UGI DEVELOPMENT COMPANY
HUNLOCK STATION
UNIT 6

RELATIVE ACCURACY TEST AUDIT REPORT

CATALYST AIR MANAGEMENT, INC.
REPORT NUMBER 124-028

JULY 22, 2005
Test Date: June 2, 2005

Prepared for
Mr. Jeff Steeber
UGI Development Company
Hunlock Station
Route 11, PO Box 224
Hunlock Creek, PA 18621

CATALYST
AIR MANAGEMENT, INC.

STATEMENT OF VALIDITY

UGI Development Company
Catalyst Report 124-028
July 22, 2005

To the extent practical, information and data provided in this test report has been verified as true and correct.

Michael J. Taylor
President - Catalyst Air Management

Jeff Steeber or Jim Dunbar
UGI Development Company

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PROJECT SUMMARY

NAME OF SOURCE OWNER:	UGI Development Company
SOURCE IDENTIFICATION:	Hunlock Station Unit 6
LOCATION OF SOURCE:	Route 11, PO Box 224 Hunlock Creek, PA 18621
TYPE OF OPERATION:	Coal Fired Utility Steam Generator
TYPES OF TESTS PERFORMED:	Sample Traverse-EPA Method 1 Volumetric Flow Rate-EPA Method 2F Oxygen/Carbon Dioxide-EPA Method 3A Moisture Content-EPA Method 4 Sulfur Dioxide-EPA Method 6C Nitrogen Oxide-EPA Method 7E
SOURCE ANALYZERS:	Air Monitor Mastron Electronic Flow - B26354 Thermo Environmental SO_2 - 43C-69110-362 Thermo Environmental NOx - 42C-69062-362 Thermo Environmental CO_2 - CHL-68209-359 VIM Technologies DAHS - 14787WIN
TEST COMPANY:	Catalyst Air Management, Inc. 10 Mill Road Morgantown, PA 19543
SITE SUPERVISOR:	Jeff Ferguson - Principal
TEST PERSONNEL:	Robert Righter - Lead Technician Chris Heilner - Technician
TEST DATE:	June 2, 2005
OWNERS REPRESENTATIVE:	Jim Dunbar Jeff Steeber
TEST OBSERVER:	Martin Felion

1.0 Introduction

Catalyst Air Management, Inc. (Catalyst) was contracted by UGI Development Company (UGI) to determine the relative accuracy of the Continuous Emissions Monitoring Systems (CEMS) at Hunlock Station Unit 6.

The sampling program was conducted June 2, 2005. The RATA was performed by Messers. Jeff Ferguson, Robert Righter, and Chris Heilner of Catalyst, with the assistance of personnel assigned by UGI. Messrs. Jim Dunbar and Jeff Steeber of UGI coordinated plant operation during the testing.

2.0 Summary of Test Results

A summary of test results developed by this source sampling program are presented in Tables 1 through 7. The summary tables are presented as follows:

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TABLE 1
Relative Accuracy Summary
Hunlock Station Unit 6

MONITOR: EPA performance Specification - < 10% semi-annual; < 7.5% annual

LOAD	RELATIVE ACCURACY	BIAS
HIGH	1.61 %	1.000
MID	1.80 %	1.000
LOW	3.42 %	1.000

PARAMETERS	RELATIVE ACCURACY	BIAS
SO_2 ppm	3.28 %	1.000
NOx lb/mmBtu	2.02 %	1.000
CO_2 %	3.12 %	NA

3.0 Results of Testing

The results from the RATA are tabulated in Appendices 1 through 3. They indicate that the CEMS meet the criteria for annual testing. All the systems passed the bias test and a bias adjustment factor of 1.000 was assigned.

4.0 Source Description

Hunlock Station Unit 6 is a pulverized coal fired boiler. No.2 fuel oil is used for ignition and flame stabilization. The boiler is rated at 400,000 lbs/hr of steam at 1350 psig and 955 °F. It is a Foster Wheeler drum type, arch fired, balanced draft unit with a nominal heat input of 562 mmBtu/hr. The steam is supplied to a turbine/generator rated at approximately 50 MW. The flue gas is passed through a primary and secondary precipitator for particulate control.

The Unit 6 stack is 40.5 feet high, with an inside diameter of 9.5 feet. The sampling location is approximately 14.5 feet upstream from the stack exit and 27 feet downstream of the inlet duct. A schematic of the sampling location is included.

5.0 Description of CEMS

The Unit 6 CEMS is a dilution extraction system that measures SO_2, NOx and CO_2 concentrations at the sampling location. The CEMS analyzers includes a Thermo Environmental Model 43H SO_2 analyzer, Thermo Environmental Model 42D NOx analyzer, Thermo Environmental Model 41CHL CO_2 analyzer and a Air Monitor Mastron Electron Flow monitor. The recording and reporting requirements are performed by a computerized data acquisition and handing system.

Unit 6 CEMS

(1) Thermo Environmental SO_2 - 43C - Serial No. - 43C-69110-362
(1) Thermo Environmental NOx - 42D - Serial No. - 42D-69062-362
(1) Thermo Environmental CO_2 - 41CHL - Serial No. - 41CHL-68209-359
(1) Air Monitor Mastron Electronic Flow- Serial No. B26354
VIM Technologies Data Acquisition and Handling System – Serial No.14787WIN

The data acquisition and handling system utilizes a Fc factor (scf/mmBtu) of 1867 to calculate NOx emissions in lbs/mmBtu. The analyzers measure on a wet basis. The data acquisition and handling system reports the volumetric flow data in standard cubic feet per hour (SCFH).

6.0 Sampling Program Procedures

The following test methods were utilized during the test program:

EPA Method 1 Sample and Velocity Traverse for Stationary Sources

EPA Method 2F	Determination of Stack Gas Velocity and Volumetric Flow Rate with Three-dimensional Probes
EPA Method 3A	Gas Analysis for CO_2, O_2, Excess Air and Dry Molecular Weight (Instrumental Analyzer Method)
EPA Method 4	Determination of Moisture Content in Stack Gas
EPA Method 6C	Determination of SO_2 Emissions from Stationary Sources (Instrumental Analyzer Method)
EPA Method 7E	Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Method)

6.1 CO_2, SO_2 and NOx - EPA Methods 3A, 6C and 7E

Catalyst conducted ten (10) SO_2, NOx and CO_2 relative accuracy runs using EPA Methods 3A, 6C and 7E. These runs were twenty-one (21) minutes in duration. During each run a moisture determination was made so the reference method dry values could be compared to the CEMS wet values.

A sample was continuously extracted and introduced into a Thermo Environmental Model 10, Chemiluminescent NOx analyzer, Western Research 721 ATM SO_2 analyzer and Servomex 1400 O_2/CO_2 analyzer for determination of gas concentrations. The sample was extracted through a heated stainless steel probe, heated sample line and sample conditioner to dry the sample before it enters the analyzers. A sample flow control system was used to control the flow into the analyzers. The analyzers were calibrated prior to starting the testing with EPA Protocol 1, calibration gases. A system bias check was performed before each run by introducing the zero and upscale gas at the back end of the sample probe. The system bias check was repeated at the end of each test run to determine the analyzer zero and calibration drift.

The NOx analyzer span was 0-250 ppm. The calibration gases that were utilized were zero, 40-60% (123.9 ppm) and 80-100% (221.8 ppm) of span. The SO_2 analyzer span was 0-2000 ppm. The calibration gases that were utilized were zero, 40-60% (891.5 ppm) and 80-100% (1780.0 ppm) of span. The O_2/CO_2 analyzer spans were 0-25% and 0-20%, respectively. The O_2 calibration gases utilized were 11.92% and 22.43%. The CO_2 calibration gases were 9.997% and 17.83%.

Reference Method Analyzers:

Manufacturer	Model	Pollutant	Span
TECO	10A	NOx	0-250 ppm
Servomex	1400B	CO_2/O_2	0-20%/0-25%
Western Research	721 ATM	SO_2	0-2000 ppm

6.2 Volumetric Flow Rate - EPA Method 2F

The velocity and volumetric flow rate was determined in accordance with procedures outlined in EPA Method 2F. A DAT Prism 3-D probe was connected to a series of calibrated magnehelics and manometers to determine the yaw and pitch angles, static pressure and pitch coefficient of the flue gas at each traverse point. The temperature of the flue gas was also determined at each traverse point.

Ten (10) test runs were performed at the high load condition. Nine (9) runs were performed at the low and mid load conditions.

6.3 Moisture - EPA Method 4

The moisture content was determined in accordance with procedures outlined in EPA Method 4. The flue gas sample is extracted from the gas stream and the moisture content is determined by measuring the increase in volume of the impingers. The sampling train consists of the following equipment connected in series:

Stainless steel heated sample probe
A modified Greenburg-Smith impinger containing 100 ml of H_2O
A Greenburg-Smith impinger containing 100 ml of H_2O
A modified Greenburg-Smith impinger, empty
A modified Greenburg-Smith impinger containing approximately 250g of silica gel

The sample volume is measured by passing it through a calibrated dry gas meter. After the run, the impinger contents are measured for increase in volume. The silica gel is returned to the original tared container and weighed to determine moisture gain.

All the procedures used for the RATA program were performed in accordance with the Code of Federal Regulations, Title 40, Part 60, Appendix A, and Appendix B, Performance Specifications 2, 3 and 6, and Part 75.

7.0 Operating Conditions

Operating conditions were monitored throughout the duration of the sampling program by UGI personnel. The testing was performed June 2, 2005 as follows:

UNIT	LOAD	MW	DATE	# of RUNS
6	High	44	6/2/05	10
6	Mid	35	6/2/05	9
6	Low	25	6/2/05	9

8.0 Quality Assurance Procedures

The quality assurance procedures followed during the testing activities followed guidelines set forth by the previously mentioned methods and the EPA Quality Assurance Handbook for Source Sampling. The specific procedures for this test program are listed below.

8.1 Velocity/Volumetric Flow Rate

The DAT Prism 3-D probe was visually inspected and calibrated to meet the design specifications of EPA Method 2F.

All legs of the probe were leaked checked before and after each sample run.

The stack thermocouples were calibrated prior to the testing and a post test check was performed after the testing project.

The magnehelics were leveled and zeroed before each sample run.

8.2 Moisture

The dry gas meter is fully calibrated annually using an EPA intermediate standard.

Post -test dry gas meter checks were completed to verify the accuracy of the meter Yi.

Pre-test and post-test leak checks were completed and were less than 0.02 cfm at the highest sampling vacuum.

8.3 Instrumental Methods

Analyzer calibrations, system bias check and drift checks were completed before and after each sample run utilizing EPA Protocol 1 calibration gases.

The NOx analyzer NO_2 to NO converter efficiency is determined in accordance with Section 5.6 of Method 20.

The analyzer interference responses were determined in accordance with Section 5.4 of Method 20 and Section 7.2 through 7.6 of Method 6C.

APPENDIX 1
CEMS RELATIVE ACCURACY

TABLE 2

SO_2 (ppm) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF SO2 MONITOR
SUMMARY OF DATA

Monitor: SO_2

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 6C
Monitor Serial # : 43C-40611-362

DATE: 6/2/2005
OPERATING LEVEL: High
GROSS UNIT LOAD: 44 MW
START: 7:54
END: 13:18

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	7:54	8:15	1,173.9	1,204.3	-30.400	924.160	-2.59	21
2	1	6/2/2005	6/2/2005	8:31	8:52	1,173.6	1,186.9	-13.300	176.890	-1.13	21
3	1	6/2/2005	6/2/2005	9:17	9:38	1,123.3	1,143.7	-20.400	416.160	-1.82	21
4	1	6/2/2005	6/2/2005	9:55	10:16	1,108.0	1,139.4	-31.400	985.960	-2.83	21
5	1	6/2/2005	6/2/2005	10:38	10:59	1,129.9	1,172.4	-42.500	1,806.250	-3.76	21
6	1	6/2/2005	6/2/2005	11:12	11:33	1,056.1	1,094.6	-38.500	1,482.250	-3.65	21
7	1	6/2/2005	6/2/2005	11:47	12:08	1,057.6	1,094.8	-37.200	1,383.840	-3.52	21
8	1	6/2/2005	6/2/2005	12:24	12:45	1,111.7	1,128.6	-16.900	285.610	-1.52	21
9	0	6/2/2005	6/2/2005	12:57	13:18	1,081.1	1,123.4	-42.300	1,789.290	-3.91	21
10	1	6/2/2005	6/2/2005	13:31	13:52	1,134.4	1,164.0	-29.600	876.160	-2.61	21
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	T-Value	2.306		
Mean RM	1,118.722	CC	7.757		
Mean CEM	1,147.633	BAF	1.000		
Mean Diff.	-28.911	SDEV	10.091	RELATIVE ACCURACY =	3.28%

TABLE 3

NOx (lb/mmBtu) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF NOx MONITOR
SUMMARY OF DATA

Monitor: NOx

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 7E
Monitor Serial # : 42C-69062-362

DATE: 6/2/2005
OPERATING LEVEL: High
GROSS UNIT LOAD: 44 MW
START: 7:54
END: 13:18

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	7:54	8:15	0.281	0.283	-0.002	0.000	-0.71	21
2	1	6/2/2005	6/2/2005	8:31	8:52	0.316	0.313	0.003	0.000	0.95	21
3	1	6/2/2005	6/2/2005	9:17	9:38	0.317	0.323	-0.006	0.000	-1.89	21
4	1	6/2/2005	6/2/2005	9:55	10:16	0.316	0.320	-0.004	0.000	-1.27	21
5	1	6/2/2005	6/2/2005	10:38	10:59	0.277	0.282	-0.005	0.000	-1.81	21
6	1	6/2/2005	6/2/2005	11:12	11:33	0.295	0.300	-0.005	0.000	-1.69	21
7	1	6/2/2005	6/2/2005	11:47	12:08	0.291	0.298	-0.007	0.000	-2.41	21
8	1	6/2/2005	6/2/2005	12:24	12:45	0.296	0.300	-0.004	0.000	-1.35	21
9	1	6/2/2005	6/2/2005	12:57	13:18	0.280	0.284	-0.004	0.000	-1.43	21
10	0	6/2/2005	6/2/2005	13:31	13:52	0.291	0.299	-0.008	0.000	-2.75	21
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	T-Value	2.306		
Mean RM	0.297	CC	0.002		
Mean CEM	0.300	BAF	1.000		
Mean Diff.	-0.004	SDEV	0.003	RELATIVE ACCURACY =	2.02%

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TABLE 4
CO_2 (%) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF CO_2 MONITOR
SUMMARY OF DATA

Monitor: CO_2

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A
Monitor Serial # : 41CHL-68209-359

