



**AIR
POLLUTION
TESTING, INC.**

DENVER, DURANGO, SALT LAKE CITY

**APT Testing Report
Cimarron LLC
24" & 48" Enclosed Flares**

**Gas Processing Facility
Greeley, Colorado**

Report Prepared for:

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Report Prepared by:

A handwritten signature in black ink, appearing to read 'BG', followed by a long horizontal flourish.

Brad Ganong

Technical Writer

Test Date

August 29th & 30th, 2006

APT Project: CIM6132

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1. Introduction

Air Pollution Testing, Inc. (APT) was contracted by Cimarron LLC to conduct a series of emissions tests on two enclosed flare stacks, located near Greeley, Colorado.

The purpose of the testing program was to determine the mass emission rates and destruction removal efficiencies (DRE) of total volatile organic compounds (TVOC) from two (2) enclosed flare stacks which are fed with off gas from various facility processes.

The data collected during testing is being used to determine the overall performance of the flares.

Table 1.1 provides a summary of the target pollutants and test methods. Table 1.2 provides contact information for personnel involved in the test program.

Cimarron – 24” & 48” Flare Test Enclosed Flare Units Sampling and Analytical Methods Summary		
<u>Location</u>	<u>Parameter</u>	<u>Test Method</u>
Flare Exhaust Stack and Waste Gas Inlet	Gas Flow	Methods 1, 2: S-type pitot traverse
	Diluent (oxygen, carbon dioxide)	Method 3: wet chemical analysis (Orsat)
	Moisture	Method 4: gravimetric
	Total VOC	Method 25A: FIA

Table 1.1: Source and Pollutant Summary

Cimarron – 24” & 48” Flare Test Test Program Contact Personnel		
<u>Name, Title</u>	<u>Company Address</u>	<u>Phone, FAX, email</u>
Mr. Sean Gabel	Cimarron LLC	(800) 822-8755, sgabel@cimarrongas.com
Mr. Andrew Bruning, Director of Operations	Air Pollution Testing, Inc. 5530 Marshall Street Arvada, Colorado 80002	(303) 420-5949, (303) 420-5920 fax, abruning@airtest.net

Table 1.2: Testing Program Contact Personnel

2. Test Results Summary

The results of the testing program are summarized in Table 2.1 and 2.2 below. Any emission parameters not found in the tables may be found in *Appendix 1*. The following terms are used in the results summaries:

- %vd – diluent concentration, dry volume percent
- %vw – stack gas moisture content, wet volume percent
- wscfm – stack gas flow rate, wet standard (68°F, one atmosphere) cubic feet per minute
- scfm – fuel flow rate, standard (68°F, one atmosphere) cubic feet per minute
- lb/hr – pollutant mass emission rate, pounds per hour
- DRE% - destruction rate efficiency, pound per hour as Propane (lb/hr @ C₃H₈)

Cimarron, LLC Flare Test 24" Flare Test Results (8/29/06)				
	<u>Run #1</u>	<u>Run #2</u>	<u>Run #3</u>	Average
Start Time	9:53	11:29	12:39	
Stop Time	10:53	12:29	13:39	
O ₂ (%vd)	20.5	13.2	19.6	17.8
CO ₂ (%vd)	0.0	4.9	0.5	1.8
H ₂ O (%vw)	6.7	6.2	2.9	5.3
<u>Outlet Data</u>				
Gas Flow (wscfm)	478	488	480	482
TVOC (lb/hr)	0.011	0.002	0.019	0.011
<u>Flash Gas Data</u>				
Fuel Flow (scfm)	3.9	5.4	3.9	4.4
TVOC (lb/hr)	23.5	33.3	23.9	26.9
<u>Purchase Gas Data</u>				
Fuel Flow (scfm)	0.3	0.3	0.3	0.3
TVOC (lb/hr)	0.9	0.9	0.9	0.9
<u>TVOC DRE</u>				
TVOC (%DRE)	99.95%	99.99%	99.92%	99.96%

Table 2.1: 24" Flare Test Results

APT Project CIM6132
Test Report – Cimarron LLC, Flare Tests

Cimarron, LLC Flare Test 48" Flare Test Results (8/30/06)				
	<u>Run #1</u>	<u>Run #2</u>	<u>Run #3</u>	Average
Start Time	10:21	12:10	13:58	
Stop Time	10:44	12:46	14:49	
O ₂ (%vd)	20.5	20.6	20.8	20.6
CO ₂ (%vd)	0.0	0.0	0.0	0.0
H ₂ O (%vw)	6.7	6.2	2.9	5.3
<u>Outlet Data</u>				
Gas Flow (wscfm)	1,890	1,888	1,876	1,885
TVOC (lb/hr)	0.02	0.08	0.11	0.07
<u>Flash Gas Data</u>				
Fuel Flow (scfm)	10.9	11.9	11.7	11.5
TVOC (lb/hr)	56.8	62.0	61.0	60.0
<u>Purchase Gas Data</u>				
Fuel Flow (scfm)	0.3	0.3	0.3	0.3
TVOC (lb/hr)	0.8	0.8	0.8	0.8
<u>TVOC DRE</u>				
TVOC (%DRE)	99.96%	99.88%	99.83%	99.89%

Table 2.2: 48" Flare Test Results

3. Methods

APT tested in accordance with the following U.S. Environmental Protection Agency (USEPA) source emissions test methods referenced in 40 CFR 60, Appendix A.

Method 1 – Sample and Velocity Traverses for Stationary Sources

Method 2 – Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)

Method 3 – Gas Analysis for the Determination of Dry Molecular Weight

Method 4 – Determination of Moisture Content in Stack Gases

Method 25A – Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer

4. Test Program Summary

4.1. General

Three, 60-minute test runs were performed at the outlet of the 24" flare. Three, approximately 30-minute runs were performed at the outlet of the 48" flare. A flame ionization analyzer was used to determine the TVOC of the units. Concurrently collected stack gas flow data were combined with TVOC concentration data in order to calculate TVOC mass emission rates in units of pounds per hour (lb/hr).

Integrated Tedlar bags were collected from the Flash Tank and Purchase Gas fuel lines and sent to a laboratory for inlet TVOC determination. Inlet fuel flow data were provided by an onsite Cimarron representative and combined with inlet TVOC data to calculate TVOC mass emission rates in units of pounds per hour (lb/hr). The inlet and outlet TVOC mass emission rates were compared in order to determine the flare's destruction removal efficiency (DRE).

Cimarron LLC – Flare Tests Sampling and Analytical Methods		
<i>Parameter</i>	<i>Sampling/Analytical Method</i>	<i>Laboratory</i>
Gas flow	Methods 1 and 2: S-type pitot tube, K-type thermocouple, draft gauge	APT, on-site
O ₂ / CO ₂	Method 3: wet chemical analysis (Orsat)	
H ₂ O	Method 4: gravimetric	
VOCs	Method 25A: flame ionization analyzer	

Table 4.1: Sampling and Analytical Methods

4.2. Stack Gas Moisture and Volumetric Flow Rate

Stack gas velocity, moisture content and volumetric flow rates were measured in accordance with EPA Methods 1, 2, 3 and 4.

Each sampling period consisted of conducting a temperature and differential pressure traverse of the stack using a K-type thermocouple and a wind tunnel-calibrated S-type pitot tube.

On the 24" flare, concurrent with the velocity traverse, a gas sample was extracted from the stack at a constant flow rate of no more than 0.75 cubic feet per minute (cfm). The

gas sample passed through a stainless steel probe, through a series of four chilled glass impingers, and through a calibrated dry gas meter. Prior to sampling, the first two impingers were each seeded with 100 milliliters of water. The third impinger was empty. The fourth impinger was seeded with 250 grams of dried silica gel. See *Appendix 4* for a schematic of the EPA Methods 1 through 4 sampling train. The moisture data from the 24" flare were used in the emission calculations for the 48" flare (see section 4.4).

Following sampling, the moisture gain in the impingers was measured gravimetrically to determine the moisture content of the stack gas. The diluent concentrations were determined in accordance with Method 3 using wet chemical analysis with an Orsat instrument.

All of the above data were combined to calculate the stack gas velocity and volumetric flow rate in units of feet per second (ft/sec), actual cubic feet per minute (acfm), wet standard (one atmosphere and 68°F) cubic feet per minute (wscfm), and pounds per hour (lb/hr).

4.3. Volatile Organic Compounds

Total VOC emission concentrations were determined in accordance with EPA Method 25A.

Each sampling period consisted of extracting a gas sample from the stack at a constant flow rate of approximately two liters per minute. The sample then passed through a heated Teflon sample line and into the sampling port of a JUM Model VE-7 flame ionization analyzer. The TVOC emission concentrations were displayed on the analyzer front panel in units of parts per million, wet volume basis as propane (ppmvw as C_3H_8 – TVOC) and logged to a computerized data acquisition system (CDAS). Please see *Appendix 4* for a diagram of the EPA Method 25A sampling train.

Before and after each sampling period, the analyzer was challenged with calibration gases to calibrate the instrument, to verify linearity of response, and to quantify zero and span drift for the previous sampling period. The calibration gases were manufacturer certified to EPA Protocol 1. To ensure no system bias, the analyzer calibrations were conducted by introducing all gases to the analyzer at the sampling probe tip at stack pressure.

Following sampling, the CDAS data were averaged in one-minute increments, corrected for instrumental drift, and reported as average TVOC emission concentrations for each sampling period. The pollutant concentration data were combined with concurrently collected stack gas flow and moisture data to calculate mass emission rates in units of lb/hr.

4.4. Test Method Deviations

Because stack gas velocity was very near zero, Method 19 calculations were going to be used to calculate TVOC emissions rates. However, diluent data were too close to ambient conditions to allow for accurate Method 19 calculations. As a result, the initial differential pressure traverses were combined with the collected diluent data and used to calculate volumetric flow rates. Because, Method 19 calculations were anticipated, moisture measurements were not made at the 48" flare. Consequently, the moisture content of the 24" flare was used in the calculations for the 48" flare.



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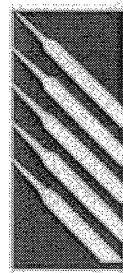
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Appendix One: Testing Parameters

24'' Flare

Cimarron
24 Inch Flare
Greely, CO
24" Flare
8/29/2006

Field Reference Method Data

Run #		1	2	3	Average
Start Time		9:53	11:29	12:39	
Stop Time		10:53	12:29	13:39	
Sample Time		60	60	60	
hrs	Assumed Hours of Operation / Year	8,760	8,760	8,760	8,760
D _s	Stack Diameter (inches)	24.0	24.0	24.0	24.0
$\sqrt{\Delta P_{AVG}}$	Average (Delta P) ^{1/2} (" H ₂ O) ^{1/2}	0.071	0.071	0.071	0.071
C _P	Pitot Tube Constant (unitless)	0.84	0.84	0.84	0.84
T _s	Stack Temp (°F)	653	590	626	623
P _{bar}	Barometric Press (mbar)	848	848	848	848
P _{bar}	Barometric Press ("Hg)	25.04	25.04	25.04	25.04
P _s	Stack Pressure ("H ₂ O)	0.00	0.00	0.00	0.00
Y _d	Meter Y Factor (unitless)	0.990	0.990	0.990	0.990
T _m	Meter Temperature (°F)	82	95	102	93
V _m	Sample Volume (ft ³)	34.872	34.655	35.479	35.002
ΔH	Orifice Setting Delta H ("H ₂ O)	1.0	1.0	1.0	1.0
V _{lc}	Moisture (g)	43.2	38.6	17.6	33.1
F _d	F _d value (dscf/MMBtu)	8710	8710	8710	8710
O ₂ %vd	O ₂ (%vd)*	20.5	13.2	19.6	17.8
CO ₂ %vd	CO ₂ (%vd)*	0.0	4.9	0.5	1.8
N ₂ %vd	N ₂ (%vd)	79.5	81.9	79.9	80.4
wet	TVOC (ppmvw as C ₃ H ₈)	3.5	0.6	5.8	3.3

Fuel Consumption Data

Run #		1	2	3	Average
<u>Purchase Gas</u>					
scfh	Fuel Use (scfh)	15	15	15	15
Btu/scf	Heat Content (Btu/scf)	1347	1347	1347	1,347
<u>Flash Gas</u>					
scfh	Fuel Use (scfh)	231.6	322.2	232	262
Btu/scf	Heat Content (Btu/scf)	2284	2326	2325	2,312

Reference Method Calculations

Run #		1	2	3	Average
MMBtu/hr	Fuel Consumption (MMBtu/hr)	0.55	0.77	0.56	
V _{mstd}	Sample Volume (dscf)	28.243	27.385	27.705	27.778
V _{wstd}	Moisture Volume (scf)	2.033	1.817	0.828	1.560
B _{ws}	Moisture Content (%/100)	0.067	0.062	0.029	0.053
M _D	Molecular Weight Dry (lb/lb-mole)	28.82	29.31	28.86	29.00
M _A	Molecular Weight Wet (lb/lb-mole)	28.09	28.61	28.55	28.42
V _s	Gas Velocity (ft/sec)	6.4	6.1	6.3	6.3
F _{ACFM}	Gas Flow (acfm)	1,204	1,159	1,180	1,181
F _{DSCFM}	Gas Flow (dscfm)	446	457	466	456
F _{WSCFM}	Gas Flow (wscfm)	478	488	480	482
lb/hr	Gas Flow (lb/hr)	2,091	2,172	2,134	2,132
dry	TVOC (ppmvd as C ₃ H ₈)	3.7	0.6	6.0	3.5
lb/hr	TVOC (lb/hr as C ₃ H ₈)	0.011	0.002	0.019	0.011
tpy	TVOC (tons/year as C ₃ H ₈)	0.05	0.01	0.08	0.05

*O₂/CO₂ determined by wet chemical analysis using an Orsat instrument

Run 2 VOC below detection limit, 2% of span used for calculations.

Cimarron
 24 Inch Flare
 Greely, CO
 24" Flare
 8/29/06

Field Data				
Run #	1	2	3	Average
<u>Flash Gas Inlet Flow Data</u>				
Fuel Flow (scfh)	231.6	322.2	231.6	261.8
Fuel Flow (scfm)	3.9	5.4	3.9	4.4
<u>Flash Gas GC Data (mol % by C number)</u>				
C1	18.64	18.69	18.42	18.58
C2	19.39	19.31	19.49	19.40
C3	24.72	24.84	25.2	24.92
C4	18.56	18.96	19.06	18.86
C5	7.73	8	7.95	7.89
C6	3.45	3.72	3.49	3.55
<u>Purchased Gas Inlet Flow Data</u>				
Fuel Flow (scfh)	15	15	15	15.0
Fuel Flow (scfm)	0.3	0.3	0.3	0.3
<u>Purchased Gas GC Data (mol % by C number)</u>				
C1	70.06	68.96	69.88	69.63
C2	14.64	14.53	14.58	14.58
C3	7.97	8.69	8.04	8.23
C4	3.51	3.81	3.53	3.62
C5	0.85	0.93	0.78	0.85
C6	0.33	0.35	0.33	0.34
<u>TO Outlet Flow Data</u>				
Gas Flow (wscfm)	478	488	480	482
<u>TO Outlet FID Data (ppmvw)</u>				
VOC (ppmvw as C ₃ H ₈)	3.5	0.6	5.8	3.3

Calculations				
Run #	1	2	3	Average
<u>Flash Gas Inlet VOC</u>				
VOC (lb/hr)	23.5	33.3	23.9	26.9
<u>Purchased Gas VOC</u>				
VOC (lb/hr)	0.9	0.9	0.9	0.9
<u>TO Outlet VOC</u>				
VOC (lb/hr)	0.011	0.002	0.019	0.011
<u>TO VOC / HAPs DRE</u>				
VOC DRE (%)	99.95%	99.99%	99.92%	99.96%

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Linearity Information		Relin
Gas	TVOC	TVOC
Expected Gas Concentration		
Instrument Span	30	30
Span Gas Value	8.4	8.4
Bias Check (Zero)	0.2	-0.2
Bias Check (Span)	8.6	8.2
Gas Concentration	(ppm)	(ppm)
1	0.0	0.0
2	8.4	8.4
3	17.1	17.1
4	26.0	26.0
Response		
1	-0.2	-0.2
2	8.6	8.2
3	17.2	16.8
4	25.7	25.9
Difference		
1	0.2	0.2
2	0.2	0.2
3	0.1	0.3
4	0.3	0.1
Results		
Zero Bias	1.33%	0.00%
Span Bias	0.00%	0.00%
Max Calibration Error	1.00%	0.93%

Cimarron
24 Inch Flare
Greely, CO
24" Flare
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Run 1

Start Time	9:53
Run Length	60
Stop Time	10:53

Calibration Information		
Gas		TVOC
Instrument Range		30
Span Gas Value		8.41
Calibration		
	Pretest Calibration	
	Zero%	0.2
	Span%	8.6
	Post Test Calibration	
	Zero%	1.5
Span%		8.8
Results		
	Absolute Bias (Zero)	4.3%
	Absolute Bias (Span)	0.7%
	Absolute Drift (Zero)	4.3%
	Absolute Drift (Span)	0.7%
		Corrected TVOC ppm
		3.5
Run Length (Minutes)	Time	Uncorrected TVOC ppm
		4.1

1	9:53	0.52
2	9:54	0.40
3	9:55	1.22
4	9:56	1.27
5	9:57	1.37
6	9:58	1.92
7	9:59	2.45
8	10:00	3.96
9	10:01	3.06
10	10:02	2.44
11	10:03	3.14
12	10:04	3.04
13	10:05	16.12
14	10:06	2.13
15	10:07	2.09
16	10:08	2.19
17	10:09	1.66
18	10:10	2.59
19	10:11	3.49
20	10:12	2.45
21	10:13	1.98
22	10:14	2.06
23	10:15	3.58
24	10:16	6.99
25	10:17	1.28
26	10:18	0.20
27	10:19	0.20
28	10:20	0.35
29	10:21	0.45
30	10:22	0.70
31	10:23	2.20
32	10:24	1.93
33	10:25	1.83
34	10:26	1.19
35	10:27	0.58
36	10:28	2.02
37	10:29	2.44
38	10:30	0.97
39	10:31	1.01
40	10:32	1.42
41	10:33	1.99
42	10:34	3.92
43	10:35	4.03
44	10:36	4.55
45	10:37	5.27
46	10:38	6.91
47	10:39	7.81
48	10:40	9.71
49	10:41	12.30
50	10:42	11.97
51	10:43	8.85
52	10:44	9.11
53	10:45	12.10
54	10:46	10.75
55	10:47	8.01
56	10:48	5.91
57	10:49	8.65
58	10:50	9.85
59	10:51	7.68
60	10:52	5.68

Cimarron
24 Inch Flare
Greely, CO
24" Flare
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Run 2

Start Time	11:29
Run Length	60
Stop Time	12:29

Calibration Information			
Gas		TVOC	
Calibration	Instrument Range	30	
	Span Gas Value	8.41	
	Pretest Calibration		
	Zero%	-0.2	
	Span%	8.2	
	Post Test Calibration		
	Zero%	0.1	
	Span%	8.5	
Results			
	Absolute Bias (Zero)	1.0%	
	Absolute Bias (Span)	1.0%	
	Absolute Drift (Zero)	1.0%	
		Absolute Drift (Span)	1.0%
		Corrected TVOC ppm	
		-0.6	
Run Length (Minutes)	Time	Uncorrected TVOC ppm	
		-0.7	
1	11:29	0.3	
2	11:30	-0.3	
3	11:31	-0.8	
4	11:32	-1.0	
5	11:33	-1.1	
6	11:34	-1.0	
7	11:35	-1.1	
8	11:36	-1.0	
9	11:37	-1.0	
10	11:38	-1.0	
11	11:39	-1.0	
12	11:40	-0.9	
13	11:41	-0.9	
14	11:42	-1.0	
15	11:43	-0.9	
16	11:44	-1.0	
17	11:45	-1.0	
18	11:46	-1.0	
19	11:47	12.1	
20	11:48	1.3	
21	11:49	-1.0	
22	11:50	-1.1	
23	11:51	-1.1	
24	11:52	-1.1	
25	11:53	-1.1	
26	11:54	-1.2	
27	11:55	-1.2	
28	11:56	-1.2	
29	11:57	-1.1	
30	11:58	-1.2	
31	11:59	-1.2	
32	12:00	-1.1	
33	12:01	-1.2	
34	12:02	-1.1	
35	12:03	-0.6	
36	12:04	-1.1	
37	12:05	-1.3	
38	12:06	-1.4	
39	12:07	-1.4	
40	12:08	-1.4	
41	12:09	-1.4	
42	12:10	-1.1	
43	12:11	-0.7	
44	12:12	-0.8	
45	12:13	-0.8	
46	12:14	-0.7	
47	12:15	-0.7	
48	12:16	-0.5	
49	12:17	-0.4	
50	12:18	-0.3	
51	12:19	-0.7	
52	12:20	-0.7	
53	12:21	-0.8	
54	12:22	-0.7	
55	12:23	-0.8	
56	12:24	-0.8	
57	12:25	-0.8	
58	12:26	-0.8	
59	12:27	-0.7	
60	12:28	-0.5	

Cimarron
24 Inch Flare
Greely, CO
24" Flare
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Run 3

Start Time	12:39
Run Length	60
Stop Time	13:39

Calibration Information		
Gas		TVOC
Instrument Range		30
Span Gas Value		8.41
Calibration		
	Pretest Calibration	
	Zero%	0.1
	Span%	8.5
	Post Test Calibration	
	Zero%	-0.2
	Span%	9.2
Results		
	Absolute Bias (Zero)	1.0%
	Absolute Bias (Span)	3.3%
	Absolute Drift (Zero)	1.0%
	Absolute Drift (Span)	2.3%
		Corrected TVOC ppm
		5.8
Run Length (Minutes)	Time	Uncorrected TVOC ppm
		6.1

1	12:39	2.9
2	12:40	2.4
3	12:41	2.6
4	12:42	4.3
5	12:43	4.4
6	12:44	2.8
7	12:45	2.9
8	12:46	4.0
9	12:47	2.7
10	12:48	3.2
11	12:49	1.8
12	12:50	1.9
13	12:51	1.8
14	12:52	1.8
15	12:53	1.7
16	12:54	1.8
17	12:55	2.1
18	12:56	1.9
19	12:57	2.1
20	12:58	1.6
21	12:59	1.7
22	13:00	2.7
23	13:01	2.2
24	13:02	1.9
25	13:03	1.8
26	13:04	1.7
27	13:05	1.7
28	13:06	1.7
29	13:07	1.7
30	13:08	1.8
31	13:09	1.9
32	13:10	2.1
33	13:11	2.4
34	13:12	3.7
35	13:13	5.2
36	13:14	4.4
37	13:15	6.0
38	13:16	69.7
39	13:17	73.1
40	13:18	35.8
41	13:19	14.1
42	13:20	8.1
43	13:21	6.3
44	13:22	4.8
45	13:23	3.5
46	13:24	3.3
47	13:25	3.3
48	13:26	4.7
49	13:27	5.4
50	13:28	3.7
51	13:29	4.0
52	13:30	4.4
53	13:31	4.4
54	13:32	4.7
55	13:33	3.7
56	13:34	3.3
57	13:35	3.5
58	13:36	3.2
59	13:37	2.8
60	13:38	2.6

48" Flare

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
8/30/06

Field Reference Method Data

Run #		1	2	3	Average
	Start Time	10:21	12:10	13:58	
	Break Time	10:29	12:15	14:07	
	Continue Time	10:34	12:35	14:35	
	End Time	10:44	12:46	14:49	
	Sample Time	20	18	24	
hrs	Assumed Hours of Operation / Year	8,760	8,760	8,760	8,760
D _S	Stack Diameter (inches)	48.0	48.0	48.0	48.0
$\sqrt{\Delta P_{AVG}}$	Average (Delta P) ^{1/2} (" H ₂ O) ^{1/2}	0.071	0.071	0.071	0.071
C _P	Pitot Tube Constant (unitless)	0.84	0.84	0.84	0.84
T _S	Stack Temp (°F)	680	680	680	680
P _{bar}	Barometric Press (mbar)	849	849	849	849
P _{bar}	Barometric Press ("Hg)	25.07	25.07	25.07	25.07
P _s	Stack Pressure ("H ₂ O)	0.00	0.00	0.00	0.00
V _{ic}	Moisture (g)	0.0	0.0	0.0	0.0
F _d	F _d value (dscf/MMBtu)	8710	8710	8710	8710
O ₂ %vd	O ₂ (%vd)*	20.5	20.6	20.8	20.6
CO ₂ %vd	CO ₂ (%vd)*	0.0	0.0	0.0	0.0
N ₂ %vd	N ₂ (%vd)	79.5	79.4	79.2	79.4
wet	TVOC (ppmvw as C ₃ H ₈)	1.7	5.9	8.3	5.3

Fuel Consumption Data

Run #		1	2	3	Average
<u>Purchase Gas</u>					
scfh	Fuel Use (scfh)	15	15	15	15
Btu/scf	Heat Content (Btu/scf)	1214	1214	1214	1,214
<u>Flash Gas</u>					
scfh	Fuel Use (scfh)	655.9	716.4	705	692
Btu/scf	Heat Content (Btu/scf)	1865.4	1865.4	1865.4	1,865

