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AP32 Section:	12.5.1
Background Chapter	3
Reference:	31
Title:	Emissions Test Report for Sulfur Dioxide and Oxides of Nitrogen, Gallatin Steel Company, Ghent, KY (Permit Number F-96-009 Revision 1). May 4, 2000. Ambient Air Services, Inc., Starke, FL.



COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION FOR AIR QUALITY
803 SCHENKEL LN
FRANKFORT KY 40601-1403
June 19, 2000

31

Ms. Valerie A. Hudson, Manager
Environmental Systems
Gallatin Steel
R.R. #1, Box 320
Ghent, Kentucky 41045-9704

Dear Ms. Hudson:

On May 4, 2000, NO_x and SO₂ compliance tests were performed on the Electric Arc Furnace baghouse at your Ghent facility. Ambient Air Services, Inc performed the testing. Gerald Slucher observed testing for the Division for Air Quality. Proper test methods were followed, and the test report was checked for completeness and accuracy. The results are summarized below.

PARAMETER	TEST RESULTS	PERMIT LIMIT
Sulfur Dioxide	0.10lb/ton, 19.0 lb/hr	0.2 lb/ton, 40 lb/hr
Nitrogen Oxides (as NO ₂)	0.19lb/ton, 36.1 lb/hr	0.51 lb/ton, 102 lb/hr

Therefore, this test report is accepted as proof of compliance for sulfur dioxide and nitrogen oxides. A copy of this letter is being sent to the Florence Regional Office for review. If you have any questions, please contact me at (502) 573-3382.

Sincerely,

Gerald Slucher, Supervisor
Source Testing Section
Technical Services Branch

GHS/mlp

cc: Edd Frazier
W. A. Clements
Florence Regional Office



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bcc: File: ID# 21-077-00018

GALSTLEAF

Facility Gallatin Steel
 Source Type Electric Arc Furnace
 Performed By Ambient Air Services Req. by E. Frazier Rvwed. By Slucher
 Date Performed 5/4/2000 Received 5/4/00 Reviewed 6/15/00

=====

	Run #1	Run #2	Run #3
-----	-----	-----	-----
Cp	0.84	0.84	0.84
Theta,min.	252	252	252
As1,ft2	201.062	201.062	201.062
Ts1,degF	132.3	135	119.3
Ps1,in.Hg.	29.8	29.85	29.87
DELP1sqrt	1.3231	1.3321	1.3087
As2,ft2	78.54	78.54	78.54
Ts2,degF	168.9	106.9	98.4
Ps2,in.Hg.	29.88	29.89	29.89
DELP2sqrt	0.3231	0.2778	0.307
As3,ft2	78.54	78.54	78.54
Ts3,degF	469.1	478.7	356.9
Ps3,in.Hg.	29.68	29.63	29.57
DELP3sqrt	1.119	1.1309	1.1406
Asout,ft2	12069.79	12069.79	12069.79
Gamma	1	1	1
Ts,degF	0	151.4	151.4
Tm,degF	85.6	89	86
Ps,in.Hg.	30.03	30	30.03
Pbar,in.Hg.	30.03	30	30.03
Vlc,ml.	9	13.4	12.5
Vm,ft3.	31.4	31.79	31.196
DELH,in.H2O	1.5	1.5	1.5
CO2%	0	0	0
O2%	20.9	20.9	20.9
CO%	0	0	0
N2%	79.1	79.1	79.1
Vwstd,ft3	0.4239	0.63114	0.58875
Vmstd,ft3.	30.5985857	30.7561352	30.3775214
Bws	0.01366428	0.02010815	0.01901262
Md	28.836	28.836	28.836
Ms	28.6879338	28.6181081	28.6299792
vs1,ft/sec	79.0861386	79.8357274	77.3496481
vs2,ft/sec	19.8738692	16.2403975	17.8086996
vs3,ft/sec	83.9410382	85.4468251	80.4592981
Q1std,dscf/hr.	50130616.8	50130979.1	49975464.6
Q2std,dscf/hr.	4646976.42	4186571.79	4665953.62
Q3std,dscf/hr.	13196684	13186914.6	14255628.6

GALSTLEAF

Qtotal,dscf/min	1132904.62	1125074.43	1148284.11
vs,out ft/sec	1.56438046	1.55356808	1.58561736

NITROGEN OXIDES

ppm	6.4	3.4	3.4
tons/hr	182	198	199
lb/scf	7.645E-07	4.0616E-07	4.062E-07
lb/hr	51.969304	27.4178724	27.983489
lbs/ton	0.2855456	0.1384741	0.1406205

Avg lbs/ton	0.1882134
-------------	-----------

SULFUR DIOXIDE

ppm	1.1	1.15	2.8
tons/hr	182	198	199
lb/scf	1.83E-07	1.9127E-07	4.657E-07
lb/hr	12.436389	12.9118174	32.086007
lb/ton	0.0683318	0.0652112	0.1612362

Avg lbs/ton	0.0982597
-------------	-----------

interoffice

MEMORANDUM

to: Jerry Slucher
from: Edd Frazier 
subject: Stack test review
date: June 15, 2000

Re: Gallatin Steel
21-077-00018/5

Please review the attached test report. This test was performed on May 4, 2000, and the NOx and SO2 emissions from the baghouse for the EAF were determined. Please inform me of your findings when your review is done.

cc: Dan Gray

attachment



June 14, 2000

Mr. Daniel Gray, Manager
Permit Review Branch
Division for Air Quality
803 Schenkel Lane
Frankfort, KY 40601-1403

RE: Air Emissions Performance Testing – May 2000
Gallatin Steel Company, Warsaw, Kentucky
I.D. # 079-1380-0018, Permit # F-96-009

Dear Mr. Gray:

Enclosed is the test report prepared by Ambient Air Services, Inc. for the air emissions performance testing conducted at Gallatin Steel Company on May 4, 2000 for SO₂ and NO_x.

Data sheets for the baghouse pressure drops, furnace shell pressures, fan amperes and damper positions are included in Appendix F of the report with the production data. The sulfur content of the charge carbon used during the test was 0.57%.

If you have any questions regarding this report, please feel free to contact me at (606) 567-3141.

Sincerely yours,

Valerie A. Hudson

Valerie A. Hudson, P.E.
Process Manager – Environmental Systems



**EMISSIONS TEST REPORT FOR
SULFUR DIOXIDE AND OXIDES OF NITROGEN**

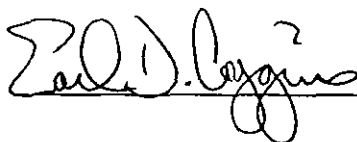
**GALLATIN STEEL COMPANY
GHENT, KENTUCKY
(PERMIT NUMBER F-96-009 REVISION 1)**

MAY 4, 2000

**AMBIENT AIR SERVICES, INC.
106 AMBIENT AIR WAY
STARKE, FLORIDA 32091
(904) 964-8440**

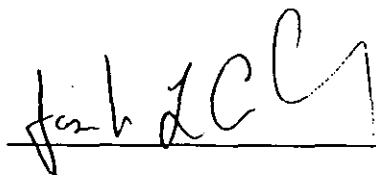
Ambient Air Services, Inc. of Starke, Florida, has completed the testing described in this report for the Gallatin Steel Company, Ghent, Kentucky facility. To the best of our knowledge and abilities we certify that all information, facts and test data are true and correct. Information supplied to AASI for use in this report from Gallatin Steel is perceived to be accurate and is used as such where necessary.

Test Team Leader:

A handwritten signature in dark ink, appearing to read "Earl D. Coggins", is written over a horizontal line.

Earl D. Coggins

Project Manager:

A handwritten signature in dark ink, appearing to read "Joe L. Cooksey", is written over a horizontal line.

Joseph L. Cooksey

1.0 EXECUTIVE SUMMARY

On May 4, 2000 emission tests were conducted at the Gallatin Steel mill located in Warsaw, Kentucky. The emission testing was conducted in accordance with the requirements listed in the Kentucky Department of Environmental Protection, Division of Air Quality, PSD Permit F-96-009. In accordance with Permit F-96-009 (Revision 1) Gallatin Steel was required to test for NO_x and SO₂ emissions. Based on results from testing conducted in the previous 2 years (1998 and 1999) testing was not required for VOC, PM, CO and lead emissions. The results from this test indicate compliance with the NO_x and SO₂ permit limitations. Table 1 summarizes the results of these testing efforts.

TABLE 1

SUMMARY OF EMISSION TEST RESULTS			
GALLATIN STEEL COMPANY - WARSAW, KENTUCKY MILL			
GHENT, KENTUCKY			
May 4, 2000			
EMISSION POINT	PARAMETER	TEST RESULTS	PERMIT LIMIT
EAF/CASTER LMF Baghouse Emission Point E1 (01)	Sulfur Dioxide (SO ₂)	0.10 lbs/ton 18.6 lbs/hr.	0.20 lbs/ton 40 lbs/hr.
	Oxides of Nitrogen	0.19 lbs/ton 36.1 lbs/hr.	0.51 lbs/ton 102.0 lbs/hr.

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APPENDIX B - Instrument Calibration Data - Baghouse Testing
APPENDIX C - Gaseous Emission Data - Baghouse Testing
APPENDIX D - Flow Rates
APPENDIX E - Field Data Sheets
APPENDIX F - Production Data, Test Notification Letter
APPENDIX G - Project Participants

2.0 INTRODUCTION

On May 4, 2000 Ambient Air Services, Inc. conducted air emission testing at Gallatin Steel Company's, Ghent, Kentucky mill. Prior to starting these tests, Kentucky Department of Environmental Protection personnel were notified of the testing schedule and provided a testing protocol for review. A copy of the Notification Letter is included in the Appendix section of this report.

Testing methods and time duration are summarized in Table 2.

TABLE 2

SUMMARY OF TESTING METHODS GALLATIN STEEL COMPANY GHENT, KENTUCKY MAY 4, 2000		
POLLUTANT-SOURCE	EPA REFERENCE METHOD	TIME DURATION
Sulfur Dioxide - E1 (01)	Method 6C	3 runs, 3 heats each, 2 compartments tested simultaneously per run
Oxides of Nitrogen - E1 (01)	Method 7E	3 runs, 3 heats each All tests conducted in Compartment 7

3.0 PROCESS DESCRIPTION

At the Ghent, Kentucky facility of Gallatin Steel, the overall objective is to reclaim scrap steel of various forms, refining this material to create rolled steel coils. This type of mill is commonly referred to as a "mini" mill. The particular aspect of this mill examined by these testing efforts were the Electric Arc Furnace (EAF) operations. The EAF by introducing heat primarily in the form of an electric arc provides the energy necessary to melt the scrap steel. Once melted and refined, the furnace is tapped and the product is transferred to the caster/tunnel furnace to be formed into rolled steel. To control the amount of particulate escaping from the melt shop building, during all operations, a baghouse filter system is employed. This system exhausts the furnace directly through fourth hole and canopy hood ducts.

4.0 GASEOUS EMISSION SAMPLING

4.1 Methodology

Continuous instruments were used to measure SO_2 and NO_x emissions. The arc furnace shop sample was obtained from the baghouse. A dilution extraction system was utilized to convey the sample gas to the sulfur dioxide analytical instruments. A fully extractive system was utilized for the NO_x instrument. The sample was obtained from a representative middle point among the bag filter banks on the clean side of the baghouse. The sample probe for the NO_x instrument was positioned in Compartment 7 of the baghouse for the duration of the test. The probe for the SO_2 sample was positioned in 6 different compartments, 2 per test run.

Gaseous emission sampling consisted of three runs, each run covering three furnace "heats". Utilizing the flow rates (SCFM) measured during each run, mass emissions were calculated in lbs/hr. and in lbs/ton.

As described in the test protocol, in order to sample a maximum number of compartments per test run, two SO_2 instruments were utilized. The sample probe for each instrument was positioned in separate compartments. Thus, a total of six compartments were tested for three heats each over the test period. The compartments were selected so that one inner and one outer compartment were sampled during each run. The compartments were randomly selected.

Historically all SO_2 measurements were conducted in Compartment Number 7. This originated at the request of the State of Kentucky. Compartment 7 was selected by the State due to the location of the installed CEMS probe. Through a baghouse consultant, Gallatin learned that the sulfur dioxide

may be different in concentration in different compartments within the baghouse. This stratification is due in part to the design of the duct work and fan configuration.

As can be seen in the results summary, SO_2 concentrations vary considerably from compartment to compartment within the baghouse. In order to achieve a more statistically valid average, compartments were selected so that one "inner" and one "outer" compartment were sampled per test run. The inner and outer compartments were selected to achieve a cross-sectional average of all compartments based on engineering judgements.

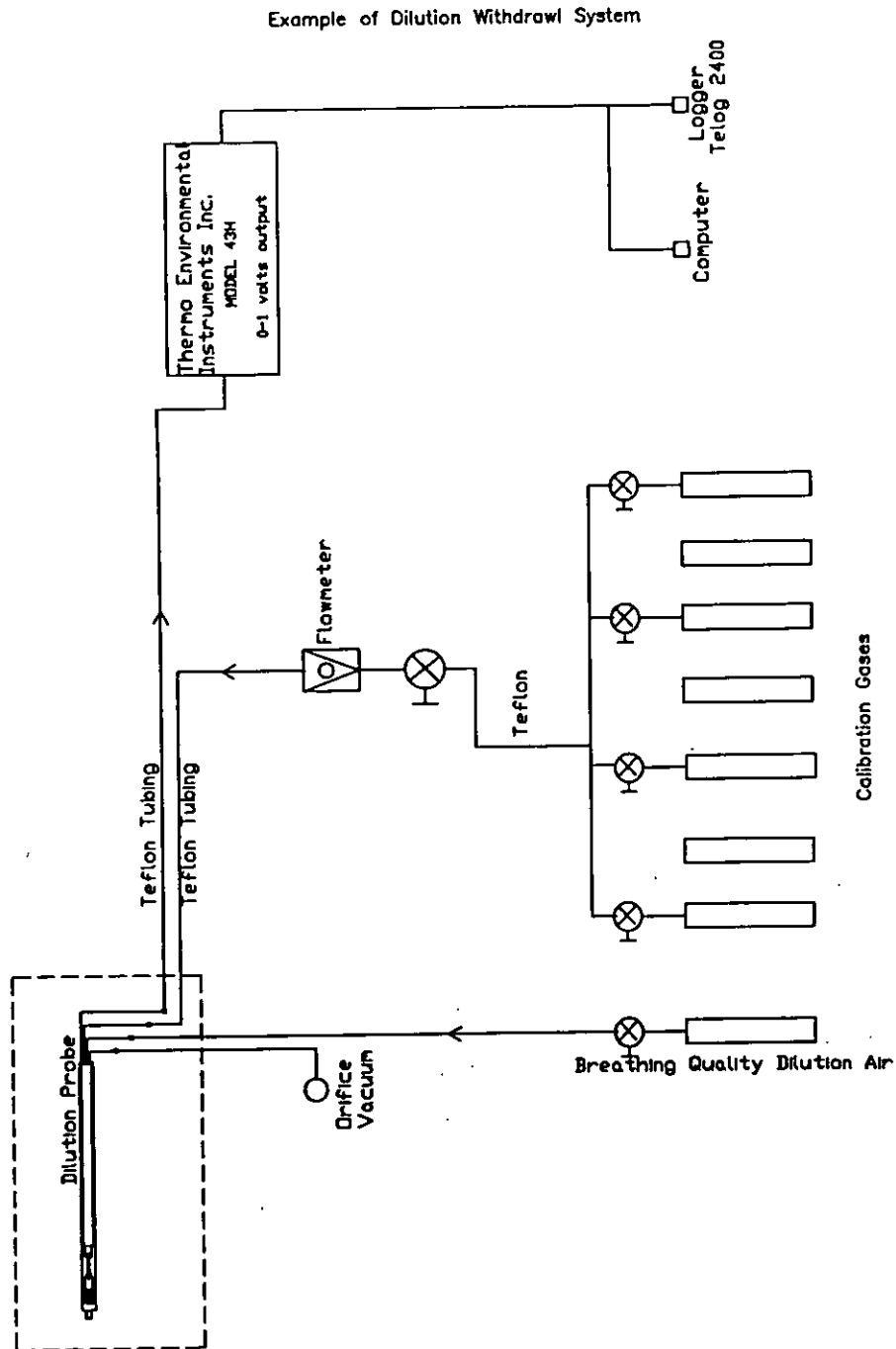


FIGURE 4-1

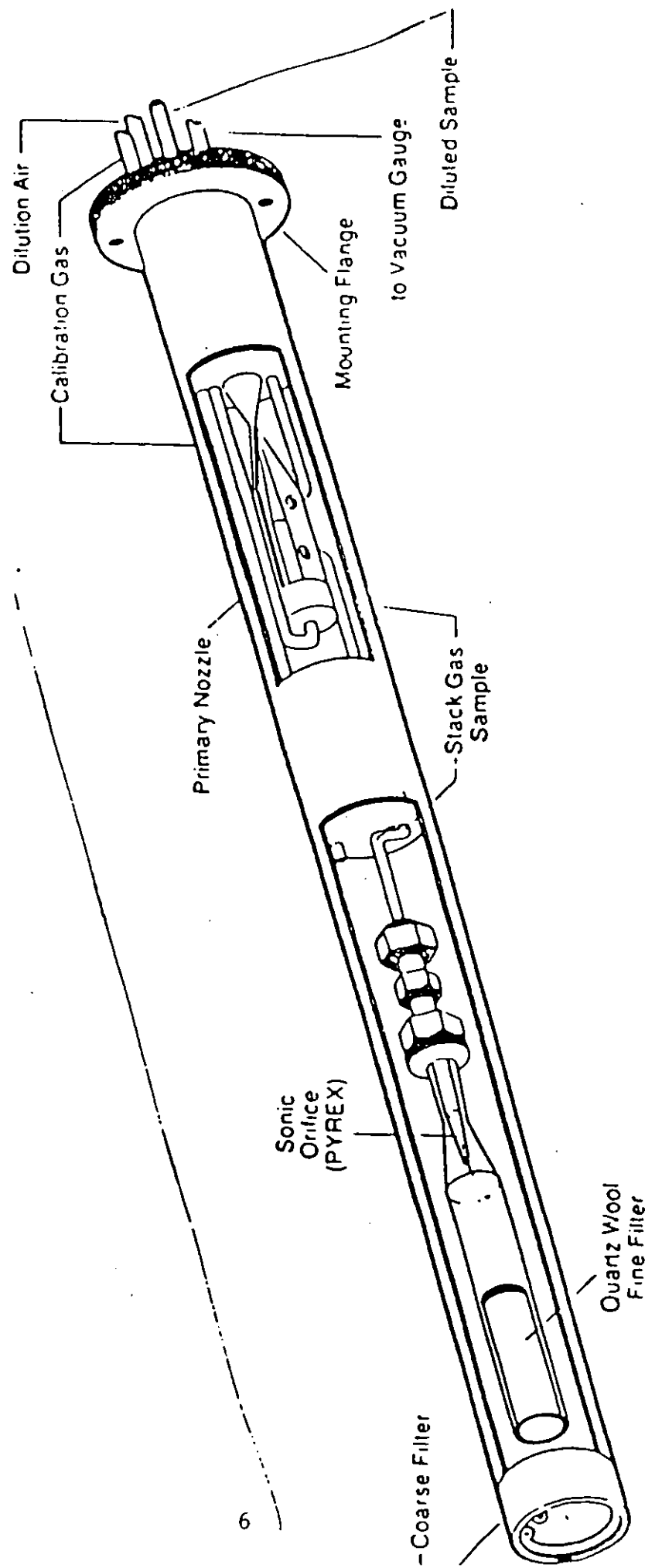


FIGURE 4-2

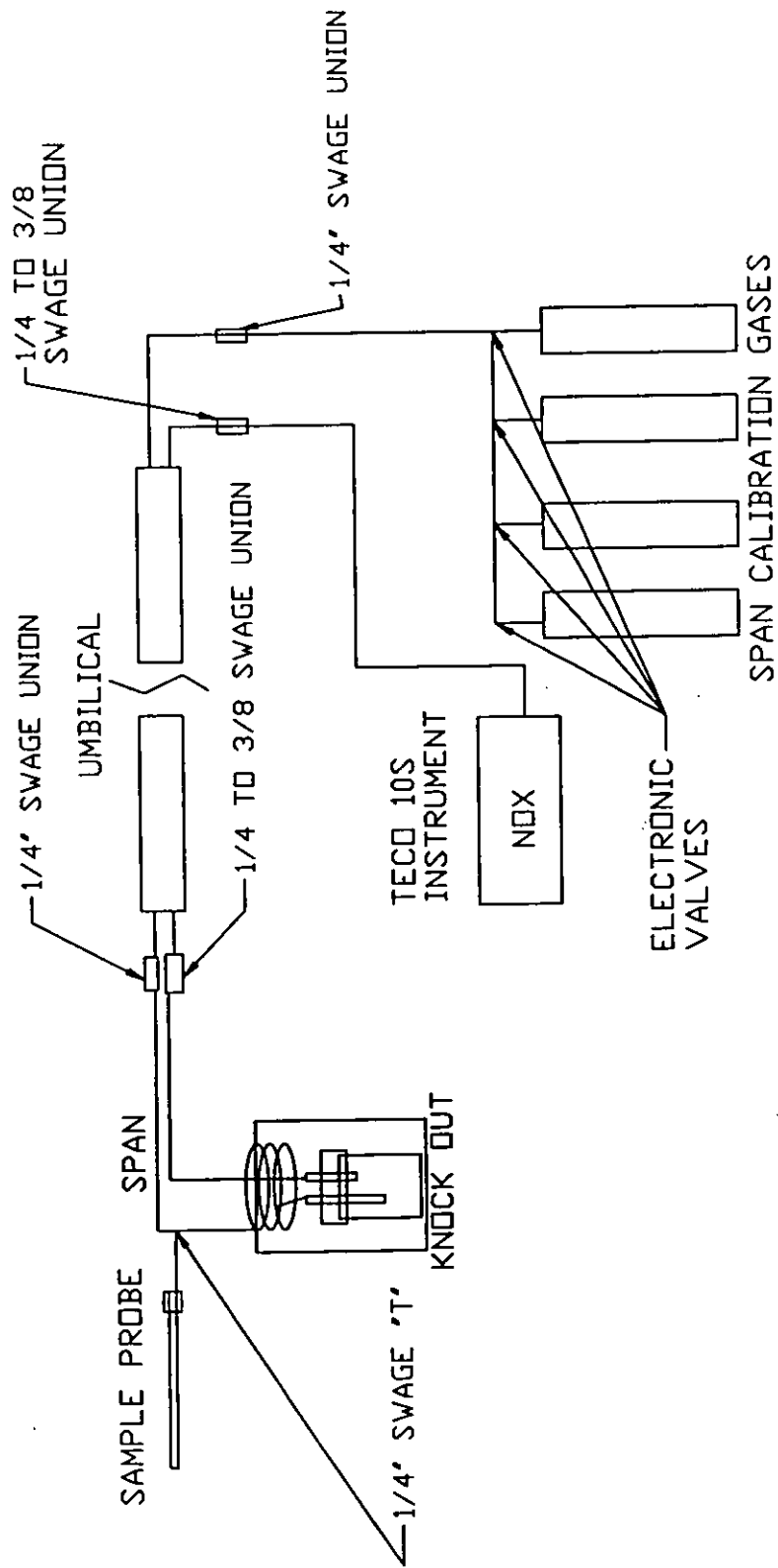


FIGURE 4-3
FULLY EXTRACTIVE WITHDRAWAL SYSTEM - NOx

Data Recording

The primary data recorder was a Telog Model 2400 electronic data recorder which is based on micro-processor technology. This recorder interrogates each analytical instrument signal on a once-every-one-second basis and for this test was instructed to accumulate 60 of these one-second readings and store the average into recorder memory. The data bank consists of a series of one minute averages. In retrieving the data from the computerized database, scaling factors were entered to reflect the appropriate calibrations which occurred immediately before and after collecting the data set of current interest. The analysis of SO₂ gaseous species was carried out as follows:

Sulfur Dioxide

Sulfur Dioxide concentrations were determined by EPA Method 6C. Two Thermo Environmental Instruments (TEI) Model 43H instruments were used. EPA protocol calibration gases of SO₂ in air were used at nominal levels of 0, 12.5, and 25.0 ppm (instrument range 0-25 ppm). Calibrations were performed before and after each test run. EPA Method 6C required correction factors were applied to the data based on the results of the calibrations.

Table 4-1 summarizes the TEI Model 43H versus those required by Method 6C.

TABLE 4-1

SULFUR DIOXIDE SYSTEM PERFORMANCE SPECIFICATIONS METHOD 6C VS THERMO ENVIRONMENTAL INSTRUMENTS MODEL 43H		
	METHOD 6C	TECO 43H
Calibration error zero, mid and high gases	Less than $\pm 2\%$ span	$\pm 1\%$ of full scale
Sampling system bias for zero, mid and high gases	Less than $\pm 5\%$ span	$\pm 1\%$ of full scale
Interference Check	Less than $\pm 7\%$ of Method 6 result	NO < 3 ppb M-Xylene < 2 ppb H ₂ O < 2% of reading
Calibration Drift	Less than $\pm 3\%$ of span over the run period	$\pm 1\%$ of full scale

Oxides of Nitrogen - Oxides of Nitrogen were measured using EPA Method 7E. Table 4-2 relates the required performance specifications of Method 7E to those presented by the manufacturer of the TEI Model 10S used in these tests. The instrument was calibrated over a nominal range of 0-50 ppm.

Results from the test are expressed in mass per unit time with all NO_x converted to the species NO₂.

At the beginning and end of each test series zero gas plus two calibration gases were used to perform calibration checks. At intermediate periods between the three runs, zero gas plus one calibration gas was used as a calibration check.

TABLE 4-2

OXIDES OF NITROGEN SYSTEM PERFORMANCE SPECIFICATIONS METHOD 7E VS THERMO ENVIRONMENTAL INSTRUMENTS MODEL 10S		
	METHOD 7E	TECO 10S
Calibration error zero, mid and high gases	Less than $\pm 2\%$ span	$\pm 1\%$ of full scale
Sampling system bias for zero, mid and high gases	Less than $\pm 5\%$ span	$\pm 1\%$ of full scale
Zero Drift	Less than $\pm 3\%$ of span over the run period	Negligible
Calibration Drift	Less than $\pm 3\%$ of span over the run period	$\pm 1\%$ of full scale

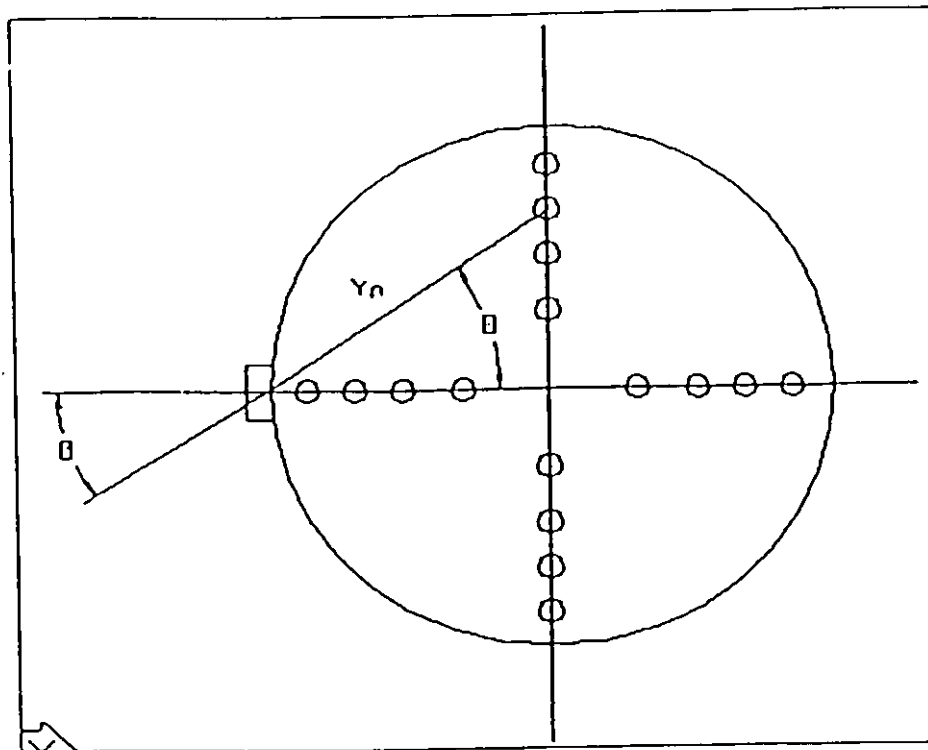
Flow, Moisture, Oxygen and Carbon Dioxide - In order to convert concentration values of parts per million NO_x and SO_2 into pounds per hour it was necessary to determine the effluent flow rate. The effluent flow rate was determined in accordance with EPA Methods 1-4.

Since the baghouse exhaust does not meet the criteria of Method 1, the flow was determined on the baghouse inlet. Specifically, there are three inlet ducts to the baghouse. Flow was measured on each of the inlet ducts and added together to get the total flow. All fresh air inlets to the compartments tested were blocked during the test. This prevented the influence of dilution air on the gas emission concentrations. Figures 4-4 and 4-5 depict the traverse points used.

