300,000 gal #10 Surge Tank containing process water	16	
	SPCC, Ref. No. 17 - the 250,000 gal Storm Water surge tank containing Storm Water	17	
	SPCC, Ref. No. 18 - the 1,500 gal Coagulant Tank containing water treatment system polymer additive	18	
	SPCC, Ref. No. 19 - the 2,500 gal Decant Tank containing Creo/Oil/Water	19	
	SPCC, Ref. No. 20 - the 8,000 gal Creosote Blowdown tank containing Creo/Water	20	
	SPCC, Ref. No. 21 - the 6 ft. Dia. X 60 ft. long, Air Receiver containing compressed air	----	Removed from list. Contains only compressed air

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
	SPCC, Ref. No. 22 - the 7 ft. Dia. X 40 ft. long Air Receiver containing compressed air	-----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 23 - the 8,000 gal Penta Blowdown tank containing water/penta/oil	23	
	SPCC, Ref. No. 26 - the 150,000 gal Aeration Tank containing waste water	26	
	SPCC, Ref. No. 27 - the 25,000 gal Clarifier Tank containing waste water	27	
	SPCC, Ref. No. 28 - the 15,000 gal Discharge Tank containing waste water	28	
	SPCC, Ref. No. 29 - the 8,000 gal Creosote Dehydrator	-----	Removed in July 2003, not replaced
	SPCC, Ref. No. 30 - the 14,000 gal North Penta Equalization Tank containing water/penta/oil	30	
	SPCC, Ref. No. 31 - the 14,000 gal South Penta Equalization Tank containing water/penta/oil	31	
	SPCC, Ref. No. 32 - the 9,400 gal Penta Mix Tank containing Oil/Penta	32	
	SPCC, Ref. No. 33 - the 5,000 gal Penta Mix Tank containing Oil/Penta	33	
	SPCC, Ref. No. 34 - the 10,500 gal Penta Concentrate Tank containing 40% Pentachlorophenol Concentrate	34	
	SPCC, Ref. No. 35 - the 100,000 gal Stormwater Tank	35	This Tank has been added.
AA-004	Title V, Ref. No. 27, the Tie Mill and Lumber Mill with cyclone	42	
AA-005	Title V, Ref. No. 33, the Boiler House natural gas fired space heater rated at 0.2 MMBTUH	43	Insignificant Activity per APC-S-6.IV. Three (3) space heaters each rated at 0.2mmbtu/hr.
AA-006	Title V, Ref. No. 35, the natural gas fired steam cleaner rated at 0.44 MMBTUH	44	Insignificant Activity per APC-S-6.IV.
AA-007	Title V, Ref. No. 36, the Wood Stove Shop Heater rated at 0.10 MMBTUH	-----	Source no longer exists. Has been removed from site.
AA-008	Title V, Ref. No. 8, the Treated Wood Storage Areas	46	
AA-009	Title V, Ref. No. 31, the Pole Kiln	47	
AA-010	Title V, Ref. No. 32, the Pole Peeler	48	
AA-011	Title V, Ref. No. 34, Wood Fuel Preparation and handling including grinding, conveying, and silo loading	49	
AA-012	Title V, Ref. No. 37, the two (2) Parts cleaners-degreasers	50	
AA-013	SPCC, Ref. No. 24, the 1,250 gal Gasoline Storage tank containing Gasoline used by company vehicles	51	Insignificant Activity per APC-S-6.IV.
AA-014	SPCC, Ref. No. 25, the 9,000 gal Diesel Storage tank used by company vehicles/Rolling Stock	52	Insignificant Activity per APC-S-6.IV.
AA-015	Title V, Ref. No. 33, the Oil Fired Murray Standby boiler room Natural Gas fired Space Heater rated at 0.1 MMBTUH	54	Insignificant Activity per APC-S-6.IV.
AA-016	Title V, Ref. No. 33, the Fire Pump building Natural Gas fired Space Heater rated at 0.02 MMBTUH	-----	Source no longer exists. Has been removed from site.

FOR OFFICIAL USE ONLY	
APPLICATION RECEIPT DATE:	
APPLICATION NO.:	
FOR MODIFICATION:	
MINOR:	
SIGNIFICANT:	

RECEIVED
JUL - 7 2003
MDEQ

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL
AIR DIVISION
P.O. BOX 10385
JACKSON, MS. 39289-0385
PHONE NO.: (601) 961 - 5171

APPLICATION FOR TITLE V
AIR POLLUTION CONTROL PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT

PERMITTING ACTIVITY:

<input type="checkbox"/>	INITIAL APPLICATION
<input checked="" type="checkbox"/>	MODIFICATION
<input type="checkbox"/>	RENEWAL OF OPERATING PERMIT

NAME: KOPPERS INDUSTRIES INC.
CITY: TIE PLANT
COUNTY: GRENADA
FACILITY No. (if known): 0960-00012

Section B Owners Information

1. Name, Address & Contact for the Owner/Applicant

A. Company Name: KOPPERS INC.

B. Mailing Address:

1. Street Address or P.O. Box: 436 SEVENTH AVENUE
2. City: PITTSBURGH 3. State: PA
4. Zip Code: 15219-1800
5. Telephone No.: (412) 227-2114

C. Contact:

1. Name: TIMOTHY R. BASILONE
2. Title: ENVIRONMENTAL MANAGER

2. Name, Address, Location and Contact for the Facility:

A. Name: KOPPERS INC.

B. Mailing Address:

1. Street Address or P.O. Box: P.O. BOX 160
2. City: TIE PLANT 3. State: MS
4. Zip Code: 38960
5. Telephone No.: (662) 226-4584

C. Site Location:

1. Street: 1 KOPPERS DRIVE
2. City: TIE PLANT 3. State: MS
4. County: GRENADA 5. Zip Code: 38960
6. Telephone No.: (662) 226-4584

Note: If the facility is located outside of the City limits, please attach a sketch or description to this application showing the approximate location of the site.

D. Contact:

1. Name: THOMAS L. HENDERSON
2. Title: PLANT MANAGER

3. SIC Code(s)(including any associated with alternate operating scenarios): 2491

4. Number of Employees: 65

5. Principal Product(s): UTILITY POLES AND RAILROAD CROSSTIES

6. Principal Raw Materials: WOOD POLES, CROSSTIES, LUMBER, CREOSOTE, PENTACHLOROPHENOL, DIESEL FUEL

7. Principal Process(es): WOOD PRESERVING

8. Maximum amount of principal product produced or raw material consumed per day:
20,000 CUBIC FEET
9. Facility Operating Schedule (Optional):
- A. Specify maximum hours per day the operation will occur: 24 HOURS
- B. Specify maximum days per week the operation will occur: 7 DAYS
- C. Specify maximum weeks per year the operation will occur: 52 WEEKS
- D. Specify the months the operation will occur: ALL
10. Is this facility a small business as defined by the Small Business Act? (Optional) NO
11. **EACH APPLICATION MUST BE SIGNED BY THE APPLICANT.**

The application must be signed by a responsible official as defined in Regulation APC-S-6, Section I.A.26.

I certify that to the best of my knowledge and belief formed after reasonable inquiry, the statements and information in this application are true, complete, and accurate, and that, as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations.

THOMAS L. HENDERSON
Printed Name of Responsible Official

PLANT MANAGER
Title

7-1-03
Date Application Signed

Thomas L. Henderson
Signature of Applicants Responsible Official

SECTION H TANK SUMMARY (page 1 of 2)

1. Emission Point No./Name: AA-003. ALL RELATED TANK DATA INCLUDED IN TANK SUMMARY DATA SPREADSHEET (FOLLOWING PAGES)

2. Was this tank constructed or modified after August 7, 1977? _____ yes _____ no
If yes please give date and explain. _____

3. Product Stored: _____
If more than one product is stored, provide the information in 4.A-E for each product.

4. Tank Data:

A. True Vapor Pressure at storage temperature: _____ psia/°F
B. Reid Vapor Pressure at storage temperature: _____ psia/°F
C. Density of product at storage temperature: _____ lb/gal
D. Molecular Weight of product vapor at storage temperature: _____ lb/lbmol
E. Throughput for most recent calendar year: _____ gal/yr
F. Tank Capacity: _____ gal
G. Tank Diameter: _____ feet
H. Tank Height / Length: _____ feet
I. Average Vapor Space Height: _____ feet
J. Tank Orientation: _____ Vertical or Horizontal
K. Type of Roof: _____ Dome or Cone
L. Is the Tank Equipped with a Vapor Recovery System? _____ Yes _____ No
If Yes, describe on separate sheet of paper and attach. Indicate efficiency.

M. Check the Type of Tank:
Fixed Roof _____ External Floating Roof
Pressure _____ Internal Floating Roof
Variable Vapor Space _____
Other, describe: _____

N. Check the Closest City: _____
Jackson, MS _____ Birmingham, AL
Memphis, TN _____ Montgomery, AL
New Orleans, LA _____ Baton Rouge, LA

O. Check the Tank Paint Color: _____
Aluminum Specular _____ Gray Light
Aluminum Diffuse _____ Gray Medium
Red _____ White
Other, describe: _____

P. Tank Paint Condition: _____ Good or Poor

Q. Check Type of Tank Loading

1. Trucks and Rail Cars

_____ Submerged Loading of clean cargo tank
_____ Submerged Loading : Dedicated Normal Service
_____ Submerged Loading : Dedicated Vapor Balance Service
_____ Splash Loading of clean cargo tank
_____ Splash Loading : Dedicated Normal Service
_____ Splash Loading : Dedicated Vapor Balance Service

2. Marine Vessels

_____ Submerged Loading: Ships
_____ Submerged Loading: Barges

SECTION H TANK SUMMARY (page 2 of 2)

R. For External Floating Roof Tanks

1. Check the Type of Tank Seal:

Mechanical Shoe

- ____ Primary Seal Only
____ With Shoe-Mounted Secondary Seal
____ With Rim-Mounted Secondary Seal

Liquid Mounted Resilient Seal

- ____ Primary Seal Only
____ With Shoe-Mounted Secondary Seal
____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

- ____ Primary Seal Only
____ With Shoe-Mounted Secondary Seal
____ With Rim-Mounted Secondary Seal

2. Type of External Floating Roof: _____ Pontoon
_____ Double-Deck

S. For Internal Floating Roof Tanks

1. Check the Type of Tank Seal:

Liquid Mounted Resilient Seal

- ____ Primary Seal Only
____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

- ____ Primary Seal Only
____ With Rim-Mounted Secondary Seal

2. Number of Roof Columns: _____

3. Length of Deck Seam: _____ feet

4. Area of Deck: _____ feet²

5. Effective Column Diameter: _____ feet

6. Check the Type of Tank:

- ____ Bolted with Column Supported Roof
____ Welded with Column Supported Roof
____ Bolted with Self-Supported Roof
____ Welded with Self-Supported Roof

5. Emissions Summary

1. Breathing Loss: _____ lb/hr _____ TPY
2. Working Loss: _____ lb/hr _____ TPY
3. Total Emissions: _____ lb/hr _____ TPY

6. UTM Coordinates:

A. Zone _____ B. North _____ C. East _____

SECTION H TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-06 AA-003 6	GRN-07 AA-003 7	GRN-08 AA-003 8	GRN-09 AA-003 9	GRN-10 AA-003 10	GRN-12 AA-003 12	GRN-13 AA-003 13	GRN-14 AA-003 14	GRN-15 AA-003 15	GRN-16 AA-003 16
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)											
2	Name Construction Date		#1 Work Tank 1903	#2 Work Tank 1903	#3 Work Tank 1978	#4 Work Tank 2003	#5 Work Tank 1930	#1 Creosote Storage Tank 1903	#2 Surge Tank 1903	#5 Storage Tank 1903	#6 Storage Tank 1903	#10 Surge Tank 1903
3	Material Stored		Oil / Pentachlorophenol	Creosote	Creosote	Creosote	Pentachlorophenol	Creosote	Process Water	#2 Diesel Fuel	Creosote	Process Water
4A	True Vapor Pressure @ Storage Temperature	psia										
4B	Reid Vapor Pressure @ Storage Temperature	psia										
4C	Storage Temperature	Degrees F	150	200	200	200	150	200	60	60	150	60
4D	Density @ Storage Temperature	lb/gal	7.75	9.25	9.25	8.95	7.75	8.95	8.34	7.1	9.25	8.34
4E	Molecular Weight @ Storage Temperature	lb/mole										
4F	Throughput	gallons/yr	8,500,000	8,200,000	8,200,000	9,200,000	8,500,000	740,000	1,600,000	127,500	660,000	1,400,000
4G	Tank Capacity	gallons	29,786	29,786	29,786	29,786	29,786	100,000	100,000	100,000	100,000	300,000
4H	Tank Diameter	feet	13	13	13	13	13	29	26	27	30	40
4I	Tank Height / Length	feet	30	30	30	30	30	24	24	24	20	32
4J	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
4L	Type of Roof (Dome or Cone)		Dome	Dome	Dome	Dome	Dome	Cone	Cone	Cone	Cone	Cone
4M	Vapor Recovery System?	Yes or no	No	No	No	No	No	No	No	No	No	No
4N	Type of Tank?		Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof
4O	Closest City	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4P	Tank Paint Color		Black	Black	Black	Aluminum	Black	Black	Black	Black	Black	Black
4Q	Paint Condition (Good or Poor)		Poor	Poor	Poor	Good	Poor	Poor	Poor	Good	Good	Poor
4R	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Normal Service; Balance Service; Bottom)					Splash Loading - Dedicated Normal						
4S	Vapor Balance Service; Bottom											
4T	Not Applicable To Any Tanks											
4U	Not Applicable To Any Tanks											
5.1	Breathing Loss (See Note)	lb/yr										
5.2	Working Loss (See Note)	lb/yr										
5.3	Total Emissions (See Note)	lb/yr										
5.4	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.	TPY										

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-17	GRN-18	GRN-19	GRN-20	GRN-23	GRN-24	GRN-25	GRN-26	GRN-27	GRN-28
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)		AA-003 17	AA-003 18	AA-003 19	AA-003 20	AA-003 23	AA-013 24	AA-014 25	AA-003 26	AA-003 27	AA-003 28
2	Name Construction Date		Storm Surge Water 1989	Coagulant 1987	Decanting 1989	Creosote / Water 1980	Pentachlorophenol Water / 1983	Gasoline 1975	Diesel 1930	Aeration 1986	Clarifier 1986	Discharge 1986
3	Material Stored		Storm Water	Coagulant Polymer	Creosote / Oil / Water	Creosote / Water	Pentachlorophenol / Oil	Gasoline	#2 Diesel	Process Waste Water	Process Waste Water	Process Waste Water
4A	True Vapor Pressure @ Storage Temperature	psia										
4B	Reid Vapor Pressure @ Storage Temperature	psia										
4C	Storage Temperature	Degrees F	80	60	80	150	100	60	60	80	80	80
4D	Density @ Storage Temperature	lb/gal	8.34	8.67	8.34	8.34	8.34	6.5	7	8.34	8.34	8.34
4E	Molecular Weight @ Storage Temperature	lb/mole										
4F	Throughput	gallons/yr	2,272,000	9,000	230,000	532,000	493,000	10,000	90,000	5,000,000	5,000,000	5,000,000
4G	Tank Capacity	gallons	250,000	1,500	2,500	8,000	8,000	1,250	9,000	25,000	25,000	15,000
4H	Tank Diameter	feet	36	6	8	10	4	4	6	40	15	15
4I	Tank Height / Length	feet	36	10	12	14	14	12	32	25	18	9
4J	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Vertical	Vertical	Horizontal	Horizontal	Vertical	Vertical	Vertical
4L	Type of Roof (Dome or Cone)		None	Dome	Dome	Dome	Dome	Fixed Roof	Fixed Roof	None	None	None
4M	Vapor Recovery System?	Yes or no	Open	No	No	No	No	No	No	No	No	No
4N	Type of Tank?	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4O	Coast City		Blue	Belge	Black	Black	Black	Aluminum	Aluminum	White	Blue	Blue
4P	Tank Paint Color		Good	Good	Good	Poor	Poor	Good	Good	Good	Good	Good
4Q	Paint Condition (Good or Poor)		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Bottom	Bottom	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service
4R	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service, Bottom)											
4S	Vapor Balance Service, Bottom											
4T	Not Applicable To Any Tanks											
5.1	Breathing Loss (See Note)	lb/yr										
5.2	Working Loss (See Note)	lb/yr										
5.3	Total Emissions (See Note)	lb/yr										
NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.												

SECTION H TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-30 AA-003 30 North Pentachlorophenol Equalization 1983	GRN-31 AA-003 31 South Pentachlorophenol Equalization 1983	GRN-32 AA-003 32 Pentachlorophenol Mix 1970	GRN-33 AA-003 33 Pentachlorophenol Mix 1970	GRN-34 AA-003 34 Pentachlorophenol Concentrate 1960	GRN-35 AA-003 35 Stormwater Process 1970
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)							
2	Name Construction Date							
3	Material Stored		Water / Penta / Oil	Water / Penta / Oil	Oil / Penta	Oil / Penta	Pentachlorophenol Concentrate	Cresote / Penta / Water
4A	True Vapor Pressure @ Storage Temperature	psia						
4B	Raid Vapor Pressure @ Storage Temperature	psia						
4C	Storage Temperature	Degrees F	60	60	60	60	60	60
4D	Density @ Storage Temperature	lb/mol	8	8	7.75	7.75	9.55	8.34
4E	Molecular Weight @ Storage Temperature	lb/mol						
4F	Throughput	gallons/yr	55,000	65,000	850,000	850,000	120,000	400,000
4G	Tank Capacity	gallons	14,000	14,000	9,400	9,400	10,500	100,000
4H	Tank Diameter	feet	10	10	9	10	13	30
4I	Tank Height / Length	feet	24	24	14	15	30	20
4J	Average Vapor Space Height	feet	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Horizontal	Vertical	Vertical
4L	Type of Roof (Dome or Cone)		Cone	Cone	Flat	Flat	Flat	Flat
4M	Vapor Recovery System?	yes or no	No	No	No	No	No	No
4N	Type of Tank?		Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof
4O	Coolest City	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4P	Tank Paint Color		Black	Black	Black	Black	Aluminum	Concrete
4Q	Paint Condition (Good or Poor)		Poor	Poor	Poor	Poor	Good	Good
4R	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service
4S	Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)							
5.1	Not Applicable To Any Tanks							
5.2	Breathing Loss (See Note)	lb/yr						
5.3	Working Loss (See Note)	lb/yr						
5.4	Total Emissions (See Note)	TPY						
5.5	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.							

2.0 SOURCE DESCRIPTION:

Koppers Industries, Inc. operates a 30,000 pound per hour Wellons wood waste boiler at their wood preserving facility in Grenada, Mississippi. The boiler provides steam for the timber treating processes and a turbine generator. Fuel is typically wood waste generated from the manufacture of treated wood products.

Heat input as calculated from the test data and an F-Factor was an average 48.53 MM Btu/hr.

The boiler exhausts to the atmosphere by way of a 34.5 inch diameter vertical stack. Two sample ports at 90° are provided at a location that is 432 inches (12.5 diameters) below the stack exit and 356 inches (10.3 diameters) above an upstream stack tapered section.

3.0 TEST PROCEDURES:

Test procedures used are those described in the Code of Federal Regulations, Title 40, Part 60, Appendix A. Specifically, Method 1 was used to determine the number of sample points and Method 5 to determine flow rates, moisture content, and particulate emissions. The sampling train was identical to that described in Method 5 except that the cyclone was omitted. Visible emissions were read in accordance with Method 9 concurrently with the emissions test

Heat input to the boilers was determined by continuously monitoring oxygen content of the flue gas as described in Method 3A and calculating heat input using an F-factor of 9400 scf per million Btu of heat input for the wood waste fuel.

Filters were recovered by rinsing the front half of the filter holder into the probe wash and securing the filters in glass petri dishes. Part of the sample filter often adheres to the filter gasket, and some of the adhering material is recovered into the probe wash. Therefore some of the filter weight is attributed to the probe wash weight.

Filters were heated in an oven for 2 hours at 105° C, desiccated at least 24 hours and weighed to constant weight. Probe wash samples in acetone were evaporated to dryness over low heat in tared beakers, desiccated for at least 24 hours and weighed to constant weight. Weighings are made at 6 hour or greater intervals (samples stored in desiccator). Final weights were considered valid and were recorded if there was no more than 0.5 milligrams difference from the previous weighing.

Koppers
Grenada County
TV - Renewal

AI 876

Basilone
Environmental Mgr
 14 of 22 Koppers
 t No. 0960-00012

SECTION 2. EMISSION POINTS & POLLUTION CONTROL DEVICES

Emission Point	Description
AA-001	Ref. No. 1, the 60.0 MMBTUH Wellons/Nebraska Woodwaste Boiler (firing treated and untreated wood) with multiclone collector
AA-002	Ref. No. 26, the 28.5 MMBTUH fuel oil fired Murray Boiler
AA-003	<p>Ref. No. 5, Wood Treatment Facility consisting of five (5) treating cylinders, pumps, valves, blowers, and the following tanks:</p> <p>Ref. No. 6, the 30,000 gallon #5 Work Tank containing penta in oil</p> <p>Ref. No. 7, the 30,000 gallon #2 Work Tank containing creosote 60/40</p> <p>Ref. No. 8, the 30,000 gallon #3 Work Tank containing creosote</p> <p>Ref. No. 9, the 22,420 gallon #4 Work Tank containing creosote #1 X</p> <p>Ref. No. 10, the 30,000 gallon 2nd Decant Tank containing creosote/water <i>stays</i></p> <p>Ref. No. 11, the 4,200 gallon Measuring Tank containing creosote #1 X</p> <p>Ref. No. 12, the 100,000 gallon Creo Storage Tank containing creosote #1</p> <p>Ref. No. 13, the 100,000 gallon Water Surge Tank containing process water</p> <p>Ref. No. 14, the 100,000 gallon Oil Storage Tank containing fuel oil</p> <p>Ref. No. 15, the 105,000 gallon Creo Storage Tank containing creosote 60/40</p> <p>Ref. No. 16, the 300,000 gallon Process Water Surge Tank containing process water</p> <p>Ref. No. 17, the 250,000 gallon Storm Water Surge Tank containing storm water</p> <p>Ref. No. 18, the 2,700 gallon Coagulant Tank containing Dearfloc 4301</p> <p>Ref. No. 19, the 4,500 gallon Decant Tank containing creo/oil/water</p> <p>Ref. No. 20, the 8,000 gallon Creo Blowdown Tank containing water/creosote</p> <p>Ref. No. 21, the 6 ft. dia. x 60 ft. long Air Receiver containing compressed air</p> <p>Ref. No. 22, the 7 ft. dia. x 40 ft. long Air Receiver containing compressed air</p> <p>Ref. No. 23, the 8,000 gallon Penta Blowdown Tank containing water/penta/oil</p> <p>Ref. No. 26, the 150,000 gallon Aeration Tank containing waste water</p> <p>Ref. No. 27, the 25,000 gallon Clarifier Tank containing waste water</p> <p>Ref. No. 28, the 15,000 gallon Discharge Tank containing waste water</p> <p>Ref. No. 29, the 4,000 gallon Creosote Dehydrator X</p> <p>Ref. No. 30, the 14,000 gallon N. Penta Equalization Tank containing water/oil/penta</p> <p>Ref. No. 31, the 14,000 gallon S. Penta Equalization Tank containing water/oil/penta</p> <p>Ref. No. 32, the 11,500 gallon Penta Mix Tank containing oil/penta</p> <p>Ref. No. 33, the 5,000 gallon Penta Mix Tank containing oil/penta</p> <p>Ref. No. 34, the 10,500 gallon Penta Concentrate Storage Tank containing penta concentrate</p>
AA-004	Ref. No. 27, the Tie Mill and Lumber Mill with cyclone
AA-005	Ref. No. 33, the Boiler House natural gas fired space heater rated at 0.2 MMBTUH
AA-006	Ref. No. 35, the natural gas fired steam cleaner rated at 0.44 MMBTUH
AA-007	Ref. No. 36, the Wood Stove Shop Heater rated at 0.10 MMBTUH
AA-008	Ref. No. 8, Treated Wood Storage
AA-009	Ref. No. 31, the Pole Kiln

Emission Point	Description
AA-010	Ref. No. 32, the Pole Peeler
AA-011	Ref. No. 34, Wood Fuel Preparation and Handling including grinding, conveying, and silo loading
AA-012	Ref. No. 37, the two (2) Parts Cleaners/Degreasers
AA-013	Ref. No. 24, the 1,000 gallon Gasoline Storage Tank
AA-014	Ref. No. 25, the 20,000 gallon Diesel Storage Tank
AA-015	Ref. No. 33, the Standby Boiler Room natural gas fired space heater rated at 0.1 MMBTUH
AA-016	Ref. No. 33, the Fire Pump Building natural gas fired space heater rated at 0.02 MMBTUH

HA 017 → New Tank

October 28, 2002

CERTIFIED MAIL
#7000 0520 0021 7551 9217Ms. Melissa Collier
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385**RECEIVED**
OCT 30 2002
Dept. of Environmental Quality
Office of Pollution Control**RE: Title V Operating Permit - #0960-00012
Koppers Industries Inc. - Grenada, Mississippi
Revisions to Renewal Application**

Dear Ms. Collier,

On 11 March 1997, Koppers Industries, Inc. was issued the Title V Operating Permit No. 0960-00012 for its wood treating plant (the Plant) at Tie Plant MS. An application for renewal of the Title V permit was submitted on September 26, 2001, in conformance with MDSEQ requirements. Since that time decisions were made that require several changes to be made at the facility, some of which will affect air emissions described in the Title V Renewal Application.

The attached sheets provide revised and updated information and summarize changes in plant operations that will affect air emissions. Changes that will be made to the operation are discussed below, and forms and supplemental information for replacement of information submitted in the original Title V Renewal Application are attached.

Koppers began using only untreated wood fuel in the wood fired boiler in November 2001. In the future only untreated wood fuel will be used. In the September 2001 renewal application the boiler operation was subject to an alternative operating scenario. Both a baseline operating scenario and an alternative operating scenario were presented with the September 2001 renewal application. This submission eliminates the baseline operating scenario for the boiler (Source AA-001), including the provision to use untreated and treated wood fuel. The Alternative Operating Scenario presented in the renewal application, which describes emissions at the wood fired boiler based on the use of only untreated wood fuel, now becomes the base (and only) operating scenario presented in the application. Despite this change, the plant remains a major source for purposes of the Title V Operating Permit Program.

Production schedules for creosote products at the plant indicate a need to produce more cross ties and less utility poles in the future. This submission adjusts the production amounts for cross ties and poles. The total volume of creosote treated wood used in calculating PTE figures that were presented in the renewal application (3.5 million cubic feet) remains the same with this submission, however, with this submission the number of cross ties has been changed from 2.0 million cubic feet to 2.4 million cubic feet, and the number of poles has been changed from 1.5 million cubic feet to 1.1 million cubic feet. Changes to emission estimates due to production

schedule modifications are included on the attached tables. The emission factors presented in the attached tables are conservatively based on 2001 reporting year production information.

Information from the most recent Stack Emissions Test on the wood fired boiler is included, for replacement of test information provided with the original renewal application from the test conducted in the year 2000.

The attached sections contain information that was modified as a result of the changes described above. These sections should be used to replace sections of the renewal application submitted earlier. The following table serves as a guide for making these replacements.