Reference Method Calculations

Run #		1	2	3	Average
MMBtu/hr	Fuel Consumption (MMBtu/hr)	1.24	1.35	1.33	1.31
B _{ws}	Moisture Content (%/100)**	0.067	0.062	0.029	0.053
M _D	Molecular Weight Dry (lb/lb-mole)	28.82	28.82	28.83	28.83
M _A	Molecular Weight Wet (lb/lb-mole)	28.09	28.15	28.52	28.25
V _S	Gas Velocity (ft/sec)	6.5	6.5	6.4	6.4
F _{ACFM}	Gas Flow (acfm)	4,870	4,865	4,834	4,856
F _{DSCFM}	Gas Flow (dscfm)	1,763	1,771	1,821	1,785
F _{WSCFM}	Gas Flow (wscfm)	1,890	1,888	1,876	1,885
lb/hr	Gas Flow (lb/hr)	8,268	8,277	8,331	8,292
dry	TVOC (ppmvd as C ₃ H ₈)	1.8	6.3	8.5	5.6
lb/hr	TVOC (lb/hr as C ₃ H ₈)	0.022	0.077	0.107	0.069
tpy	TVOC (tons/year as C ₃ H ₈)	0.10	0.34	0.47	0.30

*O₂/CO₂ determined by wet chemical analysis using an Orsat instrument

**Moisture values from the 24" flare were substituted in leau of actual moisture measurements

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
8/30/06

Field Data				
Run #	1	2	3	Average
<u>Flash Gas Inlet Flow Data</u>				
Fuel Flow (scfh)	655.9	716.4	704.5	692.3
Fuel Flow (scfm)	10.9	11.9	11.7	11.5
<u>Flash Gas GC Data (mol % by C number)*</u>				
C1	<u>22.89</u>	22.89	<u>22.89</u>	22.89
C2	<u>21.39</u>	21.39	<u>21.39</u>	21.39
C3	<u>18.73</u>	18.73	<u>18.73</u>	18.73
C4	<u>12.51</u>	12.51	<u>12.51</u>	12.51
C5	<u>5.65</u>	5.65	<u>5.65</u>	5.65
C6	<u>4.24</u>	4.24	<u>4.24</u>	4.24
<u>Purchased Gas Inlet Flow Data</u>				
Fuel Flow (scfh)	15	15	15	15.0
Fuel Flow (scfm)	0.3	0.3	0.3	0.3
<u>Purchased Gas GC Data (mol % by C number)**</u>				
C1	63.19	67.28	<u>65.24</u>	65.24
C2	11.93	12.56	<u>12.25</u>	12.25
C3	5.52	5.82	<u>5.67</u>	5.67
C4	3.02	3.25	<u>3.14</u>	3.14
C5	1.32	1.46	<u>1.39</u>	1.39
C6	0.53	0.66	<u>0.60</u>	0.60
<u>TO Outlet Flow Data</u>				
Gas Flow (wscfm)	1,890	1,888	1,876	1,885
<u>TO Outlet FID Data (ppmvw)</u>				
VOC (ppmvw as C ₃ H ₈)	1.7	5.9	8.3	5.3

Calculations				
Run #	1	2	3	Average
<u>Flash Gas Inlet VOC</u>				
VOC (lb/hr)	56.8	62.0	61.0	60.0
<u>Purchased Gas VOC</u>				
VOC (lb/hr)	0.8	0.8	0.8	0.8
<u>TO Outlet VOC</u>				
VOC (lb/hr)	0.02	0.08	0.11	0.07
<u>TO VOC / HAPs DRE</u>				
VOC DRE (%)	99.96%	99.88%	99.83%	99.89%

*Used the Run 2 flash gas analysis for Runs 1 and 3

**Used the average of the Run 1 and Run 2 purchase gas analysis for Run 3

Cimarron
 Greeley Gas Plant
 Greeley, Colorado
 48" Flare
 08/30/06

Linearity Information	
Gas	TVOC
Expected Gas Concentration	
Instrument Span	32
Span Gas Value	17.1
Bias Check (Zero)	-1.0
Bias Check (Span)	16.0
Gas Concentration	(ppm)
1	0.0
2	8.4
3	17.1
4	26.0
Response	
1	-0.3
2	8.2
3	16.7
4	25.9
Difference	
1	0.3
2	0.2
3	0.4
4	0.1
Results	
Zero Bias	2.19%
Span Bias	2.19%
Max Calibration Error	1.19%

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
08/30/06

Run 1

Start Time	10:21	10:34
Stop Time	10:29	10:44
Run Length	20	

Calibration Information		
Gas		TVOC
Calibration	Instrument Range	32
	Span Gas Value	17.1
	Pretest Calibration	
	Zero%	-1.0
	Span%	16.0
	Post Test Calibration	
	Zero%	-0.2
	Span%	16.9
Results	Absolute Bias (Zero)	2.5%
	Absolute Bias (Span)	2.8%
	Absolute Drift (Zero)	2.5%
	Absolute Drift (Span)	2.8%
		Corrected TVOC ppm
		1.7
Run Length (Minutes)	Time	Uncorrected TVOC ppm
		1.1

1	10:21	2.4
2	10:22	1.7
3	10:23	-0.7
4	10:24	1.3
5	10:25	16.8
6	10:26	2.0
7	10:27	-2.3
8	10:28	3.7
9	10:29	4.8
10	10:34	-2.0
11	10:35	-3.1
12	10:36	-3.8
13	10:37	-0.1
14	10:38	-3.4
15	10:39	-3.6
16	10:40	-3.1
17	10:41	4.2
18	10:42	-0.9
19	10:43	4.8
20	10:44	3.2

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
08/30/06

Run 2

Start Time	12:10	12:35
Stop Time	12:15	12:46
Run Length	18	

Calibration Information		
Gas		TVOC
Calibration	Instrument Range	32
	Span Gas Value	17.1
	Pretest Calibration	
	Zero%	-0.2
	Span%	16.9
	Post Test Calibration	
	Zero%	0.1
	Span%	17.3
	Results	
Absolute Bias (Zero)	3.4%	
Absolute Bias (Span)	4.1%	
Absolute Drift (Zero)	0.9%	
Absolute Drift (Span)	1.3%	
		Corrected TVOC ppm
		5.9
Run Length (Minutes)	Time	Uncorrected TVOC ppm
5.9		

1	12:10	4.2
2	12:11	6.5
3	12:12	4.8
4	12:13	7.3
5	12:14	17.7
6	12:15	5.3
7	12:35	12.2
8	12:36	1.5
9	12:37	5.5
10	12:38	1.3
11	12:39	5.9
12	12:40	3.5
13	12:41	2.8
14	12:42	10.8
15	12:43	6.2
16	12:44	5.6
17	12:45	1.8
18	12:46	3.6

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
08/30/06

Run 3

Start Time	13:58	14:35
Stop Time	14:07	14:49
Total Run Time	24	

Calibration Information		
Gas		TVOC
Calibration	Instrument Range	32
	Span Gas Value	17.1
	Pretest Calibration	
	Zero%	0.1
	Span%	17.3
	Post Test Calibration	
	Zero%	-1.3
	Span%	15.9
Results		
	Absolute Bias (Zero)	3.4%
	Absolute Bias (Span)	4.1%
	Absolute Drift (Zero)	4.4%
	Absolute Drift (Span)	4.4%
		Corrected TVOC ppm
		8.3
Run Length (Minutes)	Time	Uncorrected TVOC ppm
7.8		

1	13:58	23.9
2	13:59	9.0
3	14:00	7.0
4	14:01	5.5
5	14:02	6.6
6	14:03	13.3
7	14:04	13.7
8	14:05	6.7
9	14:06	11.8
10	14:07	6.9
11	14:35	7.0
12	14:36	4.9
13	14:37	3.4
14	14:38	6.0
15	14:39	4.3
16	14:40	2.5
17	14:41	2.3
18	14:42	8.8
19	14:43	4.4
20	14:44	18.6
21	14:45	4.0
22	14:46	2.4
23	14:47	5.2
24	14:48	8.2
25	14:49	7.4



Appendix Two: Field Data

Diluent Data

Air Pollution Testing, Inc. : EPA Method 3 Data Sheet

PT Job #: <u>CIM 6132</u>		Barometric Pressure: <u>842</u>		Date: <u>9/1/04</u>
Facility: <u>Various flares</u>		Orsat ID:		Operator: <u>J</u>
Stack ID:		Leak Check: ☒		
Run #: <u>24" R1</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>0.0</u>	<u>20.4</u>	<u>20.4</u>
	2	<u>0.0</u>	<u>20.4</u>	<u>20.4</u>
	3	<u>0.0</u>	<u>20.6</u>	<u>20.6</u>
	Average	<u>0.0</u>	<u>20.5</u>	<u>20.5</u>
Run #: <u>24" R2</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>5.0</u>	<u>18.2</u>	<u>13.3</u>
	2	<u>4.8</u>	<u>18.0</u>	13.2
	3	<u>4.8</u>	<u>18.0</u>	13.2
	Average	<u>4.9</u>	<u>18.1</u>	<u>13.2</u>
Run #: <u>24" R3</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>.5</u>	<u>20.0</u>	<u>19.5</u>
	2	<u>.5</u>	<u>20.2</u>	<u>19.7</u>
	3	<u>.5</u>	<u>20.2</u>	<u>19.7</u>
	Average	<u>.5</u>	<u>20.1</u>	<u>19.6</u>
Run #: <u>48" R1</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>0.0</u>	<u>20.5</u>	<u>20.5</u>
	2	<u>0.0</u>	<u>20.5</u>	<u>20.5</u>
	3	<u>0.0</u>	<u>20.5</u>	<u>20.5</u>
	Average	<u>0.0</u>	<u>20.5</u>	<u>20.5</u>
Run #: <u>48" R2</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>0.0</u>	<u>20.6</u>	20.6
	2	<u>0.0</u>	<u>20.4</u>	<u>20.4</u>
	3	<u>0.0</u>	<u>20.4</u>	<u>20.4</u>
	Average	<u>0.0</u>	<u>20.45</u>	<u>20.5</u>
Run #: <u>48" R3</u>	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>0.0</u>	<u>20.6</u>	<u>20.6</u>
	2	<u>0.0</u>	<u>20.6</u>	<u>20.6</u>
	3	<u>0.0</u>	<u>20.6</u>	<u>20.6</u>
	Average	<u>0.0</u>	<u>20.6</u>	<u>20.6</u>
Run #:	Analysis #:	CO2	CO2 + O2	O2
Notes:	1	<u>0.0</u>	<u>20.8</u>	<u>20.8</u>
	2	<u>0.0</u>	<u>20.8</u>	<u>20.8</u>
	3	<u>0.0</u>	<u>20.4</u>	<u>20.4</u>
	Average	<u>0.0</u>	<u>20.7</u>	<u>20.7</u>

24" Flare

Air Pollution Testing, Inc. : Analyzer Calibration Datasheet

Facility: Cimarron

Location: Greely, CO

Unit: 247 247 line

Date: 8/29/06

APT Job #: CIM 6832

Page #: 1

Analyzer Information

Analyzer Type	<u>TVOC</u>	<u>TVOC</u>				
Analyzer ID #	<u>VE7-3</u>	<u>VE7-3</u>				
Analyzer Scale	<u>0-100</u>	<u>0-100</u>				
Calibration Range	<u>0-30</u>	<u>0-30</u>				

Calibration Gas Cylinder Information (Cylinder ID#/Expiration date and Concentration)

Analyzer Type	<u>TVOC</u>	<u>TVOC</u>				
Zero	<u>0.0</u>	<u>0.0</u>				
CC#	<u>84976</u>	<u>84974</u>	<u>N₂</u>			
Expiration date						
Low	<u>8.41</u>	<u>8.41</u>				
CC#	<u>63247</u>	<u>1</u>				
Expiration date						
Mid	<u>17.08</u>	<u>17.08</u>				
CC#	<u>90957</u>	<u>1</u>				
Expiration date						
High	<u>26.0</u>	<u>26</u>				
CC#	<u>63247</u>	<u>1</u>				
Expiration date	<u>114208</u>	<u>→</u>				

Calibration Error

Analyzer Type	<u>TVOC</u>	<u>TVOC</u>				
Zero	<u>-0.2</u>	<u>-0.2</u>				
Low	<u>8.6</u>	<u>8.2</u>				
Mid	<u>17.2</u>	<u>16.8</u>				
High	<u>26.0</u>	<u>25.9</u>				
	<u>25.7</u>					

Initial Bias Check

Analyzer Type	<u>TVOC</u>	<u>TVOC</u>				
Zero	<u>0.2</u>	<u>-0.2</u>				
Low	<u>8.6</u>	<u>8.2</u>				
Mid						
High						

relin after R1 due to drift.

Facility : CimarronDate : 8/29/06Location : Sanchez 33-10APT Job # : CIM 6132Alt : 24" abovePage # : 2Start Time : 953Stop Time : 1053

Calibration Results

Analyzer Type	TVOC					
Zero	1.5 ✓					
Low	8.8 ✓					
Mid						
High						

Run # : 2Start Time : 1129Stop Time : 1229

Calibration Results

Analyzer Type	TVOC					
Zero	.1 ✓					
Low	8.5 ✓					
Mid						
High						

Run # : 3Start Time : 12:39Stop Time : 13:39

Calibration Results

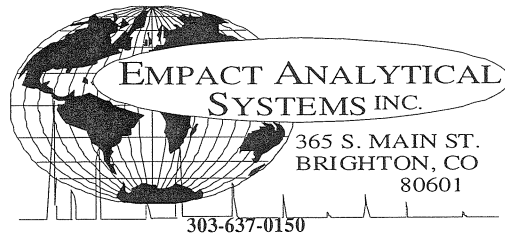
Analyzer Type	TVOC					
Zero	-0.2					
Low	9.2 ✓					
Mid						
High						

Air Pollution Testing, Inc. : EPA Method 4 - Moisture Determination Datasheet																																	
APT Job #:		C7M 6132		Date: 8-29-06		CO2 (%):		O2 (%):																									
Location:		24" Flare		Operator: HD		Ambient Temperature (oF):		Barometric Pressure (mbar):																									
Run #		1		Meter Box ID: 105-23		Probe Length (ft):		Moisture (grams):																									
Meter Box Yd:		990		Meter DHO:		Static Pressure (H2O):		Start Time:																									
Pre-Test Pump Leak Check:		0.00 @ 15" Hg		Post-Test Pump Leak Check:		0.00 @ 10"		Stop Time:																									
Method:		4		Notes:		Schematic of Stack:																											
Sampling Time (minutes)	Vacuum (Hq)	Orifice Setting (H2O)	Meter Temp. Inlet (oF)	Meter Temp. Outlet (oF)	Condenser Temp. (oF)	Meter Volume Initial	Meter Volume Final	Notes																									
5	1	1.0	75	70	38	748.155	751.5	2" port																									
10	1	1.0	76	73	38	754.9	758.2	2.8																									
15	1	1.0	78	74	39	758.2	761.6	4.5																									
20	1	1.0	80	76	39	761.6	765.0	6.7																									
25	1	1.0	82	78	39	765.0	768.3	4.8																									
30	1	1.0	84	79	40	768.3	771.8	18.2																									
35	1	1.0	86	80	40	771.8	775.1	21.3																									
40	1	1.0	87	81	41	775.1	778.5	23.5																									
45	1	1.0	88	82	41	778.5	781.8	25.2																									
50	1	1.0	90	84	41	781.8	785.2																										
55	1	1.0	91	86	42	785.2	788.631																										
60	1	1.0	91	86	42	788.631																											
Stack ID (Inches): 24 Upstream Disturbance (Inches): 6.5 Downstream Disturbance (Inches): 49.5																																	
Moisture Determination <table border="1"> <thead> <tr> <th>Imp. #</th> <th>Tare</th> <th>Final</th> <th>Gain</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>478.8</td> <td>468.5</td> <td>-10.3</td> </tr> <tr> <td>2</td> <td>485.0</td> <td>518.6</td> <td>33.6</td> </tr> <tr> <td>3</td> <td>304.9</td> <td>300.7</td> <td>10.8</td> </tr> <tr> <td>4</td> <td>507.2</td> <td>516.3</td> <td>4.1</td> </tr> <tr> <td colspan="2">Total</td> <td>1780.1</td> <td>1824.1</td> </tr> </tbody> </table> Reviewers Signature:										Imp. #	Tare	Final	Gain	1	478.8	468.5	-10.3	2	485.0	518.6	33.6	3	304.9	300.7	10.8	4	507.2	516.3	4.1	Total		1780.1	1824.1
Imp. #	Tare	Final	Gain																														
1	478.8	468.5	-10.3																														
2	485.0	518.6	33.6																														
3	304.9	300.7	10.8																														
4	507.2	516.3	4.1																														
Total		1780.1	1824.1																														
Total		60		Average		81.54		Difference																									
Maximum		1.0		Maximum		42		Difference																									
Minimum		1.0		Minimum		42		Difference																									

[illegible]

Imp. #	Tare	Final	Gain
1	468.5	480.7	12.2
2	518.6	534.8	16.2
3	320.7	328.0	7.3
4	516.3	519.2	2.9
324.1	1862.7	Total	38.6

Air Pollution Testing Inc. : EPA Method 2 - Pilot Traverse Datasheet											
Job # : <u>CIM</u>		Operator : <u>J, HD</u>		Stack Diameter (inches) : <u>24"</u>							
Facility : <u>24" flare</u>		Site : <u>8/29/06</u>		Upstream Disturbance (inches) : _____							
Date : <u>8/29/06</u>		Points : 1 5 9		Downstream Disturbance (inches) : _____							
Probe ID : <u>211</u>		2 6 10		Schematic of Sampling Location : _____							
Pilot Constant : _____		3 7 11									
		4 8 12									
Run # : <u>1</u>	CO2% : _____	Run # : <u>2</u>	CO2% : _____								
H2O% : _____	measured / estimate	H2O% : _____	measured / estimate								
Ps ("H2O) : <u>0.000</u>	Pb ("Hg) : _____	Ps ("H2O) : <u>0.000</u>	Pb ("Hg) : _____								
Start Time : <u>1000</u>	Stop Time : _____	Start Time : <u>1155</u>	Stop Time : _____								
Post Test Pilot Leak Check Good? : ☒				Post Test Pilot Leak Check Good? : ☒							
Point #	Delta P	Ts	Notes	Point #	Delta P	Ts	Notes	Point #	Delta P	Ts	Notes
1-1	5.005	653		1-1	5.005	583		1-1	5.005	624	
2		653		2		583		2		624	
3		653		3		589		3		628	
4		654		4		590		4		628	
5		654		5		592		5		627	
6		654		6		592		6		627	
7		652		7		592		7		626	
8		652		8		592		8		626	
2-1		652		2-1		589		2-1		626	
2		653		2		591		2		626	
3		653		3		591		3		627	
4		654		4		591		4		627	
5		654		5		590		5		627	
6		654		6		590		6		626	
7		654		7		590		7		626	
8		654		8		590		8		626	
Averages : <u>0.71</u> <u>653</u>				Averages : <u>0.71</u> <u>590</u>				Averages : <u>0.71</u> <u>626</u>			
Reviewer Signature : _____											



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	04
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" FLASH R1 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

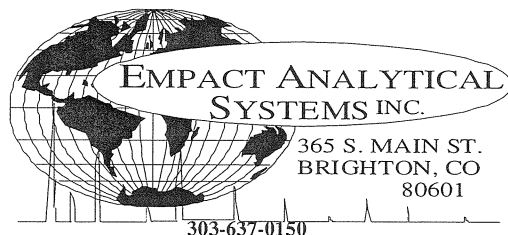
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	1.45	-	-
NITROGEN	5.12	-	-
CO2	0.94	-	-
METHANE	18.64	-	-
ETHANE	19.39	5.158	5.186
PROPANE	24.72	6.775	6.812
ISOBUTANE	4.67	1.519	1.528
N-BUTANE	13.89	4.356	4.379
ISOPENTANE	3.69	1.344	1.351
N-PENTANE	4.04	1.455	1.463
HEXANES+	3.45	1.497	1.505
TOTAL	100.00	22.103	22.224

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	2271.6	2284.0
GROSS WET REAL =	2231.9	2244.3

RELATIVE DENSITY (AIR=1 @ 14.696 PSIA 60F) : 1.4584

COMPRESSIBILITY FACTOR : 0.98485

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	05
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" FLASH R2		
	FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

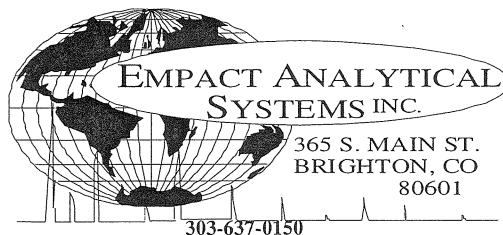
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	1.23	-	-
NITROGEN	4.31	-	-
CO2	0.94	-	-
METHANE	18.69	-	-
ETHANE	19.31	5.137	5.165
PROPANE	24.84	6.808	6.845
ISOBUTANE	4.75	1.546	1.554
N-BUTANE	14.21	4.456	4.480
ISOPENTANE	3.81	1.387	1.395
N-PENTANE	4.19	1.509	1.518
HEXANES+	3.72	1.614	1.623
TOTAL	100.00	22.456	22.579

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	2313.1	2325.7
GROSS WET REAL =	2272.7	2285.3

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.4738

COMPRESSIBILITY FACTOR : 0.98432

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	06
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" FLASH R3 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

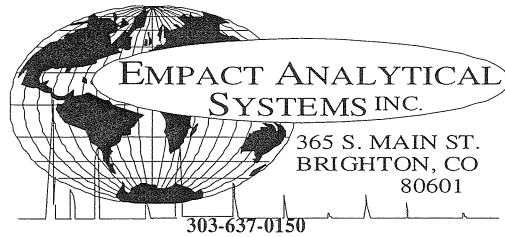
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	1.27	-	-
NITROGEN	4.18	-	-
CO2	0.94	-	-
METHANE	18.42	-	-
ETHANE	19.49	5.184	5.213
PROPANE	25.20	6.906	6.944
ISOBUTANE	4.80	1.562	1.570
N-BUTANE	14.26	4.472	4.496
ISOPENTANE	3.79	1.380	1.387
N-PENTANE	4.16	1.499	1.507
HEXANES+	3.49	1.514	1.523
TOTAL	100.00	22.517	22.640

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	2311.9	2324.6
GROSS WET REAL =	2271.5	2284.2

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.4720

COMPRESSIBILITY FACTOR : 0.98437

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	01
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" PURCHASE R1 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

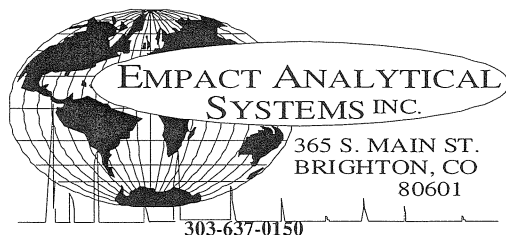
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.01	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.24	-	-
NITROGEN	0.76	-	-
CO2	1.63	-	-
METHANE	70.06	-	-
ETHANE	14.64	3.894	3.916
PROPANE	7.97	2.184	2.196
ISOBUTANE	0.99	0.322	0.324
N-BUTANE	2.52	0.790	0.795
ISOPENTANE	0.45	0.164	0.165
N-PENTANE	0.40	0.144	0.145
HEXANES+	0.33	0.143	0.144
TOTAL	100.00	7.642	7.684

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1334.0	1341.3
GROSS WET REAL =	1310.7	1318.0

RELATIVE DENSITY (AIR=1 @ 14.696 PSIA 60F) : 0.8017

COMPRESSIBILITY FACTOR : 0.99566

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	02
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" PURCHASE R2 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

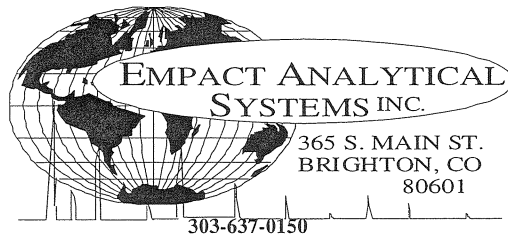
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.26	-	-
NITROGEN	0.89	-	-
CO2	1.58	-	-
METHANE	68.96	-	-
ETHANE	14.53	3.865	3.886
PROPANE	8.69	2.382	2.395
ISOBUTANE	1.12	0.364	0.366
N-BUTANE	2.69	0.844	0.848
ISOPENTANE	0.48	0.175	0.176
N-PENTANE	0.45	0.162	0.163
HEXANES+	0.35	0.152	0.153
TOTAL	100.00	7.943	7.987

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1353.3	1360.7
GROSS WET REAL =	1329.7	1337.1

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 0.8150

COMPRESSIBILITY FACTOR : 0.99551

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	03
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 29, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	24" PURCHASE R3 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	0.28	-	-
NITROGEN	0.91	-	-
CO2	1.67	-	-
METHANE	69.88	-	-
ETHANE	14.58	3.878	3.900
PROPANE	8.04	2.203	2.215
ISOBUTANE	1.01	0.329	0.330
N-BUTANE	2.52	0.790	0.795
ISOPENTANE	0.42	0.153	0.154
N-PENTANE	0.36	0.130	0.130
HEXANES+	0.33	0.143	0.144
TOTAL	100.00	7.626	7.668

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1330.8	1338.0
GROSS WET REAL =	1307.5	1314.8

RELATIVE DENSITY (AIR=1 @ 14.696 PSIA 60F) : 0.8022

COMPRESSIBILITY FACTOR : 0.99568

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS

24" flare

CIM 6132

Purchase gas (pilot)

