AIR POLLUTION TESTING, INC.
DENVER, DURANGO, SALT LAKE CITY

APT Testing Report
Cimarron [redacted] ENERGY
30" Enclosed Flares

Gas Processing Facility
Greeley, Colorado

Test report prepared for:
Mr. Sean Gabel
Cimarron [redacted] ENERGY

Test report reviewed by:

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Test Date
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APT Project: CIM6132

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Certification

Team Leader Certification:

I certify that all of the sampling and analytical procedures and data presented in this report are authentic and accurate.

Thomas J. Lentzner
B.S. Environmental Engineering
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Reviewer Certification:

I certify that all of the testing details and conclusions are accurate and valid.

Derek Stahl
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Reviewer, Technical Writer

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1. Introduction

Air Pollution Testing, Inc. (APT) was contracted by Cimarron LLC to conduct a series of emissions tests at an enclosed flare stack, 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 (VOC) from one (1) enclosed 30" flare stack which was fed with off gas from various facility processes.

The data collected during testing was used to determine the overall performance of the flares installed.

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

Cimarron – 30" Flare Test **Enclosed Flare Units Sampling and Analytical Methods Summary**		
Location	*Parameter*	*Test Method*
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 (Fyrite)
	Moisture	Method 4: gravimetric
	Methane / Ethane	Method 18: GC/FID
	Total VOC	Method 25A or Method 18: FIA, GC

Table 1.1: Source and Pollutant Summary

Cimarron LLC – 30" Flare Test Test Program Contact Personnel		
Name, Title	*Company Address*	*Phone, FAX*
Mr. Sean Gabel	Cimarron LLC	(800) 822-8755, sgabel@cimarrongas.com
Mr. Tom Lentzner, Project Manager	Air Pollution Testing, Inc. 5530 Marshall Street Arvada, Colorado 80002	(303) 420-5949, (303) 420-5920 fax, ckeefe@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 below. Any emission parameters not found in the table may be found in *Appendix 1*. The following terms are used in the results summaries:

- (°F) – temperature, degrees Fahrenheit
- %vd – diluent concentration, dry volume percent
- %vw – stack gas moisture content, wet volume percent
- dscfm – stack gas flow rate, dry 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 @ C_3H_8)

Cimarron LLC – 30" Flare Test Test Results Summary (06/07/2006)				
	30" Flare			
Run #	**1**	**2**	**3**	**Average**
Start Time	8:59	10:04	11:23	
Stop Time	9:59	11:04	12:23	
Stack Temp (°F)	906	766	575	**749**
O_2 (%vd)	15.0	15.0	15.0	**15.0**
CO_2 (%vd)	2.0	2.0	2.0	**2.0**
H_2O (%vw)	13.2	5.0	2.0	**6.8**
Gas Flow (dscfm)	401	456	510	**456**
TVOC (lb/hr as C_3H_8)	0.009	0.014	0.039	**0.021**
Flash Tank TVOC (lb/hr)	24.70	24.64	24.97	**24.77**
Pipeline Gas TVOC (lb/hr)	2.23	2.23	2.23	**2.23**
Total Inlet VOC Emissions (lb/hr)	26.93	26.86	27.20	**27.00**
TVOC (lb/hr) DRE (%)	99.9	99.9	99.9	**99.9**

Table 2.1 Test Results Summary

3. Methods

APT proposes to test 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 18 – Measurement of Gaseous Organic Compound Emissions by Gas Chromatography

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

4. Test Program Summary

4.1. General

APT determined all emission parameters detailed in Table 4.1. Three, 60-minute test runs were performed for each source. At the source outlet, concurrently collected stack gas flow data was used to calculate mass emission rates from emission concentrations. Method 25A with on-site flame ionization analyzers was used to determine total VOC levels. Tedlar bag samples were collected from the flare exhaust during each VOC sampling period for methane and ethane analysis using a gas chromatograph to correct the data to non-methane/ethane hydrocarbon values. A temperature-controlled, mobile, analytical trailer was used for housing the on-site analyzers.

Cimarron LLC – Flare Tests Sampling and Analytical Methods		
Parameter	*Sampling/Analytical Method*	*Laboratory*
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 (Fyrite)	
H_2O	Method 4: gravimetric	
VOCs	Method 25A: flame ionization analyzer	
	Method 18 (methane, ethane): GC/FID, Tedlar Bags	

Table 4.1: Sampling and Analytical Methods

4.2. Stack Gas Moisture 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.

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 5* for a schematic of the EPA Methods 1 through 4 sampling train.

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 on-site Fyrite wet chemical analysis.

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), dry standard (one atmosphere and 68°F) cubic feet per minute (dscfm), 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 5 – Sampling Train Schematics* 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 was 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.

4.3.1. Methane/Ethane Subtraction – Flare Emissions

At the flare stack, integrated samples were collected in Tedlar bags during each VOC sampling run for subsequent EPA Method 18 analysis for methane and ethane to correct the field total VOC values to non-methane/ethane values.

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Appendix One: Testing Parameters / Sample Calculations

Cimarron
30 Inch Flare
Greely, CO
30" flare
6/7/2006

Field Reference Method Data

	Run #	1	2	3		Average
	Start Time	8:59	10:04	11:23		
	Stop Time	9:59	11:04	12:23		
	Sample Time	60	60	60		
hrs	Assumed Hours of Operation / Year	8,760	8,760	8,760		8,760
D_S	Stack Diameter (inches)	30.0	30.0	30.0		30.0
$\sqrt{\Delta P_{AVG}}$	Average (Delta P)^{½} (" $H_2O)^{½}$	0.050	0.050	0.050		0.050
C_P	Pitot Tube Constant (unitless)	0.81	0.81	0.81		0.81
T_S	Stack Temp (°F)	906	766	575		749
P_{bar}	Barometric Press (mbar)	840	840	840		840
P_{bar}	Barometric Press ("Hg)	24.81	24.81	24.81		24.81
Ps	Stack Pressure ("H_2O)	0.00	0.00	0.00		0.00
Y_d	Meter Y Factor (unitless)	1.002	1.002	1.002		1.002
T_m	Meter Temperature (°F)	91	100	103		98
V_m	Sample Volume (ft^3)	34.872	34.655	35.479		35.002
ΔH	Orifice Setting Delta H ("H_2O)	1.5	1.5	1.5		1.5
V_{lc}	Moisture (g)	90.2	30.6	12.3		44.4
O_2%vd	O_2 (%vd)	15.0	15.0	15.0		15.0
CO_2%vd	CO_2 (%vd)	2.0	2.0	2.0		2.0
N_2%vd	N_2 (%vd)	83.0	83.0	83.0		83.0
wet	TVOC (ppmvw as C_3H_8)	2.9	4.3	10.8		6.0

Laboratory Data

	Run #	1	2	3		Average
	methane (ppmvd)	5.9	4.8	--		5.4
	ethane (ppmvd)	5.0	2.2	--		3.6