In addition to the traverse data, moisture runs were conducted in accordance with EPA Method 4.

Oxygen and carbon dioxide levels were confirmed to be essentially ambient air ($0\% \text{CO}_2$, $20.9\% \text{O}_2$) using Method 3. A fyrite type analyzer was used for this purpose.

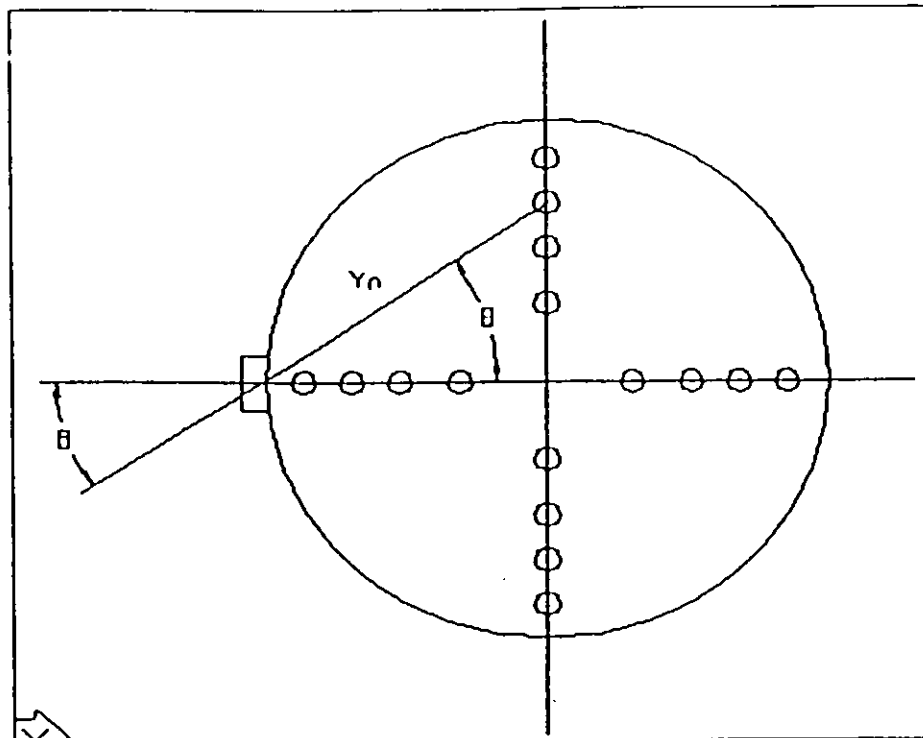
NO. 1 DUCT -- DIAMETER = 192", 16 TRAVERSE POINTS



VERTICAL TRAVERSE		HORIZONTAL TRAVERSE		
POINT	DIST. FROM WALL	POINT	Θ	Y_n
1	6.1"	1	43.0°	131.0"
2	20.2"	2	38.0°	122.0"
3	37.2"	3	31.5°	112.6"
4	62.0"	4	20.0°	101.8"
5	130.0"	5	-20.0°	101.8"
6	154.8"	6	-31.5°	112.6"
7	171.8"	7	-38.0°	122.0"
8	185.6"	8	-43.0°	131.0"

FIGURE 4-4

NO. 2 AND HOT DUCT -- DIAMETER = 120", 16 TRAVERSE POINTS



VERTICAL TRAVERSE		HORIZONTAL TRAVERSE		
POINT	DIST. FROM WALL	POINT	θ	Y_n
1	3.84	1	43.1	82.2
2	12.6	2	38.3	76.5
3	23.3	3	31.5	70.3
4	38.76	4	19.5	63.6
5	81.24	5	-19.5	63.6
6	96.72	6	-31.5	70.3
7	107.4	7	-38.3	76.5
8	116.16	8	-43.1	82.2

FIGURE 4-5

4.2 Test Results

The results of the instrumental testing for gaseous emissions are as follows:

TABLE 4-3

SUMMARY OF OXIDES OF NITROGEN EMISSION MEASUREMENTS						
GALLATIN STEEL COMPANY GHENT, KENTUCKY						
EAF/LMF/CASTER BAGHOUSE May 4, 2000						
RUN NUMBER	HEAT NUMBERS	PRODUCTION	TEST TIME	OXIDES OF NITROGEN (as NO _x)		
		TONS PER HOUR	Minutes	ppm	Lbs/hr.	Lbs/ton
1	A13562, C13217, A13563	182	180	6.4	52.0	0.29
2	A13564, C13219, A13565	198	165	3.4	28.0	0.14
3	A13566, C13221, A13567	199	148	3.4	27.4	0.14
Averages ¹		193	493	4.4	36.1	0.19

¹ Time Weighted Average

Notes: PPM = Parts per Million V.V

Lbs/Hr = Pounds per Hour

Lbs/Ton = Pounds per ton cast

All emissions measurements taken in compartment number 7 (per prior agreement/request from State of Kentucky)

TABLE 4-4

SUMMARY OF SULFUR DIOXIDE EMISSION MEASUREMENTS

GALLATIN STEEL COMPANY
GHENT, KENTUCKY

EAF/LMF/CASTER BAGHOUSE

May 4, 2000

RUN NUMBER	HEAT NUMBERS	PRODUCTION TONS PER HOUR	TEST TIME Minutes	OUTER COMPARTMENT SO ₂		INNER COMPARTMENT SO ₂		AVERAGE	
				ppm	Lb/Hr	ppm	Lb/Hr	Lb/Hr	Lb/Ton
1	A13562, C13217, A13563	182	180	1.3	14.5	0.9	10.5	12.5	0.07
2	A13564, C13219, A13565	198	165	1.8	20.8	0.5	5.9	13.4	0.07
3	A13566, C13221, A13567	199	148	2.9	32.2	2.7	30.0	31.1	0.16
Averages ¹		193	493	2.0	22.2	1.3	14.9	18.6	0.10

¹ Time Weighted Average

Notes: PPM = Parts per Million V.V

Lb/Hr = Pounds per Hour

Lb/Ton = Pounds per ton cast

Run 1 = Compartments 2 (outer) and 14 (inner)

Run 2 = Compartments 4 (outer) and 16 (inner)

Run 3 = Compartments 19 (outer) and 7 (inner)

4.3 Testing Compromises

In the test protocol/notification letter dated March 31, 2000 it was proposed to conduct 4 test runs of 3 heats each. The logic was to obtain the most representative average SO₂ data possible from the baghouse. After discussing this with Mr. Gerald Slucher on site it was decided that three test runs of three heats each would be acceptable.

Three test runs were conducted over a total of nine heats.

A second compromise - approximately 20 minutes prior to the end of the ninth heat the plant encountered a problem. The problem resulted in an undetermined amount of down time. Again, Mr. Slucher was consulted and he suggested that a representative portion of the heat had been sampled and suggested that we end the test run at that point.

APPENDICES

APPENDIX A - Sample Calculations - Gaseous Emissions

APPENDIX B - Instrument Calibration Data - Baghouse Testing

APPENDIX C - Gaseous Emission Data - Baghouse Testing

APPENDIX D - Flow Rates

APPENDIX E - Field Data Sheets

APPENDIX F - Production Data, Test Notification Letter

APPENDIX G - Project Participants

APPENDIX A
SAMPLE CALCULATIONS

Gaseous Emissions Sample Calculations

I. Concentrations as calculated from method 6c

- A. Co, Average of initial and final system calibration bias check responses for the zero gas, ppm.

Run 1, SO2

$$Co = (.037 + .078)/2 = 0.057$$

- B. Cm, Average of initial and final system calibration bias check responses for the upscale calibration gas.

Run 1, SO2

$$Cm = (8.876 + 8.937)/2 = 8.907$$

- C. Cma, Actual concentration of the upscale calibration gas ppm.

Run 1, SO2

$$Cma = 8.95$$

- D. Cgas, Effluent gas concentration, dry basis, ppm.

Run 1, SO2

$$C_{gas} = (C_{bar} - Co)(Cma / (Cm - Co))$$

A. SO2 Emissions

$$lb/hr. = \frac{(ppm) * (Mol. Wt.)}{385.6} * (flowrate)(60 \text{ min/hr})$$

Example: Mol. Wt. = 64, ppm = 2.15, flowrate = 1145162 SCFMD

$$lb/hr \text{ SO}_2 = 24.56$$

IV. Emission Rates (lb/ton)

$$Lb/ton = (lb/hr)/(lb/ton)$$

Ambient Air Services, Inc.
Environmental Consultants

106 Ambient Air Way
Starke, Florida 32091

(904) 964 - 8440
(904) 964 - 6675 fax

EXAMPLE CALCULATIONS

Plant	Gallatin Steel
Location	Ghent, Kentucky
Stack	Cold Duct No. 1
Run Date	8-25-99
Run Number	1

1. Stack Pressure, PS

Where: PB = Barometric Pressure, inches Hg
PG = Static Pressure, stack, inches
H2O

$$PS = PB + (PG \div 13.6)$$

$$PB = 29.54$$

$$PG = -3.2$$

$$PS = 29.3$$

2. Molecular Weight of stack
gas, dry, MD

$$MD = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2) + (0.28 \times \%CO)$$

$$CO_2 = 0.0$$

$$O_2 = 21.0$$

$$N_2 = 79.0$$

$$CO = 0.0$$

$$MD = 28.84$$

3. Molecular weight of stack
gas, stack conditions, MS

Where: MD = See equation 2
W = 0.037
FDA = 1 - W

$$MS = (MD \times FDA) + (18 \times W)$$

$$MD = 28.84$$

$$FDA = 0.9627039$$

$$W = 0.037$$

$$MS = 28.44$$

Ambient Air Services, Inc.
Environmental Consultants

106 Ambient Air Way
Starke, Florida 32091

(904) 964 - 8440
(904) 964 - 6675 fax

EXAMPLE CALCULATIONS - CONTINUED

Plant	Gallatin Steel
Location	Ghent, Kentucky
Stack	Cold Duct No. 1
Run Date	8-25-99
Run Number	1

4. Specific Gravity of Gas,
relative to air, GS

Where:

MS = See equation 3

$$GS = MS \div 28.99$$

$$GS = 0.981$$

5. Velocity of stack gas, feet
per minute, U

Where:

CP = Pitot Coefficient, 0.84

H = Average of the square roots of
the velocity heads, in. H₂O

$$U = 174 \times CP \times H \times$$

$$\frac{TS \times 29.92}{GS \times PS}$$

TS = Temperature of the stack,
degrees Rankin

PS = See equation 1

GS = See equation 4

$$U = 5106.9 \text{ FPM}$$

6. Stack Gas Flow Rate,
Stack conditions, cfm, QS

Where:

AS = Cross sectional area of stack
at sampling location, sq.ft.

U = See equation 5

$$QS = U \times AS$$

$$QS = 1026804 \text{ ACFM}$$

APPENDIX B

INSTRUMENT CALIBRATION DATA

- Calibration Gas Certificates

- 24.9 ppm NO_x

- 54.2 ppm NO_x

- 12.5 ppm SO₂

- 24.01 ppm SO₂

- Calibration Drift/Error

- NO_x Compartment 7

- SO₂ Inner Compartments

- SO₂ Outer Compartments

- Field Test Log



SPECTRA GASES INC.

3434 Route 22 West • Branchburg, NJ 08876 USA Tel. (908) 252-9300 • (800) 932-0624 • Fax (908) 252-0811
Shipped From 80 Industrial Drive • Alpha, NJ 08865



CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE

PROCEDURE #: G1

CUSTOMER: Gallatin Steel Company
SGI ORDER #: 144936
ITEM#: 2
P.O.#: 72399-1

CYLINDER #: CC109962
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 660

CERTIFICATION DATE: 8/10/99

EXPIRATION DATE: 8/10/2001

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Carbon Monoxide	8/2/99	24.97 ppm	25.1 ppm	+/- 1%
	8/10/99	25.13 ppm		
Nitric Oxide	8/2/99	24.79 ppm	24.8 ppm	+/- 1%
	8/10/99	24.88 ppm		
NOx			24.9 ppm	Reference Value Only

BALANCE

Nitrogen

PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Carbon Monoxide	NTRM-81679	CC88366	97.4 ppm
Nitric Oxide	NTRM-81684	CC79984	98.6 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Carbon Monoxide	Horiba VIA-510	570423011	NDIR	7/23/99
Nitric Oxide	Teco 10	10AR-34979-249	Cheml	7/20/99

THIS STANDARD WAS CERTIFIED ACCORDING TO THE EPA PROTOCOL PROCEDURES.

DO NOT USE THIS STANDARD IF THE CYLINDER PRESSURE IS LESS THAN 150 PSIG.

ANALYST:

FRED PIKULA

DATE:

8/10/99



SPECTRA GASES INC.

3434 Route 22 West • Branchburg, NJ 08876 USA Tel.: (908) 252-9300 • (800) 932-0624 • Fax: (908) 252-0811
Shipped From: 80 Industrial Drive • Alpha, NJ 08865



CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE PROCEDURE #: G1

CUSTOMER: Gallatin Steel Company
SGI ORDER #: 144936
ITEM#: 4
P.O.#: 72399-1

CYLINDER #: CC110128
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 660

CERTIFICATION DATE: 8/10/99
EXPIRATION DATE: 8/10/2001

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Carbon Monoxide	8/2/99	54.69 ppm	54.7 ppm	+/- 1%
	8/10/99	54.70 ppm		
Nitric Oxide	8/2/99	53.74 ppm	53.9 ppm	+/- 1%
	8/10/99	54.15 ppm		
NOx			54.2 ppm	Reference Value Only

BALANCE Nitrogen

PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Carbon Monoxide	NTRM-81679	CC88366	97.4 ppm
Nitric Oxide	NTRM-81684	CC79984	98.6 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Carbon Monoxide	Horiba VIA-510	570423011	NDIR	7/23/99
Nitric Oxide	Teco 10	10AR-34979-249	Cheml	7/20/99

THIS STANDARD WAS CERTIFIED ACCORDING TO THE EPA PROTOCOL PROCEDURES.
DO NOT USE THIS STANDARD IF THE CYLINDER PRESSURE IS LESS THAN 150 PSIG.

ANALYST: *F.P.*

FRED PIKULA

DATE: 8/10/99

Airgas

Specialty Gases

1 Hamilton Blvd.
Denville, AL 36582

P.O. Box 190969
Mobile, AL 36619

Phone: (334) 653-2500
FAX: (334) 653-2530

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No :	CC13785	Order No.	382975
Cylinder Pressure:	2000 PSIG	Expiration Date:	9/30/00
Certification Date	3/31/00	Laboratory:	ASG-MOBILE

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
NTRM81661	SULFUR DIOXIDE	CC31252	494.4PPM

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
SIEMENS ULTRAMAT 5E K3-685	NDIR

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
SULFUR DIOXIDE	12.50 PPM	+/-1%	G1
NITROGEN	Balance		

Analytical Results:

1st Component:

SULFUR DIOXIDE

1st Analysis Date: 3/24/00

R	494.0	S	12.50	Z	0.000	Conc	12.51
S	12.50	Z	0.000	R	494.5	Conc	12.50
Z	0.000	R	494.5	S	12.50	Conc	12.50
						AVG:	12.50

2nd Analysis Date: 3/31/00

R	494.5	S	12.50	Z	0.000	Conc	12.50
S	12.50	Z	0.000	R	494.5	Conc	12.50
Z	0.000	R	494.5	S	12.50	Conc	12.50
						AVG:	12.50

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.

Do not use cylinder below 150 psig.

Bridget M. Richardson
Approved for Release

Airgas

Specialty Gases

7 Hamilton Blvd.
Mobile, AL 36582
P.O. Box 190969
Mobile, AL 36619
Phone: (334) 653-2500
FAX: (334) 653-2530

Certificate of Analysis: E.P.A. Protocol Gas Mixture

Cylinder No : CC13853
Cylinder Pressure: 2000 PSIG
Certification Date 3/31/00

Order No. 382975
Expiration Date: 9/30/00
Laboratory: ASG-MOBILE

Reference Standard Information:

Type	Component	Cyl. Number	Concentration
NTRM81661	SULFUR DIOXIDE	CC31252	494.4PPM

Instrumentation:

Instrument/Model/Serial No.	Analytical Principle
SIEMENS ULTRAMAT 5E K3-685	NDIR

Analytical Methodology does not require correction for analytical interferences.

Certified Concentrations:

Component	Concentration	Accuracy	Procedure
SULFUR DIOXIDE	24.01 PPM	+/-1%	G1
NITROGEN	Balance		

Analytical Results:

1st Component:

SULFUR DIOXIDE

1st Analysis Date: 3/24/00

R	<u>494.0</u>	S	<u>24.00</u>	Z	<u>0.000</u>	Conc	<u>24.02</u>
S	<u>24.00</u>	Z	<u>0.000</u>	R	<u>494.5</u>	Conc	<u>24.00</u>
Z	<u>0.000</u>	R	<u>494.5</u>	S	<u>24.00</u>	Conc	<u>24.00</u>
						AVG:	<u>24.01</u>

2nd Analysis Date: 3/31/00

R	<u>494.5</u>	S	<u>24.00</u>	Z	<u>0.000</u>	Conc	<u>24.00</u>
S	<u>24.00</u>	Z	<u>0.000</u>	R	<u>494.5</u>	Conc	<u>24.00</u>
Z	<u>0.000</u>	R	<u>494.5</u>	S	<u>24.00</u>	Conc	<u>24.00</u>
						AVG:	<u>24.00</u>

Certification performed in accordance with "EPA Traceability Protocol (Sept. 1997)" using the assay procedures listed.

Do not use cylinder below 150 psig.

Bridget M. Richardson
Approved for Release

GALLATIN STEEL COMPANY

GHENT, KENTUCKY

SUMMARY OF OXIDES OF NITROGEN INSTRUMENT CALIBRATIONS

4-May-00

INSTRUMENT RANGE, PPM		60		
CALIBRATION GAS PPM		INITIAL CALIBRATION	END RUN 1	END RUN 2
0.0		0.0	0.1	0.0
24.9		24.8	24.5	24.3
54.2		54.2	N/A	N/A
CALIBRATION ERROR		((INSTRUMENT RESPONSE-CALIBRATION GAS VALUE)/(INSTRUMENT RANGE)X100		
0.0		0.0	0.2	0.0
24.9		-0.2	-0.7	-1.0
54.2		0.0	#VALUE!	#VALUE!
CALIBRATION DRIFT		((FINAL CALIBRATION - INITIAL CALIBRATION)/(INSTRUMENT RANGE)X100		
0.0		N/A	0.2	-0.2
24.9		N/A	-0.5	2.2
54.2		N/A	#VALUE!	#VALUE!
ZERO BIAS CHECKS		(SAMPLE SYSTEM-DIRECT)/RANGEX100		
SAMPLE ZERO		BIAS		
0.0		0.0		
-0.1		0.0		
CALIBRATION BIAS CHECKS				
CALIBRATION GAS, PPM		54.2		
SAMPLE		BIAS		
54.1		-0.2		
54.4		-0.2		

GALLATIN STEEL COMPANY

GHENT, KENTUCKY

SUMMARY OF SULFUR DIOXIDE CALIBRATIONS 5/4/2000 - INNER COMPARTMENTS

INSTRUMENT RANGE, PPM		25	
CALIBRATION GAS PPM		END RUN 1	END RUN 2
0.0		0.1	0.1
12.5		12.3	12.4
24.0		N/A	23.9
CALIBRATION ERROR		((INSTRUMENT RESPONSE-CALIBRATION GAS VALUE)/(INSTRUMENT RANGE)X100	
0.0		0.4	0.3
12.5		-0.8	-0.4
24.0		#VALUE!	-0.4
CALIBRATION DRIFT		((FINAL CALIBRATION - INITIAL CALIBRATION)/(INSTRUMENT RANGE)X100	
0.0		0.0	-0.1
12.5		0.4	0.8
24.0		#VALUE!	#VALUE!
ZERO BIAS CHECKS		(SAMPLE SYSTEM-DIRECT)/RANGEX100	
SAMPLE ZERO		BIAS	
N/A		#VALUE!	DILUTION PROBE
N/A		#VALUE!	USED ALL CAL
CALIBRATION BIAS CHECKS		GASES INJECTED	
CALIBRATION GAS, PPM		TO PROBE TIP ONLY	
SAMPLE		BIAS	
N/A		#VALUE!	INITIAL
N/A		#VALUE!	FINAL

GALLATIN STEEL COMPANY

GHENT, KENTUCKY

SUMMARY OF SULFUR DIOXIDE CALIBRATIONS 5/4/2000 - OUTER COMPARTMENTS

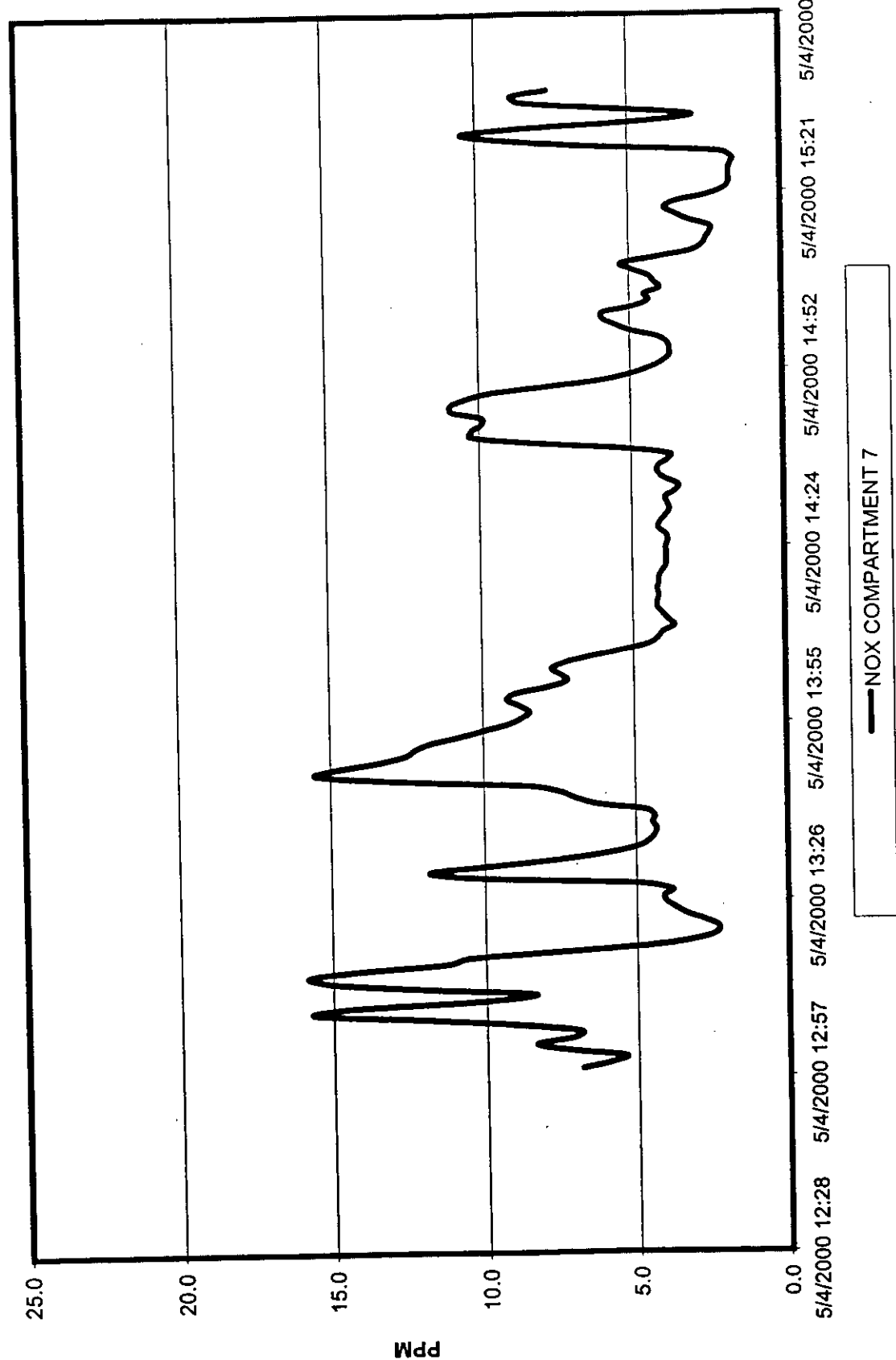
INSTRUMENT RANGE, PPM				
30				
CALIBRATION GAS PPM	INITIAL CALIBRATION	END RUN 1	END RUN 2	END RUN 3
0.0	0.0	0.1	0.1	0.0
12.5	12.4	12.7	12.5	13.2
24.0	24.1	N/A	N/A	24.9
CALIBRATION ERROR ((INSTRUMENT RESPONSE-CALIBRATION GAS VALUE)/(INSTRUMENT RANGE)X100				
0.0	0.0	0.3	0.2	-0.1
12.5	-0.3	0.7	0.0	2.3
24.0	0.3	#VALUE!	#VALUE!	3.0
CALIBRATION DRIFT ((FINAL CALIBRATION - INITIAL CALIBRATION)/(INSTRUMENT RANGE)X100				
0.0	N/A	0.3	-0.1	-0.3
12.5	N/A	1.0	-0.7	2.3
24.0	N/A	#VALUE!	#VALUE!	#VALUE!
ZERO BIAS CHECKS (SAMPLE SYSTEM-DIRECT)/RANGEX100				
SAMPLE ZERO	DIRECT ZERO	BIAS		
N/A	N/A	#VALUE!	INITIAL	DILUTION PROBE
N/A	N/A	#VALUE!	FINAL	USED ALL CAL
CALIBRATION BIAS CHECKS GASES INJECTED TO PROBE TIP ONLY				
SAMPLE	DIRECT	BIAS		
N/A	N/A	#VALUE!	INITIAL	
N/A	N/A	#VALUE!	FINAL	

APPENDIX C

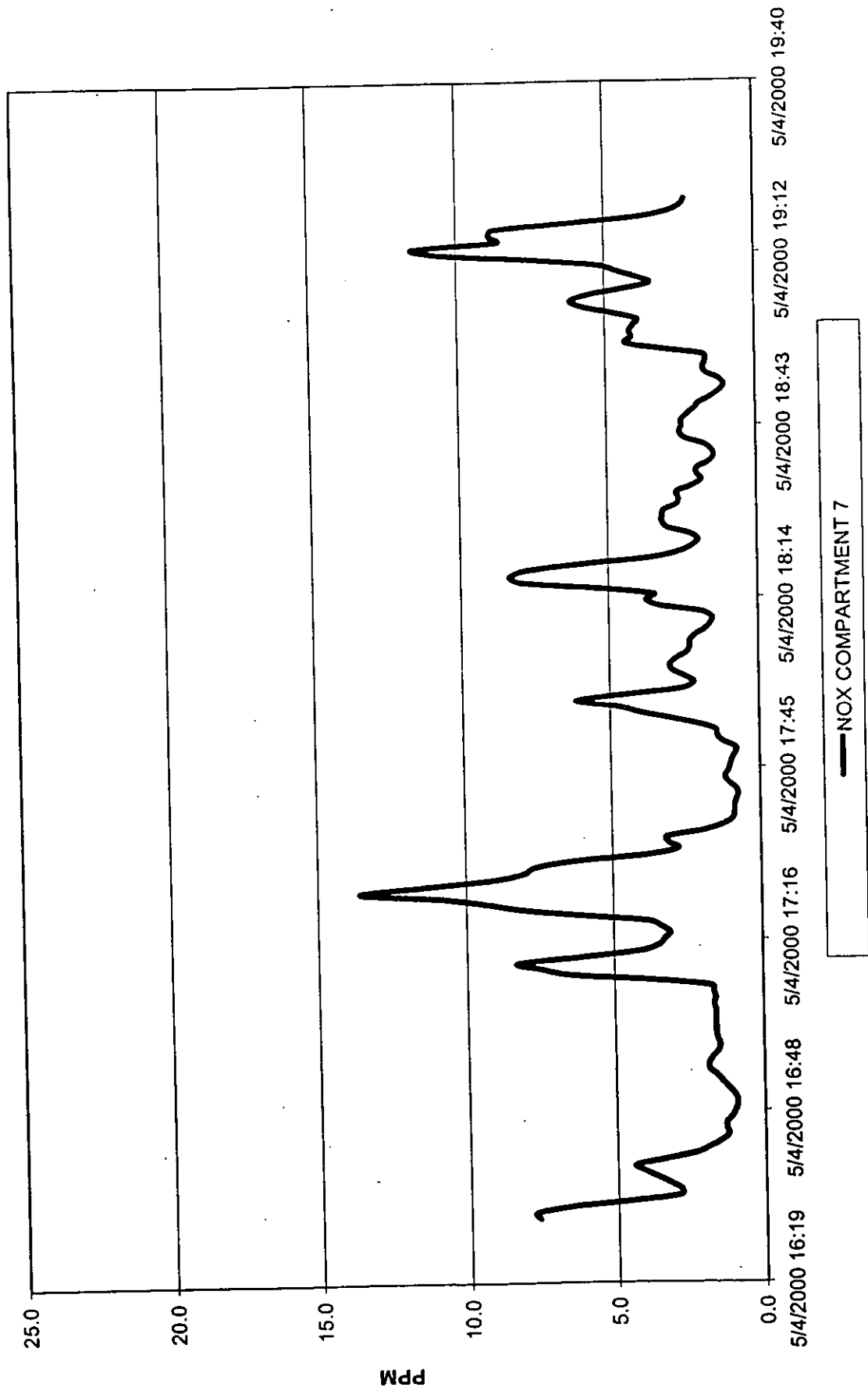
GASEOUS EMISSION DATA SO₂ and NO_x

- DATA GRAPHS
 - NO_x - Run 1, Run 2, Run 3
 - SO₂ - Run 1, Run 2, Run 3
- DATA SUMMARY
 - 5/4/00 11:00 - 5/5/00 00:03