Attached Information	Replacement For: (Sections in the original renewal application to be removed and replaced with the attached information)
Renewal Application Narrative (cover sheet and 12 pages).	Narrative provided in former application (cover sheet and 12 pages).
Section C, Emissions Summary for the Entire Facility, including Emission Inventory Calculation – PTE Basis (6 pages)	<ol style="list-style-type: none"> 1. Section C, Emissions Summary for the Entire Facility, Normal Operating Scenario – Use of Treated and Untreated Wood Fuel, including Emission Inventory Calculation – PTE Basis (6 pages) 2. Section C, Emissions Summary for the Entire Facility, Alternative Operating Scenario – Use of Untreated Wood Fuel Only, including Emission Inventory Calculation – PTE Basis (6 pages)
Section D, Fuel Burning Equipment, Emission Point No. AA-001, Ref. No. 40 Wood Fired Boiler (2 pages)	<ol style="list-style-type: none"> 1. Section D, Fuel Burning Equipment, Emission Point No. AA-001, Ref. No. 40 - Use of Treated and Untreated Wood Fuel (2 pages) 2. Section D, Fuel Burning Equipment, Emission Point No. AA-001 Ref. No. 40 - Alternative Operating Scenario Use of Untreated Wood Fuel (2 pages)
Section E, Manufacturing Processes, Emission Point No. AA-003, Wood Preserving Process (2 pages)	Section E, Manufacturing Processes, Emission Point No. AA-003, Wood Preserving Process (2 pages)
Section E, Manufacturing Processes, Emission Point No. AA-008, Ref. No. 46, Treated Wood Storage (2 Pages)	Section E, Manufacturing Processes, Emission Point No. AA-008, Ref. No. 46, Treated Wood Storage (2 Pages)
Section M5, including Stack Emissions Test, September 23, 2002 (6 pages)	Section M5, including Stack Emissions Test, September 29, 2000 (5 pages)

If you have any questions or require additional information, please call me at (662) 226-4584 extension 11.

Sincerely,


Thomas L. Henderson
Plant Manager

Enc.

cc. Steve Spengler – Environmental Permits Division MSDEQ
Tim Basilone – KII, Pittsburgh

Renewal Application

Title V Operating Permit

No. 0960-00012

Koppers Industries, Inc.

Tie Plant, MS 38960

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 - 3.0 Exempt and Insignificant Activities
 - 4.0 Alternate Operating Scenario
 - 5.0 Monitoring, Recordkeeping & Reporting
 - 6.0 MSDEQ Application Forms
-

1.0 Introduction.

On 11 March 1997, Koppers Industries, Inc. was issued the Title V Operating Permit No. 0960-00012 for its wood treating plant (the Plant) at Tie Plant MS. An application for renewal of the Title V permit was submitted on September 26, 2001, in conformance with MDSEQ requirements.

During the 5 years that the Title V permit has been in effect, the Grenada Plant has operated in compliance with the requirements of the permit. In addition, several changes have taken place. Some sources have been retired from service and some new sources have been added. Some equipment, originally used for one purpose has been switched to a different type of service. For some equipment, the Reference Numbers have been changed to provide consistency with other site permit and programmatic requirements.

The wood fired boiler operation was changed to include only the use of untreated wood fuel, instead of using both treated and untreated wood fuel as was done in the past. Koppers began using only untreated wood fuel in 2001, and has made the decision to only burn untreated wood fuel in the boiler in the future. Despite this change in wood fuel, the Plant remains a Major Source for purposes of the Title V Operating Permit Program.

The basic operations at the Plant are unchanged. The Plant continues to produce treated wood products such as railroad ties, utility poles and other timber products. During the past 5 years some of these operations have become more streamlined. Others have been replaced or eliminated. Several operations have undergone change in response to KII's pollution prevention efforts. For example, the formulation of KII's creosote has changed since the original application. The reformulated creosote is both easier to use in treating operations and results in lower VOC emissions to the atmosphere during the treating operations.

The remaining sections of this permit application document include all of the changes relevant to the Plant. In addition, the various MSDEQ Forms required for this renewal application are included.

2.0 Changes in Plant Equipment and Operations

Since the original Title V Permit has been in effect, there have been several changes in equipment and operations at the Plant. Some of these changes have been discussed previously in detail with the MSDEQ. Others correspond to exempt and/or insignificant changes. All of these changes are summarized below.

2.1 Changes in Equipment Reference Numbers

Several of these Reference Numbers have been changed to incorporate the numbering system used in the SPCC Plan for the Plant. Other Reference Numbers have been changed because the 1997 Title V Permit had duplicate Reference Numbers. For example, in the 1997 Title V Permit, both Emission Points AA-003 and AA-0010 had a Reference No. 32. By revising the Reference Number system used in this renewal application, this and other duplicate reference numbers have been avoided.

Emission Point	Description (1997 Title V References)	Proposed Ref. No	Comments
AA-001	Title V, Ref. No. 1 - the 60.0 MMBTUH Wellons/Nebraska Woodwaste Boiler	40	See also Section 4
AA-002	Title V, Ref. No. 26 - the 28.5 MMBTUH fuel oil fired Murray Boiler	41	
AA-003	SPCC, Ref. No. 5 - the 34,000 gal treatment cylinder containing Penta in oil.	1	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	2	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	3	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	4	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote.	5	Changed from Creosote to Penta use
	SPCC, Ref. No. 6 - the 29,7786 gal #1 Work Tank containing Penta in oil.	6	
	SPCC, Ref. No. 7 - the 29,786 gal #2 Work Tank containing Creosote	7	
	SPCC, Ref. No. 8 - the 29,786 gal #3 Work Tank containing Creosote	8	
	SPCC, Ref. No. 9 - the 22,419 gal #4 Work Tank containing Creosote	9	
	SPCC, Ref. No. 10 - the 29,786 gal #5 Work Tank containing Creosote/Water.	10	
	SPCC, Ref. No. 11 - the 4,200 gal Measuring Tank containing Creosote	11	
	SPCC, Ref. No. 12 - the 100,000 gal #1 Storage Tank containing Creosote	12	Changed from creosote storage to a storm water surge tank
	SPCC, Ref. No. 13 - the 100,000 gal #2 Surge Tank containing Process water	13	
	SPCC, Ref. No. 14 - the 100,000 gal #5 Storage Tank containing Diesel #2 fuel oil	14	
	SPCC, Ref. No. 15 - the 105,000 gal #6 Storage Tank containing creosote	15	
	SPCC, Ref. No. 16 - the 300,000 gal #10 Surge Tank containing process water	16	
	SPCC, Ref. No. 17 - the 250,000 gal Storm Water surge tank containing Storm Water	17	

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
	SPCC, Ref. No. 18 - the 1,500 gal Coagulant Tank containing water treatment system polymer additive	18	
	SPCC, Ref. No. 19 - the 2,500 gal Decant Tank containing Creo/Oil/Water	19	
	SPCC, Ref. No. 20 - the 8,000 gal Creosote Blowdown tank containing Creo/Water	20	
	SPCC, Ref. No. 21 - the 6 ft. Dia. X 60 ft. long, Air Receiver containing compressed air	-----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 22 - the 7 ft. Dia. X 40 ft. long Air Receiver containing compressed air	-----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 23 - the 8,000 gal Penta Blowdown tank containing water/penta/oil	23	
	SPCC, Ref. No. 26 - the 150,000 gal Aeration Tank containing waste water	26	
	SPCC, Ref. No. 27 - the 25,000 gal Clarifier Tank containing waste water	27	
	SPCC, Ref. No. 28 - the 15,000 gal Discharge Tank containing waste water	28	
	SPCC, Ref. No. 29 - the 8,000 gal Creosote Dehydrator	29	
	SPCC, Ref. No. 30 - the 14,000 gal North Penta Equalization Tank containing water/penta/oil	30	
	SPCC, Ref. No. 31 - the 14,000 gal South Penta Equalization Tank containing water/penta/oil	31	
	SPCC, Ref. No. 32 - the 9,400 gal Penta Mix Tank containing Oil/Penta	32	
	SPCC, Ref. No. 33 - the 5,000 gal Penta Mix Tank containing Oil/Penta	33	
	SPCC, Ref. No. 34 - the 10,500 gal Penta Concentrate Tank containing 40% Pentachlorophenol Concentrate	34	
	SPCC, Ref. No. 35 - the 100,000 gal Stormwater Tank	35	This Tank has been added.
AA-004	Title V, Ref. No. 27, the Tie Mill and Lumber Mill with cyclone	42	
AA-005	Title V, Ref. No. 33, the Boiler House natural gas fired space heater rated at 0.2 MMBTUH	43	Insignificant Activity per APC-S-6.IV. Three (3) space heaters each rated at 0.2mmbtu/hr.
AA-006	Title V, Ref. No. 35, the natural gas fired steam cleaner rated at 0.44 MMBTUH	44	Insignificant Activity per APC-S-6.IV.
AA-007	Title V, Ref. No. 36, the Wood Stove Shop Heater rated at 0.10 MMBTUH	-----	Source no longer exists. Has been removed from site.
AA-008	Title V, Ref. No. 8, the Treated Wood Storage Areas	46	
AA-009	Title V, Ref. No. 31, the Pole Kiln	47	
AA-010	Title V, Ref. No. 32, the Pole Peeler	48	
AA-011	Title V, Ref. No. 34, Wood Fuel Preparation and handling including grinding, conveying, and silo loading	49	
AA-012	Title V, Ref. No. 37, the two (2) Parts cleaners-degreasers	50	
AA-013	SPCC, Ref. No. 24, the 1,250 gal Gasoline Storage tank containing Gasoline used by company vehicles	51	Insignificant Activity per APC-S-6.IV.

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
AA-014	SPCC, Ref. No. 25, the 9,000 gal Diesel Storage tank used by company vehicles/Rolling Stock	52	Insignificant Activity per APC-S-6.IV.
AA-015	Title V, Ref. No. 33, the Oil Fired Murray Standby boiler room Natural Gas fired Space Heater rated at 0.1 MMBTUH	54	Insignificant Activity per APC-S-6.IV.
AA-016	Title V, Ref. No. 33, the Fire Pump building Natural Gas fired Space Heater rated at 0.02 MMBTUH	-----	Source no longer exists. Has been removed from site.

2.2 Emission Factors and Emissions.

As noted above, KII has changed the formulation of creosote used for treating ties, poles and timber. This reformulation is a classic pollution prevention program since it made the treating operations easier and it reduced VOC emissions from the treating process as well. The reformulation resulted in an appreciable reduction in the vapor pressure of the creosote. One of the significant advantages to this reformulation was the elimination of certain HAPs from the creosote, which correspondingly reduced the HAP atmospheric emissions.

The PTE emissions for the Plant are included with the various MSDEQ Forms. However, a summary of the changes in the VOC emissions associated with creosote treatment is provided below.

Emissions from Creosote Treated Products

Pollutant	Production Emissions (tpy)	Storage Yard Emission (tpy)
1996 Application/1997 Permit		
Total VOC	26.25	12.88
Napthalene	4.46	3.88
Benzene	5.78	0.003
Toluene	6.83	0.15
Dibenzofuran	0.16	n.a.
Quinoline	0.39	n.a.
Biphenyl	0.04	n.a.
Total HAPs	19.33	4.03
2002 Application		
Total VOC	4.62	5.18
Napthalene	2.69	3.12
Dibenzofuran	0.00	0.00
Quinoline	0.10	0.09
Biphenyl	0.05	0.05
Total HAPs	2.85	3.27

NOTES: All emissions based on 2,400,000 ft³ ties and 1,100,000 ft³ poles
n.a. = not analyzed or reported.
All Emissions on a PTE basis.

The summary indicates that there is a substantial reduction in the emissions of VOC and certain organic HAPs from the production of creosote treated wood products. These emissions are included in the affected Forms required by MSDEQ in this reapplication.

2.3 Equipment Changes at the Plant

The equipment associated Emission Points AA-007, the Wood Stove Shop Heater, and AA-015, the Fire Pump Building natural gas fired space heater, have been removed from the site. A new storm water storage tank has been added. It has been included in AA-003 and has the Reference No. 35.

3.0 Insignificant and Exempt Activities and Equipment

The MSDEQ regulations at APC-S-6.VI include an extensive list of "Insignificant Activities and Emissions". Several of the operations and equipment at the Plant are listed as "Insignificant" in Sections APC-S-6.VI.A and VI.B. These are listed below and are included in Form C, as required by MSDEQ. In addition, the emissions from several, but not all, of these Insignificant Activities are included in the Plant-wide Emissions Summary, as required under APC-S-6.VI.C and VI.D. See the individual equipment and/or process Forms and the Emission Summary in Form C for the details.

Emission Point	Description	Insignificant Activity
AA-003	Compressed Air Receivers (Ref. Nos. 21 & 22)	APC-S-6.VI.B.27
AA-005	Boiler House natural gas fired space heater	APC-S-6.VI.B.2.a.
AA-006	Natural gas fired steam cleaner	APC-S-6.VI.B.2.a.
AA-013	1,000 gallon Gasoline Storage Tank	APC-S-6.VI.B.7
AA-014	20,000 gallon Diesel fuel Storage Tank	APC-S-6.VI.B.7
AA-015	Standby boiler room natural gas fired Space Heater	APC-S-6.VI.B.2.a.
-----	Outdoor kerosene heaters (5 units)	APC-S-6.VI.A.17
-----	Emergency Power Generators (3 units at 11 hp and 6000 watts; 3 units at 16 hp and 8000 watts)	APC-S-6.VI.B.9

4.0 Change to Untreated Wood Fuel Only (Wood Fired Boiler)

The operation of the Wellons wood-fired boiler, Emission Point AA-001, was originally baselined using a mixture of used, treated wood and untreated wood as fuel. The emissions for the baseline operation were included in the original (1996) permit application. However, this baseline operation was changed in 2001, when Koppers began using only untreated wood fuel. Koppers has decided to continue burning only untreated wood in the wood fired boiler. Therefore the operation of the wood fired boiler represented in this application is based on use of untreated wood fuel only. Note that this operating scenario in no way affects the quantities or mix of treated wood products manufactured at the Plant.

Because, in general, untreated wood fuel has a lower thermal rating (btu/lb of wood) than does used treated wood fuel, the quantity of untreated wood that must be burned as fuel greatly exceeds that of used treated wood fuel. For example, for the Wellons boiler at the Plant, with a nameplate rating of 60,000,000 btu/hr (60mmbtu/hr), the baseline scenario included 37,580 tons of used treated wood fuel on a PTE basis. Correspondingly, the operating scenario using only untreated wood fuel requires 58,400 tons on a PTE basis.

Also, the emissions associated with untreated wood fuel differ somewhat from those associated with used treated wood fuel. The used treated wood fuel mixture contains some pentachlorophenol treated wood. For this reason, emissions of HCl are characteristic of this fuel component and are missing when only untreated wood fuel is used. Also, the untreated wood fuel contains less sulfur, which leads to lower SO₂ emissions than with the used treated wood fuel. The emission factors for the untreated wood fuel operating scenario presented in this application are taken from AP-42 and are summarized below:

**Potential To Emit Basis for Title V
Application - Alternative Operating
Scenario**

**AA-001-BOILER, WOOD
FIRED**

	tn/yr	Sulfur	Chlorine	(lb/hr):
Total Wood Burned:	58,403	0.01%	0.04%	13333
Creo Wood Burned:	0	0.25%	0.04%	
Penta Wood Burned:	0	0.25%	0.25%	
Untreated Wood Burned:	58,403	0.01%	0.04%	
Removal Efficiency (1):		70.00%	45.00%	

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	4.2	lb/tn	AP-42	122.65	28.00
SO2	0.08	lb/tn	AP-42	2.19	0.50
NOX (2)	1.60	lb/tn	1994 Test	46.72	10.67
CO	6.6	lb/tn	AP-42	192.73	44.00
VOC	0.18	lb/tn	AP-42	5.26	1.20
HCl	1.538	lb/tn PCP fuel	2/96 Test	0.00	0.00
Arsenic	8.8E-05	lb/tn	AP-42	0.0026	0.001
Cadmium	1.7E-05	lb/tn	AP-42	0.0005	0.000
Chromium	1.3E-04	lb/tn	AP-42	0.0038	0.001
Lead	3.1E-04	lb/tn	AP-42	0.0091	0.002
Manganese	8.9E-03	lb/tn	AP-42	0.2599	0.059
Nickel	5.6E-04	lb/tn	AP-42	0.0164	0.004
Selenium	1.8E-05	lb/tn	AP-42	0.0005	0.000
Mercury	6.5E-06	lb/tn	AP-42	0.0002	0.000
Total HAP Metals				0.29	0.067

- (1) Removal efficiencies based on 2/96 stack test.
(2) 1994 Stack Test

The Grenada Plant meets the criteria for a Major Source under the Title V program using untreated wood fuel in the Wellons boiler.

The emissions for the Wellons boiler (AA-001) are summarized in Section D of the MSDEQ Forms. The plant-wide summary is included in Section C of the MSDEQ Forms.

For this revised operating scenario using only untreated wood fuel in the wood fired boiler, some of the emission limitations and monitoring & recordkeeping provisions of the existing Title V permit for the Baseline Scenario are no longer appropriate. It is requested that the following changes be made in the new Title V permit:

- a. In Section 3.B, there is a temperature limitation in effect when treated wood fuel is used. Since treated wood will not be used for the Alternative Operating Scenario, this limitation should be removed.
- b. In Section 3.B, there is a limitation on the hourly feed rate of 9375 lb/hour for the used treated wood fuel. This limitation was established in the Construction Permit. For the

proposed operating scenario using only untreated wood, this limitation must be revised upwards to account for the lower btu/lb heating value of the untreated wood fuel. It is requested that this limitation be set at 15,000 lb/hour for untreated wood fuel. This limitation provides some small margin on the fuel use rate corresponding to the PTE basis in the Emission Summary. This small margin will allow for some variation in the heating value of the untreated wood fuel. The Emission Summary is based on a heating value of 4500 btu/lb. If some fuel contains greater moisture or is lower quality, in general, the actual heating value will be below the value used in the emissions summary.

- c. In Section 5.B, there is a recordkeeping requirement to provide for continuous recording of the boiler temperature and to note the time periods when untreated wood fuel is fed to the boiler. For the proposed operating scenario, used treated wood fuel will not be used at any time and it is requested that this monitoring and record keeping requirement be eliminated.
- d. In Section 5.B, there is a monitoring/record keeping requirement for CO. The CO requirement was originally included in the permit as a means of indirectly measuring the completeness of combustion, a consideration that is only important if treated wood is being burned. For the proposed operating scenario, used treated wood fuel will not be used at any time and it is requested that this monitoring and record keeping requirement be eliminated.
- e. In Section 5.B, there is a monitoring/record keeping requirement for Opacity. The opacity requirement included in the permit requires monitoring and documentation with record keeping of the in stack opacity on a continuous basis. For the proposed operating scenario, it is requested that this monitoring and record keeping requirement be changed to visual methods of opacity monitoring at the stack, with appropriate record keeping.

5.0 Monitoring, Recordkeeping & Reporting Requirements.

Section 5 of the existing Title V Permit contains several monitoring, recordkeeping and reporting (MRKR) requirements. Based on KII's experience operating in compliance with these requirements, some changes are recommended for the new Permit. These are focused on elimination of duplicative reporting requirements and on removing ambiguity from the existing language. The following changes are recommended:

Existing 5.A.4 – "Except as otherwise specified herein, the permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with APC-S-6, Section II.E."

Suggestions for Modification of Section 5.A.4 :

It is recommended that this is where all of the deviations should be reported and not under Condition 5.A.5. It is felt that semi-annual reporting is timely and that the 5-day reporting requirement in Condition 5.A.5 is burdensome. By eliminating the 5-day reporting requirement, duplicative reporting would be avoided. In addition, it is recommended that the language in the new permit be amended to include an explicit list of those deviations that must be reported and what information for each deviation must be reported in the semi-annual reports.

Existing 5.A.5 – "Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken within five (5) days of the time the deviation began."

Suggestions for Modification of Section 5.A.5:

It is recommended that the language in the new permit be amended to include an explicit list of those deviations that must be reported in the semi-annual reports. In addition, we would like the language of the permit to explain in explicit detail what information must be reported. Also we would like the 5-day reporting period to be eliminated and the Semi-Annual Air Report required under Section 5.A.4 be the only reporting schedule.

The existing Permit provides deviation reporting exemptions for the following conditions:

- a. **Startups** – Opacity may exceed 40% for 15 minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty-four (24) hour period.
- b. **Soot Blowing** – emissions from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one hour.

It is recommended that the following items be listed as exemptions for purposes of reporting deviations:

1. A longer duration allowance for soot blowing such as 15 minutes or more, since this is preventative maintenance that occurs 3 times a day on a normal operating day.
2. An opacity allowance for pulling ash. This is also a routine preventative maintenance measure that occurs at least twice daily. This practice is especially disruptive to the system in terms of opacity due to the behavior of "fly ash" that is removed from the ash box and the ash collector.
3. An opacity allowance for fuel cell clean out. This is preventative maintenance that occurs 4 times per day and is also disruptive to the system in terms of opacity.
4. An opacity allowance for fuel feed adjustment. The condition of our fuel is constantly changing. A variety of factors in fuel conditions play a significant role in the combustion efficiency rate at which the fuel is burned. One fuel feed rate may work perfectly for the type of fuel that was fed into the boiler on one day, but then that rate may be too high or too low for the fuel fed into the boiler on the next day. Sometimes the difference can be observed between fuels in consecutive hours.

6.0 MSDEQ Forms

The remainder of this Section includes the Forms that are required for this Renewal Application. Forms B and C are signed by the Plant Manager, who is the Responsible Official for this Renewal Application.

SECTION C EMISSIONS SUMMARY for the ENTIRE FACILITY

List below the total emissions for each pollutant from the entire facility in accordance with Operating Permit Application Requirements, pp. 3-5. For stack emissions, use the maximum annual allowable (potential) emissions. For fugitive emissions, use the annual emissions calculated using the maximum operating conditions.

POLLUTANT Footnote 1	ANNUAL EMISSION RATE	
	lb/hr	tons/yr
PARTICULATE (LESS FUGITIVE)		130.79
SO2		65.63
NOX		65.07
CO		197.36
VOC (LESS FUGITIVE)		75.71
VOC (INCLUDING FUGITIVE)		100.83
HAPS (ORGANICS/VOC)		6.13
NAPHTHALENE		5.82
HAP METALS		0.29
HCL		0.00
TOTAL HAPS		6.42
SEE PTE TABLES (FOLLOWING 5 PAGES)		

158.02
w/ revised AA
65.99
72.66
228.67
76.36
101.67
5.82
0.34
0.00
6.46

1. All regulated air pollutants, including hazardous air pollutants emitted from the entire facility should be listed. A list of regulated air pollutants has been provided in Section A.

With the exception of the emissions resulting from insignificant activities and emissions as defined in Regulation APC-S-6, Section VII, the pollutants listed above are all regulated air pollutants reasonably expected to be emitted from the facility.

Thomas L. Henderson

SIGNATURE (must match signature on page 17)

BASIS

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Production Study**

AA-001-BOILER, WOOD FIRED

	tn/yr	Sulfur	Chlorine	(lb/hr):
Total Wood Burned:	58,403	0.01%	0.04%	13333
Creo Wood Burned:	0	0.25%	0.04%	
Penta Wood Burned:	0	0.25%	0.25%	
Untreated Wood Burned:	58,403	0.01%	0.04%	
Removal Efficiency (1):		70.00%	45.00%	

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	4.2	lb/tn	AP-42	122.65	28.00
SO ₂	0.08	lb/tn	AP-42	2.19	0.50
NO _X	1.6	lb/tn	1994 Test	46.72	10.67
CO	6.6	lb/tn	AP-42	192.73	44.00
VOC	0.18	lb/tn	AP-42	5.26	1.20
HCl	1.538	lb/tn PCP fuel	2/96 Test	0.00	0.00
Arsenic	8.8E-05	lb/tn	AP-42	0.0026	0.001
Cadmium	1.7E-05	lb/tn	AP-42	0.0005	0.000
Chromium	1.3E-04	lb/tn	AP-42	0.0038	0.001
Lead	3.1E-04	lb/tn	AP-42	0.0091	0.002
Manganese	8.9E-03	lb/tn	AP-42	0.2599	0.059
Nickel	5.6E-04	lb/tn	AP-42	0.0164	0.004
Selenium	1.8E-05	lb/tn	AP-42	0.0005	0.000
Mercury	6.5E-06	lb/tn	AP-42	0.0002	0.000
Total HAP Metals				0.29	0.067

(1) Removal efficiencies based on 2/96 stack test.

AA-002-BOILER, FUEL OIL

Oil Burned(MGal/yr):		1787	Fuel Use Rate(MGal/hr):		0.204
			Sulfur Content:		0.500 %
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	1.79	0.41
SO ₂	71	lb/MGal	AP-42	63.44	14.48
NO _X	20	lb/MGal	AP-42	17.87	4.08
CO	5	lb/MGal	AP-42	4.47	1.02
VOC	0.2	lb/MGal	AP-42	0.18	0.04

Number of days boiler assumed to operate is

365

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Production Study**

AA-003-WOOD PRESERVING PROCESSES

Creosote Ties	2,400,000	C. F.
Creosote Poles	1,100,000	C. F.
Total Creosote Wood	3,500,000	C. F.
Oil/Penta Poles	3,500,000	C. F.