Reference Method Calculations

	Run #	1	2	3		Average
V_{mstd}	Sample Volume (dscf)	27.851	27.238	27.766		27.619
V_{wstd}	Moisture Volume (scf)	4.246	1.440	0.579		2.088
B_{ws}	Moisture Content (%/100)	0.132	0.050	0.020		0.068
M_D	Molecular Weight Dry (lb/lb-mole)	28.92	28.92	28.92		28.92
M_A	Molecular Weight Wet (lb/lb-mole)	27.48	28.37	28.70		28.18
V_S	Gas Velocity (ft/sec)	4.9	4.6	4.2		4.5
F_{ACFM}	Gas Flow (acfm)	1,444	1,346	1,229		1,340
F_{DSCFM}	Gas Flow (dscfm)	401	456	510		456
lb/hr	Gas Flow (lb/hr)	1,979	2,123	2,324		2,142
MMBtu/hr	Fuel Flow (MMBtu/hr - M19 calc)	0.78	0.89	0.99		0.89
dry	TVOC (ppmvd as C_3H_8)	3.3	4.5	11.1		6.3
lb/hr	TVOC (lb/hr as C_3H_8)	0.009	0.014	0.039		0.021
tpy	TVOC (tons/year as C_3H_8)	0.040	0.062	0.169		0.091
dry	NMEOC (ppmvd as C_3H_8)	0.0	0.4	6.9		2.4
lb/hr	NMEOC (lb/hr as C_3H_8)	0.000	0.001	0.024		0.008
tpy	NMEOC (tons/year as C_3H_8)	0.00	0.00	0.11		0.04

Reference Method Calculations - Flare Efficiency

	Run #	1	2	3		Average
	Flash Tank Gas Flow (scfh)	250	250	250		250
	Pipeline Natural Gas Flow (scfh)	60	60	60		60
	Total Gas Flow (scfh)	310	310	310		310
lb/hr	Flash Tank TVOC (lb/hr)	24.70	24.64	24.97		24.77
lb/hr	Pipeline Gas TVOC (lb/hr)	2.23	2.23	2.23		2.23
lb/hr	Total Inlet VOC Emissions (lb/hr)	26.93	26.86	27.20		27.00
DRE	TVOC (lb/hr) DRE (%)	99.97	99.95	99.86		99.92

Run 3 methane/ethane bag sample contaminated, average of R1, R2 used.
Run 1 NMEOC subtraction yielded small negative value - value of zero used for emission calculations.

Cimarron	Run 1	
30 Inch Flare		
Greely, CO	Start Time	6/7/2006 8:59
0	Run Length	60
06/07/06	Stop Time	9:59

Calibration Information	
Gas	TVOC
Instrument Range	65
Span Gas Value	14.96
Calibration	
Pretest Calibration	
Zero%	-0.1
Span%	15.3
Post Test Calibration	
Zero%	-1.3
Span%	13.7
Results	
Absolute Bias (Zero)	1.8%
Absolute Bias (Span)	2.5%
Absolute Drift (Zero)	1.8%
Absolute Drift (Span)	2.5%

		Corrected TVOC ppm *2.9*
Run Length (Minutes)	**Time**	**Uncorrected TVOC ppm**
		2.2
1	8:59	2.13
2	9:00	2.94
3	9:01	1.78
4	9:02	2.64
5	9:03	4.40
6	9:04	3.52
7	9:05	2.42
8	9:06	4.70
9	9:07	3.01
10	9:08	3.24
11	9:09	4.01
12	9:10	2.52
13	9:11	3.47
14	9:12	3.28
15	9:13	2.61
16	9:14	4.06
17	9:15	3.29
18	9:16	4.27
19	9:17	5.31
20	9:18	5.88
21	9:19	3.26
22	9:20	4.64
23	9:21	5.41
24	9:22	3.24
25	9:23	5.47
26	9:24	6.16
27	9:25	3.97
28	9:26	5.99
29	9:27	2.31
30	9:28	3.86
31	9:29	2.48
32	9:30	3.11
33	9:31	2.00
34	9:32	2.94
35	9:33	2.03
36	9:34	2.94
37	9:35	2.49
38	9:36	1.89
39	9:37	2.19
40	9:38	3.46
41	9:39	1.50
42	9:40	2.32
43	9:41	1.15
44	9:42	1.19
45	9:43	0.82
46	9:44	-0.16
47	9:45	-0.51
48	9:46	-0.60
49	9:47	-0.68
50	9:48	-0.80
51	9:49	-1.01
52	9:50	-1.06
53	9:51	-1.15
54	9:52	-0.95
55	9:53	-0.90
56	9:54	-0.81
57	9:55	-0.58
58	9:56	-0.99
59	9:57	-0.88
60	9:58	-0.63

Cimarron Run 2
30 Inch Flare
Greely, CO
0
06/07/06

Start Time	6/7/2006 10:04
Run Length	60
Stop Time	11:04

Calibration Information	
Gas	TVOC
Instrument Range	65
Span Gas Value	14.96
Calibration	
Pretest Calibration	
Zero%	-1.3
Span%	13.7
Post Test Calibration	
Zero%	-1.2
Span%	13.0
Results	
Absolute Bias (Zero)	1.8%
Absolute Bias (Span)	3.5%
Absolute Drift (Zero)	0.2%
Absolute Drift (Span)	1.1%

Run Length (Minutes)	Time	Corrected TVOC ppm *4.3* / Uncorrected TVOC ppm
		3.0
1	10:04	0.3
2	10:05	-0.2
3	10:06	-0.3
4	10:07	-0.4
5	10:08	1.0
6	10:09	0.3
7	10:10	0.5
8	10:11	2.0
9	10:12	2.7
10	10:13	0.9
11	10:14	1.5
12	10:15	1.3
13	10:16	1.7
14	10:17	2.7
15	10:18	1.6
16	10:19	2.5
17	10:20	4.4
18	10:21	1.2
19	10:22	2.8
20	10:23	0.6
21	10:24	2.1
22	10:25	1.6
23	10:26	1.7
24	10:27	4.2
25	10:28	4.8
26	10:29	3.2
27	10:30	2.3
28	10:31	2.2
29	10:32	1.5
30	10:33	3.4
31	10:34	3.4
32	10:35	2.6
33	10:36	2.8
34	10:37	4.5
35	10:38	2.4
36	10:39	3.4
37	10:40	2.1
38	10:41	2.2
39	10:42	4.7
40	10:43	5.5
41	10:44	2.9
42	10:45	4.5
43	10:46	4.9
44	10:47	2.8
45	10:48	3.5
46	10:49	2.2
47	10:50	3.9
48	10:51	2.1
49	10:52	2.5
50	10:53	4.6
51	10:54	6.2
52	10:55	2.5
53	10:56	4.0
54	10:57	5.1
55	10:58	2.0
56	10:59	3.4
57	11:00	5.9
58	11:01	7.6
59	11:02	8.5
60	11:03	10.5

Cimarron
30 Inch Flare
Greely, CO
0
06/07/06

Run 3

Start Time	6/7/2006 11:23
Run Length	60
Stop Time	12:23

Calibration Information	
Gas	TVOC
Instrument Range	65
Span Gas Value	14.96
Calibration	
Pretest Calibration	
Zero%	-1.2
Span%	13.0
Post Test Calibration	
Zero%	-1.4
Span%	12.1
Results	
Absolute Bias (Zero)	2.0%
Absolute Bias (Span)	4.9%
Absolute Drift (Zero)	0.3%
Absolute Drift (Span)	1.4%