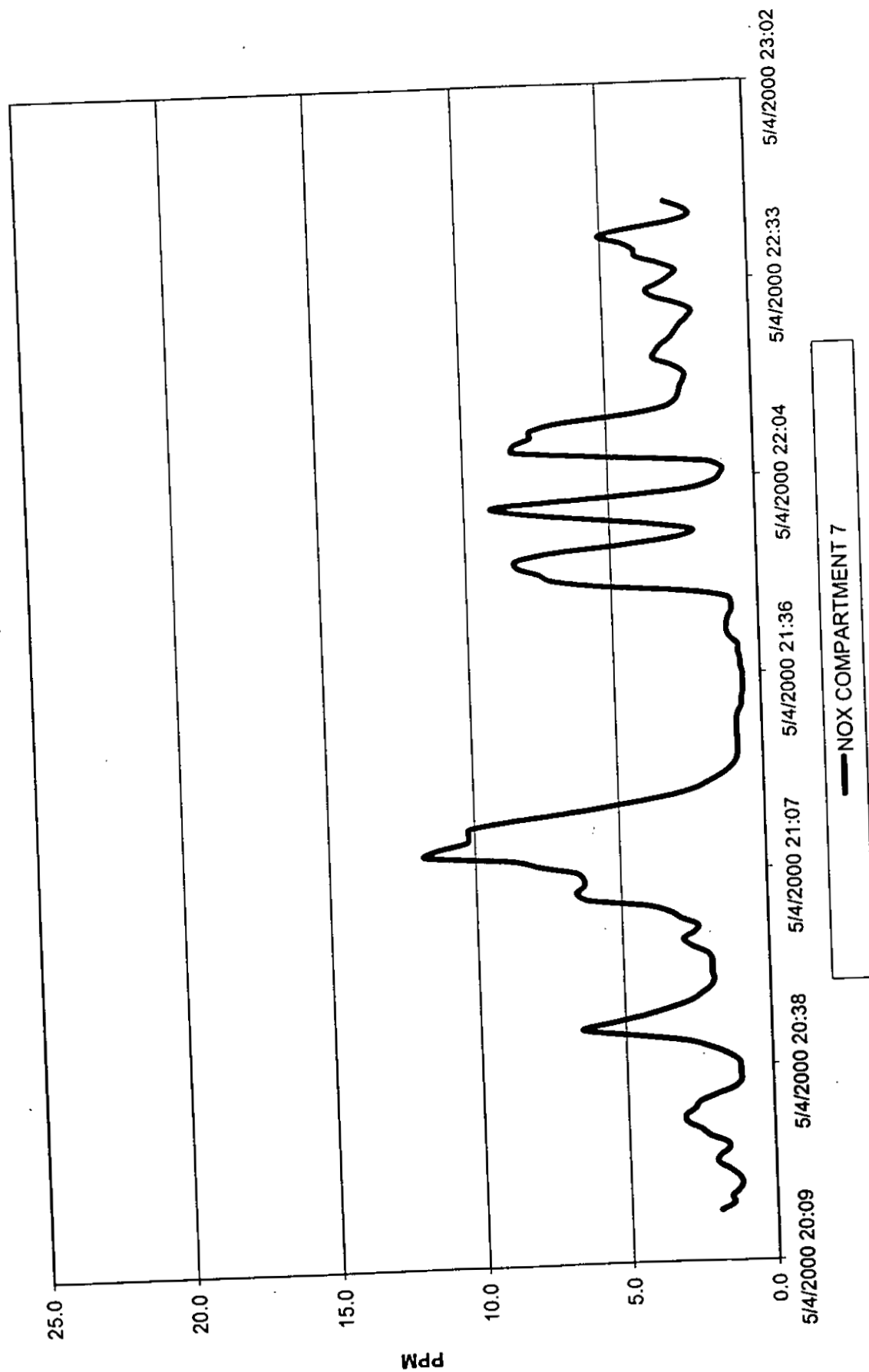
GALLATIN STEEL OXIDES OF NITROGEN TEST RUN 1



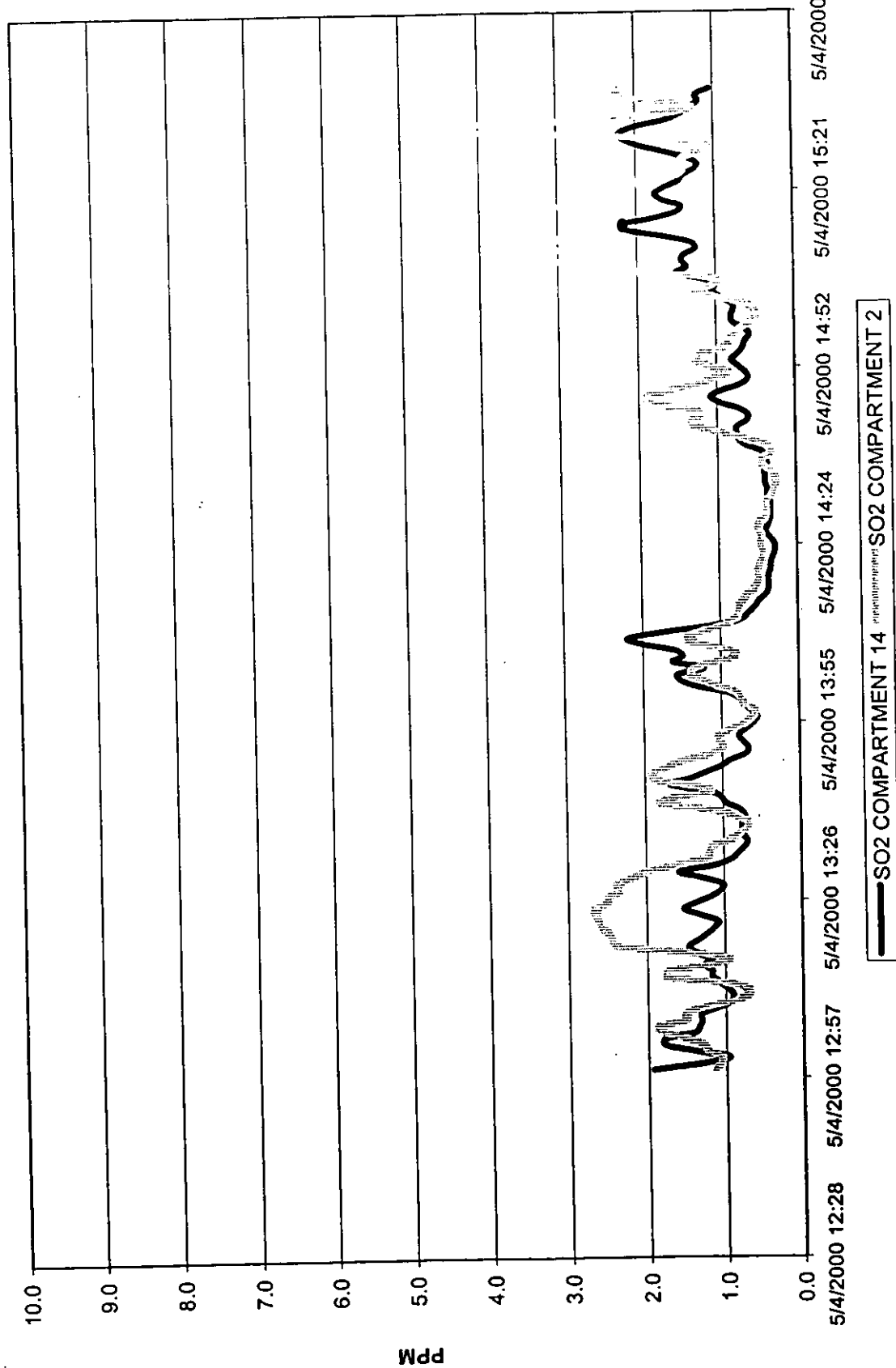
GALLATIN STEEL OXIDES OF NITROGEN TEST RUN 2



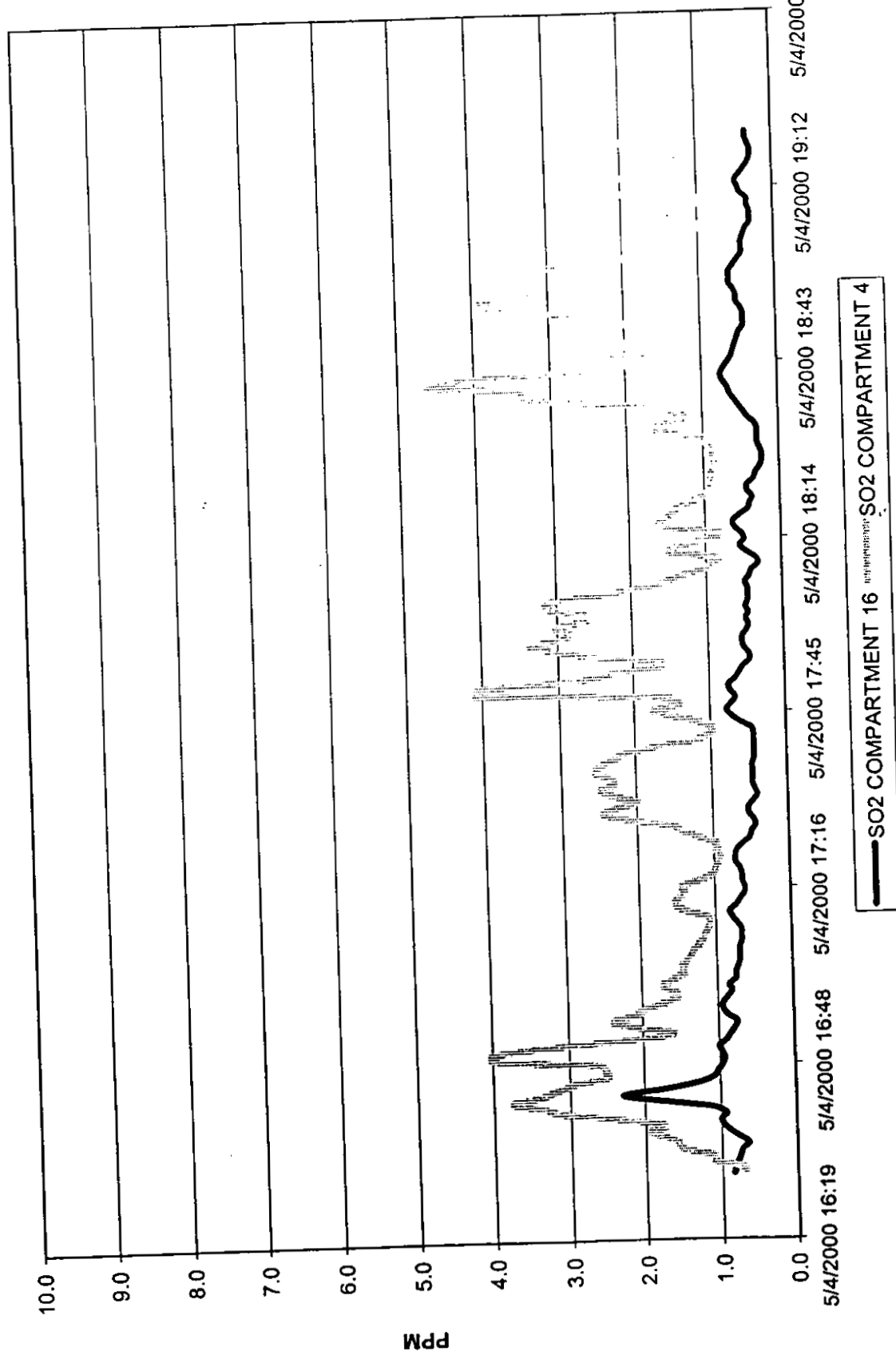
GALLATIN STEEL OXIDES OF NITROGEN TEST RUN 3



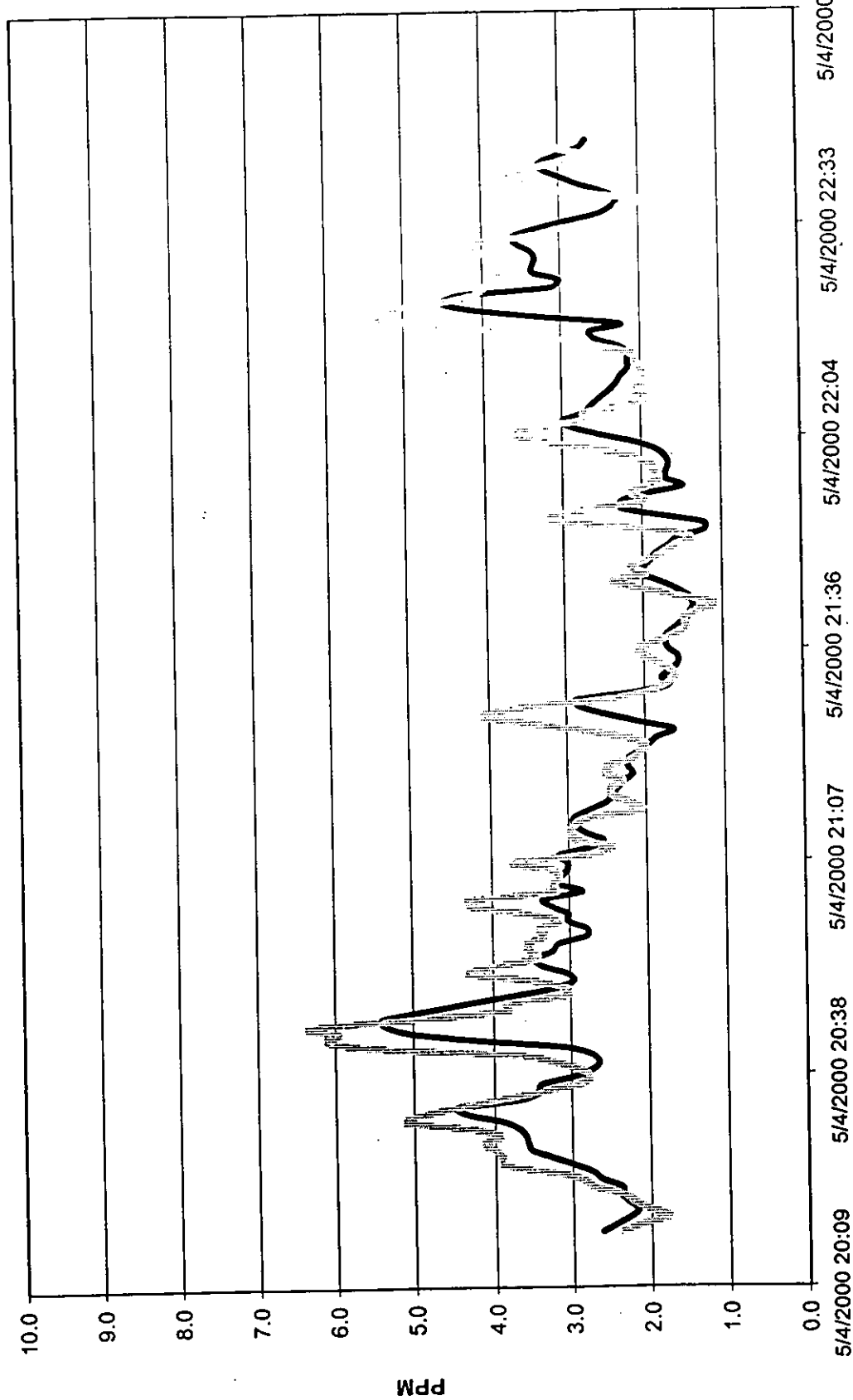
GALLATIN STEEL SULFUR DIOXIDE TEST RUN 1



GALLATIN STEEL SULFUR DIOXIDE TEST RUN 2



GALLATIN STEEL SULFUR DIOXIDE TEST RUN 3



— SO2 COMPARTMENT 7

SO2 COMPARTMENT 19

GALLATIN STEEL SO2/NOX COMPLIANCE TEST

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS			EMISSION FACTOR			
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN			SO2 OUT	NOX 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 IN LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX LBS/TON	SO2 LBS/TON
5/4/2000 11:00	28.9	1.3	1.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	28.7	1.1	833791	74919	225540	1134250						
5/4/2000 11:01	30.8	1.3	1.6	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	30.4	1.1	833791	74919	225540	1134250						
5/4/2000 11:02	40.7	1.2	1.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	40.4	1.1	833791	74919	225540	1134250						
5/4/2000 11:03	54.7	1.1	1.5	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	54.3	1.0	833791	74919	225540	1134250						
5/4/2000 11:04	26.3	1.1	1.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	26.1	1.0	833791	74919	225540	1134250						
5/4/2000 11:05	0.4	1.0	1.5	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.8	833791	74919	225540	1134250						
5/4/2000 11:06	0.2	1.0	1.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.2	0.8	833791	74919	225540	1134250						
5/4/2000 11:07	0.0	1.0	1.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.1	0.8	833791	74919	225540	1134250						
5/4/2000 11:08	0.1	0.9	1.2	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.2	0.8	833791	74919	225540	1134250						
5/4/2000 11:09	0.2	0.8	1.2	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.2	0.7	833791	74919	225540	1134250						
5/4/2000 11:10	0.3	0.8	1.1	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.3	0.7	833791	74919	225540	1134250						
5/4/2000 11:11	0.4	0.8	1.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.4	0.8	833791	74919	225540	1134250						
5/4/2000 11:12	0.4	0.9	1.2	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.4	0.8	833791	74919	225540	1134250						
5/4/2000 11:13	0.4	0.8	1.1	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.7	833791	74919	225540	1134250						
5/4/2000 11:14	0.4	0.8	1.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.7	833791	74919	225540	1134250						
5/4/2000 11:15	0.4	0.9	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.7	833791	74919	225540	1134250						
5/4/2000 11:16	0.4	0.9	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.7	833791	74919	225540	1134250						
5/4/2000 11:17	0.5	0.8	0.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.7	833791	74919	225540	1134250						
5/4/2000 11:18	0.5	0.7	0.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.5	0.8	833791	74919	225540	1134250						
5/4/2000 11:19	0.7	0.7	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.8	0.5	833791	74919	225540	1134250						
5/4/2000 11:20	6.1	0.6	0.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	6.1	0.5	833791	74919	225540	1134250						
5/4/2000 11:21	8.2	0.6	0.5	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.2	0.5	833791	74919	225540	1134250						
5/4/2000 11:22	8.5	0.7	0.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.5	0.5	833791	74919	225540	1134250						
5/4/2000 11:23	8.8	0.8	0.6	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.8	0.7	833791	74919	225540	1134250						
5/4/2000 11:24	9.5	1.0	1.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	9.5	0.8	833791	74919	225540	1134250						
5/4/2000 11:25	6.5	1.2	1.3	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	6.5	1.1	833791	74919	225540	1134250						
5/4/2000 11:26	6.0	1.2	1.3	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	6.0	1.1	833791	74919	225540	1134250						
5/4/2000 11:27	5.8	1.2	1.1	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	5.8	1.1	833791	74919	225540	1134250						
5/4/2000 11:28	14.1	1.3	1.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	14.0	1.1	833791	74919	225540	1134250						
5/4/2000 11:29	14.3	1.4	1.5	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	14.2	1.3	833791	74919	225540	1134250						
5/4/2000 11:30	8.1	1.4	1.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.1	1.3	833791	74919	225540	1134250						
5/4/2000 11:31	4.1	1.3	1.9	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	4.1	1.2	833791	74919	225540	1134250						
5/4/2000 11:32	3.8	1.2	3.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	3.8	1.1	833791	74919	225540	1134250						
5/4/2000 11:33	18.0	1.2	3.3	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	17.9	1.1	833791	74919	225540	1134250						
5/4/2000 11:34	61.8	1.4	2.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	61.1	1.3	833791	74919	225540	1134250						
5/4/2000 11:35	37.4	1.4	1.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	37.1	1.3	833791	74919	225540	1134250						
5/4/2000 11:36	42.2	1.4	1.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	41.9	1.3	833791	74919	225540	1134250						
5/4/2000 11:37	53.5	1.3	2.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	53.1	1.1	833791	74919	225540	1134250						
5/4/2000 11:38	53.8	1.4	4.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	53.4	1.3	833791	74919	225540	1134250						
5/4/2000 11:39	54.3	1.8	4.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	53.9	1.7	833791	74919	225540	1134250						
5/4/2000 11:40	54.2	1.8	3.3	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	53.8	1.7	833791	74919	225540	1134250						
5/4/2000 11:41	54.1	1.8	2.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	53.7	1.5	833791	74919	225540	1134250						
5/4/2000 11:42	44.8	1.4	2.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	44.5	1.3	833791	74919	225540	1134250						
5/4/2000 11:43	22.8	1.3	2.3	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	22.7	1.1	833791	74919	225540	1134250						
5/4/2000 11:44	24.4	1.2	1.9	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	24.3	1.1	833791	74919	225540	1134250						
5/4/2000 11:45	24.8	1.8	2.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	24.7	1.5	833791	74919	225540	1134250						
5/4/2000 11:46	25.4	2.3	3.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	25.2	2.2	833791	74919	225540	1134250						
5/4/2000 11:47	5.5	2.8	2.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	5.5	2.8	833791	74919	225540	1134250						
5/4/2000 11:48	0.2	2.4	1.7	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.2	2.4	833791	74919	225540	1134250						
5/4/2000 11:49	0.0	1.7	1.4	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	0.1	1.6	833791	74919	225540	1134250						

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM			MASS EMISSIONS				EMISSION FACTOR		
	NOX COMP 7	SO2 M	SO2 OUT		NOX 7	SO2 M	SO2 OUT	NOX -7	SO2 M	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 M LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX LBS/TON	SO2 LBS/TON
5/4/2000 11:50	0.0	1.5	2.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:51	0.0	1.5	3.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:52	0.0	1.4	2.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:53	0.2	1.7	4.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:54	0.1	1.8	6.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:55	0.0	1.7	1.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:56	0.8	1.5	0.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:57	3.2	1.4	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:58	4.8	1.2	0.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 11:59	4.5	1.0	0.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:00	4.4	1.0	0.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:01	4.3	1.2	0.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:02	4.5	1.3	0.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:03	4.8	1.3	0.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:04	5.1	1.1	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:05	5.9	1.1	0.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:06	4.8	1.1	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:07	4.8	1.4	0.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:08	4.3	1.2	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:09	4.0	1.2	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:10	3.8	1.2	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:11	3.8	1.2	0.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:12	3.7	1.0	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:13	3.6	1.0	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:14	3.6	1.1	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:15	3.8	1.5	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:16	3.6	1.7	0.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:17	3.7	1.7	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:18	3.9	1.7	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:19	4.1	1.5	0.2	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:20	4.0	1.5	5.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:21	3.9	1.7	19.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:22	3.9	2.0	22.4	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:23	3.9	2.1	23.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:24	3.9	2.1	23.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:25	3.9	1.9	24.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:26	3.8	1.5	24.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:27	3.8	1.4	26.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:28	3.9	1.8	24.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:29	4.0	1.5	24.0	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:30	3.9	1.3	21.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:31	3.8	1.0	16.3	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:32	3.8	0.9	13.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:33	3.8	0.8	12.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:34	3.8	0.6	12.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:35	3.9	2.3	12.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:36	3.7	9.2	8.9	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:37	3.6	11.5	4.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:38	3.7	12.1	2.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:39	3.7	12.2	1.8	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:40	3.8	12.8	1.6	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:41	4.1	18.4	1.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:42	4.2	7.2	1.5	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:43	3.9	3.3	1.1	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						
5/4/2000 12:44	4.0	15.7	0.9	CALS	-0.1	25.1	0.2	12.5	0.1	12.6	833791	74919	225540	1134250						

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR				
	NOX COMP 1	SO2 M	SO2 OUT		NOX 7	SO2 M	SO2 OUT	NOX 7	SO2 M	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 M LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX LBS/TON	SO2 LBS/TON			
5/4/2000 12:45	4.1	22.3	0.8	CALS	-0.1	23.1	0.2	12.3	0.1	12.6	4.1	22.9	0.7	833791	74919	223540	1134250	50.4	35.1	16.2	182	0.28	0.70
5/4/2000 12:46	4.2	23.5	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	4.2	24.1	0.7	833791	74919	223540	1134250	52.5	7.1	18.0	182	0.29	0.07
5/4/2000 12:47	4.9	23.8	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	5.0	24.5	0.7	833791	74919	223540	1134250	87.4	2.3	15.4	182	0.48	0.05
5/4/2000 12:48	8.2	24.0	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.2	24.7	0.8	833791	74919	223540	1134250	117.3	1.6	15.1	182	0.64	0.05
5/4/2000 12:49	12.0	24.1	0.8	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	12.0	24.8	0.8	833791	74919	223540	1134250	96.8	0.9	14.0	182	0.55	0.04
5/4/2000 12:50	13.0	24.2	1.0	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	12.9	24.9	0.9	833791	74919	223540	1134250	74.8	0.8	12.9	182	0.41	0.04
5/4/2000 12:51	9.5	18.3	1.1	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	8.4	16.7	1.0	833791	74919	223540	1134250	35.5	20.8	11.8	182	0.34	0.08
5/4/2000 12:52	6.2	4.8	1.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	6.2	4.9	1.4	833791	74919	223540	1134250	47.9	13.3	11.1	182	0.30	0.09
5/4/2000 12:53	6.5	0.8	1.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	6.5	0.8	1.6	833791	74919	223540	1134250	56.0	14.6	19.0	182	0.26	0.07
5/4/2000 12:54	10.8	0.3	1.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	10.8	0.2	1.4	833791	74919	223540	1134250	44.4	9.5	10.7	182	0.24	0.06
5/4/2000 12:55	14.0	0.3	1.4	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	14.4	0.1	1.3	833791	74919	223540	1134250	59.6	12.8	18.2	182	0.33	0.06
5/4/2000 12:56	12.5	0.2	1.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	12.3	0.1	1.2	833791	74919	223540	1134250	61.6	16.7	12.9	182	0.41	0.04
5/4/2000 12:57	9.2	0.2	1.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	9.2	0.0	1.1	833791	74919	223540	1134250	58.0	18.1	15.8	182	0.37	0.09
5/4/2000 12:58	7.6	1.8	1.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.6	1.5	1.1	833791	74919	223540	1134250	70.2	13.9	20.1	182	0.31	0.10
5/4/2000 12:59	6.8	1.8	1.1	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	6.8	1.0	1.0	833791	74919	223540	1134250	86.8	9.5	6.8	182	0.39	0.09
5/4/2000 13:00	8.9	1.3	1.1	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.9	1.2	1.0	833791	74919	223540	1134250	128.5	13.8	16.2	182	0.52	0.06
5/4/2000 13:01	7.2	1.4	1.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.2	1.3	1.1	833791	74919	223540	1134250	116.3	11.2	13.6	182	0.89	0.06
5/4/2000 13:02	8.3	1.3	1.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.3	1.2	1.4	833791	74919	223540	1134250	80.8	9.1	9.3	182	0.64	0.07
5/4/2000 13:03	7.1	1.8	1.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.1	1.7	1.2	833791	74919	223540	1134250	68.2	6.8	6.8	182	0.37	0.04
5/4/2000 13:04	8.7	1.3	1.9	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.7	1.2	1.5	833791	74919	223540	1134250	96.8	9.5	6.8	182	0.53	0.04
5/4/2000 13:05	11.4	1.5	1.9	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	11.4	1.2	1.4	833791	74919	223540	1134250	120.9	10.3	10.0	182	0.66	0.06
5/4/2000 13:06	15.8	1.5	1.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	15.8	1.2	1.4	833791	74919	223540	1134250	115.3	11.9	16.3	182	0.70	0.08
5/4/2000 13:07	14.4	1.1	1.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	14.3	1.0	1.2	833791	74919	223540	1134250	91.5	12.9	12.2	182	0.63	0.06
5/4/2000 13:08	10.0	0.8	0.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	9.9	0.8	0.8	833791	74919	223540	1134250	84.9	11.9	9.7	182	0.50	0.07
5/4/2000 13:09	8.4	0.9	0.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.4	0.8	0.6	833791	74919	223540	1134250	58.5	14.6	16.5	182	0.32	0.09
5/4/2000 13:10	11.9	1.0	0.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	11.8	1.1	1.6	833791	74919	223540	1134250	34.2	15.3	25.5	182	0.19	0.11
5/4/2000 13:11	14.9	1.0	1.0	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	14.9	0.8	0.6	833791	74919	223540	1134250	23.1	13.9	26.6	182	0.13	0.11
5/4/2000 13:12	15.9	1.2	1.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	15.7	1.1	1.1	833791	74919	223540	1134250	19.0	12.8	27.0	182	0.10	0.11
5/4/2000 13:13	14.2	1.2	1.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	14.2	1.1	1.5	833791	74919	223540	1134250	128.0	11.9	16.3	182	0.10	0.11
5/4/2000 13:14	11.3	1.3	1.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	11.3	1.1	1.1	833791	74919	223540	1134250	115.3	11.9	16.3	182	0.12	0.11
5/4/2000 13:15	10.5	1.2	1.0	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	10.4	1.1	0.8	833791	74919	223540	1134250	91.5	12.9	12.2	182	0.15	0.12
5/4/2000 13:16	7.2	1.4	1.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.2	1.3	1.5	833791	74919	223540	1134250	84.9	11.9	9.7	182	0.17	0.12
5/4/2000 13:17	4.2	1.5	2.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	4.2	1.4	2.3	833791	74919	223540	1134250	58.5	14.6	16.5	182	0.18	0.11
5/4/2000 13:18	2.8	1.3	2.4	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	2.8	1.2	2.4	833791	74919	223540	1134250	34.2	15.3	25.5	182	0.18	0.11
5/4/2000 13:19	2.3	1.2	2.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	2.3	1.1	2.4	833791	74919	223540	1134250	23.1	13.9	26.6	182	0.17	0.10
5/4/2000 13:20	2.3	1.1	2.6	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	2.3	1.0	2.5	833791	74919	223540	1134250	19.0	12.8	27.0	182	0.18	0.11
5/4/2000 13:21	2.7	1.1	2.6	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	2.7	1.4	2.6	833791	74919	223540	1134250	27.1	13.6	28.6	182	0.17	0.10
5/4/2000 13:22	3.3	1.3	2.6	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	3.3	1.3	2.5	833791	74919	223540	1134250	30.2	16.0	29.1	182	0.17	0.10
5/4/2000 13:23	3.7	1.5	2.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	3.7	1.4	2.6	833791	74919	223540	1134250	32.7	14.3	27.3	182	0.18	0.11
5/4/2000 13:24	4.0	1.4	2.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	4.0	1.3	2.4	833791	74919	223540	1134250	33.2	11.9	27.0	182	0.18	0.11
5/4/2000 13:25	4.1	1.2	2.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	4.1	1.1	2.4	833791	74919	223540	1134250	31.2	10.5	25.5	182	0.17	0.10
5/4/2000 13:26	3.8	1.0	2.4	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	3.8	0.9	2.3	833791	74919	223540	1134250	40.3	10.2	25.9	182	0.22	0.10
5/4/2000 13:27	4.8	1.0	2.4	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	4.8	1.2	2.1	833791	74919	223540	1134250	81.4	13.3	23.7	182	0.45	0.10
5/4/2000 13:28	10.0	1.3	2.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	10.0	1.5	1.9	833791	74919	223540	1134250	95.5	16.7	21.6	182	0.52	0.11
5/4/2000 13:29	11.8	1.6	2.0	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	11.8	1.5	1.9	833791	74919	223540	1134250	78.8	11.2	17.2	182	0.43	0.08
5/4/2000 13:30	9.7	1.1	1.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	9.7	1.0	1.5	833791	74919	223540	1134250	61.6	8.6	12.9	182	0.34	0.06
5/4/2000 13:31	7.8	0.8	1.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.8	0.8	1.1	833791	74919	223540	1134250	48.4	7.6	12.2	182	0.27	0.05
5/4/2000 13:32	6.0	0.8	1.2	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	6.0	0.7	1.1	833791	74919	223540	1134250	37.3	6.4	9.3	182	0.22	0.05
5/4/2000 13:33	4.8																						