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote (VOC)	2.641E-03	lb/cf	Form R	4.62	1.06
HAPs contained in creosote:					
Naphthalene	1.54E-03	lb/cf	Form R, Calculation	2.69	0.61
Quinoline	5.68E-05	lb/cf	Form R, Calculation	0.10	0.02
Biphenyl	3.09E-05	lb/cf	Form R, Calculation	0.05	0.01
Dibenzofuran	2.59E-06	lb/cf	Form R, Calculation	0.00	0.00
TOTAL CREO. HAP				2.85	0.65
Pentachlorophenol (VOC)	3.73E-06	lb/cf	Form R	0.01	0.00
#6 Oil (VOC)	1.4E-02	lb/cf	Engr. Est.	24.75	5.65
TOTAL VOC				29.37	6.71

AA-008-PRESERVATIVE TREATED WOOD STORAGE FUGITIVES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote Ties					
Creosote (VOC)	2.69E-03	lb/cf	FR Test & Creo Data	3.23	0.74
Naphthalene	1.62E-03	lb/cf	FR Test & Creo Data	1.95	0.44
Quinoline	4.90E-05	lb/cf	FR Test & Creo Data	0.06	0.01
Biphenyl	1.67E-05	lb/cf	FR Test & Creo Data	0.02	0.00
Dibenzofuran	1.26E-06	lb/cf	FR Test & Creo Data	0.00	0.00
Creosote Poles					
Creosote (VOC)	3.55E-03	lb/cf	FR Test & Creo Data	1.95	0.45
Naphthalene	2.14E-03	lb/cf	FR Test & Creo Data	1.18	0.27
Quinoline	6.46E-05	lb/cf	FR Test & Creo Data	0.04	0.01
Biphenyl	2.20E-05	lb/cf	FR Test & Creo Data	0.03	0.01
Dibenzofuran	1.66E-06	lb/cf	FR Test & Creo Data	0.00	0.00
Penta Poles					
Oil (VOC, est. as creo)	1.15E-02	lb/cf	FR Test	20.13	4.59
Pentachlorophenol	1.9E-06	lb/cf	Engr. Est.	0.00	0.00
Totals					
VOC				25.31	5.77
Naphthalene				3.12	0.71
Quinoline				0.09	0.02
Biphenyl				0.05	0.01
Dibenzofuran				0.00	0.00
Pentachlorophenol				0.00	0.00
HAP Organics (Total)				3.27	0.75

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Production Study**

AA-009-DRY KILNS

Poles Dried	1,600,000	C. F.	Batch time (hrs):	72	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.05	lb/cf	Alabama	40.00	9.03

AA-004-CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	300
Total Hours:	2400

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	2.40	2

AA-010-POLE PEELER

Poles Peeled=	1,000,000	CF/yr	440	CF/hr
Pole Density=	45	lb/CF		
Pole Amount Peeled=	22,500	tn/yr	9.9	tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.350	lb/ton	AP-42	3.94	3.465

SPACE HEATERS, NATURAL GAS

Location	BTU/Hr	BTU/CF	CF/Hr	Hr/Yr	MMCF/Yr
AA-005-Boiler House	600000	1000	600	8,760	5.256
AA-015-Standby Boiler Room	100000	1000	100	8,760	0.876
AA-016-Fire Pump Building	No longer exists.				
TOTAL	700000		700		6.132

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.18	lb/MMCF	AP-42	0.00	0.00
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	94	lb/MMCF	AP-42	0.29	0.07
CO	40	lb/MMCF	AP-42	0.12	0.03
VOC	11	lb/MMCF	AP-42	0.03	0.01

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Production Study**

AA-011-WOOD FUEL PREPARATION & HANDLING (Fugitive)

Wood Fuel Processed	58,403	Tn/Yr	12	tn/hr	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.25	lb/tn	Engr. Est.	7.30	3.00

AA-006-STEAM CLEANER, NATURAL GAS FIRED

Annual Usage	8760	hours/yr	Fuel Use Rate	440	CF/hr
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	12	lb/MMCF	AP-42	0.02	0.01
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	100	lb/MMCF	AP-42	0.19	0.04
CO	21	lb/MMCF	AP-42	0.04	0.01
VOC	5.8	lb/MMCF	AP-42	0.01	0.00

AA-007-WOOD STOVE HEATER, SHOP NO LONGER EXISTS

Annual Usage	0	tn/yr	Fuel Use Rate	0	tn/hr
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	30.6	lb/tn	AP-42	0.00	0.00
SO2	0.4	lb/tn	AP-42	0.00	0.00
NOX	2.8	lb/tn	AP-42	0.00	0.00
CO	230.8	lb/tn	AP-42	0.00	0.00
VOC	43.8	lb/tn	AP-42	0.00	0.00

AA-012-PARTS CLEANERS, DEGREASERS

Number of units operating:		2			
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.33	tn/unit/yr	AP-42	0.66	0.00

EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Production Study

TOTAL PLANT EMISSIONS

Pollutant	Estimated (tn/yr)	Emissions (1) (lb/hr)
Particulate (less fugitive)	130.79	29.86
SO2 (2)	65.63	14.98
NOX	65.07	14.86
CO	197.36	45.06
VOC(less fugitive)	75.51	17.24
VOC(including fugitive)	100.83	23.02
HAPs(Organics/VOC)	6.13	1.40
Naphthalene	5.82	1.33
HAP Metals	0.29	0.07
HCl	0.00	0.00
Total HAPs	6.42	1.47

(1) Average hourly emission rate; not instantaneous maximum emission rate.

(2) Assumes backup boiler operating at same time as primary for number of days shown.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: AA-001, REF. NO. 40, WOOD FIRED BOILER
2. Equipment Description: WELLONS 2 CELL COMBUSTION SYSTEM, BOILER, AND COGENERATION POWER UNIT
3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____
4. Capacity: 60.0 MMBTU/hr 5. Type of burner: FUEL CELL
6. Usage Type (i.e. Space Heat, Process, etc.): PROCESS
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
UNTREATED WOOD AND BARK RESIDUE	4,000 BTU/LB	0.01	0.5	8,760 HRS/YR	

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.

9. Operating Schedule: (Optional) 24 hours/day 7 days/week 52 weeks/year
10. Stack Data:
A. Height: 80 FT C. Exit gas velocity: 70 FT/SEC
B. Inside diameter: 3 FT D. Exit gas temperature: 471° F
11. UTM Coordinates:
A. Zone B. North C. East

SECTION D

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

SECTION E

- | MATERIAL | QUANTITY/HR
AVERAGE | QUANTITY/HR
MAXIMUM | QUANTITY/YEAR |
|----------|------------------------|------------------------|--------------------|
| WOOD | 342 CF | 800CF | UP TO 7,000,000 CF |
| | | | |
| | | | |
| | | | |

- | PRODUCT or
BY-PRODUCT | QUANTITY/HR
AVERAGE | QUANTITY/HR
MAXIMUM | QUANTITY/YEAR |
|--------------------------|------------------------|------------------------|--------------------|
| TREATED WOOD | 342 CF | 800 CF | UP TO 7,000,000 CF |
| | | | |
| | | | |
| | | | |

7. Stack Data:
- | | | | |
|---------------------|----|--------------------------|----|
| A. Height: | NA | C. Exit gas velocity: | NA |
| B. Inside diameter: | NA | D. Exit gas temperature: | NA |
8. UTM Coordinates:
- | | | | | | |
|---------|-------|----------|-------|---------|-------|
| A. Zone | _____ | B. North | _____ | C. East | _____ |
|---------|-------|----------|-------|---------|-------|

MANUFACTURING PROCESSES (page 2 of 2)

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)			PROPOSED ALLOWABLE EMISSION RATE (Optional)		
		* yes/no	effic.	note 2	lb/hr	tn/yr	note 2	lb/hr	tn/yr
AA-003	VOC	NO						6.71	29.37
	NAPHTHALENE	NO						0.61	2.69
	QUINOLINE	NO						0.02	0.10
	BIPHENYL	NO						0.01	0.05
	DIBENZOFURAN	NO						0.00	0.00
	PENTACHLOROPHENOL	NO						0.00	0.01

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

*

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-008, REF. NO. 46, TREATED WOOD STORAGE
2. Process Description: STORAGE AND HANDLING OF TREATED WOOD PRODUCTS
FOLLOWING TREATMENT AND PRIOR TO SHIPMENT
3. Was this unit constructed or modified after August 7, 1977? yes X no
If yes please give date and explain. _____
4. Capacity (tons/hr): NA
5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
TREATED POLES			UP TO 4,600,000 CF
TREATED TIES			2,400,000 CF
TOTAL TREATED WOOD			UP TO 7,000,000 CF

7. Stack Data:
- | | | | |
|---------------------|----|--------------------------|----|
| A. Height: | NA | C. Exit gas velocity: | NA |
| B. Inside diameter: | NA | D. Exit gas temperature: | NA |
8. UTM Coordinates:
- | | | | | | |
|---------|--|----------|--|---------|--|
| A. Zone | | B. North | | C. East | |
|---------|--|----------|--|---------|--|

MANUFACTURING PROCESSES (page 2 of 2)

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* Yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-008	VOC	NO				5.77	25.31
	NAPHTHALENE	NO				0.71	3.12
	QUINOLINE	NO				0.02	0.09
	BIPHENYL	NO				0.01	0.05
	DIBENZOFURAN	NO				0.00	0.00
	PENTACHLOROPHENOL	NO				0.00	0.00

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

*

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

SECTION M5 COMPLIANCE DEMONSTRATION BY STACK TESTING

Compliance demonstration by stack testing will be carried out in accordance with EPA approved reference methods and the stack test report must be attached.

1. Emission Point No./Name : AA-001, REF. NO. 40, WOOD FIRED BOILER
 2. Pollutant being tested for: PARTICULATE AND VISIBLE EMISSIONS
 3. Test Method: SEE STACK TEST REPORT (FOLLOWING PAGES)
 4. Compliance shall be demonstrated:
Daily Weekly Monthly
Other (specify): BIENNIAL (ONCE EVERY 2 YEARS)
 5. Any measured emission rate that exceeds an emission limit established by the permit must be reported as an excess emission.
 6. Is this an existing method of demonstrating compliance:
Yes X No
 7. Backup system (attach other compliance demonstration forms if needed):
-

REPORT OF PARTICULATE AND VISIBLE
EMISSIONS TESTING FOR
KOPPERS INDUSTRIES
GRENADA PLANT
WOOD WASTE BOILER

Grenada, Mississippi
September 23, 2002

FACILITY NO. 0960-00012

EMISSION POINT NO. AA-001

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

Contact: Haley Biddy
ph: 662/226-4584

Prepared By:
Environmental Monitoring Laboratories
Ridgeland, Mississippi
✻ 601/856-3092 ✻

ENVIRONMENTAL MONITORING LABORATORIES, INC.

P.O. Box 655 ☉ 624 Ridgewood Road
Ridgelund, Mississippi 39158

phone: 601/856-3092
fax : 601/853-2151

September 29, 2000

Subject: Koppers Industries - Grenada, Mississippi
Wood Waste Boiler - Stack Emissions Test
Facility No. 0960-00012

On September 23, 2002, Environmental Monitoring Laboratories performed air emissions testing for Koppers Industries in the Tie Plant community near Grenada, Mississippi. Testing was done to measure particulate and visible emissions from the wood waste boiler in accordance with requirements of the Mississippi Department of Environmental Quality.

Results of emissions testing are shown below.

PARTICULATE EMISSIONS			VISIBLE EMISSIONS
#/hr	gr/dscf	#/MM Btu	High SMA, % opacity
26.80	0.181	0.551	8.96

Mr. Haley Biddy of Koppers coordinated the testing project. Otis Rayburn of Environmental Monitoring Laboratories was responsible for collection and analysis of particulate samples. Sample custody was limited to Mr. Rayburn.

Following is a report of the test.

REPORT OF PARTICULATE EMISSIONS TESTS
FOR KOPPERS INDUSTRIES, INC.
GRENADA PLANT
WOOD WASTE BOILER

Grenada, Mississippi

September 23, 2002

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4.0	DATA REDUCTION	3
5.0	NOMENCLATURE	6
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7.0	APPENDICES:	8
A.	Field and Laboratory Data	
B.	Calibrations	
C.	Visible Emissions Record	
D.	Boiler Steam Chart (Koppers)	

REPORT CERTIFICATION

I certify that I have examined the information submitted herein,
and based upon inquiries of those responsible for obtaining the
data or upon my direct acquisition of data, I believe the
submitted information is true, accurate and complete.

Signed _____

Daniel G. Russell

1.0 Test Results:

Wellons Wood Waste Boiler

Run No.		1	2	3	AVG.
Date		09/23/02	09/23/02	09/23/02	-----
Time Start		1205	1320	1432	----
Time End		1306	1421	1533	----
PARTICULATE EMISSIONS	#/hr	34.51	21.24	24.66	26.80
PARTICULATE EMISSIONS	gr/dscf	0.236	0.143	0.163	0.181
PARTICULATE EMISSIONS	#/MM Btu	0.702	0.454	0.497	0.551
VISIBLE EMISSIONS	high SMA, %	8.96	5.83	5.83	8.96
HEAT INPUT	MM Btu/hr	49.20	46.75	49.65	48.53
VOLUMETRIC FLOWRATE	acfm	30977	31452	30796	31075
VOLUMETRIC FLOWRATE	dscfm	16991	17292	17600	17294
VELOCITY	ft./sec.	79.5	80.7	79.1	79.8
STACK TEMPERATURE	°F	365	365	366	366
MOISTURE	%	14.0	13.8	10.3	12.7
SAMPLE RATE	% isokinetic	94	99	95	96

2.0 SOURCE DESCRIPTION:

Koppers Industries, Inc. operates a 30,000 pound per hour Wellons wood waste boiler at their wood preserving facility in Grenada, Mississippi. The boiler provides steam for the timber treating processes and a turbine generator. Fuel is typically wood waste generated from the manufacture of treated wood products.

Heat input as calculated from the test data and an F-Factor was an average 48.53 MM Btu/hr.

The boiler exhausts to the atmosphere by way of a 34.5 inch diameter vertical stack. Two sample ports at 90° are provided at a location that is 432 inches (12.5 diameters) below the stack exit and 356 inches (10.3 diameters) above an upstream stack tapered section.

3.0 TEST PROCEDURES:

Test procedures used are those described in the Code of Federal Regulations, Title 40, Part 60, Appendix A. Specifically, Method 1 was used to determine the number of sample points and Method 5 to determine flow rates, moisture content, and particulate emissions. The sampling train was identical to that described in Method 5 except that the cyclone was omitted. Visible emissions were read in accordance with Method 9 concurrently with the emissions test

Heat input to the boilers was determined by continuously monitoring oxygen content of the flue gas as described in Method 3A and calculating heat input using an F-factor of 9400 scf per million Btu of heat input for the wood waste fuel.

Filters were recovered by rinsing the front half of the filter holder into the probe wash and securing the filters in glass petri dishes. Part of the sample filter often adheres to the filter gasket, and some of the adhering material is recovered into the probe wash. Therefore some of the filter weight is attributed to the probe wash weight.

Filters were heated in an oven for 2 hours at 105° C, desiccated at least 24 hours and weighed to constant weight. Probe wash samples in acetone were evaporated to dryness over low heat in tared beakers, desiccated for at least 24 hours and weighed to constant weight. Weighings are made at 6 hour or greater intervals (samples stored in desiccator). Final weights were considered valid and were recorded if there was no more than 0.5 milligrams difference from the previous weighing.

Renewal Application

Title V Operating Permit

No. 0960-00012

Koppers Industries, Inc.

Tie Plant, MS 38960

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- 2.0 Changes in Plant Equipment and Operations
- 3.0 Exempt and Insignificant Activities
- 4.0 Alternate Operating Scenario
- 5.0 Monitoring, Recordkeeping & Reporting
- 6.0 MSDEQ Application Forms

1.0 Introduction.

On 11 March 1997, Koppers Industries, Inc. was issued the Title V Operating Permit No. 0960-00012 for its wood treating plant (the Plant) at Tie Plant MS. This application for renewal of the Title V permit is submitted 6 months in advance of that expiration date, in conformance with MDSEQ requirements.

During the 5 years that the Title V permit has been in effect, the Grenada Plant has operated in compliance with the requirements of the permit. In addition, several changes have taken place. Some sources have been retired from service and some new sources have been added. Some equipment, originally used for one purpose has been switched to a different type of service. For some equipment, the Reference Numbers have been changed to provide consistency with other site permit and programmatic requirements. Importantly, some operations need to be accomplished in a different way and are the basis for an Alternative Operating Scenario not included in the original permit. For both the baseline operations and the Alternative Operating Scenario, the Plant remains a Major Source for purposes of the Title V Operating Permit Program.

The basic operations at the Plant are unchanged. The Plant continues to produce treated wood products such as railroad ties, utility poles and other timber products. During the past 5 years some of these operations have become more streamlined. Others have been replaced or eliminated. Several operations have undergone change in response to KII's pollution prevention efforts. For example, the formulation of KII's creosote has changed since the original application. The reformulated creosote is both easier to use in treating operations and results in lower VOC emissions to the atmosphere during the treating operations.

The remaining sections of this permit application document include all of the changes relevant to the Plant. In addition, the various MSDEQ Forms required for this renewal application are included.

2.0 Changes in Plant Equipment and Operations

Since the original Title V Permit has been in effect, there have been several changes in equipment and operations at the Plant. Some of these changes have been discussed previously in detail with the MSDEQ. Others correspond to exempt and/or insignificant changes. All of these changes are summarized below.

2.1 Changes in Equipment Reference Numbers

Several of these Reference Numbers have been changed to incorporate the numbering system used in the SPCC Plan for the Plant. Other Reference Numbers have been changed because the 1997 Title V Permit had duplicate Reference Numbers. For example, in the 1997 Title V Permit, both Emission Points AA-003 and AA-0010 had a Reference No. 32. By revising the Reference Number system used in this renewal application, this and other duplicate reference numbers have been avoided.

Emission Point	Description (1997 Title V References)	Proposed Ref. No	Comments
AA-001	Title V, Ref. No. 1 - the 60.0 MMBTUH Wellons/Nebraska Woodwaste Boiler	40	See also Section 4, Alternative Operating Scenario
AA-002	Title V, Ref. No. 26 - the 28.5 MMBTUH fuel oil fired Murray Boiler	41	
AA-003	SPCC, Ref. No. 5 - the 34,000 gal treatment cylinder containing Penta in oil.	1	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	2	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	3	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	4	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	5	
	SPCC, Ref. No. 6 - the 29,7786 gal #1 Work Tank containing Penta in oil.	6	
	SPCC, Ref. No. 7 - the 29,786 gal #2 Work Tank containing Creosote	7	
	SPCC, Ref. No. 8 - the 29,786 gal #3 Work Tank containing Creosote	8	
	SPCC, Ref. No. 9 - the 22,419 gal #4 Work Tank containing Creosote	9	
	SPCC, Ref. No. 10 - the 29,786 gal #5 Work Tank containing Creosote/Water.	10	
	SPCC, Ref. No. 11 - the 4,200 gal Measuring Tank containing Creosote	11	
	SPCC, Ref. No. 12 - the 100,000 gal #1 Storage Tank containing Creosote	12	
	SPCC, Ref. No. 13 - the 100,000 gal #2 Surge Tank containing Process water	13	
	SPCC, Ref. No. 14 - the 100,000 gal #5 Storage Tank containing Diesel #2 fuel oil	14	
	SPCC, Ref. No. 15 - the 105,000 gal #6 Storage Tank containing creosote	15	
	SPCC, Ref. No. 16 - the 300,000 gal #10 Surge Tank containing process water	16	
	SPCC, Ref. No. 17 - the 250,000 gal Storm Water surge tank containing Storm Water	17	

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
	SPCC, Ref. No. 18 - the 1,500 gal Coagulant Tank containing water treatment system polymer additive	18	
	SPCC, Ref. No. 19 - the 2,500 gal Decant Tank containing Creo/Oil/Water	19	
	SPCC, Ref. No. 20 - the 8,000 gal Creosote Blowdown tank containing Creo/Water	20	
	SPCC, Ref. No. 21 - the 6 ft. Dia. X 60 ft. long, Air Receiver containing compressed air	-----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 22 - the 7 ft. Dia. X 40 ft. long Air Receiver containing compressed air	-----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 23 - the 8,000 gal Penta Blowdown tank containing water/penta/oil	23	
	SPCC, Ref. No. 26 - the 150,000 gal Aeration Tank containing waste water	26	
	SPCC, Ref. No. 27 - the 25,000 gal Clarifier Tank containing waste water	27	
	SPCC, Ref. No. 28 - the 15,000 gal Discharge Tank containing waste water	28	
	SPCC, Ref. No. 29 - the 8,000 gal Creosote Dehydrator	29	
	SPCC, Ref. No. 30 - the 14,000 gal North Penta Equalization Tank containing water/penta/oil	30	
	SPCC, Ref. No. 31 - the 14,000 gal South Penta Equalization Tank containing water/penta/oil	31	
	SPCC, Ref. No. 32 - the 9,400 gal Penta Mix Tank containing Oil/Penta	32	
	SPCC, Ref. No. 33 - the 5,000 gal Penta Mix Tank containing Oil/Penta	33	
	SPCC, Ref. No. 34 - the 10,500 gal Penta Concentrate Tank containing 40% Pentachlorophenol Concentrate	34	
	SPCC, Ref. No. 35 - the 100,000 gal Stormwater Tank	35	This Tank has been added.
AA-004	Title V, Ref. No. 27, the Tie Mill and Lumber Mill with cyclone	42	
AA-005	Title V, Ref. No. 33, the Boiler House natural gas fired space heater rated at 0.2 MMBTUH	43	Insignificant Activity per APC-S-6.IV. Three (3) space heaters each rated at 0.2mmbtu/hr.
AA-006	Title V, Ref. No. 35, the natural gas fired steam cleaner rated at 0.44 MMBTUH	44	Insignificant Activity per APC-S-6.IV.
AA-007	Title V, Ref. No. 36, the Wood Stove Shop Heater rated at 0.10 MMBTUH	-----	Source no longer exists. Has been removed from site.
AA-008	Title V, Ref. No. 8, the Treated Wood Storage Areas	46	
AA-009	Title V, Ref. No. 31, the Pole Kiln	47	
AA-010	Title V, Ref. No. 32, the Pole Peeler	48	
AA-011	Title V, Ref. No. 34, Wood Fuel Preparation and handling including grinding, conveying, and silo loading	49	
AA-012	Title V, Ref. No. 37, the two (2) Parts cleaners-degreasers	50	
AA-013	SPCC, Ref. No. 24, the 1,250 gal Gasoline Storage tank containing Gasoline used by company vehicles	51	Insignificant Activity per APC-S-6.IV.

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
AA-014	SPCC, Ref. No. 25, the 9,000 gal Diesel Storage tank used by company vehicles/Rolling Stock	52	Insignificant Activity per APC-S-6.IV.
AA-015	Title V, Ref. No. 33, the Oil Fired Murray Standby boiler room Natural Gas fired Space Heater rated at 0.1 MMBTUH	54	Insignificant Activity per APC-S-6.IV.
AA-016	Title V, Ref. No. 33, the Fire Pump building Natural Gas fired Space Heater rated at 0.02 MMBTUH	-----	Source no longer exists. Has been removed from site.

2.2 Emission Factors and Emissions.

As noted above, KII has changed the formulation of creosote used for treating ties, poles and timber. This reformulation is a classic pollution prevention program since it made the treating operations easier and it reduced VOC emissions from the treating process as well. The reformulation resulted in an appreciable reduction in the vapor pressure of the creosote. One of the significant advantages to this reformulation was the elimination of certain HAPs from the creosote, which correspondingly reduced the HAP atmospheric emissions.

The PTE emissions for the Plant are included with the various MSDEQ Forms. However, a summary of the changes in the VOC emissions associated with creosote treatment is provided below.

Emissions from Creosote Treated Products

Pollutant	Production Emissions (tpy)	Storage Yard Emission (tpy)
1996 Application/1997 Permit		
Total VOC	26.25	12.88
Napthalene	4.46	3.88
Benzene	5.78	0.003
Toluene	6.83	0.15
Dibenzofuran	0.16	n.a.
Quinoline	0.39	n.a.
Biphenyl	0.04	n.a.
Total HAPs	19.33	4.03
2001 Application		
Total VOC	3.43	7.50
Napthalene	1.77	3.88
Dibenzofuran	0.15	0.33
Quinoline	0.08	0.17
Biphenyl	0.06	0.57
Total HAPs	2.06	4.95

NOTES: All emissions based on 2,000,000 ft³ ties and 1,500,000 ft³ poles
n.a. = not analyzed or reported.
All Emissions on a PTE basis.

The summary indicates that there is a substantial reduction in the emissions of VOC and certain organic HAPs from the production of creosote treated wood products. These emissions are included in the affected Forms required by MSDEQ in this reapplication.

2.3 Equipment Changes at the Plant

The equipment associated Emission Points AA-007, the Wood Stove Shop Heater, and AA-015, the Fire Pump Building natural gas fired space heater, have been removed from the site. A new stormwater storage tank has been added. It has been included in AA-003 and has the Reference No. 35.

3.0 Insignificant and Exempt Activities and Equipment

The MSDEQ regulations at APC-S-6.VI includes an extensive list of "Insignificant Activities and Emissions". Several of the operations and equipment at the Plant are listed as "Insignificant" in Sections APC-S-6-VI.A and VI.B. These are listed below and are included in Form C, as required by MSDEQ. In addition, the emissions from several, but not all, of these Insignificant Activities are included in the Plant-wide Emissions Summary, as required under APC-S-6.VI.C and VI.D. See the individual equipment and/or process Forms and the Emission Summary in Form C for the details.

Emission Point	Description	Insignificant Activity
AA-003	Compressed Air Receivers (Ref. Nos. 21 & 22)	APC-S-6.VI.B.27
AA-005	Boiler House natural gas fired space heater	APC-S-6.VI.B.2.a.
AA-006	Natural gas fired steam cleaner	APC-S-6.VI.B.2.a.
AA-013	1,000 gallon Gasoline Storage Tank	APC-S-6.VI.B.7
AA-014	20,000 gallon Diesel fuel Storage Tank	APC-S-6.VI.B.7
AA-015	Standby boiler room natural gas fired Space Heater	APC-S-6.VI.B.2.a.
-----	Outdoor kerosene heaters (5 units)	APC-S-6.VI.A.17
-----	Emergency Power Generators (3 units at 11 hp and 6000 watts; 3 units at 16 hp and 8000 watts)	APC-S-6.VI.B.9

4.0 Alternative Operating Scenario

In the MSDEQ Title V Permit Program, an applicant has the opportunity to define an Alternative Operating Scenario for inclusion in the Permit. The Alternative Operating Scenario described below is provided in accordance with the requirements given in APC-S-6.II.C.7 and II.D.

The operation of the Wellons wood-fired boiler, Emission Point AA-001, is baselined on using a mixture of used, treated wood and untreated wood as the fuel. The emissions for the baseline operation were included in the original (1996) permit application and are included here as well. However, to be able to assure operation of the Wellons wood-fired boiler in the face of increasingly uncertain supplies of used treated wood products, KII is defining an Alternative Operating Scenario as the full power operation of the Wellons boiler using only untreated wood fuel. Inclusion of this Alternative Operating Scenario will provide KII the flexibility to operate the Plant in the face of fuel supply uncertainties. Note that this Alternative Operating Scenario in no way affects the quantities or mix of treated wood products manufactured at the Plant.

Because, in general, untreated wood fuel has a lower thermal rating (btu/lb of wood) than does used treated wood fuel, the quantity of untreated wood that must be burned as fuel greatly exceeds that of used treated wood fuel. For example, for the Wellons boiler at the Plant, with a nameplate rating of 60,000,000 btu/hr (60mmbtu/hr), the baseline scenario includes 37,580 tons of used treated wood fuel on a PTE basis. Correspondingly, the Alternative Operating Scenario requires 58,400 tons of untreated wood fuel on a PTE basis.

Also, the emissions associated with untreated wood fuel differs somewhat from those associated with used treated wood fuel. The used treated wood fuel mixture contains some pentachlorophenol treated wood. For this reason, emissions of HCl are characteristic of this fuel component and are missing when only untreated wood fuel is used. Also, the untreated wood fuel contains less sulfur which leads to lower SO₂ emissions than with the used treated wood fuel. The emission factors for the Alternative Operating Scenario are taken from AP-42 and are summarized below:

**Potential To Emit Basis for Title V
Application - Alternative Operating
Scenario**

**AA-001-BOILER, WOOD
FIRED**

	tn/yr	Sulfur	Chlorine	(lb/hr):
Total Wood Burned:	58,403	0.01%	0.04%	13333
Creo Wood Burned:	0	0.25%	0.04%	
Penta Wood Burned:	0	0.25%	0.25%	
Untreated Wood Burned:	58,403	0.01%	0.04%	
Removal Efficiency (1):		70.00%	45.00%	

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	4.2	lb/tn	AP-42	122.65	28.00
SO2	0.08	lb/tn	AP-42	2.19	0.50
NOX (2)	1.60	lb/tn	1994 Test	46.72	10.67
CO	6.6	lb/tn	AP-42	192.73	44.00
VOC	0.18	lb/tn	AP-42	5.26	1.20
HCl	1.538	lb/tn PCP fuel	2/96 Test	0.00	0.00
Arsenic	8.8E-05	lb/tn	AP-42	0.0026	0.001
Cadmium	1.7E-05	lb/tn	AP-42	0.0005	0.000
Chromium	1.3E-04	lb/tn	AP-42	0.0038	0.001
Lead	3.1E-04	lb/tn	AP-42	0.0091	0.002
Manganese	8.9E-03	lb/tn	AP-42	0.2599	0.059
Nickel	5.6E-04	lb/tn	AP-42	0.0164	0.004
Selenium	1.8E-05	lb/tn	AP-42	0.0005	0.000
Mercury	6.5E-06	lb/tn	AP-42	0.0002	0.000
Total HAP Metals				0.29	0.067

(1) Removal efficiencies based on 2/96 stack test.