		Corrected TVOC ppm *10.8*
Run Length (Minutes)	**Time**	**Uncorrected TVOC ppm**
		8.7
1	11:23	2.1
2	11:24	3.5
3	11:25	4.9
4	11:26	6.7
5	11:27	7.8
6	11:28	7.9
7	11:29	10.8
8	11:30	11.3
9	11:31	10.9
10	11:32	12.7
11	11:33	12.6
12	11:34	11.2
13	11:35	10.9
14	11:36	11.4
15	11:37	13.4
16	11:38	13.9
17	11:39	11.5
18	11:40	6.5
19	11:41	8.2
20	11:42	2.0
21	11:43	3.3
22	11:44	4.5
23	11:45	7.2
24	11:46	9.1
25	11:47	10.8
26	11:48	11.8
27	11:49	11.0
28	11:50	11.0
29	11:51	11.5
30	11:52	12.6
31	11:53	6.5
32	11:54	-0.4
33	11:55	-0.4
34	11:56	-0.4
35	11:57	-0.4
36	11:58	0.0
37	11:59	0.4
38	12:00	1.7
39	12:01	3.3
40	12:02	4.1
41	12:03	6.0
42	12:04	9.3
43	12:05	9.2
44	12:06	9.1
45	12:07	11.2
46	12:08	12.2
47	12:09	11.4
48	12:10	14.6
49	12:11	12.7
50	12:12	14.6
51	12:13	15.2
52	12:14	14.4
53	12:15	12.3
54	12:16	13.7
55	12:17	12.5
56	12:18	12.1
57	12:19	12.9
58	12:20	11.1
59	12:21	10.5
60	12:22	11.5

CIM6132
outlet flare
6/21/2006
EPA Method 18: Determination of Gaseous Organic Compounds using Gas Chromatography

Sample Analysis Outlet										
run 1										
Cpd	Inj. 1		Inj. 2		Inj. 3		Average			
ID	RT	AC	RT	AC	RT	AC	RT	AC	OK?	ppm
Methane	1.967	9582.8	1.966	9480.8	1.967	9441.3	1.967	9502	Y	5.91
Ethane	2.100	15882	2.099	15808	2.099	15508.2	2.099	15733	Y	4.95
Propane	2.380	31168.2	2.378	31032.5	2.379	30291.7	2.379	30831	Y	6.99

run 2										
Cpd	Inj. 1		Inj. 2		Inj. 3		Average			
ID	RT	AC	RT	AC	RT	AC	RT	AC	OK?	ppm
Methane	1.965	7610.3	1.965	7790.4	1.965	7705.3	1.965	7702	Y	4.79
Ethane	2.082	7311.3	2.083	6942.8	2.083	6904.8	2.083	7053	Y	2.22
Propane	2.378	9809.6	2.377	10161.8	2.376	10089.6	2.377	10020	Y	2.27

run 3										
Cpd	Inj. 1		Inj. 2		Inj. 3		Average			
ID	RT	AC	RT	AC	RT	AC	RT	AC	OK?	ppm
Methane	1.965	124721	1.964	123920	1.965	124101	1.965	124247	Y	77.24
Ethane	2.099	161984	2.098	161088	2.099	161530	2.099	161534	Y	50.83
Propane	2.376	169697	2.375	168645	2.375	169402	2.375	169248	Y	38.38

Cimarron
30 Inch Flare
Greely, CO
30" flare
6/7/2006

Inlet VOC Data				
Run #	1	2	3	Average
Gas Meter Data				
Flash Tank Gas Flow (scfh)	250	250	250	250
Pipeline Natural Gas Flow (scfh)	60	60	60	60
Total Gas Flow (scfh)	310	310	310	310
Flash Tank Gas TVOC Analysis				
Methane (Mole %)	27.78	27.38	26.79	27.32
Ethane (Mole %)	22.62	22.50	22.36	22.49
Propane (Mole %)	20.24	20.33	20.51	20.36
Isobutane (Mole %)	3.97	4.00	4.07	4.01
N-butane (Mole %)	9.98	10.04	10.31	10.11
Isopentane (Mole %)	2.89	2.90	2.99	2.93
N-pentane (Mole %)	3.17	3.16	3.26	3.20
Hexanes+ (Mole %)	6.24	6.13	6.41	6.26
Pipeline Natural Gas TVOC Analysis				
Methane (Mole %)	89.11	89.11	89.11	89.11
Ethane (Mole %)	0.00	0.00	0.00	0.00
Propane (Mole %)	0.00	0.00	0.00	0.00
Isobutane (Mole %)	0.00	0.00	0.00	0.00
N-butane (Mole %)	0.00	0.00	0.00	0.00
Isopentane (Mole %)	0.00	0.00	0.00	0.00
N-pentane (Mole %)	0.00	0.00	0.00	0.00
Hexanes+ (Mole %)	0.00	0.00	0.00	0.00
Flash Tank Emission Calculations				
Methane (lb/hr)	2.9	2.9	2.8	2.8
Ethane (lb/hr)	4.4	4.4	4.4	4.4
Propane (lb/hr)	5.8	5.8	5.9	5.8
Isobutane (lb/hr)	1.5	1.5	1.5	1.5
N-butane (lb/hr)	3.8	3.8	3.9	3.8
Isopentane (lb/hr)	1.4	1.4	1.4	1.4
N-pentane (lb/hr)	1.5	1.5	1.5	1.5
Hexanes+ (lb/hr)	3.5	3.4	3.6	3.5
Flash Tank TVOC (lb/hr)	**24.7**	**24.6**	**25.0**	**17.5**
Pipeline Natural Gas Emission Calculations				
Methane (lb/hr)	2.2	2.2	2.2	2.2
Ethane (lb/hr)	0.0	0.0	0.0	0.0
Propane (lb/hr)	0.0	0.0	0.0	0.0
Isobutane (lb/hr)	0.0	0.0	0.0	0.0
N-butane (lb/hr)	0.0	0.0	0.0	0.0
Isopentane (lb/hr)	0.0	0.0	0.0	0.0
N-pentane (lb/hr)	0.0	0.0	0.0	0.0
Hexanes+ (lb/hr)	0.0	0.0	0.0	0.0
Pipeline Gas TVOC (lb/hr)	**2.2**	**2.2**	**2.2**	**0.0**
Combined Flash Tank and Pipeline Emissions				
Methane (lb/hr)	5.1	5.1	5.0	5.1
Ethane (lb/hr)	4.4	4.4	4.4	4.4
Propane (lb/hr)	5.8	5.8	5.9	5.8
Isobutane (lb/hr)	1.5	1.5	1.5	1.5
N-butane (lb/hr)	3.8	3.8	3.9	3.8
Isopentane (lb/hr)	1.4	1.4	1.4	1.4
N-pentane (lb/hr)	1.5	1.5	1.5	1.5
Hexanes+ (lb/hr)	3.5	3.4	3.6	3.5
Total Inlet VOC Emissions (lb/hr)	**26.9**	**26.9**	**27.2**	**27.0**

Cimmaron
30 Inch Flare
Estimated Purchased Gas Analysis
7-Jun-06

Determination of Oxygen-Based F Factor (dry basis)

Data Inputs
-from fuel gas analysis

Gas Species	*Volume Percent*
N2	**10.890**
O2	**0.000**
CO	**0.000**
H2	**0.000**
CO2	**0.000**
H2S	**0.000**
CH4	**89.110**
C2H6	**0.000**
C3H8	**0.000**
C4H10	**0.000**
C5H12	**0.000**
C6H14	**0.000**
total	100.000

Check #1: total should be approximately 100.