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 M	SO2 OUT		NOX 7	SO2 M	SO2 OUT	NOX - 7	SO2 M	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 M LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONSHR	NOX LBS/TON	SO2 LBS/TON			
5/4/2000 13:40	4.4	0.7	0.8	RUN 1	-0.1	25.1	0.2	12.3	4.4	0.6	0.8	833791	74919	225540	1134250	35.7	6.7	6.6	182	0.20	0.04		
5/4/2000 13:41	4.6	0.8	1.2	RUN 1	-0.1	25.1	0.2	12.3	4.6	0.7	1.1	833791	74919	225540	1134250	37.8	7.4	12.5	182	0.21	0.05		
5/4/2000 13:42	8.2	1.0	1.8	RUN 1	-0.1	25.1	0.2	12.3	8.2	0.8	1.7	833791	74919	225540	1134250	50.4	9.5	19.4	182	0.28	0.08		
5/4/2000 13:43	7.0	1.0	1.6	RUN 1	-0.1	25.1	0.2	12.3	7.0	0.9	1.5	833791	74919	225540	1134250	56.5	10.2	17.2	182	0.31	0.08		
5/4/2000 13:44	7.5	1.2	1.1	RUN 1	-0.1	25.1	0.2	12.3	7.5	1.1	1.0	833791	74919	225540	1134250	60.8	11.9	11.8	182	0.33	0.07		
5/4/2000 13:45	8.5	1.7	1.5	RUN 1	-0.1	25.1	0.2	12.3	8.4	1.6	1.4	833791	74919	225540	1134250	68.7	17.7	15.4	182	0.38	0.09		
5/4/2000 13:46	12.7	1.4	1.9	RUN 1	-0.1	25.1	0.2	12.3	12.7	1.3	1.8	833791	74919	225540	1134250	103.1	15.0	20.8	182	0.57	0.10		
5/4/2000 13:47	15.4	1.2	1.9	RUN 1	-0.1	25.1	0.2	12.3	15.4	1.1	1.8	833791	74919	225540	1134250	124.9	12.6	20.1	182	0.69	0.09		
5/4/2000 13:48	14.8	1.0	1.7	RUN 1	-0.1	25.1	0.2	12.3	14.7	0.9	1.6	833791	74919	225540	1134250	119.9	10.2	18.0	182	0.66	0.08		
5/4/2000 13:49	13.4	0.9	1.5	RUN 1	-0.1	25.1	0.2	12.3	13.4	0.8	1.4	833791	74919	225540	1134250	108.7	8.8	15.8	182	0.60	0.07		
5/4/2000 13:50	12.6	0.7	1.1	RUN 1	-0.1	25.1	0.2	12.3	12.5	0.6	1.0	833791	74919	225540	1134250	101.6	6.4	11.6	182	0.56	0.05		
5/4/2000 13:51	12.2	0.7	1.0	RUN 1	-0.1	25.1	0.2	12.3	12.2	0.5	0.9	833791	74919	225540	1134250	99.1	6.1	10.4	182	0.54	0.04		
5/4/2000 13:52	11.7	0.7	1.0	RUN 1	-0.1	25.1	0.2	12.3	11.7	0.6	0.9	833791	74919	225540	1134250	95.0	6.7	10.0	182	0.52	0.05		
5/4/2000 13:53	10.8	0.8	1.0	RUN 1	-0.1	25.1	0.2	12.3	10.8	0.7	1.0	833791	74919	225540	1134250	87.4	7.4	10.7	182	0.48	0.05		
5/4/2000 13:54	10.0	0.7	0.9	RUN 1	-0.1	25.1	0.2	12.3	10.0	0.6	0.8	833791	74919	225540	1134250	81.4	6.4	8.9	182	0.45	0.04		
5/4/2000 13:55	9.2	0.6	0.6	RUN 1	-0.1	25.1	0.2	12.3	9.2	0.5	0.8	833791	74919	225540	1134250	74.8	5.4	6.8	182	0.41	0.03		
5/4/2000 13:56	8.7	0.6	0.6	RUN 1	-0.1	25.1	0.2	12.3	8.7	0.4	0.5	833791	74919	225540	1134250	68.7	4.7	5.7	182	0.39	0.03		
5/4/2000 13:57	8.5	0.6	0.6	RUN 1	-0.1	25.1	0.2	12.3	8.4	0.5	0.5	833791	74919	225540	1134250	70.7	5.4	5.3	182	0.38	0.03		
5/4/2000 13:58	8.9	0.7	0.7	RUN 1	-0.1	25.1	0.2	12.3	8.8	0.6	0.6	833791	74919	225540	1134250	71.2	6.4	6.8	182	0.39	0.04		
5/4/2000 13:59	9.2	0.8	0.8	RUN 1	-0.1	25.1	0.2	12.3	9.2	0.6	0.7	833791	74919	225540	1134250	74.8	7.1	7.5	182	0.41	0.04		
5/4/2000 14:00	8.0	0.9	0.8	RUN 1	-0.1	25.1	0.2	12.3	8.8	0.6	0.6	833791	74919	225540	1134250	64.1	13.6	10.7	182	0.35	0.07		
5/4/2000 14:01	7.9	1.3	1.0	RUN 1	-0.1	25.1	0.2	12.3	7.9	1.2	1.1	833791	74919	225540	1134250	58.5	16.0	12.9	182	0.32	0.08		
5/4/2000 14:02	7.2	1.5	1.2	RUN 1	-0.1	25.1	0.2	12.3	7.2	1.4	1.1	833791	74919	225540	1134250	59.1	17.0	10.7	182	0.32	0.08		
5/4/2000 14:03	7.4	1.5	1.4	RUN 1	-0.1	25.1	0.2	12.3	7.4	1.4	1.1	833791	74919	225540	1134250	60.1	16.3	14.7	182	0.33	0.09		
5/4/2000 14:04	7.7	1.2	1.3	RUN 1	-0.1	25.1	0.2	12.3	7.7	1.1	1.2	833791	74919	225540	1134250	62.6	12.6	14.0	182	0.34	0.07		
5/4/2000 14:05	7.3	1.6	1.0	RUN 1	-0.1	25.1	0.2	12.3	7.3	1.5	1.0	833791	74919	225540	1134250	59.1	17.0	10.7	182	0.32	0.08		
5/4/2000 14:06	6.5	1.5	0.8	RUN 1	-0.1	25.1	0.2	12.3	6.5	1.4	0.7	833791	74919	225540	1134250	52.5	15.7	7.9	182	0.29	0.06		
5/4/2000 14:07	5.4	1.6	0.9	RUN 1	-0.1	25.1	0.2	12.3	5.4	1.5	0.8	833791	74919	225540	1134250	43.8	16.7	8.9	182	0.24	0.07		
5/4/2000 14:08	4.5	2.0	1.3	RUN 1	-0.1	25.1	0.2	12.3	4.5	1.8	1.2	833791	74919	225540	1134250	36.8	21.5	13.6	182	0.20	0.10		
5/4/2000 14:09	4.2	2.2	1.4	RUN 1	-0.1	25.1	0.2	12.3	4.2	2.1	1.3	833791	74919	225540	1134250	34.2	23.9	15.1	182	0.19	0.11		
5/4/2000 14:10	4.0	1.7	1.3	RUN 1	-0.1	25.1	0.2	12.3	4.0	1.6	1.2	833791	74919	225540	1134250	32.7	23.9	15.1	182	0.19	0.11		
5/4/2000 14:11	3.8	1.0	1.0	RUN 1	-0.1	25.1	0.2	12.3	3.8	0.9	0.8	833791	74919	225540	1134250	29.7	10.5	10.0	182	0.16	0.06		
5/4/2000 14:12	3.8	0.7	0.8	RUN 1	-0.1	25.1	0.2	12.3	3.8	0.8	0.7	833791	74919	225540	1134250	31.2	6.7	7.9	182	0.17	0.04		
5/4/2000 14:13	4.0	0.6	0.8	RUN 1	-0.1	25.1	0.2	12.3	4.0	0.6	0.7	833791	74919	225540	1134250	32.7	5.7	7.5	182	0.18	0.04		
5/4/2000 14:14	4.2	0.6	0.8	RUN 1	-0.1	25.1	0.2	12.3	4.2	0.4	0.7	833791	74919	225540	1134250	34.2	4.0	6.8	182	0.19	0.03		
5/4/2000 14:15	4.2	0.3	0.7	RUN 1	-0.1	25.1	0.2	12.3	4.2	0.4	0.6	833791	74919	225540	1134250	31.7	3.0	6.1	182	0.19	0.03		
5/4/2000 14:16	4.1	0.4	0.6	RUN 1	-0.1	25.1	0.2	12.3	4.1	0.3	0.5	833791	74919	225540	1134250	31.7	3.0	6.1	182	0.19	0.03		
5/4/2000 14:17	4.2	0.4	0.5	RUN 1	-0.1	25.1	0.2	12.3	4.2	0.2	0.4	833791	74919	225540	1134250	31.7	2.6	5.0	182	0.19	0.02		
5/4/2000 14:18	4.1	0.4	0.5	RUN 1	-0.1	25.1	0.2	12.3	4.1	0.2	0.4	833791	74919	225540	1134250	31.7	2.6	4.6	182	0.19	0.02		
5/4/2000 14:19	4.1	0.4	0.5	RUN 1	-0.1	25.1	0.2	12.3	4.1	0.2	0.4	833791	74919	225540	1134250	31.7	2.3	4.6	182	0.18	0.02		
5/4/2000 14:20	4.0	0.3	0.3	RUN 1	-0.1	25.1	0.2	12.3	4.0	0.2	0.4	833791	74919	225540	1134250	31.7	2.3	4.3	182	0.17	0.02		
5/4/2000 14:21	3.9	0.3	0.5	RUN 1	-0.1	25.1	0.2	12.3	3.9	0.2	0.4	833791	74919	225540	1134250	31.7	1.8	3.9	182	0.17	0.02		
5/4/2000 14:22	3.8	0.3	0.4	RUN 1	-0.1	25.1	0.2	12.3	3.8	0.2	0.3	833791	74919	225540	1134250	31.7	1.6	3.9	182	0.17	0.02		
5/4/2000 14:23	3.9	0.3	0.4	RUN 1	-0.1	25.1	0.2	12.3	3.9	0.1	0.3	833791	74919	225540	1134250	31.7	1.6	4.3	182	0.17	0.02		
5/4/2000 14:24	3.8	0.3	0.4	RUN 1	-0.1	25.1	0.2	12.3	3.8	0.2	0.3	833791	74919	225540	1134250	31.2	2.3	3.8	182	0.17	0.02		
5/4/2000 14:25	3.8	0.3	0.4	RUN 1	-0.1	25.1	0.2	12.3	3.8	0.2	0.3	833791	74919	225540	1134250	31.7	2.3	3.5	182	0.18	0.02		
5/4/2000 14:26	3.9	0.3	0.4	RUN 1	-0.1	25.1	0.2	12.3	3.9	0.2	0.3	833791	74919	225540	1134250	33.2	2.3	3.2	182	0.17	0.02		
5/4/2000 14:27	4.1	0.4	0.5	RUN 1	-0.1	25.1	0.2	12.3	4.1	0.2	0.4	833791	74919	225540	1134250	31.7	2.3	3.2	182				

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR		
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 IN LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX	LBS/TON	SO2 LBS/TON			
5/4/2000 14:35	3.9	0.4	0.3	RUN 1	-0.1	25.1	0.2	3.9	0.3	0.2	833791	74919	225540	1134250	31.7	3.0	2.1	182	0.17	0.01	
5/4/2000 14:36	4.1	0.4	0.3	RUN 1	-0.1	25.1	0.2	4.1	0.3	0.2	833791	74919	225540	1134250	31.7	3.0	2.6	182	0.19	0.02	
5/4/2000 14:37	4.1	0.4	0.4	RUN 1	-0.1	25.1	0.2	4.1	0.2	0.3	833791	74919	225540	1134250	33.7	2.6	3.9	182	0.19	0.02	
5/4/2000 14:38	3.8	0.4	0.4	RUN 1	-0.1	25.1	0.2	3.8	0.3	0.3	833791	74919	225540	1134250	31.2	3.0	3.5	182	0.17	0.02	
5/4/2000 14:39	3.7	0.4	0.3	RUN 1	-0.1	25.1	0.2	3.7	0.3	0.2	833791	74919	225540	1134250	30.2	3.3	2.5	182	0.17	0.02	
5/4/2000 14:40	5.4	0.6	0.4	RUN 1	-0.1	25.1	0.2	5.4	0.5	0.3	833791	74919	225540	1134250	43.6	5.7	3.2	182	0.24	0.02	
5/4/2000 14:41	6.5	0.7	0.6	RUN 1	-0.1	25.1	0.2	6.5	0.6	0.5	833791	74919	225540	1134250	69.2	6.7	6.1	182	0.36	0.04	
5/4/2000 14:42	10.3	0.8	0.9	RUN 1	-0.1	25.1	0.2	10.3	0.6	0.6	833791	74919	225540	1134250	83.4	7.1	8.9	182	0.46	0.04	
5/4/2000 14:43	10.2	0.8	1.2	RUN 1	-0.1	25.1	0.2	10.2	0.6	1.1	833791	74919	225540	1134250	82.8	7.1	12.9	182	0.46	0.05	
5/4/2000 14:44	9.9	0.8	1.3	RUN 1	-0.1	25.1	0.2	9.9	0.5	1.2	833791	74919	225540	1134250	80.3	5.7	14.0	182	0.44	0.05	
5/4/2000 14:45	9.9	0.8	1.2	RUN 1	-0.1	25.1	0.2	9.9	0.5	1.1	833791	74919	225540	1134250	80.3	5.4	12.5	182	0.44	0.05	
5/4/2000 14:46	10.8	0.7	1.3	RUN 1	-0.1	25.1	0.2	10.8	0.6	1.2	833791	74919	225540	1134250	87.9	6.7	14.0	182	0.46	0.06	
5/4/2000 14:47	10.9	1.0	1.9	RUN 1	-0.1	25.1	0.2	10.9	0.8	1.6	833791	74919	225540	1134250	88.4	9.5	20.1	182	0.49	0.06	
5/4/2000 14:48	10.5	1.1	1.9	RUN 1	-0.1	25.1	0.2	10.5	0.8	1.8	833791	74919	225540	1134250	87.9	10.9	20.5	182	0.47	0.09	
5/4/2000 14:49	9.7	0.9	1.6	RUN 1	-0.1	25.1	0.2	9.7	0.8	1.6	833791	74919	225540	1134250	84.9	9.1	17.2	182	0.43	0.07	
5/4/2000 14:50	7.8	0.7	1.3	RUN 1	-0.1	25.1	0.2	7.8	0.6	1.2	833791	74919	225540	1134250	63.1	8.4	13.3	182	0.35	0.05	
5/4/2000 14:51	6.0	0.6	1.0	RUN 1	-0.1	25.1	0.2	6.0	0.5	0.9	833791	74919	225540	1134250	48.9	5.4	10.4	182	0.27	0.04	
5/4/2000 14:52	5.0	0.5	0.8	RUN 1	-0.1	25.1	0.2	5.0	0.5	0.8	833791	74919	225540	1134250	40.8	5.7	8.6	182	0.22	0.04	
5/4/2000 14:53	4.4	0.7	1.1	RUN 1	-0.1	25.1	0.2	4.4	0.6	1.0	833791	74919	225540	1134250	35.7	6.7	11.1	182	0.20	0.05	
5/4/2000 14:54	3.9	0.8	1.3	RUN 1	-0.1	25.1	0.2	3.9	0.5	0.8	833791	74919	225540	1134250	32.2	7.8	13.3	182	0.19	0.06	
5/4/2000 14:55	3.7	0.7	1.2	RUN 1	-0.1	25.1	0.2	3.7	0.6	1.1	833791	74919	225540	1134250	30.2	6.7	12.2	182	0.17	0.05	
5/4/2000 14:56	3.7	0.7	0.9	RUN 1	-0.1	25.1	0.2	3.7	0.6	1.1	833791	74919	225540	1134250	30.2	6.1	6.2	182	0.17	0.04	
5/4/2000 14:57	3.8	0.6	0.6	RUN 1	-0.1	25.1	0.2	3.8	0.5	0.7	833791	74919	225540	1134250	33.2	5.0	7.9	182	0.18	0.04	
5/4/2000 14:58	4.1	0.8	0.6	RUN 1	-0.1	25.1	0.2	4.1	0.4	0.7	833791	74919	225540	1134250	40.3	5.7	8.6	182	0.22	0.04	
5/4/2000 14:59	4.9	0.8	0.7	RUN 1	-0.1	25.1	0.2	4.9	0.5	0.8	833791	74919	225540	1134250	44.4	7.4	5.3	182	0.24	0.04	
5/4/2000 15:00	5.5	0.8	0.6	RUN 1	-0.1	25.1	0.2	5.5	0.7	0.4	833791	74919	225540	1134250	47.9	7.8	4.3	182	0.26	0.03	
5/4/2000 15:01	5.9	0.8	0.5	RUN 1	-0.1	25.1	0.2	5.9	0.7	0.5	833791	74919	225540	1134250	47.9	7.4	4.6	182	0.26	0.03	
5/4/2000 15:02	5.9	0.8	0.5	RUN 1	-0.1	25.1	0.2	5.9	0.7	0.4	833791	74919	225540	1134250	39.8	7.4	6.1	182	0.22	0.04	
5/4/2000 15:03	4.8	0.8	0.6	RUN 1	-0.1	25.1	0.2	4.8	0.8	0.8	833791	74919	225540	1134250	35.7	9.1	9.7	182	0.20	0.05	
5/4/2000 15:04	4.4	0.9	1.0	RUN 1	-0.1	25.1	0.2	4.4	0.8	1.0	833791	74919	225540	1134250	36.8	10.5	13.3	182	0.20	0.07	
5/4/2000 15:05	4.5	1.0	1.2	RUN 1	-0.1	25.1	0.2	4.5	0.8	1.2	833791	74919	225540	1134250	32.7	10.2	10.7	182	0.18	0.06	
5/4/2000 15:06	4.0	1.0	1.0	RUN 1	-0.1	25.1	0.2	4.0	0.8	1.0	833791	74919	225540	1134250	34.2	11.5	10.0	182	0.19	0.06	
5/4/2000 15:07	4.2	1.1	1.0	RUN 1	-0.1	25.1	0.2	4.2	1.0	1.6	833791	74919	225540	1134250	35.7	15.7	18.0	182	0.20	0.09	
5/4/2000 15:08	4.4	1.5	1.7	RUN 1	-0.1	25.1	0.2	4.4	1.4	1.8	833791	74919	225540	1134250	34.2	11.5	10.0	182	0.18	0.06	
5/4/2000 15:09	4.9	1.4	2.5	RUN 1	-0.1	25.1	0.2	4.9	1.3	2.4	833791	74919	225540	1134250	35.7	15.7	18.0	182	0.20	0.09	
5/4/2000 15:10	5.3	1.4	3.0	RUN 1	-0.1	25.1	0.2	5.3	1.3	2.4	833791	74919	225540	1134250	39.8	14.3	27.3	182	0.22	0.11	
5/4/2000 15:11	4.1	1.4	3.4	RUN 1	-0.1	25.1	0.2	4.1	1.3	3.3	833791	74919	225540	1134250	42.8	15.0	33.4	182	0.24	0.13	
5/4/2000 15:12	2.9	1.3	2.8	RUN 1	-0.1	25.1	0.2	2.9	1.1	2.8	833791	74919	225540	1134250	24.1	12.9	31.3	182	0.13	0.12	
5/4/2000 15:13	2.8	1.3	2.6	RUN 1	-0.1	25.1	0.2	2.8	1.1	2.8	833791	74919	225540	1134250	21.0	13.6	26.8	182	0.12	0.12	
5/4/2000 15:14	2.4	1.8	3.2	RUN 1	-0.1	25.1	0.2	2.4	1.2	3.1	833791	74919	225540	1134250	20.0	17.4	35.6	182	0.11	0.15	
5/4/2000 15:15	2.3	2.2	3.2	RUN 1	-0.1	25.1	0.2	2.3	2.0	3.1	833791	74919	225540	1134250	19.0	22.9	43.5	182	0.10	0.16	
5/4/2000 15:16	3.0	1.8	3.6	RUN 1	-0.1	25.1	0.2	3.0	1.7	3.5	833791	74919	225540	1134250	24.6	19.1	38.2	182	0.14	0.16	
5/4/2000 15:17	3.4	1.5	3.9	RUN 1	-0.1	25.1	0.2	3.4	1.4	3.8	833791	74919	225540	1134250	26.1	15.7	42.8	182	0.15	0.16	
5/4/2000 15:18	3.8	1.4	2.9	RUN 1	-0.1	25.1	0.2	3.8	1.3	2.8	833791	74919	225540	1134250	31.2	15.0	31.6	182	0.17	0.13	
5/4/2000 15:19	3.4	1.7	2.4	RUN 1	-0.1	25.1	0.2	3.4	1.6	2.3	833791	74919	225540	1134250	28.1	17.7	26.2	182	0.15	0.12	
5/4/2000 15:20	2.4	1.8	2.5	RUN 1	-0.1	25.1	0.2	2.4	1.5	2.5	833791	74919	225540	1134250	20.0	16.7	27.7	182	0.11	0.13	
5/4/2000 15:21	1.9	1.8	2.6	RUN 1	-0.1	25.1	0.2	1.9	1.7	1.7	833791	74919	225540	1134250	15.5	17.4	28.8	182	0.08	0.13	
5/4/2000 15:22	1.7	1.5	1.8	RUN 1	-0.1	25.1	0.2	1.7	1.3	1.4	833791	74919	225540	1134250	13.9	15.3	19.8	182	0.06	0.10	
5/4/2000 15:23	1.7	1.4	1.5	RUN 1	-0.1	25.1	0.2	1.7	1.1	1.3	833791	74919	225540	1134250	13.9	14.6	15.8	182	0.06	0.08	
5/4/2000 15:24	1.7	1.3	1.4	RUN 1	-0.1	25.1	0.2	1.7	1.1	1.3	833791	74919	225540	1134250	13.4	12.6	14.7	182	0.06	0.08	
5/4/2000 15:25	1.8	1.2	1.4	RUN 1	-0.1	25.1	0.2	1.8	1.1	1.3	833791	74919	225540	1134250	12.9	14.6	14.3	182	0.07	0.08	
5/4/2000 15:26	1.8	1.4	1.4	RUN 1	-0.1	25.1	0.2	1.8	1.3	1.3	833791	74919	225540	1134250	12.9	14.6	14.3	182	0.07	0.08	
5/4/2000 15:27	2.0	1.7	1.1	RUN 1																	

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES				FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR	
	NOX CORP 7	SO2 M	SO2 OUT		NOX 7	SO2 M	SO2 OUT	NOX 7	SO2 M	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 M LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX	SO2 LBS/TON		
5/4/2000 15:30	9.3	2.2	1.6	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	9.3	833791	74919	225540	1134250	75.3	23.5	17.2	182	0.41	0.11	
5/4/2000 15:31	10.4	2.2	3.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	10.4	833791	74919	225540	1134250	84.4	23.9	42.5	182	0.46	0.18	
5/4/2000 15:32	7.8	2.0	4.5	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	7.8	833791	74919	225540	1134250	64.1	21.5	43.7	182	0.35	0.20	
5/4/2000 15:33	4.4	1.8	2.8	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	4.4	833791	74919	225540	1134250	35.7	17.0	31.3	182	0.20	0.13	
5/4/2000 15:34	2.8	1.4	1.6	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	2.8	833791	74919	225540	1134250	23.6	15.0	17.8	182	0.13	0.09	
5/4/2000 15:35	8.5	1.3	1.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.5	833791	74919	225540	1134250	44.8	13.6	13.3	182	0.23	0.07	
5/4/2000 15:36	8.5	1.2	1.7	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.5	833791	74919	225540	1134250	89.2	12.2	18.3	182	0.35	0.06	
5/4/2000 15:37	8.8	1.2	2.3	RUN 1	-0.1	25.1	0.2	12.3	0.1	12.6	8.8	833791	74919	225540	1134250	71.7	12.6	24.4	182	0.38	0.10	
5/4/2000 15:38	7.6	1.0	2.2	CALS	-0.1	25.1	0.2	12.3	0.1	12.6	7.6	833791	74919	225540	1134250							
5/4/2000 15:39	8.9	0.8	2.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	8.9	833791	74919	225540	1134250							
5/4/2000 15:40	9.9	0.7	1.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	9.9	833791	74919	225540	1134250							
5/4/2000 15:41	7.7	0.7	1.5	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	7.7	833791	74919	225540	1134250							
5/4/2000 15:42	8.3	1.0	4.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	8.3	833791	74919	225540	1134250							
5/4/2000 15:43	8.5	1.1	1.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	8.5	833791	74919	225540	1134250							
5/4/2000 15:44	9.0	0.8	0.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	9.0	833791	74919	225540	1134250							
5/4/2000 15:45	9.0	0.7	0.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	9.0	833791	74919	225540	1134250							
5/4/2000 15:46	7.3	0.7	0.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	7.3	833791	74919	225540	1134250							
5/4/2000 15:47	5.1	0.8	1.0	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	5.1	833791	74919	225540	1134250							
5/4/2000 15:48	3.8	1.1	7.9	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	3.8	833791	74919	225540	1134250							
5/4/2000 15:49	2.8	0.9	11.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.8	833791	74919	225540	1134250							
5/4/2000 15:50	2.1	0.7	12.4	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	833791	74919	225540	1134250							
5/4/2000 15:51	2.1	0.8	12.6	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	833791	74919	225540	1134250							
5/4/2000 15:52	2.1	0.8	12.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	833791	74919	225540	1134250							
5/4/2000 15:53	1.9	0.8	12.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.9	833791	74919	225540	1134250							
5/4/2000 15:54	1.8	0.8	8.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	833791	74919	225540	1134250							
5/4/2000 15:55	1.2	0.8	2.0	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.2	833791	74919	225540	1134250							
5/4/2000 15:56	1.1	0.8	0.6	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	833791	74919	225540	1134250							
5/4/2000 15:57	1.2	0.6	0.4	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.2	833791	74919	225540	1134250							
5/4/2000 15:58	1.4	0.8	0.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	833791	74919	225540	1134250							
5/4/2000 15:59	1.5	0.6	0.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.5	833791	74919	225540	1134250							
5/4/2000 16:00	1.3	0.7	1.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.3	833791	74919	225540	1134250							
5/4/2000 16:01	1.1	0.3	1.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	833791	74919	225540	1134250							
5/4/2000 16:02	0.9	0.1	1.5	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	0.9	833791	74919	225540	1134250							
5/4/2000 16:03	0.8	0.1	1.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	0.8	833791	74919	225540	1134250							
5/4/2000 16:04	1.1	4.5	2.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	833791	74919	225540	1134250							
5/4/2000 16:05	1.2	10.5	2.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.2	833791	74919	225540	1134250							
5/4/2000 16:06	1.4	11.8	2.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	833791	74919	225540	1134250							
5/4/2000 16:07	1.4	12.1	2.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	833791	74919	225540	1134250							
5/4/2000 16:08	1.3	12.3	2.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.3	833791	74919	225540	1134250							
5/4/2000 16:09	1.4	11.7	2.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	833791	74919	225540	1134250							
5/4/2000 16:10	1.1	4.8	2.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	833791	74919	225540	1134250							
5/4/2000 16:11	12.6	1.7	2.2	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	12.6	833791	74919	225540	1134250							
5/4/2000 16:12	25.1	1.1	1.9	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	25.1	833791	74919	225540	1134250							
5/4/2000 16:13	25.4	0.9	1.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	25.4	833791	74919	225540	1134250							
5/4/2000 16:14	25.4	1.0	1.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	25.4	833791	74919	225540	1134250							
5/4/2000 16:15	24.9	1.0	1.5	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	24.9	833791	74919	225540	1134250							
5/4/2000 16:16	3.0	1.1	1.5	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	3.0	833791	74919	225540	1134250							
5/4/2000 16:17	-0.1	1.2	1.4	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	-0.1	833791	74919	225540	1134250							
5/4/2000 16:18	-0.1	1.2	1.3	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	-0.1	833791	74919	225540	1134250							
5/4/2000 16:19	4.5	1.1	1.2	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	4.5	833791	74919	225540	1134250							
5/4/2000 16:20	3.4	1.0	1.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	3.4	833791	74919	225540	1134250							
5/4/2000 16:21	2.4	1.0	1.1	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.4	833791	74919	225540	1134250							
5/4/2000 16:22	2.3	1.0	1.0	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.3	833791	74919	225540	1134250							
5/4/2000 16:23	2.1	1.0	0.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	833791	74919	225540	1134250							
5/4/2000 16:24	2.1	0.8	0.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	833791	74919	225540	1134250							