15 scf/hr @ 1347 btu/scf

flash gas

$$(1133.7)(\sqrt{\text{flow} \frac{\text{oz}}{\text{in}^2}}) = \text{fuel flow (scf/hr)}$$

$$R1 = (1133.7)(\sqrt{3}) = 2316 \text{ scf/hr} @ 2284 \frac{\text{btu}}{\text{scf}}$$

$$R2 = (1133.7)(2.41) = 3222 \text{ scf/hr} @ 2326 \frac{\text{btu}}{\text{scf}}$$

$$R3 = (1133.7)(\sqrt{3}) = 2316 \text{ scf/hr} @ 2325 \frac{\text{btu}}{\text{scf}}$$

Calibration Log

Cimarron
24 Inch Flare
Greely, CO
24" Flare
August 29, 2006

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 9:24	-4.1
8/29/2006 9:24	-0.9
8/29/2006 9:24	3.9
8/29/2006 9:24	3.7
8/29/2006 9:24	4.2
8/29/2006 9:25	4.3
8/29/2006 9:25	5.1
8/29/2006 9:25	4.0
8/29/2006 9:25	4.0
8/29/2006 9:25	4.0
8/29/2006 9:25	4.2
8/29/2006 9:26	5.0
8/29/2006 9:26	4.5
8/29/2006 9:26	4.2
8/29/2006 9:26	4.2
8/29/2006 9:26	4.1
8/29/2006 9:26	3.2
8/29/2006 9:27	98.1
8/29/2006 9:27	20.3
8/29/2006 9:27	6.6
8/29/2006 9:27	3.7
8/29/2006 9:27	2.3
8/29/2006 9:27	1.3
8/29/2006 9:28	0.5
8/29/2006 9:28	0.1
8/29/2006 9:28	0.0
8/29/2006 9:28	-0.3
8/29/2006 9:28	-0.4
8/29/2006 9:28	-0.5
8/29/2006 9:29	-0.7
8/29/2006 9:29	-0.3
8/29/2006 9:29	-0.3
8/29/2006 9:29	-0.2
8/29/2006 9:29	-0.3
8/29/2006 9:29	-0.4
8/29/2006 9:30	-0.2
8/29/2006 9:30	-0.2
8/29/2006 9:30	-0.1
8/29/2006 9:30	-0.2
8/29/2006 9:30	-0.1
8/29/2006 9:30	-0.3
8/29/2006 9:31	0.1
8/29/2006 9:31	13.1
8/29/2006 9:31	24.2
8/29/2006 9:31	24.7
8/29/2006 9:31	24.7
8/29/2006 9:31	24.7
8/29/2006 9:32	25.0
8/29/2006 9:32	25.6
8/29/2006 9:32	26.1
8/29/2006 9:32	26.0
8/29/2006 9:32	26.0
8/29/2006 9:32	26.0
8/29/2006 9:33	25.9
8/29/2006 9:33	26.0
8/29/2006 9:33	26.1
8/29/2006 9:33	26.3
8/29/2006 9:33	18.4
8/29/2006 9:33	26.1
8/29/2006 9:34	16.3
8/29/2006 9:34	17.7
8/29/2006 9:34	17.7
8/29/2006 9:34	17.9
8/29/2006 9:34	18.0
8/29/2006 9:34	18.0
8/29/2006 9:35	17.8

Linear

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/29/2006 9:35	17.8
8/29/2006 9:35	17.8
8/29/2006 9:35	17.8
8/29/2006 9:35	17.8
8/29/2006 9:35	17.8
8/29/2006 9:36	17.8
8/29/2006 9:36	17.8
8/29/2006 9:36	17.7
8/29/2006 9:36	17.8
8/29/2006 9:36	10.7
8/29/2006 9:37	19.3
8/29/2006 9:37	27.0
8/29/2006 9:37	26.1
8/29/2006 9:37	25.9
8/29/2006 9:37	25.8
8/29/2006 9:37	25.7
8/29/2006 9:38	25.6
8/29/2006 9:38	25.7
8/29/2006 9:38	25.7
8/29/2006 9:38	25.7
8/29/2006 9:38	25.7
8/29/2006 9:38	24.5
8/29/2006 9:39	20.0
8/29/2006 9:39	21.9
8/29/2006 9:39	17.2
8/29/2006 9:39	17.2
8/29/2006 9:39	17.3
8/29/2006 9:39	17.4
8/29/2006 9:40	17.3
8/29/2006 9:40	17.3
8/29/2006 9:40	10.2
8/29/2006 9:40	16.7
8/29/2006 9:40	9.7
8/29/2006 9:40	8.8
8/29/2006 9:41	8.7
8/29/2006 9:41	8.6
8/29/2006 9:41	8.6
8/29/2006 9:41	8.6
8/29/2006 9:41	8.6
8/29/2006 9:42	8.6
8/29/2006 9:42	8.7
8/29/2006 9:42	6.0
8/29/2006 9:42	2.5
8/29/2006 9:42	1.6
8/29/2006 9:42	1.1
8/29/2006 9:43	0.9
8/29/2006 9:43	0.8
8/29/2006 9:43	0.7
8/29/2006 9:43	0.7
8/29/2006 9:43	0.2
8/29/2006 9:43	1.2
8/29/2006 9:44	0.9
8/29/2006 9:44	2.2
8/29/2006 9:44	2.2
8/29/2006 9:44	0.9
8/29/2006 9:44	0.5
8/29/2006 9:44	0.8
8/29/2006 9:45	0.8
8/29/2006 9:45	1.0
8/29/2006 9:45	1.4
8/29/2006 9:45	1.5
8/29/2006 9:45	1.6
8/29/2006 9:45	1.3
8/29/2006 9:46	1.0
8/29/2006 9:46	1.3
8/29/2006 9:46	1.0
8/29/2006 9:46	0.9
8/29/2006 9:46	0.5
8/29/2006 9:46	0.1
8/29/2006 9:47	-0.2

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
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8/29/2006 9:47	-0.2
8/29/2006 9:47	-0.3
8/29/2006 9:47	-0.2
8/29/2006 9:47	-0.4
8/29/2006 9:47	-0.3
8/29/2006 9:48	-0.3
8/29/2006 9:48	-0.4
8/29/2006 9:48	-0.2
8/29/2006 9:48	4.8
8/29/2006 9:48	24.0
8/29/2006 9:48	10.4
8/29/2006 9:49	9.0
8/29/2006 9:49	8.6
8/29/2006 9:49	8.6
8/29/2006 9:49	8.6
8/29/2006 9:49	8.8
8/29/2006 9:50	8.9
8/29/2006 9:50	9.1
8/29/2006 9:50	8.6
8/29/2006 9:50	8.0
8/29/2006 9:50	1.7
8/29/2006 9:50	0.4
8/29/2006 9:51	0.2
8/29/2006 9:51	0.4
8/29/2006 9:51	0.2
8/29/2006 9:51	0.3
8/29/2006 9:51	0.2
8/29/2006 9:51	0.2
8/29/2006 9:52	0.2
8/29/2006 9:52	0.2
8/29/2006 9:52	0.3
8/29/2006 9:52	0.3
8/29/2006 9:52	0.1
8/29/2006 9:52	0.3
8/29/2006 9:53	2.3
8/29/2006 9:53	0.9
8/29/2006 9:53	0.7
8/29/2006 9:53	0.3
8/29/2006 9:53	0.5
8/29/2006 9:53	0.3
8/29/2006 9:54	0.4
8/29/2006 9:54	0.4
8/29/2006 9:54	0.2
8/29/2006 9:54	0.3
8/29/2006 9:54	0.5
8/29/2006 9:54	0.5
8/29/2006 9:55	0.7
8/29/2006 9:55	1.3
8/29/2006 9:55	1.0
8/29/2006 9:55	0.9
8/29/2006 9:55	1.4
8/29/2006 9:55	1.2
8/29/2006 9:56	1.7
8/29/2006 9:56	0.9
8/29/2006 9:56	0.6
8/29/2006 9:56	1.3
8/29/2006 9:56	2.0
8/29/2006 9:56	0.9
8/29/2006 9:57	1.9
8/29/2006 9:57	0.9
8/29/2006 9:57	2.7
8/29/2006 9:57	1.0
8/29/2006 9:57	0.8
8/29/2006 9:57	1.0
8/29/2006 9:58	1.8
8/29/2006 9:58	1.4
8/29/2006 9:58	2.6
8/29/2006 9:58	2.3
8/29/2006 9:58	2.6
8/29/2006 9:58	1.1
8/29/2006 9:59	1.6

B.A.s check

0.2

R.H.I

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 9:59	2.7
8/29/2006 9:59	2.6
8/29/2006 9:59	2.4
8/29/2006 9:59	2.0
8/29/2006 9:59	2.4
8/29/2006 10:00	2.7
8/29/2006 10:00	2.7
8/29/2006 10:00	4.3
8/29/2006 10:00	4.4
8/29/2006 10:00	4.6
8/29/2006 10:00	4.6
8/29/2006 10:01	3.1
8/29/2006 10:01	2.3
8/29/2006 10:01	1.9
8/29/2006 10:01	2.9
8/29/2006 10:01	3.2
8/29/2006 10:01	2.9
8/29/2006 10:02	5.2
8/29/2006 10:02	2.8
8/29/2006 10:02	2.9
8/29/2006 10:02	2.8
8/29/2006 10:02	1.9
8/29/2006 10:02	2.1
8/29/2006 10:03	2.1
8/29/2006 10:03	3.0
8/29/2006 10:03	3.2
8/29/2006 10:03	2.9
8/29/2006 10:03	4.1
8/29/2006 10:03	3.0
8/29/2006 10:04	2.8
8/29/2006 10:04	2.1
8/29/2006 10:04	2.4
8/29/2006 10:04	2.8
8/29/2006 10:04	3.3
8/29/2006 10:04	3.6
8/29/2006 10:05	4.1
8/29/2006 10:05	3.6
8/29/2006 10:05	4.8
8/29/2006 10:05	5.1
8/29/2006 10:05	5.6
8/29/2006 10:05	19.8
8/29/2006 10:06	57.9
8/29/2006 10:06	6.1
8/29/2006 10:06	1.8
8/29/2006 10:06	1.0
8/29/2006 10:06	1.8
8/29/2006 10:06	0.9
8/29/2006 10:07	1.2
8/29/2006 10:07	1.3
8/29/2006 10:07	1.7
8/29/2006 10:07	2.2
8/29/2006 10:07	2.7
8/29/2006 10:07	2.5
8/29/2006 10:08	2.2
8/29/2006 10:08	2.1
8/29/2006 10:08	2.1
8/29/2006 10:08	2.1
8/29/2006 10:08	2.3
8/29/2006 10:08	2.0
8/29/2006 10:09	2.6
8/29/2006 10:09	1.6
8/29/2006 10:09	1.8
8/29/2006 10:09	1.7
8/29/2006 10:09	1.2
8/29/2006 10:09	1.9
8/29/2006 10:10	1.8
8/29/2006 10:10	2.1
8/29/2006 10:10	1.8
8/29/2006 10:10	3.1
8/29/2006 10:10	3.5
8/29/2006 10:10	2.6
8/29/2006 10:11	2.4

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 10:11	2.2
8/29/2006 10:11	3.4
8/29/2006 10:11	5.7
8/29/2006 10:11	3.5
8/29/2006 10:11	3.3
8/29/2006 10:12	2.9
8/29/2006 10:12	2.7
8/29/2006 10:12	3.0
8/29/2006 10:12	2.4
8/29/2006 10:12	3.2
8/29/2006 10:12	1.7
8/29/2006 10:13	1.8
8/29/2006 10:13	2.3
8/29/2006 10:13	1.5
8/29/2006 10:13	1.9
8/29/2006 10:13	2.8
8/29/2006 10:13	1.8
8/29/2006 10:14	1.7
8/29/2006 10:14	1.7
8/29/2006 10:14	2.1
8/29/2006 10:14	2.2
8/29/2006 10:14	2.1
8/29/2006 10:14	2.3
8/29/2006 10:15	2.0
8/29/2006 10:15	4.1
8/29/2006 10:15	3.2
8/29/2006 10:15	4.5
8/29/2006 10:15	4.5
8/29/2006 10:15	2.5
8/29/2006 10:16	2.6
8/29/2006 10:16	4.5
8/29/2006 10:16	5.1
8/29/2006 10:16	6.3
8/29/2006 10:16	6.2
8/29/2006 10:16	12.8
8/29/2006 10:17	7.1
8/29/2006 10:17	3.5
8/29/2006 10:17	2.1
8/29/2006 10:17	0.9
8/29/2006 10:17	0.5
8/29/2006 10:17	0.2
8/29/2006 10:18	0.4
8/29/2006 10:18	0.3
8/29/2006 10:18	0.3
8/29/2006 10:18	0.4
8/29/2006 10:18	0.1
8/29/2006 10:18	0.0
8/29/2006 10:19	0.2
8/29/2006 10:19	0.4
8/29/2006 10:19	0.5
8/29/2006 10:19	0.2
8/29/2006 10:19	0.0
8/29/2006 10:19	0.1
8/29/2006 10:20	0.1
8/29/2006 10:20	0.0
8/29/2006 10:20	0.1
8/29/2006 10:20	0.1
8/29/2006 10:20	0.6
8/29/2006 10:20	0.1
8/29/2006 10:21	1.2
8/29/2006 10:21	0.5
8/29/2006 10:21	0.2
8/29/2006 10:21	0.4
8/29/2006 10:21	0.6
8/29/2006 10:21	0.6
8/29/2006 10:22	0.5
8/29/2006 10:22	0.5
8/29/2006 10:22	0.2
8/29/2006 10:22	0.3
8/29/2006 10:22	0.4
8/29/2006 10:22	0.8
8/29/2006 10:23	2.0

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 10:23	1.9
8/29/2006 10:23	1.7
8/29/2006 10:23	2.1
8/29/2006 10:23	2.3
8/29/2006 10:23	3.0
8/29/2006 10:24	2.2
8/29/2006 10:24	1.7
8/29/2006 10:24	1.1
8/29/2006 10:24	1.8
8/29/2006 10:24	2.3
8/29/2006 10:24	2.2
8/29/2006 10:25	2.6
8/29/2006 10:25	2.0
8/29/2006 10:25	2.0
8/29/2006 10:25	1.3
8/29/2006 10:25	1.6
8/29/2006 10:25	1.6
8/29/2006 10:26	2.4
8/29/2006 10:26	2.2
8/29/2006 10:26	2.2
8/29/2006 10:26	2.1
8/29/2006 10:26	0.5
8/29/2006 10:26	0.2
8/29/2006 10:27	0.0
8/29/2006 10:27	0.1
8/29/2006 10:27	0.6
8/29/2006 10:27	0.7
8/29/2006 10:27	0.4
8/29/2006 10:27	1.4
8/29/2006 10:28	0.5
8/29/2006 10:28	0.8
8/29/2006 10:28	1.2
8/29/2006 10:28	0.7
8/29/2006 10:28	0.8
8/29/2006 10:28	5.9
8/29/2006 10:29	2.6
8/29/2006 10:29	1.4
8/29/2006 10:29	1.9
8/29/2006 10:29	2.6
8/29/2006 10:29	3.2
8/29/2006 10:29	2.5
8/29/2006 10:30	3.0
8/29/2006 10:30	1.4
8/29/2006 10:30	1.2
8/29/2006 10:30	0.7
8/29/2006 10:30	0.6
8/29/2006 10:30	1.5
8/29/2006 10:31	0.5
8/29/2006 10:31	0.6
8/29/2006 10:31	0.9
8/29/2006 10:31	1.3
8/29/2006 10:31	1.1
8/29/2006 10:31	0.9
8/29/2006 10:32	1.4
8/29/2006 10:32	1.2
8/29/2006 10:32	1.3
8/29/2006 10:32	1.2
8/29/2006 10:32	1.1
8/29/2006 10:32	1.6
8/29/2006 10:33	2.1
8/29/2006 10:33	2.3
8/29/2006 10:33	2.0
8/29/2006 10:33	2.1
8/29/2006 10:33	1.9
8/29/2006 10:33	2.0
8/29/2006 10:34	1.6
8/29/2006 10:34	1.5
8/29/2006 10:34	2.5
8/29/2006 10:34	3.6
8/29/2006 10:34	6.7
8/29/2006 10:34	4.4
8/29/2006 10:35	4.9

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 10:35	4.2
8/29/2006 10:35	4.9
8/29/2006 10:35	3.5
8/29/2006 10:35	3.9
8/29/2006 10:35	3.3
8/29/2006 10:36	4.5
8/29/2006 10:36	3.9
8/29/2006 10:36	3.7
8/29/2006 10:36	4.1
8/29/2006 10:36	5.1
8/29/2006 10:36	5.0
8/29/2006 10:37	5.5
8/29/2006 10:37	4.1
8/29/2006 10:37	4.0
8/29/2006 10:37	5.5
8/29/2006 10:37	5.7
8/29/2006 10:37	6.3
8/29/2006 10:38	6.0
8/29/2006 10:38	6.3
8/29/2006 10:38	6.0
8/29/2006 10:38	6.7
8/29/2006 10:38	6.8
8/29/2006 10:38	7.3
8/29/2006 10:39	8.3
8/29/2006 10:39	7.8
8/29/2006 10:39	7.5
8/29/2006 10:39	8.9
8/29/2006 10:39	7.3
8/29/2006 10:39	7.4
8/29/2006 10:40	8.0
8/29/2006 10:40	10.8
8/29/2006 10:40	9.0
8/29/2006 10:40	10.0
8/29/2006 10:40	9.0
8/29/2006 10:40	8.7
8/29/2006 10:41	10.9
8/29/2006 10:41	10.5
8/29/2006 10:41	11.7
8/29/2006 10:41	13.9
8/29/2006 10:41	13.7
8/29/2006 10:41	12.7
8/29/2006 10:42	11.3
8/29/2006 10:42	11.9
8/29/2006 10:42	13.7
8/29/2006 10:42	13.2
8/29/2006 10:42	10.4
8/29/2006 10:42	9.9
8/29/2006 10:43	12.7
8/29/2006 10:43	9.8
8/29/2006 10:43	8.6
8/29/2006 10:43	9.0
8/29/2006 10:43	9.5
8/29/2006 10:43	8.5
8/29/2006 10:44	7.7
8/29/2006 10:44	7.0
8/29/2006 10:44	8.1
8/29/2006 10:44	11.5
8/29/2006 10:44	8.0
8/29/2006 10:44	10.4
8/29/2006 10:45	9.7
8/29/2006 10:45	13.0
8/29/2006 10:45	12.2
8/29/2006 10:45	10.2
8/29/2006 10:45	12.6
8/29/2006 10:45	12.9
8/29/2006 10:46	11.6
8/29/2006 10:46	10.6
8/29/2006 10:46	10.3
8/29/2006 10:46	10.6
8/29/2006 10:46	11.5
8/29/2006 10:46	12.3
8/29/2006 10:47	9.2

Calibration Log

Time	TVOC (ppmww as C ₃ H ₆)
8/29/2006 10:47	9.7
8/29/2006 10:47	9.2
8/29/2006 10:47	8.2
8/29/2006 10:47	8.3
8/29/2006 10:47	6.5
8/29/2006 10:48	6.1
8/29/2006 10:48	6.0
8/29/2006 10:48	5.9
8/29/2006 10:48	5.8
8/29/2006 10:48	5.6
8/29/2006 10:48	5.6
8/29/2006 10:49	6.5
8/29/2006 10:49	8.2
8/29/2006 10:49	8.4
8/29/2006 10:49	9.1
8/29/2006 10:49	8.8
8/29/2006 10:49	9.4
8/29/2006 10:50	8.1
8/29/2006 10:50	9.0
8/29/2006 10:50	8.5
8/29/2006 10:50	9.2
8/29/2006 10:50	10.5
8/29/2006 10:50	11.2
8/29/2006 10:51	10.6
8/29/2006 10:51	11.2
8/29/2006 10:51	9.6
8/29/2006 10:51	7.3
8/29/2006 10:51	6.4
8/29/2006 10:51	6.2
8/29/2006 10:52	5.4
8/29/2006 10:52	5.5
8/29/2006 10:52	5.7
8/29/2006 10:52	5.9
8/29/2006 10:52	5.3
8/29/2006 10:52	5.7
8/29/2006 10:53	6.0
8/29/2006 10:53	6.6
8/29/2006 10:53	5.7
8/29/2006 10:53	6.0
8/29/2006 10:53	10.2
8/29/2006 10:53	98.6
8/29/2006 10:54	13.1
8/29/2006 10:54	5.9
8/29/2006 10:54	4.5
8/29/2006 10:54	4.2
8/29/2006 10:54	3.8
8/29/2006 10:54	3.4
8/29/2006 10:55	3.1
8/29/2006 10:55	3.1
8/29/2006 10:55	2.9
8/29/2006 10:55	2.9
8/29/2006 10:55	2.8
8/29/2006 10:55	2.6
8/29/2006 10:56	2.6
8/29/2006 10:56	2.6
8/29/2006 10:56	2.5
8/29/2006 10:56	1.1
8/29/2006 10:56	0.6
8/29/2006 10:56	0.7
8/29/2006 10:57	0.6
8/29/2006 10:57	0.5
8/29/2006 10:57	0.5
8/29/2006 10:57	0.4
8/29/2006 10:57	1.4
8/29/2006 10:57	1.7
8/29/2006 10:58	1.7
8/29/2006 10:58	1.7
8/29/2006 10:58	1.6
8/29/2006 10:58	1.6
8/29/2006 10:58	1.5
8/29/2006 10:58	1.5
8/29/2006 10:59	1.6

A

R#1

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 10:59	1.5
8/29/2006 10:59	1.5
8/29/2006 10:59	1.5
8/29/2006 10:59	1.5
8/29/2006 10:59	1.5
8/29/2006 11:00	6.3
8/29/2006 11:00	6.4
8/29/2006 11:00	9.1
8/29/2006 11:00	11.2
8/29/2006 11:00	11.0
8/29/2006 11:00	10.9
8/29/2006 11:01	9.7
8/29/2006 11:01	8.9
8/29/2006 11:01	8.8
8/29/2006 11:01	8.8
8/29/2006 11:01	8.8
8/29/2006 11:02	8.8
8/29/2006 11:02	8.8
8/29/2006 11:02	8.8
8/29/2006 11:02	8.8
8/29/2006 11:02	8.8
8/29/2006 11:02	7.7
8/29/2006 11:03	10.1
8/29/2006 11:03	2.1
8/29/2006 11:03	0.9
8/29/2006 11:03	0.8
8/29/2006 11:03	0.7
8/29/2006 11:03	0.7
8/29/2006 11:04	-0.2
8/29/2006 11:04	-0.6
8/29/2006 11:04	-0.6
8/29/2006 11:04	-0.3
8/29/2006 11:04	-0.2
8/29/2006 11:04	-0.2
8/29/2006 11:05	-0.1
8/29/2006 11:05	-0.2
8/29/2006 11:05	-0.2
8/29/2006 11:05	-0.2
8/29/2006 11:05	-0.3
8/29/2006 11:05	-0.2
8/29/2006 11:06	-0.3
8/29/2006 11:06	-0.2
8/29/2006 11:06	0.5
8/29/2006 11:06	3.1
8/29/2006 11:06	15.4
8/29/2006 11:06	23.7
8/29/2006 11:07	23.8
8/29/2006 11:07	23.8
8/29/2006 11:07	23.9
8/29/2006 11:07	26.3
8/29/2006 11:07	26.2
8/29/2006 11:07	25.8
8/29/2006 11:08	25.7
8/29/2006 11:08	25.8
8/29/2006 11:08	25.8
8/29/2006 11:08	25.7
8/29/2006 11:08	25.7
8/29/2006 11:08	25.7
8/29/2006 11:09	25.6
8/29/2006 11:09	13.0
8/29/2006 11:09	19.5
8/29/2006 11:09	22.1
8/29/2006 11:09	16.9
8/29/2006 11:09	17.0
8/29/2006 11:10	16.9
8/29/2006 11:10	16.7
8/29/2006 11:10	16.3
8/29/2006 11:10	16.4
8/29/2006 11:10	16.4
8/29/2006 11:10	16.3
8/29/2006 11:11	16.4