Calculations Section 1: Constants

Gas Species	*Gas Molecular Weight*	*Gas Heat Content Btu/scf*	*Elemental Weight Percentages in Each Compound*				
			hydrogen H	*carbon C*	*sulfur S*	*nitrogen N*	*oxygen O*
N2	28.01	0	0.0	0.0	0.0	100.0	0.0
O2	32.00	0	0.0	0.0	0.0	0.0	100.0
CO	28.01	321	0.0	42.9	0.0	0.0	57.1
H2	2.02	324	100.0	0.0	0.0	0.0	0.0
CO2	44.01	0	0.0	27.3	0.0	0.0	72.7
H2S	34.08	637	5.9	0.0	94.1	0.0	0.0
CH4	16.04	1,010	25.1	74.9	0.0	0.0	0.0
C2H6	30.07	1,770	20.1	79.9	0.0	0.0	0.0
C3H8	44.10	2,516	18.3	81.7	0.0	0.0	0.0
C4H10	58.12	3,257	17.3	82.7	0.0	0.0	0.0
C5H12	72.15	3,998	16.8	83.2	0.0	0.0	0.0
C6H14	86.18	4,747	16.4	83.6	0.0	0.0	0.0

Calculations Section 2: Fuel Gas Elemental Composition, Weight Percent

Gas Species	*Fuel Gas Elemental Weight Percentage*				
	H	*C*	*S*	*N*	*O*
N2	0.00	0.00	0.00	17.59	0.00
O2	0.00	0.00	0.00	0.00	0.00
CO	0.00	0.00	0.00	0.00	0.00
H2	0.00	0.00	0.00	0.00	0.00
CO2	0.00	0.00	0.00	0.00	0.00
H2S	0.00	0.00	0.00	0.00	0.00
CH4	20.71	61.70	0.00	0.00	0.00
C2H6	0.00	0.00	0.00	0.00	0.00
C3H8	0.00	0.00	0.00	0.00	0.00
C4H10	0.00	0.00	0.00	0.00	0.00
C5H12	0.00	0.00	0.00	0.00	0.00
C6H14	0.00	0.00	0.00	0.00	0.00
total	20.71	61.70	0.00	17.59	0.00
K values	3.64	1.53	0.57	0.14	-0.46

Calculations Section 3: Fuel Gas Weight Percentage by Compound, Heat Content and F Factor

Gas Species	*Fuel Gas Weight Percent*	*Fuel Gas Heat Content*	
		Btu/scf	*Btu/lb*
N2	17.59	0	0
O2	0.00	0	0
CO	0.00	0	0
H2	0.00	0	0
CO2	0.00	0	0
H2S	0.00	0	0
CH4	82.41	900	19,685
C2H6	0.00	0	0
C3H8	0.00	0	0
C4H10	0.00	0	0
C5H12	0.00	0	0
C6H14	0.00	0	0
total	100.00	900	19,685
Molecular Weight (gm/gm-mol)			17.35
Heat Content (Btu/scf)			900.0
Heat Content (Btu/lb)			19,684.7
F Factor (dscf/MMBtu)			**8,751**

Sample Calculations

EPA Methods 1 - 4 : Determination of Stack Gas Velocity and Volumetric Flow Rate
Cimarron LLC - 30" Flare - Run 1 - June 7th, 2006
Sample Calculations

$$\text{sample volume (scf)} = \frac{(17.64)\cdot V_M \cdot Y_D \cdot \left(P_B + \frac{\Delta H}{13.6}\right)}{T_M + 460}$$

$$= \frac{(17.64)\cdot(34.872)\cdot(1.002)\cdot\left[(24.81) + \frac{(1.5)}{13.6}\right]}{[(91) + 460]}$$

$$= 27.851$$

$$\text{moisture volume (scf)} = (0.04707)\cdot V_{LC}$$

$$= (0.04707)\cdot(90.2)$$

$$= 4.246$$

$$\text{moisture content (\%/100)} = \frac{V_{W(STD)}}{\left(V_{M(STD)} + V_{W(STD)}\right)}$$

$$= \frac{(4.246)}{[(27.851) + (4.246)]}$$

$$= 0.132$$

$$\text{molecular weight, dry (grams/mol)} = (0.440)\cdot(\%CO_2) + (0.320)\cdot(\%O_2) + (0.280)\cdot(\%N_2 + \%CO)$$

$$= (0.440)\cdot(2.0) + (0.320)\cdot(15.0) + (0.280)\cdot[(83.0) + (0.0)]$$

$$= 28.92$$

$$\text{molecular weight, actual (grams/mol)} = M_D\cdot(1 - B_{WS}) + (18.0)\cdot B_{WS}$$

$$= (28.92)\cdot[1 - (0.132)] + (18.0)\cdot(0.132)$$

$$= 27.48$$

$$\text{gas velocity (ft/sec)} = (85.49)\cdot C_P \cdot \sqrt{\Delta P}_{AVG} \cdot \sqrt{\frac{T_S + 460}{\left[P_B + \frac{P_S}{(13.6)}\right]\cdot M_A}}$$

$$= (85.49)\cdot(0.81)\cdot(0.050)\cdot \sqrt{\frac{(906) + 460}{\left[(24.81) + \frac{(0.00)}{(13.6)}\right]\cdot(27.48)}}$$

$$= 4.9$$

EPA Methods 1 - 4 : Determination of Stack Gas Velocity and Volumetric Flow Rate
Cimarron LLC - 30" Flare - Run 1 - June 7th, 2006
Sample Calculations (continued)

$$\text{gas flow (acfm)} = (60)\cdot\frac{\pi\cdot\left(\frac{D_S}{12}\right)^2}{4}\cdot V_S$$

$$= (60)\cdot\frac{\pi\cdot\left[\frac{(30.0)}{12}\right]^2}{4}\cdot(4.9)$$

$$= 1{,}444$$

$$\text{gas flow (dscfm)} = (60)\cdot V_S\cdot(1-B_{WS})\cdot\frac{\pi\cdot\left(\frac{D_S}{12}\right)^2}{4}\cdot\frac{T_{STD}\cdot\left[P_B+\frac{P_S}{(13.6)}\right]}{(T_S+460)\cdot P_{STD}}$$

$$= (60)\cdot(4.9)\cdot(1-0.132)\cdot\frac{\pi\cdot\left[\frac{(30)}{12}\right]^2}{4}\cdot\frac{(528)\cdot\left[(24.81)+\frac{(0.00)}{(13.6)}\right]}{[(906)+460]\cdot(29.92)}$$

$$= 401$$

Variables and Abbreviations

B_{WS} - moisture content of the gas (wet volume percent/100)

%CO - carbon monoxide content of the gas (dry volume percent)

$\%CO_2$ - carbon dioxide content of the gas (dry volume percent)

C_P - pitot tube constant (unitless)

D_S - diameter of the stack (inches)

ΔH - pressure differential at dry gas meter exit orifice (inches water)

M_D - molecular weight of the dry gas (grams per mol)

M_A - molecular weight of the wet gas (grams per mol)

$\%N_2$ - nitrogen content of the gas (dry volume percent)

$\%O_2$ - oxygen content of the gas (dry volume percent)

$\sqrt{\Delta P}_{AVG}$ - average square root of the stack gas pitot differential pressure (inches water)

P_B - barometric pressure (inches mercury)

EPA Methods 1 - 4 : Determination of Stack Gas Velocity and Volumetric Flow Rate
Cimarron LLC - 30" Flare - Run 1 - June 7th, 2006
Variables and Abbreviations (continued)

P_S - stack pressure relative to barometric presure (inches water)

P_{STD} - standard pressure (29.92 inches mercury)

T_M - average dry gas meter temperature (°F)

T_S - average stack temperature (°F)

T_{STD} - standard temperature (528 °R)

V_{LC} - volume of moisture collected as a liquid (milliliters)

V_M - volume indicated on dry gas meter (uncorrected actual cubic feet)

V_{MSTD} - volume of gas through dry gas meter (corrected dry standard cubic feet)

V_S - stack gas velocity (feet per second)

V_{WSTD} - volume of moisture collected as a gas at standard conditions (standard cubic feet)

Y_D - dry gas meter calibration factor (unitless)

