

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.

# RAMCON

ENVIRONMENTAL CORPORATION

March 18, 1991

Mr. Jim Warnock  
El Dorado Chemical Company  
P.O. Box 231  
El Dorado, AR 71730 351) 463-1200

Re: Sulfur Dioxide Emissions Test: Sulfuric Acid Plant

Dear Mr. Warnock:

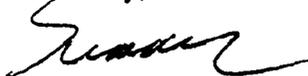
Enclosed you will find four copies of our report on the sulfur dioxide emissions test we conducted at your plant on March 13, 1991. Based on our test results, the average pounds per hour on the three test runs do pass both SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions standards set by the State of Arkansas. Therefore, the plant is operating in compliance with State Standards.

You will want to sign the report covers and send two copies to:

Mr. Mitchell Stroh  
Arkansas Dept. of Ecology  
and Pollution Control  
P.O. Box 9583  
Little Rock, AR 72219-9583

You will need to keep one copy of the report at the plant. We certainly have enjoyed working with you. Please let us know if we can be of further assistance.

Sincerely,



G. Sumner Buck, III  
President

GSBIII:kh

Enclosures

## TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	TEST RESULTS	1
III.	TEST PROCEDURES	2
IV.	EQUIPMENT USED	4
V.	LABORATORY PROCEDURES & RESULTS	5
VI.	CALCULATIONS	9
VII.	FIELD DATA	25
VIII.	CALIBRATIONS	31
IX.	RAMCON PERSONNEL	38

I. INTRODUCTION

On March 13, 1991 personnel from RAMCON Environmental Corporation conducted a source emissions test for sulfur dioxide emissions compliance at El Dorado Chemical Company's sulfuric acid plant (#SN07) located in El Dorado, Arkansas. RAMCON personnel conducting the test were Bill Turner, Team Leader, and Bobby Sanders. Heather Baldick was responsible for the laboratory analysis including taring the beakers and filters and recording final data in the laboratory record books. Custody of the samples was limited to Mr. Turner and Ms. Baldick.

The purpose of the test was to determine if the rate of sulfur dioxide emissions from this facility's sulfuric acid plant is below or equal to the allowable emissions limit set by the State of Arkansas.

II. TEST RESULTS

Table I summarizes the test results. The  $\text{SO}_2$  and  $\text{H}_2\text{SO}_4$  limitation for the State of Arkansas is stated in this facility's permit #573-AR-3 which states the allowable emissions for  $\text{SO}_2$  is 743 pounds per hour and 8.5 pounds per hour for  $\text{H}_2\text{SO}_4$ .

## SUMMARY OF TEST RESULTS

TABLE I  
March 13, 1991

<u>Test Run</u>	<u>Time</u>	<u>SO2 Emissions Lbs/Hr</u>	<u>H2SO4 Emissions Lbs/Hr</u>	<u>Isokinetic Variation</u>
1	08:58 to 10:00	315.6	0.21	97.2%
2	10:45 to 11:47	378.6	2.01	95.9%
3	12:14 to 13:18	302.6	1.63	96.3%
	Average:	332.3	1.28	

On the basis of these test results, the average pounds per hour on the three test runs was below the allowable emissions limitation set by the State of Arkansas for both SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> emissions. Therefore, the plant is operating in compliance with State Standards.

### III. TEST PROCEDURES

A. Method Used: Method 8 source sampling was conducted in accordance with requirements of the U.S. Environmental Protection Agency as set forth in 39 FR 9314, March 8, 1974, 60.93, as amended.

B. Problems Encountered: No problems were encountered that affected testing.

C. Sampling Site: The emissions test was conducted on a round stack with a diameter of 48". The sampling ports were placed 1,080" down (22.5 diameters upstream) from the top of the stack and 720" up (15.0 diameters downstream) from the last flow disturbance. Twenty four points were sampled, twelve through each traverse for 2.5 minutes each for a total testing time of 60 minutes.

<u>Points on a Diameter</u>	<u>Probe Mark</u>
1	*5.0"
2	7.2"
3	9.7"
4	12.5"
5	16.0"
6	21.0"
7	35.0"
8	40.0"
9	43.5"
10	46.3"
11	48.8"
12	51.0"

\*Measurements include a 4" standoff.