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
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8/29/2006 11:11	16.4
8/29/2006 11:11	16.4
8/29/2006 11:11	16.3
8/29/2006 11:11	16.3
8/29/2006 11:11	11.2
8/29/2006 11:12	6.8
8/29/2006 11:12	3.7
8/29/2006 11:12	12.1
8/29/2006 11:12	13.4
8/29/2006 11:12	8.0
8/29/2006 11:12	7.7
8/29/2006 11:13	7.5
8/29/2006 11:13	7.5
8/29/2006 11:13	7.6
8/29/2006 11:13	7.6
8/29/2006 11:13	7.6
8/29/2006 11:13	7.6
8/29/2006 11:14	7.6
8/29/2006 11:14	7.6
8/29/2006 11:14	7.6
8/29/2006 11:14	7.6
8/29/2006 11:14	7.5
8/29/2006 11:15	7.2
8/29/2006 11:15	7.5
8/29/2006 11:15	6.3
8/29/2006 11:15	15.2
8/29/2006 11:15	24.6
8/29/2006 11:15	24.7
8/29/2006 11:16	24.9
8/29/2006 11:16	25.2
8/29/2006 11:16	25.9
8/29/2006 11:16	25.9
8/29/2006 11:16	25.9
8/29/2006 11:16	25.9
8/29/2006 11:17	25.8
8/29/2006 11:17	25.7
8/29/2006 11:17	25.7
8/29/2006 11:17	25.7
8/29/2006 11:17	12.0
8/29/2006 11:17	23.2
8/29/2006 11:18	0.4
8/29/2006 11:18	-0.9
8/29/2006 11:18	-1.0
8/29/2006 11:18	-1.0
8/29/2006 11:18	-1.1
8/29/2006 11:18	-0.5
8/29/2006 11:19	-0.3
8/29/2006 11:19	-0.2
8/29/2006 11:19	-0.2
8/29/2006 11:19	-0.3
8/29/2006 11:19	-0.2
8/29/2006 11:19	-0.3
8/29/2006 11:20	-0.2
8/29/2006 11:20	-0.3
8/29/2006 11:20	-0.3
8/29/2006 11:20	-0.2
8/29/2006 11:20	-0.2
8/29/2006 11:20	-0.3
8/29/2006 11:21	-0.3
8/29/2006 11:21	-0.2
8/29/2006 11:21	-0.2
8/29/2006 11:21	-0.3
8/29/2006 11:21	3.8
8/29/2006 11:21	2.7
8/29/2006 11:22	16.2
8/29/2006 11:22	26.7
8/29/2006 11:22	26.7
8/29/2006 11:22	25.9
8/29/2006 11:22	25.9
8/29/2006 11:22	25.9
8/29/2006 11:23	25.9

Relin

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 11:23	26.0
8/29/2006 11:23	26.0
8/29/2006 11:23	21.9
8/29/2006 11:23	4.9
8/29/2006 11:23	3.5
8/29/2006 11:24	3.1
8/29/2006 11:24	2.6
8/29/2006 11:24	15.3
8/29/2006 11:24	22.5
8/29/2006 11:24	17.1
8/29/2006 11:24	16.8
8/29/2006 11:25	<u>16.8</u> M
8/29/2006 11:25	16.8
8/29/2006 11:25	16.8
8/29/2006 11:25	16.9
8/29/2006 11:25	16.9
8/29/2006 11:25	16.9
8/29/2006 11:26	12.4
8/29/2006 11:26	15.2
8/29/2006 11:26	8.4
8/29/2006 11:26	8.2
8/29/2006 11:26	<u>8.2</u> L
8/29/2006 11:26	8.2
8/29/2006 11:27	8.2
8/29/2006 11:27	8.2
8/29/2006 11:27	8.1
8/29/2006 11:27	8.2
8/29/2006 11:27	8.1
8/29/2006 11:27	6.7
8/29/2006 11:28	6.1
8/29/2006 11:28	4.6
8/29/2006 11:28	4.2
8/29/2006 11:28	4.2
8/29/2006 11:28	3.7
8/29/2006 11:28	3.5 R#2
8/29/2006 11:29	3.1
8/29/2006 11:29	3.0
8/29/2006 11:29	2.8
8/29/2006 11:29	1.3
8/29/2006 11:29	1.8
8/29/2006 11:29	1.2
8/29/2006 11:30	0.8
8/29/2006 11:30	0.4
8/29/2006 11:30	0.0
8/29/2006 11:30	-0.6
8/29/2006 11:30	-0.5
8/29/2006 11:30	-0.3
8/29/2006 11:31	-0.6
8/29/2006 11:31	-0.7
8/29/2006 11:31	-0.7
8/29/2006 11:31	-0.8
8/29/2006 11:31	-0.7
8/29/2006 11:31	-0.9
8/29/2006 11:32	-1.0
8/29/2006 11:32	-0.9
8/29/2006 11:32	-0.9
8/29/2006 11:32	-0.8
8/29/2006 11:32	-1.0
8/29/2006 11:32	-1.0
8/29/2006 11:32	-1.0
8/29/2006 11:33	-1.1
8/29/2006 11:33	-1.1
8/29/2006 11:33	-1.1
8/29/2006 11:33	-1.1
8/29/2006 11:33	-1.0
8/29/2006 11:33	-1.1
8/29/2006 11:34	-1.0
8/29/2006 11:34	-1.1
8/29/2006 11:34	-1.1
8/29/2006 11:34	-1.0
8/29/2006 11:34	-1.0
8/29/2006 11:34	-1.1
8/29/2006 11:35	-0.9

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/29/2006 11:35	-1.1
8/29/2006 11:35	-1.1
8/29/2006 11:35	-1.1
8/29/2006 11:35	-1.1
8/29/2006 11:35	-1.1
8/29/2006 11:36	-1.1
8/29/2006 11:36	-1.1
8/29/2006 11:36	-1.0
8/29/2006 11:36	-1.0
8/29/2006 11:36	-1.0
8/29/2006 11:36	-0.9
8/29/2006 11:37	-1.0
8/29/2006 11:37	-1.1
8/29/2006 11:37	-1.0
8/29/2006 11:37	-1.1
8/29/2006 11:37	-1.0
8/29/2006 11:37	-1.0
8/29/2006 11:38	-1.0
8/29/2006 11:38	-1.0
8/29/2006 11:38	-1.0
8/29/2006 11:38	-1.0
8/29/2006 11:38	-1.1
8/29/2006 11:39	-1.0
8/29/2006 11:39	-1.0
8/29/2006 11:39	-1.0
8/29/2006 11:39	-0.9
8/29/2006 11:39	-1.0
8/29/2006 11:39	-0.9
8/29/2006 11:39	-0.9
8/29/2006 11:40	-1.0
8/29/2006 11:40	-1.0
8/29/2006 11:40	-0.9
8/29/2006 11:40	-0.9
8/29/2006 11:40	-0.9
8/29/2006 11:40	-0.9
8/29/2006 11:41	-0.8
8/29/2006 11:41	-0.8
8/29/2006 11:41	-0.9
8/29/2006 11:41	-0.9
8/29/2006 11:41	-0.8
8/29/2006 11:41	-0.9
8/29/2006 11:42	-1.0
8/29/2006 11:42	-0.9
8/29/2006 11:42	-0.9
8/29/2006 11:42	-0.9
8/29/2006 11:42	-1.0
8/29/2006 11:42	-1.0
8/29/2006 11:43	-1.0
8/29/2006 11:43	-0.9
8/29/2006 11:43	-0.8
8/29/2006 11:43	-0.9
8/29/2006 11:43	-1.0
8/29/2006 11:43	-0.9
8/29/2006 11:44	-0.8
8/29/2006 11:44	-1.0
8/29/2006 11:44	-0.9
8/29/2006 11:44	-1.0
8/29/2006 11:44	-1.0
8/29/2006 11:44	-0.9
8/29/2006 11:45	-1.0
8/29/2006 11:45	-1.0
8/29/2006 11:45	-1.0
8/29/2006 11:45	-1.0
8/29/2006 11:45	-1.0
8/29/2006 11:46	-1.0
8/29/2006 11:46	-1.0
8/29/2006 11:46	-0.9
8/29/2006 11:46	-0.9
8/29/2006 11:46	-1.0
8/29/2006 11:46	-1.0
8/29/2006 11:47	-1.1

Calibration Log

Time	TVOC (ppmw as C ₃ H ₈)
8/29/2006 11:47	-1.1
8/29/2006 11:47	7.4
8/29/2006 11:47	38.8
8/29/2006 11:47	11.2
8/29/2006 11:47	8.4
8/29/2006 11:48	8.0
8/29/2006 11:48	7.4
8/29/2006 11:48	2.7
8/29/2006 11:48	-0.1
8/29/2006 11:48	-0.6
8/29/2006 11:48	-0.7
8/29/2006 11:49	-0.8
8/29/2006 11:49	-1.0
8/29/2006 11:49	-1.0
8/29/2006 11:49	-0.9
8/29/2006 11:49	-1.0
8/29/2006 11:49	-1.0
8/29/2006 11:50	-1.1
8/29/2006 11:50	-1.0
8/29/2006 11:50	-1.1
8/29/2006 11:50	-1.1
8/29/2006 11:50	-1.1
8/29/2006 11:50	-1.1
8/29/2006 11:51	-1.2
8/29/2006 11:51	-1.1
8/29/2006 11:51	-1.0
8/29/2006 11:51	-1.1
8/29/2006 11:51	-1.1
8/29/2006 11:51	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:52	-1.1
8/29/2006 11:53	-1.0
8/29/2006 11:53	-1.1
8/29/2006 11:53	-1.1
8/29/2006 11:53	-1.1
8/29/2006 11:53	-1.1
8/29/2006 11:53	-1.2
8/29/2006 11:54	-1.2
8/29/2006 11:54	-1.1
8/29/2006 11:54	-1.2
8/29/2006 11:54	-1.1
8/29/2006 11:54	-1.2
8/29/2006 11:54	-1.2
8/29/2006 11:55	-1.1
8/29/2006 11:55	-1.2
8/29/2006 11:55	-1.3
8/29/2006 11:55	-1.3
8/29/2006 11:55	-1.2
8/29/2006 11:55	-1.1
8/29/2006 11:56	-1.1
8/29/2006 11:56	-1.1
8/29/2006 11:56	-1.2
8/29/2006 11:56	-1.1
8/29/2006 11:56	-1.2
8/29/2006 11:56	-1.2
8/29/2006 11:57	-1.2
8/29/2006 11:57	-1.1
8/29/2006 11:57	-1.1
8/29/2006 11:57	-1.1
8/29/2006 11:57	-1.1
8/29/2006 11:57	-1.2
8/29/2006 11:58	-1.2
8/29/2006 11:58	-1.2
8/29/2006 11:58	-1.1
8/29/2006 11:58	-1.1
8/29/2006 11:58	-1.2
8/29/2006 11:58	-1.2
8/29/2006 11:59	-1.1

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 11:59	-1.2
8/29/2006 11:59	-1.1
8/29/2006 11:59	-1.2
8/29/2006 11:59	-1.2
8/29/2006 11:59	-1.2
8/29/2006 12:00	-1.1
8/29/2006 12:00	-1.1
8/29/2006 12:00	-1.0
8/29/2006 12:00	-1.1
8/29/2006 12:00	-1.2
8/29/2006 12:00	-1.0
8/29/2006 12:01	-1.1
8/29/2006 12:01	-1.1
8/29/2006 12:01	-1.2
8/29/2006 12:01	-1.1
8/29/2006 12:01	-1.1
8/29/2006 12:01	-1.1
8/29/2006 12:02	-1.2
8/29/2006 12:02	-1.2
8/29/2006 12:02	-1.2
8/29/2006 12:02	-1.1
8/29/2006 12:02	-1.1
8/29/2006 12:02	-1.1
8/29/2006 12:03	-1.0
8/29/2006 12:03	-1.1
8/29/2006 12:03	-1.0
8/29/2006 12:03	-0.4
8/29/2006 12:03	-0.2
8/29/2006 12:03	-0.9
8/29/2006 12:04	-0.2
8/29/2006 12:04	-0.8
8/29/2006 12:04	-1.0
8/29/2006 12:04	-1.0
8/29/2006 12:04	-1.3
8/29/2006 12:04	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:05	-1.3
8/29/2006 12:06	-1.3
8/29/2006 12:06	-1.3
8/29/2006 12:06	-1.4
8/29/2006 12:06	-1.4
8/29/2006 12:06	-1.4
8/29/2006 12:06	-1.4
8/29/2006 12:06	-1.4
8/29/2006 12:07	-1.4
8/29/2006 12:07	-1.4
8/29/2006 12:07	-1.4
8/29/2006 12:07	-1.4
8/29/2006 12:07	-1.4
8/29/2006 12:07	-1.3
8/29/2006 12:08	-1.4
8/29/2006 12:08	-1.4
8/29/2006 12:08	-1.4
8/29/2006 12:08	-1.4
8/29/2006 12:08	-1.4
8/29/2006 12:08	-1.4
8/29/2006 12:09	-1.4
8/29/2006 12:09	-1.4
8/29/2006 12:09	-1.3
8/29/2006 12:09	-1.4
8/29/2006 12:09	-1.4
8/29/2006 12:09	-1.4
8/29/2006 12:10	-1.4
8/29/2006 12:10	-1.3
8/29/2006 12:10	-1.4
8/29/2006 12:10	-1.3
8/29/2006 12:10	-1.3
8/29/2006 12:10	-0.8
8/29/2006 12:11	-0.8

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/29/2006 12:11	-0.6
8/29/2006 12:11	-0.8
8/29/2006 12:11	-0.8
8/29/2006 12:11	-0.7
8/29/2006 12:11	-0.8
8/29/2006 12:12	-0.7
8/29/2006 12:12	-0.8
8/29/2006 12:12	-0.8
8/29/2006 12:12	-0.7
8/29/2006 12:12	-0.8
8/29/2006 12:12	-0.8
8/29/2006 12:13	-0.8
8/29/2006 12:13	-0.9
8/29/2006 12:13	-0.8
8/29/2006 12:13	-0.9
8/29/2006 12:13	-0.8
8/29/2006 12:13	-0.7
8/29/2006 12:14	-0.7
8/29/2006 12:14	-0.7
8/29/2006 12:14	-0.7
8/29/2006 12:14	-0.8
8/29/2006 12:14	-0.7
8/29/2006 12:14	-0.6
8/29/2006 12:15	-0.7
8/29/2006 12:15	-0.8
8/29/2006 12:15	-0.8
8/29/2006 12:15	-0.7
8/29/2006 12:15	-0.8
8/29/2006 12:15	-0.7
8/29/2006 12:16	-0.6
8/29/2006 12:16	-0.6
8/29/2006 12:16	-0.7
8/29/2006 12:16	-0.6
8/29/2006 12:16	-0.2
8/29/2006 12:16	-0.6
8/29/2006 12:17	-0.6
8/29/2006 12:17	-0.6
8/29/2006 12:17	-0.6
8/29/2006 12:17	-0.6
8/29/2006 12:17	-0.6
8/29/2006 12:17	-0.3
8/29/2006 12:17	-0.4
8/29/2006 12:18	-0.1
8/29/2006 12:18	0.0
8/29/2006 12:18	-0.3
8/29/2006 12:18	-0.5
8/29/2006 12:18	-0.4
8/29/2006 12:18	-0.1
8/29/2006 12:19	-0.4
8/29/2006 12:19	-0.7
8/29/2006 12:19	-0.8
8/29/2006 12:19	-0.7
8/29/2006 12:19	-0.8
8/29/2006 12:19	-0.7
8/29/2006 12:20	-0.8
8/29/2006 12:20	-0.8
8/29/2006 12:20	-0.7
8/29/2006 12:20	-0.8
8/29/2006 12:20	-0.7
8/29/2006 12:20	-0.6
8/29/2006 12:21	-0.7
8/29/2006 12:21	-0.8
8/29/2006 12:21	-0.8
8/29/2006 12:21	-0.6
8/29/2006 12:21	-0.8
8/29/2006 12:21	-0.7
8/29/2006 12:22	-0.7
8/29/2006 12:22	-0.8
8/29/2006 12:22	-0.7
8/29/2006 12:22	-0.7
8/29/2006 12:22	-0.7
8/29/2006 12:22	-0.8
8/29/2006 12:23	-0.7

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₆)
8/29/2006 12:23	-0.8
8/29/2006 12:23	-0.8
8/29/2006 12:23	-0.8
8/29/2006 12:23	-0.7
8/29/2006 12:23	-0.8
8/29/2006 12:24	-0.8
8/29/2006 12:24	-0.7
8/29/2006 12:24	-0.8
8/29/2006 12:24	-0.8
8/29/2006 12:24	-0.8
8/29/2006 12:24	-0.9
8/29/2006 12:25	-0.8
8/29/2006 12:25	-0.8
8/29/2006 12:25	-0.9
8/29/2006 12:25	-0.8
8/29/2006 12:25	-0.8
8/29/2006 12:25	-0.8
8/29/2006 12:26	-0.8
8/29/2006 12:26	-0.7
8/29/2006 12:26	-0.7
8/29/2006 12:26	-0.7
8/29/2006 12:26	-0.8
8/29/2006 12:26	-0.7
8/29/2006 12:26	-0.7
8/29/2006 12:27	-0.9
8/29/2006 12:27	-0.7
8/29/2006 12:27	-0.7
8/29/2006 12:27	-0.7
8/29/2006 12:27	-0.7
8/29/2006 12:27	-0.6
8/29/2006 12:28	-0.5
8/29/2006 12:28	-0.5
8/29/2006 12:28	-0.5
8/29/2006 12:28	-0.6
8/29/2006 12:28	-0.5
8/29/2006 12:28	-0.6
8/29/2006 12:29	-0.3
8/29/2006 12:29	-0.6
8/29/2006 12:29	-0.5
8/29/2006 12:29	-0.5
8/29/2006 12:29	-0.4
8/29/2006 12:29	-0.6
8/29/2006 12:30	-0.6
8/29/2006 12:30	-0.6
8/29/2006 12:30	-0.5
8/29/2006 12:30	-0.2
8/29/2006 12:30	0.1
8/29/2006 12:30	-0.2
8/29/2006 12:31	-0.4
8/29/2006 12:31	26.5
8/29/2006 12:31	41.5
8/29/2006 12:31	3.6
8/29/2006 12:31	1.5
8/29/2006 12:31	0.8
8/29/2006 12:32	0.6
8/29/2006 12:32	0.4
8/29/2006 12:32	0.3
8/29/2006 12:32	0.3
8/29/2006 12:32	0.1
8/29/2006 12:32	0.0
8/29/2006 12:33	0.1
8/29/2006 12:33	0.0
8/29/2006 12:33	0.1
8/29/2006 12:33	-0.1
8/29/2006 12:33	0.1
8/29/2006 12:33	7.7
8/29/2006 12:34	1.0
8/29/2006 12:34	6.7
8/29/2006 12:34	8.5
8/29/2006 12:34	8.5
8/29/2006 12:34	8.4
8/29/2006 12:34	8.5
8/29/2006 12:35	8.5

R#2

cal r2

0.1

8.5

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
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8/29/2006 12:35	8.4
8/29/2006 12:35	8.5
8/29/2006 12:35	7.7
8/29/2006 12:35	6.0
8/29/2006 12:35	3.4
8/29/2006 12:36	3.4
8/29/2006 12:36	2.4
8/29/2006 12:36	2.8
8/29/2006 12:36	3.1
8/29/2006 12:36	3.0
8/29/2006 12:36	2.6
8/29/2006 12:37	3.5
8/29/2006 12:37	2.9
8/29/2006 12:37	3.3
8/29/2006 12:37	2.5
8/29/2006 12:37	2.3
8/29/2006 12:37	2.6
8/29/2006 12:38	2.2
8/29/2006 12:38	2.4
8/29/2006 12:38	2.7
8/29/2006 12:38	4.1
8/29/2006 12:38	3.6
8/29/2006 12:38	4.1
8/29/2006 12:39	4.2
8/29/2006 12:39	3.0
8/29/2006 12:39	3.3
8/29/2006 12:39	2.6
8/29/2006 12:39	2.8
8/29/2006 12:39	2.7
8/29/2006 12:40	2.7
8/29/2006 12:40	2.5
8/29/2006 12:40	2.4
8/29/2006 12:40	2.3
8/29/2006 12:40	2.1
8/29/2006 12:40	2.4
8/29/2006 12:41	2.6
8/29/2006 12:41	3.1
8/29/2006 12:41	2.4
8/29/2006 12:41	2.1
8/29/2006 12:41	2.4
8/29/2006 12:41	2.3
8/29/2006 12:42	3.5
8/29/2006 12:42	3.8
8/29/2006 12:42	5.5
8/29/2006 12:42	4.3
8/29/2006 12:42	3.1
8/29/2006 12:42	4.0
8/29/2006 12:43	5.1
8/29/2006 12:43	3.6
8/29/2006 12:43	3.7
8/29/2006 12:43	4.4
8/29/2006 12:43	5.0
8/29/2006 12:43	4.8
8/29/2006 12:44	4.6
8/29/2006 12:44	4.1
8/29/2006 12:44	3.6
8/29/2006 12:44	3.7
8/29/2006 12:44	1.9
8/29/2006 12:44	1.6
8/29/2006 12:45	1.8
8/29/2006 12:45	1.7
8/29/2006 12:45	1.7
8/29/2006 12:45	1.9
8/29/2006 12:45	2.6
8/29/2006 12:45	4.5
8/29/2006 12:46	5.2
8/29/2006 12:46	4.0
8/29/2006 12:46	3.1
8/29/2006 12:46	5.5
8/29/2006 12:46	4.8
8/29/2006 12:46	3.6
8/29/2006 12:47	3.2

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Calibration Log

Time	TVOC (ppmww as C ₃ H ₆)
8/29/2006 12:47	2.2
8/29/2006 12:47	2.5
8/29/2006 12:47	2.7
8/29/2006 12:47	3.4
8/29/2006 12:47	2.5
8/29/2006 12:48	2.7
8/29/2006 12:48	2.9
8/29/2006 12:48	1.7
8/29/2006 12:48	3.1
8/29/2006 12:48	5.9
8/29/2006 12:48	3.6
8/29/2006 12:49	2.3
8/29/2006 12:49	1.8
8/29/2006 12:49	2.0
8/29/2006 12:49	1.6
8/29/2006 12:49	1.8
8/29/2006 12:49	1.7
8/29/2006 12:50	1.7
8/29/2006 12:50	1.8
8/29/2006 12:50	1.8
8/29/2006 12:50	2.3
8/29/2006 12:50	2.0
8/29/2006 12:50	1.9
8/29/2006 12:51	1.7
8/29/2006 12:51	1.8
8/29/2006 12:51	1.7
8/29/2006 12:51	1.6
8/29/2006 12:51	1.8
8/29/2006 12:51	1.7
8/29/2006 12:52	1.9
8/29/2006 12:52	1.3
8/29/2006 12:52	1.7
8/29/2006 12:52	2.0
8/29/2006 12:52	2.1
8/29/2006 12:52	1.8
8/29/2006 12:53	1.8
8/29/2006 12:53	1.8
8/29/2006 12:53	1.8
8/29/2006 12:53	1.7
8/29/2006 12:53	1.7
8/29/2006 12:53	1.7
8/29/2006 12:54	1.8
8/29/2006 12:54	1.6
8/29/2006 12:54	1.8
8/29/2006 12:54	1.9
8/29/2006 12:54	1.8
8/29/2006 12:54	1.7
8/29/2006 12:55	1.8
8/29/2006 12:55	2.0
8/29/2006 12:55	2.1
8/29/2006 12:55	2.2
8/29/2006 12:55	1.8
8/29/2006 12:55	2.3
8/29/2006 12:56	2.1
8/29/2006 12:56	2.0
8/29/2006 12:56	1.8
8/29/2006 12:56	2.1
8/29/2006 12:56	1.8
8/29/2006 12:56	2.0
8/29/2006 12:57	2.0
8/29/2006 12:57	2.0
8/29/2006 12:57	2.2
8/29/2006 12:57	2.3
8/29/2006 12:57	2.3
8/29/2006 12:57	2.1
8/29/2006 12:58	1.8
8/29/2006 12:58	1.9
8/29/2006 12:58	1.6
8/29/2006 12:58	1.5
8/29/2006 12:58	1.3
8/29/2006 12:58	1.8
8/29/2006 12:59	1.6

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/29/2006 12:59	1.8
8/29/2006 12:59	1.7
8/29/2006 12:59	1.6
8/29/2006 12:59	1.7
8/29/2006 12:59	2.0
8/29/2006 13:00	1.8
8/29/2006 13:00	1.7
8/29/2006 13:00	1.9
8/29/2006 13:00	1.8
8/29/2006 13:00	3.6
8/29/2006 13:00	4.7
8/29/2006 13:01	2.2
8/29/2006 13:01	3.4
8/29/2006 13:01	2.6
8/29/2006 13:01	1.9
8/29/2006 13:01	1.7
8/29/2006 13:01	1.8
8/29/2006 13:02	1.6
8/29/2006 13:02	1.4
8/29/2006 13:02	1.7
8/29/2006 13:02	1.4
8/29/2006 13:02	1.6
8/29/2006 13:02	1.9
8/29/2006 13:03	3.1
8/29/2006 13:03	2.1
8/29/2006 13:03	1.5
8/29/2006 13:03	1.7
8/29/2006 13:03	1.9
8/29/2006 13:03	1.9
8/29/2006 13:04	1.7
8/29/2006 13:04	1.5
8/29/2006 13:04	1.8
8/29/2006 13:04	1.9
8/29/2006 13:04	1.8
8/29/2006 13:04	1.5
8/29/2006 13:05	1.6
8/29/2006 13:05	1.6
8/29/2006 13:05	1.7
8/29/2006 13:05	1.6
8/29/2006 13:05	1.6
8/29/2006 13:05	2.0
8/29/2006 13:06	1.9
8/29/2006 13:06	1.9
8/29/2006 13:06	1.8
8/29/2006 13:06	1.8
8/29/2006 13:06	1.8
8/29/2006 13:06	1.7
8/29/2006 13:07	1.3
8/29/2006 13:07	1.6
8/29/2006 13:07	1.7
8/29/2006 13:07	1.9
8/29/2006 13:07	1.6
8/29/2006 13:07	1.7
8/29/2006 13:08	1.9
8/29/2006 13:08	1.7
8/29/2006 13:08	1.7
8/29/2006 13:08	1.7
8/29/2006 13:08	2.1
8/29/2006 13:08	1.7
8/29/2006 13:09	1.7
8/29/2006 13:09	1.7
8/29/2006 13:09	1.9
8/29/2006 13:09	2.2
8/29/2006 13:09	1.9
8/29/2006 13:09	1.9
8/29/2006 13:10	2.0
8/29/2006 13:10	2.0
8/29/2006 13:10	2.5
8/29/2006 13:10	1.8
8/29/2006 13:10	2.1
8/29/2006 13:10	1.9
8/29/2006 13:11	2.0