EPA Method 25A - Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer
Cimarron LLC - 30" Flare - Run 1 - June 7th, 2006
Sample Calculations

$$\text{VOC conc, drift cal (ppmw)} = \frac{\left(\%FS_{STACK} - \%FS_0\right)\cdot[\textit{Span Gas Conc (ppmvd)}]}{\left(\%FS_{SPAN} - \%FS_0\right)}$$

$$= \frac{\left[(2.2) - (-0.7)\right]\cdot(14.96)}{\left[(14.5) - (-0.7)\right]}$$

$$= 2.9$$

$$\text{VOC emissions (lb/hr as } C_3H_8) = [\textit{VOC conc, drift cal (ppmvw)}]\cdot\frac{(F_{DSCFM})}{(1 - B_{WS})}\cdot(6.859\cdot10^{-6})$$

$$= (2.2)\cdot\frac{(401)}{[1-(0.132)]}\cdot(6.859\cdot10^{-6})$$

$$= 0.009$$

Variables and Abbreviations

B_{WS} - moisture content of the gas (wet volume percent/100)

cal - calibrated

conc - concentration

F_{DSCFM} - gas flow (dry standard cubic feet per minute, where standard = 29.92 inches Hg and 68°F)

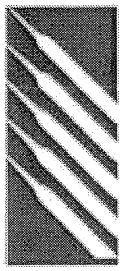
$\%FS_{SPAN}$ - average analyzer reading for span gas at probe tip (percent of full scale)

$\%FS_{STACK}$ - average analyzer reading for stack gas (percent of full scale)

$\%FS_0$ - average analyzer reading for zero gas at probe tip (percent of full scale)

lb/hr - pounds per hour

ppmvw - parts per million, wet volume basis



AIR
POLLUTION
TESTING, INC.

Appendix Two: Field Data

Cimarron
Inch Flare
eely, CO
06/07/06

Linearity Information	
Gas	TVOC
Expected Gas Concentration	50
Instrument Span	65
Span Gas Value	15.0
Bias Check (Zero)	-0.1
Bias Check (Span)	15.3
Gas Concentration	(ppm)
1	0.0
2	15.0
3	26.0
4	50.2
Response	
1	-0.1
2	15.5
3	26.5
4	50.2
Difference	
1	0.1
2	0.5
3	0.5
4	0.0
Results	
Zero Bias	0.00%
Span Bias	0.31%
Max Calibration Error	0.83%

Air Pollution Testing, Inc. : Analyzer Calibration Datasheet

Facility : 30" flare	Date : 6/7/06
Location : Greely, CO	APT Job # : CIM 6132
Unit :	Page # : 1 /2

Analyzer Information

Analyzer Type	TVOC					
Analyzer ID #	VE7-1					
Analyzer Scale	0-100					
Calibration Range	0-65					

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

Analyzer Type	TVOC					
Zero	0 ✓					
CC#	82073					
Expiration date						
Low	14.96 ✓					
CC#	38296					
Expiration date	2/09					
Mid	26.0 ✓					
CC#	114208					
Expiration date	2/09					
High	50.82 ✓					
CC#	91113					
Expiration date	4/07					

Calibration Error

Analyzer Type	TVOC					
Zero	-0.1 ✓					
Low	15.5 ✓					
Mid	26.5 ✓					
High	50.2 ✓					

Initial Bias Check

Analyzer Type	TVOC					
Zero	-0.1 ✓					
Low	15.43 ✓					
Mid						
High						

Air Pollution Testing, Inc. : Analyzer Calibration Data Sheet

Facility : 30" flare
Location : Greely, CO
Unit :
Date : 6/7/06
APT Job # : CIM613c
Page # : 2/2

Run # : 1 Start Time : 859 Stop Time : 958

Calibration Results

Analyzer Type	TVOC					
Zero	-1.3					
Low	13.7					
Mid						
High						

Run # : 2 Start Time : 1004 Stop Time : 1103

Calibration Results

Analyzer Type	TVOC					
Zero	-1.2					
Low						
Mid	13.0					
High						

Run # : 3 Start Time : 1123 Stop Time : 1223

Calibration Results

Analyzer Type	TVOC					
Zero	-1.4					
Low						
Mid	12.1					
High						

2X14 , 2X16

flash Gas

R1 A	9:15 – 930
R1 B	9:45 - 9:55
R2 A	1010 – 1015
R2 B	1050 - 1055
R3 A	1143
R3 B	1153

All 3 runs

Flash
- 250 scf/h
- 2400 btu/scf

Porch-
- 900 btu/scf
- 60 scf/hr

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

Job # : CIM 6132
Facility : 30" Flare
Date :
Probe ID : P.420
Pitot Constant : .841

Operator : KH
Site : 30" Flare

Points : 1 2 3 4 5 6 7 8 9 10 11 12

Stack Diameter (inches) : 30
Upstream Disturbance (inches) : 10
Downstream Disturbance (inches) : 44
Schematic of Sampling Location :

	Run # : 1	Run # : 2	Run # : 3
O2% :	15	15	15
CO2% :	2	2	2
H20% :	measured / estimate	measured / estimate	measured / estimate
Ps ("H2O) :	0.000	0.000	0.000
Pb (mbar) :	840	840	840
Start Time :	9:10	10:20	11:30
Stop Time :	9:17	10:27	11:35
Post Test Pitot Leak Check Good? :	✓	✓	✓

Point #	Delta P	Ts	Notes
1 - 1	less than .0025	880	
2	< .0025	879	
3	< .0025	885	
4	< .0025	885	
5	< .0025	890	
6	< .0025	895	
7	< .0025	940	
8	< .0025	920	
2 - 1	< .0025	890	
2	< .0025	893	
3	< .0025	902	
4	< .0025	910	
5	< .0025	930	
6	< .0025	940	
7	< .0025	925	
8	< .0025	937	
Averages :	< .05	906	

Point #	Delta P	Ts	Notes
1 - 1	< .0025	805	
2	< .0025	802	
3	< .0025	775	
4	< .0025	780	
5	< .0025	755	
6	< .0025	780	
7	< .0025	773	
8	< .0025	760	
2 - 1	< .0025	710	
2	< .0025	725	
3	< .0025	732	
4	< .0025	755	
5	< .0025	757	
6	< .0025	773	
7	< .0025	780	
2 - 8	< .0025	792	
Averages :	< .05	765.9	

All Values less than .0025

Point #	Delta P	Ts	Notes
1 - 1	< .0025	496	
2	< .0025	502	
3	< .0025	507	
4	< .0025	513	
5	< .0025	515	
6	< .0025	527	
7	< .0025	543	
8	< .0025	567	
2 - 1	< .0025	582	
2	< .0025	595	
3	< .0025	610	
4	< .0025	617	
5	< .0025	625	
6	< .0025	650	
7	< .0025	665	
8	< .0025	679	
Averages :	< .05	574.6	

All Values less than .0025

Reviewers Signature :

Air Pollution Testing, Inc. : EPA Method 4 - Moisture Determination Datasheet

APT Job #: CIM 6132	Date: 6-7-06	CO2 (%):	O2 (%):
Location: 30" Flare	Operator: KH	Ambient Temperature (oF): 85	Barometric Pressure (mbar): 840
Run # 1	Meter Box ID: M5-24	Probe Length (ft): 3	Moisture (grams):
Meter Box Yd: 1.002	Meter DH@: 1.66	Static Pressure (" H2O): 0	Start Time: 9:00
Pre-Test Pump Leak Check: 0.0@8"Hg	Post-Test Pump Leak Check: 0.0@8"Hg	Method: 4	Stop Time: 9:45