(2) 1994 Stack Test

The Grenada Plant meets the criteria for a Major Source under the Title V program whether untreated wood or used treated wood fuel is used in the Wellons boiler.

The emissions for the Wellons boiler (AA-001) are summarized in Section D of the MSDEQ Forms for each Scenario. The plant-wide summaries for both Scenarios are included in Section C of the MSDEQ Forms.

For this Alternative Operating Scenario, some of the emission limitations and monitoring & recordkeeping provisions of the existing Title V permit for the Baseline Scenario are no longer appropriate. It is requested that the following changes be made in the new Title V permit for the Alternative Operating Scenario:

- a. In Section 3.B, for the Baseline Scenario, there is a temperature limitation in effect when treated wood fuel is used. Since treated wood will not be used for the Alternative Operating Scenario, this limitation should be removed.

- b. In Section 3.B, for the Baseline Scenario, there is a limitation on the hourly feed rate of 9375 lb/hour for the used treated wood fuel. This limitation was established in the Construction Permit. For the Alternative Operating Scenario, this limitation must be revised upwards to account for the lower btu/lb heating value of the untreated wood fuel. It is requested that this limitation be set at 15,000 lb/hour for untreated wood fuel. This limitation provides some small margin on the fuel use rate corresponding to the PTE basis in the Emission Summary. This small margin will allow for some variation in the heating value of the untreated wood fuel. The Emission Summary is based on a heating value of 4500 btu/lb. If some fuel contains greater moisture or is lower quality, in general, the actual heating value will be below the value used in the emissions summary.
- c. In Section 5.B, for the Baseline Scenario, there is a recordkeeping requirement to provide for continuous recording of the boiler temperature and to note the time periods when untreated wood fuel is fed to the boiler. For the Alternative Operating Scenario, used treated wood fuel will not be used at any time and it is requested that this monitoring & recordkeeping requirement be eliminated.

5.0 Monitoring, Recordkeeping & Reporting Requirements.

Section 5 of the existing Title V Permit contains several monitoring, recordkeeping and reporting (MRKR) requirements. Based on KII's experience operating in compliance with these requirements, some changes are recommended for the new Permit. These are focused on elimination of duplicative reporting requirements and on removing ambiguity from the existing language. The following changes are recommended:

Existing 5.A.4 – “Except as otherwise specified herein, the permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with APC-S-6, Section II.E.”

Suggestions for Modification of Section 5.A.4 :

It is recommended that this is where all of the deviations should be reported and not under Condition 5.A.5. It is felt that semi-annual reporting is timely and that the 5-day reporting requirement in Condition 5.A.5 is burdensome. By eliminating the 5-day reporting requirement, duplicative reporting would be avoided. In addition, it is recommended that the language in the new permit be amended to include an explicit list of those deviations must be reported and what information for each deviation must be reported in the semi-annual reports.

Existing 5.A.5 – “Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken within five (5) days of the time the deviation began.”

Suggestions for Modification of Section 5.A.5:

It is recommended that the language in the new permit be amended to include an explicit list of those deviations which must be reported in the semi-annual reports. In addition, we would like the language of the permit to explain in explicit detail what information must be reported. Also we would like the 5-day reporting period to be eliminated and the Semi-Annual Air Report required under Section 5.A.4 be the only reporting schedule.

The existing Permit provides deviation reporting exemptions for the following conditions:

- a. **Startups** – Opacity may exceed 40% for 15 minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty-four (24) hour period.
- b. **Soot Blowing** — emissions from soot blowing operations shall be permitted provided such emissions do not exceed 60 percent opacity, and provided further that the aggregate duration of such emissions during any twenty-four (24) hour period does not exceed ten (10) minutes per billion BTU gross heating value of fuel in any one hour.

It is recommended that the following items be listed as exemptions for purposes of reporting deviations:

1. A longer duration allowance for soot blowing such as 15 minutes or more, since this is preventative maintenance that occurs 3 times a day on a normal operating day.
2. An opacity allowance for pulling ash. This is also a routine preventative maintenance measure that occurs at least twice daily. This practice is especially disruptive to the system in terms of opacity due to the behavior of "fly ash" that is removed from the ash box and the ash collector.
3. An opacity allowance for fuel cell clean-out. This is preventative maintenance that occurs 4 times per day and is also disruptive to the system in terms of opacity.
4. An opacity allowance for fuel feed adjustment. The condition of our fuel is constantly changing. A variety of factors in fuel conditions play a significant role in the combustion efficiency rate at which the fuel is burned. One fuel feed rate may work perfectly for the type of fuel that was fed into the boiler on one day, but then that rate may be too high or too low for the fuel fed into the boiler on the next day. Sometimes the difference can be observed between fuels in consecutive hours.
5. A time/temperature allowance for monitoring system performance checks during combustion of treated wood fuel. At least once per month it is necessary to perform internal system checks and tests of the CEM and process control systems. At least once a quarter (conservatively), tests will need to be run on the fuel feed system to ensure its accuracy. The fuel feed system may have to be switched manually from untreated to treated fuel to ensure the effectiveness of the switchover setpoints installed in our computer system. The switchover setpoint is put into the monitoring computer that automatically switches from treated wood fuel to untreated wood fuel in the event of a temperature drop that falls below 1200° Fahrenheit.

6.0 MSDEQ Forms

The remainder of this Section includes the Forms that are required for this Renewal Application. The majority of these Forms are applicable both to the Baseline Scenario and the Alternative Operating Scenario. The exceptions are the Forms for the Wellons Boiler (Emission Point AA-001). There are individual Form C submittals for the two Scenarios. Also, for Form C, individual emission summaries are included for the two Scenarios. Forms B and C are signed by the Plant Manager, who is the Responsible Official for this Renewal Application.

FOR OFFICIAL USE ONLY

APPLICATION RECEIPT
DATE:

APPLICATION NO.:

FOR MODIFICATION :
MINOR:
SIGNIFICANT:

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL
AIR DIVISION
P.O. BOX 10385
JACKSON, MS. 39289-0385
PHONE NO.: (601) 961 - 5171

APPLICATION FOR TITLE V
AIR POLLUTION CONTROL PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT

PERMITTING ACTIVITY:

____ INITIAL APPLICATION
____ MODIFICATION
 X RENEWAL OF OPERATING PERMIT

NAME: _____ KOPPERS INDUSTRIES INC.
CITY: _____ TIE PLANT
COUNTY: _____ GRENADA
FACILITY No. (if known): _____ 0960-00012

APPLICATION FOR TITLE V PERMIT TO
OPERATE AIR EMISSIONS EQUIPMENT

CONTENTS OF THIS RENEWAL APPLICATION

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Section B Owners Information

1. Name, Address & Contact for the Owner/Applicant

A. Company Name: KOPPERS INDUSTRIES INC.

B. Mailing Address:

1. Street Address or P.O. Box: 436 SEVENTH AVENUE

2. City: PITTSBURGH 3. State: PA

4. Zip Code: 15219-1800

5. Telephone No.: (412) 227-2114

C. Contact:

1. Name: TIMOTHY R. BASILONE

2. Title: ENVIRONMENTAL MANAGER

2. Name, Address, Location and Contact for the Facility:

A. Name: KOPPERS INDUSTRIES INC.

B. Mailing Address:

1. Street Address or P.O. Box: P.O. BOX 160

2. City: TIE PLANT 3. State: MS

4. Zip Code: 38960

5. Telephone No.: (662) 226-4584

C. Site Location:

1. Street: 1 KOPPERS DRIVE

2. City: TIE PLANT 3. State: MS

4. County: GRENADA 5. Zip Code: 38960

6. Telephone No.: (662) 226-4584

Note: If the facility is located outside of the City limits, please attach a sketch or description to this application showing the approximate location of the site.

D. Contact:

1. Name: THOMAS L. HENDERSON

2. Title: PLANT MANAGER

3. SIC Code(s)(including any associated with alternate operating scenarios): 2491

4. Number of Employees: 65

5. Principal Product(s): UTILITY POLES AND RAILROAD CROSSTIES

6. Principal Raw Materials: WOOD POLES, CROSSTIES, LUMBER, CREOSOTE, PENTACHLOROPHENOL, DIESEL FUEL
7. Principal Process(es): WOOD PRESERVING
8. Maximum amount of principal product produced or raw material consumed per day:
20,000 CUBIC FEET
9. Facility Operating Schedule (Optional):
- A. Specify maximum hours per day the operation will occur: 24 HOURS
- B. Specify maximum days per week the operation will occur: 7 DAYS
- C. Specify maximum weeks per year the operation will occur: 52 WEEKS
- D. Specify the months the operation will occur: ALL
10. Is this facility a small business as defined by the Small Business Act? (Optional) NO
11. **EACH APPLICATION MUST BE SIGNED BY THE APPLICANT.**

The application must be signed by a responsible official as defined in Regulation APC-S-6, Section I.A.26.

I certify that to the best of my knowledge and belief formed after reasonable inquiry, the statements and information in this application are true, complete, and accurate, and that, as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations.

THOMAS L. HENDERSON
Printed Name of Responsible Official

PLANT MANAGER
Title

9-26-01
Date Application Signed

Thomas L. Henderson
Signature of Applicants Responsible Official

SECTION C EMISSIONS SUMMARY for the ENTIRE FACILITY

List below the total emissions for each pollutant from the entire facility in accordance with Operating Permit Application Requirements, pp. 3-5. For stack emissions, use the maximum annual allowable (potential) emissions. For fugitive emissions, use the annual emissions calculated using the maximum operating conditions.

NORMAL OPERATING SCENARIO – USE OF TREATED AND UNTREATED WOOD FUEL

POLLUTANT Footnote 1	ANNUAL EMISSION RATE	
	lb/hr	tons/yr
PARTICULATE (LESS FUGITIVE)		54.56
SO2		116.10
NOX		80.32
CO		160.57
VOC (LESS FUGITIVE)		72.44
VOC (INCLUDING FUGITIVE)		100.07
HAPS (ORGANICS/VOC)		7.02
NAPHTHALENE		5.64
HAP METALS		0.19
HCL		11.54
TOTAL HAPS		18.74
SEE PTE TABLES (FOLLOWING 5 PAGES)		

1. All regulated air pollutants, including hazardous air pollutants emitted from the entire facility should be listed. A list of regulated air pollutants has been provided in Section A. With the exception of the emissions resulting from insignificant activities and emissions as defined in Regulation APC-S-6, Section VII, the pollutants listed above are all regulated air pollutants reasonably expected to be emitted from the facility.

Thomas C. Henderson
SIGNATURE (must match signature on page 17)

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-001-BOILER, WOOD FIRED	tn/yr	Sulfur	Chlorine	(lb/hr):
Total Wood Burned:	37,580	0.23%	0.12%	8580
Creo Wood Burned:	20,000	0.25%	0.04%	
Penta Wood Burned:	15,000	0.25%	0.25%	
Untreated Wood Burned:	2,580	0.01%	0.04%	
Removal Efficiency (1):		70.00%	45.00%	

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2.47	lb/tn	9/2000 Test	46.41	10.60
SO ₂	2.80	lb/tn	Mass Calc	52.65	12.02
NO _X (3)	3.3	lb/tn	2/96 test	62.01	14.16
CO (2)	8.3	lb/tn	CEM	155.96	35.61
VOC	0.18	lb/tn	AP-42	3.38	0.77
HCl	1.538	lb/tn PCP fuel	2/96 Test	11.54	6.60
Arsenic	8.8E-05	lb/tn	AP-42	0.0017	0.000
Cadmium	1.7E-05	lb/tn	AP-42	0.0003	0.000
Chromium	1.3E-04	lb/tn	AP-42	0.0024	0.001
Lead	3.1E-04	lb/tn	AP-42	0.0058	0.001
Manganese	8.9E-03	lb/tn	AP-42	0.1672	0.038
Nickel	5.6E-04	lb/tn	AP-42	0.0105	0.002
Selenium	1.8E-05	lb/tn	AP-42	0.0003	0.000
Mercury	6.5E-06	lb/tn	AP-42	0.0001	0.000
Total HAP Metals				0.19	0.043

(1) Removal efficiencies based on 2/96 stack test.

(2) CO factor is 8.3 for 600 ppm fired on untreated fuel, 2.1 for 150 ppm fired on treated fuel.

(3) NO_X factor is 3.3 for high fire, treated wood. Use 1.6 for untreated wood.

AA-002 BOILER, FUEL OIL			Fuel Use Rate(MGal/hr):		0.204
Oil Burned(MGal/yr):	1787	Sulfur Content:	0.500	%	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	1.79	0.41
SO2	71	lb/MGal	AP-42	63.44	14.48
NOX	20	lb/MGal	AP-42	17.87	4.08
CO	5	lb/MGal	AP-42	4.47	1.02
VOC	0.2	lb/MGal	AP-42	0.18	0.04

Number of days boiler assumed to operate is

365

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-003-WOOD PRESERVING PROCESSES

Creosote Ties	2,000,000	C. F.
Creosote Poles	1,500,000	C. F.
Total Creosote Wood	3,500,000	C. F.
Oil/Penta Poles	3,500,000	C. F.

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote (VOC)	1.96E-03	lb/cf	Form R	3.43	0.78
HAPs contained in creosote:					
Biphenyl	1.72	% in vapor	Calculation	0.06	0.01
Dibenzofurans	4.43	% in vapor	Calculation	0.15	0.03
Naphthalene	51.62	% in vapor	Calculation	1.77	0.40
Quinoline	2.32	% in vapor	Calculation	0.08	0.02
TOTAL CREO. HAP	60.09	% in vapor		2.06	0.47
Pentachlorophenol (VOC)	3.73E-06	lb/cf	Form R	0.01	0.00
#6 Oil (VOC)	1.4E-02	lb/cf	Engr. Est.	24.75	5.65
TOTAL VOC				28.18	6.43

AA-008-PRESERVATIVE TREATED WOOD STORAGE FUGITIVES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote Ties					
Creosote (VOC)	2.65E-03	lb/cf	FR Test & Creo Data	2.65	0.61
Naphthalene	1.37E-03	lb/cf	FR Test & Creo Data	1.37	0.31
Quinoline	6.15E-05	lb/cf	FR Test & Creo Data	0.06	0.01
Biphenyl	4.56E-04	lb/cf	FR Test & Creo Data	0.46	0.10
Dibenzofuran	1.18E-04	lb/cf	FR Test & Creo Data	0.12	0.03
Creosote Poles					
Creosote (VOC)	6.47E-03	lb/cf	FR Test & Creo Data	4.85	1.11
Naphthalene	3.34E-03	lb/cf	FR Test & Creo Data	2.51	0.57
Quinoline	1.50E-04	lb/cf	FR Test & Creo Data	0.11	0.03
Biphenyl	1.11E-04	lb/cf	FR Test & Creo Data	0.11	0.03
Dibenzofuran	2.87E-04	lb/cf	FR Test & Creo Data	0.21	0.05
Penta Poles					
Oil (VOC, est. as creo)	1.15E-02	lb/cf	FR Test	20.13	4.59
Pentachlorophenol	1.9E-06	lb/cf	Engr. Est.	0.00	0.00
Totals					
VOC				27.63	6.30
Naphthalene				3.88	0.88
Quinoline				0.17	0.04
Biphenyl				0.57	0.13
Dibenzofuran				0.33	0.08
Pentachlorophenol				0.00	0.00
HAP Organics (Total)				4.95	1.13

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-009-DRY KILNS

Poles Dried	1,600,000	C. F.	Batch size (cf):	13000	
			Batch time (hrs):	72	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.05	lb/cf	Alabama	40.00	9.03

AA-004-CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	300
Total Hours:	2400

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	2.40	0

AA-010-POLE PEELER

Poles Peeled=	1,000,000	CF/yr	440	CF/hr
Pole Density=	45	lb/CF		
Pole Amount Peeled=	22,500	tn/yr	9.9	tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.350	lb/ton	AP-42	3.94	3.465

SPACE HEATERS, NATURAL GAS

Location	BTU/Hr	BTU/CF	CF/Hr	Hr/Yr	MMCF/Yr
AA-005-Boiler House	600000	1000	600	8760	5.256
AA-015-Standby Boiler Room	100000	1000	100	8760	0.876
AA-016-Fire Pump Building	No longer exists				
TOTAL	700000		700		6.132

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.18	lb/MMCF	AP-42	0.00	0.00
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	94	lb/MMCF	AP-42	0.29	0.07
CO	40	lb/MMCF	AP-42	0.12	0.03
VOC	11	lb/MMCF	AP-42	0.03	0.01

AA-011-WOOD FUEL PREPARATION & HANDLING (Fugitive)

Wood Fuel Processed 37,580 Tn/Yr 12 tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.25	lb/tn	Engr. Est.	4.70	3.00

AA-006-STEAM CLEANER, NATURAL GAS FIRED

Annual Usage 8760 hours/yr Fuel Use Rate 440 CF/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	12	lb/MMCF	AP-42	0.02	0.01
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	100	lb/MMCF	AP-42	0.19	0.04
CO	21	lb/MMCF	AP-42	0.04	0.01
VOC	5.8	lb/MMCF	AP-42	0.01	0.00

AA-007-WOOD STOVE HEATER, SHOP NO LONGER EXISTS

Annual Usage 0 tn/yr Fuel Use Rate 0 tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	30.6	lb/tn	AP-42	0.00	0.00
SO2	0.4	lb/tn	AP-42	0.00	0.00
NOX	2.8	lb/tn	AP-42	0.00	0.00
CO	230.8	lb/tn	AP-42	0.00	0.00
VOC	43.8	lb/tn	AP-42	0.00	0.00

AA-012-PARTS CLEANERS, DEGREASERS

Number of units operating: 2

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.33	tn/unit/yr	AP-42	0.66	0.00

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

TOTAL PLANT EMISSIONS

Pollutant	Estimated (tn/yr)	Emissions(1) (lb/hr)
Particulate (less fugitive)	54.56	12.46
SO2 (2)	116.10	26.51
NOX	80.36	18.35
CO	160.59	36.66
VOC(less fugitive)	72.45	16.54
VOC(including fugitive)	100.08	22.85
HAPs(Organics/VOC)	7.02	1.60
Naphthalene	5.64	1.29
HAP Metals	0.19	0.04
HCl	11.54	2.63
Total HAPs	18.74	4.28

(1) Average hourly emission rate; not instantaneous maximum emission rate.

SECTION C EMISSIONS SUMMARY for the ENTIRE FACILITY

List below the total emissions for each pollutant from the entire facility in accordance with Operating Permit Application Requirements, pp. 3-5. For stack emissions, use the maximum annual allowable (potential) emissions. For fugitive emissions, use the annual emissions calculated using the maximum operating conditions.

ALTERNATIVE OPERATING SCENARIO – USE OF UNTREATED WOOD FUEL ONLY

POLLUTANT Footnote 1	ANNUAL EMISSION RATE	
	lb/hr	tons/yr
PARTICULATE (LESS FUGITIVE)		130.79
SO ₂		65.63
NO _X		65.04
CO		197.35
VOC (LESS FUGITIVE)		74.32
VOC (INCLUDING FUGITIVE)		101.95
HAPS (ORGANICS/VOC)		7.02
NAPHTHALENE		5.64
HAP METALS		0.29
HCL		0.00
TOTAL HAPS		7.31
SEE PTE TABLES (FOLLOWING 5 PAGES)		

1. All regulated air pollutants, including hazardous air pollutants emitted from the entire facility should be listed. A list of regulated air pollutants has been provided in Section A. With the exception of the emissions resulting from insignificant activities and emissions as defined in Regulation APC-S-6, Section VII, the pollutants listed above are all regulated air pollutants reasonably expected to be emitted from the facility.

Thomas L. Henderson
SIGNATURE (must match signature on page 17)

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-001-BOILER, WOOD FIRED	tn/yr	Sulfur	Chlorine	(lb/hr):
Total Wood Burned:	58,403	0.01%	0.04%	13333
Creo Wood Burned:	0	0.25%	0.04%	
Penta Wood Burned:	0	0.25%	0.25%	
Untreated Wood Burned:	58,403	0.01%	0.04%	
Removal Efficiency (1):		70.00%	45.00%	

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	4.2	lb/tn	AP-42	122.65	28.00
SO ₂	0.08	lb/tn	AP-42	2.19	0.50
NO _X	1.6	lb/tn	1994 Test	46.72	10.67
CO	6.6	lb/tn	AP-42	192.73	44.00
VOC	0.18	lb/tn	AP-42	5.26	1.20
HCl	1.538	lb/tn PCP fuel	2/96 Test	0.00	0.00
Arsenic	8.8E-05	lb/tn	AP-42	0.0026	0.001
Cadmium	1.7E-05	lb/tn	AP-42	0.0005	0.000
Chromium	1.3E-04	lb/tn	AP-42	0.0038	0.001
Lead	3.1E-04	lb/tn	AP-42	0.0091	0.002
Manganese	8.9E-03	lb/tn	AP-42	0.2599	0.059
Nickel	5.6E-04	lb/tn	AP-42	0.0164	0.004
Selenium	1.8E-05	lb/tn	AP-42	0.0005	0.000
Mercury	6.5E-06	lb/tn	AP-42	0.0002	0.000
Total HAP Metals				0.29	0.067

(1) Removal efficiencies based on 2/96 stack test.

AA-002-BOILER, FUEL OIL			Fuel Use Rate(MGal/hr):		0.204
Oil Burned(MGal/yr):	1787	Sulfur Content:	0.500	%	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/MGal	AP-42	1.79	0.41
SO2	71	lb/MGal	AP-42	63.44	14.48
NOX	20	lb/MGal	AP-42	17.87	4.08
CO	5	lb/MGal	AP-42	4.47	1.02
VOC	0.2	lb/MGal	AP-42	0.18	0.04
Number of days boiler assumed to operate is		365			

Number of days boiler assumed to operate is

365

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-003-WOOD PRESERVING PROCESSES

Creosote Ties	2,000,000	C. F.
Creosote Poles	1,500,000	C. F.
Total Creosote Wood	3,500,000	C. F.
Oil/Penta Poles	3,500,000	C. F.

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote (VOC)	1.96E-03	lb/cf	Form R	3.43	0.78
HAPs contained in creosote:					
Biphenyl	1.72	% in vapor	Calculation	0.06	0.01
Dibenzofurans	4.43	% in vapor	Calculation	0.15	0.03
Naphthalene	51.62	% in vapor	Calculation	1.77	0.40
Quinoline	2.32	% in vapor	Calculation	0.08	0.02
TOTAL CREO. HAP	60.09	% in vapor		2.06	0.47
Pentachlorophenol (VOC)	3.73E-06	lb/cf	Form R	0.01	0.00
#6 Oil (VOC)	1.4E-02	lb/cf	Engr. Est.	24.75	5.65
TOTAL VOC				28.18	6.43

AA-008-PRESERVATIVE TREATED WOOD STORAGE FUGITIVES

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Creosote Ties					
Creosote (VOC)	2.65E-03	lb/cf	FR Test & Creo Data	2.65	0.61
Naphthalene	1.37E-03	lb/cf	FR Test & Creo Data	1.37	0.31
Quinoline	6.15E-05	lb/cf	FR Test & Creo Data	0.06	0.01
Biphenyl	4.56E-04	lb/cf	FR Test & Creo Data	0.46	0.10
Dibenzofuran	1.18E-04	lb/cf	FR Test & Creo Data	0.12	0.03
Creosote Poles					
Creosote (VOC)	6.47E-03	lb/cf	FR Test & Creo Data	4.85	1.11
Naphthalene	3.34E-03	lb/cf	FR Test & Creo Data	2.51	0.57
Quinoline	1.50E-04	lb/cf	FR Test & Creo Data	0.11	0.03
Biphenyl	1.11E-04	lb/cf	FR Test & Creo Data	0.11	0.03
Dibenzofuran	2.87E-04	lb/cf	FR Test & Creo Data	0.21	0.05
Penta Poles					
Oil (VOC, est. as creo)	1.15E-02	lb/cf	FR Test	20.13	4.59
Pentachlorophenol	1.9E-06	lb/cf	Engr. Est.	0.00	0.00
Totals					
VOC				27.63	6.30
Naphthalene				3.88	0.88
Quinoline				0.17	0.04
Biphenyl				0.57	0.13
Dibenzofuran				0.33	0.08
Pentachlorophenol				0.00	0.00
HAP Organics (Total)				4.95	1.13

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

AA-009-DRY KILNS

AA-009-DRY KILNS			Batch size (cf):	13000	
Poles Dried	1,600,000	C. F.	Batch time (hrs):	72	
Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.05	lb/cf	Alabama	40.00	9.03

AA-004-CYCLONES FOR WOOD MILLING

Number of Cyclones:	1
Ave. Hours/Day:	8
Ave Days/Yr Each:	300
Total Hours:	2400

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	2	lb/hr	AP-42	2.40	2

AA-010-POLE PEELER

Poles Peeled=	1,000,000	CF/yr	440	CF/hr
Pole Density=	45	lb/CF		
Pole Amount Peeled=	22,500	tn/yr	9.9	tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.350	lb/ton	AP-42	3.94	3.465

SPACE HEATERS, NATURAL GAS

Location	BTU/Hr	BTU/CF	CF/Hr	Hr/Yr	MMCF/Yr
AA-005-Boiler House	600000	1000	600	8,760	5.256
AA-015-Standby Boiler Room	100000	1000	100	8,760	0.876
AA-016-Fire Pump Building	No longer exists.				
TOTAL	700000		700		6.132

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.18	lb/MMCF	AP-42	0.00	0.00
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	94	lb/MMCF	AP-42	0.29	0.07
CO	40	lb/MMCF	AP-42	0.12	0.03
VOC	11	lb/MMCF	AP-42	0.03	0.01

AA-011-WOOD FUEL PREPARATION & HANDLING (Fugitive)

Wood Fuel Processed 58,403 Tn/Yr 12 tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	0.25	lb/tn	Engr. Est.	7.30	3.00

AA-006-STEAM CLEANER, NATURAL GAS FIRED

Annual Usage 8760 hours/yr Fuel Use Rate 440 CF/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	12	lb/MMCF	AP-42	0.02	0.01
SO2	0.6	lb/MMCF	AP-42	0.00	0.00
NOX	100	lb/MMCF	AP-42	0.19	0.04
CO	21	lb/MMCF	AP-42	0.04	0.01
VOC	5.8	lb/MMCF	AP-42	0.01	0.00

AA-007-WOOD STOVE HEATER, SHOP NO LONGER EXISTS

Annual Usage 0 tn/yr Fuel Use Rate 0 tn/hr

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
Particulate	30.6	lb/tn	AP-42	0.00	0.00
SO2	0.4	lb/tn	AP-42	0.00	0.00
NOX	2.8	lb/tn	AP-42	0.00	0.00
CO	230.8	lb/tn	AP-42	0.00	0.00
VOC	43.8	lb/tn	AP-42	0.00	0.00

AA-012-PARTS CLEANERS, DEGREASERS

Number of units operating: 2

Pollutant	Emission Factor	Units	Basis	Estimated (tn/yr)	Emissions (lb/hr)
VOC	0.33	tn/unit/yr	AP-42	0.66	0.00

**EMISSION INVENTORY CALCULATION
KOPPERS INDUSTRIES, INC. - GRENADA, MS
Potential To Emit Basis for Title V Application**

TOTAL PLANT EMISSIONS

Pollutant	Estimated (tn/yr)	Emissions (1) (lb/hr)
Particulate (less fugitive)	130.79	29.86
SO ₂ (2)	65.63	14.98
NOX	65.07	14.86
CO	197.36	45.06
VOC(less fugitive)	74.32	16.97
VOC(including fugitive)	101.95	23.28
HAPs(Organics/VOC)	7.02	1.60
Naphthalene	5.64	1.29
HAP Metals	0.29	0.07
HCl	0.00	0.00
Total HAPs	7.31	1.67

(1) Average hourly emission rate; not instantaneous maximum emission rate.