DATE: 6/2/2005
OPERATING LEVEL: High
GROSS UNIT LOAD: 44 MW
START: 7:54
END: 13:18

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	7:54	8:15	11.90	12.23	-0.330	0.109	-2.77	21
2	1	6/2/2005	6/2/2005	8:31	8:52	12.00	12.30	-0.300	0.090	-2.50	21
3	1	6/2/2005	6/2/2005	9:17	9:38	11.80	12.09	-0.290	0.084	-2.46	21
4	1	6/2/2005	6/2/2005	9:55	10:16	11.70	12.03	-0.330	0.109	-2.82	21
5	0	6/2/2005	6/2/2005	10:38	10:59	11.80	12.28	-0.480	0.230	-4.07	21
6	1	6/2/2005	6/2/2005	11:12	11:33	11.80	12.20	-0.400	0.160	-3.39	21
7	1	6/2/2005	6/2/2005	11:47	12:08	11.90	12.27	-0.370	0.137	-3.11	21
8	1	6/2/2005	6/2/2005	12:24	12:45	12.00	12.25	-0.250	0.063	-2.08	21
9	1	6/2/2005	6/2/2005	12:57	13:18	11.80	12.20	-0.400	0.160	-3.39	21
10	1	6/2/2005	6/2/2005	13:31	13:52	11.90	12.22	-0.320	0.102	-2.69	21
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	**T-Value**	2.306		
Mean RM	11.867	**CC**	0.038		
Mean CEM	12.199	**BAF**	NA		
Mean Diff.	-0.332	**SDEV**	0.050	**RELATIVE ACCURACY =**	**3.12%**

TABLE 5
High Flow (WSCFH) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF FLOW MONITOR
SUMMARY OF DATA

Monitor: FLOW

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 2,3,4
Monitor Serial # : B26354

DATE: 6/2/2005
OPERATING LEVEL: High
GROSS UNIT LOAD: 44 MW
START: 7:54
END: 13:18

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	7:54	8:15	8,037,000	8,046,000	-9,000	8.10E+07	-0.11	21
2	1	6/2/2005	6/2/2005	8:31	8:52	8,018,000	8,022,000	-4,000	1.60E+07	-0.05	21
3	1	6/2/2005	6/2/2005	9:17	9:38	7,863,000	8,112,000	-249,000	6.20E+10	-3.17	21
4	1	6/2/2005	6/2/2005	9:55	10:16	7,924,000	8,004,000	-80,000	6.40E+09	-1.01	21
5	1	6/2/2005	6/2/2005	10:38	10:59	7,826,000	7,854,000	-28,000	7.84E+08	-0.36	21
6	1	6/2/2005	6/2/2005	11:12	11:33	7,829,000	7,830,000	-1,000	1.00E+06	-0.01	21
7	1	6/2/2005	6/2/2005	11:47	12:08	7,792,000	7,746,000	46,000	2.12E+09	0.59	21
8	1	6/2/2005	6/2/2005	12:24	12:45	7,590,000	7,674,000	-84,000	7.06E+09	-1.11	21
9	1	6/2/2005	6/2/2005	12:57	13:18	7,584,000	7,704,000	-120,000	1.44E+10	-1.58	21
10	0	6/2/2005	6/2/2005	13:31	13:52	7,962,000	7,674,000	288,000	8.29E+10	3.62	21
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	T-Value	2.306		
Mean RM	7,829,222	CC	67,539		
Mean CEM	7,888,000	BAF	1.000		
Mean Diff.	-58,778	SDEV	87,865	RELATIVE ACCURACY =	1.61%

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TABLE 6
Mid Flow (WSCFH) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF FLOW MONITOR
SUMMARY OF DATA

Monitor: FLOW

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 2,3,4
Monitor Serial # : B26354

DATE: 6/2/2005
OPERATING LEVEL: Mid
GROSS UNIT LOAD: 35 MW
START: 14:34
END: 16:23

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	14:34	14:43	6,450,000	6,528,000	-78,000	6.08E+09	-1.21	10
2	1	6/2/2005	6/2/2005	14:44	14:53	6,403,000	6,432,000	-29,000	8.41E+08	-0.45	10
3	1	6/2/2005	6/2/2005	14:54	15:03	6,505,000	6,492,000	13,000	1.69E+08	0.20	10
4	1	6/2/2005	6/2/2005	15:16	15:25	6,614,000	6,480,000	134,000	1.80E+10	2.03	10
5	1	6/2/2005	6/2/2005	15:26	15:35	6,500,000	6,432,000	68,000	4.62E+09	1.05	10
6	1	6/2/2005	6/2/2005	15:36	15:45	6,482,000	6,426,000	56,000	3.14E+09	0.86	10
7	1	6/2/2005	6/2/2005	15:54	16:03	6,594,000	6,342,000	252,000	6.35E+10	3.82	10
8	1	6/2/2005	6/2/2005	16:04	16:13	6,292,000	6,366,000	-74,000	5.48E+09	-1.18	10
9	1	6/2/2005	6/2/2005	16:14	16:23	6,318,000	6,360,000	-42,000	1.76E+09	-0.66	10
10	0										
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	**T-Value**	2.306		
Mean RM	6,462,000	**CC**	83,124		
Mean CEM	6,428,667	**BAF**	1.000		
Mean Diff.	33,333	**SDEV**	108,140	**RELATIVE ACCURACY =**	**1.80%**

TABLE 7
Low Flow (WSCFH) Relative Accuracy

CATALYST AIR MANAGEMENT Inc.
RELATIVE ACCURACY OF FLOW MONITOR
SUMMARY OF DATA

Monitor: **FLOW**

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 2,3,4
Monitor Serial # : B26354

DATE: 6/2/2005
OPERATING LEVEL: Low
GROSS UNIT LOAD: 25 MW
START: 16:47
END: 18:25

RUN	RUN USED Y/N	DATE START	DATE END	TIME START	TIME END	REFERENCE METHOD	UGI CEM	DIFFERENCE (REF-CEM)	DIFFERENCE SQUARED	% DIFF	DURATION OF RUN (Min)
1	1	6/2/2005	6/2/2005	16:47	16:56	5,747,000	5,628,000	119,000	1.42E+10	2.07	10
2	1	6/2/2005	6/2/2005	16:57	17:06	5,635,000	5,370,000	265,000	7.02E+10	4.70	10
3	1	6/2/2005	6/2/2005	17:07	17:16	5,511,000	5,214,000	297,000	8.82E+10	5.39	10
4	1	6/2/2005	6/2/2005	17:22	17:31	5,275,000	5,226,000	49,000	2.40E+09	0.93	10
5	1	6/2/2005	6/2/2005	17:32	17:41	5,189,000	5,082,000	107,000	1.14E+10	2.06	10
6	1	6/2/2005	6/2/2005	17:42	17:51	4,993,000	5,106,000	-113,000	1.28E+10	-2.26	10
7	1	6/2/2005	6/2/2005	17:56	18:05	5,120,000	5,118,000	2,000	4.00E+06	0.04	10
8	1	6/2/2005	6/2/2005	18:06	18:15	5,024,000	5,076,000	-52,000	2.70E+09	-1.04	10
9	1	6/2/2005	6/2/2005	18:16	18:25	5,004,000	5,010,000	-6,000	3.60E+07	-0.12	10
10	0										
11	0										
12	0										

SUMMARY STATISTICS

Runs Used	9	**T-Value**	2.306		
Mean RM	5,277,556	**CC**	106,085		
Mean CEM	5,203,333	**BAF**	1.000		
Mean Diff.	74,222	**SDEV**	138,012	**RELATIVE ACCURACY =**	**3.42%**

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APPENDIX 2
REFERENCE METHOD TEST RESULTS

High Load

CATALYST AIR MANAGEMENT Inc.
CALIBRATION DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: RATA
LOCATION: Stack

RUN #: 1-10
LOAD LEVEL: High
DATE: 6/2/2005

GAS UNITS	ANALYZER SCALE	CYLINDER VALUE	ANALYZER VALUE	DIFF PPM	% SPAN	Pass Yes\No
O2, %		0.00	0.03	0.03	0.12	**YES**
O2, %	**25**	11.92	11.90	0.02	0.08	**YES**
O2, %		22.43	22.44	0.01	0.04	**YES**
CO2, %		0.00	0.04	0.04	0.20	**YES**
CO2, %	**20**	9.997	10.02	0.02	0.11	**YES**
CO2, %		17.83	17.82	0.01	0.05	**YES**
NOx ppm:		0.00	0.05	0.05	0.02	**YES**
NOx ppm:	**250**	123.90	123.79	0.11	0.04	**YES**
NOx ppm:		221.80	222.04	0.24	0.10	**YES**
SO2 ppm:		0.00	0.40	0.40	0.02	**YES**
SO2 ppm:	**2000**	891.50	892.41	0.91	0.05	**YES**
SO2 ppm:		1780.00	1780.01	0.01	0.00	**YES**

CAT. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: High

RUN: 1
DATE: 6/2/2005
TIME START: 7:54
END: 8:15

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.18 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	7.1	0.37	0.01	0.03	3	7.70	1.006	0.37	-0.55	331	49.53
2	0.4	0.39	0.02	0.05	5	5.02	1.006	0.39	-0.57	334	51.22
3	1.3	0.41	0.02	0.05	5	5.17	1.006	0.41	-0.59	334	52.50
4	2.8	0.38	0.02	0.05	5	5.73	1.006	0.38	-0.56	334	50.50
5	3.3	0.38	0.00	0.00	0	3.30	1.006	0.38	-0.56	333	50.63
6	7.3	0.34	-0.02	-0.06	-5	8.84	1.013	0.34	-0.52	331	47.51
7	2.7	0.33	0.00	0.00	0	2.70	1.006	0.33	-0.51	331	47.15
8	9.6	0.24	0.00	0.00	0	9.60	1.006	0.24	-0.42	325	39.54
B-1	2.6	0.37	0.02	0.05	5	5.63	1.006	0.37	-0.55	333	49.81
2	1.5	0.38	0.00	0.00	0	1.50	1.006	0.38	-0.56	332	50.67
3	1.8	0.39	0.00	0.00	0	1.80	1.006	0.39	-0.57	333	51.36
4	1.5	0.34	0.00	0.00	0	1.50	1.006	0.34	-0.52	333	47.96
5	2.5	0.27	0.00	0.00	0	2.50	1.006	0.27	-0.45	334	42.74
6	8	0.29	0.00	0.00	0	8.00	1.006	0.29	-0.47	335	43.93
7	5.3	0.34	0.00	0.00	0	5.30	1.006	0.34	-0.52	335	47.83
8	2.6	0.28	0.01	0.04	5	5.63	1.006	0.28	-0.46	325	43.11
						Ri			Ps	TEMP	Vs
						5.00			-0.53	332.1	47.98
						avg			avg	avg	avg

MOISTURE = 8.84
MD = 0.91
MWD = 30.32
MW = 29.23
Psa = 29.46

02 % = 6.1
CO2 % = 13.0
N2 % = 80.9

VOLUMETRIC FLOW RATE
Qs = 7,325,927 DSCFH
Qs = 8,037,000 WSCFH
Qa = 12,244,017 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
7:54	0	910.488	1.70	77	77	1.00	29.50
	5	912.1		76	77		
	10	916.3		76	77		
	15	919.0		76	77		
	20	924.2		76	77		
	25	928.1		76	77		
8:24	30	932.977					
		22.489	1.70		77		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	134	
2	100	105	
3	0	1	
Gel	250	255.1	Total
NET	450	495.1	45.1

TOTAL MOISTURE (ml) 45.1

VM(STD)= 21.902
VW(GAS)= 2.124

%MOISTURE = 8.84

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CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 1
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 7:54
END: 8:15

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	7:54	6.41	12.84	156	1278.08
6/2/2005	7:55	6.4	12.88	153.89	1273.29
6/2/2005	7:56	6.06	13.22	165.94	1301.42
6/2/2005	7:57	6.19	13.11	164.94	1284.49
6/2/2005	7:58	6.15	13.04	158.94	1286.21
6/2/2005	7:59	6.28	12.92	157.54	1282.23
6/2/2005	8:00	6.33	12.84	154.46	1280.53
6/2/2005	8:01	6.21	12.9	152.84	1293.84
6/2/2005	8:02	6.19	12.96	156.4	1297.92
6/2/2005	8:03	6.29	13.03	162.6	1291.03
6/2/2005	8:04	6.21	13.02	156.6	1289.43
6/2/2005	8:05	6.24	13.03	162	1291.95
6/2/2005	8:06	6.24	12.98	160.82	1279.69
6/2/2005	8:07	6.08	13.1	170.88	1298.75
6/2/2005	8:08	6.35	12.91	168.13	1279.25
6/2/2005	8:09	6.19	12.97	158.92	1293.44
6/2/2005	8:10	6.4	12.89	164	1281.53
6/2/2005	8:11	6.11	13.2	166.51	1294.25
6/2/2005	8:12	6.27	13.08	171.75	1281.4
6/2/2005	8:13	5.91	13.13	157.62	1299.49
6/2/2005	8:14	6.03	13.1	166.43	1310.51
6/2/2005	8:15	6.27	12.95	169.86	1279.57
		O2	CO2	NOx	SO2
		6.22	13.00	161.69	1288.56
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.13	0.40	**YES**	0.10	0.28	0.12	**YES**
O2, %	22.44	22.41	0.12	**YES**	22.50	0.24	0.36	**YES**
CO2, %	0.04	0.08	0.20	**YES**	0.10	0.30	0.10	**YES**
CO2, %	17.82	17.89	0.35	**YES**	17.74	0.40	0.75	**YES**
NOx ppm:	0.05	0.42	0.15	**YES**	0.63	0.23	0.08	**YES**
NOx ppm:	123.79	123.55	0.10	**YES**	123.04	0.30	0.20	**YES**
SO2 ppm:	0.40	1.38	0.05	**YES**	1.59	0.06	0.01	**YES**
SO2 ppm:	1780.01	1781.41	0.07	**YES**	1779.89	0.01	0.08	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.2
CO2, %	13.0
NOx ppm:	161.7
SO2 ppm:	1288.6

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **8.84**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.1	5.6
CO2, %	13.0	11.9
NOx ppm:	162.6	148.2
SO2 ppm:	1287.7	1173.9