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR		
	NOX COMP 7	SO2 N	SO2 OUT		NOX 7	SO2 N	SO2 OUT	NOX 7	SO2 N	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 N LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX	LBS/TON	SO2 LBS/TON
5/4/2000 16:25	2.2	0.8	0.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.8	2.3	0.8	0.6	1134250	53.6	6.0	11.1	190	0.27	0.05	
5/4/2000 16:26	2.3	0.8	0.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.8	2.4	0.7	0.7	1134250	36.4	7.6	11.4	190	0.18	0.05	
5/4/2000 16:27	2.7	0.7	0.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.8	2.7	0.6	0.7	1134250	23.8	7.3	15.7	190	0.12	0.06	
5/4/2000 16:28	4.3	0.7	0.8	CALS	-0.1	25.2	0.1	12.3	0.1	12.8	4.4	0.8	0.7	1134250	23.8	6.3	16.4	190	0.12	0.06	
5/4/2000 16:29	6.5	0.8	0.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	6.5	0.7	0.6	1134250	26.9	9.0	20.8	190	0.15	0.06	
5/4/2000 16:30	7.8	0.8	0.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	7.8	0.8	0.6	1134250	31.4	10.0	18.6	190	0.17	0.07	
5/4/2000 16:31	7.8	0.8	0.7	CALS	-0.1	25.2	0.1	12.3	0.1	12.6	7.8	0.7	0.6	1134250	35.9	10.4	24.7	190	0.16	0.06	
5/4/2000 16:32	6.6	0.8	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	6.6	0.7	1.0	1134250	28.4	9.7	33.3	190	0.14	0.11	
5/4/2000 16:33	4.4	0.8	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.5	0.7	1.0	1134250	19.8	11.7	36.9	190	0.10	0.12	
5/4/2000 16:34	2.9	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.9	0.6	1.4	1134250	15.8	19.2	41.2	190	0.08	0.15	
5/4/2000 16:35	2.9	0.8	1.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.9	0.6	1.5	1134250	12.8	25.4	36.9	190	0.06	0.16	
5/4/2000 16:36	3.3	0.8	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.3	0.7	1.6	1134250	10.7	18.9	34.4	190	0.05	0.13	
5/4/2000 16:37	3.6	0.9	1.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.7	0.8	1.8	1134250	11.2	13.8	31.5	190	0.06	0.11	
5/4/2000 16:38	4.1	1.0	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.1	0.9	1.6	1134250	8.7	10.7	27.2	190	0.05	0.10	
5/4/2000 16:39	4.4	1.0	2.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.4	0.9	2.2	1134250	8.7	10.0	28.3	190	0.04	0.10	
5/4/2000 16:40	3.4	0.8	3.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.5	0.9	2.9	1134250	8.2	9.7	44.1	190	0.04	0.14	
5/4/2000 16:41	2.4	1.1	3.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.4	1.0	3.3	1134250	9.2	10.4	36.5	190	0.05	0.12	
5/4/2000 16:42	1.9	1.8	3.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.9	1.7	3.6	1134250	10.7	8.3	24.3	190	0.05	0.09	
5/4/2000 16:43	1.5	2.3	3.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.6	2.2	3.3	1134250	12.3	8.7	16.8	190	0.06	0.06	
5/4/2000 16:44	1.2	1.7	3.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.3	1.7	3.0	1134250	13.8	8.0	22.2	190	0.07	0.08	
5/4/2000 16:45	1.3	1.3	2.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	1.2	2.8	1134250	15.8	7.6	25.8	190	0.06	0.06	
5/4/2000 16:46	1.3	1.1	2.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.4	1.0	2.4	1134250	11.2	13.8	26.9	190	0.06	0.10	
5/4/2000 16:47	1.1	1.0	2.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.2	0.9	2.4	1134250	8.7	10.7	27.2	190	0.05	0.10	
5/4/2000 16:48	1.0	1.0	2.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	0.9	2.5	1134250	8.7	10.0	28.3	190	0.04	0.10	
5/4/2000 16:49	0.9	0.9	4.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.0	0.9	3.9	1134250	8.2	9.7	44.1	190	0.04	0.14	
5/4/2000 16:50	0.9	1.0	4.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.0	0.9	3.9	1134250	9.2	10.4	36.5	190	0.05	0.12	
5/4/2000 16:51	1.1	1.0	3.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	0.8	3.2	1134250	10.7	8.3	24.3	190	0.05	0.09	
5/4/2000 16:52	1.2	0.9	2.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.3	0.8	2.2	1134250	12.3	8.7	16.8	190	0.06	0.06	
5/4/2000 16:53	1.4	0.8	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.5	0.8	1.5	1134250	13.8	8.0	22.2	190	0.07	0.08	
5/4/2000 16:54	1.8	0.8	2.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.7	2.0	1134250	15.8	7.6	25.8	190	0.06	0.06	
5/4/2000 16:55	1.9	0.8	2.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.9	0.7	2.3	1134250	15.8	9.0	22.5	190	0.06	0.06	
5/4/2000 16:56	1.9	0.9	2.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.9	0.8	2.0	1134250	14.8	9.7	21.1	190	0.07	0.06	
5/4/2000 16:57	1.7	0.8	2.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.9	1.9	1134250	13.3	9.7	18.2	190	0.07	0.07	
5/4/2000 16:58	1.6	0.8	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.6	0.9	1.8	1134250	12.8	9.0	16.1	190	0.06	0.06	
5/4/2000 16:59	1.5	0.9	1.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.6	0.8	1.4	1134250	12.8	8.3	16.8	190	0.07	0.06	
5/4/2000 17:00	1.6	0.8	1.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.6	0.7	1.5	1134250	13.8	8.7	18.2	190	0.07	0.07	
5/4/2000 17:01	1.6	0.8	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.8	1.6	1134250	13.8	7.6	16.4	190	0.07	0.06	
5/4/2000 17:02	1.6	0.8	1.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.7	1.5	1134250	13.8	7.6	15.0	190	0.07	0.06	
5/4/2000 17:03	1.6	0.8	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.7	1.3	1134250	13.8	6.9	14.7	190	0.07	0.05	
5/4/2000 17:04	1.6	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.6	1.4	1134250	13.8	7.3	15.4	190	0.07	0.06	
5/4/2000 17:05	1.6	0.7	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.6	1.3	1134250	14.3	6.9	13.9	190	0.07	0.05	
5/4/2000 17:06	1.7	0.7	1.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.6	1.2	1134250	14.3	6.6	12.1	190	0.07	0.05	
5/4/2000 17:07	1.6	0.7	1.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.6	1.2	1134250	13.8	6.9	11.4	190	0.14	0.05	
5/4/2000 17:08	1.7	0.7	1.2	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.6	1.1	1134250	12.8	6.9	11.3	190	0.27	0.05	
5/4/2000 17:09	1.7	0.7	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.6	1.1	1134250	14.3	6.6	11.8	190	0.07	0.05	
5/4/2000 17:10	3.4	0.7	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.5	0.6	1.0	1134250	28.4	6.6	11.4	190	0.14	0.05	
5/4/2000 17:11	6.5	0.7	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	6.5	0.6	1.0	1134250	52.8	7.3	11.1	190	0.31	0.05	
5/4/2000 17:12	7.5	0.8	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	7.5	0.7	1.0	1134250	80.6	8.0	11.4	190	0.31	0.05	
5/4/2000 17:13	8.3	0.8	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	8.3	0.7	1.3	1134250	67.2	8.3	14.7	190	0.34	0.06	
5/4/2000 17:14	6.1	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	6.1	0.6	1.4	1134250	49.5	7.3	16.1	190	0.25	0.06	
5/4/2000 17:15	4.1	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.2	0.6	1.4	1134250	33.9	6.6	15.7	190	0.17	0.06	
5/4/2000 17:16	3.5	0.6	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.6	0.5	1.3	1134250	28.9	5.9	14.7	190	0.15	0.05	
5/4/2000 17:17	3.3	0.6	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.												

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 M	SO2 OUT		NOX 7	SO2 M	SO2 OUT	NOX 7	SO2 M	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 M LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONSHR	NOX	SO2 LBS/TON			
5/4/2000 17:20	3.8	0.7	1.0	RUN 2	-0.1	25.2	0.1	12.6	3.9	0.6	0.8	833791	74919	225540	1134250	31.4	6.6	10.0	198	0.16	0.04		
5/4/2000 17:21	4.1	0.7	1.0	RUN 2	-0.1	25.2	0.1	12.6	4.2	0.6	0.8	833791	74919	225540	1134250	50.0	7.3	9.6	198	0.25	0.04		
5/4/2000 17:22	8.1	0.7	0.9	RUN 2	-0.1	25.2	0.1	12.6	8.1	0.6	0.8	833791	74919	225540	1134250	65.7	7.3	9.3	198	0.33	0.04		
5/4/2000 17:23	8.3	0.7	1.0	RUN 2	-0.1	25.2	0.1	12.6	8.3	0.6	0.8	833791	74919	225540	1134250	75.7	6.5	10.0	198	0.38	0.04		
5/4/2000 17:24	10.9	0.8	1.0	RUN 2	-0.1	25.2	0.1	12.6	10.9	0.5	0.8	833791	74919	225540	1134250	88.3	5.9	9.6	198	0.45	0.04		
5/4/2000 17:25	13.6	0.5	1.2	RUN 2	-0.1	25.2	0.1	12.6	13.5	0.4	1.1	833791	74919	225540	1134250	109.5	4.9	12.1	198	0.55	0.04		
5/4/2000 17:26	11.5	0.5	1.4	RUN 2	-0.1	25.2	0.1	12.6	11.4	0.4	1.3	833791	74919	225540	1134250	92.9	4.6	14.3	198	0.47	0.05		
5/4/2000 17:27	9.0	0.4	1.6	RUN 2	-0.1	25.2	0.1	12.6	9.0	0.3	1.5	833791	74919	225540	1134250	71.2	3.9	16.4	198	0.37	0.06		
5/4/2000 17:28	6.0	0.5	2.1	RUN 2	-0.1	25.2	0.1	12.6	6.0	0.4	2.0	833791	74919	225540	1134250	65.1	4.2	22.2	198	0.33	0.07		
5/4/2000 17:29	6.3	0.5	2.3	RUN 2	-0.1	25.2	0.1	12.6	6.3	0.4	2.2	833791	74919	225540	1134250	62.1	4.9	26.5	198	0.31	0.08		
5/4/2000 17:30	3.9	0.5	2.0	RUN 2	-0.1	25.2	0.1	12.6	3.9	0.4	1.9	833791	74919	225540	1134250	51.5	4.9	24.7	198	0.26	0.07		
5/4/2000 17:31	2.8	0.4	2.3	RUN 2	-0.1	25.2	0.1	12.6	2.8	0.3	2.2	833791	74919	225540	1134250	31.9	4.2	21.5	198	0.16	0.06		
5/4/2000 17:32	3.1	0.4	2.5	RUN 2	-0.1	25.2	0.1	12.6	3.1	0.4	2.4	833791	74919	225540	1134250	23.3	3.5	24.7	198	0.12	0.07		
5/4/2000 17:33	3.2	0.5	2.3	RUN 2	-0.1	25.2	0.1	12.6	3.2	0.4	2.4	833791	74919	225540	1134250	25.9	3.9	26.9	198	0.13	0.06		
5/4/2000 17:34	1.9	0.5	2.4	RUN 2	-0.1	25.2	0.1	12.6	1.9	0.4	2.3	833791	74919	225540	1134250	16.3	4.2	24.7	198	0.08	0.06		
5/4/2000 17:35	1.2	0.5	2.5	RUN 2	-0.1	25.2	0.1	12.6	1.3	0.4	2.4	833791	74919	225540	1134250	10.7	4.2	27.6	198	0.05	0.08		
5/4/2000 17:36	0.8	0.5	2.3	RUN 2	-0.1	25.2	0.1	12.6	0.8	0.4	2.4	833791	74919	225540	1134250	8.2	4.2	26.9	198	0.04	0.08		
5/4/2000 17:37	0.8	0.4	2.1	RUN 2	-0.1	25.2	0.1	12.6	0.8	0.3	2.2	833791	74919	225540	1134250	7.7	3.9	24.7	198	0.04	0.07		
5/4/2000 17:38	0.7	0.4	1.7	RUN 2	-0.1	25.2	0.1	12.6	0.8	0.3	1.8	833791	74919	225540	1134250	7.2	3.9	22.9	198	0.04	0.07		
5/4/2000 17:39	0.8	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.6	0.8	0.3	1.6	833791	74919	225540	1134250	6.7	3.9	18.8	198	0.04	0.06		
5/4/2000 17:40	1.1	0.5	1.0	RUN 2	-0.1	25.2	0.1	12.6	1.1	0.4	0.9	833791	74919	225540	1134250	7.2	3.9	10.3	198	0.03	0.04		
5/4/2000 17:41	1.2	0.6	1.1	RUN 2	-0.1	25.2	0.1	12.6	1.3	0.5	1.0	833791	74919	225540	1134250	9.2	4.2	10.0	198	0.05	0.04		
5/4/2000 17:42	1.1	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.6	1.1	0.6	1.4	833791	74919	225540	1134250	10.2	5.9	11.8	198	0.05	0.04		
5/4/2000 17:43	1.0	0.8	1.7	RUN 2	-0.1	25.2	0.1	12.6	1.1	0.7	1.6	833791	74919	225540	1134250	9.2	7.3	13.7	198	0.05	0.06		
5/4/2000 17:44	0.9	0.7	1.4	RUN 2	-0.1	25.2	0.1	12.6	1.0	0.6	1.3	833791	74919	225540	1134250	8.7	6.0	16.6	198	0.04	0.07		
5/4/2000 17:45	0.8	0.7	1.5	RUN 2	-0.1	25.2	0.1	12.6	0.9	0.6	1.4	833791	74919	225540	1134250	8.2	7.3	14.7	198	0.04	0.06		
5/4/2000 17:46	4.1	0.7	4.1	RUN 2	-0.1	25.2	0.1	12.6	4.1	0.6	4.0	833791	74919	225540	1134250	7.2	6.6	16.1	198	0.04	0.08		
5/4/2000 17:47	1.4	0.7	2.7	RUN 2	-0.1	25.2	0.1	12.6	1.5	0.6	2.8	833791	74919	225540	1134250	10.7	7.6	44.6	198	0.04	0.13		
5/4/2000 17:48	1.5	0.8	2.3	RUN 2	-0.1	25.2	0.1	12.6	1.6	0.5	2.2	833791	74919	225540	1134250	12.3	6.6	29.7	198	0.05	0.11		
5/4/2000 17:49	2.1	0.8	1.6	RUN 2	-0.1	25.2	0.1	12.6	2.2	0.5	1.5	833791	74919	225540	1134250	17.8	5.2	17.5	198	0.06	0.09		
5/4/2000 17:50	3.1	0.5	1.8	RUN 2	-0.1	25.2	0.1	12.6	3.1	0.4	1.5	833791	74919	225540	1134250	25.3	4.2	17.2	198	0.13	0.05		
5/4/2000 17:51	4.0	0.5	2.6	RUN 2	-0.1	25.2	0.1	12.6	4.0	0.4	2.5	833791	74919	225540	1134250	38.0	4.2	28.6	198	0.17	0.08		
5/4/2000 17:52	6.1	0.6	3.4	RUN 2	-0.1	25.2	0.1	12.6	6.2	0.5	3.2	833791	74919	225540	1134250	50.0	5.2	36.9	198	0.20	0.10		
5/4/2000 17:53	4.8	0.5	2.8	RUN 2	-0.1	25.2	0.1	12.6	4.8	0.4	2.8	833791	74919	225540	1134250	38.4	5.2	31.9	198	0.19	0.09		
5/4/2000 17:54	2.8	0.6	2.9	RUN 2	-0.1	25.2	0.1	12.6	2.7	0.5	2.8	833791	74919	225540	1134250	20.3	4.6	31.2	198	0.11	0.09		
5/4/2000 17:55	2.2	0.5	3.0	RUN 2	-0.1	25.2	0.1	12.6	2.3	0.4	2.6	833791	74919	225540	1134250	18.3	4.2	33.0	198	0.09	0.09		
5/4/2000 17:56	2.4	0.5	2.6	RUN 2	-0.1	25.2	0.1	12.6	2.5	0.4	2.5	833791	74919	225540	1134250	20.3	4.6	28.3	198	0.10	0.08		
5/4/2000 17:57	2.9	0.5	2.8	RUN 2	-0.1	25.2	0.1	12.6	2.9	0.4	3.0	833791	74919	225540	1134250	23.8	4.2	28.6	198	0.12	0.08		
5/4/2000 17:58	3.0	0.5	3.1	RUN 2	-0.1	25.2	0.1	12.6	3.1	0.4	3.0	833791	74919	225540	1134250	24.8	4.6	34.0	198	0.13	0.10		
5/4/2000 17:59	2.8	0.5	2.5	RUN 2	-0.1	25.2	0.1	12.6	2.8	0.4	2.4	833791	74919	225540	1134250	23.3	4.2	34.4	198	0.12	0.10		
5/4/2000 18:00	2.3	0.5	2.0	RUN 2	-0.1	25.2	0.1	12.6	2.4	0.4	1.9	833791	74919	225540	1134250	19.3	4.2	27.2	198	0.10	0.08		
5/4/2000 18:01	2.1	0.4	1.4	RUN 2	-0.1	25.2	0.1	12.6	2.4	0.4	1.5	833791	74919	225540	1134250	19.3	4.6	16.8	198	0.10	0.06		
5/4/2000 18:02	1.8	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.6	1.9	0.3	1.3	833791	74919	225540	1134250	17.8	3.9	14.3	198	0.09	0.05		
5/4/2000 18:03	1.8	0.5	1.0	RUN 2	-0.1	25.2	0.1	12.6	1.8	0.3	0.9	833791	74919	225540	1134250	15.3	3.5	10.7	198	0.08	0.04		
5/4/2000 18:04	1.5	0.5	0.9	RUN 2	-0.1	25.2	0.1	12.6	1.7	0.2	0.8	833791	74919	225540	1134250	13.8	2.5	9.6	198	0.07	0.03		
5/4/2000 18:05	1.9	0.8	1.5	RUN 2	-0.1	25.2	0.1	12.6	1.8	0.3	0.8	833791	74919	225540	1134250	13.3	2.9	8.6	198	0.07	0.03		
5/4/2000 18:06	3.3	0.6	1.3	RUN 2	-0.1	25.2	0.1	12.6	3.4	0.4	1.4	833791	74919	225540	1134250	16.3	4.2	15.4	198	0.08	0.03		
5/4/2000 18:07	3.8	0.5	1.0	RUN 2	-0.1	25.2	0.1	12.6	3.8	0.4	1.2	833791	74919	225540	1134250								

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	NOX-7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 IN LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX	LBS/TON	SO2	LBS/TON	
5/4/2000 18:15	3.5	0.5	0.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.6	0.4	0.7	833781	74818	225540	1134250	28.9	4.9	7.8	198	0.15	0.03
5/4/2000 18:16	5.4	0.6	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.4	0.5	1.3	833781	74818	225540	1134250	44.0	5.9	14.7	198	0.22	0.06
5/4/2000 18:17	6.0	0.6	1.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	8.0	0.6	1.5	833781	74818	225540	1134250	64.6	6.3	17.2	198	0.33	0.08
5/4/2000 18:18	7.8	0.6	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	8.3	0.5	1.4	833781	74818	225540	1134250	87.7	5.2	15.4	198	0.34	0.08
5/4/2000 18:20	8.0	0.4	1.2	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	7.8	0.3	1.3	833781	74818	225540	1134250	83.8	3.6	14.7	198	0.32	0.06
5/4/2000 18:21	3.8	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	8.0	0.3	1.1	833781	74818	225540	1134250	63.6	3.9	14.7	198	0.32	0.06
5/4/2000 18:22	2.6	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.7	0.3	0.9	833781	74818	225540	1134250	46.5	3.5	12.5	198	0.25	0.04
5/4/2000 18:23	2.2	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.7	0.3	0.8	833781	74818	225540	1134250	29.9	3.2	10.7	198	0.25	0.04
5/4/2000 18:24	2.0	0.3	0.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.3	0.3	0.8	833781	74818	225540	1134250	21.8	3.9	9.6	198	0.11	0.03
5/4/2000 18:25	2.2	0.3	0.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	0.3	0.8	833781	74818	225540	1134250	18.3	3.9	8.6	198	0.09	0.03
5/4/2000 18:26	3.2	0.3	0.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.3	0.2	0.8	833781	74818	225540	1134250	18.8	2.9	9.3	198	0.08	0.03
5/4/2000 18:27	3.5	0.3	0.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.3	0.2	0.8	833781	74818	225540	1134250	18.8	2.5	8.9	198	0.09	0.03
5/4/2000 18:28	3.1	0.3	0.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.2	0.1	0.8	833781	74818	225540	1134250	24.8	1.8	8.9	198	0.13	0.03
5/4/2000 18:29	2.7	0.3	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.2	0.1	0.8	833781	74818	225540	1134250	26.4	1.5	8.6	198	0.13	0.03
5/4/2000 18:30	2.6	0.3	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.2	0.2	0.8	833781	74818	225540	1134250	26.4	1.5	8.9	198	0.13	0.03
5/4/2000 18:31	2.8	0.3	1.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.7	0.2	0.8	833781	74818	225540	1134250	25.9	1.8	9.3	198	0.13	0.03
5/4/2000 18:32	2.7	0.3	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.7	0.2	1.0	833781	74818	225540	1134250	22.3	2.2	10.0	198	0.11	0.03
5/4/2000 18:33	3.2	0.3	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.7	0.2	1.5	833781	74818	225540	1134250	21.8	2.2	11.1	198	0.11	0.03
5/4/2000 18:34	1.9	0.4	1.2	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.3	0.2	1.5	833781	74818	225540	1134250	22.3	2.2	11.1	198	0.11	0.03
5/4/2000 18:35	2.0	0.5	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	0.4	1.1	833781	74818	225540	1134250	18.3	2.5	17.2	198	0.11	0.05
5/4/2000 18:36	1.8	0.6	2.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	0.4	1.3	833781	74818	225540	1134250	15.8	3.5	12.9	198	0.09	0.05
5/4/2000 18:37	2.0	0.8	3.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	0.4	1.3	833781	74818	225540	1134250	15.8	3.5	12.9	198	0.09	0.05
5/4/2000 18:38	1.4	0.6	3.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.7	0.5	1.8	833781	74818	225540	1134250	16.8	4.2	14.3	198	0.08	0.04
5/4/2000 18:39	1.5	0.7	3.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.5	0.6	3.3	833781	74818	225540	1134250	16.8	4.9	18.8	198	0.08	0.04
5/4/2000 18:40	1.7	0.7	4.6	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.5	0.6	3.3	833781	74818	225540	1134250	13.8	5.6	31.5	198	0.07	0.06
5/4/2000 18:41	2.4	0.8	4.1	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.8	4.5	833781	74818	225540	1134250	12.3	6.3	37.3	198	0.06	0.06
5/4/2000 18:42	2.8	0.7	2.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.8	4.5	833781	74818	225540	1134250	12.8	6.5	38.9	198	0.06	0.11
5/4/2000 18:43	2.5	0.7	1.9	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.4	0.7	4.0	833781	74818	225540	1134250	14.8	7.3	50.9	198	0.07	0.15
5/4/2000 18:44	2.5	0.6	2.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.8	0.6	3.8	833781	74818	225540	1134250	18.8	7.6	44.9	198	0.10	0.13
5/4/2000 18:45	2.3	0.8	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.8	0.6	3.8	833781	74818	225540	1134250	21.3	7.3	29.7	198	0.11	0.09
5/4/2000 18:46	2.1	0.8	2.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.6	0.5	2.2	833781	74818	225540	1134250	20.8	8.8	20.4	198	0.11	0.09
5/4/2000 18:47	1.8	0.5	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.4	0.5	1.8	833781	74818	225540	1134250	20.8	8.8	20.4	198	0.11	0.07
5/4/2000 18:48	1.5	0.5	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	2.1	0.5	1.8	833781	74818	225540	1134250	19.3	5.9	24.3	198	0.11	0.06
5/4/2000 18:49	1.2	0.4	1.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.9	0.4	1.7	833781	74818	225540	1134250	17.3	5.8	24.3	198	0.10	0.08
5/4/2000 18:50	1.1	0.4	2.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.4	1.5	833781	74818	225540	1134250	17.3	5.8	24.3	198	0.10	0.08
5/4/2000 18:51	1.2	0.4	2.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.1	0.3	2.2	833781	74818	225540	1134250	15.6	4.9	18.7	198	0.08	0.07
5/4/2000 18:52	1.7	0.5	3.2	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.3	0.3	2.7	833781	74818	225540	1134250	10.2	3.8	16.8	198	0.06	0.06
5/4/2000 18:53	1.7	0.5	3.8	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.4	3.1	833781	74818	225540	1134250	9.2	3.8	24.3	198	0.05	0.05
5/4/2000 18:54	1.7	0.5	3.5	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.4	3.1	833781	74818	225540	1134250	10.7	3.9	30.4	198	0.05	0.07
5/4/2000 18:55	3.2	0.8	3.2	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.4	3.7	833781	74818	225540	1134250	14.3	4.2	35.1	198	0.06	0.09
5/4/2000 18:56	4.3	0.8	3.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	1.8	0.4	3.8	833781	74818	225540	1134250	14.8	4.8	42.3	198	0.07	0.12
5/4/2000 18:57	4.1	0.6	3.3	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	3.2	0.5	3.1	833781	74818	225540	1134250	14.3	4.9	42.8	198	0.07	0.12
5/4/2000 18:58	4.2	0.8	3.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.4	0.5	3.2	833781	74818	225540	1134250	14.8	5.2	35.5	198	0.07	0.12
5/4/2000 19:01	3.9	0.4	1.7	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.2	0.5	3.2	833781	74818	225540	1134250	26.4	5.9	35.8	198	0.13	0.11
5/4/2000 19:02	4.8	0.4	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	4.8	0.3	3.3	833781	74818	225540	1134250	35.4	5.9	35.8	198	0.18	0.11
5/4/2000 19:03	6.1	0.4	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	5.7	0.3	3.3	833781	74818	225540	1134250	39.0	3.9	14.7	198	0.18	0.08
5/4/2000 19:04	9.7	0.4	1.4	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	8.2	0.3	3.3	833781	74818	225540	1134250	46.5	3.9	15.0	198	0.20	0.05
5/4/2000 19:05	3.8	0.4	1.0	RUN 2	-0.1	25.2	0.1	12.3	0.1	12.6	5.6	0.3	0.9	833781	74818	225540	1134250	50.0	3.5	14.3	198	0.22	0.05
5/4/2000 19:06	4.4	0.3	1.0	RUN 2	-0.1																		