(2) Assumes backup boiler operating at same time as primary for number of days shown.

SECTION C

For the sections listed below indicate the number that have been completed for each section as part of this application.

Section B <u>1</u>	Section L1 <u> </u>	Section M1 <u>1</u>
Section C <u>2</u>	Section L2 <u>2</u>	Section M2 <u> </u>
Section D <u>6</u>	Section L3 <u> </u>	Section M3 <u>5</u>
Section E <u>6</u>	Section L4 <u> </u>	Section M4 <u> </u>
Section F <u>1</u>	Section L5 <u> </u>	Section M5 <u>1</u>
Section G <u> </u>	Section L6 <u> </u>	Section M6 <u>4</u>
Section H <u>1</u>	Section L7 <u> </u>	Section M7 <u> </u>
Section I <u> </u>		Section M8 <u> </u>
Section J <u> </u>		Section N <u>1</u>
Section K <u> </u>		Section O <u>2</u>

As a minimum, sections B, C, M, N and O must be completed for the application to be considered complete.

Please list below all insignificant activities required by APC-S-6, Section VII.B that apply to your facility.

- (1) EMISSION POINT AA-003, REF. NOS. 21 AND 22, COMPRESSED AIR RECEIVERS, PER APC-S.VI.B.27
 - (2) EMISSION POINT AA-005, NATURAL GAS SPACE HEATERS (3), RATED AT 0.2 MMBTU/HR, PER S.VI.B.2.A
 - (3) EMISSION POINT AA-006, NATURAL GAS FIRED STEAM CLEANER, PER APC-S-6.IV.B.2.A
 - (4) EMISSION POINT AA-013, GASOLINE STORAGE TANK, PER APC-S-6.IV.B.7
 - (5) EMISSION POINT AA-014, DIESEL STORAGE TANK, PER APC-S-6.IV.B.7
 - (6) EMISSION POINT AA-015, NATURAL GAS SPACE HEATER (1), RATED AT 0.1 MMBTU/HR, PER APC-S-6.IV.B.2.A
 - (7) OUTDOOR KEROSENE HEATERS (5 UNITS), PER APC-S-6.IV.A.17
 - (8) EMERGENCY POWER GENERATORS, (3) AT 11 HP AND 6,000 WATTS, AND (3) AT 16 HP AND 8,000 WATTS, PER APC-S-6.IV.B.9
-

SECTION C RISK MANAGEMENT PLANS

If the source is required to develop and register a risk management plan pursuant to Section 112(r) of the Title III of the Clean Air Act, the permittee need only specify that it will comply with the requirement to register such a plan. The content of the risk management plan need not itself be incorporated as a permit term.

Please answer the following questions:

- I. Are you required to develop and register a risk management plan pursuant to Section 112(r)?

Yes X No

Only if "yes", answer questions II., III., and/or IV.

- II. Have you submitted the risk management plan to the appropriate agency (i.e. Mississippi Emergency Management Agency (MEMA), Federal Emergency Management Agency (FEMA), etc.)?

Yes No

- III. If yes, give agency name and date submitted.

- IV. If no, provide a schedule for developing and submitting the risk management plan to the appropriate agency and providing our agency with certification that this submittal was made.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: USE OF TREATED AND UNTREATED WOOD FUEL
AA-001, REF. NO. 40, WOOD FIRED BOILER

2. Equipment Description: WELLONS 2 CELL COMBUSTION SYSTEM, BOILER, AND
COGENERATION POWER UNIT

3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____

4. Capacity: 60.0 MMBTU/hr 5. Type of burner: FUEL CELL

6. Usage Type (i.e. Space Heat, Process, etc.) : PROCESS

7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
TREATED WOOD RESIDUE	4,000-6,000 BTU/LB	0.25	5.0	8,760 HRS/YR	8,424 HRS/YR

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.
(APPROXIMATE AMOUNTS) 1% PENTACHLOROPHENOL; 15% CREOSOTE; 2% NAPHTHALENE

9. Operating Schedule: (Optional) 24 hours/day 7 days/week 52 weeks/year

10. Stack Data:
A. Height: 80 FT C. Exit gas velocity: 60 FT/SEC
B. Inside diameter: 3 FT D. Exit gas temperature: 471° F

11. UTM Coordinates:
A. Zone B. North C. East _____

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

USE OF TREATED AND UNTREATED WOOD FUEL

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-001	PARTICULATE	YES					10.60
	SO2	NO					12.02
	NOX	NO					14.16
	CO	NO					35.61
	VOC	NO					0.77
	HCL	NO					6.60
	TOTAL HAP METALS	NO					0.043

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

*

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D****ALTERNATIVE OPERATING SCENARIO – USE OF UNTREATED WOOD FUEL ONLY**

1. Emission Point No. / Name: AA-001, REF. NO. 40, WOOD FIRED BOILER
2. Equipment Description: WELLONS 2 CELL COMBUSTION SYSTEM, BOILER, AND COGENERATION POWER UNIT
3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____
4. Capacity: 60.0 MMBTU/hr 5. Type of burner: FUEL CELL
6. Usage Type (i.e. Space Heat, Process, etc.) : PROCESS
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
UNTREATED WOOD AND BARK RESIDUE	4,000 BTU/LB	0.01	0.5	8,760 HRS/YR	

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.

9. Operating Schedule: (Optional) 24 hours/day 7 days/week 52 weeks/year
10. Stack Data:
A. Height: 80 FT C. Exit gas velocity: 70 FT/SEC
B. Inside diameter: 3 FT D. Exit gas temperature: 471° F
11. UTM Coordinates:
A. Zone B. North C. East _____

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

ALTERNATIVE OPERATING SCENARIO -- BURNING UNTREATED WOOD ONLY

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-001	PARTICULATE	YES					28.0
	SO2	NO					0.50
	NOX	NO					10.67
	CO	NO					44.0
	VOC	NO					1.20
	HCL	NO					0.00
	TOTAL HAP METALS	NO					0.067

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: AA-002, REF. NO. 41, OIL FIRED BOILER
2. Equipment Description: BACKUP SERVICE BOILER
3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____
4. Capacity: 28.5 MMBTU/hr 5. Type of burner: ATOMIZING OIL
6. Usage Type (i.e. Space Heat, Process, etc.): PROCESS
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
#2 OIL	140,000 BTU/GAL	0.50	1.6	204 GAL/HR	100,000 GAL

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.
NONE
9. Operating Schedule: (Optional) 24 hours/day 7 days/week 2 weeks/year
10. Stack Data:
A. Height: 36 FT C. Exit gas velocity: 32 FT/SEC
B. Inside diameter: 2.5 FT D. Exit gas temperature: 570° F
11. UTM Coordinates:
A. Zone B. North C. East _____

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

Pollutant test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.									
EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)			PROPOSED ALLOWABLE EMISSION RATE (Optional)		
		* yes/no	effic.	note 2	lb/hr	tn/yr	note 2	lb/hr	tn/yr
AA-002 (SEE NOTE BELOW)	PARTICULATE	NO						0.41	1.79
	S02	NO						14.48	63.44
	NOX	NO						4.08	17.87
	CO	NO						1.02	4.47
	VOC	NO						0.04	0.18

NOTE: THIS BOILER WILL NOT OPERATE AT THE SAME TIME AS SOURCE AA-001 (WOOD FIRED BOILER). THIS BOILER IS FOR BACKUP SERVICE ONLY.

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMbtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: AA-005, REF. NO. 43, NATURAL GAS SPACE HEATER
2. Equipment Description: SPACE HEATERS USED IN PLANT BUILDINGS. (3) UNITS LOCATED IN BOILER HOUSE
3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____
4. Capacity: 0.20 MMBTU/hr 5. Type of burner: NATURAL GAS
6. Usage Type (i.e. Space Heat, Process, etc.): SPACE HEAT
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
NATURAL GAS	1,000 BTU/CF			320 CF/HR	645 MCF

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.
NONE
9. Operating Schedule: (Optional) 24 hours/day 7 days/week 12 weeks/year
10. Stack Data:
A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA
11. UTM Coordinates:
A. Zone B. North C. East

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-005	PM						0.00
	SO ₂						0.00
	NO _X						0.06
	CO						0.02
	VOC						0.01

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: AA-006, REF. NO. 44, NATURAL GAS FIRED STEAM CLEANER
2. Equipment Description: WATER HEATER FOR STEAM CLEANER USED FOR EQUIPMENT CLEANING
3. Was this unit constructed or modified after August 7, 1977? X Yes No
If yes please give date and explain. 1992
4. Capacity: 0.44 MMBTU/hr 5. Type of burner: NATURAL GAS
6. Usage Type (i.e. Space Heat, Process, etc.): PROCESS
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
NATURAL GAS	1,000 BTU/CF	0.0	0.0	8,760 HR/YR	2,000 HR/YR

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.
NONE
9. Operating Schedule: (Optional) 8 hours/day 5 days/week 50 weeks/year
10. Stack Data:
A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA
11. UTM Coordinates:
A. Zone B. North C. East

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-006	PM					0.01	0.02
	SO ₂					0.00	0.00
	NO _X					0.04	0.19
	CO					0.01	0.04
	VOC					0.00	0.01

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

FUEL BURNING EQUIPMENT (page 1 of 2)**SECTION D**

1. Emission Point No. / Name: AA-015, REF. NO. 53, NATURAL GAS SPACE HEATER
2. Equipment Description: SPACE HEATER USED IN PLANT BUILDINGS (1) UNIT
3. Was this unit constructed or modified after August 7, 1977? Yes X No
If yes please give date and explain. _____
4. Capacity: 0.1 MMBTU/hr 5. Type of burner: NATURAL GAS
6. Usage Type (i.e. Space Heat, Process, etc.) : SPACE HEAT
7. Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	ACTUAL YEARLY USAGE
NATURAL GAS	1,000 BTU/CF	0.0	0.0	107 CF/HR	215 MCF

8. Please list any fuel components that are hazardous air pollutants and the percentage in the fuel.
NONE
9. Operating Schedule: (Optional) 24 hours/day 7 days/week 12 weeks/year
10. Stack Data:
A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA
11. UTM Coordinates:
A. Zone B. North C. East

FUEL BURNING EQUIPMENT (page 2 of 2)

SECTION D

12. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-015	PM				0.00	0.00	0.00
	SO2				0.00	0.00	0.00
	NOX				0.00	0.01	0.01
	CO				0.00	0.01	0.01
	VOC				0.00	0.00	0.00

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-003, WOOD PRESERVING PROCESS
2. Process Description: PRESSURE TREATMENT OF UTILITY POLES WITH PENTACHLOROPHENOL OR CREOSOTE, AND RAILROAD CROSSTIES WITH CREOSOTE
3. Was this unit constructed or modified after August 7, 1977? yes X no
If yes please give date and explain. _____
4. Capacity (tons/hr): 7,000,000 CF WOOD PRODUCTS PER YEAR

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
WOOD	342 CF	800CF	UP TO 7,000,000 CF

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
TREATED WOOD	342 CF	800 CF	UP TO 7,000,000 CF

7. Stack Data:
- | | | | |
|---------------------|----|--------------------------|----|
| A. Height: | NA | C. Exit gas velocity: | NA |
| B. Inside diameter: | NA | D. Exit gas temperature: | NA |
8. UTM Coordinates: _____
- | | | |
|---------|----------|---------|
| A. Zone | B. North | C. East |
|---------|----------|---------|

MANUFACTURING PROCESSES (page 2 of 2)

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)		PROPOSED ALLOWABLE EMISSION RATE (Optional)	
		* yes/no	effic.	note 2	lb/hr	tn/yr	lb/hr
AA-003	VOC	NO					6.58
	NAPHTHALENE	NO					0.40
	QUINOLINE	NO					0.02
	BIPHENYL	NO					0.01
	DIBENZOFURAN	NO					0.03
	PENTACHLOROPHENOL	NO					0.00

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

* If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-004, REF. NO. 42, CYCLONES FOR WOOD MILLING

2. Process Description: DUST COLLECTION FROM UNTREATED WOOD MILLING AND CUTTING

3. Was this unit constructed or modified after August 7, 1977? _____ yes ___X___ no
If yes please give date and explain. _____

4. Capacity (tons/hr): _____

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
ROUGH CUT WOOD PRODUCTS			2,000,000 CF

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
TRIMMED AND SHAPED UNTREATED WOOD PRODUCTS			2,000,000 CF

7. Stack Data:

A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA

8. UTM Coordinates: _____

A. Zone _____ B. North _____ C. East _____

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

[illegible]

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

***** If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-008, REF. NO. 46, TREATED WOOD STORAGE
2. Process Description: STORAGE AND HANDLING OF TREATED WOOD PRODUCTS FOLLOWING TREATMENT AND PRIOR TO SHIPMENT
3. Was this unit constructed or modified after August 7, 1977? yes X no
If yes please give date and explain. _____
4. Capacity (tons/hr): NA

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
TREATED POLES			UP TO 5,000,000 CF
TREATED TIES			2,000,000 CF
TOTAL TREATED WOOD			UP TO 7,000,000 CF

7. Stack Data:
- A. Height: NA C. Exit gas velocity: NA
- B. Inside diameter: NA D. Exit gas temperature: NA
8. UTM Coordinates: _____
- A. Zone _____ B. North _____ C. East _____

MANUFACTURING PROCESSES (page 2 of 2)

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

EMISSION POINT NO.	POLLUTANT (note 1)	CONTROL EQUIPMENT		ACTUAL EMISSION RATE (in accordance with Operating Permit Application Requirements, pp. 3-5)			PROPOSED ALLOWABLE EMISSION RATE (Optional)		
		* Yes/no	effic.	note 2	lb/hr	tn/yr	note 2	lb/hr	tn/yr
AA-008	VOC	NO						6.30	27.63
	NAPHTHALENE	NO						0.88	3.88
	QUINOLINE	NO						0.04	0.17
	BIPHENYL	NO						0.13	0.57
	DIBENZOFURAN	NO						0.08	0.33
	PENTACHLOROPHENOL	NO						0.00	0.00

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

*

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-009, REF. NO. 47, POLE KILN

2. Process Description: DRY WOOD POLES PRIOR TO TREATMENT

3. Was this unit constructed or modified after August 7, 1977? yes X no
If yes please give date and explain. _____

4. Capacity (tons/hr): 13,000 CF PER BATCH

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
GREEN WOOD POLES			1,600,000 CF

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
DRY WOOD POLES			1,600,000 CF

7. Stack Data:

A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA

8. UTM Coordinates: _____

A. Zone _____ B. North _____ C. East _____

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

[illegible]

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

*** If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.**

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-010, REF. NO. 48, POLE PEELER
2. Process Description: REMOVE BARK AND CAMBIUM LAYER FROM PINE LOGS TO PRODUCE WHITE POLES
3. Was this unit constructed or modified after August 7, 1977? yes X no
If yes please give date and explain.
4. Capacity (tons/hr): 9.9

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
BARKED LOGS	22 PIECES	22 PIECES	22,500 PIECES

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
WHITE POLES	22 PIECES	22 PIECES	22,500 PIECES
BARKED AND WOOD CHIPS	5.5 TONS/HR	5.5 TONS/HR	5,000 TONS/YR

7. Stack Data:
- A. Height: NA C. Exit gas velocity: NA
- B. Inside diameter: NA D. Exit gas temperature: NA
8. UTM Coordinates:
- A. Zone B. North C. East

MANUFACTURING PROCESSES (page 1 of 2)**SECTION E**

1. Emission Point No./ Name: AA-011, REF. NO. 49, WOOD FUEL PREPARATION AND HANDLING

2. Process Description: PREPARATION OF WOOD FUEL FOR BOILER, INCLUDING GRINDING, HANDLING, AND LOADING INTO SILO ON CONVEYORS

3. Was this unit constructed or modified after August 7, 1977? _____ yes X no
If yes please give date and explain. _____

4. Capacity (tons/hr): 12

5. Raw Material Input:

MATERIAL	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
WOOD RESIDUE	8 TONS	12 TONS	58,403 TONS

6. Product Output:

PRODUCT or BY-PRODUCT	QUANTITY/HR AVERAGE	QUANTITY/HR MAXIMUM	QUANTITY/YEAR
WOOD CHIPS AND SAWDUST	8 TONS	12 TONS	58,403 TONS

7. Stack Data:
A. Height: NA C. Exit gas velocity: NA
B. Inside diameter: NA D. Exit gas temperature: NA

8. UTM Coordinates: _____
A. Zone _____ B. North _____ C. East _____

SECTION E

13. POLLUTANT EMISSIONS:

Example emission rate calculations, monitoring data, or stack test data must be attached in accordance with Operating Permit Application Requirements, pp. 3-5.

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with Operating Permit Application Requirements, pp. 3-5. A list of regulated air pollutants has been provided in Section A.
2. Provide emission rate in units of applicable emission standard, e.g. lb/MMBtu, gr/dscf, etc. This may not apply to every emission point or every pollutant from an emission point.

If yes, attach appropriate Air Pollution Control Data Sheet from Section L or manufacturers specifications if other.

- | | | | | | |
|--|--|---|--|--|------------------|
| 1. | Emission Point No./ Name: | AA-012, REF. NO. 50, (2) PARTS CLEANER/DEGREASER'S | | | |
| 2. | Process Description (INDICATE NO. OF IDENTICAL PROCESSES-BOOTHES, DIP TANKS, DEGREASING TANKS, FINISHING LINES, ETC.): | 2 EACH, SAFETY KLEEN INC. PARTS CLEANERS | | | |
| | | | | | |
| 3. | Were any of these units constructed or modified after August 7, 1977? _____ yes _____ no
If yes please give date and explain. | | | | |
| | | | | | |
| 4. | COATING: | NA | | | |
| | | | | | |
| A. Describe Articles Coated: _____ | | | | | |
| | | | | | |
| B. Operating Schedule (Optional) | | | | | |
| | | 1. Maximum: | Hours/Day | Days/Week | _____ Weeks/Year |
| | | 2. Average: | Hours/Day | Days/Week | _____ Weeks/Year |
| | | | | | |
| C. Bake ovens: Type of oven: For direct fired ovens: | | | | | |
| | | Number of Ovens: _____ | () Steam () direct fired
() Electric () Other _____ | Heat input MMBTU/hr _____
Fuel type _____ | |
| | | | | | |
| 5. | SPRAY BOOTHS: | NA | | | |
| | | | | | |
| A. Width (ft) Height _____ (ft)
Depth (ft) No. Open Sides _____ | | | | | |
| | | | | | |
| B. Operating Schedule | | | | | |
| | | 1. Maximum: | Hours/Day | Days/Week | _____ Weeks/Year |
| | | 2. Average: | Hours/Day | Days/Week | _____ Weeks/Year |
| | | | | | |
| C. Method of Spray: | | | | | |
| | | () Airless () Air Atomize () Electrostatic () Other: _____
Overspray _____ % | | | |
| | | | | | |
| D. Exhaust Fan Data: | | | | | |
| | | No. of Fans | Total Horsepower | Total Volume (cfm) | |

SECTION F COATING, SOLVENT USAGE, and/or DEGREASING (page 2 of 5)

E.	Exhaust Control:	Control Efficiency:	Exhaust Stack Data:		
	() None	Particulate	%	Diameter	(FT)
	() Waterwash	Hydrocarbon	%	Height	(FT)
	() Adsorption			Flow	(CFM)
	() Incineration				
	() Baffles				
	() Dry Filter				
	() Other: _____				

6. DEGREASING:

A. Describe articles degreased. Include surface area of parts degreased in square feet per hour (ft²/hr) and square feet per year (ft²/yr).

MAINTENANCE PARTS CLEANING, ONLY PERIODIC USE

B. Type of degreasing:

1.	Cold Solvent	X	No. of Units	<u>2</u>
2.	<u>Vapor</u>			
1.	Oven top conveyor		No. of Units	_____
2.	Conveyorized non-boiling		No. of Units	_____
3.	Conveyorized vapor		No. of Units	_____
4.	Other			_____

C. Tank Dimensions (ft):

Width	<u>2</u> (ft)	Height	<u>1</u> (ft)	<u>Length</u>	<u>3</u> (ft)
-------	---------------	--------	---------------	---------------	---------------

D. Operating Schedule (Optional)

1.	Maximum:	Hours/Day	<u>2</u>	7 Days/Week	<u>52</u>
2.	Average:	1 Hours/Day		4 Days/Week	<u>40</u> Weeks/Year

7. UTM Coordinates:

A.	Zone	B.	North	C.	East

SECTION F COATING, SOLVENT USAGE, and/or DEGREASING (page 4 of 5)

13. List all Hazardous Air Pollutants (HAP'S) found in each product:

PRODUCT NAME	HAZARDOUS AIR POLLUTANT	CAS NUMBER	MAXIMUM PRODUCT USAGE ** (LBS/HR)	PERCENT HAP	MAXIMUM HAP EMISSION RATES (in accordance with Operating Permit Application Requirements, pp. 3-5)	
					(LBS/HR)	(TONS/YR)
SAFETY KLEEN PETROLEUM DISTILLATE SOLVENT	VOC	644742-47-8	0.20	100	0.00	0.66

USE SEPARATE SHEET(S) IF NEEDED.

** PRODUCT USAGE SHOULD NOT INCLUDE THOSE AMOUNTS RETURNED TO THE SUPPLIER, RECYCLED, OR REUSED.

SECTION F COATING, SOLVENT USAGE, and/or DEGREASING (page 5 of 5)

14. Describe the storage and handling methods used in employing products listed in tables No. 12 & 13. Include disposal methods of the collected waste.

SOLVENT RECEIVED IN CLOSED CONTAINERS, USED IN CLEANERS, AND RECYCLED
BACK TO MANUFACTURER

15. List reclaimed material: MATERIAL TYPES INCLUDE COATINGS, THINNERS, SOLVENTS, DEGREASERS, LACQUERS, ETC.

PRODUCT/MATERIAL TYPE NO ON SITE RECLAMATION	QUANTITY USED (GAL/YR)	QUANTITY RECLAIMED (GAL/YR)

Describe methods that the products listed above are reclaimed, including how they are captured and reused or returned.

* PLEASE NOTE THAT MATERIAL RECLAIMED WILL ONLY BE CREDITED IF PROPERLY DOCUMENTED.

SECTION H TANK SUMMARY (page 1 of 2)

1. Emission Point No./Name: AA-003, ALL RELATED TANK DATA INCLUDED IN TANK SUMMARY DATA SPREADSHEET (FOLLOWING PAGES)

2. Was this tank constructed or modified after August 7, 1977? _____ yes _____ no
If yes please give date and explain.

3. Product Stored: _____
If more than one product is stored, provide the information in 4.A-E for each product.

4. Tank Data:

A. True Vapor Pressure at storage temperature: _____ psia/°F
B. Reid Vapor Pressure at storage temperature: _____ psia/°F
C. Density of product at storage temperature: _____ lb/gal
D. Molecular Weight of product vapor at storage temperature: _____ lb/lbmol
E. Throughput for most recent calendar year: _____ gal/yr
F. Tank Capacity: _____ gal
G. Tank Diameter: _____ feet
H. Tank Height / Length: _____ feet
I. Average Vapor Space Height: _____ feet
J. Tank Orientation: _____ Vertical or Horizontal
K. Type of Roof: _____ Dome or Cone
L. Is the Tank Equipped with a Vapor Recovery System? Yes _____ No _____
If Yes, describe on separate sheet of paper and attach. Indicate efficiency.
M. Check the Type of Tank:
Fixed Roof _____ External Floating Roof
Pressure _____ Internal Floating Roof
Variable Vapor Space
Other, describe: _____

N. Check the Closest City: _____
Jackson, MS _____ Birmingham, AL
Memphis, TN _____ Montgomery, AL
New Orleans, LA _____ Baton Rouge, LA

O. Check the Tank Paint Color: _____
Aluminum Specular _____ Gray Light
Aluminum Diffuse _____ Gray Medium
Red _____ White
Other, describe: _____

P. Tank Paint Condition: _____ Good or Poor

Q. Check Type of Tank Loading

1. Trucks and Rail Cars

_____ Submerged Loading of clean cargo tank
_____ Submerged Loading : Dedicated Normal Service
_____ Submerged Loading : Dedicated Vapor Balance Service
_____ Splash Loading of clean cargo tank
_____ Splash Loading : Dedicated Normal Service
_____ Splash Loading : Dedicated Vapor Balance Service

2. Marine Vessels

_____ Submerged Loading: Ships
_____ Submerged Loading: Barges

SECTION H TANK SUMMARY (page 2 of 2)

R. For External Floating Roof Tanks

1. Check the Type of Tank Seal:

Mechanical Shoe

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

Liquid Mounted Resilient Seal

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

2. Type of External Floating Roof: _____ Pontoon
_____ Double-Deck

S. For Internal Floating Roof Tanks

1. Check the Type of Tank Seal:

Liquid Mounted Resilient Seal

_____ Primary Seal Only

_____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

_____ Primary Seal Only

_____ With Rim-Mounted Secondary Seal

2. Number of Roof Columns: _____

3. Length of Deck Seam _____ feet:

4. Area of Deck: _____ feet²

5. Effective Column Diameter: _____ feet

6. Check the Type of Tank:

_____ Bolted with Column Supported Roof

_____ Welded with Column Supported Roof

_____ Bolted with Self-Supported Roof

_____ Welded with Self-Supported Roof

5. Emissions Summary

1. Breathing Loss: _____ lb/hr _____ TPY

2. Working Loss: _____ lb/hr _____ TPY

3. Total Emissions: _____ lb/hr _____ TPY

6. UTM Coordinates: _____

A. Zone _____

B. North _____

C. East _____

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-06 AA-003 8	GRN-07 AA-003 7	GRN-08 AA-003 8	GRN-09 AA-003 9	GRN-10 AA-003 10	GRN-11 AA-003 11	GRN-12 AA-003 12	GRN-13 AA-003 13	GRN-14 AA-003 14	GRN-15 AA-003 15	GRN-16 AA-003 16
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)												
2	Name Construction Date		#1 Work Tank 1903	#2 Work Tank 1903	#3 Work Tank 1979	#4 Work Tank 1980	#5 Work Tank 1980	Creosote Measuring Tank 1980	#1 Creosote Storage Tank 1903	#2 Surge Tank 1903	#5 Storage Tank 1903	#6 Storage Tank 1903	#10 Surge Tank 1903
3	Material Stored		Oil / Pentachlorophenol	Creosote	Creosote	Creosote	Pentachlorophenol Cr	Creosote	Creosote	Process Water	#2 Diesel Fuel	Creosote	Process Water
4A	Temperature	psia											
4B	Storage Temperature	psia											
4C	Density @ Storage Temperature	lb/gal	150	200	200	200	150	200	200	60	60	150	60
4D	Molecular Weight @ Storage Temperature	lb/mole	7.75	9.25	9.25	8.65	7.75	8.65	8.65	8.34	7.1	9.25	8.34
4E	Throughput	gallons/yr	8,500,000	8,200,000	8,200,000	6,500,000	8,500,000	740,000	740,000	1,600,000	127,500	660,000	1,400,000
4F	Tank Capacity	gallons	28,786	28,786	28,786	22,419	28,786	4,200	100,000	100,000	100,000	105,000	300,000
4G	Tank Diameter	feet	13	13	13	6	13	6	29	26	27	30	40
4H	Tank Height / Length	feet	30	30	30	108	30	20	24	24	24	20	32
4I	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1	1
4J	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Horizontal	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
4K	Type of Roof (Dome or Cone)	yes or no	Dome	Dome	Dome	No	Dome	Dome	Cone	Cone	Cone	Cone	Cone
4L	Vapor Recovery System?		No	No	No	No	No	No	No	No	No	No	No
4M	Type of Tank?		Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof
4N	Closest City	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4O	Tank Paint Color		Black	Black	Black	Aluminum	Black	Black	Black	Black	Black	Black	Black
4P	Paint Condition (Good or Poor)		Poor	Poor	Poor	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor
4Q	Tank Loading (Splash Loading - Dedicated Vapor Balance Service; Dedicated Vapor Balance Service; Bottom)		Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
4R	Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom												
4S	Not Applicable To Any Tanks												
4T	Not Applicable To Any Tanks												
5.1	Breathing Loss (See Note)	lb/yr											
5.2	Working Loss (See Note)	TPY											
5.3	Total Emissions (See Note)	TPY											
	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.												