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 13:11	2.5
8/29/2006 13:11	2.0
8/29/2006 13:11	2.1
8/29/2006 13:11	2.2
8/29/2006 13:11	2.4
8/29/2006 13:12	3.1
8/29/2006 13:12	3.1
8/29/2006 13:12	3.7
8/29/2006 13:12	4.1
8/29/2006 13:12	4.2
8/29/2006 13:12	3.7
8/29/2006 13:13	3.4
8/29/2006 13:13	4.2
8/29/2006 13:13	4.0
8/29/2006 13:13	4.9
8/29/2006 13:13	6.1
8/29/2006 13:13	5.4
8/29/2006 13:14	6.4
8/29/2006 13:14	6.6
8/29/2006 13:14	5.0
8/29/2006 13:14	4.0
8/29/2006 13:14	3.4
8/29/2006 13:14	3.7
8/29/2006 13:15	3.6
8/29/2006 13:15	5.7
8/29/2006 13:15	6.3
8/29/2006 13:15	5.2
8/29/2006 13:15	6.2
8/29/2006 13:15	6.1
8/29/2006 13:16	6.4
8/29/2006 13:16	46.8
8/29/2006 13:16	66.1
8/29/2006 13:16	80.4
8/29/2006 13:16	72.5
8/29/2006 13:16	78.6
8/29/2006 13:17	73.8
8/29/2006 13:17	78.5
8/29/2006 13:17	80.3
8/29/2006 13:17	77.4
8/29/2006 13:17	81.0
8/29/2006 13:17	78.1
8/29/2006 13:18	43.3
8/29/2006 13:18	16.8
8/29/2006 13:18	12.2
8/29/2006 13:18	8.0
8/29/2006 13:18	8.9
8/29/2006 13:18	67.3
8/29/2006 13:19	101.4
8/29/2006 13:19	43.6
8/29/2006 13:19	11.4
8/29/2006 13:19	8.6
8/29/2006 13:19	7.4
8/29/2006 13:19	6.9
8/29/2006 13:20	6.9
8/29/2006 13:20	7.7
8/29/2006 13:20	8.3
8/29/2006 13:20	10.6
8/29/2006 13:20	6.8
8/29/2006 13:20	7.5
8/29/2006 13:21	7.9
8/29/2006 13:21	6.5
8/29/2006 13:21	7.2
8/29/2006 13:21	6.4
8/29/2006 13:21	5.8
8/29/2006 13:21	6.3
8/29/2006 13:22	5.9
8/29/2006 13:22	5.6
8/29/2006 13:22	4.0
8/29/2006 13:22	4.0
8/29/2006 13:22	3.7
8/29/2006 13:22	4.9
8/29/2006 13:23	6.8

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/29/2006 13:23	4.6
8/29/2006 13:23	3.4
8/29/2006 13:23	3.3
8/29/2006 13:23	3.8
8/29/2006 13:23	2.9
8/29/2006 13:24	3.2
8/29/2006 13:24	3.6
8/29/2006 13:24	3.7
8/29/2006 13:24	3.7
8/29/2006 13:24	3.4
8/29/2006 13:24	3.0
8/29/2006 13:25	2.7
8/29/2006 13:25	3.0
8/29/2006 13:25	2.8
8/29/2006 13:25	3.3
8/29/2006 13:25	3.3
8/29/2006 13:25	3.4
8/29/2006 13:26	3.9
8/29/2006 13:26	3.4
8/29/2006 13:26	4.6
8/29/2006 13:26	4.5
8/29/2006 13:26	3.8
8/29/2006 13:26	5.3
8/29/2006 13:27	6.6
8/29/2006 13:27	5.7
8/29/2006 13:27	7.5
8/29/2006 13:27	5.1
8/29/2006 13:27	4.9
8/29/2006 13:27	4.8
8/29/2006 13:28	4.1
8/29/2006 13:28	3.5
8/29/2006 13:28	3.9
8/29/2006 13:28	3.9
8/29/2006 13:28	3.8
8/29/2006 13:28	3.3
8/29/2006 13:29	4.1
8/29/2006 13:29	4.0
8/29/2006 13:29	3.6
8/29/2006 13:29	5.4
8/29/2006 13:29	3.7
8/29/2006 13:29	3.7
8/29/2006 13:30	3.9
8/29/2006 13:30	4.3
8/29/2006 13:30	3.7
8/29/2006 13:30	3.4
8/29/2006 13:30	4.0
8/29/2006 13:30	5.3
8/29/2006 13:31	5.7
8/29/2006 13:31	5.0
8/29/2006 13:31	5.2
8/29/2006 13:31	4.1
8/29/2006 13:31	3.7
8/29/2006 13:31	3.8
8/29/2006 13:32	4.8
8/29/2006 13:32	4.6
8/29/2006 13:32	4.4
8/29/2006 13:32	4.9
8/29/2006 13:32	5.5
8/29/2006 13:32	4.7
8/29/2006 13:33	4.4
8/29/2006 13:33	3.3
8/29/2006 13:33	3.8
8/29/2006 13:33	6.3
8/29/2006 13:33	2.7
8/29/2006 13:33	3.0
8/29/2006 13:34	2.9
8/29/2006 13:34	3.2
8/29/2006 13:34	3.4
8/29/2006 13:34	3.6
8/29/2006 13:34	3.6
8/29/2006 13:34	2.9
8/29/2006 13:35	3.4

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₆)
8/29/2006 13:35	3.0
8/29/2006 13:35	3.7
8/29/2006 13:35	3.8
8/29/2006 13:35	3.9
8/29/2006 13:35	3.3
8/29/2006 13:36	3.5
8/29/2006 13:36	3.7
8/29/2006 13:36	3.1
8/29/2006 13:36	3.0
8/29/2006 13:36	3.2
8/29/2006 13:36	3.5
8/29/2006 13:37	2.9
8/29/2006 13:37	3.0
8/29/2006 13:37	2.8
8/29/2006 13:37	3.1
8/29/2006 13:37	2.9
8/29/2006 13:37	2.4
8/29/2006 13:38	2.7
8/29/2006 13:38	2.7
8/29/2006 13:38	2.6
8/29/2006 13:38	2.6
8/29/2006 13:38	2.3
8/29/2006 13:38	2.6
8/29/2006 13:39	2.5
8/29/2006 13:39	2.6
8/29/2006 13:39	2.4
8/29/2006 13:39	2.3
8/29/2006 13:39	2.6
8/29/2006 13:39	2.5
8/29/2006 13:40	2.4
8/29/2006 13:40	1.9
8/29/2006 13:40	2.1
8/29/2006 13:40	2.4
8/29/2006 13:40	2.1
8/29/2006 13:40	2.2
8/29/2006 13:41	2.7
8/29/2006 13:41	2.3
8/29/2006 13:41	2.1
8/29/2006 13:41	1.9
8/29/2006 13:41	2.4
8/29/2006 13:41	2.3
8/29/2006 13:42	28.2
8/29/2006 13:42	96.5
8/29/2006 13:42	18.0
8/29/2006 13:42	12.8
8/29/2006 13:42	11.6
8/29/2006 13:42	11.0
8/29/2006 13:43	10.7
8/29/2006 13:43	10.6
8/29/2006 13:43	10.4
8/29/2006 13:43	10.3
8/29/2006 13:43	10.2
8/29/2006 13:43	10.2
8/29/2006 13:44	10.1
8/29/2006 13:44	9.9
8/29/2006 13:44	9.8
8/29/2006 13:44	9.7
8/29/2006 13:44	9.7
8/29/2006 13:44	9.5
8/29/2006 13:45	9.4
8/29/2006 13:45	9.3
8/29/2006 13:45	9.3
8/29/2006 13:45	9.3
8/29/2006 13:45	9.3
8/29/2006 13:45	9.3
8/29/2006 13:46	9.2
8/29/2006 13:46	9.2
8/29/2006 13:46	9.2
8/29/2006 13:46	9.1
8/29/2006 13:46	9.3
8/29/2006 13:47	8.9

R#3

Cal R3

9.2 S

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/29/2006 13:47	7.1
8/29/2006 13:47	0.3
8/29/2006 13:47	0.0
8/29/2006 13:47	0.0
8/29/2006 13:47	0.2 $\emptyset$
8/29/2006 13:48	-0.2
8/29/2006 13:48	-0.3
8/29/2006 13:48	-0.2
8/29/2006 13:48	-0.2
8/29/2006 13:48	-0.3
8/29/2006 13:48	-0.3
8/29/2006 13:49	-0.2
8/29/2006 13:49	-0.4
8/29/2006 13:49	3.2
8/29/2006 13:49	7.1
8/29/2006 13:49	13.0
8/29/2006 13:49	20.7
8/29/2006 13:50	16.7
8/29/2006 13:50	70.3
8/29/2006 13:50	31.1
8/29/2006 13:50	26.2
8/29/2006 13:50	12.3
8/29/2006 13:50	13.0
8/29/2006 13:51	8.6
8/29/2006 13:51	8.6
8/29/2006 13:51	11.0

48'' Flare

Air Pollution Testing, Inc. : Analyzer Calibration Datasheet

Facility : Cimarron

Location : Greely, Co

Unit : 48" Flare

Date : 8/30/06

APT Job # : CIM 6132

Page # : 1

Analyzer Information

Analyzer Type	<u>TVOC</u>					
Analyzer ID #	<u>1167-3</u>					
Analyzer Scale	<u>0-100</u>					
Calibration Range	<u>0-30</u>					

Calibration Gas Cylinder Information (Cylinder ID#/Expiration date and Concentration)

Analyzer Type	<u>TVOC</u>					
Zero	<u>0.0</u>					
CC#	<u>84976</u>					
Expiration date						
Low	<u>8.41</u>					
CC#	<u>63247</u>					
Expiration date						
Mid	<u>17.08</u>					
CC#	<u>90957</u>					
Expiration date						
High	<u>26.0</u>					
CC#	<u>63247</u>					
Expiration date	<u>114208</u>					

Calibration Error

Analyzer Type	<u>TVOC</u>					
Zero	<u>-0.3</u> ✓					
Low	<u>8.2</u> ✓					
Mid	<u>16.7</u> ✓					
High	<u>25.9</u> ✓					

Initial Bias Check

Analyzer Type	<u>TVOC</u>					
Zero	<u>-1.0</u> ✓					
Low						
Mid	<u>16.0</u> ✓					
High						

Facility: Flores, Cimarron

Date: 8/30/06

Location 48" Flare

APT Job #: CIM 6132

Alt:

Page #:

Run #: 1

Start Time: 1021-1034²⁹Stop Time: ~~1044~~ 1034-1044

Calibration Results

Analyzer Type	TVOC					
Zero	-0.2 ✓					
Low						
Mid	16.9 ✓					
High	16.9					

Run #: 2

Start Time: 1210-1215, 1235-1246

Stop Time:

Calibration Results

Analyzer Type	TVOC					
Zero	.1 ✓					
Low						
Mid	17.3 ✓					
High						

Run #: 3

Start Time: 1358-1407, 1435-1449

Stop Time:

Calibration Results

Analyzer Type	TVOC					
Zero	-1.2 ✓					
Low						
Mid	15.9 ✓					
High						

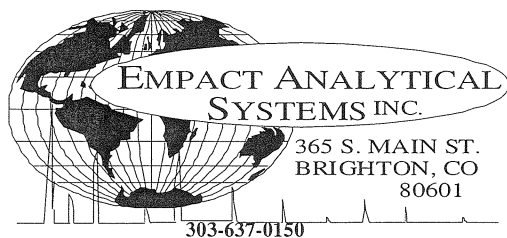
Air Pollution Testing Inc. : EPA Method 2 - Pitot Traverse Datasheet

Job # : <u>57M6132</u>	Operator : <u>HP</u>	Stack Diameter (inches) : <u>48</u>
Facility : <u>4</u>	Site : <u>H8 Flare</u>	Upstream Disturbance (inches) : <u>12</u>
Date : <u>8-30-06</u>	Points : 1 5 9	Downstream Disturbance (inches) : <u>43</u>
Probe ID : _____	2 6 10	Schematic of Sampling Location : _____
Pitot Constant : _____	3 7 11	
	4 8 12	

Run # : <u>1</u>	Run # : <u>3</u>
CO2% : _____	CO2% : _____
H2O% : _____	H2O% : _____
Pb ("Hg) : _____	Pb ("Hg) : _____
Stop Time : _____	Stop Time : _____

Post Test Pitot Leak Check Good? :				Post Test Pitot Leak Check Good? :			
Point #	Delta P	Ts	Notes	Point #	Delta P	Ts	Notes
1-1	5.005	675		1-1		590	
2		676		2		590	
3		678		3		590	
4		674		4		591	
5		678		5		592	
6		680		6		593	
7		681		7		594	
8		682		8		594	
2-1		682		2-1		603	
2		683		2		605	
3		684		3		609	
4		685		4		610	
5		686		5		613	
6		687		6		614	
7		686		7		612	
8		686		8		610	
Averages : _____				Averages : _____			

Reviewers Signature : _____



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	07
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 30, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	48" PURCHASE R1 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES.:		GRAVITY :	
SAMPLE TEMP.:		VAPOR PRES. :	
COMMENTS :			

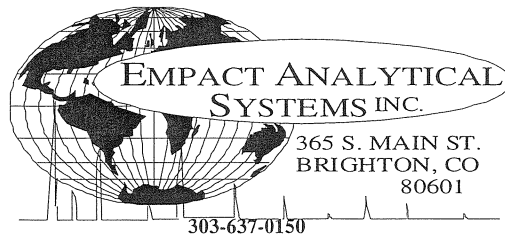
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	2.74	-	-
NITROGEN	9.69	-	-
CO2	2.06	-	-
METHANE	63.19	-	-
ETHANE	11.93	3.173	3.191
PROPANE	5.52	1.513	1.521
ISOBUTANE	0.96	0.312	0.314
N-BUTANE	2.06	0.646	0.650
ISOPENTANE	0.66	0.240	0.242
N-PENTANE	0.66	0.238	0.239
HEXANES+	0.53	0.230	0.231
TOTAL	100.00	6.353	6.387

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1167.2	1173.5
GROSS WET REAL =	1146.8	1153.1

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 0.8266

COMPRESSIBILITY FACTOR : 0.99635

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	08
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 30, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	48" PURCHASE R2 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

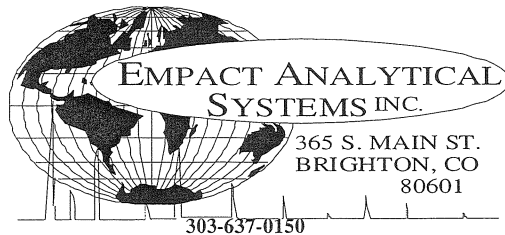
COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	1.50	-	-
NITROGEN	5.21	-	-
CO2	2.26	-	-
METHANE	67.28	-	-
ETHANE	12.56	3.341	3.359
PROPANE	5.82	1.595	1.604
ISOBUTANE	1.03	0.335	0.337
N-BUTANE	2.22	0.696	0.700
ISOPENTANE	0.72	0.262	0.264
N-PENTANE	0.74	0.267	0.268
HEXANES+	0.66	0.286	0.288
TOTAL	100.00	6.782	6.819

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1247.4	1254.2
GROSS WET REAL =	1225.6	1232.4

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 0.8188

COMPRESSIBILITY FACTOR : 0.99598

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS



NATURAL GAS ANALYSIS

PROJECT NO. :	200608145	ANALYSIS NO. :	10
COMPANY NAME :	AIR POLLUTION TESTING	ANALYSIS DATE:	SEPTEMBER 5, 2006
ACCOUNT NO. :	CIM 6132	SAMPLE DATE :	AUGUST 30, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	5L TEDLAR BAG
NAME/DESCRIP :	48" FLASH R2 FUEL GAS		

FIELD DATA

SAMPLED BY :	TOM LENTZNER	AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

COMPONENTS	NORM. MOLE%	GPM @ 14.65	GPM @ 14.73
HELIUM	0.00	-	-
HYDROGEN	0.00	-	-
OXYGEN/ARGON	2.78	-	-
NITROGEN	10.08	-	-
CO2	1.73	-	-
METHANE	22.89	-	-
ETHANE	21.39	5.690	5.721
PROPANE	18.73	5.133	5.161
ISOBUTANE	3.94	1.282	1.289
N-BUTANE	8.57	2.687	2.702
ISOPENTANE	2.77	1.009	1.014
N-PENTANE	2.88	1.038	1.043
HEXANES+	4.24	1.840	1.850
TOTAL	100.00	18.678	18.780

BTU @ 60 DEG F	14.65	14.73
GROSS DRY REAL =	1948.4	1959.0
GROSS WET REAL =	1914.3	1925.0

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.3317

COMPRESSIBILITY FACTOR : 0.98840

NOTE: REFERENCE GPA 2261(ASTM D1945), 2145, & 2172 CURRENT PUBLICATIONS

48" flare

LIM 6132

Purchase gas

15 scf/hr @ 1214 btu/scf

flash gas

$$\text{fuel flow} = \left(\frac{1.54 \text{ scf}}{\text{jet} \cdot \text{hr} \cdot (\text{inch wc})} \right) \left(\frac{210 \text{ jets}}{1} \right) \left(\sqrt{\frac{\text{actual pressure (oz/in}^2\text{)}}{\left(\frac{1.578 \text{ oz/in}^2}{(\text{inch wc})} \right)}} \right)$$
$$= (425.4) (\sqrt{\text{pressure}}) \left(\frac{\text{scf}}{\text{hr}} \right)$$

$$R1 = (425.4)(1.542) = 655.9 \text{ scf/hr}$$

$$R2 = (425.4)(1.684) = 716.4 \text{ scf/hr} \quad @ 1865.4$$

$$R3 = (425.4)(1.656) = 704.5 \text{ scf/hr}$$

Cimarron
Greeley Gas Plant
Greeley, Colorado
48" Flare
August 30, 2006

Calibration Log

Time	TVOC (ppmvw as C ₂ H ₆)
8/30/2006 9:21	1.9
8/30/2006 9:22	26.8
8/30/2006 9:22	30.8
8/30/2006 9:22	30.8
8/30/2006 9:22	27.4
8/30/2006 9:22	26.1
8/30/2006 9:22	26.0
8/30/2006 9:23	26.0
8/30/2006 9:23	<u>25.9</u> H
8/30/2006 9:23	25.9
8/30/2006 9:23	25.8
8/30/2006 9:23	24.5
8/30/2006 9:23	18.9
8/30/2006 9:24	19.6
8/30/2006 9:24	16.6
8/30/2006 9:24	16.8
8/30/2006 9:24	<u>16.7</u> M
8/30/2006 9:24	16.7
8/30/2006 9:24	16.6
8/30/2006 9:25	16.5
8/30/2006 9:25	16.5
8/30/2006 9:25	15.3
8/30/2006 9:25	12.8
8/30/2006 9:25	12.8
8/30/2006 9:25	8.1
8/30/2006 9:26	7.8
8/30/2006 9:26	7.7
8/30/2006 9:26	7.8
8/30/2006 9:26	7.7
8/30/2006 9:26	7.6
8/30/2006 9:26	7.9
8/30/2006 9:27	8.3
8/30/2006 9:27	<u>8.2</u> L
8/30/2006 9:27	8.2
8/30/2006 9:27	8.2
8/30/2006 9:27	8.2
8/30/2006 9:27	8.2
8/30/2006 9:28	8.1
8/30/2006 9:28	8.2
8/30/2006 9:28	5.3
8/30/2006 9:28	2.4
8/30/2006 9:28	1.9
8/30/2006 9:28	2.3
8/30/2006 9:29	7.8
8/30/2006 9:29	19.7
8/30/2006 9:29	16.8
8/30/2006 9:29	8.5
8/30/2006 9:29	25.5
8/30/2006 9:29	139.9
8/30/2006 9:30	139.9
8/30/2006 9:30	139.9
8/30/2006 9:30	139.9
8/30/2006 9:30	139.9
8/30/2006 9:30	139.9
8/30/2006 9:30	139.9
8/30/2006 9:31	139.9
8/30/2006 9:31	139.9
8/30/2006 9:31	139.9
8/30/2006 9:31	139.9
8/30/2006 9:31	139.9
8/30/2006 9:31	139.9
8/30/2006 9:32	139.9
8/30/2006 9:32	139.9
8/30/2006 9:32	139.9
8/30/2006 9:32	136.3
8/30/2006 9:33	411.8
8/30/2006 9:33	1359.8
8/30/2006 9:33	862.2
8/30/2006 9:33	1034.9
8/30/2006 9:33	739.9
8/30/2006 9:33	857.2
8/30/2006 9:34	726.9
8/30/2006 9:34	550.1
8/30/2006 9:34	578.8
8/30/2006 9:34	772.0
8/30/2006 9:34	891.0

Calibration Log

Time	TVOC (ppmvw as C ₂ H ₆)
8/30/2006 9:34	865.5
8/30/2006 9:35	1103.0
8/30/2006 9:35	882.5
8/30/2006 9:35	1348.1
8/30/2006 9:35	1217.8
8/30/2006 9:35	1008.3
8/30/2006 9:35	715.3
8/30/2006 9:36	1172.2
8/30/2006 9:36	996.8
8/30/2006 9:36	701.2
8/30/2006 9:36	371.8
8/30/2006 9:36	573.9
8/30/2006 9:36	948.4
8/30/2006 9:37	1706.7
8/30/2006 9:37	775.5
8/30/2006 9:37	994.6
8/30/2006 9:37	1426.0
8/30/2006 9:37	1212.1
8/30/2006 9:37	1729.9
8/30/2006 9:38	1757.5
8/30/2006 9:38	2142.1
8/30/2006 9:38	1268.2
8/30/2006 9:38	1873.7
8/30/2006 9:38	1557.0
8/30/2006 9:38	2228.8
8/30/2006 9:39	1516.5
8/30/2006 9:39	1069.3
8/30/2006 9:39	774.0
8/30/2006 9:39	798.3
8/30/2006 9:39	1189.9
8/30/2006 9:39	772.2
8/30/2006 9:40	942.7
8/30/2006 9:40	1070.3
8/30/2006 9:40	1166.6
8/30/2006 9:40	987.7
8/30/2006 9:40	1159.5
8/30/2006 9:40	797.9
8/30/2006 9:41	1008.9
8/30/2006 9:41	1534.9
8/30/2006 9:41	1070.3
8/30/2006 9:41	1082.1
8/30/2006 9:41	1135.2
8/30/2006 9:41	1598.5
8/30/2006 9:42	1618.6
8/30/2006 9:42	870.4
8/30/2006 9:42	921.7
8/30/2006 9:42	747.9
8/30/2006 9:42	565.8
8/30/2006 9:42	1058.5
8/30/2006 9:43	559.3
8/30/2006 9:43	840.2
8/30/2006 9:43	861.9
8/30/2006 9:43	957.7
8/30/2006 9:43	685.8
8/30/2006 9:43	717.3
8/30/2006 9:44	670.7
8/30/2006 9:44	584.6
8/30/2006 9:44	1016.9
8/30/2006 9:44	907.9
8/30/2006 9:44	1046.8
8/30/2006 9:44	1288.6
8/30/2006 9:45	943.4
8/30/2006 9:45	974.4
8/30/2006 9:45	755.1
8/30/2006 9:45	541.6
8/30/2006 9:45	560.3
8/30/2006 9:45	522.8
8/30/2006 9:46	625.5
8/30/2006 9:46	1320.1
8/30/2006 9:46	1163.9
8/30/2006 9:46	706.0
8/30/2006 9:46	692.9
8/30/2006 9:46	771.7
8/30/2006 9:47	948.2
8/30/2006 9:47	907.8
8/30/2006 9:47	1100.0
8/30/2006 9:47	458.6
8/30/2006 9:47	1212.7

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 9:47	834.1
8/30/2006 9:48	1184.5
8/30/2006 9:48	710.4
8/30/2006 9:48	691.1
8/30/2006 9:48	775.0
8/30/2006 9:48	596.0
8/30/2006 9:48	955.9
8/30/2006 9:49	995.0
8/30/2006 9:49	1072.7
8/30/2006 9:49	1194.3
8/30/2006 9:49	1821.1
8/30/2006 9:49	930.0
8/30/2006 9:49	1098.0
8/30/2006 9:50	1078.4
8/30/2006 9:50	923.3
8/30/2006 9:50	1359.0
8/30/2006 9:50	1928.6
8/30/2006 9:50	1585.2
8/30/2006 9:50	1240.1
8/30/2006 9:51	1345.5
8/30/2006 9:51	900.8
8/30/2006 9:51	606.2
8/30/2006 9:51	966.1
8/30/2006 9:51	1216.3
8/30/2006 9:51	780.3
8/30/2006 9:52	1148.3
8/30/2006 9:52	1063.3
8/30/2006 9:52	830.3
8/30/2006 9:52	876.3
8/30/2006 9:52	903.2
8/30/2006 9:52	838.5
8/30/2006 9:53	712.4
8/30/2006 9:53	663.6
8/30/2006 9:53	1087.9
8/30/2006 9:53	1045.0
8/30/2006 9:53	1218.8
8/30/2006 9:53	895.8
8/30/2006 9:54	1200.8
8/30/2006 9:54	1592.2
8/30/2006 9:54	969.4
8/30/2006 9:54	1674.8
8/30/2006 9:54	1232.3
8/30/2006 9:54	1286.9
8/30/2006 9:55	1572.3
8/30/2006 9:55	1327.5
8/30/2006 9:55	1485.1
8/30/2006 9:55	1070.5
8/30/2006 9:55	1588.3
8/30/2006 9:55	1085.0
8/30/2006 9:56	1052.9
8/30/2006 9:56	1155.4
8/30/2006 9:56	885.1
8/30/2006 9:56	871.5
8/30/2006 9:56	1369.4
8/30/2006 9:56	1662.5
8/30/2006 9:57	924.3
8/30/2006 9:57	612.5
8/30/2006 9:57	1527.6
8/30/2006 9:57	969.9
8/30/2006 9:57	504.9
8/30/2006 9:57	710.6
8/30/2006 9:58	985.8
8/30/2006 9:58	957.8
8/30/2006 9:58	774.2
8/30/2006 9:58	1331.5
8/30/2006 9:58	809.7
8/30/2006 9:58	1611.7
8/30/2006 9:59	1421.7
8/30/2006 9:59	1211.9
8/30/2006 9:59	1272.6
8/30/2006 9:59	1387.4
8/30/2006 9:59	1383.1
8/30/2006 9:59	1388.1
8/30/2006 10:00	1503.3
8/30/2006 10:00	1387.3
8/30/2006 10:00	1063.4
8/30/2006 10:00	1109.7
8/30/2006 10:00	723.1