EMISSION RATES

NOx, lbs/mmBtu = **0.281**
SO2, lbs/mmBtu = **3.100**

CAT/. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	2	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	8:31	Pb =	29.50	P_{bar}
LOAD:	High	END:	8:52	Ps =	-0.18	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	10.2	0.31	0.00	0.00	0	10.20	1.006	0.31	-0.49	335	44.96
2	10.6	0.31	0.00	0.00	0	10.60	1.006	0.31	-0.49	334	44.88
3	3.2	0.34	0.00	0.00	0	3.20	1.006	0.34	-0.52	335	47.77
4	6	0.32	0.00	0.00	0	6.00	1.006	0.32	-0.50	335	46.16
5	7	0.34	0.02	0.06	6	9.21	1.009	0.34	-0.52	336	47.33
6	7	0.36	0.02	0.06	6	9.21	1.009	0.36	-0.54	336	48.70
7	1	0.37	0.00	0.00	0	1.00	1.006	0.37	-0.55	337	49.97
8	1	0.32	0.00	0.00	0	1.00	1.006	0.32	-0.50	335	46.41
A-1	8	0.36	0.01	0.03	3	8.54	1.006	0.36	-0.54	333	48.63
2	4	0.38	0.03	0.08	7	8.06	1.012	0.38	-0.56	336	50.26
3	7	0.38	0.03	0.08	7	9.89	1.012	0.38	-0.56	337	50.04
4	10	0.38	0.02	0.05	5	11.17	1.006	0.38	-0.56	337	49.69
5	2	0.38	0.00	0.00	0	2.00	1.006	0.38	-0.56	336	50.58
6	12	0.37	-0.01	-0.03	-3	12.36	1.010	0.37	-0.55	334	48.82
7	8	0.32	0.00	0.00	0	8.00	1.006	0.32	-0.50	333	45.91
8	2	0.32	0.00	0.00	0	2.00	1.006	0.32	-0.50	324	46.07
						Ri			Ps	TEMP	Vs
						7.03			-0.53	334.6	48.02
						avg			avg	avg	avg

MOISTURE = 6.89
MD = 0.93
MWD = 30.32
MW = 29.47
Psa = 29.46

02 % = 6.3
CO2 % = 12.9
N2 % = 80.8

VOLUMETRIC FLOW RATE
Qs = 7,465,031 DSCFH
Qs = 8,018,000 WSCFH
Qa = 12,254,225 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
8:31	0	932.053	2.00	80	82	1.00	29.50
	5	936.0		81	84		
	10	940.9		83	86		
	15	944.5		83	87		
	20	948.1		84	87		
	25	951.6		85	87		
9:01	30	955.415					
		23.362	2.00		84		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	124	
2	100	104	
3	0	1	
Gel	250	256.3	Total
NET	450	485.3	35.3

TOTAL MOISTURE (ml) 35.3

VM(STD)= 22.456
VW(GAS)= 1.663

% MOISTURE = 6.89

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 2
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 8:31
END: 8:52

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	8:31	6.45	12.86	185.84	1265.34
6/2/2005	8:32	6.32	12.92	178.89	1264.82
6/2/2005	8:33	6.27	12.97	179.9	1281.24
6/2/2005	8:34	6.43	13	190.22	1262.22
6/2/2005	8:35	6.26	12.98	177.4	1267.16
6/2/2005	8:36	6.26	13.01	182.34	1268.35
6/2/2005	8:37	6.33	12.94	180.4	1260.07
6/2/2005	8:38	6.37	12.8	176.01	1251.95
6/2/2005	8:39	6.37	12.81	179.52	1262.62
6/2/2005	8:40	6.37	12.64	180.21	1262.92
6/2/2005	8:41	6.43	12.83	177.72	1241.55
6/2/2005	8:42	6.48	12.81	176.61	1253.15
6/2/2005	8:43	6.27	12.96	175.9	1260.64
6/2/2005	8:44	6.41	12.88	184.29	1256.62
6/2/2005	8:45	6.27	12.84	174.48	1256.83
6/2/2005	8:46	6.2	12.85	176.72	1271.73
6/2/2005	8:47	6.5	12.72	181.95	1255.84
6/2/2005	8:48	6.29	12.83	178.95	1268.19
6/2/2005	8:49	6.6	12.71	179.49	1255.38
6/2/2005	8:50	6.37	12.86	180.09	1252.04
6/2/2005	8:51	6.18	12.93	183.34	1271.82
6/2/2005	8:52	6.43	12.86	189.95	1250.35
		O2	CO2	NOx	SO2
		6.36	12.86	180.46	1260.95
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.10	0.28	**YES**	0.10	0.28	0.00	**YES**
O2, %	22.44	22.50	0.24	**YES**	22.50	0.24	0.00	**YES**
CO2, %	0.04	0.10	0.30	**YES**	0.07	0.15	0.15	**YES**
CO2, %	17.82	17.74	0.40	**YES**	17.76	0.30	0.10	**YES**
NOx ppm:	0.05	0.63	0.23	**YES**	0.58	0.21	0.02	**YES**
NOx ppm:	123.79	123.04	0.30	**YES**	124.04	0.10	0.40	**YES**
SO2 ppm:	0.40	1.59	0.06	**YES**	2.12	0.09	0.03	**YES**
SO2 ppm:	1780.01	1779.89	0.01	**YES**	1779.85	0.01	0.00	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.4
CO2, %	12.9
NOx ppm:	180.5
SO2 ppm:	1260.9

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **6.89**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.3	5.9
CO2, %	12.9	12.0
NOx ppm:	181.3	168.8
SO2 ppm:	1260.5	1173.6

EMISSION RATES

NOx, lbs/mmBtu = **0.316**
SO2, lbs/mmBtu = **3.060**

CA\ ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	3	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	9:17	Pb =	29.50 P_{bar}
LOAD:	High	END:	9:38	Ps =	-0.18 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	5	0.35	0.02	0.06	6	7.80	1.009	0.35	-0.53	337	48.23
2	1	0.38	0.02	0.05	5	5.10	1.006	0.38	-0.56	338	50.48
3	8	0.38	0.03	0.08	7	10.62	1.012	0.38	-0.56	338	49.96
4	10	0.39	0.02	0.05	5	11.17	1.006	0.39	-0.57	338	50.37
5	6	0.38	0.00	0.00	0	6.00	1.006	0.38	-0.56	336	50.34
6	6	0.37	-0.02	-0.05	-4	7.21	1.012	0.37	-0.55	334	49.63
7	10	0.32	-0.02	-0.06	-5	11.17	1.013	0.32	-0.50	331	45.58
8	7	0.26	0.00	0.00	0	7.00	1.006	0.26	-0.44	327	41.32
B-1	0	0.30	0.00	0.00	0	0.00	1.006	0.30	-0.48	329	44.77
2	7	0.30	0.00	0.00	0	7.00	1.006	0.30	-0.48	335	44.61
3	4	0.32	0.00	0.00	0	4.00	1.006	0.32	-0.50	336	46.33
4	4	0.35	-0.02	-0.06	-5	6.40	1.013	0.35	-0.53	335	48.41
5	3	0.29	0.00	0.00	0	3.00	1.006	0.29	-0.47	335	44.13
6	2	0.31	0.00	0.00	0	2.00	1.006	0.31	-0.49	336	45.69
7	7	0.34	0.00	0.00	0	7.00	1.006	0.34	-0.52	336	47.52
8	8	0.29	0.00	0.00	0	8.00	1.006	0.29	-0.47	324	43.45
						Ri			Ps	TEMP	Vs
						6.47			-0.52	334.1	47.06
						avg			avg	avg	avg

MOISTURE = 6.74
MD = 0.93
MWD = 30.30
MW = 29.47
Psa = 29.46

02 % = 6.6
CO2 % = 12.7
N2 % = 80.7

VOLUMETRIC FLOW RATE
Qs = 7,332,491 DSCFH
Qs = 7,863,000 WSCFH
Qa = 12,009,242 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
9:17	0	955.585	2.00	87	89	1.00	29.50
	5	959.9		87	89		
	10	964.2		87	89		
	15	968.0		87	90		
	20	971.5		87	91		
	25	975.6		87	94		
9:47	30	979.230					
		23.645	2.00		89		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	122	
2	100	104	
3	0	1	
Gel	250	257.6	Total
NET	450	484.6	34.6

TOTAL MOISTURE (ml) 34.6

VM(STD)= 22.538
VW(GAS)= 1.630

%MOISTURE = 6.74

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 3
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 9:17
END: 9:38

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	9:17	6.61	12.67	188.42	1211.72
6/2/2005	9:18	6.77	12.56	181.34	1196.78
6/2/2005	9:19	6.58	12.68	181.34	1215.84
6/2/2005	9:20	6.68	12.7	181.53	1214.3
6/2/2005	9:21	6.8	12.61	180.64	1191.06
6/2/2005	9:22	6.25	12.78	168.12	1226.55
6/2/2005	9:23	6.64	12.61	173.7	1220.15
6/2/2005	9:24	6.68	12.52	173.91	1202.83
6/2/2005	9:25	6.84	12.43	175.71	1193.9
6/2/2005	9:26	6.7	12.6	181.38	1182.58
6/2/2005	9:27	6.78	12.54	177.33	1202.51
6/2/2005	9:28	6.76	12.66	178.47	1203.15
6/2/2005	9:29	6.85	12.5	174.33	1188.26
6/2/2005	9:30	6.71	12.61	176.2	1195.23
6/2/2005	9:31	6.53	12.72	176.09	1210.76
6/2/2005	9:32	6.51	12.67	176.58	1211.06
6/2/2005	9:33	6.88	12.46	179.78	1198.78
6/2/2005	9:34	6.69	12.55	176.03	1204.49
6/2/2005	9:35	6.71	12.66	181.01	1210.91
6/2/2005	9:36	6.72	12.7	179.37	1211.53
6/2/2005	9:37	6.7	12.6	176.89	1203.85
6/2/2005	9:38	6.6	12.69	176.56	1212.39
		O2	CO2	NOx	SO2
		6.68	12.61	177.94	1204.94
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.10	0.28	**YES**	0.13	0.40	0.12	**YES**
O2, %	22.44	22.50	0.24	**YES**	22.42	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.02	0.10	0.25	**YES**
CO2, %	17.82	17.76	0.30	**YES**	17.73	0.45	0.15	**YES**
NOx ppm:	0.05	0.58	0.21	**YES**	0.55	0.20	0.01	**YES**
NOx ppm:	123.79	124.04	0.10	**YES**	122.92	0.35	0.45	**YES**
SO2 ppm:	0.40	2.12	0.09	**YES**	0.88	0.02	0.06	**YES**
SO2 ppm:	1780.01	1779.85	0.01	**YES**	1780.12	0.01	0.01	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.7
CO2, %	12.6
NOx ppm:	177.9
SO2 ppm:	1204.9

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **6.74**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.6	6.2
CO2, %	12.7	11.8
NOx ppm:	178.8	166.7
SO2 ppm:	1204.5	1123.3

EMISSION RATES

NOx, lbs/mmBtu = **0.317**
SO2, lbs/mmBtu = **2.970**

CAT. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	4	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	9:55	Pb =	29.50 P_{bar}
LOAD:	High	END:	10:16	Ps =	-0.20 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	10	0.29	0.00	0.00	0	10.00	1.006	0.29	-0.49	334	43.53
2	7	0.31	0.00	0.00	0	7.00	1.006	0.31	-0.51	335	45.39
3	3	0.37	0.03	0.08	7	7.61	1.012	0.37	-0.57	335	49.67
4	1	0.32	-0.02	-0.06	-5	5.10	1.013	0.32	-0.52	335	46.44
5	2	0.27	0.00	0.00	0	2.00	1.006	0.27	-0.47	336	42.68
6	4	0.34	0.00	0.00	0	4.00	1.006	0.34	-0.54	337	47.84
7	5	0.36	0.02	0.06	6	7.80	1.009	0.36	-0.56	337	48.96
8	2	0.30	0.02	0.07	7	7.28	1.012	0.30	-0.50	329	44.59
A-1	6	0.37	0.00	0.00	0	6.00	1.006	0.37	-0.57	333	49.63
2	6	0.40	0.01	0.03	3	6.71	1.006	0.40	-0.60	335	51.59
3	3	0.39	0.01	0.03	3	4.24	1.006	0.39	-0.59	337	51.22
4	11	0.38	0.01	0.03	3	11.40	1.006	0.38	-0.58	337	49.70
5	8	0.37	0.00	0.00	0	8.00	1.006	0.37	-0.57	336	49.51
6	3	0.36	0.00	0.00	0	3.00	1.006	0.36	-0.56	335	49.22
7	3	0.33	0.00	0.00	0	3.00	1.006	0.33	-0.53	332	47.03
8	5	0.24	0.00	0.00	0	5.00	1.006	0.24	-0.44	326	39.86
						Ri			Ps	TEMP	Vs
						6.13			-0.54	334.3	47.44
						avg			avg	avg	avg

MOISTURE = 7.16
MD = 0.93
MWD = 30.29
MW = 29.41
Psa = 29.46

O2 % = 6.8
CO2 % = 12.6
N2 % = 80.6

VOLUMETRIC FLOW RATE
Qs = 7,355,981 DSCFH
Qs = 7,924,000 WSCFH
Qa = 12,106,215 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
9:55	0	979.301	2.00	90	93	1.00	29.50
	5	983.4		90	95		
	10	987.5		91	96		
	15	992.0		91	97		
	20	996.5		91	95		
	25	999.9		91	95		
10:25	30	1003.195					
		23.894	2.00		93		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	127	
2	100	104	
3	0	1	
Gel	250	255	Total
NET	450	487	37

TOTAL MOISTURE (ml) 37

VM(STD)= 22.600
VW(GAS)= 1.743

% MOISTURE = 7.16

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CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 4
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 9:55
END: 10:16

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	9:55	6.78	12.5	178.06	1202.9
6/2/2005	9:56	6.71	12.55	173.27	1213.41
6/2/2005	9:57	6.94	12.4	175.36	1199.13
6/2/2005	9:58	6.91	12.47	175.03	1203.6
6/2/2005	9:59	6.52	12.66	167.84	1211.67
6/2/2005	10:00	6.87	12.54	177.85	1209.15
6/2/2005	10:01	6.87	12.53	177.3	1181.62
6/2/2005	10:02	7.05	12.38	177.12	1180.59
6/2/2005	10:03	6.95	12.38	174.09	1172.54
6/2/2005	10:04	6.88	12.51	177.67	1198.32
6/2/2005	10:05	7.12	12.32	179.07	1176.23
6/2/2005	10:06	7.03	12.45	178.97	1185.37
6/2/2005	10:07	6.58	12.75	176.89	1209.75
6/2/2005	10:08	6.97	12.5	181.21	1193.05
6/2/2005	10:09	6.86	12.57	180.42	1191.85
6/2/2005	10:10	6.89	12.44	176.35	1190.81
6/2/2005	10:11	6.76	12.54	175.6	1201.96
6/2/2005	10:12	7.1	12.36	175.32	1188.74
6/2/2005	10:13	7.04	12.42	175.8	1184.82
6/2/2005	10:14	7.06	12.44	174.02	1186.88
6/2/2005	10:15	7	12.56	180.64	1189.46
6/2/2005	10:16	6.98	12.47	174.96	1194.65
		O2	CO2	NOx	SO2
		6.90	12.49	176.49	1193.93
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.13	0.40	**YES**	0.10	0.28	0.12	**YES**
O2, %	22.44	22.42	0.08	**YES**	22.40	0.16	0.08	**YES**
CO2, %	0.04	0.02	0.10	**YES**	0.03	0.05	0.05	**YES**
CO2, %	17.82	17.73	0.45	**YES**	17.73	0.45	0.00	**YES**
NOx ppm:	0.05	0.55	0.20	**YES**	0.51	0.18	0.02	**YES**
NOx ppm:	123.79	122.92	0.35	**YES**	124.60	0.32	0.67	**YES**
SO2 ppm:	0.40	0.88	0.02	**YES**	0.94	0.03	0.00	**YES**
SO2 ppm:	1780.01	1780.12	0.01	**YES**	1780.45	0.02	0.02	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.9
CO2, %	12.5
NOx ppm:	176.5
SO2 ppm:	1193.9