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-17 AA-003 17	GRN-18 AA-003 18	GRN-19 AA-003 19	GRN-20 AA-003 20	GRN-23 AA-003 23	GRN-24 AA-013 24	GRN-25 AA-014 25	GRN-28 AA-003 28	GRN-27 AA-003 27	GRN-28 AA-003 28	GRN-29 AA-003 29
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)												
2	Name Construction Date		Storm Surge Water 1989	Coagulant 1987	Decanting 1989	Creosote Blowdown 1980	Pentachlorophenol Blowdown 1983 Water / Oil	Gasoline 1975	Diesel 1930	Aeration 1988	Clarifier 1988	Discharge 1988	Creosote Dehydrator 1983
3	Material Stored		Storm Water	Coagulant Polymer	Creosote / Oil / Water	Creosote / Water	Pentachlorophenol / Oil	Gasoline	#2 Diesel	Process Waste Water	Process Waste Water	Process Waste Water	Creosote / Water
4A	Temperature	pels											
4B	Storage Temperature	pels											
4C	Density @ Storage Temperature	Degrees F	60	60	60	150	100	60	60	80	80	80	220
4D	Molecular Weight @ Storage Temperature	lb/mol	8.34	8.67	8.34	8.34	8.34	8.5	7	8.34	8.34	8.34	10
4E	Throughput	gallons/hr	2,272,000	9,000	230,000	532,000	483,000	10,000	90,000	5,000,000	5,000,000	5,000,000	200,000
4F	Tank Capacity	gallons	250,000	1,500	2,500	8,000	8,000	1,250	9,000	150,000	25,000	15,000	8,000
4G	Tank Diameter	feet	38	8	8	10	10	6	8	40	15	15	10
4H	Tank Height / Length	feet	38	10	12	14	14	12	32	25	18	9	24
4I	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1	1
4J	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Vertical	Vertical	Horizontal	Horizontal	Vertical	Vertical	Vertical	Horizontal
4K	Type of Roof (Dome or Cone)	yes or no	None	Dome	Dome	Dome	Dome	No	No	None	None	None	None
4L	Vapor Recovery System?												
4M	Type of Tank?												
4N	Coast City												
4O	Tank Paint Color	Memphis	Open	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Open	Open	Open	Open
4P	Paint Condition (Good or Poor)		Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4Q	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Blue	Beige	Black	Black	Black	Aluminum	Aluminum	White	Blue	Blue	Black
4R	Vapor Balance Service; Bottom)		Good	Good	Good	Poor	Poor	Good	Good	Good	Good	Good	Poor
4S	Not Applicable To Any Tanks		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Bottom	Bottom	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Bottom
5.1	Breathing Loss (See Note)	lb/hr											
5.2	Working Loss (See Note)	TPY											
5.3	Total Emissions (See Note)	lb/hr											
	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.	TPY											

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-30 AA-003 30	GRN-31 AA-003 31	GRN-32 AA-003 32	GRN-33 AA-003 33	GRN-34 AA-003 34	GRN-35 AA-003 35
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)		North Pentachlorophenol Equalization 1983	South Pentachlorophenol Equalization 1983	Mix Pentachlorophenol 1970	Mix Pentachlorophenol 1970	Pentachlorophenol Concentrate 1980	Slumwater Process 1970
2	Name Construction Date							
3	Material Stored		Water / Penta / Oil	Water / Penta / Oil	Oil / Penta	Oil / Penta	Pentachlorophenol Concentrate	Creosote / Penta / Water
4A	Temperature	pels						
4B	Storage Temperature	pels						
4C	Density @ Storage Temperature	Degrees F	60	60	60	60	60	60
4D	Molecular Weight @ Storage Temperature	lb/mol	8	8	7.75	7.75	8.55	8.34
4E	Throughput	lb/minute	65,000	65,000	850,000	850,000	120,000	400,000
4F	Tank Capacity	gallons/yr	14,000	14,000	9,400	5,000	10,500	100,000
4G	Tank Diameter	feet	10	10	9	10	13	30
4H	Tank Height / Length	feet	24	24	14	15	30	20
4I	Average Vapor Space Height	feet	1	1	1	1	1	1
4J	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Horizontal	Vertical	Vertical
4K	Type of Roof (Dome or Cone)		Cone	Cone	Flat	Flat	Flat	Flat
4L	Vapor Recovery System?	Yes or No	No	No	No	No	No	No
4M	Closest City	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4N	Tank Paint Color		Black	Black	Black	Black	Aluminum	Concrete
4P	Tank Condition (Good or Poor)		Poor	Poor	Poor	Poor	Good	Splash Loading Dedicated Normal Service
4Q	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Bottom	Splash Loading Dedicated Normal Service	Bottom	Splash Loading Dedicated Normal Service
4R	Vapor Balance Service; Bottom							
4S	Not Applicable To Any Tanks							
4T	Breathing Loss (See Note)	lb/yr						
5.1	Working Loss (See Note)	TPY						
5.2	Total Emissions (See Note)	TPY						
5.3	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.	TPY						

SECTION L2 CYCLONES

1. Emission Point No. / Name: AA-001, REF. NO. 40, MULTICLONE
2. Manufacturers Name and Model No.: WELLONS MULTICLONE COLLECTOR
3. Date of construction for existing sources or date of anticipated start-up for new sources:
1972
4. Cyclone Data:
 - a) Cyclone type (if more than 1, put total number) :

Simple	Potbellied	
High Efficiency	Multiclone	<u>X</u>
 - b) Efficiency: 90 %
 - c) Pollutant viscosity: _____ poise
 - d) Flow Rate: 25,450 acfm
 - e) Pollutant size entering cyclone: _____ microns
 - f) Pressure drop: _____ inches H₂O
 - g) Baffles or Louvers (specify): _____
 - h) Cyclone dimensions:

Inlet:	<u>2.0</u>	ft
Outlet:	<u>0.5</u>	ft
Body diameter:	<u>6.0</u>	ft
Body height:	<u>15.0</u>	ft
Cone height:	<u>8.0</u>	ft
 - i) Wet spray: Yes X No

1.	No. of Nozzles:	_____
2.	Type of liquid used:	_____
3.	Flow rate:	_____ gpm
4.	Make-up rate:	_____ gpm
5.	% recycled:	_____ %
 - j) Fan location:

1.	Downstream:	_____	Direct emission
		_____	Auxiliary Stack
2.	Upstream:	<u>X</u>	No cap (vertical emissions)
		_____	Fixed cap (diffuse emissions)
		_____	Wind respondent cap (horizontal emissions)
5. Which process(es) does the cyclone(s) control emissions from? WOOD FIRED BOILER SOURCE AA-001, REF. NO. 40
6. Attach a diagram of the cyclone(s) used.

6. Attach a diagram of the cyclone(s) used.

SECTION M COMPLIANCE DEMONSTRATION (page 1 of 2)

Completion of Section M is not required for a complete application. It is presented to merely reflect what may be required by the Enhanced Monitoring and/or the Periodic Monitoring Regulations. Upon promulgation of those regulations, this section will be revised to reflect the actual requirements. Until then, the information in this section should be utilized for planning purposes.

Choose the type of monitoring that is suggested for your source in the "Enhanced Monitoring Guideline". Fill out the appropriate form and attach to the corresponding emission point description pages.

A. Compliance Demonstration by Continuous Emissions Monitoring (CEM).

Sulfur Dioxide(SO ₂)	Nitrogen Oxides (NO _x)	Oxygen (O ₂)
Carbon Dioxide (CO ₂)	Total Reduced Sulfur (TRS)	Opacity
Hydrogen Chloride (HCl)	Carbon Monoxide (CO)	Flow
Hydrogen Sulfide (H ₂ S)	Volatile Organic Compound (VOC)	

B. Compliance Demonstration by Periodic Emission Monitoring using Portable Monitors.

SO ₂	NO _x	O ₂	CO ₂	CO	HCl	H ₂ S	VOC	Flow	Moisture
Combustibles		Combustion Efficiency							

C. Compliance Demonstration by Monitoring Control System Parameters or Operating Parameters of a Process.

Baghouse	Pressure drop across baghouse, Broken bag detector, Opacity.
Mechanical Collectors	Pressure drop across collector, Hopper full detector, Opacity.
Electrostatic Precipitators	Primary and secondary voltage, Primary and secondary currents, Spark Rate, Broken wire detector, Rap cycle frequency, Resistivity measurement, Inlet water flow, Total solids, Opacity.
Thermal Incinerator	Firebox temperature.
Catalytic Incinerator	Catalyst bed temperature.
Flare	Pilot light detector, Temperature after flame zone.
Particulate Scrubber	Pressure drop across scrubber and demister, Scrubber fluid recirculation rate, Pump discharge pressure, Pump motor current.
Absorber for Gases	pH of fluid, Fluid recirculation rate, Air flow, Pressure drop across absorber and demister, Fluid temperature.
Carbon Absorber	Steam mass flow rate per regeneration cycle, Carbon bed temperature.
Condenser	Condenser exit temperature, Amount of solvent recovered daily, Charging rate, Production rate, Hours of operation, Secondary chamber temperature, Kiln or dryer exit temperature, Burner combustion efficiency, Power consumption, Static pressure, Fuel usage rate, Water injection rate.

SECTION M COMPLIANCE DEMONSTRATION (page 2 of 2)

D. Compliance Demonstration by Monitoring Maintenance Procedures.

Water quality testing	VOC leak testing
Sludge solids testing	Soot blowing frequency
Electrostatic precipitator cleaning frequency	Fugitive dust control measures
Blacklight inspection of baghouses	Control equipment inspection frequency
Sludge mercury testing	Reid vapor pressure testing
Periodic inspection of process operating parameters	

E. Compliance Demonstration by Stack Testing.

EPA Method 1 & 2 :	Flow (S-type pilot tubes, Hot-wire anemometer)
EPA Method 3 :	CO ₂ , O ₂ , CO (Orsat, Fyrite)
EPA Method 3A :	CO ₂ , O ₂ , (Analyzers)
EPA Method 4 :	Moisture (Wet bulb-Dry bulb, Impingers)
EPA Method 5 :	PM
EPA Method 6 :	SO ₂ (Impingers)
EPA Method 6B :	SO ₂ (24 hour average)
EPA Method 6C :	SO ₂ (Analyzer)
EPA Method 7E :NO _x (Analyzer)	
EPA Method 9 :	Opacity (Visible emissions reader)
EPA Method 10 : CO (Analyzer)	
EPA Method 16 : TRS (Gas Chromatograph)	
EPA Method 16A :	TRS (Impingers)
EPA Method 16B:	TRS (Gas Chromatograph)
EPA Method 18 : VOC (Gas Chromatograph)	
EPA Method 21 : VOC Leaks (Analyzer)	
EPA Method 25A:	VOC (Analyzer with FID)
EPA Method 25B :	VOC (NDIR Analyzer)

F. Compliance Demonstration by Fuel Sampling and Analysis (FSA).

Coal Sampling	Coke sampling	Tire derived fuel sampling
Waste oil sampling	Sewage sludge sampling	Paper sludge sampling
Refuse derived fuel sampling	Landfill gas sampling	

G. Compliance Demonstration by Recordkeeping.

Testing and monitoring records	Records of malfunction
Compliance schedule records	As-applied coating & ink records,
Process hours of operation records	Transfer efficiency records
Fuel usage records	Production records
As-applied coating & ink composition records	

SECTION M1 COMPLIANCE DEMONSTRATION BY CONTINUOUS EMISSIONS MONITORING (CEM)

An installation plan for each new (i.e. proposed) Continuous Emission Monitoring (CEM) System shall be submitted with the permit application for approval. Fill out one (1) sheet per analyzer.

1. Emission Point No./Name : AA-001 WOOD FIRED BOILER
2. Continuous Emission Monitoring Data:
- A. Name of Manufacturer: HORIBA
- B. Model number: CMA-321
- C. Serial Number: 566220011
- D. Date of installation of CEM: 1992
- E. Which does the CEM monitor: ☒ Pollutant ☐ Diluent
- F. Pollutant / Diluent / Flow being monitored: Flow ☒ CO, OPACITY
- G. Type of analyzer: ☐ In situ ☒ Extractive
- ☐ Dilution ☐ O₂
- ☐ CO₂ ☐ Thermal
- ☐ Differential Pressure
- ☐ Other (specify) : _____
- H. Type of analyzer description: MAGNETOPNEUMATIC
- I. Backup system (attach other compliance demonstration forms if needed): _____
-
- J. Opacity CEM:
- How measured: ☒ Monitor ☐ Visible Emission Evaluation
- K. If CEM is not previously certified, then it shall be submitted for certification within 60 days of startup of the CEM system.
- L. State the operating principles of the analyzer: SEE FOLLOWING PAGE
-
- M. Attach a schematic of the CEM system showing the sample acquisition point and location of the monitor and explain any deviations from the siting criteria in Performance Specifications 1, 2, 3, 4, 5, 6 and 7 in 40 CFR Part 60, Appendix B.

1 OVERVIEW

1.1 THEORY OF OPERATION

The SNIFFER system is designed to measure the concentration of CO, CO₂, and O₂ components in stack gas emitted from a stationary source. The system uses a magnetopneumatic analyzer to measure O₂ and infra-red analyzers (NDIR method) to measure CO and CO₂. During the operation of the magnetopneumatic analyzer, oxygen molecules are drawn into a non-homogenous magnetic field and attracted to a higher magnetic field, resulting in a pressure increase. A pressure increase is produced outside of the magnetic field using nitrogen gas. This differential pressure is measured using a condenser type microphone, which produces an electrical signal. A stable signal is then produced and transmitted by exciting the magnet intermittently and processing the alternating signal. The output signal is directly linear to the oxygen concentration.

The principle of the non-dispersive infra-red analyzer involves a dual beam method with an opto-pneumatic double layer detector. The infra-red source emits infra-red radiation, which is modulated by a rotating chopper wheel. After passing through the sample cell, the radiation is detected by the double layer detector. A window that is permeable to the infra-red radiation divides the detector chamber into two gas chambers or layers, which are linked together by a capillary that contains a microflow sensor. The center part of the absorption curve is absorbed by the first detector level while the edges are absorbed by the second detector level, resulting in a pressure differential between the two detector levels. The gas flow that results from the pressure differential is detected by the microflow sensor. This detected output signal is then processed by the microprocessor into a linear output signal.

The SNIFFER system also incorporates other components that allow the Analyzers to be calibrated, and the data from them to be recorded.

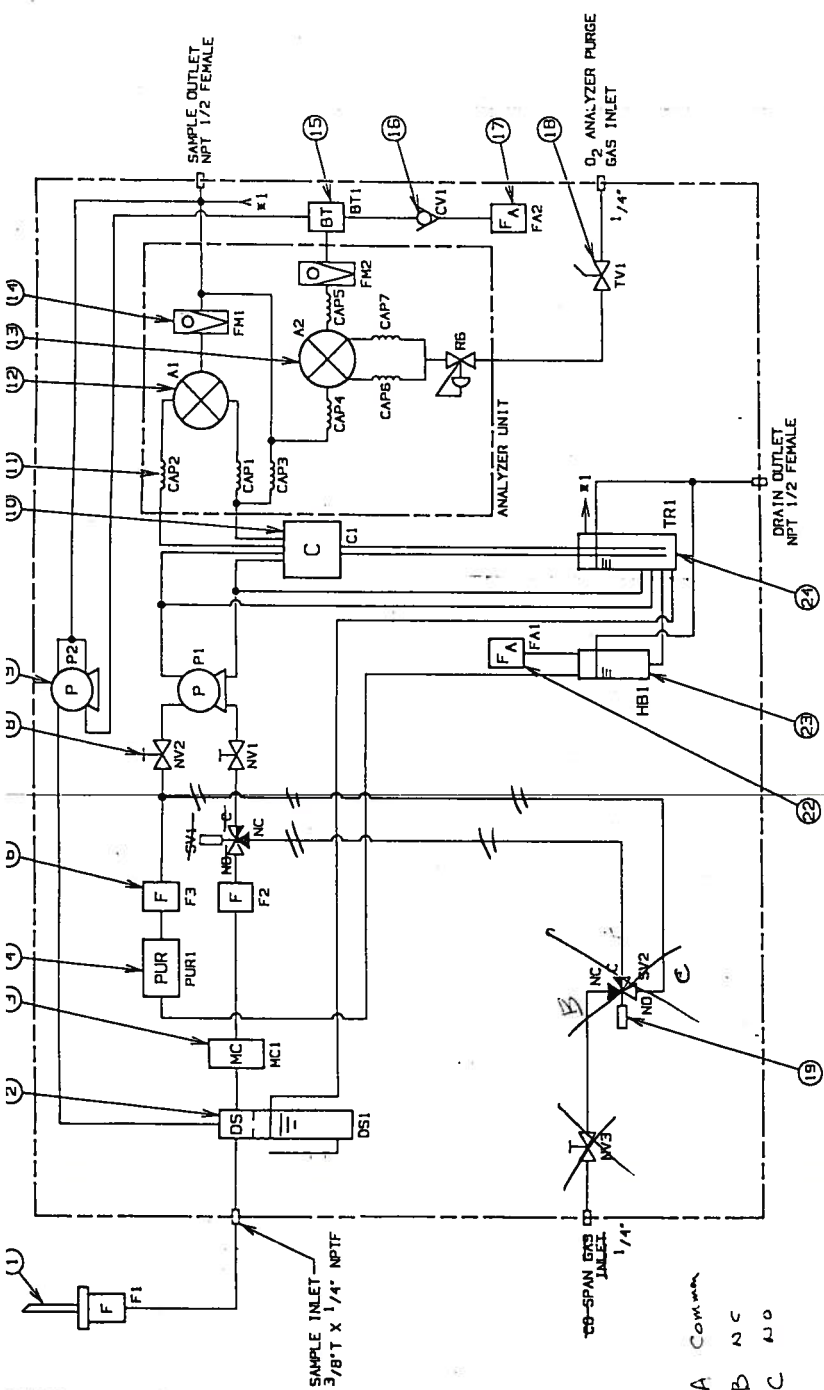
1.2 COMPONENTS

The SNIFFER system incorporates a Sample Conditioner, Analyzer, Calibration Unit, Opacity Monitors, and Strip Chart Recorder. Figure 1-1 shows how the components are configured in the system cabinet.

1.2.1 Sample Conditioner

The Sample Conditioner takes sample gas from the stack port and supplies a steady flow of clean sample gas to the Analyzer.

1	PRIMARY FILTER	PVC
2	DRAIN SEPARATOR	MC-050
3	MIST CATCHER	PUR-01
4	ZERO GAS PURIFIER	PUR-01
5	FILTER	PVC
6	NEEDLE VALVE	GP-2201
7	PUMP	GP-2201
8	THERMO-ELECTRIC DEHUMIDIFIER	DM-107H
9	CAPILLARY	CFA CO
10	ANALYZER	MPA D2
11	FLOW METER	PVC
12	BUFFER TANK	PVC
13	CHECK VALVE	0.3"
14	AIR FILTER	SVC-301-7HA
15	TOGGLE VALVE	3"
16	SOLENOID VALVE	PVC
17	AIR FILTER	PVC
18	HUMIDIFIER	PVC
19	PRESSURE TRAP	PVC



- NOTES: UNLESS OTHERWISE SPECIFIED
1. AFTER MEASUREMENT DISCHARGE THE SAMPLE GAS FROM SAMPLE OUTLET TO AN AREA AT ATMOSPHERIC PRESSURE IN COMPLIANCE WITH ENVIRONMENTAL SAFETY REGULATIONS.
 2. INTERNAL RACK PLUMBING IS MADE OF TEFLON OR SOFT PVC.
 3. SAMPLE LINE SUPPLIED BY OTHERS.

FORIBA HORIBA INSTRUMENTS, INC. 17671 ARISTARQUE AVE. IRVINE, CALIF. 92714	
CONTRACT NO. FM0. 0270-1 S/O. 203192 ENERTEC, INC.	DATE 4/28/92
APPROVALS J.N. 4/28/92 1.C.	DATE 4/28/92
PROJECT 5/26/92 1.C.	DATE 5/26/92
DESCRIPTION A AC BUILT	APPROVED
REV	DATE
REVISIONS	
END A-1250 STACK GAS SYSTEM FLOW DIAGRAM	
FSOI NO. 53595	DSG NO. 585608
SIZE 8	SCALE 1 OF 1

The monitoring of a control system parameter or a process parameter may be acceptable provided that a correlation between the parameter value and the emission rate of a particular pollutant is established in the form of a curve of emission rate versus parameter values. At least three sets of stack test data, that bracket the emission limit if possible, shall be used to define the emission curve. This data shall constitute the certification of the system and must be attached for approval. If it is not attached, it shall be submitted within 60 days from the date of startup of the system or the date of application, which ever is later.

1. Emission Point No./Name : AA-002, REF. NO. 41, OIL FIRED BOILER
2. Method of monitoring description: MONITORING BY MEASUREMENT OF FUEL OIL CONSUMPTION FOR TOTAL TIME IN OPERATION

3. Backup system (attach other compliance demonstration forms if needed):

4. The monitoring system shall be subject to appropriate performance specifications, calibration requirements, and quality assurance procedures.
5. If a quality assurance / quality control plan is not attached with the application for approval, it shall be submitted within 60 days from the date of startup of the monitoring program or the date of application, which ever is later.

SECTION M3 COMPLIANCE DEMONSTRATION BY MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter may be acceptable provided that a correlation between the parameter value and the emission rate of a particular pollutant is established in the form of a curve of emission rate versus parameter values. At least three sets of stack test data, that bracket the emission limit if possible, shall be used to define the emission curve. This data shall constitute the certification of the system and must be attached for approval. If it is not attached, it shall be submitted within 60 days from the date of startup of the system or the date of application, which ever is later.

1. Emission Point No./Name : AA-003 WOOD PRESERVING PROCESS
2. Method of monitoring description:
MONITORING BY MEASUREMENT OF CUBIC FEET OF PRODUCTS
PRODUCED

Attach separate sheets if needed.

3. Backup system (attach other compliance demonstration forms if needed):

4. The monitoring system shall be subject to appropriate performance specifications, calibration requirements, and quality assurance procedures.
5. If a quality assurance / quality control plan is not attached with the application for approval, it shall be submitted within 60 days from the date of startup of the monitoring program or the date of application, which ever is later.

SECTION M3 COMPLIANCE DEMONSTRATION BY MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter may be acceptable provided that a correlation between the parameter value and the emission rate of a particular pollutant is established in the form of a curve of emission rate versus parameter values. At least three sets of stack test data, that bracket the emission limit if possible, shall be used to define the emission curve. This data shall constitute the certification of the system and must be attached for approval. If it is not attached, it shall be submitted within 60 days from the date of startup of the system or the date of application, which ever is later.

1. Emission Point No./Name : AA-005, REF. NO. 43, NATURAL GAS SPACE
 HEATERS, (3) UNITS

2. Method of monitoring description: MONITORING BY MEASUREMENT OF NATURAL GAS CONSUMPTION

Attach separate sheets if needed.

3. Backup system (attach other compliance demonstration forms if needed):

4. The monitoring system shall be subject to appropriate performance specifications, calibration requirements, and quality assurance procedures.

5. If a quality assurance / quality control plan is not attached with the application for approval, it shall be submitted within 60 days from the date of startup of the monitoring program or the date of application, which ever is later.

SECTION M3 COMPLIANCE DEMONSTRATION BY MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter may be acceptable provided that a correlation between the parameter value and the emission rate of a particular pollutant is established in the form of a curve of emission rate versus parameter values. At least three sets of stack test data, that bracket the emission limit if possible, shall be used to define the emission curve. This data shall constitute the certification of the system and must be attached for approval. If it is not attached, it shall be submitted within 60 days from the date of startup of the system or the date of application, which ever is later.

1. Emission Point No./Name : AA-006, REF. NO. 44, NATURAL GAS FIRED
STEAM CLEANER

2. Method of monitoring description: MONITORING BY MEASUREMENT OF NATURAL GAS CONSUMPTION

Attach separate sheets if needed.

3. Backup system (attach other compliance demonstration forms if needed):
4. The monitoring system shall be subject to appropriate performance specifications, calibration requirements, and quality assurance procedures.
5. If a quality assurance / quality control plan is not attached with the application for approval, it shall be submitted within 60 days from the date of startup of the monitoring program or the date of application, which ever is later.

The monitoring of a control system parameter or a process parameter may be acceptable provided that a correlation between the parameter value and the emission rate of a particular pollutant is established in the form of a curve of emission rate versus parameter values. At least three sets of stack test data, that bracket the emission limit if possible, shall be used to define the emission curve. This data shall constitute the certification of the system and must be attached for approval. If it is not attached, it shall be submitted within 60 days from the date of startup of the system or the date of application, which ever is later.

2. Method of monitoring description: MONITORING BY MEASUREMENT OF NATURAL GAS CONSUMPTION

3. Backup system (attach other compliance demonstration forms if needed):

4. The monitoring system shall be subject to appropriate performance specifications, calibration requirements, and quality assurance procedures.
5. If a quality assurance / quality control plan is not attached with the application for approval, it shall be submitted within 60 days from the date of startup of the monitoring program or the date of application, which ever is later.

SECTION M5 COMPLIANCE DEMONSTRATION BY STACK TESTING

Compliance demonstration by stack testing will be carried out in accordance with EPA approved reference methods and the stack test report must be attached.