Inlet Pressure
20z/in²
~~4.5 oz.~~

Sampling Time (minutes)	Vacuum (" Hg)	Orifice Setting (" H2O)	Meter Temp. Inlet (oF)	Meter Temp. Outlet (oF)	Condenser Temp. (oF)	Meter Volume (ft3) Initial Volume	Notes
						261.110	
5	2	1.5	90	88	40	265.0	Stack Temp
10	2	1.5	90	88	41	269.0	850-940
15	2	1.5	90	88	42	272.8	
20	2	1.5	91	89	42	276.6	
25	2	1.5	92	90	42	280.4	
30	2	1.5	93	90	43	284.3	
35	2	1.5	95	91	43	288.2	
40	2	1.5	97	93	44	292.1	
45	2	1.5	97	94	45	295.982	
total	maximum	average	average		maximum	difference	
45	2	1.5	91.4		45	34.872	

Scematic of Stack :

Stack ID (inches):	30
Upstream Disturbance (inches):	10
Downstream Disturbance (inches):	44

Moisture Determination

Imp. #	Tare	Final	Gain
1	467.3	537.6	70.3
2	426.2	431.8	5.6
3	306.7	312.5	5.8
4	493.3	501.8	~~8.5~~
		Total	90.2

Reviewers Signature

Air Pollution Testing, Inc. : EPA Method 4 - Moisture Determination Datasheet

APT Job #: CIM 6132	Date: 6-7-06	CO2 (%):	O2 (%):
Location: 30" Flare	Operator: KH	Ambient Temperature (oF): 90	Barometric Pressure (mbar): 840
Run # 2	Meter Box ID: 24	Probe Length (ft): 3	Moisture (grams):
Meter Box Yd: 1.002	Meter DH@: 1.66	Static Pressure (" H2O): 0	Start Time: 10:10
Pre-Test Pump Leak Check: 0.028" Hg	Post-Test Pump Leak Check:	Method: 4	Stop Time: 10:55

Sampling Time (minutes)	Vacuum (" Hg)	Orifice Setting (" H2O)	Meter Temp. Inlet (oF)	Meter Temp. Outlet (oF)	Condenser Temp. (oF)	Meter Volume (ft3) Initial Volume	Notes
						296.044	
5	1	1.5	97	96	40	299.9	Stack Temp.
10	1	1.5	99	99	41	303.7	506 - 840
15	1	1.5	100	99	42	307.6	
20	1	1.5	100	99	43	311.5	
25	1	1.5	101	100	44	315.4	
30	1	1.5	102	101	44	319.3	
35	1	1.5	102	101	45	323.1	
40	1	1.5	103	101	45	326.7	
45	1	1.5	103	102	46	330.699	
total	maximum	average	average		maximum	difference	
45	1	1.5	100.27		46	34.655	

Scematic of Stack :

Stack ID (inches):	30
Upstream Disturbance (inches):	10
Downstream Disturbance (inches):	44

Moisture Determination

Imp. #	Tare	Final	Gain
1	537.6	550.2	12.6
2	431.8	441.7	9.9
3	312.5	316.0	3.5
4	501.8	506.4	4.6
		Total	30.6

Reviewers Signature

Air Pollution Testing, Inc. : EPA Method 4 - Moisture Determination Datasheet

APT Job #: CIM 6132	Date: 6-7-06	CO2 (%):	O2 (%):
Location: 30" Flare	Operator: KH	Ambient Temperature (oF): 93	Barometric Pressure (mbar): 840
Run # 3	Meter Box ID: 24	Probe Length (ft): 3	Moisture (grams):
Meter Box Yd: 1.002	Meter DH@: 1.66	Static Pressure (" H2O): 0	Start Time: 11:15
Pre-Test Pump Leak Check: 0.0@8"Hg	Post-Test Pump Leak Check:	Method: 4	Stop Time: 12:00

Sampling Time (minutes)	Vacuum (" Hg)	Orifice Setting (" H2O)	Meter Temp. Inlet (oF)	Meter Temp. Outlet (oF)	Condenser Temp. (oF)	Meter Volume (ft3) Initial Volume	Notes
						330.835	
5	1	1.5	101	102	41	334.9	Stack Temp
10	1	1.5	101	102	42	338.8	496-797
15	1	1.5	102	103	42	342.7	
20	1	1.5	102	102	43	346.7	
25	1	1.5	103	102	44	350.6	
30	1	1.5	104	103	44	354.3	
35	1	1.5	104	103	45	358.5	
40	1	1.5	104	103	46	362.4	
45	1	1.5	104	104	46	366.314	
total	maximum	average	average	maximum	~~difference~~		
45	1	1.5	102.72	46	35.479		

Scematic of Stack :

Stack ID (inches):	30
Upstream Disturbance (inches):	10
Downstream Disturbance (inches):	44

Moisture Determination

Imp. #	Tare	Final	Gain
1	550.2	552.7	2.5
2	441.7	444.7	3
3	316.0	318.4	2.4
4	506.4	510.8	4.4
		Total	12.3

Reviewers Signature

Calibration Log

Cimarron
30 Inch Flare
Greely, CO
June 7, 2006

Time	TVOC (ppmvw as C_3H_8)	
6/7/2006 8:35	484.9	
6/7/2006 8:36	433.7	
6/7/2006 8:36	465.8	
6/7/2006 8:36	475.8	
6/7/2006 8:36	516.8	
6/7/2006 8:36	416.1	
6/7/2006 8:36	515.9	
6/7/2006 8:37	607.8	
6/7/2006 8:37	544.5	
6/7/2006 8:37	37.4	
6/7/2006 8:37	32.3	
6/7/2006 8:37	22.0	
6/7/2006 8:37	35.0	
6/7/2006 8:38	49.2	
6/7/2006 8:38	47.7	
6/7/2006 8:38	40.4	
6/7/2006 8:38	53.4	
6/7/2006 8:38	41.1	
6/7/2006 8:38	101.5	
6/7/2006 8:39	71.7	
6/7/2006 8:39	54.9	
6/7/2006 8:39	94.5	
6/7/2006 8:39	57.7	
6/7/2006 8:39	62.3	
6/7/2006 8:39	47.0	
6/7/2006 8:40	43.5	
6/7/2006 8:40	233.9	
6/7/2006 8:40	2900.2	Start Lin
6/7/2006 8:40	65.4	
6/7/2006 8:40	13.9	
6/7/2006 8:40	8.2	
6/7/2006 8:41	6.3	
6/7/2006 8:41	6.3	
6/7/2006 8:41	3.0	
6/7/2006 8:41	-5.6	
6/7/2006 8:41	-10.2	
6/7/2006 8:41	-12.8	
6/7/2006 8:42	-10.6	
6/7/2006 8:42	-10.2	
6/7/2006 8:42	-7.7	
6/7/2006 8:42	1.3	
6/7/2006 8:42	2.7	
6/7/2006 8:42	4.2	
6/7/2006 8:43	-16.0	
6/7/2006 8:43	-2.3	
6/7/2006 8:43	9.6	