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **7.16**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.8	6.3
CO2, %	12.6	11.7
NOx ppm:	176.9	164.2
SO2 ppm:	1193.4	1108.0

EMISSION RATES

NOx, lbs/mmBtu = **0.316**
SO2, lbs/mmBtu = **2.960**

CAT. , T AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	5	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	10:38	Pb =	29.50 P_{bar}
LOAD:	High	END:	10:59	Ps =	-0.18 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	4	0.38	0.030	0.08	7	8.06	1.012	0.38	-0.56	336	50.36
2	3	0.38	0.020	0.05	5	5.83	1.006	0.38	-0.56	338	50.51
3	7	0.37	0.010	0.03	3	7.61	1.006	0.37	-0.55	337	49.63
4	8	0.37	0.020	0.05	5	9.43	1.006	0.37	-0.55	337	49.39
5	5	0.36	0.000	0.00	0	5.00	1.006	0.36	-0.54	335	49.14
6	2	0.34	-0.020	-0.06	-5	5.38	1.013	0.34	-0.52	333	47.83
7	5	0.30	-0.005	-0.02	-2	5.38	1.009	0.30	-0.48	333	44.84
8	1	0.24	0.000	0.00	0	1.00	1.006	0.24	-0.42	325	40.01
B-1	7	0.30	0.000	0.00	0	7.00	1.006	0.30	-0.48	330	44.55
2	6	0.30	0.000	0.00	0	6.00	1.006	0.30	-0.48	331	44.67
3	1	0.34	-0.005	-0.01	-1	1.41	1.007	0.34	-0.52	333	47.88
4	9	0.31	-0.010	-0.03	-3	9.48	1.010	0.31	-0.49	334	45.21
5	2	0.29	-0.010	-0.03	-3	3.61	1.010	0.29	-0.47	335	44.27
6	5	0.33	-0.005	-0.02	-2	5.38	1.009	0.33	-0.51	336	47.12
7	4	0.34	0.000	0.00	0	4.00	1.006	0.34	-0.52	336	47.85
8	2	0.28	0.000	0.00	0	2.00	1.006	0.28	-0.46	328	43.28
						Ri			Ps	TEMP	Vs
						5.41			-0.51	333.6	46.81
						avg			avg	avg	avg

MOISTURE = 7.67
MD = 0.92
MWD = 30.30
MW = 29.36
Psa = 29.46

02 % = 6.3
CO2 % = 12.8
N2 % = 80.9

VOLUMETRIC FLOW RATE
Qs = 7,225,837 DSCFH
Qs = 7,826,000 WSCFH
Qa = 11,945,445 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	METER TEMPERATURE OUTLET	METER Yi	BAR. PRESS. IN. Hg
10:38	0	4.548	2.00	94	96	1.00	29.50
	5	8.1		93	97		
	10	12.3		95	98		
	15	16.4		94	99		
	20	20.3		94	100		
	25	24.1		95	100		
11:08	30	28.977					
		24.429	2.00		96		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	128	
2	100	104	
3	0	1	
Gel	250	257.5	Total
NET	450	490.5	40.5

TOTAL MOISTURE (ml) 40.5

VM(STD)= 22.968
VW(GAS)= 1.908

%MOISTURE = 7.67

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 5
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 10:38
END: 10:59

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	10:38	6.38	12.76	159.99	1238.9
6/2/2005	10:39	6.12	12.87	153.28	1257.84
6/2/2005	10:40	6.22	12.84	155.65	1252.36
6/2/2005	10:41	6.39	12.63	157.38	1236.37
6/2/2005	10:42	6.22	12.76	155.41	1246.61
6/2/2005	10:43	6.27	12.71	154.12	1233.11
6/2/2005	10:44	6.5	12.61	156.98	1232.72
6/2/2005	10:45	6.34	12.75	154.52	1240.1
6/2/2005	10:46	6.32	12.77	154.78	1241.31
6/2/2005	10:47	6.27	12.78	155.19	1230.94
6/2/2005	10:48	6.28	12.78	158.08	1232.41
6/2/2005	10:49	6.23	12.78	159.04	1230.05
6/2/2005	10:50	6.34	12.75	159.19	1226.46
6/2/2005	10:51	6.52	12.63	159.19	1216.24
6/2/2005	10:52	6.34	12.74	156.07	1216.39
6/2/2005	10:53	6.56	12.76	163.4	1203.51
6/2/2005	10:54	6.36	12.88	163.66	1201.33
6/2/2005	10:55	6.47	12.82	168.46	1193.83
6/2/2005	10:56	6.36	12.79	160.04	1190.63
6/2/2005	10:57	6.31	12.68	156.49	1207.54
6/2/2005	10:58	6.6	12.65	165.55	1188.61
6/2/2005	10:59	6.71	12.54	159.49	1171.99
		O2	CO2	NOx	SO2
		6.35	12.75	158.40	1224.63
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.10	0.28	**YES**	0.04	0.04	0.24	**YES**
O2, %	22.44	22.40	0.16	**YES**	22.40	0.16	0.00	**YES**
CO2, %	0.04	0.03	0.05	**YES**	0.05	0.05	0.10	**YES**
CO2, %	17.82	17.73	0.45	**YES**	17.74	0.40	0.05	**YES**
NOx ppm:	0.05	0.51	0.18	**YES**	0.50	0.18	0.00	**YES**
NOx ppm:	123.79	124.60	0.32	**YES**	124.37	0.23	0.09	**YES**
SO2 ppm:	0.40	0.94	0.03	**YES**	1.01	0.03	0.00	**YES**
SO2 ppm:	1780.01	1780.45	0.02	**YES**	1781.34	0.07	0.04	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.4
CO2, %	12.7
NOx ppm:	158.4
SO2 ppm:	1224.6

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **7.67**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.3	5.8
CO2, %	12.8	11.8
NOx ppm:	157.8	145.7
SO2 ppm:	1223.7	1129.9

EMISSION RATES

NOx, lbs/mmBtu = **0.277**
SO2, lbs/mmBtu = **2.990**

CAT .T AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	6	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	11:12	Pb =	29.50	P_{bar}
LOAD:	High	END:	11:33	Ps =	-0.20	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	5	0.32	0.000	0.00	0	5.00	1.006	0.32	-0.52	336	46.37
2	9	0.29	-0.005	-0.02	-2	9.22	1.009	0.29	-0.49	336	43.80
3	8	0.33	-0.005	-0.02	-2	8.24	1.009	0.33	-0.53	337	46.88
4	3	0.32	-0.010	-0.03	-3	4.24	1.010	0.32	-0.52	337	46.54
5	2	0.34	0.005	0.01	1	2.24	1.006	0.34	-0.54	337	47.97
6	5	0.30	0.000	0.00	0	5.00	1.006	0.30	-0.50	338	44.95
7	8	0.32	0.000	0.00	0	8.00	1.006	0.32	-0.52	338	46.15
8	5	0.28	0.000	0.00	0	5.00	1.006	0.28	-0.48	325	43.07
A-1	6	0.36	0.015	0.04	5	7.80	1.006	0.36	-0.56	335	48.88
2	4	0.38	0.015	0.04	5	6.40	1.006	0.38	-0.58	338	50.47
3	4	0.38	0.010	0.03	3	5.00	1.006	0.38	-0.58	339	50.62
4	6	0.38	0.020	0.05	5	7.80	1.006	0.38	-0.58	338	50.31
5	7	0.37	0.000	0.00	0	7.00	1.006	0.37	-0.57	337	49.71
6	8	0.33	-0.010	-0.03	-3	8.54	1.010	0.33	-0.53	336	46.83
7	6	0.30	-0.010	-0.03	-3	6.71	1.010	0.30	-0.50	335	44.82
8	7	0.26	-0.010	-0.04	-4	8.06	1.012	0.26	-0.46	325	41.38
						Ri			Ps	TEMP	Vs
						6.52			-0.53	335.4	46.94
						avg			avg	avg	avg

MOISTURE =	7.87			VOLUMETRIC FLOW RATE		
MD =	0.92	02 % =	6.6	Qs =	7,212,744	DSCFH
MWD =	30.31	CO2 % =	12.8	Qs =	7,829,000	WSCFH
MW =	29.34	N2 % =	80.6	Qa =	11,978,620	ACFH
Psa =	29.46					

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
11:12	0	29.057	2.00	95	99	1.00	29.50
	5	33.1		95	100		
	10	37.1		95	103		
	15	41.3		96	105		
	20	45.5		97	102		
	25	49.2		97	100		
11:42	30	53.210					
		24.153	2.00		99		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	128	
2	100	105	
3	0	0	
Gel	250	258	Total
NET	450	491	41

TOTAL MOISTURE (ml)	41
VM(STD)=	22.610
VW(GAS)=	1.931
%MOISTURE =	7.87

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 6
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 11:12
END: 11:33

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	11:12	6.31	12.8	159.95	1191.44
6/2/2005	11:13	6.6	12.68	163.63	1169.32
6/2/2005	11:14	6.44	12.79	165.15	1177.74
6/2/2005	11:15	6.45	12.75	164.01	1185.08
6/2/2005	11:16	6.69	12.7	163.97	1155.22
6/2/2005	11:17	6.85	12.65	167.65	1144
6/2/2005	11:18	6.89	12.61	172.79	1117.4
6/2/2005	11:19	7.03	12.53	176.23	1106.4
6/2/2005	11:20	6.79	12.59	172.77	1116.67
6/2/2005	11:21	6.74	12.62	170.1	1142.88
6/2/2005	11:22	7.01	12.52	176.28	1121.81
6/2/2005	11:23	6.91	12.57	168.04	1123.17
6/2/2005	11:24	6.57	12.85	167.04	1145.82
6/2/2005	11:25	6.67	12.78	164.66	1148.44
6/2/2005	11:26	6.61	12.77	168.25	1147.15
6/2/2005	11:27	6.68	12.73	168.23	1143.07
6/2/2005	11:28	6.63	12.65	164.55	1134.86
6/2/2005	11:29	6.39	12.87	162.32	1169.32
6/2/2005	11:30	6.65	12.76	169.02	1155.32
6/2/2005	11:31	6.65	12.76	168.94	1152.27
6/2/2005	11:32	6.59	12.9	171.85	1156.65
6/2/2005	11:33	6.68	12.75	167.98	1141.77
		O2	CO2	NOx	SO2
		6.67	12.71	167.88	1147.54
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.04	0.04	**YES**	0.07	0.16	0.12	**YES**
O2, %	22.44	22.40	0.16	**YES**	22.46	0.08	0.24	**YES**
CO2, %	0.04	0.05	0.05	**YES**	0.03	0.05	0.10	**YES**
CO2, %	17.82	17.74	0.40	**YES**	17.74	0.40	0.00	**YES**
NOx ppm:	0.05	0.50	0.18	**YES**	0.32	0.11	0.07	**YES**
NOx ppm:	123.79	124.37	0.23	**YES**	123.37	0.17	0.40	**YES**
SO2 ppm:	0.40	1.01	0.03	**YES**	0.84	0.02	0.01	**YES**
SO2 ppm:	1780.01	1781.34	0.07	**YES**	1781.55	0.08	0.01	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.7
CO2, %	12.7
NOx ppm:	167.9
SO2 ppm:	1147.5

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **7.87**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.6	6.1
CO2, %	12.8	11.8
NOx ppm:	168.1	154.9
SO2 ppm:	1146.3	1056.1

EMISSION RATES

NOx, lbs/mmBtu = **0.295**
SO2, lbs/mmBtu = **2.800**

CAT. ;T AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	7	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	11:47	Pb =	29.50 P_{bar}
LOAD:	High	END:	12:08	Ps =	-0.20 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF 2.8 (P4-P5) (P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps) (P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	1	0.35	0.015	0.04	5	5.10	1.006	0.35	-0.55	344	48.74
2	6	0.37	0.015	0.04	5	7.80	1.006	0.37	-0.57	344	49.84
3	2	0.40	0.015	0.04	5	5.38	1.006	0.40	-0.60	344	52.08
4	8	0.38	0.025	0.07	7	10.62	1.012	0.38	-0.58	343	50.23
5	3	0.35	0.005	0.01	1	3.16	1.006	0.35	-0.55	342	48.80
6	6	0.32	-0.010	-0.03	-3	6.71	1.010	0.32	-0.52	340	46.44
7	3	0.32	-0.010	-0.03	-3	4.24	1.010	0.32	-0.52	338	46.58
8	4	0.25	-0.010	-0.04	-4	5.65	1.012	0.25	-0.45	328	40.86
B-1	8	0.33	0.005	0.02	2	8.24	1.006	0.33	-0.53	339	46.88
2	9	0.37	0.000	0.00	0	9.00	1.006	0.37	-0.57	340	49.57
3	6	0.34	0.000	0.00	0	6.00	1.006	0.34	-0.54	342	47.90
4	1	0.29	-0.050	-0.17	-11	11.04	1.042	0.30	-0.50	342	44.44
5	6	0.29	0.050	0.17	14	15.21	1.025	0.30	-0.50	342	43.33
6	7	0.30	0.000	0.00	0	7.00	1.006	0.30	-0.50	343	44.94
7	6	0.33	0.000	0.00	0	6.00	1.006	0.33	-0.53	344	47.25
8	6	0.26	0.050	0.19	15	16.13	1.026	0.27	-0.47	332	40.61
						Ri 7.96 avg			Ps -0.53 avg	TEMP 340.4 avg	Vs 47.01 avg

MOISTURE =	8.03	02 % =	6.4	VOLUMETRIC FLOW RATE	
MD =	0.92	CO2 % =	12.9	Qs = 7,165,956	DSCFH
MWD =	30.32	N2 % =	80.7	Qs = 7,792,000	WSCFH
MW =	29.33			Qa = 11,996,483	ACFH
Psa =	29.46				

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
11:47	0	53.397	2.00	98	98	1.00	29.50
	5	57.4		99	101		
	10	61.3		99	102		
	15	65.3		99	102		
	20	69.4		99	103		
	25	74.3		95	103		
12:17	30	77.368					
		23.971	2.00		100		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	128	
2	100	105	
3	0	0	
Gel	250	258.5	Total
NET	450	491.5	41.5

TOTAL MOISTURE (ml) 41.5

VM(STD)= 22.393
VW(GAS)= 1.955

% MOISTURE = 8.03

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 7
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 11:47
END: 12:08