1. Emission Point No./Name : AA-001, REF. NO. 40, WOOD FIRED BOILER
2. Pollutant being tested for: PARTICULATE AND VISIBLE EMISSIONS
3. Test Method: SEE STACK TEST REPORT (FOLLOWING PAGES)
4. Compliance shall be demonstrated:
Daily Weekly Monthly
Other (specify): BIENNIAL (ONCE EVERY 2 YEARS)
5. Any measured emission rate that exceeds an emission limit established by the permit must be reported as an excess emission.
6. Is this an existing method of demonstrating compliance:
X Yes No
7. Backup system (attach other compliance demonstration forms if needed):

ENVIRONMENTAL MONITORING LABORATORIES, INC.

P. Box 655 • 624 Ridgewood Road
Ireland, Mississippi 39158

phone: 601/856-3092

fax : 601/853-2151

Section M5
Stack Test

September 29, 2000

Subject: Koppers Industries - Grenada, Mississippi
Wood Waste Boiler - Stack Emissions Test
Facility No. 0960-00012

On September 22, 2000, Environmental Monitoring Laboratories performed air emissions testing for Koppers Industries in the Tie Plant community near Grenada, Mississippi. Testing was done to measure particulate and visible emissions from the wood waste boiler in accordance with requirements of the Mississippi Department of Environmental Quality.

Results of emissions testing are shown below.

PARTICULATE EMISSIONS			VISIBLE EMISSIONS
#/hr	gr/dscf	#/MM Btu	High SMA, % opacity
8.75	0.076	0.192	31.88

Mr. Anthony Mahan of Koppers coordinated the testing project. Danny Russell of Environmental Monitoring Laboratories was responsible for sample collection and analysis of particulate samples. Sample custody was limited to Mr. Russell.

Following is a report of the test.

REPORT OF AIR EMISSIONS TESTS
FOR KOPPERS INDUSTRIES, INC.

GRENADA PLANT
WOOD WASTE BOILER

Section m5

Grenada, Mississippi
September 22, 2000

Stack Test

CONTENTS

1.0	TEST RESULTS	page 1
2.0	SOURCE DESCRIPTION	2
3.0	TEST PROCEDURES	2
4.0	DATA REDUCTION	3
5.0	NOMENCLATURE	6
6.0	CALIBRATION	7
7.0	APPENDICES:	8
A.	Field and Laboratory Data	
B.	Calibrations	
C.	Visible Emissions Record	
D.	Boiler Steam Chart (Koppers)	

REPORT CERTIFICATION

I certify that I have examined the information submitted herein,
and based upon inquiries of those responsible for obtaining the
data or upon my direct acquisition of data, I believe the
submitted information is true, accurate and complete.

Signed



Daniel G. Russell

2.0 SOURCE DESCRIPTION:

Section M5
Stack Test

Koppers Industries, Inc. operates a 30,000 pound per hour Wellons wood waste boiler at their wood preserving facility in Grenada, Mississippi. The boiler provides steam for the timber treating processes and a turbine generator. Fuel is typically wood waste generated from the manufacture of treated wood products.

Heat input as calculated from the test data and an F-Factor was an average 45.16 MM Btu/hr.

The boiler exhausts to the atmosphere by way of a 34.5 inch diameter vertical stack. Two sample ports at 90° are provided at a location that is 432 inches (12.5 diameters) below the stack exit and 356 inches (10.3 diameters) above an upstream stack tapered section.

3.0 TEST PROCEDURES:

Test procedures used are those described in the Code of Federal Regulations, Title 40, Part 60, Appendix A. Specifically, Method 1 was used to determine the number of sample points and Method 5 to determine flow rates, moisture content, and particulate emissions. The sampling train was identical to that described in Method 5 except that the cyclone was omitted. Visible emissions were read in accordance with Method 9 concurrently with the emissions test

Heat input to the boilers was determined by continuously monitoring oxygen content of the flue gas as described in Method 3A and calculating heat input using an F-factor of 9280 scf per million Btu of heat input for the wood waste fuel.

Filters were recovered by rinsing the front half of the filter holder into the probe wash and securing the filters in glass petri dishes. Part of the sample filter normally adheres to the filter gasket, and some of the adhering material is recovered into the probe wash. Therefore some of the filter weight is attributed to the probe wash weight.

Filters were heated in an oven for 2 hours at 105° C, desiccated at least 24 hours and weighed to constant weight. Probe wash samples in acetone were evaporated to dryness over low heat in tared beakers, desiccated for at least 24 hours and weighed to constant weight. Weighings are made at 6 hour or greater intervals (samples stored in desiccator). Final weights were considered valid and were recorded if there was no more than 0.5 milligrams difference from the previous weighing.

Section M5
Stack Test

1.0 Test Results:

Wellons Wood Waste Boiler

Run No.		1	2	3	AVG.
Date		9/22/00	9/22/00	9/22/00	-----
Time Start		0955	0116	1235	----
Time End		1059	1220	1339	----
PARTICULATE EMISSIONS	#/hr	12.69	5.10	8.46	8.75
PARTICULATE EMISSIONS	gr/dscf	0.109	0.044	0.075	0.076
PARTICULATE EMISSIONS	#/MM Btu	0.265	0.113	0.199	0.192
VISIBLE EMISSIONS	high SMA, %	31.88	15.00	10.42	31.88
HEAT INPUT	MM Btu/hr	47.92	45.12	42.43	45.16
VOLUMETRIC FLOWRATE	acfm	27884	26664	26376	26975
VOLUMETRIC FLOWRATE	dscfm	13593	13454	13149	13399
VELOCITY	ft./sec.	71.6	68.5	67.7	69.3
STACK TEMPERATURE	°F	481	470	462	471
MOISTURE	%	12.9	10.9	12.8	12.2
SAMPLE RATE	% isokinetic	100	101	97	99

91

SECTION M6 COMPLIANCE DEMONSTRATION BY FUEL SAMPLING AND ANALYSIS

An installation plan for each Fuel Sampling Analysis (FSA) System must be submitted with the permit application for approval. Fill out one (1) sheet per analyzer.

1. Emission Point No./Name : AA-002, REF. NO. 41, OIL FIRED BOILER
2. Date of construction if for existing sources or date of anticipated start-up for new sources:
BEFORE AUGUST 7, 1977
3. List the ASTM fuel sample collecting and analyzing methods used: EMISSION ESTIMATE BASIS – AP-42
4. Fuel being sampled:
5. How will samples be taken: Automated Manual
6. Fuel Sampling Data:
 - A. Name of Manufacturer:
 - B. Model number:
 - C. Serial Number:
 - D. Is this an existing FSA system: YES No
 - E. How will samples be taken: Automated Manual
 - F. Backup system (attach other compliance demonstration forms if needed):
 - G. State the method of operating of the sampler:
 - H. Attach a schematic of the FSA system showing the sample acquisition point and location of the machine.
 - I. Compliance shall be demonstrated:
Daily Weekly Monthly Quarterly
7. Any composite sample over the emission rate will be reported as an excess emission.
8. If the FSA system certification is not attached for approval, it must be submitted within 60 days from startup of the FSA system or the date of application, which ever is later.

SECTION M6 COMPLIANCE DEMONSTRATION BY FUEL SAMPLING AND ANALYSIS

An installation plan for each Fuel Sampling Analysis (FSA) System must be submitted with the permit application for approval. Fill out one (1) sheet per analyzer.

1. Emission Point No./Name : AA-005, REF. NO. 43, NATURAL GAS SPACE HEATERS
(3) UNITS
2. Date of construction if for existing sources or date of anticipated start-up for new sources:
BEFORE AUGUST 7, 1977
3. List the ASTM fuel sample collecting and analyzing methods used: EMISSION ESTIMATE BASIS – AP-42
4. Fuel being sampled:
5. How will samples be taken: Automated _____ Manual
6. Fuel Sampling Data:
 - A. Name of Manufacturer: _____
 - B. Model number: _____
 - C. Serial Number: _____
 - D. Is this an existing FSA system: YES _____ No
 - E. How will samples be taken: Automated _____ Manual
 - F. Backup system (attach other compliance demonstration forms if needed): _____
 - G. State the method of operating of the sampler: _____
 - H. Attach a schematic of the FSA system showing the sample acquisition point and location of the machine.
 - I. Compliance shall be demonstrated:
Daily Weekly Monthly _____ Quarterly
7. Any composite sample over the emission rate will be reported as an excess emission.
8. If the FSA system certification is not attached for approval, it must be submitted within 60 days from startup of the FSA system or the date of application, which ever is later.

SECTION M6 COMPLIANCE DEMONSTRATION BY FUEL SAMPLING AND ANALYSIS

An installation plan for each Fuel Sampling Analysis (FSA) System must be submitted with the permit application for approval. Fill out one (1) sheet per analyzer.

1. Emission Point No./Name : AA-006, REF. NO. 44, NATURAL GAS FIRED STEAM CLEANER _____
2. Date of construction if for existing sources or date of anticipated start-up for new sources: 1992 _____
3. List the ASTM fuel sample collecting and analyzing methods used: EMISSION ESTIMATE BASIS – AP-42 _____

4. Fuel being sampled: _____
5. How will samples be taken: Automated _____ Manual _____
6. Fuel Sampling Data:
 - A. Name of Manufacturer: _____
 - B. Model number: _____
 - C. Serial Number: _____
 - D. Is this an existing FSA system: YES _____ No _____
 - E. How will samples be taken: Automated _____ Manual _____
 - F. Backup system (attach other compliance demonstration forms if needed): _____

 - G. State the method of operating of the sampler: _____

 - H. Attach a schematic of the FSA system showing the sample acquisition point and location of the machine.
 - I. Compliance shall be demonstrated:
Daily Weekly Monthly _____ Quarterly
7. Any composite sample over the emission rate will be reported as an excess emission.
8. If the FSA system certification is not attached for approval, it must be submitted within 60 days from startup of the FSA system or the date of application, which ever is later.

SECTION M6 COMPLIANCE DEMONSTRATION BY FUEL SAMPLING AND ANALYSIS

An installation plan for each Fuel Sampling Analysis (FSA) System must be submitted with the permit application for approval. Fill out one (1) sheet per analyzer.

1. Emission Point No./Name : AA-015, REF. NO. 53, NATURAL GAS FIRED SPACE HEATER, (1) UNIT
2. Date of construction if for existing sources or date of anticipated start-up for new sources: BEFORE AUGUST 7, 1977
3. List the ASTM fuel sample collecting and analyzing methods used: EMISSION ESTIMATE BASIS – AP-42
4. Fuel being sampled:
5. How will samples be taken: Automated _____ Manual
6. Fuel Sampling Data:
 - A. Name of Manufacturer: _____
 - B. Model number: _____
 - C. Serial Number: _____
 - D. Is this an existing FSA system: YES _____ No
 - E. How will samples be taken: Automated _____ Manual
 - F. Backup system (attach other compliance demonstration forms if needed): _____
 - G. State the method of operating of the sampler: _____
 - H. Attach a schematic of the FSA system showing the sample acquisition point and location of the machine.
 - I. Compliance shall be demonstrated:
Daily Weekly Monthly _____ Quarterly
7. Any composite sample over the emission rate will be reported as an excess emission.
8. If the FSA system certification is not attached for approval, it must be submitted within 60 days from startup of the FSA system or the date of application, which ever is later.

SECTION N Current Applicable Requirements and Status (page 1 of 2)

List applicable state and federal regulations and applicable test methods for determining compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

Emission Point No.	Applicable Requirement	Pollutant	Test Method	Limits	Compliance Status IN / OUT
AA-001	APC-S-1, SEC. 3.4(B)	PM	METHOD 5	0.3 GR/DSCF	IN
AA-001	APC-S-1, SEC. 3.1	OPACITY	CEM	40%	IN
AA-001	APC-S-1, SEC. 4.1(C)	SO2	STACK TEST & ENGINEER CALCS.	2.4 LB/MMBTU	IN
AA-002	APC-S-1, SEC. 3.4(A)	PM	AP-42	E=0.8808I-0.1667 =14.36 LB/HR	IN
AA-002	APC-S-1, SEC. 3.1	OPACITY		40%	IN
AA-002	APC-S-1, SEC. 4.1(C)	SO2	AP-42	2.4 LB/MMBTU	IN
AA-004	APC-S-1, SEC. 6	PM	AP-42	E=4.1P 0.67 27 LB/HR	IN
AA-010	APC-S-1, SEC. 6	PM	AP-42	4.78 LB/HR	IN
AA-011	APC-S-1, SEC. 6	PM	AP-42	4.84 LB/HR	IN
PLANT - WIDE	APC-S-1, SEC. 6	PM	VARIOUS	28.4 LB/HR	IN

1. Emission Point No./Name : AA-001, REF. NO. 40, WOOD FIRED BOILER

A. X Where this source is currently in compliance, we will continue to operate and maintain this source to assure compliance for the duration of the permit.

C. This source is not in compliance. The following statement of corrective action is submitted to describe action which we will take to achieve compliance.

2. _____ We will achieve compliance according to the following schedule.

Starting date: _____ and every six (6) months thereafter

[illegible]

SECTION 0 COMPLIANCE CERTIFICATION

1. Emission Point No./Name : ALL POINTS EXCEPT AA-001
2. Indicate the source compliance status:
- A. X Where this source is currently in compliance, we will continue to operate and maintain this source to assure compliance for the duration of the permit.
- B. _____ The Current Emissions Requirements and Status form (previous page) includes new requirements that apply or will apply to this source during the term of the permit. We will meet such requirements on a timely basis.
- C. _____ This source is not in compliance. The following statement of corrective action is submitted to describe action which we will take to achieve compliance.
1. _____ Attached is a brief description of the problem and the proposed solution.
2. _____ We will achieve compliance according to the following schedule.

Progress reports will be submitted:

Starting date: _____

and every six (6) months thereafter

[illegible]

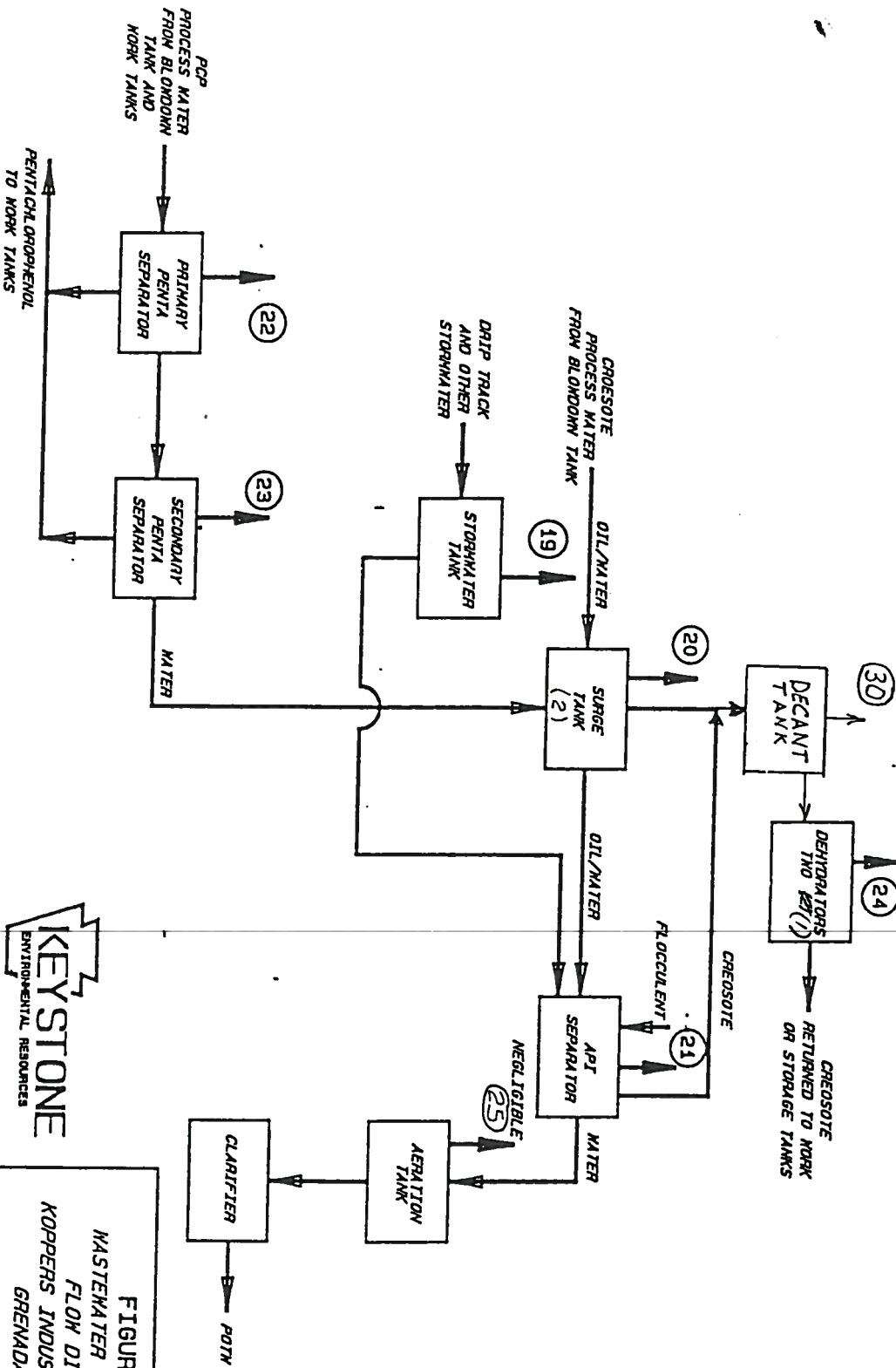
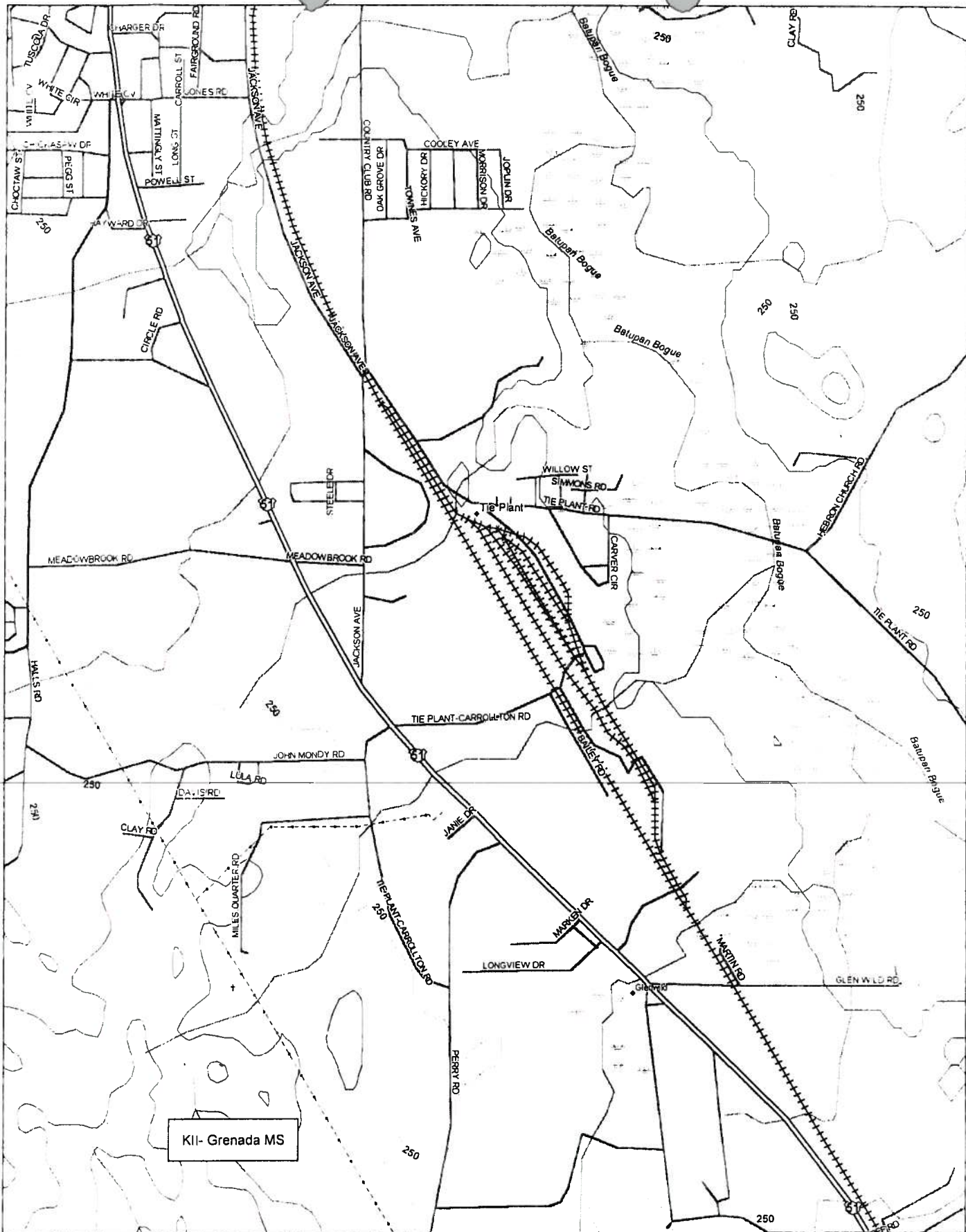


FIGURE 2
 WASTEWATER TREATMENT
 FLOW DIAGRAM
 KOPPERS INDUSTRIES, INC.
 GRENADA, MS

11/17/92
 REVISED 3/30/95 ST
 9/26/01 TLH
 C69371



© 2001 DeLorme. Topo USA® 3.0
Zoom Level: 13-0 Datum: WGS84

Scale 1 : 25,000
1" = 2,083.33 ft





Fax

Koppers Inc.
Environmental Dept.
436 Seventh Avenue
Pittsburgh, PA 15219
Tel 412 227 2337
Fax 412 227 2423
www.koppers.com

Fax Number: 601-961-5703
Company: MDEQ
Attention: CHRISTEN DAVIS
Subject: AA-001 INFORMATION-REQUESTED
Date: 8-7-03

PER OUR DISCUSSIONS, PLEASE SEE
THE ATTACHED SHEET. PLEASE CALL
IF YOU HAVE QUESTIONS. THANKS.

TIM BASILONE

412-227-2114

AA-001-BOILER, WOOD FIRED tn/yr
 Total Wood Burned: 15500
 Creosote Wood Burned: 0.04%
 Penta Wood Burned: 0.04%
 Untreated Wood Burned: 0.25%
 Removal Efficiency (1): 0.01%
 Sulfur 0.01%
 Chlorine 0.04%
 (lb/hr): 15500

Pollutant	Emission Factor	Units	Basis	Estimated Emissions (tn/yr)	Estimated Emissions (lb/hr)
Particulate	4.20	lb/tn	AP-42	142.57	32.55
SO ₂	0.075	lb/tn	AP-42	2.55	0.58
NOX	1.6	lb/tn	1994 Test	54.31	12.40
CO	6.8	lb/tn	AP-42	224.04	51.15
VOC	0.180	lb/tn	AP-42	6.11	1.40
HCl	1.5E+00	lb/tn PCP fuel	2/96 Test	0.0000	0.0000
Arsenic	8.8E-05	lb/tn	AP-42	0.0030	0.0007
Cadmium	1.7E-05	lb/tn	AP-42	0.0006	0.0001
Chromium	1.3E-04	lb/tn	AP-42	0.0044	0.0010
Lead	3.1E-04	lb/tn	AP-42	0.0105	0.0024
Manganese	8.9E-03	lb/tn	AP-42	0.3021	0.0690
Nickel	5.6E-04	lb/tn	AP-42	0.0190	0.0043
Selenium	1.8E-05	lb/tn	AP-42	0.0006	0.0001
Mercury	0.000065	lb/tn	AP-42	0.0002	0.0001
Total HAP Metals				0.34	0.08

(1) Removal efficiencies based on 2/98 stack test.

Permit Details - Modifications, Reopenings, etc

Facility Number: 0960-00012

Modification/Reopening #: 3

Facility No.: 0960-00012

Facility Name: Koppers Industries, Inc.

City: Grenada

SIC: 2491

Project Engineer: David Burchfield

Orig OP Issued: 3/11/1997

MACT Major Subpart:

NESHAP Subpart:

MACT Area Subpart:

NSPS Subpart:

Project Engineer

EPD Energy

Application Rec'd:

7/7/2003

Type of Permit Action:

Minor Modification

Assigned:

Review Complete:

Date Determined Incomplete:

Date Determined Complete:

Ant Draft to Supervisor:

Draft Permit to Supervisor:

Ant. Draft to Source:

Draft Permit to Source:

Ant. Public Notice:

Public Notice Publish:

Public Notice Expire:

Ant. Proposed to EPA:

Proposed Permit to EPA:

Ant. Permit Board:

Permit Board:

Notes/Comments:

7-24-03-On 7-7-03, EPD Energy who is now handling this source received a minor modification. The minor modification is for the purpose of installing a 29,786 gallon creosote tank. The request as initially not detected as a modification because it was incorporated in a package that initially indicated it was only revisions to the renewal application on file.

TVOP Renewal Info

Facility Number: 0960-00012

Facility Name: Koppers Industries, Inc.

City: Grenada

SIC: 2491

Class: TV

Status: O

Renewal Application Due: 9/1/2001

Renewal Application Rec'd: 09/28/2001

Original Permit Board: 3/11/1997

Permit Expires: 3/1/2002

Permit Renewed:

Mods,

MACT Subparts:

Major:

NESHAP Subparts:

Area:

NSPS Subparts:

Notes/Comments from Original TV Application Review:

Koppers will be unable to become a SM source due to actual emissions of HCl being >10 tpy from the combustion of treated woodwaste in the boiler. Published PN 112996 for modification of PTC to change emission limits so the company can begin using crossties as a fuel. PTC was modified 011497. 11-4-02-On 10-30-02 the source submitted a revised renewal application due to some change in the source's operations. 7-11-03-On 7-7-03 the source submitted another revision to the TV renewal application. This revision was due to a modification at the source.



876

July 1, 2003

CERTIFIED MAIL 7000 0520 0021 7551 8951

RECEIVED
JUL - 7 2003
Dept. of Environmental Quality
Office of Pollution ControlKoppers Inc.
Utility Poles and Piling
P.O. Box 160
Tie Plant, MS 38960
Tel 662 226 4584
Fax 662 226 4588
www.koppers.comMs. Maya Rao
Mississippi Department of Environmental Quality
P.O. Box 10385
Jackson, MS 39289-0385**RE: Title V Operating Permit - #0960-00012
Koppers Inc. - Grenada, Mississippi
Minor Permit Modification, and
Second Revision to Renewal Application**

Dear Ms. Rao,

On March 11, 1997, Koppers Industries, Inc. was issued the Title V Operating Permit No. 0960-00012 for its wood treating plant (the Plant) at Tie Plant, MS. An application for renewal of the Title V permit was submitted on September 26, 2001, in conformance with MDSEQ requirements. Since that time a modification to the renewal application was submitted on October 22, 2002, with regard to several changes at the facility that affected air emissions described in the original Title V Renewal Application. This transmittal contains information pertaining to a second modification to the Title V Renewal Application as a result of facility equipment changes that will occur.

The attached sheets provide revised and updated information and summarize changes in plant equipment that will occur during the summer of 2003. The subject changes affect air emissions in that the overall air emissions for the facility will be less than estimates provided in the Title V Renewal Application. Changes that will be made to the facility are discussed below, and forms and supplemental information for replacement of information submitted in the original Title V Renewal Application are attached.