Linearity

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 8:43	11.4
6/7/2006 8:43	4.8
6/7/2006 8:43	-0.4
6/7/2006 8:44	-0.3
6/7/2006 8:44	-0.1
6/7/2006 8:44	-0.2
6/7/2006 8:44	-0.1
6/7/2006 8:44	-0.1
6/7/2006 8:44	-0.4
6/7/2006 8:45	-0.1
6/7/2006 8:45	-0.2
6/7/2006 8:45	0.0
6/7/2006 8:45	-0.1
6/7/2006 8:45	31.6
6/7/2006 8:45	48.8
6/7/2006 8:46	49.3
6/7/2006 8:46	49.3
6/7/2006 8:46	49.3
6/7/2006 8:46	49.6
6/7/2006 8:46	49.8
6/7/2006 8:46	49.8
6/7/2006 8:47	49.9
6/7/2006 8:47	49.9
6/7/2006 8:47	50.1
6/7/2006 8:47	50.3
6/7/2006 8:47	50.0
6/7/2006 8:47	50.2
6/7/2006 8:48	50.3
6/7/2006 8:48	50.2
6/7/2006 8:48	50.3
6/7/2006 8:48	50.2 H
6/7/2006 8:48	50.2
6/7/2006 8:48	49.8
6/7/2006 8:49	25.2
6/7/2006 8:49	26.2
6/7/2006 8:49	26.0
6/7/2006 8:49	26.3
6/7/2006 8:49	25.8
6/7/2006 8:49	26.5 M
6/7/2006 8:50	26.5
6/7/2006 8:50	26.7
6/7/2006 8:50	26.4
6/7/2006 8:50	26.4
6/7/2006 8:50	26.5
6/7/2006 8:50	22.4
6/7/2006 8:51	15.2
6/7/2006 8:51	15.4
6/7/2006 8:51	15.0
6/7/2006 8:51	15.4 L
6/7/2006 8:51	15.5
6/7/2006 8:51	15.1

Calibration Log

Time	TVOC (ppmvw as C_3H_8)	
6/7/2006 8:52	15.1	
6/7/2006 8:52	15.1	
6/7/2006 8:52	15.4	
6/7/2006 8:52	15.1	
6/7/2006 8:52	13.2	
6/7/2006 8:52	3.9	
6/7/2006 8:53	2.5	
6/7/2006 8:53	2.9	
6/7/2006 8:53	3.2	
6/7/2006 8:53	2.4	
6/7/2006 8:53	2.8	
6/7/2006 8:53	2.8	
6/7/2006 8:54	3.4	
6/7/2006 8:54	3.3	
6/7/2006 8:54	3.3	
6/7/2006 8:54	3.2	
6/7/2006 8:54	3.8	
6/7/2006 8:54	3.9	
6/7/2006 8:55	3.9	Start Bias BIAS ✓
6/7/2006 8:55	2.6	
6/7/2006 8:55	2.0	
6/7/2006 8:55	2.9	
6/7/2006 8:55	2.4	
6/7/2006 8:55	3.2	
6/7/2006 8:56	16.8	
6/7/2006 8:56	15.4	
6/7/2006 8:56	**15.3**	S
6/7/2006 8:56	**15.3**	
6/7/2006 8:56	15.2	
6/7/2006 8:56	8.4	
6/7/2006 8:57	0.1	
6/7/2006 8:57	0.0	
6/7/2006 8:57	**-0.1**	
6/7/2006 8:57	**-0.1**	
6/7/2006 8:57	-0.1	
6/7/2006 8:57	-0.1	
6/7/2006 8:58	-0.1	
6/7/2006 8:58	-0.1	
6/7/2006 8:58	-0.1	
6/7/2006 8:58	2.7	
6/7/2006 8:58	3.0	
6/7/2006 8:58	3.2	
6/7/2006 8:59	1.3	Run 1
6/7/2006 8:59	1.1	
6/7/2006 8:59	1.2	
6/7/2006 8:59	1.5	
6/7/2006 8:59	2.3	
6/7/2006 8:59	2.1	
6/7/2006 9:00	2.3	
6/7/2006 9:00	2.6	
6/7/2006 9:00	2.0	

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:00	1.7
6/7/2006 9:00	2.0
6/7/2006 9:00	3.1
6/7/2006 9:01	3.0
6/7/2006 9:01	3.6
6/7/2006 9:01	3.5
6/7/2006 9:01	2.9
6/7/2006 9:01	1.5
6/7/2006 9:01	1.1
6/7/2006 9:02	1.5
6/7/2006 9:02	1.3
6/7/2006 9:02	2.1
6/7/2006 9:02	2.2
6/7/2006 9:02	2.4
6/7/2006 9:02	2.9
6/7/2006 9:03	1.8
6/7/2006 9:03	1.4
6/7/2006 9:03	2.1
6/7/2006 9:03	3.4
6/7/2006 9:03	4.2
6/7/2006 9:03	3.4
6/7/2006 9:04	4.1
6/7/2006 9:04	3.8
6/7/2006 9:04	4.9
6/7/2006 9:04	5.1
6/7/2006 9:04	5.1
6/7/2006 9:04	4.5
6/7/2006 9:05	4.1
6/7/2006 9:05	3.1
6/7/2006 9:05	3.0
6/7/2006 9:05	2.7
6/7/2006 9:05	3.7
6/7/2006 9:05	2.9
6/7/2006 9:06	3.7
6/7/2006 9:06	2.1
6/7/2006 9:06	1.2
6/7/2006 9:06	2.2
6/7/2006 9:06	2.5
6/7/2006 9:06	2.6
6/7/2006 9:07	4.1
6/7/2006 9:07	5.1
6/7/2006 9:07	4.7
6/7/2006 9:07	5.3
6/7/2006 9:07	6.4
6/7/2006 9:07	4.1
6/7/2006 9:08	1.9
6/7/2006 9:08	2.4
6/7/2006 9:08	3.3
6/7/2006 9:08	3.1
6/7/2006 9:08	3.3
6/7/2006 9:08	3.3

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:09	3.1
6/7/2006 9:09	2.8
6/7/2006 9:09	3.3
6/7/2006 9:09	3.6
6/7/2006 9:09	3.5
6/7/2006 9:09	4.2
6/7/2006 9:10	4.9
6/7/2006 9:10	3.8
6/7/2006 9:10	2.7
6/7/2006 9:10	3.7
6/7/2006 9:10	4.8
6/7/2006 9:10	4.4
6/7/2006 9:11	2.3
6/7/2006 9:11	2.0
6/7/2006 9:11	2.0
6/7/2006 9:11	1.9
6/7/2006 9:11	2.4
6/7/2006 9:11	3.0
6/7/2006 9:12	3.1
6/7/2006 9:12	2.8
6/7/2006 9:12	3.2
6/7/2006 9:12	4.5
6/7/2006 9:12	4.2
6/7/2006 9:12	4.9
6/7/2006 9:13	4.8
6/7/2006 9:13	3.5
6/7/2006 9:13	2.4
6/7/2006 9:13	2.3
6/7/2006 9:13	1.8
6/7/2006 9:13	2.8
6/7/2006 9:14	2.3
6/7/2006 9:14	3.1
6/7/2006 9:14	2.7
6/7/2006 9:14	1.8
6/7/2006 9:14	2.9
6/7/2006 9:14	4.2
6/7/2006 9:15	4.2
6/7/2006 9:15	3.1
6/7/2006 9:15	3.6
6/7/2006 9:15	4.2
6/7/2006 9:15	5.2
6/7/2006 9:15	5.2
6/7/2006 9:16	4.9
6/7/2006 9:16	3.8
6/7/2006 9:16	1.2
6/7/2006 9:16	2.2
6/7/2006 9:16	2.5
6/7/2006 9:16	1.7
6/7/2006 9:17	3.0
6/7/2006 9:17	3.0
6/7/2006 9:17	4.5