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	11:47	6.52	12.91	170.6	1148.82
6/2/2005	11:48	6.43	12.92	165.46	1150.46
6/2/2005	11:49	6.36	12.93	167.74	1151.12
6/2/2005	11:50	6.33	12.94	167.51	1154.88
6/2/2005	11:51	6.36	12.87	171.25	1156.89
6/2/2005	11:52	6.62	12.77	173.34	1139.22
6/2/2005	11:53	6.54	12.73	167.81	1139.48
6/2/2005	11:54	6.41	12.85	163.52	1164.56
6/2/2005	11:55	6.58	12.88	172.31	1146.87
6/2/2005	11:56	6.45	12.9	168.54	1144.23
6/2/2005	11:57	6.35	12.88	165.43	1157.07
6/2/2005	11:58	6.5	12.79	166.92	1125.73
6/2/2005	11:59	6.51	12.71	165.01	1145.39
6/2/2005	12:00	6.6	12.73	167.87	1142.46
6/2/2005	12:01	6.5	12.72	162.56	1153.52
6/2/2005	12:02	6.42	12.83	160.54	1163.54
6/2/2005	12:03	6.56	12.78	163	1154.56
6/2/2005	12:04	6.4	12.85	163	1152.34
6/2/2005	12:05	6.4	12.86	162.23	1159.4
6/2/2005	12:06	6.53	12.73	164.95	1149.82
6/2/2005	12:07	6.52	12.7	161.33	1143.2
6/2/2005	12:08	6.3	12.75	157.7	1172.67
		O2	CO2	NOx	SO2
		6.46	12.82	165.85	1150.74
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.07	0.16	**YES**	0.05	0.08	0.08	**YES**
O2, %	22.44	22.46	0.08	**YES**	22.48	0.16	0.08	**YES**
CO2, %	0.04	0.03	0.05	**YES**	0.05	0.05	0.10	**YES**
CO2, %	17.82	17.74	0.40	**YES**	17.75	0.35	0.05	**YES**
NOx ppm:	0.05	0.32	0.11	**YES**	0.42	0.15	0.04	**YES**
NOx ppm:	123.79	123.37	0.17	**YES**	123.46	0.13	0.04	**YES**
SO2 ppm:	0.40	0.84	0.02	**YES**	0.96	0.03	0.01	**YES**
SO2 ppm:	1780.01	1781.55	0.08	**YES**	1780.02	0.00	0.08	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.5
CO2, %	12.8
NOx ppm:	165.8
SO2 ppm:	1150.7

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **8.03**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.4	5.9
CO2, %	12.9	11.9
NOx ppm:	166.6	153.2
SO2 ppm:	1149.9	1057.6

EMISSION RATES

NOx, lbs/mmBtu = **0.291**
SO2, lbs/mmBtu = **2.790**

CA) ,T AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	8	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	12:24	Pb =	29.50 P_{bar}
LOAD:	High	END:	12:45	Ps =	-0.20 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	10	0.36	0.010	0.03	3	10.44	1.006	0.36	-0.56	345	48.70
2	10	0.37	0.010	0.03	3	10.44	1.006	0.37	-0.57	345	49.38
3	7	0.33	0.000	0.00	0	7.00	1.006	0.33	-0.53	346	47.09
4	4	0.29	-0.005	-0.02	-2	4.47	1.009	0.29	-0.49	346	44.41
5	2	0.26	0.000	0.00	0	2.00	1.006	0.26	-0.46	346	42.09
6	2	0.30	0.000	0.00	0	2.00	1.006	0.30	-0.50	346	45.21
7	2	0.32	0.005	0.02	2	2.83	1.006	0.32	-0.52	347	46.69
8	5	0.26	0.005	0.02	2	5.38	1.006	0.26	-0.46	333	41.59
A-1	7	0.33	0.015	0.05	5	8.60	1.006	0.33	-0.53	343	46.82
2	3	0.36	0.015	0.04	5	5.83	1.006	0.36	-0.56	345	49.27
3	4	0.37	0.015	0.04	5	6.40	1.006	0.37	-0.57	346	49.92
4	6	0.36	0.025	0.07	7	9.21	1.012	0.36	-0.56	346	49.06
5	2	0.34	0.005	0.01	1	2.24	1.006	0.34	-0.54	345	48.09
6	3	0.30	-0.010	-0.03	-3	4.24	1.010	0.30	-0.50	343	45.12
7	4	0.28	-0.010	-0.04	-4	5.65	1.012	0.28	-0.48	340	43.46
8	3	0.20	-0.005	-0.03	-3	4.24	1.010	0.20	-0.40	335	36.65
						Ri			Ps	TEMP	Vs
						5.69			-0.52	343.6	45.97
						avg			avg	avg	avg

MOISTURE =	6.72	02 % =	6.3
MD =	0.93	CO2 % =	12.9
MWD =	30.32	N2 % =	80.8
MW =	29.49		
Psa =	29.46		

VOLUMETRIC FLOW RATE

Qs =	7,079,933	DSCFH
Qs =	7,590,000	WSCFH
Qa =	11,731,085	ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	METER TEMPERATURE OUTLET	METER Yi	BAR. PRESS. IN. Hg
12:24	0	77.609	2.00	95	95	1.00	29.50
	5	81.6		91	93		
	10	85.7		91	93		
	15	90.0		90	94		
	20	95.1		90	95		
	25	99.1		90	94		
12:54	30	101.798					
		24.189	2.00		93		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	125	
2	100	104	
3	0	1	
Gel	250	255	Total
NET	450	485	35

TOTAL MOISTURE (ml) 35

VM(STD)= 22.893
VW(GAS)= 1.649

%MOISTURE = 6.72

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 8
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 12:24
END: 12:45

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	12:24	6.31	12.86	165.95	1182.62
6/2/2005	12:25	6.36	12.93	171.57	1186.69
6/2/2005	12:26	6.54	12.88	174.45	1168.06
6/2/2005	12:27	6.39	12.89	169.64	1169.03
6/2/2005	12:28	6.09	13.03	164.52	1197.04
6/2/2005	12:29	6.29	12.9	169.25	1192.78
6/2/2005	12:30	6.34	12.83	173.42	1188.35
6/2/2005	12:31	6.43	12.84	174.18	1190.58
6/2/2005	12:32	6.5	12.77	170.5	1177.65
6/2/2005	12:33	6.27	12.88	161.98	1209.18
6/2/2005	12:34	6.38	12.87	166.64	1200.04
6/2/2005	12:35	6.32	12.92	171.5	1195.2
6/2/2005	12:36	6.2	12.92	168.2	1199.35
6/2/2005	12:37	6.19	12.84	163.5	1203.83
6/2/2005	12:38	6.11	12.81	161.12	1221.82
6/2/2005	12:39	6.41	12.84	174.14	1203.03
6/2/2005	12:40	6.4	12.86	175.57	1188.83
6/2/2005	12:41	6.26	12.93	166.82	1203.05
6/2/2005	12:42	6.35	12.83	164.44	1202.16
6/2/2005	12:43	6.35	12.85	171.46	1189.58
6/2/2005	12:44	6.35	12.88	172.81	1186.29
6/2/2005	12:45	6.4	12.78	174.34	1174.59
		O2	CO2	NOx	SO2
		6.33	12.87	169.36	1192.26
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.05	0.08	**YES**	0.09	0.24	0.16	**YES**
O2, %	22.44	22.48	0.16	**YES**	22.48	0.16	0.00	**YES**
CO2, %	0.04	0.05	0.05	**YES**	0.08	0.20	0.15	**YES**
CO2, %	17.82	17.75	0.35	**YES**	17.76	0.30	0.05	**YES**
NOx ppm:	0.05	0.42	0.15	**YES**	0.40	0.14	0.01	**YES**
NOx ppm:	123.79	123.46	0.13	**YES**	123.73	0.02	0.11	**YES**
SO2 ppm:	0.40	0.96	0.03	**YES**	1.14	0.04	0.01	**YES**
SO2 ppm:	1780.01	1780.02	0.00	**YES**	1780.68	0.03	0.03	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.3
CO2, %	12.9
NOx ppm:	169.4
SO2 ppm:	1192.3

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **6.72**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.3	5.9
CO2, %	12.9	12.0
NOx ppm:	169.9	158.5
SO2 ppm:	1191.7	1111.7

EMISSION RATES

NOx, lbs/mmBtu = **0.296**
SO2, lbs/mmBtu = **2.890**

CA' ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: High

RUN: 9
DATE: 6/2/2005
TIME START: 12:57
END: 13:18

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.20 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	3	0.35	0.015	0.04	5	5.83	1.006	0.35	-0.55	349	48.88
2	3	0.37	0.020	0.05	5	5.83	1.006	0.37	-0.57	349	50.26
3	7	0.37	0.020	0.05	5	8.60	1.006	0.37	-0.57	349	49.95
4	8	0.37	0.020	0.05	5	9.43	1.006	0.37	-0.57	348	49.81
5	2	0.37	0.000	0.00	0	2.00	1.006	0.37	-0.57	346	50.39
6	3	0.30	0.000	0.00	0	3.00	1.006	0.30	-0.50	345	45.31
7	0	0.29	-0.010	-0.03	-3	3.00	1.010	0.29	-0.49	342	44.56
8	4	0.24	-0.010	-0.04	-4	5.65	1.012	0.24	-0.44	337	40.31
B-1	2	0.28	0.000	0.00	0	2.00	1.006	0.28	-0.48	338	43.62
2	4	0.30	0.000	0.00	0	4.00	1.006	0.30	-0.50	342	45.18
3	5	0.32	-0.010	-0.03	-3	5.83	1.010	0.32	-0.52	345	46.72
4	8	0.29	-0.010	-0.03	-3	8.54	1.010	0.29	-0.49	345	44.21
5	2	0.26	-0.005	-0.02	-2	2.83	1.009	0.26	-0.46	345	42.26
6	0	0.31	-0.005	-0.02	-2	2.00	1.009	0.31	-0.51	346	46.20
7	3	0.32	0.000	0.00	0	3.00	1.006	0.32	-0.52	346	46.83
8	5	0.24	0.050	0.21	17	17.70	1.015	0.24	-0.44	333	38.55
						Ri			Ps	TEMP	Vs
						5.58			-0.51	344.1	45.96
						avg			avg	avg	avg

MOISTURE = 8.47
MD = 0.92
MWD = 30.31
MW = 29.27
Psa = 29.46

02 % = 6.2
CO2 % = 12.9
N2 % = 80.9

VOLUMETRIC FLOW RATE
Qs = 6,941,017 DSCFH
Qs = 7,584,000 WSCFH
Qa = 11,728,533 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
12:57	0	101.795	2.00	96	97	1.00	29.50
	5	105.5		97	97		
	10	109.9		98	99		
	15	115.2		98	99		
	20	118.0		97	99		
	25	122.0		97	99		
13:27	30	125.675					
		23.88	2.00		98		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	128	
2	100	105	
3	0	2	
Gel	250	259	Total
NET	450	494	44

TOTAL MOISTURE (ml) 44

VM(STD)= 22.391
VW(GAS)= 2.072

%MOISTURE = 8.47

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 9
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 12:57
END: 13:18

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	12:57	6.01	12.87	146.87	1223.08
6/2/2005	12:58	6.1	12.94	155.1	1198.14
6/2/2005	12:59	5.79	12.84	140.88	1218.52
6/2/2005	13:00	5.9	12.91	148.34	1219.39
6/2/2005	13:01	6	12.81	151.31	1211.97
6/2/2005	13:02	6.18	12.75	154.01	1199.58
6/2/2005	13:03	6.15	12.74	149.94	1198.09
6/2/2005	13:04	6.17	12.82	150.98	1201.92
6/2/2005	13:05	6.1	12.79	146.05	1197.59
6/2/2005	13:06	6.34	12.88	167.94	1169.82
6/2/2005	13:07	6.54	12.76	165.85	1154.73
6/2/2005	13:08	6.56	12.7	170.45	1146.34
6/2/2005	13:09	6.39	12.8	168.07	1159.05
6/2/2005	13:10	6.43	12.8	169.31	1169.9
6/2/2005	13:11	6.61	12.72	172.02	1166.62
6/2/2005	13:12	6.6	12.76	166.17	1155.41
6/2/2005	13:13	6.42	12.85	161.18	1170.83
6/2/2005	13:14	6.43	12.86	163.75	1166.11
6/2/2005	13:15	6.34	12.94	169.8	1176.28
6/2/2005	13:16	6.54	12.71	168.89	1161.77
6/2/2005	13:17	6.52	12.71	165.23	1161.81
6/2/2005	13:18	6.34	12.87	168.39	1186.11
		O2	CO2	NOx	SO2
		6.29	12.81	160.02	1182.41
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.09	0.24	**YES**	0.07	0.16	0.08	**YES**
O2, %	22.44	22.48	0.16	**YES**	22.39	0.20	0.36	**YES**
CO2, %	0.04	0.08	0.20	**YES**	0.09	0.25	0.05	**YES**
CO2, %	17.82	17.76	0.30	**YES**	17.72	0.50	0.20	**YES**
NOx ppm:	0.05	0.40	0.14	**YES**	0.63	0.23	0.09	**YES**
NOx ppm:	123.79	123.73	0.02	**YES**	123.92	0.05	0.08	**YES**
SO2 ppm:	0.40	1.14	0.04	**YES**	1.22	0.04	0.00	**YES**
SO2 ppm:	1780.01	1780.68	0.03	**YES**	1781.67	0.08	0.05	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.3
CO2, %	12.8
NOx ppm:	160.0
SO2 ppm:	1182.4

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **8.47**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.2	5.7
CO2, %	12.9	11.8
NOx ppm:	160.3	146.7
SO2 ppm:	1181.2	1081.1

EMISSION RATES

NOx, lbs/mmBtu = **0.280**
SO2, lbs/mmBtu = **2.860**

CA1. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: High

RUN: 10
DATE: 6/2/2005
TIME START: 13:31
END: 13:52

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.20 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	8	0.39	0.000	0.00	0	8.00	1.006	0.39	-0.59	333	50.73
2	8	0.37	0.005	0.01	1	8.06	1.006	0.37	-0.57	336	49.50
3	3	0.38	0.000	0.00	0	3.00	1.006	0.38	-0.58	335	50.57
4	2	0.30	-0.010	-0.03	-3	3.61	1.010	0.30	-0.50	336	45.02
5	9	0.31	0.015	0.05	5	10.29	1.006	0.31	-0.51	340	45.14
6	2	0.31	0.010	0.03	3	3.61	1.006	0.31	-0.51	341	45.82
7	4	0.34	0.010	0.03	3	5.00	1.006	0.34	-0.54	342	47.92
8	7	0.33	0.010	0.03	3	7.61	1.006	0.33	-0.53	342	46.98
B-1	1	0.36	0.000	0.00	0	1.00	1.006	0.36	-0.56	340	49.43
2	3	0.38	0.005	0.01	1	3.16	1.006	0.38	-0.58	343	50.81
3	5	0.39	0.010	0.03	3	5.83	1.006	0.39	-0.59	345	51.35
4	7	0.39	0.010	0.03	3	7.61	1.006	0.39	-0.59	345	51.16
5	5	0.35	-0.010	-0.03	-3	5.83	1.010	0.35	-0.55	344	48.71
6	3	0.33	-0.015	-0.05	-4	5.00	1.012	0.33	-0.53	343	47.38
7	2	0.29	-0.015	-0.05	-4	4.47	1.012	0.29	-0.49	341	44.40
8	4	0.25	-0.010	-0.04	-4	5.65	1.012	0.25	-0.45	331	40.89
						Ri			Ps	TEMP	Vs
						5.48			-0.54	339.8	48.00
						avg			avg	avg	avg