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	NOX - 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/HR	SO2 IN LBS/HR	SO2 OUT LBS/HR	PRODUCTION TONS/HR	NOX	LBS/TON	SO2 LBS/TON		
5/4/2000 21:00	3.0	3.0	3.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	3.4	833791	74919	225540	1134250	24.7	33.8	38.7	199	0.12		0.18	
5/4/2000 21:01	3.4	3.2	4.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	3.4	833791	74919	225540	1134250	27.7	36.2	46.0	199	0.14		0.21	
5/4/2000 21:02	4.2	3.3	4.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	4.2	833791	74919	225540	1134250	34.2	37.5	46.7	199	0.17		0.21	
5/4/2000 21:03	8.1	2.8	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	6.1	833791	74919	225540	1134250	49.7	31.8	34.5	199	0.25		0.17	
5/4/2000 21:04	6.5	3.1	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	8.5	833791	74919	225540	1134250	52.7	35.2	34.8	199	0.27		0.18	
5/4/2000 21:05	6.3	3.1	3.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	6.2	833791	74919	225540	1134250	50.7	34.8	31.8	199	0.25		0.17	
5/4/2000 21:06	6.3	3.0	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	6.2	833791	74919	225540	1134250	50.7	33.8	34.8	199	0.25		0.17	
5/4/2000 21:07	6.5	3.0	3.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	6.5	833791	74919	225540	1134250	52.7	33.8	40.8	199	0.27		0.19	
5/4/2000 21:08	7.8	3.1	2.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	7.7	833791	74919	225540	1134250	62.8	34.8	29.6	199	0.32		0.16	
5/4/2000 21:09	8.7	2.7	2.4	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	8.6	833791	74919	225540	1134250	70.3	30.4	26.4	199	0.35		0.14	
5/4/2000 21:10	11.7	2.5	2.9	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	11.6	833791	74919	225540	1134250	94.3	28.4	31.3	199	0.47		0.15	
5/4/2000 21:11	11.3	2.6	3.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	11.2	833791	74919	225540	1134250	90.8	31.1	32.4	199	0.46		0.16	
5/4/2000 21:12	10.3	2.9	2.9	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	10.2	833791	74919	225540	1134250	82.8	32.4	31.7	199	0.42		0.16	
5/4/2000 21:13	10.2	2.8	2.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	10.1	833791	74919	225540	1134250	81.8	30.7	29.9	199	0.41		0.16	
5/4/2000 21:14	10.2	2.8	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	10.1	833791	74919	225540	1134250	82.3	32.6	28.9	199	0.42		0.16	
5/4/2000 21:15	8.5	2.5	2.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	8.5	833791	74919	225540	1134250	68.8	28.0	22.2	199	0.35		0.13	
5/4/2000 21:16	6.4	2.4	2.4	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	6.4	833791	74919	225540	1134250	51.7	27.0	26.1	199	0.26		0.13	
5/4/2000 21:17	4.7	2.4	2.4	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	4.7	833791	74919	225540	1134250	38.2	26.3	26.4	199	0.19		0.13	
5/4/2000 21:18	3.3	2.3	2.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	3.3	833791	74919	225540	1134250	26.7	25.3	24.7	199	0.13		0.13	
5/4/2000 21:19	2.4	2.2	2.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	2.4	833791	74919	225540	1134250	19.7	23.9	27.1	199	0.10		0.13	
5/4/2000 21:20	1.9	2.2	2.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.9	833791	74919	225540	1134250	15.7	24.6	26.6	199	0.08		0.13	
5/4/2000 21:21	1.4	2.2	2.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.5	833791	74919	225540	1134250	12.2	24.6	23.6	199	0.06		0.12	
5/4/2000 21:22	1.1	2.1	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.2	833791	74919	225540	1134250	9.7	22.8	22.2	199	0.05		0.11	
5/4/2000 21:23	0.9	2.0	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.0	833791	74919	225540	1134250	6.7	21.5	21.5	199	0.04		0.11	
5/4/2000 21:24	0.9	1.8	2.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	7.7	20.2	24.7	199	0.04		0.11	
5/4/2000 21:25	0.9	1.6	2.9	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.9	833791	74919	225540	1134250	7.7	17.8	31.0	199	0.04		0.12	
5/4/2000 21:26	0.9	2.0	3.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.9	833791	74919	225540	1134250	7.7	22.6	38.3	199	0.04		0.15	
5/4/2000 21:27	0.9	2.5	4.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.9	833791	74919	225540	1134250	7.7	27.3	44.3	199	0.04		0.18	
5/4/2000 21:28	0.9	2.8	3.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.9	833791	74919	225540	1134250	7.7	31.4	39.4	199	0.04		0.18	
5/4/2000 21:29	0.9	2.9	2.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.9	833791	74919	225540	1134250	7.2	32.1	27.8	199	0.04		0.15	
5/4/2000 21:30	0.8	2.1	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	7.2	22.9	21.5	199	0.04		0.11	
5/4/2000 21:31	0.7	1.7	1.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	6.2	18.5	17.3	199	0.03		0.09	
5/4/2000 21:32	0.7	1.8	1.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.7	833791	74919	225540	1134250	6.2	18.5	18.7	199	0.03		0.09	
5/4/2000 21:33	0.6	1.7	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.7	833791	74919	225540	1134250	5.7	18.1	17.7	199	0.03		0.09	
5/4/2000 21:34	0.6	1.6	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.7	833791	74919	225540	1134250	5.7	17.1	19.4	199	0.03		0.09	
5/4/2000 21:35	0.6	1.6	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.7	833791	74919	225540	1134250	5.7	17.1	21.5	199	0.03		0.09	
5/4/2000 21:36	0.6	1.7	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.7	833791	74919	225540	1134250	5.7	17.1	22.2	199	0.03		0.10	
5/4/2000 21:37	0.7	1.7	1.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	6.2	18.5	19.4	199	0.03		0.10	
5/4/2000 21:38	0.7	1.7	1.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	6.2	18.5	19.4	199	0.03		0.10	
5/4/2000 21:39	0.7	1.5	1.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	6.7	17.1	15.6	199	0.03		0.08	
5/4/2000 21:40	0.7	1.5	1.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	0.8	833791	74919	225540	1134250	6.7	15.1	15.9	199	0.03		0.08	
5/4/2000 21:41	1.0	1.4	1.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.1	833791	74919	225540	1134250	9.7	14.7	14.2	199	0.04		0.07	
5/4/2000 21:42	1.1	1.4	1.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.2	833791	74919	225540	1134250	9.7	15.1	14.2	199	0.04		0.07	
5/4/2000 21:43	1.1	1.4	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.2	833791	74919	225540	1134250	9.7	14.7	11.7	199	0.05		0.07	
5/4/2000 21:44	1.1	1.6	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.1	833791	74919	225540	1134250	9.2	15.4	18.6	199	0.05		0.08	
5/4/2000 21:45	0.8	1.8	2.4	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.1	833791	74919	225540	1134250	8.2	17.1	21.5	199	0.05		0.10	
5/4/2000 21:46	0.9	2.0	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	1.0	833791	74919	22554									

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 IN LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX	SO2 LBS/TON					
5/4/2000 21:55	4.5	2.3	2.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	36.1	24.9	27.8	199	0.18	0.13		
5/4/2000 21:56	2.7	2.3	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	24.9	21.2	199	0.11	0.12		
5/4/2000 21:57	3.7	2.0	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	18.2	21.5	22.9	199	0.09	0.11		
5/4/2000 21:58	2.2	1.5	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	30.2	16.1	20.8	199	0.15	0.09		
5/4/2000 21:59	8.0	1.7	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	48.7	18.5	19.1	199	0.24	0.09		
5/4/2000 22:00	8.1	1.7	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	63.3	18.5	19.1	199	0.33	0.10		
5/4/2000 22:01	9.0	1.7	1.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	72.3	18.1	20.5	199	0.36	0.10		
5/4/2000 22:02	5.3	1.7	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	42.7	18.5	22.6	199	0.21	0.10		
5/4/2000 22:03	1.4	2.1	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	19.7	18.5	27.1	199	0.10	0.12		
5/4/2000 22:04	2.4	2.1	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	10.2	22.9	34.8	199	0.06	0.15		
5/4/2000 22:05	1.2	2.5	3.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	9.7	32.1	39.0	199	0.05	0.17		
5/4/2000 22:06	1.7	3.0	2.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	14.2	33.5	25.6	199	0.07	0.16		
5/4/2000 22:07	5.3	2.7	2.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	43.2	30.4	29.6	199	0.22	0.15		
5/4/2000 22:08	8.3	2.6	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	66.3	28.0	22.9	199	0.34	0.13		
5/4/2000 22:09	8.2	2.5	1.9	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	61.8	26.6	22.2	199	0.31	0.12		
5/4/2000 22:10	7.6	2.4	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	53.7	24.9	21.2	199	0.27	0.12		
5/4/2000 22:11	7.6	2.3	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	35.7	23.9	21.5	199	0.16	0.11		
5/4/2000 22:12	6.6	2.3	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	21.7	23.9	22.9	199	0.11	0.12		
5/4/2000 22:13	4.4	2.2	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	20.7	25.1	21.8	199	0.10	0.12		
5/4/2000 22:14	3.1	2.2	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	19.2	29.4	39.7	199	0.10	0.17		
5/4/2000 22:15	2.6	2.2	2.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	19.2	29.4	39.7	199	0.10	0.17		
5/4/2000 22:16	2.5	2.3	2.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	19.2	24.9	50.3	199	0.10	0.19		
5/4/2000 22:17	2.4	2.6	3.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	20.2	36.9	58.0	199	0.11	0.24		
5/4/2000 22:18	2.3	2.6	3.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	27.2	46.7	59.7	199	0.14	0.27		
5/4/2000 22:19	2.3	2.3	4.6	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	25.2	51.1	50.6	199	0.13	0.26		
5/4/2000 22:20	2.7	3.3	5.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	21.2	33.8	42.3	199	0.11	0.20		
5/4/2000 22:21	3.3	4.1	3.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	19.7	37.9	40.4	199	0.10	0.20		
5/4/2000 22:22	3.1	4.3	4.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	16.7	37.5	40.8	199	0.09	0.19		
5/4/2000 22:23	2.7	3.1	3.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	20.2	38.2	44.6	199	0.10	0.21		
5/4/2000 22:24	2.4	3.4	3.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.13	0.22		
5/4/2000 22:25	2.4	3.4	3.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.14	0.19		
5/4/2000 22:26	2.1	3.4	3.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.11	0.15		
5/4/2000 22:27	3.4	3.6	4.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.13	0.21		
5/4/2000 22:28	2.0	3.3	3.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.10	0.20		
5/4/2000 22:29	2.4	3.4	4.1	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.11	0.19		
5/4/2000 22:30	3.3	3.6	4.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.13	0.21		
5/4/2000 22:31	3.5	3.6	3.4	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.16	0.16		
5/4/2000 22:32	3.1	3.5	3.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.16	0.15		
5/4/2000 22:33	2.7	2.9	2.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.17	0.17		
5/4/2000 22:34	2.5	2.9	2.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.21	0.19		
5/4/2000 22:35	3.1	2.3	2.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.17	0.19		
5/4/2000 22:36	3.8	2.3	2.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.11	0.17		
5/4/2000 22:37	3.9	2.4	2.8	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.08	0.16		
5/4/2000 22:38	4.3	2.8	3.3	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.09	0.16		
5/4/2000 22:39	5.1	3.0	3.9	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.12	0.16		
5/4/2000 22:40	4.2	3.2	3.5	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.12	0.16		
5/4/2000 22:41	2.7	3.3	3.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.16	0.15		
5/4/2000 22:42	2.0	3.0	2.7	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.17	0.17		
5/4/2000 22:43	2.8	2.6	3.0	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5	40.8	199	0.11	0.17		
5/4/2000 22:44	2.7	3.2	3.2	RUN 3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	22.2	37.5</						

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS			CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR			
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/HR	SO2 IN LBS/HR	SO2 OUT LBS/HR	PRODUCTION TONS/HR	NOX	SO2 LBS/TON	0.19	0.10			
TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED	TEST AVERAGE TIME WEIGHTED				
5/4/2000 22:50	3.3	3.0	3.9	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250	36.1	14.9	22.2	192.8	0.19	0.10			
5/4/2000 22:51	3.3	3.0	3.2	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:52	3.5	2.7	1.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:53	3.4	2.1	0.4	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:54	3.4	2.2	0.2	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:55	3.3	2.3	0.2	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:56	3.3	2.1	0.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:57	3.5	2.1	0.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:58	3.7	2.0	0.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 22:59	3.8	2.1	0.0	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:00	3.7	2.1	0.0	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:01	3.9	2.0	0.0	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:02	4.0	2.0	0.7	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:03	3.9	2.0	11.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:04	3.8	2.0	12.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:05	3.7	1.9	12.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:06	3.7	1.7	13.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:07	3.7	1.5	13.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:08	3.6	1.5	13.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:09	3.6	1.5	13.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:10	3.6	1.5	13.2	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:11	3.8	1.5	13.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:12	3.7	1.5	10.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:13	3.4	1.5	2.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:14	3.1	1.4	0.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:15	2.9	1.3	0.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:16	2.5	1.2	0.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:17	1.7	1.2	0.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:18	1.2	1.1	5.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:19	0.9	1.0	20.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:20	0.8	0.9	24.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:21	0.9	0.8	25.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:22	1.0	0.9	25.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:23	1.0	0.8	25.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:24	1.0	0.8	25.2	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:25	1.0	0.8	25.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:26	0.9	0.7	18.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:27	0.9	0.7	4.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:28	0.9	0.7	1.1	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:29	0.9	0.6	0.6	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:30	0.9	2.7	0.9	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:31	0.9	1.0	1.4	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:32	0.9	0.3	1.0	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:33	0.9	0.1	0.6	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:34	0.9	0.1	0.7	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:35	0.8	0.1	0.6	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:36	0.8	0.1	0.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:37	0.9	2.8	0.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:38	0.8	17.6	0.4	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:39	0.9	22.7	0.4	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:40	0.9	23.5	0.4	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:41	0.8	23.8	0.5	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:42	0.8	23.9	0.6	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:43	0.9	23.7	0.8	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									
5/4/2000 23:44	0.8	18.6	1.3	-0.1	25.3	0.1	12.3	0.1	12.9	833791	74919	225540	1134250									

TIME	OBSERVED CONCENTRATION PPM			COMMENTS	CALIBRATION CORRECTIONS				CORRECTED PPM VALUES			FLOW MEASUREMENTS SCFM				MASS EMISSIONS				EMISSION FACTOR		
	NOX COMP 7	SO2 IN	SO2 OUT		NOX 7	SO2 IN	SO2 OUT	NOX - 7	SO2 IN	SO2 OUT	COLD-1	COLD-2	HOT	TOTAL	NOX LBS/MR	SO2 IN LBS/MR	SO2 OUT LBS/MR	PRODUCTION TONS/MR	NOX LBS/TON	SO2 LBS/TON		
5/4/2000 23:45	0.9	12.8	1.7		-0.1	25.3	0.1	12.3	0.1	12.9	1.8	833791	74919	225540	1134250							
5/4/2000 23:46	0.9	12.4	1.9		-0.1	25.3	0.1	12.3	0.1	12.9	1.8	833791	74919	225540	1134250							
5/4/2000 23:47	0.9	12.4	1.8		-0.1	25.3	0.1	12.3	0.1	12.9	1.7	833791	74919	225540	1134250							
5/4/2000 23:48	0.9	12.4	1.7		-0.1	25.3	0.1	12.3	0.1	12.9	1.8	833791	74919	225540	1134250							
5/4/2000 23:49	1.0	10.3	1.5		-0.1	25.3	0.1	12.3	0.1	12.9	1.1	833791	74919	225540	1134250							
5/4/2000 23:50	0.4	3.9	0.6		-0.1	25.3	0.1	12.3	0.1	12.9	0.5	833791	74919	225540	1134250							
5/4/2000 23:51	-0.1	2.4	0.1		-0.1	25.3	0.1	12.3	0.1	12.9	0.0	833791	74919	225540	1134250							
5/4/2000 23:52	-0.1	1.8	0.0		-0.1	25.3	0.1	12.3	0.1	12.9	0.0	833791	74919	225540	1134250							
5/4/2000 23:53	2.6	0.9	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	0.0	833791	74919	225540	1134250							
5/4/2000 23:54	18.2	1.4	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	2.7	833791	74919	225540	1134250							
5/4/2000 23:55	25.4	3.7	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	1.4	833791	74919	225540	1134250							
5/4/2000 23:56	25.7	3.8	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	25.3	833791	74919	225540	1134250							
5/4/2000 23:57	25.9	3.6	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	25.5	833791	74919	225540	1134250							
5/4/2000 23:58	28.4	3.4	0.0		-0.1	25.3	0.1	12.3	0.1	12.9	26.0	833791	74919	225540	1134250							
5/4/2000 23:59	51.7	3.3	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	50.8	833791	74919	225540	1134250							
5/5/2000 0:00	53.8	3.4	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	54.8	833791	74919	225540	1134250							
5/5/2000 0:01	53.5	3.6	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	52.8	833791	74919	225540	1134250							
5/5/2000 0:02	54.2	3.8	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	53.2	833791	74919	225540	1134250							
5/5/2000 0:03	54.3	4.0	-0.1		-0.1	25.3	0.1	12.3	0.1	12.9	53.4	833791	74919	225540	1134250							

Gallatin Steel 5-4-00

Comp 7 Ch1 NOx
Ch4 NOx b.u.

0811 injecting 12.5 ppm
0815 reading 13.7 ppm Ch2 SO₂ comp 14
0828 injecting zero gas Ch2 inner 0.026 volts
0830 injecting zero gas Ch3 outer 0.026 volts
" " " Ch4 backup NOx 0.0510 volts
0835 injecting 24.01 ppm SO₂ Ch3 outer (comp ~~14~~ 2)
0843 reading 0.8300 v SO₂ Ch3 outer (comp ~~14~~ 2)
0843 injecting 12.5 ppm SO₂ Ch3 ~~outer~~ (comp ~~14~~ 2)
0851 reading 0.450 v SO₂ Ch3 outer (comp ~~14~~ 2)
0852 injecting 24.01 ppm SO₂ Ch2 inner (comp 2)
0859 reading 0.858 v SO₂ Ch2 inner (comp 2)
0901 injecting ~~12.5~~ 12.5 ppm SO₂ Ch2 inner (comp 2)
0906 reading 0.461 v SO₂ Ch2 inner (comp 2)

CH2 slope 28.8562
intercept -0.7672
CH3 slope 29.8558
intercept -0.8272

0910 on line

1138	inject	54.2 ppm NOx	Ch1 comp 7	1750 psi	Tank # CC110128	expires 8-10-2001
1141	reading	0.865 volts ✓	(54.2)			
1143	injecting	24.9 ppm NOx	Ch1 comp 7	1750 psi	Tank # CC109962	expires 8-10-2001
1145	reading	0.397 volts ✓	(24.8)			
1146	injecting	0.00 NOx	Ch1 comp 7			
1151	reading	0.003 volts ✓	(0.0)			

Gallatin Steel 5-4-00

1152 injecting 0.0 Ch 3 comp 14 SO₂ inner
 1152 injecting 0.0 Ch 4 comp 14 NO_x backup
 1201 reading 0.028v Ch 3 comp 14 SO₂ inner (0.1 ppm)
 1201 ✓ reading 0.050 volts Ch 4 comp 14 NO_x backup (0.1 ppm)
 1201 injecting 54.2 NO_x Ch 4 comp 14 NO_x backup
 1205 reading 1.002 volts Ch 4 comp 14 NO_x backup
 1205 injecting 24.9 ppm NO_x Ch 4 comp 14 NO_x backup
 1209 reading 0.535 volts Ch 4 comp 14 NO_x backup
 1210 injecting 54.2 NO_x Ch 4 comp 14 NO_x backup
 1215 ✓ change to read 0.920 volts Ch 4 comp 14 NO_x backup (54.3 ppm)
 1216 injecting 24.9 ppm NO_x Ch 4 comp 14 NO_x backup
 1218 ✓ reading 0.445 volts NO_x Ch 4 comp 14 NO_x backup (24.7 ppm)
 1220 injecting 24.01 ppm SO₂ Ch 3 comp 2 SO₂ outer
 injecting 24.01 ppm SO₂ Ch 4 comp 14 NO_x backup
 1229 reading 0.785 volts SO₂ Ch 3 comp 2 SO₂ outer (24.1 ppm)
 reading 0.053 volts zero Ch 4 NO_x Backup
 1230 injecting 12.5 ppm SO₂ Ch 3 comp 2 outer
 1234 reading 0.416 volts SO₂ Ch 3 comp 2 outer (12.4 ppm)
 1235 injecting 12.5 ppm SO₂ Ch 2 comp 14 inner, Ch 3 outer on line
 1239 reading 0.436 volts SO₂ Ch 2 comp 14 inner (12.2 ppm)
 1244 injecting 24.01 ppm SO₂ Ch 2 comp 14 inner
 1249 reading 0.845 volts SO₂ Ch 2 comp 14 inner (24.2 ppm)
 1250 injecting zero ppm SO₂ Ch 2 comp 14 inner
 1257 reading 0.028 volts SO₂ Ch 2 comp 14 inner (0.2 ppm)
 1258 on line

END Run 1 1538

5/4/00 GAL STEEL

POST RUN 1 CAL CHECKS

1540 OUT COMP #2

Zero ppm	SO ₂	OUT (comp 2)	0.028 v	(0.1 ppm)	1546
"	NO _x	OUT (comp 2)	0.050 v	(0.1 ppm)	1545
12.5 ppm	SO ₂	OUT (comp 2)	0.426 v	(12.7 ppm)	1553
0 ppm	NO _x	OUT (comp 2)	0.050 v		1553
—	SO ₂		—		—
24.9 ppm	NO _x		0.442 v	(24.5 ppm)	1559

In Comp #14

Zero	SO ₂	0.026 v	(0.1)	1602
12.5	SO ₂	0.442 v	(12.3)	1608

NO_x Comp 7

Zero ppm	NO _x	0.001 v	(-0.1)	1618
24.9 ppm	NO _x	0.405 v	(25.3)	1613

ON LINE 1620 - WAIT FOR NEXT HEAT

		SLOPE	INTCP	1v	0v
Run 1	CH1	62.8687	-0.1429	62.7	/ -0.14
	CH2	29.3875	-0.6527	28.7	/ -0.653
	CH3	31.7216	-0.8253	30.90	/ -0.8253
	CH4	62.2783	-3.0079	59.27	/ -3.0079

APPROX AVG FOR RUN 1

CH1	6.3 ppm
2	1.1 ppm
3	1.4 ppm

START RUN 2 16:30 Heat 1
 17:24 Heat 2
 18:18 Heat 3
 END RUN 2 19:21

1924 inject 0.0 ~~Ch 3 comp 4~~ ~~Ch 1 comp 7~~ (10s) SO₂
 Ch 4 comp 4 b.v. NO_x backup
 1931 reading 0.063 ppm Ch 3 comp 4 SO₂ outer
 0.106 Ch 4 comp 4 NO_x outer Backup
 1931 injecting 12.5 ppm SO₂ Ch 3 comp 4 SO₂ outer
 1941 reading 12.5 ppm SO₂ Ch 3 comp 4 SO₂ outer
 1941 injecting 24.9 ppm NO_x Ch 4 comp 4 NO_x outer backup
 1946 reading 24.3 ppm NO_x Ch 4 comp 4 NO_x outer backup
 1946 injecting 24.3 ppm NO_x Ch 1 comp 7 NO_x compliance NO_x
 1950 reading 25.0 ppm NO_x Ch 1 comp 7 NO_x compliance NO_x
 1951 injecting 0.0 ppm NO_x Ch 1 comp 7 NO_x compliance NO_x
 1956 reading 0.11 ppm NO_x Ch 1 comp 7 NO_x compliance
 1957 injecting 0.0 ppm Ch 2 comp 16 SO₂ inner
 2001 reading 0.11 ppm Ch 2 comp 16 SO₂ inner
 2002 injecting 12.5 ppm Ch 2 comp 16 SO₂ inner
 2009 reading 12.2 ppm Ch 2 comp 16 SO₂ inner
 2016 online
 2017 Start RUN 3 Heat 1 ~ 2115 START HEAT 2

Run 2 Results

1 NO_x #7 = 3.4
 2 SO₂ #16 = 0.6
 3 SO₂ #4 = 1.9

1045 Plant down - End run 3

- 1050 inject zero gas ch 3 SO₂ out comp 19
ch 4 NO_x out comp 19
- 1100 reading 0.03 ppm ch 3 SO₂ out comp 19
0.106 ppm ch 4 NO_x out comp 19
- 1101 injecting 12.5 ppm SO₂ ch 3 SO₂ out comp 19
- 1109 reading 13.2 ppm SO₂ ch 3 SO₂ out comp 19
- 1112 injecting 24.9 ppm NO_x ch 4 NO_x out comp 19
- 1116 reading 24.6 ppm NO_x ch 4 NO_x out comp 19
- 1117 injecting 24.0 ppm SO₂ ch 3 SO₂ out comp 19
- 1124 reading 25 ppm SO₂ ch 3 SO₂ out comp 19
- 1124 injecting 54.2 NO_x ch 4 out comp 19
- 1129 reading 53.8 ppm NO_x ch 4 out comp 19
- 1129 injecting ~~24.0~~^{zero} ppm SO₂ ch 2 SO₂ in Comp 7
- 1136 reading 0.08 ppm SO₂ ch 2 SO₂ in Comp 7
- 1137 injecting 24.01 ppm SO₂ ch 2 SO₂ in Comp 7
- 1142 reading 23.9 ppm SO₂ ch 2 SO₂ in Comp 7
- 1142 injecting 12.5 ppm SO₂ ch 2 SO₂ in Comp 7
- 1148 reading 12.4 ppm SO₂ ch 2 SO₂ in Comp 7
- 1149 injecting zero ppm NO_x ch 1 (10s) in Comp 7
- 1151 reading 0.14 ppm NO_x ch 1 (10s) in Comp 7
- 1152 injecting 24.9 ppm NO_x ch 1 (10s) in Comp 7
- 1156 reading 25.6 ppm NO_x ch 1 (10s) in Comp 7
- 1157 injecting 54.2 NO_x ch 1 (10s) in Comp 7
- 1202 reading 54.4 NO_x ch 1 (10s) in Comp 7
- End of Calibrations / END OF TEST

APPENDIX D
FLOW RATES
EPA METHODS 1-4

GALLATIN STEEL SO₂ TEST
FLOW AVERAGES

Cold Duct 1		ACFM	SCFMD	SCFMW
	R1	952974.	834555.	846113.
	R2	962283.	834826.	851927.
	R3	<u>932043.</u>	<u>831991.</u>	<u>848086.</u>
	Avg.	949100.	833791.	848709.

Cold Duct 2		ACFMD	SCFMD	SCFMW
	R1	93541.	77357.	78428.
	R2	76467.	69720.	71148.
	R3	<u>83826.</u>	<u>77680.</u>	<u>79183.</u>
	Avg.	84611.	74919.	76253.

Hot Duct		ACFM	SCFMD	SCFMW
	R1	395103.	219690.	222732.
	R2	402313.	219601.	224099.
	R3	<u>378720.</u>	<u>237330.</u>	<u>241921.</u>
	Avg.	392045.	225540.	229584.

Total Flow		ACFM	SCFMD	SCFMW
		1,425,756.	1,134,250.	1,154,546.