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 10:00	1176.2
8/30/2006 10:01	1162.5
8/30/2006 10:01	1062.2
8/30/2006 10:01	1288.8
8/30/2006 10:01	1735.5
8/30/2006 10:01	932.9
8/30/2006 10:01	1122.0
8/30/2006 10:02	1667.0
8/30/2006 10:02	830.8
8/30/2006 10:02	865.5
8/30/2006 10:02	1723.7
8/30/2006 10:02	985.2
8/30/2006 10:02	961.1
8/30/2006 10:03	1469.2
8/30/2006 10:03	754.1
8/30/2006 10:03	774.4
8/30/2006 10:03	246.2
8/30/2006 10:03	-12.8
8/30/2006 10:03	-26.0
8/30/2006 10:04	-27.3
8/30/2006 10:04	-30.5
8/30/2006 10:04	231.4
8/30/2006 10:04	322.7
8/30/2006 10:04	2.9
8/30/2006 10:04	-0.4
8/30/2006 10:05	-0.6
8/30/2006 10:05	-0.8
8/30/2006 10:05	-1.1
8/30/2006 10:05	-1.3
8/30/2006 10:05	-0.9
8/30/2006 10:05	-0.7
8/30/2006 10:06	-0.8
8/30/2006 10:06	-1.0
8/30/2006 10:06	-1.0
8/30/2006 10:06	-1.2
8/30/2006 10:06	-1.2
8/30/2006 10:06	-1.4
8/30/2006 10:07	13.6
8/30/2006 10:07	94.7
8/30/2006 10:07	7.0
8/30/2006 10:07	15.4
8/30/2006 10:07	14.9
8/30/2006 10:07	14.6
8/30/2006 10:08	14.5
8/30/2006 10:08	15.2
8/30/2006 10:08	16.3
8/30/2006 10:08	16.2
8/30/2006 10:08	16.1
8/30/2006 10:08	16.0
8/30/2006 10:08	15.9
8/30/2006 10:09	15.9
8/30/2006 10:09	15.9
8/30/2006 10:09	15.9
8/30/2006 10:09	15.7
8/30/2006 10:09	15.7
8/30/2006 10:10	15.6
8/30/2006 10:10	140.1
8/30/2006 10:10	140.1
8/30/2006 10:10	140.1
8/30/2006 10:10	86.2
8/30/2006 10:11	284.3
8/30/2006 10:11	561.9
8/30/2006 10:11	2107.9
8/30/2006 10:11	3930.8
8/30/2006 10:11	676.9
8/30/2006 10:11	738.9
8/30/2006 10:12	584.6
8/30/2006 10:12	777.5
8/30/2006 10:12	683.7
8/30/2006 10:12	770.8
8/30/2006 10:12	1185.9
8/30/2006 10:12	985.7
8/30/2006 10:13	1285.3
8/30/2006 10:13	924.2
8/30/2006 10:13	1350.9
8/30/2006 10:13	912.3
8/30/2006 10:13	1312.1
8/30/2006 10:13	1006.5

Start Bias

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 10:14	1078.5
8/30/2006 10:14	1256.3
8/30/2006 10:14	1055.8
8/30/2006 10:14	1263.8
8/30/2006 10:14	883.9
8/30/2006 10:14	944.8
8/30/2006 10:15	895.8
8/30/2006 10:15	978.6
8/30/2006 10:15	1219.5
8/30/2006 10:15	768.6
8/30/2006 10:15	1096.5
8/30/2006 10:15	827.0
8/30/2006 10:16	996.4
8/30/2006 10:16	750.3
8/30/2006 10:16	997.7
8/30/2006 10:16	534.3
8/30/2006 10:16	969.8
8/30/2006 10:16	538.8
8/30/2006 10:17	130.5
8/30/2006 10:17	38.4
8/30/2006 10:17	74.3
8/30/2006 10:17	56.0
8/30/2006 10:17	205.3
8/30/2006 10:17	260.7
8/30/2006 10:18	399.6
8/30/2006 10:18	655.9
8/30/2006 10:18	466.0
8/30/2006 10:18	643.4
8/30/2006 10:18	819.8
8/30/2006 10:18	866.2
8/30/2006 10:19	767.2
8/30/2006 10:19	675.6
8/30/2006 10:19	820.1
8/30/2006 10:19	971.5
8/30/2006 10:19	819.0
8/30/2006 10:19	1145.9
8/30/2006 10:20	965.1
8/30/2006 10:20	970.4
8/30/2006 10:20	1136.7
8/30/2006 10:20	752.4
8/30/2006 10:20	77.1
8/30/2006 10:20	40.9
8/30/2006 10:21	3.5
8/30/2006 10:21	2.9
8/30/2006 10:21	1.8
8/30/2006 10:21	1.5
8/30/2006 10:21	0.0
8/30/2006 10:21	-0.3
8/30/2006 10:22	-0.7
8/30/2006 10:22	-0.7
8/30/2006 10:22	1.7
8/30/2006 10:22	8.3
8/30/2006 10:22	6.0
8/30/2006 10:22	3.2
8/30/2006 10:23	6.3
8/30/2006 10:23	0.9
8/30/2006 10:23	0.6
8/30/2006 10:23	-0.1
8/30/2006 10:23	-0.7
8/30/2006 10:23	0.0
8/30/2006 10:24	0.3
8/30/2006 10:24	-0.5
8/30/2006 10:24	-1.3
8/30/2006 10:24	-1.7
8/30/2006 10:24	-1.2
8/30/2006 10:24	0.1
8/30/2006 10:25	3.8
8/30/2006 10:25	0.7
8/30/2006 10:25	-1.5
8/30/2006 10:25	-2.2
8/30/2006 10:25	6.9
8/30/2006 10:25	15.8
8/30/2006 10:26	17.2
8/30/2006 10:26	32.7
8/30/2006 10:26	11.4
8/30/2006 10:26	13.0
8/30/2006 10:26	10.9
8/30/2006 10:26	6.3

RH

Calibration Log

Time	TVOC (ppmv as C ₂ H ₆)
8/30/2006 10:27	5.4
8/30/2006 10:27	2.3
8/30/2006 10:27	0.7
8/30/2006 10:27	-0.6
8/30/2006 10:27	-2.4
8/30/2006 10:27	-2.6
8/30/2006 10:28	-2.9
8/30/2006 10:28	-2.5
8/30/2006 10:28	-2.0
8/30/2006 10:28	-2.5
8/30/2006 10:28	-1.5
8/30/2006 10:28	-1.9
8/30/2006 10:29	-0.2
8/30/2006 10:29	1.1
8/30/2006 10:29	15.5
8/30/2006 10:29	2.8
8/30/2006 10:29	4.9
8/30/2006 10:29	0.1
8/30/2006 10:30	-1.2
8/30/2006 10:30	-0.8
8/30/2006 10:30	5.6
8/30/2006 10:30	16.7
8/30/2006 10:30	8.2
8/30/2006 10:30	7.9
8/30/2006 10:31	9.6
8/30/2006 10:31	19.4
8/30/2006 10:31	51.7
8/30/2006 10:31	116.9
8/30/2006 10:31	140.1
8/30/2006 10:31	140.1
8/30/2006 10:32	140.1
8/30/2006 10:32	140.1
8/30/2006 10:32	54.5
8/30/2006 10:32	19.3
8/30/2006 10:32	23.5
8/30/2006 10:32	55.2
8/30/2006 10:33	77.4
8/30/2006 10:33	59.3
8/30/2006 10:33	50.5
8/30/2006 10:33	30.8
8/30/2006 10:33	16.9
8/30/2006 10:33	14.7
8/30/2006 10:34	19.0
8/30/2006 10:34	12.6
8/30/2006 10:34	1.1
8/30/2006 10:34	3.3
8/30/2006 10:34	-1.4
8/30/2006 10:34	-3.1
8/30/2006 10:35	-3.7
8/30/2006 10:35	-3.7
8/30/2006 10:35	-3.9
8/30/2006 10:35	0.0
8/30/2006 10:35	2.5
8/30/2006 10:35	-2.0
8/30/2006 10:36	-3.6
8/30/2006 10:36	-3.8
8/30/2006 10:36	-3.3
8/30/2006 10:36	-2.1
8/30/2006 10:36	-3.6
8/30/2006 10:36	-3.7
8/30/2006 10:37	-3.6
8/30/2006 10:37	-3.7
8/30/2006 10:37	-4.1
8/30/2006 10:37	-4.2
8/30/2006 10:37	-3.6
8/30/2006 10:37	-3.9
8/30/2006 10:38	-2.3
8/30/2006 10:38	10.6
8/30/2006 10:38	1.2
8/30/2006 10:38	-2.7
8/30/2006 10:38	-3.8
8/30/2006 10:38	-3.7
8/30/2006 10:39	-2.5
8/30/2006 10:39	-2.6
8/30/2006 10:39	-3.7
8/30/2006 10:39	-3.9
8/30/2006 10:39	-3.9
8/30/2006 10:39	-3.9

R#1 Break

R#1 cont

~~R#1 Break~~

Calibration Log

Time	TVOC (ppmv as C ₃ H ₈)
8/30/2006 10:40	-3.7
8/30/2006 10:40	-3.7
8/30/2006 10:40	-3.4
8/30/2006 10:40	-3.0
8/30/2006 10:40	-3.6
8/30/2006 10:40	-3.6
8/30/2006 10:41	-1.8
8/30/2006 10:41	-3.5
8/30/2006 10:41	-3.3
8/30/2006 10:41	-3.6
8/30/2006 10:41	-2.9
8/30/2006 10:41	0.2
8/30/2006 10:42	2.9
8/30/2006 10:42	8.6
8/30/2006 10:42	9.2
8/30/2006 10:42	4.4
8/30/2006 10:42	-0.4
8/30/2006 10:42	-1.6
8/30/2006 10:43	-2.5
8/30/2006 10:43	-2.7
8/30/2006 10:43	-2.6
8/30/2006 10:43	-2.4
8/30/2006 10:43	6.5
8/30/2006 10:43	7.3
8/30/2006 10:44	3.0
8/30/2006 10:44	3.3
8/30/2006 10:44	4.5
8/30/2006 10:44	6.2
8/30/2006 10:44	4.8
8/30/2006 10:44	6.7
8/30/2006 10:45	4.4
8/30/2006 10:45	0.0
8/30/2006 10:45	-0.7
8/30/2006 10:45	1.2
8/30/2006 10:45	7.6
8/30/2006 10:45	46.9
8/30/2006 10:46	32.2
8/30/2006 10:46	14.9
8/30/2006 10:46	14.2
8/30/2006 10:46	24.7
8/30/2006 10:46	63.5
8/30/2006 10:46	39.4
8/30/2006 10:47	30.9
8/30/2006 10:47	23.3
8/30/2006 10:47	23.0
8/30/2006 10:47	22.3
8/30/2006 10:47	27.0
8/30/2006 10:47	32.3
8/30/2006 10:48	24.8
8/30/2006 10:48	52.0
8/30/2006 10:48	69.7
8/30/2006 10:48	130.4
8/30/2006 10:48	120.9
8/30/2006 10:48	104.6
8/30/2006 10:49	91.7
8/30/2006 10:49	125.1
8/30/2006 10:49	128.3
8/30/2006 10:49	89.3
8/30/2006 10:49	40.2
8/30/2006 10:49	2.6
8/30/2006 10:50	-1.3
8/30/2006 10:50	-2.2
8/30/2006 10:50	-2.5
8/30/2006 10:50	-2.8
8/30/2006 10:50	-2.9
8/30/2006 10:50	-2.0
8/30/2006 10:51	-0.2
8/30/2006 10:51	-0.2
8/30/2006 10:51	-0.2
8/30/2006 10:51	-0.3
8/30/2006 10:51	-0.3
8/30/2006 10:51	36.6
8/30/2006 10:52	68.2
8/30/2006 10:52	8.0
8/30/2006 10:52	17.2
8/30/2006 10:52	17.1
8/30/2006 10:52	17.0
8/30/2006 10:52	17.0

R#1 End

cal r1

-0.2

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 10:53	17.0
8/30/2006 10:53	16.9 S
8/30/2006 10:53	16.9
8/30/2006 10:53	16.9
8/30/2006 10:53	16.9
8/30/2006 10:53	16.8
8/30/2006 10:54	16.8
8/30/2006 10:54	16.9
8/30/2006 10:54	16.8
8/30/2006 10:54	81.3
8/30/2006 10:54	140.1
8/30/2006 10:54	140.1
8/30/2006 10:55	140.1
8/30/2006 10:55	140.1
8/30/2006 10:55	140.1
8/30/2006 10:55	140.1
8/30/2006 10:55	140.1
8/30/2006 11:06	292.8
8/30/2006 11:06	256.2
8/30/2006 11:07	293.7
8/30/2006 11:07	262.8
8/30/2006 11:07	284.2
8/30/2006 11:07	315.5
8/30/2006 11:07	271.7
8/30/2006 11:07	241.3
8/30/2006 11:08	214.0
8/30/2006 11:08	246.6
8/30/2006 11:08	265.7
8/30/2006 11:08	283.1
8/30/2006 11:08	247.6
8/30/2006 11:09	172.6
8/30/2006 11:09	242.4
8/30/2006 11:09	168.8
8/30/2006 11:09	444.5
8/30/2006 11:09	351.3
8/30/2006 11:10	418.5
8/30/2006 11:10	522.3
8/30/2006 11:10	399.0
8/30/2006 11:10	459.8
8/30/2006 11:10	451.3
8/30/2006 11:10	453.8
8/30/2006 11:11	492.0
8/30/2006 11:11	445.1
8/30/2006 11:11	443.3
8/30/2006 11:11	315.7
8/30/2006 11:11	395.5
8/30/2006 11:11	383.8
8/30/2006 11:12	339.6
8/30/2006 11:12	546.8
8/30/2006 11:12	438.5
8/30/2006 11:12	338.0
8/30/2006 11:12	394.7
8/30/2006 11:12	419.3
8/30/2006 11:13	399.0
8/30/2006 11:13	323.8
8/30/2006 11:13	290.2
8/30/2006 11:13	294.9
8/30/2006 11:13	202.7
8/30/2006 11:13	160.4
8/30/2006 11:14	169.1
8/30/2006 11:14	194.9
8/30/2006 11:14	220.5
8/30/2006 11:14	257.6
8/30/2006 11:14	268.0
8/30/2006 11:14	222.9
8/30/2006 11:15	211.7
8/30/2006 11:15	230.9
8/30/2006 11:15	226.0
8/30/2006 11:15	200.1
8/30/2006 11:15	159.6
8/30/2006 11:15	139.8
8/30/2006 11:16	154.2
8/30/2006 11:16	171.6
8/30/2006 11:16	158.3
8/30/2006 11:16	116.0
8/30/2006 11:16	110.8
8/30/2006 11:16	182.5

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 11:17	204.0
8/30/2006 11:17	160.4
8/30/2006 11:17	242.0
8/30/2006 11:17	207.5
8/30/2006 11:17	179.3
8/30/2006 11:17	137.4
8/30/2006 11:18	133.9
8/30/2006 11:18	143.4
8/30/2006 11:18	124.3
8/30/2006 11:18	84.8
8/30/2006 11:18	75.1
8/30/2006 11:18	113.1
8/30/2006 11:19	153.4
8/30/2006 11:19	166.4
8/30/2006 11:19	137.6
8/30/2006 11:19	143.2
8/30/2006 11:19	162.5
8/30/2006 11:19	181.2
8/30/2006 11:20	185.3
8/30/2006 11:20	140.2
8/30/2006 11:20	114.9
8/30/2006 11:20	104.4
8/30/2006 11:20	80.1
8/30/2006 11:20	97.4
8/30/2006 11:21	62.8
8/30/2006 11:21	65.4
8/30/2006 11:21	94.4
8/30/2006 11:21	72.1
8/30/2006 11:21	87.6
8/30/2006 11:21	77.7
8/30/2006 11:22	37.8
8/30/2006 11:22	39.2
8/30/2006 11:22	48.2
8/30/2006 11:22	101.6
8/30/2006 11:22	151.7
8/30/2006 11:22	165.6
8/30/2006 11:23	126.6
8/30/2006 11:23	110.5
8/30/2006 11:23	121.0
8/30/2006 11:23	101.1
8/30/2006 11:23	127.9
8/30/2006 11:23	103.4
8/30/2006 11:24	105.1
8/30/2006 11:24	84.3
8/30/2006 11:24	80.8
8/30/2006 11:24	66.6
8/30/2006 11:24	45.5
8/30/2006 11:24	51.8
8/30/2006 11:25	54.9
8/30/2006 11:25	52.4
8/30/2006 11:25	113.9
8/30/2006 11:25	85.8
8/30/2006 11:25	68.6
8/30/2006 11:25	88.1
8/30/2006 11:26	175.2
8/30/2006 11:26	103.3
8/30/2006 11:26	112.7
8/30/2006 11:26	127.3
8/30/2006 11:26	103.3
8/30/2006 11:26	102.6
8/30/2006 11:27	93.5
8/30/2006 11:27	62.3
8/30/2006 11:27	82.5
8/30/2006 11:27	69.5
8/30/2006 11:27	112.1
8/30/2006 11:27	139.1
8/30/2006 11:28	83.2
8/30/2006 11:28	94.7
8/30/2006 11:28	122.7
8/30/2006 11:28	84.9
8/30/2006 11:28	113.3
8/30/2006 11:28	84.0
8/30/2006 11:29	69.7
8/30/2006 11:29	94.0
8/30/2006 11:29	80.1
8/30/2006 11:29	93.8
8/30/2006 11:29	58.3
8/30/2006 11:29	114.6

Calibration Log

Time	TVOC (ppmv as C ₂ H ₆)
8/30/2006 11:30	77.2
8/30/2006 11:30	89.1
8/30/2006 11:30	70.1
8/30/2006 11:30	72.5
8/30/2006 11:30	108.4
8/30/2006 11:30	98.1
8/30/2006 11:31	94.7
8/30/2006 11:31	107.0
8/30/2006 11:31	96.8
8/30/2006 11:31	115.5
8/30/2006 11:31	74.3
8/30/2006 11:31	68.4
8/30/2006 11:32	96.5
8/30/2006 11:32	142.7
8/30/2006 11:32	119.0
8/30/2006 11:32	76.3
8/30/2006 11:32	88.9
8/30/2006 11:32	75.6
8/30/2006 11:33	82.7
8/30/2006 11:33	57.3
8/30/2006 11:33	36.1
8/30/2006 11:33	35.1
8/30/2006 11:33	33.6
8/30/2006 11:33	50.2
8/30/2006 11:34	38.4
8/30/2006 11:34	48.5
8/30/2006 11:34	42.5
8/30/2006 11:34	39.5
8/30/2006 11:34	33.6
8/30/2006 11:34	47.9
8/30/2006 11:35	44.8
8/30/2006 11:35	54.0
8/30/2006 11:35	72.7
8/30/2006 11:35	64.6
8/30/2006 11:35	44.3
8/30/2006 11:35	50.3
8/30/2006 11:36	42.6
8/30/2006 11:36	68.9
8/30/2006 11:36	105.3
8/30/2006 11:36	69.7
8/30/2006 11:36	67.2
8/30/2006 11:36	95.5
8/30/2006 11:37	82.6
8/30/2006 11:37	122.1
8/30/2006 11:37	209.7
8/30/2006 11:37	465.7
8/30/2006 11:37	513.5
8/30/2006 11:37	315.2
8/30/2006 11:38	430.0
8/30/2006 11:38	428.4
8/30/2006 11:38	445.1
8/30/2006 11:38	713.5
8/30/2006 11:38	468.4
8/30/2006 11:38	568.3
8/30/2006 11:39	632.2
8/30/2006 11:39	462.4
8/30/2006 11:39	480.6
8/30/2006 11:39	681.1
8/30/2006 11:39	770.8
8/30/2006 11:39	790.8
8/30/2006 11:40	817.9
8/30/2006 11:40	885.9
8/30/2006 11:40	505.8
8/30/2006 11:40	520.5
8/30/2006 11:40	619.7
8/30/2006 11:40	815.2
8/30/2006 11:41	584.9
8/30/2006 11:41	594.9
8/30/2006 11:41	592.5
8/30/2006 11:41	408.8
8/30/2006 11:41	534.0
8/30/2006 11:41	499.4
8/30/2006 11:42	490.4
8/30/2006 11:42	565.3
8/30/2006 11:42	426.6
8/30/2006 11:42	360.6
8/30/2006 11:42	437.7
8/30/2006 11:42	462.2

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 11:43	436.6
8/30/2006 11:43	396.7
8/30/2006 11:43	368.2
8/30/2006 11:43	395.7
8/30/2006 11:43	506.3
8/30/2006 11:43	520.9
8/30/2006 11:44	547.7
8/30/2006 11:44	544.7
8/30/2006 11:44	445.1
8/30/2006 11:44	516.2
8/30/2006 11:44	496.7
8/30/2006 11:44	474.5
8/30/2006 11:45	599.8
8/30/2006 11:45	369.6
8/30/2006 11:45	195.4
8/30/2006 11:45	229.0
8/30/2006 11:45	348.7
8/30/2006 11:45	404.2
8/30/2006 11:46	387.2
8/30/2006 11:46	515.2
8/30/2006 11:46	514.6
8/30/2006 11:46	457.2
8/30/2006 11:46	444.4
8/30/2006 11:46	366.5
8/30/2006 11:47	434.5
8/30/2006 11:47	312.3
8/30/2006 11:47	351.0
8/30/2006 11:47	418.3
8/30/2006 11:47	351.0
8/30/2006 11:47	265.8
8/30/2006 11:48	405.3
8/30/2006 11:48	572.6
8/30/2006 11:48	400.3
8/30/2006 11:48	347.5
8/30/2006 11:48	369.3
8/30/2006 11:48	296.8
8/30/2006 11:49	440.0
8/30/2006 11:49	1401.4
8/30/2006 11:49	1390.7
8/30/2006 11:49	644.6
8/30/2006 11:49	140.1
8/30/2006 11:49	140.1
8/30/2006 11:50	140.1
8/30/2006 11:50	140.1
8/30/2006 11:50	134.2
8/30/2006 11:50	64.5
8/30/2006 11:50	8.6
8/30/2006 11:50	3.4
8/30/2006 11:51	2.1
8/30/2006 11:51	1.4
8/30/2006 11:51	1.1
8/30/2006 11:51	0.9
8/30/2006 11:51	0.7
8/30/2006 11:51	0.6
8/30/2006 11:52	0.4
8/30/2006 11:52	0.3
8/30/2006 11:52	0.3
8/30/2006 11:52	0.1
8/30/2006 11:52	0.1
8/30/2006 11:52	0.0
8/30/2006 11:53	1.1
8/30/2006 11:53	74.5
8/30/2006 11:53	113.1
8/30/2006 11:53	98.6
8/30/2006 11:53	51.8
8/30/2006 11:53	78.2
8/30/2006 11:54	68.8
8/30/2006 11:54	91.9
8/30/2006 11:54	108.7
8/30/2006 11:54	133.2
8/30/2006 11:54	92.8
8/30/2006 11:54	94.9
8/30/2006 11:55	88.8
8/30/2006 11:55	93.7
8/30/2006 11:55	101.4
8/30/2006 11:55	104.2
8/30/2006 11:55	140.1
8/30/2006 11:55	130.4