MOISTURE = 7.41
MD = 0.93
MWD = 30.32
MW = 29.41
Psa = 29.46

02 % = 6.4
CO2 % = 12.9
N2 % = 80.7

VOLUMETRIC FLOW RATE
Qs = 7,371,510 DSCFH
Qs = 7,962,000 WSCFH
Qa = 12,249,121 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	METER TEMPERATURE OUTLET	METER Yi	BAR. PRESS. IN. Hg
13:31	0	125.859	2.00	91	92	1.00	29.50
	5	129.8		90	94		
	10	133.8		92	95		
	15	137.8		92	95		
	20	141.9		91	95		
	25	145.8		91	96		
14:01	30	149.684					
		23.825	2.00		93		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	126	
2	100	105	
3	0	1	
Gel	250	256.3	Total
NET	450	488.3	38.3

TOTAL MOISTURE (ml) 38.3

VM(STD)= 22.538
VW(GAS)= 1.804

%MOISTURE = 7.41

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 10
OPERATING LEVEL: High
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 13:31
END: 13:52

DATE	TIME	O2	CO2	NOx	SO2
6/2/2005	13:31:13	6.4	12.83	168.87	1206.33
6/2/2005	13:32:13	6.56	12.69	169.4	1184.45
6/2/2005	13:33:13	6.34	12.8	160.59	1212.28
6/2/2005	13:34:13	6.53	12.72	166.18	1210.5
6/2/2005	13:35:13	6.61	12.76	169.56	1198.11
6/2/2005	13:36:13	6.44	12.88	167.16	1212.02
6/2/2005	13:37:13	6.32	12.89	163.16	1218.44
6/2/2005	13:38:13	6.26	12.99	170.64	1230.5
6/2/2005	13:39:13	6.45	12.82	172.73	1214.74
6/2/2005	13:40:13	6.38	12.81	172.5	1220.81
6/2/2005	13:41:13	6.4	12.84	171.19	1230.77
6/2/2005	13:42:13	6.44	12.8	171.9	1236.06
6/2/2005	13:43:13	6.57	12.81	169.3	1225.67
6/2/2005	13:44:13	6.22	12.98	163.77	1242.58
6/2/2005	13:45:13	6.25	13	165.86	1246.64
6/2/2005	13:46:13	6.35	12.88	168.36	1243.92
6/2/2005	13:47:13	6.51	12.67	162.91	1233.32
6/2/2005	13:48:13	6.45	12.68	159.84	1231.53
6/2/2005	13:49:13	6.48	12.7	162.48	1250.9
6/2/2005	13:50:13	6.62	12.68	165.03	1233.35
6/2/2005	13:51:13	6.48	12.82	161.04	1241.07
6/2/2005	13:52:13	6.3	12.86	161.19	1253.4
		O2	CO2	NOx	SO2
		6.43	12.81	166.53	1226.25
		%	%	ppm	ppm

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.03	0.07	0.16	**YES**	0.04	0.04	0.12	**YES**
O2, %	22.44	22.39	0.20	**YES**	22.39	0.20	0.00	**YES**
CO2, %	0.04	0.09	0.25	**YES**	0.11	0.35	0.10	**YES**
CO2, %	17.82	17.72	0.50	**YES**	17.70	0.60	0.10	**YES**
NOx ppm:	0.05	0.63	0.23	**YES**	0.70	0.26	0.03	**YES**
NOx ppm:	123.79	123.92	0.05	**YES**	123.97	0.07	0.02	**YES**
SO2 ppm:	0.40	1.22	0.04	**YES**	1.37	0.05	0.01	**YES**
SO2 ppm:	1780.01	1781.67	0.08	**YES**	1780.19	0.01	0.07	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.4
CO2, %	12.8
NOx ppm:	166.5
SO2 ppm:	1226.2

F- FACTOR (scf/mmBtu) = **1884**
% MOISTURE = **7.41**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.4	5.9
CO2, %	12.9	11.9
NOx ppm:	166.7	154.3
SO2 ppm:	1225.2	1134.4

EMISSION RATES

NOx, lbs/mmBtu = **0.291**
SO2, lbs/mmBtu = **2.970**

Mid Load

CATALYST AIR MANAGEMENT Inc.
CALIBRATION DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: RATA
LOCATION: Stack

RUN #: 1-9
LOAD LEVEL: Mid
DATE: 6/2/2005

GAS UNITS	ANALYZER SCALE	CYLINDER VALUE	ANALYZER VALUE	DIFF PPM	% SPAN	Pass Yes\No
O2, %		0.00	0.00	0.00	0.00	**YES**
O2, %	**25**	11.92	11.94	0.02	0.08	**YES**
O2, %		22.43	22.45	0.02	0.08	**YES**
CO2, %		0.00	0.04	0.04	0.20	**YES**
CO2, %	**20**	9.997	10.03	0.03	0.16	**YES**
CO2, %		17.83	17.85	0.02	0.10	**YES**

CA. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	1	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	14:34	Pb =	29.50 P_{bar}
LOAD:	Mid	END:	14:43	Ps =	-0.01 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	4	0.26	0.000	0.00	0	4.00	1.006	0.26	-0.27	331	41.73
2	4	0.26	0.000	0.00	0	4.00	1.006	0.26	-0.27	333	41.79
3	1	0.27	0.005	0.02	2	2.24	1.006	0.27	-0.28	334	42.68
4	8	0.27	0.010	0.04	5	9.43	1.006	0.27	-0.28	334	42.14
5	8	0.26	0.000	0.00	0	8.00	1.006	0.26	-0.27	334	41.51
6	2	0.23	-0.015	-0.07	-6	6.32	1.018	0.23	-0.24	333	39.39
7	0	0.21	-0.015	-0.07	-6	6.00	1.018	0.21	-0.22	331	37.61
8	7	0.17	-0.010	-0.06	-5	8.60	1.013	0.17	-0.18	320	33.33
B-1	2	0.22	0.000	0.00	0	2.00	1.006	0.22	-0.23	326	38.34
2	2	0.17	-0.010	-0.06	-5	5.38	1.013	0.17	-0.18	335	33.88
3	4	0.23	0.000	0.00	0	4.00	1.006	0.23	-0.24	339	39.45
4	11	0.16	-0.015	-0.09	-7	13.02	1.022	0.16	-0.17	339	32.39
5	3	0.20	0.000	0.00	0	3.00	1.006	0.20	-0.21	339	36.83
6	0	0.22	0.000	0.00	0	0.00	1.006	0.22	-0.23	339	38.68
7	7	0.23	0.000	0.00	0	7.00	1.006	0.23	-0.24	339	39.25
8	7	0.19	0.000	0.00	0	7.00	1.006	0.19	-0.20	328	35.43
						Ri			Ps	TEMP	Vs
						5.62			-0.23	333.4	38.54
						avg			avg	avg	avg

MOISTURE = 7.98 %
MD = 0.92
MWD = 30.28
MW = 29.30
Psa = 29.48

O2 % = 7.1
CO2 % = 12.5
N2 % = 80.4

VOLUMETRIC FLOW RATE
Qs = 5,934,861 DSCFH
Qs = 6,450,000 WSCFH
Qa = 9,835,023 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	METER TEMPERATURE OUTLET	METER Yi	BAR. PRESS. IN. Hg
14:34	0	149.731	2.00	90	90	1.00	29.50
	5	153.5		91	93		
	10	157.6		91	93		
	15	161.5		93	97		
	20	165.9		94	96		
	25			94	96		
15:04	30	172.146					
		22.415	2.00		93		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	129	
2	100	105	
3	0	1	
Gel	250	254	Total
NET	450	489	39

TOTAL MOISTURE (ml) 39

VM(STD)= 21.192
VW(GAS)= 1.837

%MOISTURE = 7.98

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 1
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 14:34
END: 14:43

DATE	TIME	O2	CO2
6/2/2005	14:34	7.2	12.32
6/2/2005	14:35	7.37	12.28
6/2/2005	14:36	6.87	12.65
6/2/2005	14:37	6.96	12.66
6/2/2005	14:38	7.27	12.48
6/2/2005	14:39	7.43	12.3
6/2/2005	14:40	7.31	12.42
6/2/2005	14:41	7.41	12.27
6/2/2005	14:42	6.94	12.65
6/2/2005	14:43	6.88	12.73
		O2	CO2
		7.16	12.48
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	7.2
CO2, %	12.5

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	7.1	6.5
CO2, %	12.5	11.5

% MOISTURE = **7.98**

CAT, f AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: Mid

RUN: 2
DATE: 6/2/2005
TIME START: 14:44
END: 14:53

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.01 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	2	0.21	-0.005	-0.02	-2	2.83	1.009	0.21	-0.22	337	37.73
2	7	0.20	-0.010	-0.05	-4	8.06	1.012	0.20	-0.21	339	36.60
3	3	0.19	-0.010	-0.05	-4	5.00	1.012	0.19	-0.20	339	35.89
4	5	0.21	-0.015	-0.07	-6	7.80	1.018	0.21	-0.22	339	37.64
5	2	0.19	0.000	0.00	0	2.00	1.006	0.19	-0.20	340	35.92
6	0	0.21	0.000	0.00	0	0.00	1.006	0.21	-0.22	340	37.79
7	3	0.21	0.000	0.00	0	3.00	1.006	0.21	-0.22	339	37.71
8	7	0.20	0.000	0.00	0	7.00	1.006	0.20	-0.21	299	35.65
A-1	5	0.22	0.005	0.02	2	5.38	1.006	0.22	-0.23	337	38.43
2	0	0.25	0.010	0.04	5	5.00	1.006	0.25	-0.26	341	41.10
3	3	0.28	0.015	0.05	5	5.83	1.006	0.28	-0.29	341	43.43
4	8	0.26	0.010	0.04	5	9.43	1.006	0.26	-0.27	340	41.48
5	2	0.25	0.000	0.00	0	2.00	1.006	0.25	-0.26	339	41.18
6	7	0.24	-0.005	-0.02	-2	7.28	1.009	0.24	-0.25	337	40.06
7	3	0.22	-0.005	-0.02	-2	3.61	1.009	0.22	-0.23	335	38.54
8	7	0.16	0.000	0.00	0	7.00	1.006	0.16	-0.17	314	32.20
						Ri			Ps	TEMP	Vs
						5.08			-0.23	334.8	38.33
						avg			avg	avg	avg

MOISTURE = 7.98 %
MD = 0.92
MWD = 30.32
MW = 29.34
Psa = 29.48

02 % = 6.9
CO2 % = 12.8
N2 % = 80.3

VOLUMETRIC FLOW RATE
Qs = 5,892,359 DSCFH
Qs = 6,403,000 WSCFH
Qa = 9,781,434 ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 2
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 14:44
END: 14:53

DATE	TIME	O2	CO2
6/2/2005	14:44	7.02	12.67
6/2/2005	14:45	7.44	12.42
6/2/2005	14:46	7.29	12.48
6/2/2005	14:47	6.75	12.87
6/2/2005	14:48	6.75	12.86
6/2/2005	14:49	6.86	12.72
6/2/2005	14:50	6.82	12.77
6/2/2005	14:51	6.54	12.94
6/2/2005	14:52	6.66	12.97
6/2/2005	14:53	6.93	12.85
		O2	CO2
		6.91	12.76
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.9
CO2, %	12.8

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.9	6.3
CO2, %	12.8	11.8

% MOISTURE = **7.98**

CATA. AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	3	STACK DIAMETER =	114 in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88 sq. ft.
UNIT:	6	TIME START:	14:54	Pb =	29.50 P_{bar}
LOAD:	Mid	END:	15:03	Ps =	-0.01 in Hg
				WAF =	NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	5	0.25	0.005	0.02	2	5.38	1.006	0.25	-0.26	333	40.87
2	6	0.27	0.010	0.04	5	7.80	1.006	0.27	-0.28	341	42.48
3	6	0.27	0.015	0.06	6	8.48	1.009	0.27	-0.28	341	42.47
4	3	0.28	0.015	0.05	5	5.83	1.006	0.28	-0.29	341	43.43
5	2	0.25	0.005	0.02	2	2.83	1.006	0.25	-0.26	340	41.18
6	4	0.23	-0.005	-0.02	-2	4.47	1.009	0.23	-0.24	338	39.44
7	1	0.19	-0.005	-0.03	-3	3.16	1.010	0.19	-0.20	328	35.69
8	2	0.12	0.000	0.00	0	2.00	1.006	0.12	-0.13	299	27.81
B-1	4	0.20	0.000	0.00	0	4.00	1.006	0.20	-0.21	335	36.67
2	7	0.21	-0.015	-0.07	-6	9.21	1.018	0.21	-0.22	335	37.40
3	4	0.25	-0.015	-0.06	-5	6.40	1.013	0.25	-0.26	336	41.01
4	4	0.23	0.000	0.00	0	4.00	1.006	0.23	-0.24	337	39.38
5	2	0.20	0.000	0.00	0	2.00	1.006	0.20	-0.21	337	36.79
6	4	0.24	0.000	0.00	0	4.00	1.006	0.24	-0.25	338	40.25
7	1	0.22	0.000	0.00	0	1.00	1.006	0.22	-0.23	339	38.65
8	2	0.20	-0.010	-0.05	-4	4.47	1.012	0.20	-0.21	313	36.25
						Ri			Ps	TEMP	Vs
						4.69			-0.24	333.2	38.86
						avg			avg	avg	avg

MOISTURE =	7.98	%
MD =	0.92	
MWD =	30.32	
MW =	29.34	
Psa =	29.48	

02 % =	6.9
CO2 % =	12.8
N2 % =	80.3

VOLUMETRIC FLOW RATE

Qs =	5,985,499	DSCFH
Qs =	6,505,000	WSCFH
Qa =	9,916,684	ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 3
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 14:54
END: 15:03

