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The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

Background Report Reference

AP-42 Section Number: 10.8

Background Report Section: 4

Reference Number: 4

**Title: Report of Emissions Test: Koppers
Industries Wood Fired Boiler,
Florence, SC**

ATEC Associates, Inc

October 8, 1991

II-8-6

December 10, 1991

Mr. Barry Killian
Koppers Industries
P.O. Box 1725
Florence, South Carolina 29503-1725

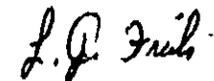
Dear Mr. Killian:

Enclosed is a copy of the acceptable results of the recent stack tests conducted on your woodfired boiler.

This summary includes the particulate, metals and HCl emission rates along with the operating parameters and compliance status.

Please review this data for accuracy and if I can be of further assistance in these matters please call.

Sincerely,



L. J. Frick
Engineering Services Division
Bureau of Air Quality Control

enclosure

cc: Phil Brantley
Jim White
Don Smith, Pee Dee District



RUPPERTS INDUSTRIES
 Woodfired Boiler
 Permit No. 1040-0008 - ID No. 01
 Florence, South Carolina
 Test Results of 9-5-91

Particulate:

Test No.	Heat Input ¹ mmBTU/Hr	Capacity ² %	Emissions		Allowable Emissions lb/mmBTU
			lb/hr	lb/mmBTU	
1	28.8	63	3.38	0.12	0.60
2	30.6	67	1.94	0.06	0.60
<u>3</u>	<u>32.3</u>	<u>70</u>	<u>2.80</u>	<u>0.09</u>	<u>0.60</u>
Avg.	30.6	67	2.71	0.09	0.60

¹ Based on Fd factor of 9600 dscf/mmBTU.

² Based on a rated capacity of 45.9 mmBtu/ Hr.

Metals:

	Run #1	Run #2	Run #3	Average	Allowable
Lead - Lbs/mgal	1.6x10 ⁻³	1.1x10 ⁻³	1.4x10 ⁻³	1.4x10 ⁻³	750x10 ⁻³
Arsenic - Lbs/mgal	5.8x10 ⁻⁴	3.2x10 ⁻⁴	4.0x10 ⁻⁴	4.4x10 ⁻⁴	380x10 ⁻⁴
Chromium - Lbs/mgal	5.9x10 ⁻⁴	3.6x10 ⁻⁴	5.1x10 ⁻⁴	4.9x10 ⁻⁴	750x10 ⁻⁴
Cadmium - Lbs/mgal	7.4x10 ⁻⁵	6.9x10 ⁻⁵	7.5x10 ⁻⁵	7.3x10 ⁻⁵	1500x10 ⁻⁵
Nickel - Lbs/mgal	1.2x10 ⁻⁴	9.2x10 ⁻⁵	7.4x10 ⁻⁵	9.5x10 ⁻⁵	91000x10 ⁻⁵

HCL:

Run No.	Emissions - Lbs/mmBtu	Allowable Emissions - Lbs/mmBTU
1	73x10 ⁻⁴	4500x10 ⁻⁴
2	6.9x10 ⁻⁴	4500x10 ⁻⁴
<u>3</u>	<u>24x10⁻⁴</u>	<u>4500x10⁻⁴</u>
Avg.	35x10 ⁻⁴	4500x10 ⁻⁴

Operation Notes:

1.) Firing 100% "treated" wood chips at a rate of 2.38 tons per hour.

Status as Tested:

S.C. Regulation 62.5, Standard No. 1, Section II (particulate) Compliance
 S.C. Regulation 62.5, Standard No. 3, Section III(I.) (metals) Compliance
 S.C. Regulation 62.5, Standard No. 3, Section III(I.) (HCL) Compliance

cc: Phil Brantley
 Jim White
 Don Smith

report received 10-15-91
 review completed 12-10-91
 reviewed by - L. J. Frick *LF*

REPORT OF EMISSION TEST
KOPPERS INDUSTRIES
Wood Fired Boiler
Florence, South Carolina
ATEC PROJECT NUMBER 5617088



KOPPERS INDUSTRIES
Post Office Box 1725
Florence, South Carolina 29501

Attention: Mr. Barry Killian

October 9, 1991

ATEC Associates, Inc.



1200 Woodruff Road, Suite C-23
Greenville, South Carolina 29607
[803] 288-8617, FAX # [803] 288-8784

October 8, 1991

Mr. Barry Killian
KOPPERS INDUSTRIES
P. O. Box 1725
Florence, South Carolina 29501

RE: WOOD FIRED BOILER
Koppers Industries
Florence, South Carolina
ATEC Project Number 5617018

Dear Barry:

Please find enclosed three copies of a report summarizing the Emission Test performed on ~~August~~ ^{Sept} 5, 1991.

Please forward one copy of this report to Mr. Max Batavia at the South Carolina Department of Health and Environmental Control in Columbia, South Carolina, and one copy to your local SCDHEC office. The third copy is for your files.

If you have any questions, please do not hesitate to call me. Thank you for allowing ATEC Associates, Inc. to assist you.

Sincerely,

ATEC ASSOCIATES, INC.

Raymond E. Bishop
Project Coordinator

H. William Chandler, P.E.
District Manager

REB:HWC:le
Enclosures

COMPLIANCE EMISSION TESTING

KOPPERS INDUSTRIES
FLORENCE, SOUTH CAROLINA

Prepared For

Koppers Industries
P. O. Box 1725
Florence, South Carolina 29501
ATEC Project Number 5617088

October 8, 1991

ATEC ASSOCIATES, INC.

*Consulting Environmental, Geotechnical and Materials Engineers
1200 Woodruff Road, Suite C-23/Greenville, South Carolina 29607/(803) 288-8617*

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EXECUTIVE SUMMARY

A TEC Environmental Consultants (A TEC) was retained by Koppers Industries to perform emission testing at their facility in Florence, South Carolina. The source tested was the Wood Fired Boiler. A TEC test The testing was performed on ^{Sept 5} Sept. 5, 1991. The testing performed determined particulate, HCL, and five metal emissions (Pb, Ar, Cr, Cd, Ni).

1.0 INTRODUCTION

A TEC Environmental Consultants (A TEC) was retained by Koppers Industries to perform compliance emission testing at their facility in Florence, South Carolina. The source tested was the Wood Fired Boiler burning treated wood chips as the fuel source.

The A TEC Project Leader for this scope of work was Mr. Gregg Mueller. Mr. Mueller was assisted in the field by Mr. Keith Dowling of A TEC. Barry Killian of Koppers Industries coordinated the testing efforts with A TEC Associates, Inc., and collected the process data during the test period. Sampling was conducted using the EPA Reference Method 5 sampling train using absorption materials in the impingers as outlined in Method 26 (HCl) and the Trace Metals Method (Pb, Ar, Cr, Cd, Ni).

2.0 DESCRIPTION OF PROCESS

2.1 Process

The Wood Fired Boiler provides heat and steam to the wood manufacturing processes. Boiler loads and temperatures are shown on the following charts (Appendix E). Treated (creosote and pentachlorophenol (diesel fuel as carrier)) wood chips were used as fuel during testing.