Calibration Log

Time	TVOC (ppmvw as C ₂ H ₆)
8/30/2006 11:56	116.2
8/30/2006 11:56	140.1
8/30/2006 11:56	138.8
8/30/2006 11:56	119.4
8/30/2006 11:56	111.9
8/30/2006 11:56	106.8
8/30/2006 11:57	109.7
8/30/2006 11:57	85.7
8/30/2006 11:57	133.1
8/30/2006 11:57	140.1
8/30/2006 11:57	140.1
8/30/2006 11:57	140.1
8/30/2006 11:58	140.1
8/30/2006 11:58	140.1
8/30/2006 11:58	140.1
8/30/2006 11:58	139.9
8/30/2006 11:58	140.1
8/30/2006 11:58	140.1
8/30/2006 11:59	140.1
8/30/2006 11:59	140.1
8/30/2006 11:59	140.1
8/30/2006 11:59	140.1
8/30/2006 11:59	140.1
8/30/2006 11:59	140.1
8/30/2006 12:00	140.1
8/30/2006 12:00	140.1
8/30/2006 12:00	140.1
8/30/2006 12:00	140.1
8/30/2006 12:00	140.1
8/30/2006 12:00	140.1
8/30/2006 12:01	140.1
8/30/2006 12:01	140.1
8/30/2006 12:01	140.1
8/30/2006 12:01	140.1
8/30/2006 12:01	140.1
8/30/2006 12:01	140.1
8/30/2006 12:02	140.1
8/30/2006 12:02	140.1
8/30/2006 12:02	140.1
8/30/2006 12:02	140.1
8/30/2006 12:02	140.0
8/30/2006 12:02	140.1
8/30/2006 12:03	140.1
8/30/2006 12:03	140.1
8/30/2006 12:03	140.0
8/30/2006 12:03	140.1
8/30/2006 12:03	140.1
8/30/2006 12:03	140.1
8/30/2006 12:04	140.1
8/30/2006 12:04	140.1
8/30/2006 12:04	140.1
8/30/2006 12:04	140.1
8/30/2006 12:04	140.1
8/30/2006 12:05	140.1
8/30/2006 12:05	140.1
8/30/2006 12:05	140.1
8/30/2006 12:05	140.1
8/30/2006 12:05	140.1
8/30/2006 12:05	140.1
8/30/2006 12:06	140.1
8/30/2006 12:06	140.1
8/30/2006 12:06	140.1
8/30/2006 12:06	140.1
8/30/2006 12:06	140.1
8/30/2006 12:06	140.1
8/30/2006 12:07	140.1
8/30/2006 12:07	140.1
8/30/2006 12:07	140.1
8/30/2006 12:07	140.1
8/30/2006 12:07	140.1
8/30/2006 12:08	140.0
8/30/2006 12:08	140.1
8/30/2006 12:08	140.1
8/30/2006 12:08	140.1
8/30/2006 12:08	140.1

Calibration Log

Time	TVOC (ppmv as C ₂ H ₆)
8/30/2006 12:09	140.1
8/30/2006 12:09	140.1
8/30/2006 12:09	140.1
8/30/2006 12:09	130.8
8/30/2006 12:09	38.8
8/30/2006 12:09	8.8
8/30/2006 12:10	6.3
8/30/2006 12:10	4.8
8/30/2006 12:10	6.2
8/30/2006 12:10	4.5
8/30/2006 12:10	6.3
8/30/2006 12:10	9.4
8/30/2006 12:11	3.5
8/30/2006 12:11	2.2
8/30/2006 12:11	1.9
8/30/2006 12:11	1.6
8/30/2006 12:11	2.3
8/30/2006 12:11	9.0
8/30/2006 12:12	7.2
8/30/2006 12:12	12.0
8/30/2006 12:12	5.4
8/30/2006 12:12	3.3
8/30/2006 12:12	2.5
8/30/2006 12:12	3.5
8/30/2006 12:13	5.3
8/30/2006 12:13	3.7
8/30/2006 12:13	5.4
8/30/2006 12:13	8.3
8/30/2006 12:13	11.6
8/30/2006 12:13	4.7
8/30/2006 12:14	3.0
8/30/2006 12:14	4.8
8/30/2006 12:14	10.8
8/30/2006 12:14	8.5
8/30/2006 12:14	6.7
8/30/2006 12:14	8.0
8/30/2006 12:15	17.5
8/30/2006 12:15	12.2
8/30/2006 12:15	29.0
8/30/2006 12:15	32.8
8/30/2006 12:15	12.0
8/30/2006 12:15	2.2
8/30/2006 12:16	0.9
8/30/2006 12:16	2.4
8/30/2006 12:16	7.2
8/30/2006 12:16	7.2
8/30/2006 12:16	3.3
8/30/2006 12:16	0.9
8/30/2006 12:17	0.5
8/30/2006 12:17	0.4
8/30/2006 12:17	1.6
8/30/2006 12:17	3.3
8/30/2006 12:17	2.0
8/30/2006 12:17	0.7
8/30/2006 12:18	5.4
8/30/2006 12:18	12.7
8/30/2006 12:18	13.4
8/30/2006 12:18	15.4
8/30/2006 12:18	27.9
8/30/2006 12:18	50.3
8/30/2006 12:19	106.3
8/30/2006 12:19	104.1
8/30/2006 12:19	122.8
8/30/2006 12:19	131.1
8/30/2006 12:19	116.1
8/30/2006 12:19	76.7
8/30/2006 12:20	63.6
8/30/2006 12:20	76.1
8/30/2006 12:20	103.0
8/30/2006 12:20	95.9
8/30/2006 12:20	88.6
8/30/2006 12:20	78.9
8/30/2006 12:21	90.2
8/30/2006 12:21	117.4
8/30/2006 12:21	121.9
8/30/2006 12:21	120.5
8/30/2006 12:21	127.0
8/30/2006 12:21	113.6

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 12:22	126.6
8/30/2006 12:22	126.9
8/30/2006 12:22	139.2
8/30/2006 12:22	130.1
8/30/2006 12:22	140.1
8/30/2006 12:22	140.1
8/30/2006 12:23	140.1
8/30/2006 12:23	140.1
8/30/2006 12:23	136.9
8/30/2006 12:23	131.5
8/30/2006 12:23	139.1
8/30/2006 12:23	140.1
8/30/2006 12:24	140.1
8/30/2006 12:24	140.1
8/30/2006 12:24	140.1
8/30/2006 12:24	140.1
8/30/2006 12:24	140.1
8/30/2006 12:24	134.3
8/30/2006 12:24	140.1
8/30/2006 12:25	140.1
8/30/2006 12:25	140.1
8/30/2006 12:25	140.1
8/30/2006 12:25	140.1
8/30/2006 12:25	140.1
8/30/2006 12:25	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:26	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:27	140.1
8/30/2006 12:28	140.1
8/30/2006 12:28	140.1
8/30/2006 12:28	140.0
8/30/2006 12:28	140.1
8/30/2006 12:28	140.1
8/30/2006 12:28	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:29	140.1
8/30/2006 12:30	140.1
8/30/2006 12:30	140.1
8/30/2006 12:30	140.1
8/30/2006 12:30	140.0
8/30/2006 12:30	140.1
8/30/2006 12:30	140.1
8/30/2006 12:31	140.1
8/30/2006 12:31	139.8
8/30/2006 12:31	140.1
8/30/2006 12:31	140.1
8/30/2006 12:31	140.1
8/30/2006 12:31	140.1
8/30/2006 12:32	140.0
8/30/2006 12:32	140.1
8/30/2006 12:32	140.1
8/30/2006 12:32	140.1
8/30/2006 12:32	140.1
8/30/2006 12:32	140.1
8/30/2006 12:32	140.1
8/30/2006 12:33	140.1
8/30/2006 12:33	140.1
8/30/2006 12:33	140.1
8/30/2006 12:33	140.0
8/30/2006 12:33	140.1
8/30/2006 12:33	140.1
8/30/2006 12:34	140.1
8/30/2006 12:34	140.0
8/30/2006 12:34	53.5
8/30/2006 12:34	29.8
8/30/2006 12:34	17.7
8/30/2006 12:34	22.6

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)	R#2 Cont
8/30/2006 12:35	19.1	
8/30/2006 12:35	4.5	
8/30/2006 12:35	6.6	
8/30/2006 12:35	7.0	
8/30/2006 12:35	12.7	
8/30/2006 12:35	21.4	
8/30/2006 12:36	24.8	
8/30/2006 12:36	10.1	
8/30/2006 12:36	3.7	
8/30/2006 12:36	0.4	
8/30/2006 12:36	0.4	
8/30/2006 12:36	0.3	
8/30/2006 12:37	0.1	
8/30/2006 12:37	2.0	
8/30/2006 12:37	4.5	
8/30/2006 12:37	1.5	
8/30/2006 12:37	2.7	
8/30/2006 12:37	6.3	
8/30/2006 12:38	8.2	
8/30/2006 12:38	4.0	
8/30/2006 12:38	5.7	
8/30/2006 12:38	6.0	
8/30/2006 12:38	4.1	
8/30/2006 12:38	4.5	
8/30/2006 12:39	0.3	
8/30/2006 12:39	-0.3	
8/30/2006 12:39	-0.5	
8/30/2006 12:39	-0.4	
8/30/2006 12:39	-0.3	
8/30/2006 12:39	-0.1	
8/30/2006 12:40	4.4	
8/30/2006 12:40	11.5	
8/30/2006 12:40	13.2	
8/30/2006 12:40	6.6	
8/30/2006 12:40	1.8	
8/30/2006 12:40	7.0	
8/30/2006 12:41	9.6	
8/30/2006 12:41	2.8	
8/30/2006 12:41	-0.2	
8/30/2006 12:41	0.0	
8/30/2006 12:41	0.9	
8/30/2006 12:41	1.1	
8/30/2006 12:42	4.8	
8/30/2006 12:42	1.5	
8/30/2006 12:42	2.3	
8/30/2006 12:42	6.4	
8/30/2006 12:42	15.9	
8/30/2006 12:42	9.6	
8/30/2006 12:43	27.7	
8/30/2006 12:43	6.0	
8/30/2006 12:43	2.2	
8/30/2006 12:43	3.6	
8/30/2006 12:43	12.6	
8/30/2006 12:43	22.0	
8/30/2006 12:44	2.4	
8/30/2006 12:44	0.2	
8/30/2006 12:44	-0.1	
8/30/2006 12:44	0.2	
8/30/2006 12:44	4.3	
8/30/2006 12:44	4.5	
8/30/2006 12:45	3.1	
8/30/2006 12:45	1.9	
8/30/2006 12:45	9.9	
8/30/2006 12:45	9.7	
8/30/2006 12:45	2.7	
8/30/2006 12:45	0.7	
8/30/2006 12:46	0.7	
8/30/2006 12:46	1.1	
8/30/2006 12:46	2.0	
8/30/2006 12:46	3.3	
8/30/2006 12:46	5.2	
8/30/2006 12:46	3.3	
8/30/2006 12:47	2.3	
8/30/2006 12:47	2.3	
8/30/2006 12:47	4.3	
8/30/2006 12:47	4.3	
8/30/2006 12:47	4.5	
8/30/2006 12:47	8.0	

R#2 End

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 12:48	23.6
8/30/2006 12:48	24.1
8/30/2006 12:48	38.6
8/30/2006 12:48	45.9
8/30/2006 12:48	34.9
8/30/2006 12:48	42.0
8/30/2006 12:49	22.6
8/30/2006 12:49	11.1
8/30/2006 12:49	10.5
8/30/2006 12:49	22.4
8/30/2006 12:49	38.3
8/30/2006 12:49	23.8
8/30/2006 12:50	20.5
8/30/2006 12:50	19.5
8/30/2006 12:50	24.4
8/30/2006 12:50	18.2
8/30/2006 12:50	28.2
8/30/2006 12:50	57.2
8/30/2006 12:51	94.7
8/30/2006 12:51	99.1
8/30/2006 12:51	114.1
8/30/2006 12:51	140.0
8/30/2006 12:51	140.0
8/30/2006 12:51	124.0
8/30/2006 12:52	108.9
8/30/2006 12:52	95.9
8/30/2006 12:52	69.8
8/30/2006 12:52	94.2
8/30/2006 12:52	137.5
8/30/2006 12:52	140.1
8/30/2006 12:53	140.1
8/30/2006 12:53	140.1
8/30/2006 12:53	140.1
8/30/2006 12:53	140.1
8/30/2006 12:53	140.1
8/30/2006 12:53	140.1
8/30/2006 12:54	140.1
8/30/2006 12:54	140.1
8/30/2006 12:54	140.1
8/30/2006 12:54	140.1
8/30/2006 12:54	140.1
8/30/2006 12:54	140.1
8/30/2006 12:55	140.1
8/30/2006 12:55	140.1
8/30/2006 12:55	140.1
8/30/2006 12:55	140.1
8/30/2006 12:55	116.9
8/30/2006 12:55	53.4
8/30/2006 12:56	6.6
8/30/2006 12:56	3.4
8/30/2006 12:56	2.4
8/30/2006 12:56	1.8
8/30/2006 12:56	1.5
8/30/2006 12:56	1.2
8/30/2006 12:57	1.0
8/30/2006 12:57	0.8
8/30/2006 12:57	0.7
8/30/2006 12:57	0.6
8/30/2006 12:57	0.6
8/30/2006 12:57	0.5
8/30/2006 12:58	0.4
8/30/2006 12:58	0.3
8/30/2006 12:58	0.2
8/30/2006 12:58	0.2
8/30/2006 12:58	0.2
8/30/2006 12:58	0.1
8/30/2006 12:58	0.1
8/30/2006 12:59	0.2
8/30/2006 12:59	0.1
8/30/2006 12:59	0.1
8/30/2006 12:59	0.0
8/30/2006 12:59	0.0
8/30/2006 13:00	89.8
8/30/2006 13:00	11.5
8/30/2006 13:00	16.5
8/30/2006 13:00	17.6
8/30/2006 13:00	17.4
8/30/2006 13:00	17.3

Cal R2

Calibration Log

Time	TVOC (ppmvw as C ₂ H ₆)
8/30/2006 13:01	17.3
8/30/2006 13:01	17.2
8/30/2006 13:01	17.1
8/30/2006 13:01	17.2
8/30/2006 13:01	17.3
8/30/2006 13:01	17.3
8/30/2006 13:02	17.2
8/30/2006 13:02	73.5
8/30/2006 13:02	140.2
8/30/2006 13:02	140.2
8/30/2006 13:02	140.1
8/30/2006 13:02	140.1
8/30/2006 13:03	140.1
8/30/2006 13:03	140.1
8/30/2006 13:03	140.1
8/30/2006 13:03	140.1
8/30/2006 13:03	140.1
8/30/2006 13:03	140.1
8/30/2006 13:04	140.1
8/30/2006 13:04	140.1
8/30/2006 13:04	140.1
8/30/2006 13:04	140.1
8/30/2006 13:04	140.1
8/30/2006 13:04	140.1
8/30/2006 13:05	140.1
8/30/2006 13:05	140.1
8/30/2006 13:05	140.1
8/30/2006 13:05	140.1
8/30/2006 13:05	140.1
8/30/2006 13:05	140.1
8/30/2006 13:06	140.1
8/30/2006 13:06	140.1
8/30/2006 13:06	140.1
8/30/2006 13:06	140.1
8/30/2006 13:06	140.1
8/30/2006 13:06	140.1
8/30/2006 13:07	140.1
8/30/2006 13:07	140.1
8/30/2006 13:07	140.1
8/30/2006 13:07	140.1
8/30/2006 13:07	140.1
8/30/2006 13:07	140.1
8/30/2006 13:08	140.1
8/30/2006 13:08	140.1
8/30/2006 13:08	140.1
8/30/2006 13:08	140.1
8/30/2006 13:08	140.1
8/30/2006 13:08	140.1
8/30/2006 13:09	140.1
8/30/2006 13:09	140.1
8/30/2006 13:09	140.1
8/30/2006 13:09	140.1
8/30/2006 13:10	140.1
8/30/2006 13:10	140.1
8/30/2006 13:10	140.1
8/30/2006 13:10	140.1
8/30/2006 13:10	140.1
8/30/2006 13:11	140.1
8/30/2006 13:11	140.1
8/30/2006 13:11	140.1
8/30/2006 13:11	140.1
8/30/2006 13:11	140.1
8/30/2006 13:11	140.1
8/30/2006 13:12	140.1
8/30/2006 13:12	140.1
8/30/2006 13:12	140.0
8/30/2006 13:12	140.1
8/30/2006 13:12	140.1
8/30/2006 13:12	140.1
8/30/2006 13:13	140.1
8/30/2006 13:13	140.1
8/30/2006 13:13	140.1
8/30/2006 13:13	140.1
8/30/2006 13:13	140.1

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 13:14	140.1
8/30/2006 13:14	140.1
8/30/2006 13:14	140.1
8/30/2006 13:14	140.1
8/30/2006 13:14	140.1
8/30/2006 13:14	140.1
8/30/2006 13:15	140.1
8/30/2006 13:15	140.1
8/30/2006 13:15	140.1
8/30/2006 13:15	140.1
8/30/2006 13:15	140.1
8/30/2006 13:15	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:16	140.1
8/30/2006 13:17	140.1
8/30/2006 13:17	140.1
8/30/2006 13:17	140.1
8/30/2006 13:17	140.1
8/30/2006 13:17	140.1
8/30/2006 13:17	140.1
8/30/2006 13:18	140.1
8/30/2006 13:18	140.1
8/30/2006 13:18	140.1
8/30/2006 13:18	140.1
8/30/2006 13:18	140.1
8/30/2006 13:18	140.1
8/30/2006 13:19	140.1
8/30/2006 13:19	140.1
8/30/2006 13:19	140.1
8/30/2006 13:19	140.1
8/30/2006 13:19	140.1
8/30/2006 13:20	140.1
8/30/2006 13:20	140.1
8/30/2006 13:20	140.1
8/30/2006 13:20	140.1
8/30/2006 13:20	140.1
8/30/2006 13:21	140.1
8/30/2006 13:21	140.1
8/30/2006 13:21	140.1
8/30/2006 13:21	140.1
8/30/2006 13:21	140.1
8/30/2006 13:21	140.1
8/30/2006 13:22	140.1
8/30/2006 13:22	140.1
8/30/2006 13:22	140.1
8/30/2006 13:22	140.1
8/30/2006 13:22	140.1
8/30/2006 13:22	140.1
8/30/2006 13:23	140.1
8/30/2006 13:23	140.1
8/30/2006 13:23	140.1
8/30/2006 13:23	140.1
8/30/2006 13:23	140.1
8/30/2006 13:23	140.1
8/30/2006 13:24	140.1
8/30/2006 13:24	140.1
8/30/2006 13:24	140.1
8/30/2006 13:24	140.1
8/30/2006 13:24	140.1
8/30/2006 13:25	140.1
8/30/2006 13:25	140.1
8/30/2006 13:25	140.1
8/30/2006 13:25	140.1
8/30/2006 13:25	140.1
8/30/2006 13:25	140.1
8/30/2006 13:26	140.1
8/30/2006 13:26	140.1
8/30/2006 13:26	140.1
8/30/2006 13:26	140.1
8/30/2006 13:26	140.1

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 13:27	140.1
8/30/2006 13:27	140.1
8/30/2006 13:27	140.1
8/30/2006 13:27	140.1
8/30/2006 13:27	131.1
8/30/2006 13:27	341.4
8/30/2006 13:28	1066.2
8/30/2006 13:28	1103.5
8/30/2006 13:28	1144.7
8/30/2006 13:28	1017.5
8/30/2006 13:28	612.7
8/30/2006 13:28	778.9
8/30/2006 13:29	482.0
8/30/2006 13:29	800.4
8/30/2006 13:29	817.6
8/30/2006 13:29	1031.6
8/30/2006 13:29	1394.9
8/30/2006 13:29	1118.1
8/30/2006 13:30	685.8
8/30/2006 13:30	1004.5
8/30/2006 13:30	851.9
8/30/2006 13:30	627.7
8/30/2006 13:30	633.2
8/30/2006 13:30	455.5
8/30/2006 13:31	857.4
8/30/2006 13:31	765.6
8/30/2006 13:31	1058.7
8/30/2006 13:31	813.3
8/30/2006 13:31	563.8
8/30/2006 13:31	612.6
8/30/2006 13:32	673.1
8/30/2006 13:32	590.2
8/30/2006 13:32	741.4
8/30/2006 13:32	721.7
8/30/2006 13:32	779.5
8/30/2006 13:32	1209.0
8/30/2006 13:33	1345.4
8/30/2006 13:33	1318.3
8/30/2006 13:33	1017.8
8/30/2006 13:33	1132.1
8/30/2006 13:33	1169.3
8/30/2006 13:33	1051.6
8/30/2006 13:34	1116.8
8/30/2006 13:34	941.8
8/30/2006 13:34	797.7
8/30/2006 13:34	1025.5
8/30/2006 13:34	815.8
8/30/2006 13:34	756.0
8/30/2006 13:35	1130.1
8/30/2006 13:35	986.9
8/30/2006 13:35	1048.9
8/30/2006 13:35	1127.1
8/30/2006 13:35	1121.2
8/30/2006 13:35	905.3
8/30/2006 13:36	774.0
8/30/2006 13:36	934.3
8/30/2006 13:36	1323.5
8/30/2006 13:36	1259.5
8/30/2006 13:36	1096.6
8/30/2006 13:36	895.8
8/30/2006 13:37	1082.5
8/30/2006 13:37	1293.8
8/30/2006 13:37	1379.5
8/30/2006 13:37	1148.6
8/30/2006 13:37	1080.2
8/30/2006 13:37	1044.4
8/30/2006 13:38	814.8
8/30/2006 13:38	1004.2
8/30/2006 13:38	717.6
8/30/2006 13:38	1025.1
8/30/2006 13:38	1287.0
8/30/2006 13:38	1368.9
8/30/2006 13:39	778.0
8/30/2006 13:39	1024.4
8/30/2006 13:39	964.4
8/30/2006 13:39	1066.1
8/30/2006 13:39	1149.4
8/30/2006 13:39	140.2

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 13:40	140.2
8/30/2006 13:40	140.1
8/30/2006 13:40	140.1
8/30/2006 13:40	140.1
8/30/2006 13:40	140.1
8/30/2006 13:40	140.1
8/30/2006 13:41	140.1
8/30/2006 13:41	140.1
8/30/2006 13:41	140.1
8/30/2006 13:41	140.1
8/30/2006 13:41	140.1
8/30/2006 13:41	140.1
8/30/2006 13:42	140.1
8/30/2006 13:42	140.1
8/30/2006 13:42	140.1
8/30/2006 13:42	140.1
8/30/2006 13:42	140.1
8/30/2006 13:42	140.1
8/30/2006 13:43	140.1
8/30/2006 13:43	140.1
8/30/2006 13:43	140.1
8/30/2006 13:43	140.1
8/30/2006 13:43	140.1
8/30/2006 13:44	140.1
8/30/2006 13:44	140.1
8/30/2006 13:44	140.1
8/30/2006 13:44	140.1
8/30/2006 13:44	140.1
8/30/2006 13:44	140.1
8/30/2006 13:45	140.1
8/30/2006 13:45	140.1
8/30/2006 13:45	140.1
8/30/2006 13:45	140.1
8/30/2006 13:45	140.1
8/30/2006 13:46	140.1
8/30/2006 13:46	140.1
8/30/2006 13:46	140.1
8/30/2006 13:46	137.9
8/30/2006 13:46	105.2
8/30/2006 13:46	73.3
8/30/2006 13:47	84.0
8/30/2006 13:47	84.5
8/30/2006 13:47	96.1
8/30/2006 13:47	83.9
8/30/2006 13:47	89.7
8/30/2006 13:47	73.5
8/30/2006 13:48	108.2
8/30/2006 13:48	116.8
8/30/2006 13:48	78.9
8/30/2006 13:48	115.3
8/30/2006 13:48	90.0
8/30/2006 13:48	60.1
8/30/2006 13:49	62.4
8/30/2006 13:49	79.5
8/30/2006 13:49	73.7
8/30/2006 13:49	59.7
8/30/2006 13:49	44.2
8/30/2006 13:49	34.8
8/30/2006 13:50	35.1
8/30/2006 13:50	39.5
8/30/2006 13:50	73.8
8/30/2006 13:50	75.2
8/30/2006 13:50	68.1
8/30/2006 13:50	33.2
8/30/2006 13:51	58.9
8/30/2006 13:51	65.2
8/30/2006 13:51	76.1
8/30/2006 13:51	72.6
8/30/2006 13:51	97.8
8/30/2006 13:51	88.2
8/30/2006 13:52	108.5
8/30/2006 13:52	106.0
8/30/2006 13:52	98.9
8/30/2006 13:52	81.5
8/30/2006 13:52	102.6
8/30/2006 13:52	97.6

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 13:53	115.3
8/30/2006 13:53	140.2
8/30/2006 13:53	140.2
8/30/2006 13:53	138.4
8/30/2006 13:53	139.0
8/30/2006 13:53	140.1
8/30/2006 13:54	140.2
8/30/2006 13:54	139.6
8/30/2006 13:54	134.9
8/30/2006 13:54	140.2
8/30/2006 13:54	140.1
8/30/2006 13:54	140.2
8/30/2006 13:55	140.1
8/30/2006 13:55	140.1
8/30/2006 13:55	140.1
8/30/2006 13:55	140.1
8/30/2006 13:55	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:56	140.1
8/30/2006 13:57	140.1
8/30/2006 13:57	140.1
8/30/2006 13:57	140.1
8/30/2006 13:57	140.1
8/30/2006 13:57	140.2
8/30/2006 13:57	140.1
8/30/2006 13:58	140.1
8/30/2006 13:58	140.1
8/30/2006 13:58	98.7
8/30/2006 13:58	44.2
8/30/2006 13:58	32.9
8/30/2006 13:58	31.3
8/30/2006 13:59	26.8
8/30/2006 13:59	17.6
8/30/2006 13:59	23.6
8/30/2006 13:59	11.3
8/30/2006 13:59	6.9
8/30/2006 13:59	6.2
8/30/2006 14:00	12.2
8/30/2006 14:00	6.2
8/30/2006 14:00	8.9
8/30/2006 14:00	13.7
8/30/2006 14:00	18.0
8/30/2006 14:00	17.1
8/30/2006 14:01	3.2
8/30/2006 14:01	1.5
8/30/2006 14:01	1.1
8/30/2006 14:01	0.9
8/30/2006 14:01	0.8
8/30/2006 14:01	0.9
8/30/2006 14:02	0.9
8/30/2006 14:02	9.6
8/30/2006 14:02	11.8
8/30/2006 14:02	9.2
8/30/2006 14:02	9.7
8/30/2006 14:02	2.5
8/30/2006 14:03	4.6
8/30/2006 14:03	6.9
8/30/2006 14:03	4.7
8/30/2006 14:03	11.4
8/30/2006 14:03	9.9
8/30/2006 14:03	19.4
8/30/2006 14:04	15.5
8/30/2006 14:04	12.0
8/30/2006 14:04	10.8
8/30/2006 14:04	11.9
8/30/2006 14:04	8.9
8/30/2006 14:04	14.5
8/30/2006 14:05	12.7
8/30/2006 14:05	22.5
8/30/2006 14:05	11.3
8/30/2006 14:05	12.0
8/30/2006 14:05	11.4
8/30/2006 14:05	5.4