DATE	TIME	O2	CO2
6/2/2005	14:54	6.59	12.98
6/2/2005	14:55	6.33	13.2
6/2/2005	14:56	6.54	13.03
6/2/2005	14:57	6.78	12.83
6/2/2005	14:58	7.07	12.69
6/2/2005	14:59	7.74	12.1
6/2/2005	15:00	7.19	12.66
6/2/2005	15:01	7.24	12.62
6/2/2005	15:02	7.07	12.72
6/2/2005	15:03	6.87	12.85
		O2	CO2
		6.94	12.77
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.9
CO2, %	12.8

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.9	6.3
CO2, %	12.8	11.8

% MOISTURE = **7.98**

CA. ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: Mid

RUN: 4
DATE: 6/2/2005
TIME START: 15:16
END: 15:25

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.13 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	5	0.28	0.000	0.00	0	5.00	1.006	0.28	-0.41	332	43.15
2	6	0.28	0.000	0.00	0	6.00	1.006	0.28	-0.41	333	43.10
3	8	0.28	0.000	0.00	0	8.00	1.006	0.28	-0.41	333	42.92
4	3	0.23	-0.010	-0.04	-4	5.00	1.012	0.23	-0.36	337	39.35
5	5	0.22	-0.015	-0.07	-6	7.80	1.018	0.22	-0.35	333	38.29
6	2	0.25	-0.005	-0.02	-2	2.83	1.009	0.25	-0.38	335	41.01
7	3	0.23	-0.005	-0.02	-2	3.61	1.009	0.23	-0.36	335	39.31
8	8	0.18	0.000	0.00	0	8.00	1.006	0.18	-0.31	315	34.02
A-1	5	0.25	0.005	0.02	2	5.38	1.006	0.25	-0.38	330	40.69
2	0	0.20	0.005	0.03	3	3.00	1.006	0.20	-0.33	333	36.58
3	1	0.20	0.010	0.05	5	5.10	1.006	0.20	-0.33	334	36.51
4	8	0.27	0.010	0.04	5	9.43	1.006	0.27	-0.40	332	41.96
5	4	0.25	0.000	0.00	0	4.00	1.006	0.25	-0.38	333	40.85
6	2	0.23	-0.010	-0.04	-4	4.47	1.012	0.23	-0.36	330	39.20
7	2	0.21	-0.010	-0.05	-4	4.47	1.012	0.21	-0.34	330	37.46
8	1	0.18	0.000	0.00	0	1.00	1.006	0.18	-0.31	325	34.57
						Ri 5.19 avg			Ps -0.37 avg	TEMP 331.3 avg	Vs 39.43 avg

MOISTURE = 6.64 %
MD = 0.93
MWD = 30.31
MW = 29.49
Psa = 29.47

O2 % = 6.9
CO2 % = 12.7
N2 % = 80.4

VOLUMETRIC FLOW RATE
Qs = 6,174,351 DSCFH
Qs = 6,614,000 WSCFH
Qa = 10,062,143 ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
15:16	0	173.953	2.00	94	95	1.00	29.50
	5	178.1		94	99		
	10	182.3		94	99		
	15	186.5		95	100		
	20	190.7		95	101		
	25	194.1		95	101		
15:46	30	197.911					
		23.958	2.00		97		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	125	
2	100	109	
3	0	0	
Gel	255	255	Total
NET	455	489	34

TOTAL MOISTURE (ml) 34

VM(STD)= 22.501
VW(GAS)= 1.601

%MOISTURE = 6.64

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CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 4
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 15:16
END: 15:25

DATE	TIME	O2	CO2
6/2/2005	15:16	7.07	12.75
6/2/2005	15:17	6.74	12.95
6/2/2005	15:18	6.9	12.84
6/2/2005	15:19	6.86	12.78
6/2/2005	15:20	7.22	12.46
6/2/2005	15:21	6.8	12.84
6/2/2005	15:22	7.17	12.51
6/2/2005	15:23	7.29	12.49
6/2/2005	15:24	6.95	12.77
6/2/2005	15:25	6.91	12.79
		O2	CO2
		6.99	12.72
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	7.0
CO2, %	12.7

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.9	6.4
CO2, %	12.7	11.9

% MOISTURE = **6.64**

CATA[illegible] AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
LOAD: Mid

RUN: 5
DATE: 6/2/2005
TIME START: 15:26
END: 15:35

STACK DIAMETER = 114 in
STACK AREA = 70.88 sq. ft.
Pb = 29.50 P_{bar}
Ps = -0.13 in Hg
WAF = NA

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	7	0.25	0.010	0.04	5	8.60	1.006	0.25	-0.38	333	40.49
2	1	0.25	0.010	0.04	5	5.10	1.006	0.25	-0.38	335	40.84
3	8	0.20	0.010	0.05	5	9.43	1.006	0.20	-0.33	333	36.13
4	4	0.20	0.010	0.05	5	6.40	1.006	0.20	-0.33	333	36.39
5	5	0.26	0.000	0.00	0	5.00	1.006	0.26	-0.39	332	41.57
6	5	0.23	-0.005	-0.02	-2	5.38	1.009	0.23	-0.36	330	39.08
7	3	0.19	0.000	0.00	0	3.00	1.006	0.19	-0.32	329	35.56
8	6	0.17	-0.005	-0.03	-3	6.71	1.010	0.17	-0.30	319	33.30
B-1	1	0.24	0.000	0.00	0	1.00	1.006	0.24	-0.37	333	40.11
2	8	0.28	0.000	0.00	0	8.00	1.006	0.28	-0.41	330	42.83
3	6	0.27	0.000	0.00	0	6.00	1.006	0.27	-0.40	330	42.24
4	3	0.21	-0.005	-0.02	-2	3.61	1.009	0.21	-0.34	331	37.46
5	2	0.21	0.005	0.02	2	2.83	1.006	0.21	-0.34	332	37.46
6	2	0.23	0.005	0.02	2	2.83	1.006	0.23	-0.36	333	39.23
7	2	0.23	0.000	0.00	0	2.00	1.006	0.23	-0.36	333	39.25
8	8	0.20	0.000	0.00	0	8.00	1.006	0.20	-0.33	319	35.95
						Ri 5.24 avg			Ps -0.36 avg	TEMP 330.3 avg	Vs 38.70 avg

MOISTURE = 6.64 %
MD = 0.93
MWD = 30.32
MW = 29.50
Psa = 29.47

02 % = 6.7
CO2 % = 12.8
N2 % = 80.5

VOLUMETRIC FLOW RATE
Qs = 6,067,349 DSCFH
Qs = 6,500,000 WSCFH
Qa = 9,875,854 ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 5
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 15:26
END: 15:35

DATE	TIME	O2	CO2
6/2/2005	15:26	6.83	12.81
6/2/2005	15:27	6.67	12.88
6/2/2005	15:28	6.61	12.67
6/2/2005	15:29	6.89	12.75
6/2/2005	15:30	6.89	12.74
6/2/2005	15:31	7.05	12.71
6/2/2005	15:32	6.55	13.02
6/2/2005	15:33	6.5	13.04
6/2/2005	15:34	6.96	12.72
6/2/2005	15:35	6.64	12.85
		O2	CO2
		6.76	12.82
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.8
CO2, %	12.8

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.7	6.3
CO2, %	12.8	11.9

% MOISTURE = **6.64**

CATA AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	6	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	15:36	Pb =	29.50	P_{bar}
LOAD:	Mid	END:	15:45	Ps =	-0.12	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	6	0.21	0.000	0.00	0	6.00	1.006	0.21	-0.33	330	37.23
2	7	0.22	0.000	0.00	0	7.00	1.006	0.22	-0.34	330	38.03
3	5	0.24	-0.005	-0.02	-2	5.38	1.009	0.24	-0.36	332	39.96
4	5	0.22	-0.010	-0.05	-4	6.40	1.012	0.22	-0.34	331	38.22
5	4	0.21	0.000	0.00	0	4.00	1.006	0.21	-0.33	332	37.40
6	2	0.22	0.000	0.00	0	2.00	1.006	0.22	-0.34	333	38.37
7	5	0.23	0.000	0.00	0	5.00	1.006	0.23	-0.35	334	39.13
8	5	0.18	0.010	0.06	6	7.80	1.009	0.18	-0.30	319	34.15
A-1	2	0.24	0.010	0.04	5	5.38	1.006	0.24	-0.36	331	39.87
2	4	0.25	0.010	0.04	5	6.40	1.006	0.25	-0.37	332	40.65
3	0	0.26	0.015	0.06	6	6.00	1.009	0.26	-0.38	334	41.60
4	6	0.26	0.015	0.06	6	8.48	1.009	0.26	-0.38	332	41.32
5	1	0.25	0.000	0.00	0	1.00	1.006	0.25	-0.37	331	40.87
6	1	0.22	-0.005	-0.02	-2	2.24	1.009	0.22	-0.34	330	38.35
7	2	0.21	-0.005	-0.02	-2	2.83	1.009	0.21	-0.33	329	37.43
8	1	0.16	0.000	0.00	0	1.00	1.006	0.16	-0.28	300	32.05
						Ri			Ps	TEMP	Vs
						4.81			-0.35	328.8	38.52
						avg			avg	avg	avg

MOISTURE =	6.64	%
MD =	0.93	
MWD =	30.34	
MW =	29.52	
Psa =	29.47	

O2 % =	6.2
CO2 % =	13.1
N2 % =	80.7

VOLUMETRIC FLOW RATE

Qs =	6,051,278	DSCFH
Qs =	6,482,000	WSCFH
Qa =	9,829,920	ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 6
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 15:36
END: 15:45

DATE	TIME	O2	CO2
6/2/2005	15:36	6.73	12.8
6/2/2005	15:37	6.51	12.98
6/2/2005	15:38	6.45	13.09
6/2/2005	15:39	6.6	13.04
6/2/2005	15:40	6.48	13.04
6/2/2005	15:41	6.14	13.2
6/2/2005	15:42	5.99	13.17
6/2/2005	15:43	5.79	12.93
6/2/2005	15:44	5.9	13.02
6/2/2005	15:45	5.92	13.02
		O2	CO2
		6.25	13.03
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.3
CO2, %	13.0

% MOISTURE = **6.64**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.2	5.8
CO2, %	13.1	12.2

CA'i ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	7	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	15:54	Pb =	29.50	P_{bar}
LOAD:	Mid	END:	16:03	Ps =	-0.15	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF 2.8 (P4-P5) / (P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps) / (P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	2	0.26	0.010	0.04	5	5.38	1.006	0.26	-0.41	332	41.59
2	1	0.24	0.010	0.04	5	5.10	1.006	0.24	-0.39	332	39.98
3	5	0.27	0.015	0.06	6	7.80	1.009	0.27	-0.42	333	42.27
4	6	0.25	0.015	0.06	6	8.48	1.009	0.25	-0.40	331	40.55
5	5	0.25	-0.005	-0.02	-2	5.38	1.009	0.25	-0.40	330	40.79
6	3	0.22	-0.010	-0.05	-4	5.00	1.012	0.22	-0.37	329	38.32
7	2	0.21	-0.015	-0.07	-6	6.32	1.018	0.21	-0.36	327	37.42
8	1	0.26	-0.015	-0.06	-5	5.10	1.013	0.26	-0.41	325	41.57
B-1	1	0.26	0.000	0.00	0	1.00	1.006	0.26	-0.41	333	41.80
2	3	0.25	0.000	0.00	0	3.00	1.006	0.25	-0.40	330	40.86
3	6	0.26	0.000	0.00	0	6.00	1.006	0.26	-0.41	329	41.47
4	4	0.21	-0.015	-0.07	-6	7.21	1.018	0.21	-0.36	329	37.40
5	4	0.20	0.000	0.00	0	4.00	1.006	0.20	-0.35	329	36.48
6	1	0.22	0.000	0.00	0	1.00	1.006	0.22	-0.37	331	38.40
7	6	0.18	0.000	0.00	0	6.00	1.006	0.18	-0.33	319	34.29
8	3	0.15	0.000	0.00	0	3.00	1.006	0.15	-0.30	315	31.35
						Ri			Ps	TEMP	Vs
						4.99			-0.38	328.4	39.17
						avg			avg	avg	avg

MOISTURE =	7.32	%
MD =	0.93	
MWD =	30.34	
MW =	29.43	
Psa =	29.47	

02 % =	6.4
CO2 % =	13.0
N2 % =	80.6

VOLUMETRIC FLOW RATE

Qs =	6,111,473	DSCFH
Qs =	6,594,000	WSCFH
Qa =	9,995,793	ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
15:54	0	197.977	2.00	99	108	1.00	29.50
	5	202.1		98	107		
	10	206.3		99	107		
	15	210.5		99	105		
	20	214.9		99	105		
	25	218.9		98	105		
16:24	30	223.005					
		25.028	2.00		102		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	128	
2	100	105	
3	0	2	
Gel	256	260	Total
NET	456	495	39

TOTAL MOISTURE (ml) 39

VM(STD)= 23.273
VW(GAS)= 1.837

%MOISTURE = 7.32

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 7
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 15:54
END: 16:03

DATE	TIME	O2	CO2
6/2/2005	15:54	6.59	12.98
6/2/2005	15:55	6.32	13.12
6/2/2005	15:56	6.27	13.14
6/2/2005	15:57	6.49	13.03
6/2/2005	15:58	6.41	12.97
6/2/2005	15:59	6.35	13
6/2/2005	16:00	6.51	12.96
6/2/2005	16:01	6.69	12.88
6/2/2005	16:02	6.66	12.97
6/2/2005	16:03	6.47	13.03
		O2	CO2
		6.48	13.01
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.5
CO2, %	13.0

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.4	5.9
CO2, %	13.0	12.0

% MOISTURE = **7.32**

CATAL... AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	8	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	16:04	Pb =	29.50	P_{bar}
LOAD:	Mid	END:	16:13	Ps =	-0.13	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	3	0.18	0.000	0.00	0	3.00	1.006	0.18	-0.31	325	34.56
2	3	0.20	-0.005	-0.03	-3	4.24	1.010	0.20	-0.33	327	36.50
3	2	0.19	-0.005	-0.03	-3	3.61	1.010	0.19	-0.32	327	35.60
4	8	0.19	-0.015	-0.08	-6	9.99	1.018	0.19	-0.32	328	35.29
5	4	0.17	0.000	0.00	0	4.00	1.006	0.17	-0.30	329	33.63
6	5	0.22	0.000	0.00	0	5.00	1.006	0.22	-0.35	329	38.21
7	6	0.20	0.005	0.03	3	6.71	1.006	0.20	-0.33	328	36.30
8	6	0.15	0.005	0.03	3	6.71	1.006	0.15	-0.28	320	31.27
A-1	2	0.24	0.005	0.02	2	2.83	1.006	0.24	-0.37	329	40.01
2	4	0.25	0.005	0.02	2	4.47	1.006	0.25	-0.38	328	40.74
3	3	0.27	0.005	0.02	2	3.61	1.006	0.27	-0.40	329	42.41
4	8	0.26	0.015	0.06	6	9.99	1.009	0.26	-0.39	329	41.13
5	1	0.24	0.000	0.00	0	1.00	1.006	0.24	-0.37	327	40.00
6	4	0.21	0.010	0.05	5	6.40	1.006	0.21	-0.34	326	37.17
7	2	0.21	0.005	0.02	2	2.83	1.006	0.21	-0.34	324	37.31
8	1	0.18	0.000	0.00	0	1.00	1.006	0.18	-0.31	309	34.25
						Ri			Ps	TEMP	Vs
						4.71			-0.34	325.9	37.25
						avg			avg	avg	avg