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 1		
Run Date	5-4-00		
Run Number	1	Volume Metered	31.4
Start Time	0	Meter Temp (Deg R)	545.6
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	192	Orsat CO %	0
Stack Area sq. ft.	201.062	Orsat N %	79.1
Number of Points	12	Condensate Volume	9
Avg of SQRT of V.H.	1.3231	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.80
Pitot Correction Factor	0.84	Stack Temp (Deg R)	592.3

=====

Moisture in stack gas, volume fraction	0.0136598
Dry Stack Gas, volume fraction	0.9863402
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.69
Specific gravity of Stack Gas Relative to Air	0.990
Excess Air (%)	
Average Stack Velocity, FPM	4739.7
Actual Stack Gas Flow Rate, ACFM	952974
Actual Stack Gas Flow Rate, (Dry) ACFMD	939957
Stack Gas Flow Rate (Standard conditions), SCFMD	834555
Stack Gas Flow Rate (Standard conditions), SCFMW	846112.73

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 1		
Run Date	5-4-00		
Run Number	2	Volume Metered	31.79
Start Time	0	Meter Temp (Deg R)	549.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	192	Orsat CO %	0
Stack Area sq. ft.	201.062	Orsat N %	79.1
Number of Points	12	Condensate Volume	13.4
Avg of SQRT of V.H.	1.3321	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.85
Pitot Correction Factor	0.84	Stack Temp (Deg R)	595

=====

Moisture in stack gas, volume fraction	0.0200732
Dry Stack Gas, volume fraction	0.9799268
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.62
Specific gravity of Stack Gas Relative to Air	0.987
Excess Air (%)	
Average Stack Velocity, FPM	4786.0
Actual Stack Gas Flow Rate, ACFM	962283
Actual Stack Gas Flow Rate, (Dry) ACFMD	942967
Stack Gas Flow Rate (Standard conditions), SCFMD	834826
Stack Gas Flow Rate (Standard conditions), SCFMW	851926.87

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 1		
Run Date	5-4-00		
Run Number	3	Volume Metered	31.196
Start Time	0	Meter Temp (Deg R)	546.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	192	Orsat CO %	0
Stack Area sq. ft.	201.062	Orsat N %	79.1
Number of Points	12	Condensate Volume	12.5
Avg of SQRT of V.H.	1.3087	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.87
Pitot Correction Factor	0.84	Stack Temp (Deg R)	579.3

=====

Moisture in stack gas, volume fraction	0.0189781
Dry Stack Gas, volume fraction	0.9810219
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.63
Specific gravity of Stack Gas Relative to Air	0.988
Excess Air (%)	
Average Stack Velocity, FPM	4635.6
Actual Stack Gas Flow Rate, ACFM	932043
Actual Stack Gas Flow Rate, (Dry) ACFMD	914355
Stack Gas Flow Rate (Standard conditions), SCFMD	831991
Stack Gas Flow Rate (Standard conditions), SCFMW	848086.1

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 2		
Run Date	5-4-00		
Run Number	1	Volume Metered	31.4
Start Time	0	Meter Temp (Deg R)	545.6
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	9
Avg of SQRT of V.H.	0.3231	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.88
Pitot Correction Factor	0.84	Stack Temp (Deg R)	628.9

=====

Moisture in stack gas, volume fraction	0.0136598
Dry Stack Gas, volume fraction	0.9863402
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.69
Specific gravity of Stack Gas Relative to Air	0.990
Excess Air (%)	
Average Stack Velocity, FPM	1191.0
Actual Stack Gas Flow Rate, ACFM	93541
Actual Stack Gas Flow Rate, (Dry) ACFMD	92263
Stack Gas Flow Rate (Standard conditions), SCFMD	77357
Stack Gas Flow Rate (Standard conditions), SCFMW	78428.315

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 2		
Run Date	5-4-00		
Run Number	2	Volume Metered	31.79
Start Time	0	Meter Temp (Deg R)	549.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	13.4
Avg of SQRT of V.H.	0.2778	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.89
Pitot Correction Factor	0.84	Stack Temp (Deg R)	566.9

=====

Moisture in stack gas, volume fraction	0.0200732
Dry Stack Gas, volume fraction	0.9799268
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.62
Specific gravity of Stack Gas Relative to Air	0.987
Excess Air (%)	
Average Stack Velocity, FPM	973.6
Actual Stack Gas Flow Rate, ACFM	76467
Actual Stack Gas Flow Rate, (Dry) ACFMD	74932
Stack Gas Flow Rate (Standard conditions), SCFMD	69720
Stack Gas Flow Rate (Standard conditions), SCFMW	71148.169

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Cold Duct No. 2		
Run Date	5-4-00		
Run Number	3	Volume Metered	31.196
Start Time	0	Meter Temp (Deg R)	546.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	12.5
Avg of SQRT of V.H.	0.3070	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.89
Pitot Correction Factor	0.84	Stack Temp (Deg R)	558.4

=====

Moisture in stack gas, volume fraction	0.0189781
Dry Stack Gas, volume fraction	0.9810219
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.63
Specific gravity of Stack Gas Relative to Air	0.988
Excess Air (%)	
Average Stack Velocity, FPM	1067.3
Actual Stack Gas Flow Rate, ACFM	83826
Actual Stack Gas Flow Rate, (Dry) ACFMD	82235
Stack Gas Flow Rate (Standard conditions), SCFMD	77680
Stack Gas Flow Rate (Standard conditions), SCFMW	79182.742

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Hot Duct		
Run Date	5-4-00		
Run Number	1	Volume Metered	31.4
Start Time	0	Meter Temp (Deg R)	545.6
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	9
Avg of SQRT of V.H.	1.1190	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.68
Pitot Correction Factor	0.84	Stack Temp (Deg R)	929.1

=====

Moisture in stack gas, volume fraction	0.0136598
Dry Stack Gas, volume fraction	0.9863402
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.69
Specific gravity of Stack Gas Relative to Air	0.990
Excess Air (%)	
Average Stack Velocity, FPM	5030.6
Actual Stack Gas Flow Rate, ACFM	395103
Actual Stack Gas Flow Rate, (Dry) ACFMD	389706
Stack Gas Flow Rate (Standard conditions), SCFMD	219690
Stack Gas Flow Rate (Standard conditions), SCFMW	222732.48

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Hot Duct		
Run Date	5-4-00		
Run Number	2	Volume Metered	31.79
Start Time	0	Meter Temp (Deg R)	549.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	13.4
Avg of SQRT of V.H.	1.1309	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.63
Pitot Correction Factor	0.84	Stack Temp (Deg R)	938.7

=====

Moisture in stack gas, volume fraction	0.0200732
Dry Stack Gas, volume fraction	0.9799268
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.62
Specific gravity of Stack Gas Relative to Air	0.987
Excess Air (%)	
Average Stack Velocity, FPM	5122.4
Actual Stack Gas Flow Rate, ACFM	402313
Actual Stack Gas Flow Rate, (Dry) ACFMD	394237
Stack Gas Flow Rate (Standard conditions), SCFMD	219601
Stack Gas Flow Rate (Standard conditions), SCFMW	224099.38

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Volumetric Air-Flow Rates

Plant	Gallatin Steel		
Location	Ghent, Kentucky		
Stack	Hot Duct		
Run Date	5-4-00		
Run Number	3	Volume Metered	31.196
Start Time	0	Meter Temp (Deg R)	546.0
Finish Time	0	Orsat CO2 %	0
Barometric Pressure	30.03	Orsat O2 %	20.9
Stack Diameter (in.)	120	Orsat CO %	0
Stack Area sq. ft.	78.540	Orsat N %	79.1
Number of Points	16	Condensate Volume	12.5
Avg of SQRT of V.H.	1.1406	Delta H (inches H2O)	1.5
Meter Correction (Y)	1	Stack Pressure	29.57
Pitot Correction Factor	0.84	Stack Temp (Deg R)	816.9

=====

Moisture in stack gas, volume fraction	0.0189781
Dry Stack Gas, volume fraction	0.9810219
Molecular Weight of Stack Gas (Dry Basis)	28.84
Molecular Weight of Stack Gas (Stack conditions)	28.63
Specific gravity of Stack Gas Relative to Air	0.988
Excess Air (%)	
Average Stack Velocity, FPM	4822.0
Actual Stack Gas Flow Rate, ACFM	378720
Actual Stack Gas Flow Rate, (Dry) ACFMD	371533
Stack Gas Flow Rate (Standard conditions), SCFMD	237330
Stack Gas Flow Rate (Standard conditions), SCFMW	241921.22

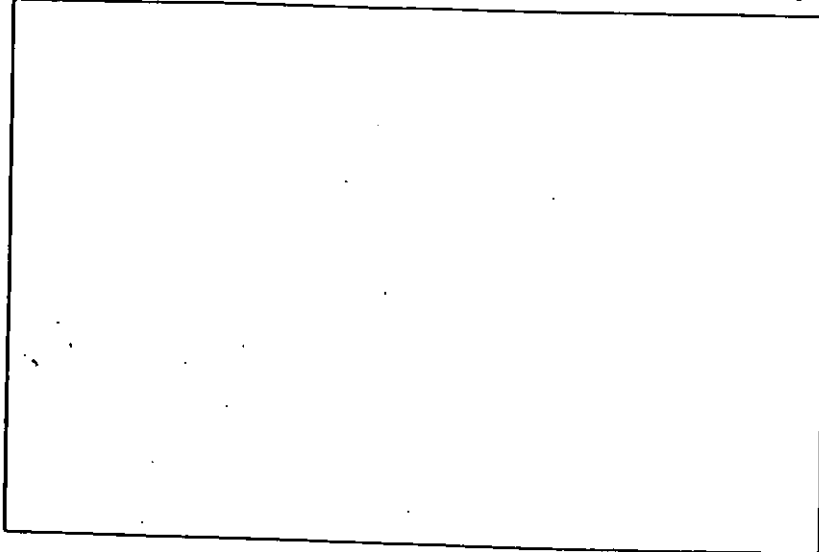
APPENDIX E

- MOISTURE RUN DATA SHEETS**
- FLOW TRAVERSE DATA SHEETS**
- PITOT TUBES - POST TEST CALIBRATION CHECK**
- THERMOCOUPLE - POST TEST CALIBRATION CHECK**
- GAS METER POST TEST CALIBRATION**

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Plant Galatia Steel Source Baghouse
 Plant Location Ghent Kentucky
 Type of Sampling Train EPA Method 4
 Type of Samples Moisture
 Date 5-4-00 Run No. 1
 Time Start 1326 Time End 1356
 Sample Time 5.0 min/pl Total Min 30.03
 Bar. Pressure 30.03 "Hg Stack Pressure NA "Hg
 Assumed Moisture 3.0 % IDA 0.98
 Weather Overcast Temperature 70° °F
 Meter Box No. 3 "H Pilot Corr. Factor 0.84
 Nozzle Calibration NA
 Stack Dimensions More than one stack
 Stack Area NA (Effective NA ft²)
 Stack Height Approx 40 ft
 Stack Diameter: Upstream NA Downstream NA
 Port Size NA in Middle Length NA
 Cord Length 100 feet
 Remarks



TEST ID _____ PAGE 1 OF 1

Meter Processing Rate

Gas Meter Readings: Final 73.437 123
 Initial 42.037 123
 Net 31.400 123

Impingers Vol. Gain 4 ml 123
 Silical Gel No. BH-1 123
 Filter No. NA Total Condensate 9.0 123

ONSAT

	1	2	3	4	AVG
Σ CO ₂					
Σ O ₂					
Σ CO					
Σ H ₂					

Leak Checks: Meter Box/Pump OK
 Orsat Bag NA Gas Sample System NA
 Orsat Analyzer Pyrite (Ambient)
 Pre-test 0.004 CFM 10 "Hg Post-Test 0.005 CFM 10 "Hg
 Box Operator Loggins Probe Holder PETIET
 Pyrometer No. 3 Pilot Tube No. NA
 Pilot Tube Leak Check: Pretest OK 3" H₂O 15 sec
 Post-Test (-) OK 3" H₂O 15 sec
 Post-Test (-) OK 3" H₂O 15 sec

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN)	CLOCK TIME	GAS METER READING (FT ³)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF		STACK GAS TEMP. (°F)	SAMPLE BOX TEMP. (°F)	LAST IMPINGER TEMP. (°F)	DRY GAS METER TEMP. (°F)	VACUUM ON SAMPLE TRAIL (°Hg)
					CALC.	ACTUAL					
		5.0	45.9	—	—	1.5	—	—	67	78	6
		10.0	45.9	—	—	1.5	—	—	65	81	6
		15.0	49.8	—	—	1.5	—	—	60	84	6
		20.0	57.7	—	—	1.5	—	—	59	87	6
		25.0	62.9	—	—	1.5	—	—	58	88	6
		30.0	65.7	—	—	1.5	—	—	56	89	6
		35.0	69.4	—	—	1.5	—	—	56	89	6
		40.0	73.437	—	—	1.5	—	—	57	89	6

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 ENVIRONMENTAL CONSULTANTS

TEST ID _____ PAGE 1 OF 1

Plant Gallatin Steel source Boyd
 Plant Location Ghent, Kentucky
 Type of Sampling Train EPA Method 14
 Type of Samples Moisture
 Date 5-4-00 Run No. 2
 Time Start 1651 Time End 1731
 Sample Time 5.0 min/pt Total Min
 Bar. Pressure 30. "Hg Stack Pressure NA "Hg
 assumed moisture 1.0 %
 weather Overcast Temperature 70 °F
 meter box no. 3 ΔH 1.5 ft
 orograph CI NA Pilot Corr. Factor 0.84
 bottle Calibration NA
 Stack Dimensions More than one stack
 Stack Area NA effective NA ft²
 Stack Height Approx 40 ft
 Stack Diameter: Upstream NA Downstream NA
 Port Size NA in Middle Length NA
 Cord Length 100
 Remarks _____

Mat'l Processing Rate
 Gas Meter Readings: Final 105.608
 Initial 73.818
 Net 31.790
 Impingers Vol. Gain 8
 Silical Gel No. BH-2 Vol. Gain 5.4
 Filter No. NA Total Condensate 13.4

ORSAT

	1	2	3	4	AVG
% CO ₂					
% O ₂					
% CO					
% H ₂					

f_o _____
 f_o Range _____

Leak Checks: Meter Box/Pump OK
 Orsat Bag NA Gas Sample System NA
 Orsat Analyzer LYRIE (Ambient)
 Pre-test 0.007 CFM 10 "Hg Post-Test 0.006 CFM 8 "Hg
 Box Operator COGGINS Probe Holder REITER
 Pyrometer No. 3 Pilot Tube No. NA
 Pilot Tube Leak Check: Pretest 0.0 @ 3" @ 15 sec
 Post-Test (+) OK 3" H₂O 15 sec
 Post-Test (-) OK 3" H₂O 15 sec

PORT AND TRAVERSE POINT NUMBER	DISTANCE FROM INSIDE STACK WALL (IN)	CLOCK TIME	GAS METER READING (FT ³)	STACK VELOCITY HEAD	METER ORIFICE PRESS. DIFF		STACK GAS TEMP. (°F)	SAMPLE BOX TEMP. (°F)	LAST IMPINGER TEMP. (°F)	DRY GAS METER TEMP. (°F)	VACUUM ON SAMPLE TRAIL (mmHg)
					CALC.	ACTUAL					
		5.0	77.8	—	—	1.5	—	—	66	79	7
		10.0	81.9	—	—	1.5	—	—	64	84	7
		15.0	85.9	—	—	1.5	—	—	61	87	7
		20.0	89.6	—	—	1.5	—	—	60	89	7
		25.0	93.4	—	—	1.5	—	—	58	91	7
		30.0	97.7	—	—	1.5	—	—	58	92	7
		35.0	101.7	—	—	1.5	—	—	56	95	7
		40.0	105.608	—	—	1.5	—	—	57	95	7

PRELIMINARY VELOCITY TRAVERSE

PLANT Gallatin Steel
 DATE 5-4-00
 LOCATION COLD DUCT NO. 1
 STACK I.D. 192.0"
 BAROMETRIC PRESSURE, in. Hg 30.03
 STACK GAUGE PRESSURE, in. H₂O _____
 OPERATORS COGGINS / PETIET

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δps), in. H ₂ O	STACK TEMPERATURE (T _s), °F
Static-3.1	Run 1	
1-1	1.69	140
2	1.75	138
3	1.75	134
4	1.75	136
5	1.80	137
6	1.70	138
2-1	1.85	127
2	1.77	128
3	1.75	127
4	1.75	128
5	1.75	126
6	1.70	128
Run 3		
1-1	1.68	120
2	1.61	119
Static-2.2	1.64	119
4	1.75	118
5	1.82	118
6	1.82	118
2-1	1.83	119
2	1.70	119
3	1.87	120
4	1.67	120
5	1.56	121
6	1.62	121

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δps), in. H ₂ O	STACK TEMPERATURE (T _s), °F
Static-2.4	Run 2	
1-1	1.77	132
2	1.75	133
3	1.75	133
4	2.0	133
5	1.55	126
6	1.30	130
2-1	2.0	137
2	1.9	136
3	2.1	140
4	1.8	140
5	1.7	140
6	1.75	140
PTD-1		
Pitot	pos 0.0 at 3 inch	15 sec
leak ck	neg 0.0 at 3 inch	15 sec

PRELIMINARY VELOCITY TRAVERSE

PLANT Gallatin Steel
 DATE 5-4-00
 LOCATION Cold Duct NO. 2
 STACK I.D. 120.0"
 BAROMETRIC PRESSURE, in. Hg 30.03
 STACK GAUGE PRESSURE, in. H₂O
 OPERATORS COGGINS / PETIET

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp_s), in. H ₂ O	STACK TEMPERATURE (T_s), °F
Static-2.0	RUN 1	
1-1	0.15	156
2	0.12	160
3	0.12	161
4	0.12	163
5	0.10	160
6	0.10	165
7	0.09	164
8	0.09	160
2-1	0.09	174
2	0.10	186
3	0.09	187
4	0.12	178
5	0.10	178
6	0.10	170
7	0.10	168
8	0.09	172
Run 3	0.10	97
1-1	0.09	98
Static 2	0.10	98
-1.8 3	0.10	98
4	0.10	98
5	0.09	99
6	0.08	99
7	0.08	99
8		

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp_s), in. H ₂ O	STACK TEMPERATURE (T_s), °F
Static-1.9	RUN 2	
1-1	0.11	100
2	0.09	102
3	0.09	104
4	0.08	108
5	0.07	109
6	0.07	109
7	0.07	108
8	0.07	108
2-1	0.07	167
2	0.08	109
3	0.08	108
4	0.07	107
5	0.07	108
6	0.08	108
7	0.07	107
8	0.07	108
2-1	0.09	97
2	0.09	98
3	0.09	98
4	0.10	99
5	0.10	99
6	0.10	99
7	0.10	99
8	0.10	99
PT 10-1		

leakchk pos 0.0 @ 3" @ 15 sec
 neg 0.0 @ 3" @ 15 sec

PRELIMINARY VELOCITY TRAVERSE

PLANT Gallatin Steel
 DATE 5-4-00
 LOCATION HOT DUCT
 STACK I.D. 120.0"
 BAROMETRIC PRESSURE, In.Hg 30.03
 STACK GAUGE PRESSURE, In.H₂O -4.8
 OPERATORS COGGINS PETTET

P_t tot 10-2

leak ck 0.0 @ 3" @ 15 sec
 0.0 @ 3" @ 15 sec

SCHEMATIC OF TRAVERSE POINT LAYOUT

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp _s), In.H ₂ O	STACK TEMPERATURE (T _s), °F
Static -4.8	RUN 1	
1-1	1.22	437
2	1.20	442
3	1.49	476
4	1.50	478
5	1.52	483
6	1.40	478
7	1.27	463
8	1.10	456
2-1	1.20	497
2-2	1.30	453
3	1.15	468
4	1.05	474
5	1.26	481
6	1.25	477
7	1.15	472
8	1.10	470
Runs static 6.2		
1-1	1.18	329
2	1.31	330
3	1.40	328
4	1.46	341
5	1.43	365
6	1.47	353
7	1.49	352
8	1.23	353

TRAVERSE POINT NUMBER	VELOCITY HEAD (Δp _s), In.H ₂ O	STACK TEMPERATURE (T _s), °F
Static -5.4	RUN 2	
1-1	1.25	455
2	1.35	478
3	1.45	485
4	1.45	493
5	1.25	487
6	1.20	488
7	1.25	479
8	1.20	478
1-1	1.10	479
2	1.20	458
3	1.30	478
4	1.40	478
5	1.45	481
6	1.30	485
7	1.25	479
8	1.10	478
Runs static 6.2		
2-1	1.28	358
2	1.26	376
3	1.26	373
4	1.22	373
5	1.25	369
6	1.21	368
7	1.20	373
8	1.20	370

PITOT TUBE CALIBRATION MEASUREMENTSDATE CALIBRATED 5-16-00 PITOT TUBE PT 10-1Pitot tube assembly level? ✓ Yes NoPitot tube openings damaged? Yes (explain below) ✓ No $\alpha_1 = \underline{1.0}^\circ (<10^\circ)$, $\alpha_2 = \underline{1.0}^\circ (<10^\circ)$, $\beta_1 = \underline{0.5}^\circ (<5^\circ)$, $\beta_2 = \underline{0.5}^\circ (<5^\circ)$ $\gamma = \underline{0.5}^\circ$, $\theta = \underline{0.5}^\circ$, $A = \underline{1.094}$ in. = $(P_a + P_b)$ $z = A \sin \gamma = \underline{0.01}$ in.; <0.32 / $<1/8$ in. $w = A \sin \theta = \underline{0.01}$ in.; <0.08 / $<1/32$ in. $P_a \underline{0.547}$ in. $P_b \underline{0.547}$ in. $D_c = \underline{0.375}$ Calibration required? Yes ✓ No

PITOT TUBE CALIBRATION MEASUREMENTSDATE CALIBRATED 5-16-00 PITOT TUBE PT10-2Pitot tube assembly level? ✓ Yes NoPitot tube openings damaged? Yes (explain below) ✓ No $\alpha_1 = \underline{1.0}^\circ (<10^\circ)$, $\alpha_2 = \underline{1.0}^\circ (<10^\circ)$, $\beta_1 = \underline{1.0}^\circ (<5^\circ)$, $\beta_2 = \underline{0.5}^\circ (<5^\circ)$ $\gamma = \underline{1.0}^\circ$, $\theta = \underline{1.0}^\circ$, $A = \underline{1.024}$ in. = (Pa + Pb) $z = A \sin \gamma = \underline{0.018}$ in.; <0.32 / $<1/8$ in. $w = A \sin \theta = \underline{0.018}$ in.; <0.08 / $<1/32$ in. $P_a = \underline{0.512}$ in. $P_b = \underline{0.512}$ in. $D_t = \underline{0.375''}$ Calibration required? Yes ✓ No

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PITOT TUBE CALIBRATION MEASUREMENTS

DATE CALIBRATED 5-16-00 PITOT TUBE PT12-1

Pitot tube assembly level? ✓ Yes No

Pitot tube openings damaged? Yes (explain below) ✓ No

α_1 - 2.0 ° (<10°), α_2 - 2.0 ° (<10°), β_1 - 1.0 ° (<5°),

β_2 - 1.0 ° (<5°)

γ - 1.0 °, θ - 1.5 °, A - 1.049 in. - ($P_a + P_b$)

$z = A \sin \gamma =$ 0.018 in.; <0.32 / <1/8 in.

$w = A \sin \theta =$ 0.027 in.; <0.08 / <1/32 in.

P_a 0.524 in. P_b 0.525 in. Q_c - 0.375"

Calibration required? Yes ✓ No

AMBIENT AIR SERVICES, INC.
106 Ambient Air Way
Starke, Florida

THERMOCOUPLE CALIBRATION FORM

Date 5-16-80 Time 0916
Ambient Temperature 83°F Source CAB
Barometric Pressure 29.89 Source CAB
Technician's Signature Earl C. Coyne

Standard Thermometer Type Mercury in Glass
Manufacturer FBT Co
Serial Number 64613
Pyrometer Manufacturer Omega Model 9414
Serial Number B520K-3 Meter Box 3

TEMPERATURE SOURCE (A)	
REFERENCE THERMOMETER	Actual Reading
	Corrected Temperature
	<u>ICE</u>
	<u>32°F</u>

Ambient Air
83°F

Boiling H₂O
212°F

CALIBRATED THERMOCOUPLE

Serial Number	Location	Indicated Temp.	Difference (B)	Percent Diff. (C)	Indicated Temp.	Difference	Percent Diff.	Indicated Temp.	Difference	Percent Diff.
PT12-1	Stack	32	0		83	0		213	1	
NA	Filter									
TT3	Impinger	32	0		83	0		213	1	
3in	Meter In	32	0		84	1		213	1	
3out	Meter Out	32	0		84	1		214	2	
PT10-1	Stack	32	0		84	1		213	1	
PT10-2	Stack	32	0		84	1		214	2	

Comments:

Calibration Tolerances

Stack = 1.5% of value, Filter Box = ±5.4°F, Impinger = ±2°F, Meter = ±5.4°F (40CFR Pt 60, App. A Method 5, and QA Handbook Section 3.4, Method 5, page 13, Rev. O)

(A) Type of calibration system used

(B) Reference - Indicated = Difference

(C)
$$\left[\frac{(\text{ref. temp. } ^\circ\text{F} + 460) - (\text{indicated temp. } ^\circ\text{F} + 460)}{(\text{reference temp. } ^\circ\text{F} + 460)} \right] \times 100$$

POSTTEST DRY GAS METER CALIBRATION DATA (ENGLISH UNITS)

Test numbers: all Date: 5-16-00 Meter Box number: 3

Barometric Pressure: 29.89 inches Hg. Dry Gas Meter Number: 3 Pretest Y: 0.99

Plant: Gallatin Steel Location: Ghent, KY

Orifice manomtr setting (DH), inches H2O	Gas volume		Temperature				Time in minutes	Vacuum setting inches Hg	Yi
	Wet test meter (Vw), cu.ft.	Dry gas meter (Vd), cu.ft.	Wet test meter (Tw), deg F	Inlet (Tdi), deg F	Outlet (Tdo), deg F	Average (Td), deg F			
1.50	11.066	11.362	84.25	107.5	88.0	97.75	14.73	12.0	0.9944
1.50	12.611	12.949	85.25	109.5	89.5	99.50	16.77	12.0	0.9956
1.50	16.631	17.110	85.50	113.0	91.0	102.00	21.06	12.0	0.9977
									1.00

If there is only one thermometer on the dry gas meter, record the temperature under Td

Vw= Gas volume passing through the wet test meter, in cubic feet
Vd= Gas volume passing through the dry gas meter, in cubic feet
Tw= Temperature of the gas in the wet test meter, degrees fahrenheit
Tdi= Temperature of the inlet gas of the dry gas meter, degrees fahrenheit
Tdo= Temperature of the outlet gas of the dry gas meter, degrees fahrenheit
Td= Average temperature of the gas in the dry gs meter, obtained by the average of Tdi and Tdo, degrees fahrenheit
DH= Pressure differential across orifice, inches H2O
Yi= Ratio of accuracy of wet test meter to dry gas meter for each run.
Y= Average ratio of accuracy of wet test meter to dry gas meter for all three runs; tolerance = pretest Y plus/minus 0.05Y
Pb= Barometric pressure, inches Mercury
Time= Time of calibration run, in minutes.