Three tanks located at the Plant will be removed from service and dismantled, including the #4 Work Tank, Creosote Measuring Tank, and the Creosote Dehydrator. Reference Numbers for these tanks in the Renewal Application (Section H, Tank Summary Table) are GRN-09, GRN-11, and GRN-29, respectively. All three of the tanks to be removed are equipment included under Emission Point Number AA-003 in the Renewal Application. Only one of the tanks, the #4 Work Tank, will be replaced at this time. The new tank will be named "#4 Work Tank", and will be referenced as GRN-09 on the Tank Summary Table.

The attached sections contain information that was modified as a result of the changes described above. These sections should be used to replace sections of the renewal application submitted earlier. The following table serves as a guide for making these replacements.

Attached Information	Replacement For: (Sections in the original renewal application and/or the first modification request dated 10/12/02 to be removed and replaced with the attached information)
Renewal Application Narrative - Section 2.1 (2 Pages).	Information provided in original application, and the first modification request on 10/28/02.
Section H (2 Pages), and the referenced Tank Summary Table (3 Pages)	Section H (2 Pages), and the Tank Summary Table (3 Pages).

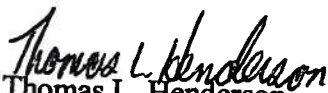
In addition to information referenced above, a cover page indicating the permitting activity (modification) and a completed Section B, Owners Information (2 Pages), are attached.

Please note that information contained in the Tank Summary Table for Section H was revised to include information on the new Work Tank #4 (GRN-09) that will be installed in July 2003. Information required on the Section H form for the new tank is highlighted in bold print under reference GRN-09 on the Tank Summary Table. Also, information for the Creosote Dehydrator (GRN-29) and the Creosote Measuring Tank (GRN-11) was removed from the Tank Summary Table.

Koppers understands that the new tank will be regulated under 40 CFR 60 Subpart Kb, which requires that a strapping table and a construction drawing of the tank are maintained on file at the facility. The full requirements of Subpart Kb are not applicable because the vapor pressure of the material stored in the tank is below the pressure criteria for Subpart Kb.

If you have any questions or require additional information, please call me at (662) 226-4584 extension 11.

Yours truly,


Thomas L. Henderson
Plant Manager

Enc.

cc. Steve Spengler – Environmental Permits Division MSDEQ
Tim Basilone – KII, Pittsburgh

2.1 Changes in Equipment Reference Numbers

Several of these Reference Numbers have been changed to incorporate the numbering system used in the SPCC Plan for the Plant. Other Reference Numbers have been changed because the 1997 Title V Permit had duplicate Reference Numbers. For example, in the 1997 Title V Permit, both Emission Points AA-003 and AA-0010 had a Reference No. 32. By revising the Reference Number system used in this renewal application, this and other duplicate reference numbers have been avoided.

Emission Point	Description (1997 Title V References)	Proposed Ref. No	Comments
✓ AA-001	Title V, Ref. No. 1 - the 60.0 MMBTUH Wellons/Nebraska Woodwaste Boiler	40	See also Section 4
✓ AA-002	Title V, Ref. No. 26 - the 28.5 MMBTUH fuel oil fired Murray Boiler	41	
AA-003	SPCC, Ref. No. 5 - the 34,000 gal treatment cylinder containing Penta in oil.	1	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	2	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	3	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote	4	
	SPCC, Ref. No. 5 - the 27,000 gal treatment cylinder containing Creosote.	5	Changed from Creosote to Penta use
	SPCC, Ref. No. 6 - the 29,7786 gal #1 Work Tank containing Penta in oil.	6	
	SPCC, Ref. No. 7 - the 29,786 gal #2 Work Tank containing Creosote	7	
	SPCC, Ref. No. 8 - the 29,786 gal #3 Work Tank containing Creosote	8	
	SPCC, Ref. No. 9 - the 29,786 gal #4 Work Tank containing Creosote	9	Original tank replaced in July 2003
	SPCC, Ref. No. 10 - the 29,786 gal #5 Work Tank containing Creosote/Water.	10	
	SPCC, Ref. No. 11 - the 4,200 gal Measuring Tank containing Creosote	---	Removed in July 2003, not replaced
	SPCC, Ref. No. 12 - the 100,000 gal #1 Storage Tank containing Creosote	12	Changed from creosote storage to a storm water surge tank
	SPCC, Ref. No. 13 - the 100,000 gal #2 Surge Tank containing Process water	13	
	SPCC, Ref. No. 14 - the 100,000 gal #5 Storage Tank containing Diesel #2 fuel oil	14	
	SPCC, Ref. No. 15 - the 105,000 gal #6 Storage Tank containing creosote	15	
	SPCC, Ref. No. 16 - the 300,000 gal #10 Surge Tank containing process water	16	
	SPCC, Ref. No. 17 - the 250,000 gal Storm Water surge tank containing Storm Water	17	
	SPCC, Ref. No. 18 - the 1,500 gal Coagulant Tank containing water treatment system polymer additive	18	
	SPCC, Ref. No. 19 - the 2,500 gal Decant Tank containing Creo/Oil/Water	19	
	SPCC, Ref. No. 20 - the 8,000 gal Creosote Blowdown tank containing Creo/Water	20	
	SPCC, Ref. No. 21 - the 6 ft. Dia. X 60 ft. long, Air Receiver containing compressed air	---	Removed from list. Contains only compressed air

Emission Point	Description (1996 Title V References)	Proposed Ref. No	Comments
	SPCC, Ref. No. 22 - the 7 ft. Dia. X 40 ft. long Air Receiver containing compressed air	----	Removed from list. Contains only compressed air
	SPCC, Ref. No. 23 - the 8,000 gal Penta Blowdown tank containing water/penta/oil	23	
	SPCC, Ref. No. 26 - the 150,000 gal Aeration Tank containing waste water	26	
	SPCC, Ref. No. 27 - the 25,000 gal Clarifier Tank containing waste water	27	
	SPCC, Ref. No. 28 - the 15,000 gal Discharge Tank containing waste water	28	
	SPCC, Ref. No. 29 - the 8,000 gal Creosote Dehydrator	----	Removed in July 2003, not replaced
	SPCC, Ref. No. 30 - the 14,000 gal North Penta Equalization Tank containing water/penta/oil	30	
	SPCC, Ref. No. 31 - the 14,000 gal South Penta Equalization Tank containing water/penta/oil	31	
	SPCC, Ref. No. 32 - the 9,400 gal Penta Mix Tank containing Oil/Penta	32	
	SPCC, Ref. No. 33 - the 5,000 gal Penta Mix Tank containing Oil/Penta	33	
	SPCC, Ref. No. 34 - the 10,500 gal Penta Concentrate Tank containing 40% Pentachlorophenol Concentrate	34	
	SPCC, Ref. No. 35 - the 100,000 gal Stormwater Tank	35	This Tank has been added.
✓ AA-004	Title V, Ref. No. 27, the Tie Mill and Lumber Mill with cyclone	42	
AA-005	Title V, Ref. No. 33, the Boiler House natural gas fired space heater rated at 0.2 MMBTUH	43	Insignificant Activity per APC-S-6.IV. Three (3) space heaters each rated at 0.2mmbtu/hr.
AA-006	Title V, Ref. No. 35, the natural gas fired steam cleaner rated at 0.44 MMBTUH	44	Insignificant Activity per APC-S-6.IV.
AA-007	Title V, Ref. No. 36, the Wood Stove Shop Heater rated at 0.10 MMBTUH	-----	Source no longer exists. Has been removed from site.
AA-008	Title V, Ref. No. 8, the Treated Wood Storage Areas	46	
✓ AA-009	Title V, Ref. No. 31, the Pole Kiln	47	
✓ AA-010	Title V, Ref. No. 32, the Pole Peeler	48	
✓ AA-011	Title V, Ref. No. 34, Wood Fuel Preparation and handling including grinding, conveying, and silo loading	49	
✓ AA-012	Title V, Ref. No. 37, the two (2) Parts cleaners-degreasers	50	
AA-013	SPCC, Ref. No. 24, the 1,250 gal Gasoline Storage tank containing Gasoline used by company vehicles	51	Insignificant Activity per APC-S-6.IV.
AA-014	SPCC, Ref. No. 25, the 9,000 gal Diesel Storage tank used by company vehicles/Rolling Stock	52	Insignificant Activity per APC-S-6.IV.
AA-015	Title V, Ref. No. 33, the Oil Fired Murray Standby boiler room Natural Gas fired Space Heater rated at 0.1 MMBTUH	54	Insignificant Activity per APC-S-6.IV.
AA-016	Title V, Ref. No. 33, the Fire Pump building Natural Gas fired Space Heater rated at 0.02 MMBTUH	-----	Source no longer exists. Has been removed from site.

FOR OFFICIAL USE ONLY

APPLICATION RECEIPT
DATE:

APPLICATION NO.:

FOR MODIFICATION :
MINOR:
SIGNIFICANT:

STATE OF MISSISSIPPI
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL
AIR DIVISION
P.O. BOX 10385
JACKSON, MS. 39289-0385
PHONE NO.: (601) 961 - 5171

APPLICATION FOR TITLE V
AIR POLLUTION CONTROL PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT

PERMITTING ACTIVITY:

<u> </u>	INITIAL APPLICATION
<u> X </u>	MODIFICATION
<u> </u>	RENEWAL OF OPERATING PERMIT

NAME: KOPPERS INDUSTRIES INC
CITY: TIE PLANT
COUNTY: GRENADA
FACILITY No. (if known): 0960-00012

Section B Owners Information

1. Name, Address & Contact for the Owner/Applicant

A. Company Name: KOPPERS INC.

B. Mailing Address:

1. Street Address or P.O. Box: 436 SEVENTH AVENUE

2. City: PITTSBURGH

3. State: PA

4. Zip Code: 15219-1800

5. Telephone No.: (412) 227-2114

C. Contact:

1. Name: TIMOTHY R. BASILONE

2. Title: ENVIRONMENTAL MANAGER

2. Name, Address, Location and Contact for the Facility:

A. Name: KOPPERS INC.

B. Mailing Address:

1. Street Address or P.O. Box: P.O. BOX 160

2. City: TIE PLANT

3. State: MS

4. Zip Code: 38960

5. Telephone No.: (662) 226-4584

C. Site Location:

1. Street: 1 KOPPERS DRIVE

2. City: TIE PLANT

3. State: MS

4. County: GRENADA

5. Zip Code: 38960

6. Telephone No.: (662) 226-4584

Note: If the facility is located outside of the City limits, please attach a sketch or description to this application showing the approximate location of the site.

D. Contact:

1. Name: THOMAS L. HENDERSON

2. Title: PLANT MANAGER

3. SIC Code(s)(including any associated with alternate operating scenarios): 2491

4. Number of Employees: 65

5. Principal Product(s): UTILITY POLES AND RAILROAD CROSSTIES

6. Principal Raw Materials: WOOD POLES, CROSSTIES, LUMBER, CREOSOTE, PENTACHLOROPHENOL, DIESEL FUEL

7. Principal Process(es): WOOD PRESERVING

8. Maximum amount of principal product produced or raw material consumed per day:
20,000 CUBIC FEET
9. Facility Operating Schedule (Optional):
- A. Specify maximum hours per day the operation will occur: 24 HOURS
- B. Specify maximum days per week the operation will occur: 7 DAYS
- C. Specify maximum weeks per year the operation will occur: 52 WEEKS
- D. Specify the months the operation will occur: ALL
10. Is this facility a small business as defined by the Small Business Act? (Optional) NO

11. **EACH APPLICATION MUST BE SIGNED BY THE APPLICANT.**

The application must be signed by a responsible official as defined in Regulation APC-S-6, Section I.A.26.

I certify that to the best of my knowledge and belief formed after reasonable inquiry, the statements and information in this application are true, complete, and accurate, and that, as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations.

THOMAS L. HENDERSON
Printed Name of Responsible Official

PLANT MANAGER
Title

7-1-03
Date Application Signed

Thomas L. Henderson
Signature of Applicants Responsible Official

SECTION H TANK SUMMARY (page 1 of 2)

1. Emission Point No./Name: AA-003, ALL RELATED TANK DATA INCLUDED IN TANK SUMMARY DATA SPREADSHEET (FOLLOWING PAGES)

2. Was this tank constructed or modified after August 7, 1977? _____ yes _____ no
If yes please give date and explain. _____

3. Product Stored: _____
If more than one product is stored, provide the information in 4.A-E for each product.

4. Tank Data:

A. True Vapor Pressure at storage temperature: _____ psia/°F
B. Reid Vapor Pressure at storage temperature: _____ psia/°F
C. Density of product at storage temperature: _____ lb/gal
D. Molecular Weight of product vapor at storage temperature: _____ lb/lbmol
E. Throughput for most recent calendar year: _____ gal/yr
F. Tank Capacity: _____ gal
G. Tank Diameter: _____ feet
H. Tank Height / Length: _____ feet
I. Average Vapor Space Height: _____ feet
J. Tank Orientation: _____ Vertical or Horizontal
K. Type of Roof: _____ Dome or Cone
L. Is the Tank Equipped with a Vapor Recovery System? _____ Yes _____ No
If Yes, describe on separate sheet of paper and attach. Indicate efficiency.

M. Check the Type of Tank:
Fixed Roof _____ External Floating Roof
Pressure _____ Internal Floating Roof
Variable Vapor Space _____
Other, describe: _____

N. Check the Closest City:
Jackson, MS _____ Birmingham, AL
Memphis, TN _____ Montgomery, AL
New Orleans, LA _____ Baton Rouge, LA

O. Check the Tank Paint Color:
Aluminum Specular _____ Gray Light
Aluminum Diffuse _____ Gray Medium
Red _____ White
Other, describe: _____

P. Tank Paint Condition: _____ Good or Poor

Q. Check Type of Tank Loading

1. Trucks and Rail Cars

_____ Submerged Loading of clean cargo tank
_____ Submerged Loading : Dedicated Normal Service
_____ Submerged Loading : Dedicated Vapor Balance Service
_____ Splash Loading of clean cargo tank
_____ Splash Loading : Dedicated Normal Service
_____ Splash Loading : Dedicated Vapor Balance Service

2. Marine Vessels

_____ Submerged Loading: Ships
_____ Submerged Loading: Barges

SECTION H TANK SUMMARY (page 2 of 2)

R. For External Floating Roof Tanks

1. Check the Type of Tank Seal:

Mechanical Shoe

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

Liquid Mounted Resilient Seal

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

_____ Primary Seal Only

_____ With Shoe-Mounted Secondary Seal

_____ With Rim-Mounted Secondary Seal

2. Type of External Floating Roof: _____ Pontoon _____ Double-Deck

S. For Internal Floating Roof Tanks

1. Check the Type of Tank Seal:

Liquid Mounted Resilient Seal

_____ Primary Seal Only

_____ With Rim-Mounted Secondary Seal

Vapor Mounted Resilient Seal

_____ Primary Seal Only

_____ With Rim-Mounted Secondary Seal

2. Number of Roof Columns: _____

3. Length of Deck Seam _____ feet:

4. Area of Deck: _____ feet²

5. Effective Column Diameter: _____ feet

6. Check the Type of Tank:

_____ Bolted with Column Supported Roof

_____ Welded with Column Supported Roof

_____ Bolted with Self-Supported Roof

_____ Welded with Self-Supported Roof

5. Emissions Summary

1. Breathing Loss: _____ lb/hr _____ TPY

2. Working Loss: _____ lb/hr _____ TPY

3. Total Emissions: _____ lb/hr _____ TPY

6. UTM Coordinates: _____

A. Zone _____ B. North _____ C. East _____

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-06 AA-003 6	GRN-07 AA-003 7	GRN-08 AA-003 8	GRN-09 AA-003 9	GRN-10 AA-003 10	GRN-12 AA-003 12	GRN-13 AA-003 13	GRN-14 AA-003 14	GRN-15 AA-003 15	GRN-16 AA-003 16
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)											
2	Name Construction Date		#1 Work Tank 1903	#2 Work Tank 1903	#3 Work Tank 1979	#4 Work Tank 2003	#5 Work Tank 1930	#1 Cressote Storage Tank 1903	#2 Surge Tank 1903	#3 Storage Tank 1903	#4 Storage Tank 1903	#5 Surge Tank 1903
3	Material Stored		Oil / Pentachlorophenol	Cresosote	Cresosote	Cresosote	Pentachlorophenol	Cresosote	Process Water	#2 Diesel Fuel	Cresosote	Process Water
4A	True Vapor Pressure @ Storage Temperature	psia										
4B	Reld Vapor Pressure @ Storage Temperature	psia										
4C	Storage Temperature	Degrees F	150	200	200	200	150	200	60	80	150	60
4D	Density @ Storage Temperature	lb/gal	7.76	9.25	9.25	8.96	7.76	8.96	8.34	7.1	9.25	8.34
4E	Molecular Weight @ Storage Temperature	lb/mole										
4F	Throughput	gallons/yr	8,500,000	8,200,000	8,200,000	9,200,000	8,500,000	740,000	1,600,000	127,500	660,000	1,400,000
4G	Tank Capacity	gallons	29,786	29,786	29,786	29,786	29,786	100,000	100,000	100,000	105,000	300,000
4H	Tank Diameter	feet	13	13	13	13	13	28	28	27	30	40
4I	Tank Height / Length	feet	30	30	30	30	30	24	24	24	20	32
4J	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical
4L	Type of Roof (Dome or Cone)	yes or no	Dome	Dome	Dome	Dome	Dome	Cone	Cone	Cone	Cone	Cone
4M	Vapor Recovery System?		No	No	No	No	No	No	No	No	No	No
4N	Type of Tank?		Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof
4O	Closest City	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4P	Tank Paint Color	Memphis	Black	Black	Black	Aluminum	Black	Black	Black	Black	Black	Black
4Q	Tank Condition (Good or Poor)		Poor	Poor	Poor	Good	Poor	Poor	Poor	Good	Good	Poor
4R	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Bottom	Bottom	Bottom	Splash Loading - Dedicated Normal Service	Bottom	Bottom	Bottom	Bottom	Bottom	Bottom
4S	Not Applicable To Any Tanks											
5.1	Breathing Loss (See Note)	lb/yr										
5.2	Working Loss (See Note)	TPY										
5.3	Total Emissions (See Note)	lb/yr										
	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.											

SECTION H
TANK SUMMARY TABLE

Section H Reference	Item	Units	GRN-17 AA-003 17	GRN-18 AA-003 18	GRN-19 AA-003 19	GRN-20 AA-003 20	GRN-23 AA-003 23	GRN-24 AA-013 24	GRN-25 AA-014 25	GRN-26 AA-003 26	GRN-27 AA-005 27	GRN-28 AA-003 28
1	Part Reference Number Emission Point Number Reference No. (Table 2.1)											
2	Name Construction Date		Storm Surge Water 1989	Coagulant 1987	Decanting 1988	Creosote Blowdown 1980	Pentachlorophenol Blowdown 1983	Gasoline 1975	Diesel 1930	Aeration 1986	Clarifier 1986	Discharge 1986
3	Material Stored		Storm Water	Coagulant Polymer	Creosote / Oil / Water	Creosote / Water	Pentachlorophenol / Oil	Gasoline	#2 Diesel	Process Waste Water	Process Waste Water	Process Waste Water
4A	True Vapor Pressure @ Storage Temperature	psia										
4B	Real Vapor Pressure @ Storage Temperature	psia										
4C	Storage Temperature	Degrees F	60	60	60	150	100	60	60	80	80	80
4D	Density @ Storage Temperature	lb/gal	8.34	8.87	8.34	8.34	8.34	6.5	7	8.34	8.34	8.34
4E	Molecular Weight @ Storage Temperature	lb/mole										
4F	Throughput	gallons/yr	2,272,000	9,000	230,000	532,000	483,000	10,000	90,000	5,000,000	5,000,000	5,000,000
4G	Tank Capacity	gallons	250,000	1,500	2,500	8,000	8,000	1,250	9,000	150,000	25,000	15,000
4H	Tank Diameter	feet	36	8	8	10	10	4	6	40	15	15
4I	Tank Height / Length	feet	36	10	12	14	14	12	32	25	18	9
4J	Average Vapor Space Height	feet	1	1	1	1	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Vertical	Vertical	Horizontal	Horizontal	Vertical	Vertical	Vertical
4L	Type of Roof (Dome or Cone)	Yes or no	None	Dome	Dome	Dome	Dome	No	No	None	None	None
4M	Vapor Recovery System?		Open	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Open	Open	Open
4N	Type of Tank?	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4O	Closest City		Blue	Belge	Black	Black	Black	Aluminum	Aluminum	White	Blue	Blue
4P	Tank Paint Color		Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
4Q	Tank Condition (Good or Poor)		Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
4R	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Bottom	Bottom	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service
4S	Vapor Balance Service, Bottom											
4T	Not Applicable To Any Tanks											
5.1	Breathing Loss (See Note)	lb/yr										
5.2	Working Loss (See Note)	lb/yr										
5.3	Total Emissions (See Note)	lb/yr										
	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.	TPY										

SECTION H

Section H Reference	Item	Units	GRN-30 AA-003 30	GRN-31 AA-003 31	GRN-32 AA-003 32	GRN-33 AA-003 33	GRN-34 AA-003 34	GRN-35 AA-003 35
1	Plant Reference Number Emission Point Number Reference No. (Table 2.1)		North Pentachlorophenol Equalization 1983	South Pentachlorophenol Equalization 1983	Pentachlorophenol Mix 1970	Pentachlorophenol Mix 1970	Pentachlorophenol Concentrate 1980	Stormwater Process 1970
2	Name Construction Date		Water / Penta / Oil	Water / Penta / Oil	Oil / Penta	Oil / Penta	Pentachlorophenol Concentrate	Cresote / Penta / Water
3	Material Stored		Water / Penta / Oil	Water / Penta / Oil	Oil / Penta	Oil / Penta	Pentachlorophenol Concentrate	Cresote / Penta / Water
4A	True Vapor Pressure @ Storage Temperature	pais						
4B	Red Vapor Pressure @ Storage Temperature	pais						
4C	Storage Temperature	Degrees F	60	60	60	60	60	60
4D	Density @ Storage Temperature	lb/gal	8	8	7.75	7.75	9.55	8.34
4E	Molecular Weight @ Storage Temperature	lb/mole						
4F	Throughput	gallons/hr	65,000	65,000	850,000	850,000	120,000	400,000
4G	Tank Capacity	gallons	14,000	14,000	9,400	8,000	10,500	100,000
4H	Tank Diameter	feet	10	10	9	10	13	30
4I	Tank Height / Length	feet	24	24	14	15	30	20
4J	Average Vapor Space Height	feet	1	1	1	1	1	1
4K	Tank Orientation (Horizontal or Vertical)		Vertical	Vertical	Vertical	Horizontal	Vertical	Vertical
4L	Vapor Recovery System?	yes or no	Yes	Yes	Flat	No	Flat	Flat
4M	Type of Tank?		No	No	No	No	No	No
4N	Ground ON?	Memphis	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof	Fixed Roof
4O	Tank Paint Color		Memphis	Memphis	Memphis	Memphis	Memphis	Memphis
4P	Paint Condition (Good or Poor)		Black	Black	Black	Black	Aluminum	Concrete
4Q	Tank Loading (Splash Loading - Dedicated Normal Service; Splash Loading - Dedicated Vapor Balance Service; Bottom)		Poor	Poor	Poor	Poor	Good	Concrete
4R	Vapor Balance Service; Bottom		Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service	Splash Loading Dedicated Normal Service
4S	Not Applicable to Any Tanks							
5.1	Breathing Loss (See Note)	lb/hr						
5.2	Working Loss (See Note)	lb/hr						
5.3	Total Emissions (See Note)	lb/hr						
	NOTE: All tank emissions are included in Plant Summary Table of Section C of the Application.	TPY						

AA-001 1
60.0 MMBTUH woodwaste boiler *baseline operation--untreated 40 SPCC Ref. No.

AA-002 26
28.5 MMBTUH fuel oil fired boiler 41

AA-003
34,000 gal treatment cylinder/ Penta in oil 1 5
27,000 gal treatment cylinder/ Creosote 2 5
27,000 gal treatment cylinder/ Creosote 3 5
27,000 gal treatment cylinder/ Creosote 4 5
27,000 gal treatment cylinder/ Penta 5 5
29,786 gal #1 work tank/ Penta in oil 6 6
29,786 gal #2 work tank/ Creosote 7 7
29,786 gal #3 work tank/ Creosote 8 8
22,419 gal #4 work tank/ Creosote 9 9 removed
29,786 gal #4 work tank/ Creosote 9 9
29,786 gal #5 work tank/ Creosote/Water 10 10
4,200 gal measuring tank/ Creosote 11 11 removed
100,000 gal #1 storage tank/ storm water 12 12
100,000 gal #2 surge tank/ process water 13 13
100,000 gal #5 storage tank/ Diesel #2 14 14
105,000 gal #6 storage tank/ Creosote 15 15
300,000 gal #10 surge tank/ process water 16 16
250,000 gal storm water surge tank/ storm water 17 17
1,500 gal coagulant tank/ polymer additive 18 18
2,500 gal decant tank/ creosote/oil/water 19 19
8,000 gal creosote blowdown/ creosote/water 20 20
6 ft. dia. X 60 ft. long, air receiver/ compressed air removed from list (insignificant)
7 ft. dia. X 40 ft. long, air receiver/ compressed air removed from list (insignificant)
8,000 gal Penta blowdown tank/ water/penta/oil 23 23
150,000 gal aeration tank/ waste water 26 26
25,000 gal clarifier tank/ waste water 27 27
15,000 gal discharge tank/ waste water 28 28
8,000 gal creosote dehydrator 29 29 removed
14,000 gal north penta equalization tank/ water/penta/oil 30 30
14,000 gal south penta equalization tank/ water/penta/oil 31 31
9,400 gal penta mix tank/ oil/penta 32 32
5,000 gal penta mix tank/ oil/penta 33 33
10,500 gal penta concentrate tank/ 40% pentachlorophenol 34 34
100,000 gal stormwater tank 35 35 added

AA-004 27
Tie Mill and Lumber Mill with cyclone 42

AA-005 33
boiler house natural gas fired space heater rated at 0.2 43 insignificant activity

keep permit #s

MMBTUH							
AA-006	35		44	natural gas fired steam cleaner rated at 0.44 MMBTUH	insignificant activity		
AA-007	36			wood stove shop heater rated at 0.10 MMBTUH	DNE, removed from site		
AA-008	8		46	treated wood storage areas			
AA-009	31		47	pole kiln			
AA-010	32		48	pole peeler			
AA-011	34		49	wood fuel preparation and handling *			
				*wood hog grinder-->Precision Husky Chipper			
AA-012	37		50	two parts cleaners-degreasers			
AA-0013	24		51	1,250 gal gasoline storage tank/ gasoline	insignificant activity		
AA-014	25		52	9,000 gal diesel storage tank	insignificant activity		
AA-015	33		54	oil fired murray standby boiler room natrual gas fired space heater rated at 0.1 MMBTUH	insignificant activity		
AA-016	33			fire pump building natural gas fired space heater rated at 0.02 MMBTUH	DNE, removed from site		
also				Outdoor kerosene heaters (5)			
				Emergency Power Generators (3 units at 11 hp and 6000 watts; 3 units at 16 hp and 8000 watts)			