MOISTURE =	7.32	%
MD =	0.93	
MWD =	30.34	
MW =	29.43	
Psa =	29.47	

02 % =	6.4
CO2 % =	13.0
N2 % =	80.6

VOLUMETRIC FLOW RATE

Qs =	5,830,993	DSCFH
Qs =	6,292,000	WSCFH
Qa =	9,505,828	ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 8
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 16:04
END: 16:13

DATE	TIME	O2	CO2
6/2/2005	16:04	6.15	13.2
6/2/2005	16:05	6.46	13.03
6/2/2005	16:06	6.38	12.99
6/2/2005	16:07	6.68	12.84
6/2/2005	16:08	6.78	12.76
6/2/2005	16:09	6.42	13.03
6/2/2005	16:10	6.55	13.06
6/2/2005	16:11	6.26	13.09
6/2/2005	16:12	6.18	13.16
6/2/2005	16:13	6.47	12.98
		O2	CO2
		6.43	13.01
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.4
CO2, %	13.0

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.4	5.9
CO2, %	13.0	12.0

% MOISTURE = **7.32**

CATA... AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	9	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	16:14	Pb =	29.50	P_{bar}
LOAD:	Mid	END:	16:23	Ps =	-0.15	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	6	0.23	0.010	0.04	5	7.80	1.006	0.23	-0.38	326	38.78
2	0	0.25	0.010	0.04	5	5.00	1.006	0.25	-0.40	330	40.75
3	4	0.24	0.015	0.06	6	7.21	1.009	0.24	-0.39	330	39.83
4	3	0.24	0.010	0.04	5	5.83	1.006	0.24	-0.39	329	39.85
5	3	0.24	0.000	0.00	0	3.00	1.006	0.24	-0.39	327	39.95
6	4	0.21	-0.005	-0.02	-2	4.47	1.009	0.21	-0.36	326	37.34
7	5	0.17	-0.005	-0.03	-3	5.83	1.010	0.17	-0.32	317	33.35
8	3	0.15	0.000	0.00	0	3.00	1.006	0.15	-0.30	309	31.22
B-1	1	0.21	0.000	0.00	0	1.00	1.006	0.21	-0.36	334	37.58
2	2	0.20	-0.005	-0.03	-3	3.61	1.010	0.20	-0.35	329	36.57
3	4	0.23	-0.005	-0.02	-2	4.47	1.009	0.23	-0.38	323	39.00
4	10	0.19	0.000	0.00	0	10.00	1.006	0.19	-0.34	325	35.01
5	2	0.17	-0.010	-0.06	-5	5.38	1.013	0.17	-0.32	325.6	33.61
6	4	0.23	0.000	0.00	0	4.00	1.006	0.23	-0.38	327	39.07
7	2	0.23	0.000	0.00	0	2.00	1.006	0.23	-0.38	327	39.14
8	3	0.19	0.000	0.00	0	3.00	1.006	0.19	-0.34	323	35.46
						Ri			Ps	TEMP	Vs
						4.73			-0.36	325.5	37.39
						avg			avg	avg	avg

MOISTURE =	7.32	%
MD =	0.93	
MWD =	30.34	
MW =	29.44	
Psa =	29.47	

02 % =	6.5	
CO2 % =	13.0	
N2 % =	80.5	

VOLUMETRIC FLOW RATE

Qs =	5,855,578	DSCFH
Qs =	6,318,000	WSCFH
Qa =	9,541,555	ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 9
OPERATING LEVEL: Mid
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 16:14
END: 16:23

DATE	TIME	O2	CO2
6/2/2005	16:14	6.63	12.88
6/2/2005	16:15	6.5	12.95
6/2/2005	16:16	6.51	12.96
6/2/2005	16:17	6.39	13.1
6/2/2005	16:18	6.48	13.07
6/2/2005	16:19	6.82	12.82
6/2/2005	16:20	6.61	12.92
6/2/2005	16:21	6.46	12.93
6/2/2005	16:22	6.68	12.82
6/2/2005	16:23	6.47	12.93
		O2	CO2
		6.56	12.94
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.00	0.00	**YES**	0.10	0.40	0.40	**YES**
O2, %	11.94	12.00	0.24	**YES**	11.92	0.08	0.32	**YES**
CO2, %	0.04	0.07	0.15	**YES**	0.06	0.10	0.05	**YES**
CO2, %	10.03	10.03	0.00	**YES**	9.95	0.40	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	6.6
CO2, %	12.9

% MOISTURE = **7.32**

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	6.5	6.0
CO2, %	13.0	12.0

Low Load

CATALYST AIR MANAGEMENT Inc.
CALIBRATION DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: RATA
LOCATION: Stack

RUN #: 1-9
LOAD LEVEL: Low
DATE: 6/2/2005

GAS UNITS	ANALYZER SCALE	CYLINDER VALUE	ANALYZER VALUE	DIFF PPM	% SPAN	Pass Yes\No
O2, %		0.00	0.00	0.00	0.00	**YES**
O2, %	**25**	11.92	11.94	0.02	0.08	**YES**
O2, %		22.43	22.45	0.02	0.08	**YES**
CO2, %		0.00	0.04	0.04	0.20	**YES**
CO2, %	**20**	10.00	10.03	0.03	0.16	**YES**
CO2, %		17.83	17.85	0.02	0.10	**YES**

CAT/. . ST AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	1	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	16:47	Pb =	29.50	P_{bar}
LOAD:	Low	END:	16:56	Ps =	-0.10	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
B-1	4	0.18	0.000	0.00	0	4.00	1.006	0.18	-0.28	305	34.14
2	5	0.18	-0.005	-0.03	-3	5.83	1.010	0.18	-0.28	307	34.16
3	6	0.18	0.000	0.00	0	6.00	1.006	0.18	-0.28	311	34.17
4	1	0.15	-0.005	-0.03	-3	3.16	1.010	0.15	-0.25	314	31.44
5	1	0.13	0.005	0.04	5	5.10	1.006	0.13	-0.23	314	29.14
6	2	0.17	0.005	0.03	3	3.61	1.006	0.17	-0.27	315	33.41
7	5	0.16	0.000	0.00	0	5.00	1.006	0.16	-0.26	316	32.38
8	5	0.14	0.000	0.00	0	5.00	1.006	0.14	-0.24	310	30.17
A-1	1	0.18	0.005	0.03	3	3.16	1.006	0.18	-0.28	312	34.33
2	2	0.20	0.010	0.05	5	5.38	1.006	0.20	-0.30	318	36.22
3	5	0.21	0.010	0.05	5	7.07	1.006	0.21	-0.31	318	37.00
4	7	0.20	0.010	0.05	5	8.60	1.006	0.20	-0.30	318	35.98
5	0	0.18	0.000	0.00	0	0.00	1.006	0.18	-0.28	317	34.49
6	4	0.16	-0.005	-0.03	-3	5.00	1.010	0.16	-0.26	315	32.42
7	5	0.16	-0.005	-0.03	-3	5.83	1.010	0.16	-0.26	313	32.33
8	3	0.16	0.000	0.00	0	3.00	1.006	0.16	-0.26	308	32.29
						Ri			Ps	TEMP	Vs
						4.73			-0.27	313.2	33.47
						avg			avg	avg	avg

MOISTURE =	6.21		
MD =	0.94	02 % =	9.6
MWD =	30.06	CO2 % =	10.5
MW =	29.31	N2 % =	79.9
Psa =	29.48		

VOLUMETRIC FLOW RATE

Qs =	5,389,744	DSCFH
Qs =	5,747,000	WSCFH
Qa =	8,541,210	ACFH

MOISTURE DATA

ACTUAL TIME	RUN TIME	GAS VOL FT^3	ORIFICE IN. H2O	METER TEMPERATURE INLET	OUTLET	METER Yi	BAR. PRESS. IN. Hg
16:47	0	223.043	2.00	101	102	1.00	29.50
	5	227.2		99	101		
	10	231.4		98	100		
	15	235.6		98	100		
	20	238.8		98	101		
	25	234.3		98	101		
17:17	30	247.410					
		24.367	2.00		100		

VOLUME OF MOISTURE (ml)

IMPINGERS	INITIAL	FINAL	
1	100	123	
2	100	104	
3	0	1	
Gel	250	254	Total
NET	450	482	32

TOTAL MOISTURE (ml) 32

VM(STD)= 22.766
VW(GAS)= 1.507

%MOISTURE = 6.21

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 1
OPERATING LEVEL: Low
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 16:47
END: 16:56

DATE	TIME	O2	CO2
6/2/2005	16:47	9.36	10.54
6/2/2005	16:48	9.51	10.47
6/2/2005	16:49	9.82	10.19
6/2/2005	16:50	9.37	10.53
6/2/2005	16:51	9.64	10.28
6/2/2005	16:52	9.59	10.26
6/2/2005	16:53	9.69	10.23
6/2/2005	16:54	9.6	10.31
6/2/2005	16:55	9.64	10.33
6/2/2005	16:56	9.34	10.64
		O2	CO2
		9.56	10.38
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.10	0.40	**YES**	0.17	0.68	0.28	**YES**
O2, %	11.94	11.92	0.08	**YES**	11.82	0.48	0.40	**YES**
CO2, %	0.04	0.06	0.10	**YES**	0.09	0.25	0.15	**YES**
CO2, %	10.03	9.95	0.40	**YES**	9.87	0.80	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	9.6
CO2, %	10.4

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	9.6	9.0
CO2, %	10.5	9.8

% MOISTURE = **6.21**

CATA_ _T AIR MANAGEMENT, Inc.
3-D Flow Profile

CLIENT:	UGI	RUN:	2	STACK DIAMETER =	114	in
PLANT:	Hunlock	DATE:	6/2/2005	STACK AREA =	70.88	sq. ft.
UNIT:	6	TIME START:	16:57	Pb =	29.50	P_{bar}
LOAD:	Low	END:	17:06	Ps =	-0.10	in Hg
				WAF =	NA	

TRAVERSE POINT	YAW ANGLE Yi	PRESSURE (in. of H2O) (P1-P2)	(P4-P5)	PITCH ANGLE COEF (P4-P5)/(P1-P2)	PITCH ANGLE Pi	RESULT ANGLE Ri	VEL PRESS COEF (Pt-Ps)/(P1-P2)	TRUE VEL PRESS (Pt-Ps)	STATIC PRESS Ps	STACK TEMP F	AXIAL VEL Vs FT/S
A-1	5	0.18	0.005	0.03	3	5.83	1.006	0.18	-0.28	315	34.23
2	6	0.20	0.005	0.03	3	6.71	1.006	0.20	-0.30	319	36.11
3	5	0.20	0.010	0.05	5	7.07	1.006	0.20	-0.30	319	36.08
4	6	0.20	0.005	0.03	3	6.71	1.006	0.20	-0.30	319	36.11
5	0	0.17	0.000	0.00	0	0.00	1.006	0.17	-0.27	317	33.48
6	5	0.17	-0.005	-0.03	-3	5.83	1.010	0.17	-0.27	315	33.33
7	2	0.15	-0.005	-0.03	-3	3.61	1.010	0.15	-0.25	314	31.39
8	4	0.12	-0.005	-0.04	-4	5.65	1.012	0.12	-0.22	310	27.95
B-1	4	0.16	0.000	0.00	0	4.00	1.006	0.16	-0.26	313	32.32
2	7	0.17	-0.005	-0.03	-3	7.61	1.010	0.17	-0.27	317	33.25
3	7	0.15	-0.010	-0.07	-6	9.21	1.018	0.15	-0.25	317	31.23
4	2	0.17	-0.010	-0.06	-5	5.38	1.013	0.17	-0.27	318	33.47
5	1	0.14	0.000	0.00	0	1.00	1.006	0.14	-0.24	318	30.40
6	2	0.16	0.000	0.00	0	2.00	1.006	0.16	-0.26	319	32.50
7	1	0.16	0.000	0.00	0	1.00	1.006	0.16	-0.26	319	32.52
8	3	0.15	0.000	0.00	0	3.00	1.006	0.15	-0.25	319	31.45
						Ri			Ps	TEMP	Vs
						4.66			-0.27	316.8	32.97
						avg			avg	avg	avg

MOISTURE =	6.21	%
MD =	0.94	
MWD =	30.14	
MW =	29.39	
Psa =	29.48	

02 % =	8.8
CO2 % =	11.2
N2 % =	80.0

VOLUMETRIC FLOW RATE

Qs =	5,284,950	DSCFH
Qs =	5,635,000	WSCFH
Qa =	8,413,615	ACFH

CATALYST AIR MANAGEMENT Inc.
REFERENCE DATA

CLIENT: UGI
PLANT: Hunlock
UNIT: 6
TEST: 3A,6C,7E
LOCATION: Stack

RUN #: 2
OPERATING LEVEL: Low
START DATE: 6/2/2005
END DATE: 6/2/2005
START: 16:57
END: 17:06

DATE	TIME	O2	CO2
6/2/2005	16:57	9.02	10.89
6/2/2005	16:58	9.13	10.78
6/2/2005	16:59	9.23	10.63
6/2/2005	17:00	8.83	10.98
6/2/2005	17:01	9	10.9
6/2/2005	17:02	9.01	10.87
6/2/2005	17:03	8.88	11.09
6/2/2005	17:04	8.61	11.33
6/2/2005	17:05	8.16	11.72
6/2/2005	17:06	8.36	11.53
		O2	CO2
		8.82	11.07
		%	%

Analyzer Readings not corrected for Post-Test Calibrations.

SYSTEM CALIBRATION BIAS AND DRIFT DATA

GAS UNITS	ANALYZER VALUE	PRE-TEST CHECK	% SPAN	Pass YES\NO	POST-TEST CHECK	% SPAN	% DRIFT	Pass YES\NO
O2, %	0.00	0.10	0.40	**YES**	0.17	0.68	0.28	**YES**
O2, %	11.94	11.92	0.08	**YES**	11.82	0.48	0.40	**YES**
CO2, %	0.04	0.06	0.10	**YES**	0.09	0.25	0.15	**YES**
CO2, %	10.03	9.95	0.40	**YES**	9.87	0.80	0.40	**YES**

UNCORRECTED ANALYZER VALUES

	DRY
O2, %	8.8
CO2, %	11.1

ANALYZER VALUES CORRECTED FOR DRIFT

	DRY	WET
O2, %	8.8	8.3
CO2, %	11.2	10.5

% MOISTURE = **6.21**