APPENDIX F

- PRODUCTION DATA

- TEST NOTIFICATION LETTER

[illegible]

	MA 1 RUNNING AMPS	DP14A % OPEN	MA 2 RUNNING AMPS	DP14B % OPEN	MA 3 RUNNING AMPS	DP14C % OPEN	MA 4 RUNNING AMPS	DP14D % OPEN	MA 5 RUNNING AMPS	DP14E % OPEN	HG 1 RUNNING AMPS	DP13A % OPEN	HG 2 RUNNING AMPS	DP13B % OPEN	HG 3 RUNNING AMPS	DP13C % OPEN	DP 1A % OPEN	DP 2A % OPEN	DP 2 % OPEN	DP 1 % OPEN	DP 4 % OPEN	DP 4A % OPEN	DP 7A % OPEN	DP 7C % OPEN	DP 8 % OPEN	DP 7B % OPEN	DP 3 C&D % OPEN	DP 3 A&B % OPEN	DP 6 % OPEN	DP 5 % OPEN	DP 9 % OPEN	EAF C ROOF PRESSURE PT 2 inches / 100	EAF A ROOF PRESSURE PT 1 inches / 100	
RUN 1:																																		
12.55	129	10	111	100	128	100	118	100	121	100	0	2	47	100	47	100	15	1	7	40	21	0	0	63	2	0	100	100	4	23	2	-0.02	-0.08	
13.10	118	10	102	100	116	100	110	100	112	100	0	2	43	100	43	100	10	1	8	40	21	0	0	63	2	0	100	100	4	23	2	0.02	-0.13	
13.25	120	100	106	99	121	100	114	100	116	100	0	2	41	100	41	100	20	1	7	95	21	0	0	63	2	0	100	100	4	12	2	-0.04	-0.07	
13.40	118	100	106	100	128	100	114	100	118	100	0	2	41	100	39	100	20	2	7	86	21	0	0	0	2	0	100	100	4	22	2	-0.03	-0.07	
13.55	132	100	113	100	128	100	119	100	121	100	0	2	46	100	46	100	31	1	7	29	21	0	0	0	2	0	100	100	4	22	2	-0.05	-0.15	
14.10	121	100	111	99	124	100	118	100	118	100	0	2	45	100	43	100	91	1	8	10	21	0	0	0	2	0	100	100	4	12	2	0.02	-0.01	
14.25	121	100	106	100	121	100	114	100	116	100	0	2	45	100	43	100	91	2	7	19	21	0	0	0	2	0	100	100	4	12	2	0.02	-0.01	
14.40	123	100	111	100	124	100	114	100	118	100	0	2	46	100	46	100	31	1	8	40	95	0	0	0	2	0	100	100	4	23	2	-0.02	-0.08	
14.55	120	100	106	99	121	100	113	100	118	100	0	2	43	100	42	100	10	1	7	95	21	0	0	0	2	0	100	100	4	13	2	0.01	-0.05	
15.10	121	100	107	98	124	100	114	100	118	100	0	2	42	100	41	100	20	1	7	95	21	0	0	0	2	0	100	100	4	23	2	-0.03	0.01	
15.25	118	100	106	100	121	100	114	100	116	100	0	2	41	100	41	100	20	1	7	95	43	0	0	0	2	0	100	100	4	23	2	-0.03	0.01	
15.40	123	100	111	99	124	100	118	100	120	100	0	2	49	100	47	100	91	1	8	9	21	0	0	0	2	0	100	100	4	12	2	-0.08	-0.03	
15.55	121	100	107	100	124	100	116	100	118	100	0	2	45	100	43	100	91	1	7	19	21	0	0	0	2	0	100	100	4	23	2	0.05	-0.07	
RUN 2:																																		
16.30	123	100	107	100	121	100	114	100	116	100																								

Damper Legend

DP1A	C Shell water cooled damper
DP2A	C Shell slag damper
DP2	A Shell slag damper
DP1	A Shell water cooled damper
DP4	LMF roof
DP4A	LMF dilution air
DP7A	Ladle tearout
DP7C	Ladle drying
DP8	Ladle dump
DP7B	Ladle preheat
DP3D/DP3C	C Shell canopy
DP3B/DP3A	A Shell canopy
DP5	Caster canopy
DP9	Tundish deskull

MONTH _____		MAGNAHELIC CHECKS						YEAR _____	
COMP. NUMBER	RUN#	PRESSURE DIFFERENTIAL IN COMPARTMENTS							
		DATE 5 / 4 / 00	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /
TIME		12:55	13:10	13:25	13:40	13:55	14:10	14:25	
1		6.5	Cleaning	7.0	6.9	7.0	6.9	7.0	
2		6.4	6.5	6.5	6.9	6.5	6.5	6.5	
3		6.5	6.9	6.9	6.9	6.9	6.9	6.9	
4		6.6	6.9	6.9	Cleaning	7.0	6.9	7.0	
5		6.9	7.0	7.0	7.2	7.0	6.9	7.0	
6		7.2	7.2	7.2	7.9	7.5	Cleaning	7.5	
7		7.0	7.0	7.0	7.5	7.0	6.5	7.2	
8		7.0	7.2	7.0	7.5	7.0	7.0	7.2	
9		6.6	7.0	6.9	7.2	6.9	7.0	7.0	
10		6.5	7.2	6.9	7.5	6.9	7.0	7.0	
11		6.4	6.9	6.5	7.0	6.5	6.5	6.9	
12		6.9	7.0	7.0	7.2	7.0	7.0	7.0	
13		7.1	7.2	7.2	7.5	7.5	6.9	7.5	
14		6.9	7.0	7.0	7.2	7.0	6.9	7.0	
15		6.1	6.5	6.5	6.9	6.5	6.5	6.9	
16	CLEANING		7.2	7.2	7.2	7.2	7.0	7.2	
17	7.5		6.2	7.2	6.5	6.2	6.2	6.5	
18	7.1		7.2	Cleaning	7.5	7.0	7.2	7.2	
19	6.5		6.9	7.0	6.5	6.5	6.5	6.9	
20	6.5		6.5	7.0	7.0	6.9	6.9	6.9	
21	7.0		7.0	7.5	7.2	Cleaning	6.9	7.0	
22	7.5		7.5	8.0	7.9	7.9	7.2	7.5	
23	6.3		6.2	6.5	6.2	6.5	6.0	Cleaning	
24	7.5		7.5	7.5	7.5	7.5	7.2	7.2	

MONTH _____		MAGNAHELIC CHECKS						YEAR _____	
COMP. NUMBER	DATE 5/4/00	PRESSURE DIFFERENTIAL IN COMPARTMENTS							
		DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /
TIME	14:40	14:55	15:10	15:25	15:40	15:55	16:10		
1	7.0	6.9	7.0	7.0	7.0	6.9	6.9		
2	6.9	6.5	6.5	6.5	6.5	6.9	6.9		
3	7.0	6.5	6.9	7.0	6.9	7.0	7.0		
4	7.0	6.9	7.0	7.0	6.9	7.0	7.0		
5	7.0	7.0	7.0	7.0	7.0	7.2	7.2		
6	7.5	7.2	7.5	7.5	7.2	7.9	7.9		
7	7.5	7.0	7.2	7.2	7.0	7.5	7.5		
8	7.5	7.0	7.0	7.2	7.0	7.5	7.5		
9	cleaning	7.0	7.0	7.0	6.9	7.2	7.2		
10	7.5	6.9	6.9	7.0	7.0	7.2	7.2		
11	7.0	6.5	6.5	6.9	6.5	7.0	7.0		
12	7.2	7.0	cleaning	7.0	7.0	7.2	7.2		
13	7.9	7.2	7.5	7.5	7.5	7.5	7.5		
14	7.2	6.9	7.2	7.0	cleaning	7.0	7.0		
15	7.0	6.2	6.9	6.9	7.0	6.9	6.9		
16	7.5	6.9	7.2	7.0	7.2	7.2	7.2		
17	6.9	7.0	7.5	7.2	7.5	7.5	7.5		
18	7.5	7.0	7.5	7.2	7.5	7.5	7.5		
19	7.0	6.2	6.9	6.9	7.0	7.0	7.0		
20	7.2	6.5	7.0	6.9	7.2	7.0	7.0		
21	7.2	6.9	7.2	7.0	7.5	7.2	7.2		
22	7.9	7.0	7.5	7.5	8.0	8.0	8.0		
23	6.5	5.9	6.2	6.2	6.5	6.5	6.5		
24	7.5	6.9	7.2	7.2	7.5	7.5	7.5		

MONTH _____		MAGNAHELIC CHECKS						YEAR _____	
COMP. NUMBER	TIME	PRESSURE DIFFERENTIAL IN COMPARTMENTS							
		DATE 5 / 4 / 00	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /
	Run 2	16:45	17:00	17:15	17:30	17:45	18:00		
1	7.0	6.9	7.0	7.0	7.0	7.1	7.0		
2	6.9	6.5	6.5	6.5	6.5	cleaning	6.5		
3	6.9	6.6	6.2	6.2	7.0	7.3	6.7		
4	7.0	6.9	7.0	7.0	7.0	7.3	7.0		
5	7.0	7.0	7.0	7.0	7.0	7.5	7.0		
6	7.5	7.3	7.6	7.5	7.5	7.9	7.5		
7	7.2	7.0	7.2	7.0	7.0	7.6	7.0		
8	7.2	7.0	7.2	7.0	7.0	7.7	7.0		
9	7.0	6.9	7.0	7.0	6.9	7.5	7.0		
10	Cleaning	7.0	7.0	7.0	7.0	7.5	7.0		
11	7.0	6.5	6.6	7.0	6.6	7.1	6.6		
12	7.5	7.0	Cleaning	7.2	7.0	7.5	7.0		
13	7.9	7.0	7.5	7.5	7.2	7.5	7.2		
14	7.2	6.7	7.0	7.0	7.0	6.8	7.0		
15	7.0	6.5	6.9	6.7	6.5	6.8	6.5		
16	7.2	7.0	7.5	7.3	Cleaning	7.4	7.0		
17	7.5	7.2	7.7	7.5	7.6	7.7	6.2		
18	7.5	7.0	7.5	7.5	7.5	7.7	7.0		
19	7.0	6.5	7.0	6.9	7.0	6.8	cleaning		
20	7.0	6.5	7.0	7.0	7.0	7.1	7.0		
21	7.2	6.9	7.2	7.0	7.5	7.4	7.2		
22	8.0	7.2	7.5	7.5	8.0	8.0	7.5		
23	6.5	6.0	6.2	6.3	6.5	6.5	6.5		
24	7.5	7.0	7.5	7.5	7.5	7.7	7.5		

MONTH <u>MAY</u>			MAGNAHELIC CHECKS				YEAR <u>2000</u>			
COMP. NUMBER	PRESSURE DIFFERENTIAL IN COMPARTMENTS									
	DATE 5/4/00	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /
<u>Run 2</u>										
TIME	18:15	18:30	18:45	19:00	19:15					
1	7.0	6.6	7.0	6.9	7.0					
2	6.5	6.4	6.6	6.6	6.7					
3	cleaning	6.6	6.8	6.9	6.8					
4	7.2	6.8	6.8	7.0	7.0					
5	7.5	6.9	7.0	7.1	7.1					
6	7.9	7.1	cleaning	7.5	7.6					
7	7.5	6.9	7.0	7.2	7.5					
8	7.5	6.9	7.1	7.2	7.5					
9	7.3	6.7	7.1	7.0	cleaning					
10	7.5	6.8	7.2	7.0	7.5					
11	7.0	6.5	6.8	6.6	7.0					
12	7.5	7.0	7.4	7.1	7.5					
13	7.5	7.1	7.3	7.3	7.6					
14	7.0	6.6	7.0	7.0	7.2					
15	6.6	6.2	6.5	6.6	6.9					
16	7.2	6.9	7.3	7.4	7.4					
17	7.8	7.2	7.5	7.6	7.7					
18	7.5	7.0	7.4	7.4	7.5					
19	6.9	6.4	6.7	6.6	6.9					
20	7.0	6.5	6.9	6.9	7.0					
21	7.2	cleaning	7.1	7.1	7.3					
22	7.9	7.6	7.6	7.4	7.9					
23	6.5	6.3	6.2	6.0	6.6					
24	7.5	7.2	7.5	7.0	7.7					

MONTH _____		MAGNAHELIC CHECKS										YEAR _____
COMP. NUMBER	TIME	PRESSURE DIFFERENTIAL IN COMPARTMENTS										
		DATE 5 / 4 / 00	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	
Run 3												
1	20:15	20:30	20:45	21:00	21:15	21:30	21:45					
2	6.5	cleaning	6.5	7.0	6.8	6.8	7.0					
3	6.2	6.5	6.2	6.5	6.5	7.2	6.5					
4	6.5	6.6	6.5	cleaning	6.5	6.5	6.8					
5	6.6	6.6	6.5	7.0	6.9	6.7	6.8					
6	6.7	6.9	6.6	7.0	7.0	6.7	7.0					
7	7.0	7.4	7.2	7.5	7.4	cleaning	7.4					
8	7.0	7.0	7.0	7.5	7.0	7.0	7.0					
9	6.7	6.9	6.7	7.5	7.0	7.0	7.0					
10	6.7	7.0	6.7	7.4	6.8	7.0	7.0					
11	6.2	6.5	6.7	7.4	6.8	7.0	7.0					
12	6.8	7.0	6.3	7.0	6.5	6.6	6.5					
13	7.0	7.0	6.7	7.2	7.0	7.2	7.0					
14	6.5	6.5	7.0	7.5	7.0	7.0	7.2					
15	6.2	6.2	6.5	7.0	6.8	6.8	6.8					
16	7.0	7.0	7.0	6.8	6.5	6.5	6.5					
17	cleaning	7.0	7.0	7.2	7.0	7.0	7.0					
18	7.5	6.2	cleaning	7.5	7.0	7.0	7.0					
19	6.5	6.2	6.5	7.4	7.0	7.0	7.2					
20	7.0	6.5	6.9	6.6	6.5	6.5	6.6					
21	7.1	6.5	6.9	7.0	6.5	6.7	7.0					
22	7.8	7.0	7.0	7.2	cleaning	7.0	7.0					
23	6.0	6.0	7.2	7.5	7.5	7.5	7.8					
24	7.2	7.0	6.2	6.2	6.2	6.0	6.2					
				7.5	7.5	7.2	cleaning					

MONTH _____		MAGNAHELIC CHECKS				YEAR _____	
COMP. NUMBER	PRESSURE DIFFERENTIAL IN COMPARTMENTS						
	DATE 5/4/00	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /	DATE / /
TIME	22:00	22:15	22:30	22:45	23:00		
1	7.0	6.8	6.9	7.0			
2	6.3	6.0	6.4	6.5			
3	6.6	6.5	6.5	7.0			
4	6.8	6.5	6.8	7.0			
5	6.8	6.8	7.0	7.0			
6	7.3	7.3	7.5	7.5			
7	7.2	7.0	7.0	7.0			
8	7.0	7.0	7.0	7.0			
9	cleaning	6.8	6.8	7.0			
10	7.0	6.8	7.0	7.0			
11	6.8	6.5	6.5	6.5			
12	7.3	7.0	cleaning	7.0			
13	7.2	7.0	7.0	7.0			
14	6.8	6.5	7.0	6.8			
15	6.5	6.2	6.8	6.5			
16	7.0	6.8	7.2	7.0			
17	7.0	7.0	7.5	7.2			
18	7.0	7.0	7.2	7.0			
19	6.5	6.5	6.8	6.5			
20	6.5	6.5	7.0	6.5			
21	7.0	6.9	7.0	7.0			
22	7.5	7.2	7.5	7.5			
23	6.0	6.0	6.3	6.2			
24	7.2	7.2	7.5	7.5			



March 31, 2000

Mr. Gerald Slucher
Source Sampling and Data Management
Section
Technical Services Branch
Division for Air Quality
803 Schenkel Lane
Frankfort, KY 40601-1403

RE: Gallatin Steel Company, Warsaw, KY, ID # 079-1380-0018
Permit Number F-96-009 (Revision 1)
Compliance Test Protocol for Emissions Testing

Dear Mr. Slucher:

Gallatin Steel's air testing firm, Ambient Air Services, Inc., is scheduled to be at Gallatin Steel the first week of May to conduct emissions testing on emission point E1 (01) for NO_x and SO₂. In accordance with the conditions in our permit, we are not required to conduct testing for VOC, PM, CO, and lead emissions this year based on our test results for the last two years (1998 and 1999).

The protocol submitted to your attention on January 7, 1998 will be followed for the testing of NO_x and SO₂ with the following listed changes.

- 1) For NO_x, three runs each of 3 heat cycles in duration will be performed with the inlet probe being positioned in the discharge plenum of the baghouse.
- 2) For SO₂, in order to obtain statistically valid sampling of levels in the baghouse (since there is not homogeneity in the baghouse), we will be testing compartments in pairs (instead of testing one single compartment) over a total of four runs, each run consisting of three heats. We are requesting to test 8 of the 24 compartments during the four runs, two compartments tested during each run. The results of the sampling will provide more accurate information and will produce an average ppm level for the baghouse emissions. Please note that 40 CFR 60 supports and addresses multiple measurement sites for correctly testing particulate emissions. This same logic is also applicable to SO₂ emissions, and supports the use of an "alternate" method to produce more accurate results.

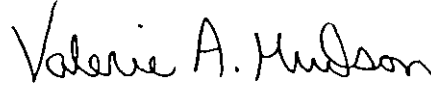
The performance testing is tentatively scheduled to begin on May 5 and we will provide you with notification of the exact test date and start time at least 10 days prior to the testing. A source testing report which presents the results of the performance tests will be submitted to the DAQ within 45 days after the completion of the fieldwork in accordance with the permit.



Letter to Gerald Slucher
March 31, 2000
Page Two

If you have any questions or comments, please contact me at the address below or by telephone at 606-567-3141.

Sincerely yours,



Valerie A. Hudson, P.E.
Process Manager - Environmental Systems

cc: Dan Gray, DAQ
John Allen, DAQ-Regional Office
✓ Joe Cooksey, Ambient Air Services, Inc.

JAMES E. BICKFORD
SECRETARY



PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION FOR AIR QUALITY
803 SCHENKEL LN
FRANKFORT KY 40601-1403

May 5, 2000

Ms. Valerie Hudson
Manager, Environmental Systems
Gallatin Steel Company
US Highway 42, Route 1, Box 320
Ghent, Kentucky 41045

RE: ID# 079-1380-0018
Permit # F-96-009 (Revision 1)

Dear Ms. Hudson:

The Division acknowledges the receipt on April 5, 2000, of the test protocol for emission point E1 (01). The Division has reviewed the protocol and concurs that the appropriate test methods are being utilized.

If you have any questions regarding this matter, please contact me at (502)573-3382, Extension 324.

Sincerely,

A handwritten signature in black ink, appearing to read "Forrest E. Frazier, Jr.", written over a horizontal line.

Forrest E. Frazier, Jr., Supervisor
Metallurgy Section
Permit Review Branch

FEF/AJW

cc: William A. Clements / Regional Office
Source file / 5



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APPENDIX G
PROJECT PARTICIPANTS

PROJECT PARTICIPANTS

AMBIENT AIR SERVICES, INC.

Joe Cooksey
Earl Coggins
Melvin Petit

GALLATIN STEEL

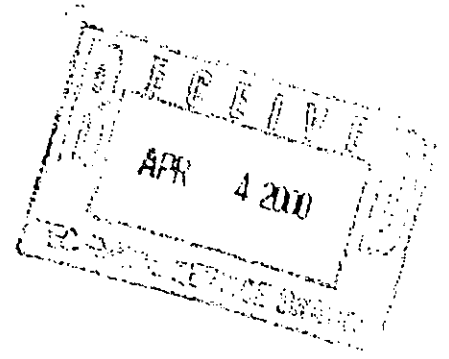
Valerie Hudson
Joe Dougherty

STATE OBSERVER

Gerald Slucher



March 31, 2000



Mr. Gerald Slucher
Source Sampling and Data Management
Section
Technical Services Branch
Division for Air Quality
803 Schenkel Lane
Frankfort, KY 40601-1403

RE: Gallatin Steel Company, Warsaw, KY, ID # 079-1380-0018
Permit Number F-96-009 (Revision 1)
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- 2) For SO₂, in order to obtain statistically valid sampling of levels in the baghouse (since there is not homogeneity in the baghouse), we will be testing compartments in pairs (instead of testing one single compartment) over a total of four runs, each run consisting of three heats. We are requesting to test 8 of the 24 compartments during the four runs, two compartments tested during each run. The results of the sampling will provide more accurate information and will produce an average ppm level for the baghouse emissions. Please note that 40 CFR 60 supports and addresses multiple measurement sites for correctly testing particulate emissions. This same logic is also applicable to SO₂ emissions, and supports the use of an "alternate" method to produce more accurate results.

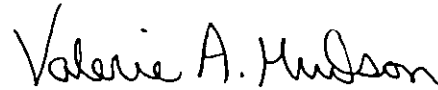
The performance testing is tentatively scheduled to begin on May 5 and we will provide you with notification of the exact test date and start time at least 10 days prior to the testing. A source testing report which presents the results of the performance tests will be submitted to the DAQ within 45 days after the completion of the fieldwork in accordance with the permit.



Letter to Gerald Slucher
March 31, 2000
Page Two

If you have any questions or comments, please contact me at the address below or by telephone at 606-567-3141.

Sincerely yours,

A handwritten signature in black ink that reads "Valerie A. Hudson". The signature is written in a cursive style with a large, stylized 'V' and 'H'.

Valerie A. Hudson, P.E.
Process Manager - Environmental Systems

cc: Dan Gray, DAQ
John Allen, DAQ-Regional Office
Joe Cooksey, Ambient Air Services, Inc.

SECTION B — EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

01 (E1)

Description:

Existing melt shop, consisting of the following:

Twin-Shell DC EAF & continuous caster
Ladle and tundish bricking, deskulling, and brick tear-out
Shell bricking and brick tear-out
Two LMF's
One tundish dryer, 1.5 MMBtu/hr
One ladle dryer, 8 MMBtu/hr
Three ladle preheaters, 10 MMBtu/hr, each
Two tundish preheaters, 10 MMBtu/hr, each
Two tundish casting nozzle preheaters, 5 MMBtu/hr, each
Two stirring stations
Dump pit for handling used refractory materials
Scrap cutting from slag pot
Control Equipment: positive pressure fabric filter baghouse
Construction commenced: April, 1993

APPLICABLE REGULATIONS:

- A. 401 KAR 51:017, Prevention of significant deterioration of air quality.
- B. 401 KAR 60:005 40 CFR standards of performance for new sources. Section 3. (1) (dd), Standards of performance for steel plants: electric arc furnaces and argon-oxygen decarburization vessels constructed after August 17, 1983 (40 CFR Part 60, Subpart AAa).
- C. 401 KAR 59:010, New process operations.

1. Operating Limitations:

- a. The following raw materials usage rates (including the replacement of the heel) shall not be exceeded: Scrap/substitutes: 270 tons/heat, Lime: 12 tons/heat, and Carbon/substitutes: 7 tons/heat. (Limit on PTE).

Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Permittee Name: Gallatin Steel Company
Mailing Address: RR #1, Box 320, Ghent, KY 41045

is authorized to operate a steel mill and to construct/operate a second melt shop with associated equipment and a caster and tunnel furnace.

Source Name: Gallatin Steel Company
Mailing Address: RR#1, Box 320, Ghent, KY 41045
Source Location: U.S. Highway 42 West, Warsaw, Kentucky

Permit Type: Federally-Enforceable
Review Type: PSD, Title V

Permit Number: V-99-003 (Revision 2)
Log Number: 54190, 53839, F690
Application
Complete Date: November 26, 2001 (54190), May 21, 2001 (53839), June 23, 1998 (F690)

AFS Plant ID #: 21-077-00018
SIC Code: 3312

Region: CINCINNATI
County: Gallatin

Issuance Date: June 22, 2000
Revision 1 Date: August 27, 2001
Revision 2 Date: December 10, 2001
Expiration Date: June 22, 2005

John E. Hornback, Director
Division for Air Quality

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SECTION A -- PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto and shall become the final permit unless the U.S. EPA files an objection pursuant to 401 KAR 52:100, Section 10.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

Prior to commencing construction on 02(E2), the permittee is responsible for demonstrating that all BACT requirements for all emission units in the new meltshop have not changed from the BACT requirements in F-96-009(Revision 1). If any BACT requirements have changed, the permittee shall meet all new BACT requirements. Additionally, if any parameters changed that affect the modeled ambient impacts in F-96-009(Revision 1), the permittee shall be responsible for performing additional appropriate modeling analyses.

Gallatin Steel Company, and the adjacent slag processing plant, AFS # 21-077-00020, and the industrial gas plant, AFS # 21-077-00023, are considered by the Kentucky Division for Air Quality and the US EPA Region IV to be one source as defined in 401 KAR 51:017, Prevention of significant deterioration of air quality (PSD). Each is responsible and liable for their own violations unless there is a joint cause for the violations.



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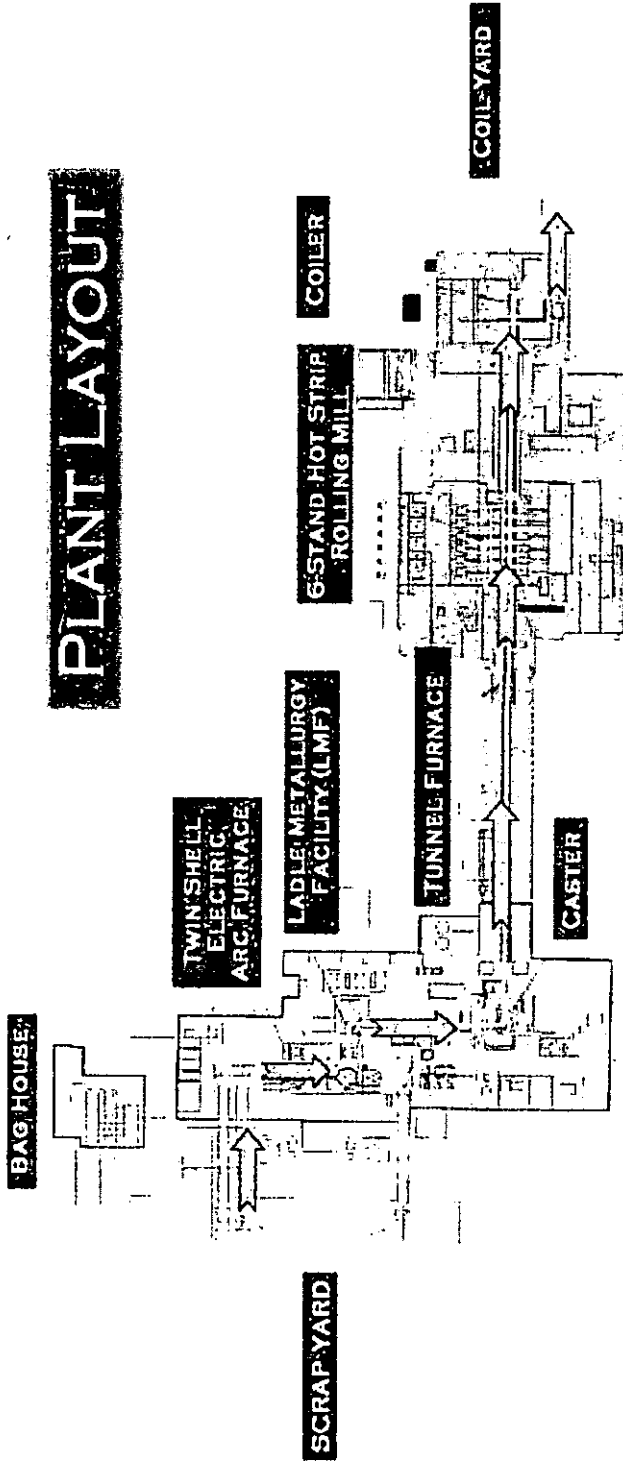
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PLANT LAYOUT



PROCESS OVERVIEW

Gallatin Steel recycles scrap steel to make new hot-rolled steel coils, using a continuous Compact Strip Production or CSP process. Quality is one of our core business values, and we are ISO 9002 certified.

Reclaimed metals from sources including junked automobiles, demolished buildings and bridges, railroad wheels and old household appliances are delivered to our site via truck, rail and barge. The reclaimed metals are stored in our Scrap Yard until the metals are carried into the Melt Shop and charged in a twin-shell electric arc furnace (EAF).

The EAF melts the scrap steel by striking an electric arc that radiates energy to the scrap charge.

The molten steel is transferred to the Ladle Metallurgy Facility (LMF). At the LMF, the molten metal is refined by making alloy additions and

adjusting the ladle temperature. Once the steel meets the required chemistry and temperature, the ladle is taken to the Caster, and positioned on the rotating turret.

The caster pours the steel into a vertical water-cooled copper mold, which forms a shell the required thickness and width of the slab. The shell is then drawn down through the cooling spray chamber by rollers, solidifying as it travels. The continuous strand exits at the bottom of the machine, and is sheared into slabs of specified lengths, which then enter the tunnel furnace.

The slabs move through the Tunnel Furnace and into the Rolling Mill, where six rolling stands reduce the slabs to the final thickness at a mill exit speed of about 25 mph.

A Coiler at the end of the line captures and wraps the strip into coils suitable for shipping. The coils are banded, marked, weighed and moved to the coil yard for cooling. Coils are cool enough to ship in about 2 days.

The coils are loaded on trucks, outbound rail cars or river barges for transport to the customer.

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MELT SHOP

The Melt Shop melts the scrap charge to liquid steel at the required temperature and chemical analysis. It uses large amounts of electric power.

- ▶ The melting equipment consists of a twin-shell DC electric arc furnace, powered by a shared set of electrical equipment operating at up to 850 volts and 135,000 amps.
- ▶ Oxy-fuel burners placed at strategic locations around the furnace supply additional energy. A lance system is used to inject oxygen to decarbonize the steel. The lance can also inject anthracite carbon to produce a foamy slag.
- ▶ When the furnace is ready for scrap charging, an overhead crane brings a "clamshell" bucket over the furnace top and opens the bottom, charging the scrap into the furnace.
- ▶ The process of melting a charge of scrap is called a heat. The melt shop computer system identifies each production batch with a unique heat number. To begin melting, the single 30" diameter graphite electrode is lowered into the furnace, and an electric arc is struck between the top and bottom electrodes.



- ▶ The arc is like a captive lightning bolt, and radiates energy to the scrap charge from its 4000° F core, quickly boring its way down through the packed scrap. During the heat, the arc voltage is adjusted several times by the programmable controller, or PLC, which controls the furnace.



- ▶ A foamy slag is created, which protects the water cooled panels that make up the walls of the furnace and aids in heat transfer to the scrap.

- ▶ Oxygen is blown in to remove carbon and other oxidizable elements from the steel bath. It normally takes 50 to 60 minutes to melt a heat of steel and tap the furnace into a waiting ladle.

- ▶ Tapping necessitates tilting the furnace forward until liquid steel runs out of the tap hole into a ladle waiting below. The ladle sits on the platform of a transfer car, which is moved into position under the furnace.



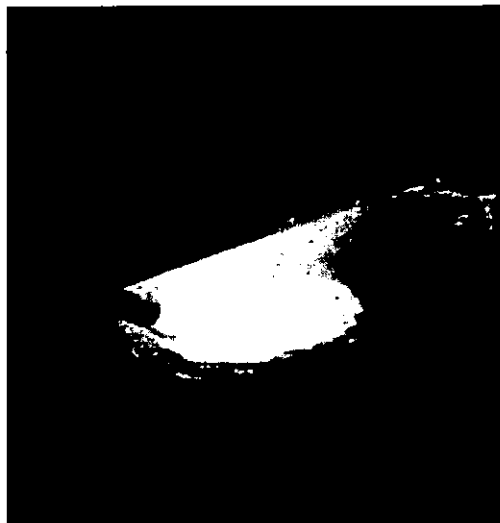
- ▶ Some steel is always left in the furnace. The residual amount is called a heel. The heel protects the bottom electrode when scrap drops into the furnace and helps to maintain the furnace temperature.

- ▶ When the steel in the ladle reaches a target weight, the furnace moves back into its level position, and the gate is closed.

- ▶ Temperatures and samples for analysis

are taken with an automated mechanical arm. This is safer and more reliable than taking them manually. The temperature of the steel at tap is about 2960° F.

- ▶ The operators send samples of the steel to a Chemical Laboratory using a system of pneumatic tubes. The samples are analyzed on a high-tech optical emission spectrometer, and the results are sent by computer network back to the furnace operator to show the chemical composition of the steel.
- ▶ Based on the sample results, the operators can adjust the chemistry to meet specifications by making alloy additions at tap.
- ▶ After tap, the ladle of steel is lifted to the LMF car by crane.



Tapping Molten Metal from Electric Arc Furnace

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