 B3 Start

Calibration Log

Time	TVOC (ppmv as C ₃ H ₈)
8/30/2006 14:06	5.1
8/30/2006 14:06	9.1
8/30/2006 14:06	5.3
8/30/2006 14:06	3.9
8/30/2006 14:06	7.8
8/30/2006 14:06	15.1
8/30/2006 14:07	13.5
8/30/2006 14:07	14.9
8/30/2006 14:07	6.9
8/30/2006 14:07	12.6
8/30/2006 14:07	13.6
8/30/2006 14:07	7.9
8/30/2006 14:08	2.7
8/30/2006 14:08	4.8
8/30/2006 14:08	8.5
8/30/2006 14:08	4.2
8/30/2006 14:08	4.2
8/30/2006 14:08	12.7
8/30/2006 14:09	6.5
8/30/2006 14:09	7.6
8/30/2006 14:09	9.3
8/30/2006 14:09	4.2
8/30/2006 14:09	1.9
8/30/2006 14:09	1.8
8/30/2006 14:10	2.5
8/30/2006 14:10	22.3
8/30/2006 14:10	15.1
8/30/2006 14:10	13.5
8/30/2006 14:10	14.1
8/30/2006 14:10	21.7
8/30/2006 14:11	28.2
8/30/2006 14:11	40.1
8/30/2006 14:11	26.2
8/30/2006 14:11	34.8
8/30/2006 14:11	47.7
8/30/2006 14:11	53.4
8/30/2006 14:12	40.3
8/30/2006 14:12	61.0
8/30/2006 14:12	82.5
8/30/2006 14:12	89.1
8/30/2006 14:12	62.0
8/30/2006 14:12	112.8
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:13	140.2
8/30/2006 14:14	140.2
8/30/2006 14:14	140.2
8/30/2006 14:14	140.2
8/30/2006 14:14	140.1
8/30/2006 14:14	140.2
8/30/2006 14:15	140.1
8/30/2006 14:15	140.2
8/30/2006 14:15	140.1
8/30/2006 14:15	140.1
8/30/2006 14:15	140.2
8/30/2006 14:15	140.2
8/30/2006 14:16	140.1
8/30/2006 14:16	140.1
8/30/2006 14:16	140.1
8/30/2006 14:16	140.1
8/30/2006 14:16	140.1
8/30/2006 14:16	140.1
8/30/2006 14:17	140.1
8/30/2006 14:17	140.1
8/30/2006 14:17	140.1
8/30/2006 14:17	140.1
8/30/2006 14:17	140.2
8/30/2006 14:17	140.1
8/30/2006 14:18	140.1
8/30/2006 14:18	140.1
8/30/2006 14:18	140.1
8/30/2006 14:18	140.1
8/30/2006 14:18	140.1

R#3 Break

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 14:19	140.2
8/30/2006 14:19	140.1
8/30/2006 14:19	140.1
8/30/2006 14:19	140.1
8/30/2006 14:19	140.2
8/30/2006 14:19	140.1
8/30/2006 14:20	140.2
8/30/2006 14:20	140.1
8/30/2006 14:20	140.1
8/30/2006 14:20	140.1
8/30/2006 14:20	140.2
8/30/2006 14:20	140.2
8/30/2006 14:21	140.2
8/30/2006 14:21	140.1
8/30/2006 14:21	140.1
8/30/2006 14:21	140.1
8/30/2006 14:21	140.1
8/30/2006 14:21	140.1
8/30/2006 14:22	140.1
8/30/2006 14:22	140.2
8/30/2006 14:22	140.1
8/30/2006 14:22	140.2
8/30/2006 14:22	140.2
8/30/2006 14:22	140.1
8/30/2006 14:23	140.1
8/30/2006 14:23	140.2
8/30/2006 14:23	140.1
8/30/2006 14:23	140.1
8/30/2006 14:23	140.1
8/30/2006 14:23	140.1
8/30/2006 14:24	140.1
8/30/2006 14:24	140.1
8/30/2006 14:24	140.1
8/30/2006 14:24	140.1
8/30/2006 14:24	140.2
8/30/2006 14:25	140.1
8/30/2006 14:25	140.1
8/30/2006 14:25	140.2
8/30/2006 14:25	140.1
8/30/2006 14:25	140.1
8/30/2006 14:25	140.2
8/30/2006 14:26	140.1
8/30/2006 14:26	140.2
8/30/2006 14:26	140.1
8/30/2006 14:26	140.2
8/30/2006 14:26	140.1
8/30/2006 14:26	140.1
8/30/2006 14:27	140.1
8/30/2006 14:27	140.1
8/30/2006 14:27	140.1
8/30/2006 14:27	140.1
8/30/2006 14:27	110.9
8/30/2006 14:28	21.5
8/30/2006 14:28	13.3
8/30/2006 14:28	14.3
8/30/2006 14:28	11.6
8/30/2006 14:28	13.3
8/30/2006 14:28	17.3
8/30/2006 14:29	37.3
8/30/2006 14:29	48.1
8/30/2006 14:29	87.3
8/30/2006 14:29	116.8
8/30/2006 14:29	140.2
8/30/2006 14:29	140.2
8/30/2006 14:30	140.2
8/30/2006 14:30	140.2
8/30/2006 14:30	140.2
8/30/2006 14:30	140.2
8/30/2006 14:30	140.2
8/30/2006 14:31	140.2
8/30/2006 14:31	140.2
8/30/2006 14:31	140.2
8/30/2006 14:31	140.1
8/30/2006 14:31	140.2

Calibration Log

Time	TVOC (ppmvw as C ₃ H ₈)
8/30/2006 14:32	140.2
8/30/2006 14:32	140.1
8/30/2006 14:32	140.1
8/30/2006 14:32	140.1
8/30/2006 14:32	140.2
8/30/2006 14:32	140.1
8/30/2006 14:33	140.2
8/30/2006 14:33	140.2
8/30/2006 14:33	140.2
8/30/2006 14:33	140.2
8/30/2006 14:33	140.1
8/30/2006 14:34	140.2
8/30/2006 14:34	140.1
8/30/2006 14:34	140.2
8/30/2006 14:34	140.2
8/30/2006 14:34	140.2
8/30/2006 14:34	140.2
8/30/2006 14:35	140.2
8/30/2006 14:35	45.5
8/30/2006 14:35	12.7
8/30/2006 14:35	9.8
8/30/2006 14:35	11.0
8/30/2006 14:35	8.7
8/30/2006 14:36	7.0
8/30/2006 14:36	5.3
8/30/2006 14:36	5.5
8/30/2006 14:36	4.8
8/30/2006 14:36	6.3
8/30/2006 14:36	7.5
8/30/2006 14:37	8.0
8/30/2006 14:37	2.7
8/30/2006 14:37	2.4
8/30/2006 14:37	2.7
8/30/2006 14:37	3.8
8/30/2006 14:37	3.3
8/30/2006 14:38	2.4
8/30/2006 14:38	1.7
8/30/2006 14:38	4.4
8/30/2006 14:38	4.7
8/30/2006 14:38	5.3
8/30/2006 14:38	4.0
8/30/2006 14:39	3.9
8/30/2006 14:39	5.3
8/30/2006 14:39	10.9
8/30/2006 14:39	7.0
8/30/2006 14:39	7.8
8/30/2006 14:39	10.2
8/30/2006 14:40	5.1
8/30/2006 14:40	1.8
8/30/2006 14:40	0.6
8/30/2006 14:40	0.5
8/30/2006 14:40	0.4
8/30/2006 14:40	0.7
8/30/2006 14:41	3.5
8/30/2006 14:41	7.7
8/30/2006 14:41	2.0
8/30/2006 14:41	0.6
8/30/2006 14:41	0.2
8/30/2006 14:41	0.5
8/30/2006 14:42	1.1
8/30/2006 14:42	4.9
8/30/2006 14:42	3.1
8/30/2006 14:42	4.2
8/30/2006 14:42	4.7
8/30/2006 14:42	5.4
8/30/2006 14:43	12.1
8/30/2006 14:43	9.6
8/30/2006 14:43	10.9
8/30/2006 14:43	10.3
8/30/2006 14:43	6.1
8/30/2006 14:43	6.0
8/30/2006 14:44	2.4
8/30/2006 14:44	2.3
8/30/2006 14:44	4.4
8/30/2006 14:44	5.2
8/30/2006 14:44	10.9
8/30/2006 14:44	13.7

R#3 Cont

Calibration Log

Time	TVOC (ppmww as C ₃ H ₈)
8/30/2006 14:45	12.4
8/30/2006 14:45	19.6
8/30/2006 14:45	21.5
8/30/2006 14:45	33.4
8/30/2006 14:45	17.5
8/30/2006 14:45	4.8
8/30/2006 14:46	1.5
8/30/2006 14:46	0.4
8/30/2006 14:46	-0.1
8/30/2006 14:46	-0.1
8/30/2006 14:46	0.0
8/30/2006 14:46	5.0
8/30/2006 14:47	4.0
8/30/2006 14:47	4.8
8/30/2006 14:47	0.9
8/30/2006 14:47	-0.1
8/30/2006 14:47	-0.2
8/30/2006 14:47	-0.3
8/30/2006 14:48	0.2
8/30/2006 14:48	12.7
8/30/2006 14:48	9.0
8/30/2006 14:48	9.9
8/30/2006 14:48	16.6
8/30/2006 14:48	11.3
8/30/2006 14:49	12.0
8/30/2006 14:49	5.1
8/30/2006 14:49	0.7
8/30/2006 14:49	3.8
8/30/2006 14:49	5.6
8/30/2006 14:49	8.7
8/30/2006 14:50	12.5
8/30/2006 14:50	7.2
8/30/2006 14:50	5.6
8/30/2006 14:50	5.1
8/30/2006 14:50	9.2
8/30/2006 14:50	7.1
8/30/2006 14:51	12.5
8/30/2006 14:51	31.1
8/30/2006 14:51	18.9
8/30/2006 14:51	9.7
8/30/2006 14:51	14.5
8/30/2006 14:51	22.2
8/30/2006 14:52	18.5
8/30/2006 14:52	10.0
8/30/2006 14:52	8.7
8/30/2006 14:52	20.3
8/30/2006 14:52	16.7
8/30/2006 14:52	16.1
8/30/2006 14:53	116.5
8/30/2006 14:53	56.2
8/30/2006 14:53	21.9
8/30/2006 14:53	19.1
8/30/2006 14:53	16.9
8/30/2006 14:53	16.3
8/30/2006 14:54	16.0
8/30/2006 14:54	15.9
8/30/2006 14:54	15.9
8/30/2006 14:54	15.7
8/30/2006 14:54	15.6
8/30/2006 14:54	15.5
8/30/2006 14:55	15.4
8/30/2006 14:55	15.7
8/30/2006 14:55	32.1
8/30/2006 14:55	8.8
8/30/2006 14:55	-0.5
8/30/2006 14:55	-0.9
8/30/2006 14:56	-1.1
8/30/2006 14:56	-1.2
8/30/2006 14:56	-1.2
8/30/2006 14:56	-1.2
8/30/2006 14:56	-1.3
8/30/2006 14:57	-1.3

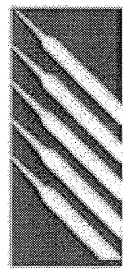
Δ

R# 3 End

Cal R3

15.9

-1.2



AIR
POLLUTION
TESTING, INC.

Appendix Three: Calibration Information



Spectra Gases, Inc.

3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

Shipped from: 80 Industrial Drive, Alpha, NJ 08865

CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE

PROCEDURE #: G1

CUSTOMER: Air Pollution Testing
SGI ORDER #: 0093497
ITEM#: 1
P.O.#: DOOFC

CYLINDER #: CC-90957
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 350

CERTIFICATION DATE: 7/21/2006

EXPIRATION DATE: 7/21/2009

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Propane	7/21/2006	17.08 ppm	17.08 ppm	+/- 1%

BALANCE Nitrogen

PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Propane	GMIS-1	CC-128776	50.0 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Propane	H. Packard 6890	US00001434	GC - FID	7/17/2006

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

ANALYST: _____

CHERYL PATINO

DATE: 7/21/2006



3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

Shipped from: 80 Industrial Drive, Alpha, NJ 08865

CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE PROCEDURE #: G1

CUSTOMER: Air Pollution Testing
SGI ORDER #: 0084455
ITEM#: 2
P.O.#: DOOFC

CYLINDER #: CC-63247
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 350

CERTIFICATION DATE: 2/6/2006

EXPIRATION DATE: 2/6/2009

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Propane	2/6/2006	8.41 ppm	8.41 ppm	+/- 1%

BALANCE Nitrogen

PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Propane	GMIS-1	CC-128776	50.0 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Propane	H. Packard 6890	US00001434	GC - FID	1/7/2006

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

ANALYST:


CHERYL PATINO

DATE: 2/6/2006



3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

Shipped from: 80 Industrial Drive, Alpha, NJ 08865

CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE PROCEDURE #: G1

CUSTOMER: Air Pollution Testing
SGI ORDER # : 0084455
ITEM# : 4
P.O.# : DOOFC

CYLINDER # : CC-114208
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 350

CERTIFICATION DATE: 2/6/2006

EXPIRATION DATE: 2/6/2009

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Propane	2/6/2006	26.0 ppm	26.0 ppm	+/- 1%

BALANCE Nitrogen

PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Propane	GMIS-1	CC-128776	50.0 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Propane	H. Packard 6890	US00001434	GC - FID	1/7/2006

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

ANALYST: CHERYL PATINO

DATE: 2/6/2006

AIR POLLUTION TESTING, INC.
THERMOCOUPLE AND DRY GAS METER CALIBRATION DATA

GAS METER ID :	M5-23 Precal
DATE :	30-Mar-06
BARO. PRESS. (MBAR) :	836

GAS METER CALIBRATION

Run #1	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	0.5	210.45	64	64	960.716	61	0.35	8	4:00 PM
Stop	0.5	215.013	64	64	965.200	58	0.35	8	4:10 PM
Avg.	0.5	4.563	64	64	4.484	60	0.35	8	10.0

Run #2	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.5	215.013	64	64	965.200	61	0.77	8	4:12 PM
Stop	1.5	222.668	65	64	972.759	59	0.77	8	4:22 PM
Avg.	1.5	7.655	65	64	7.559	60	0.77	8	10.0

Run #3	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	3.0	222.668	65	64	972.759	59	1.5	9	4:24 PM
Stop	3.0	233.57	65	64	983.553	58	1.5	9	4:34 PM
Avg.	3.0	10.902	65	64	10.794	59	1.50	9	10.0

	Run #1	Run #2	Run #3	<i>Average</i>
Yref	1.001	1.001	1.001	1.001
Yd	0.990	0.990	0.989	0.990
DH@	1.65	1.75	1.70	1.70

THERMOCOUPLE CALIBRATION

Calibration Temperature Reading (F)	Pyrometer Reading (F)	ABS (Relative Difference) % R
0	-2	0.4
500	498	0.2
800	798	0.2
Max Absolute Difference %		0.4

PITOT LEAK CHECK

0.00 @ 6" H2O Positive
0.00 @ 6" H2O Negative

Technician: bg

DENVER OFFICE
5530 Marshall Street
Arvada, CO 80002
(303) 420-5949
FAX (303) 420-5920
(800) 268-6213

AIR POLLUTION TESTING, INC.
THERMOCOUPLE AND DRY GAS METER CALIBRATION DATA

GAS METER ID :	M5-23	Post
DATE :	6-Sep-06	
BARO. PRESS. (MBAR) :	844	

GAS METER CALIBRATION

Run #1	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.5	876.977	70	70	728.292	71	0.83	8	11:05 AM
Stop	1.5	884.874	71	71	736.231	71	0.83	8	11:15 AM
Avg.	1.5	7.897	71	71	7.939	71	0.83	8	10.0

Run #2	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.5	884.874	71	71	736.231	71	0.83	8	11:17 AM
Stop	1.5	892.818	72	71	744.190	72	0.83	8	11:27 AM
Avg.	1.5	7.944	72	71	7.959	72	0.83	8	10.0

Run #3	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.5	892.818	72	71	744.190	72	0.83	8	11:30 AM
Stop	1.5	900.728	74	72	752.128	72	0.83	8	11:40 AM
Avg.	1.5	7.910	73	72	7.938	72	0.83	8	10.0

	Run #1	Run #2	Run #3	Average
Yref	0.996	0.996	0.996	0.996
Yd	0.994	0.991	0.993	0.992
DH@	1.63	1.62	1.63	1.63

THERMOCOUPLE CALIBRATION

Calibration Temperature Reading (F)	Pyrometer Reading (F)	ABS (Relative Difference) % R
0	0	0.0
400	398	0.2
800	800	0.0
Max Absolute Difference %		0.2

PITOT LEAK CHECK

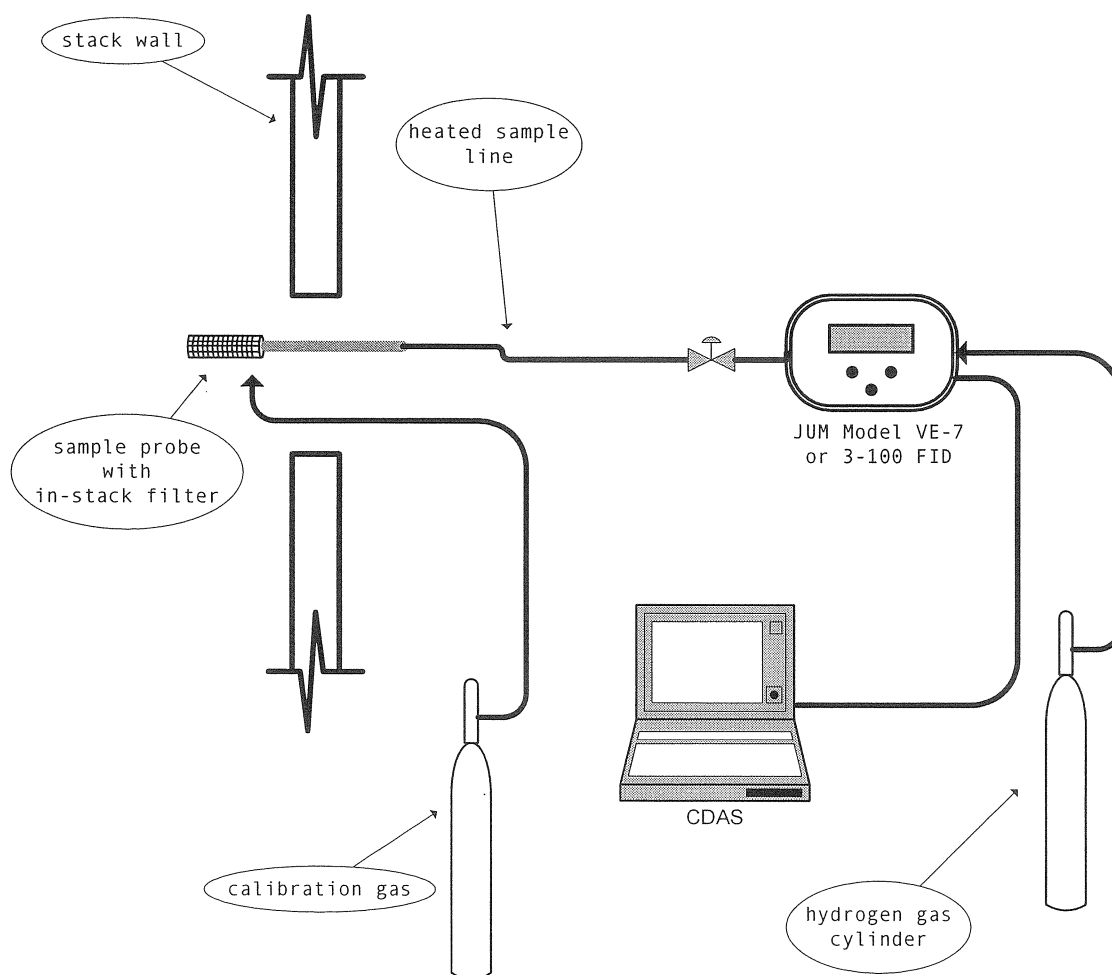
0.00 @ 6" H2O Positive
0.00 @ 6" H2O Negative

Technician: RJ

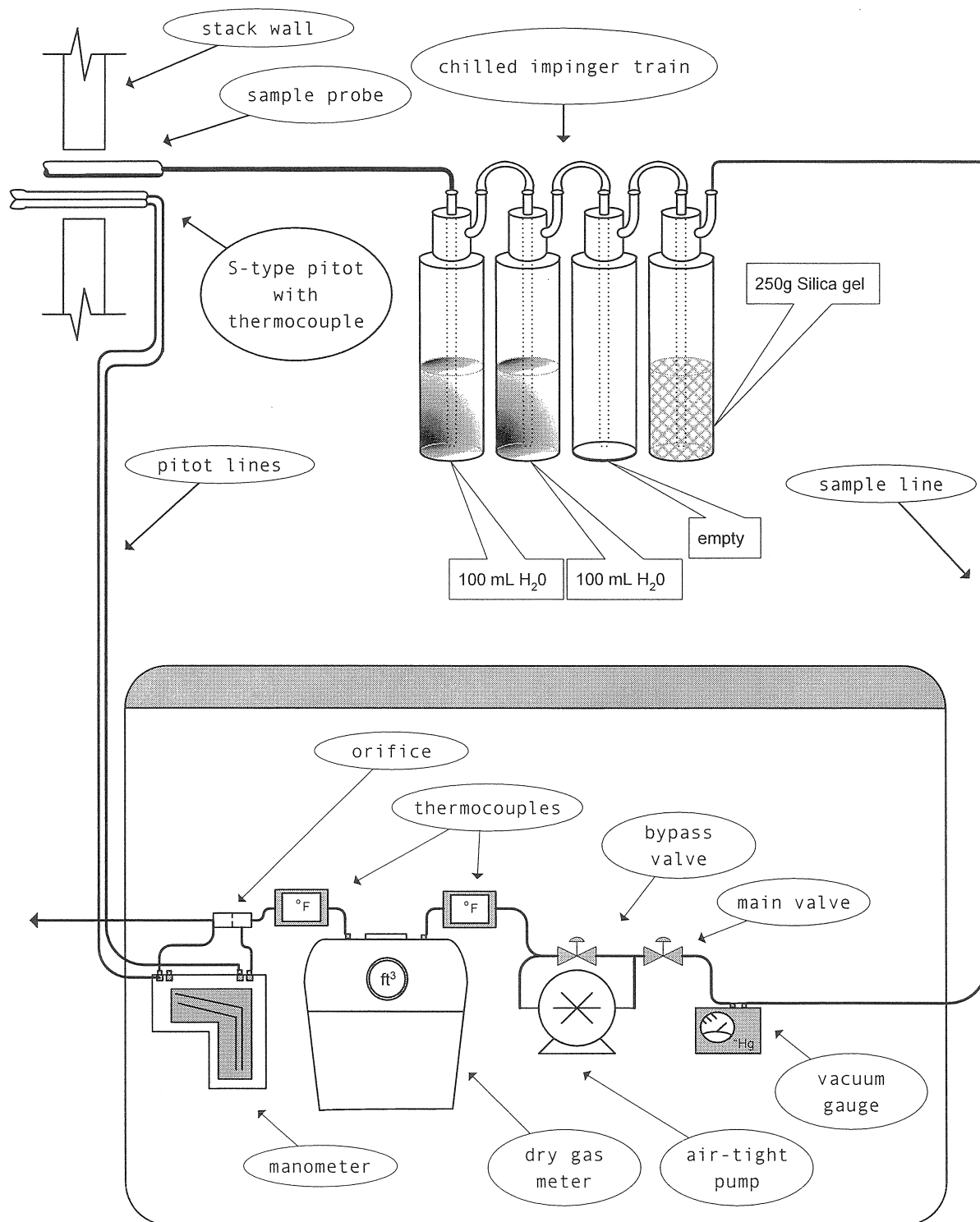
DENVER OFFICE
5530 Marshall Street
Arvada, CO 80002
(303) 420-5949
FAX (303) 420-5920
(800) 268-6213



Appendix Four: Schematics



EPA Method 25A
sampling train schematic



EPA Methods 1, 2, & 4
sampling train schematic