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:17	8.3
6/7/2006 9:17	5.1
6/7/2006 9:17	4.7
6/7/2006 9:18	5.1
6/7/2006 9:18	5.1
6/7/2006 9:18	5.7
6/7/2006 9:18	6.6
6/7/2006 9:18	4.7
6/7/2006 9:18	5.6
6/7/2006 9:19	5.0
6/7/2006 9:19	8.1
6/7/2006 9:19	6.3
6/7/2006 9:19	6.7
6/7/2006 9:19	3.6
6/7/2006 9:19	2.8
6/7/2006 9:20	2.5
6/7/2006 9:20	2.5
6/7/2006 9:20	3.6
6/7/2006 9:20	4.3
6/7/2006 9:20	3.9
6/7/2006 9:20	4.2
6/7/2006 9:21	4.5
6/7/2006 9:21	4.0
6/7/2006 9:21	5.4
6/7/2006 9:21	4.4
6/7/2006 9:21	5.4
6/7/2006 9:21	6.2
6/7/2006 9:22	6.3
6/7/2006 9:22	6.5
6/7/2006 9:22	7.2
6/7/2006 9:22	4.0
6/7/2006 9:22	2.2
6/7/2006 9:22	2.2
6/7/2006 9:23	2.4
6/7/2006 9:23	2.9
6/7/2006 9:23	3.4
6/7/2006 9:23	3.6
6/7/2006 9:23	4.9
6/7/2006 9:23	4.7
6/7/2006 9:24	5.5
6/7/2006 9:24	5.4
6/7/2006 9:24	5.3
6/7/2006 9:24	5.4
6/7/2006 9:24	6.5
6/7/2006 9:24	5.6
6/7/2006 9:25	6.5
6/7/2006 9:25	7.3
6/7/2006 9:25	7.2
6/7/2006 9:25	6.3
6/7/2006 9:25	4.1
6/7/2006 9:25	3.1

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:26	3.1
6/7/2006 9:26	3.6
6/7/2006 9:26	4.6
6/7/2006 9:26	4.4
6/7/2006 9:26	5.1
6/7/2006 9:26	7.0
6/7/2006 9:27	5.3
6/7/2006 9:27	5.8
6/7/2006 9:27	6.4
6/7/2006 9:27	6.6
6/7/2006 9:27	4.8
6/7/2006 9:27	2.6
6/7/2006 9:28	1.9
6/7/2006 9:28	1.7
6/7/2006 9:28	2.1
6/7/2006 9:28	2.5
6/7/2006 9:28	3.1
6/7/2006 9:28	3.4
6/7/2006 9:29	3.6
6/7/2006 9:29	5.2
6/7/2006 9:29	5.4
6/7/2006 9:29	3.1
6/7/2006 9:29	2.5
6/7/2006 9:29	2.4
6/7/2006 9:30	2.5
6/7/2006 9:30	2.3
6/7/2006 9:30	2.2
6/7/2006 9:30	2.5
6/7/2006 9:30	3.1
6/7/2006 9:30	3.5
6/7/2006 9:31	3.4
6/7/2006 9:31	3.7
6/7/2006 9:31	4.3
6/7/2006 9:31	2.7
6/7/2006 9:31	1.1
6/7/2006 9:31	1.6
6/7/2006 9:32	2.0
6/7/2006 9:32	2.3
6/7/2006 9:32	1.9
6/7/2006 9:32	1.7
6/7/2006 9:32	2.4
6/7/2006 9:32	2.3
6/7/2006 9:33	3.3
6/7/2006 9:33	3.5
6/7/2006 9:33	4.0
6/7/2006 9:33	2.7
6/7/2006 9:33	1.9
6/7/2006 9:33	1.6
6/7/2006 9:34	1.3
6/7/2006 9:34	1.3
6/7/2006 9:34	1.7

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:34	2.3
6/7/2006 9:34	4.0
6/7/2006 9:34	2.0
6/7/2006 9:35	2.0
6/7/2006 9:35	3.1
6/7/2006 9:35	3.0
6/7/2006 9:35	3.8
6/7/2006 9:35	3.8
6/7/2006 9:35	3.5
6/7/2006 9:36	3.7
6/7/2006 9:36	2.5
6/7/2006 9:36	1.6
6/7/2006 9:36	2.1
6/7/2006 9:36	1.6
6/7/2006 9:36	1.8
6/7/2006 9:37	1.3
6/7/2006 9:37	1.5
6/7/2006 9:37	2.6
6/7/2006 9:37	2.3
6/7/2006 9:37	1.9
6/7/2006 9:37	1.7
6/7/2006 9:38	3.0
6/7/2006 9:38	2.2
6/7/2006 9:38	1.8
6/7/2006 9:38	2.1
6/7/2006 9:38	2.3
6/7/2006 9:38	5.2
6/7/2006 9:39	5.7
6/7/2006 9:39	5.2
6/7/2006 9:39	2.6
6/7/2006 9:39	1.4
6/7/2006 9:39	0.7
6/7/2006 9:39	1.5
6/7/2006 9:40	1.5
6/7/2006 9:40	0.7
6/7/2006 9:40	1.4
6/7/2006 9:40	1.9
6/7/2006 9:40	2.0
6/7/2006 9:40	2.4
6/7/2006 9:41	3.4
6/7/2006 9:41	2.7
6/7/2006 9:41	2.8
6/7/2006 9:41	1.0
6/7/2006 9:41	1.7
6/7/2006 9:41	1.2
6/7/2006 9:42	0.4
6/7/2006 9:42	1.5
6/7/2006 9:42	1.8
6/7/2006 9:42	0.8
6/7/2006 9:42	1.2
6/7/2006 9:42	1.4

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 9:43	1.0
6/7/2006 9:43	0.8
6/7/2006 9:43	1.8
6/7/2006 9:43	1.3
6/7/2006 9:43	0.8
6/7/2006 9:43	1.3
6/7/2006 9:44	1.0
6/7/2006 9:44	1.6
6/7/2006 9:44	1.3
6/7/2006 9:44	-0.3
6/7/2006 9:44	0.0
6/7/2006 9:44	0.1
6/7/2006 9:45	0.4
6/7/2006 9:45	-0.1
6/7/2006 9:45	0.0
6/7/2006 9:45	-0.6
6/7/2006 9:45	-0.7
6/7/2006 9:45	-0.6
6/7/2006 9:46	-0.4
6/7/2006 9:46	-0.4
6/7/2006 9:46	-0.4
6/7/2006 9:46	-0.5
6/7/2006 9:46	-0.7
6/7/2006 9:46	-0.8
6/7/2006 9:47	-0.8
6/7/2006 9:47	-0.6
6/7/2006 9:47	-0.6
6/7/2006 9:47	-0.5
6/7/2006 9:47	-0.4
6/7/2006 9:47	-0.7
6/7/2006 9:48	-0.7
6/7/2006 9:48	-0.8
6/7/2006 9:48	-0.7
6/7/2006 9:48	-0.7
6/7/2006 9:48	-0.6
6/7/2006 9:48	-1.0
6/7/2006 9:49	-0.9
6/7/2006 9:49	-0.9
6/7/2006 9:49	-0.8
6/7/2006 9:49	-0.5
6/7/2006 9:49	-0.8
6/7/2006 9:49	-1.0
6/7/2006 9:50	-1.1
6/7/2006 9:50	-0.9
6/7/2006 9:50	-0.9
6/7/2006 9:50	-1.1
6/7/2006 9:50	-1.1
6/7/2006 9:50	-1.1
6/7/2006 9:51	-1.1
6/7/2006 9:51	-1.1
6/7/2006 9:51	-1.0

Calibration Log

Time	TVOC (ppmvw as C_3H_8)	
6/7/2006 9:51	-1.1	
6/7/2006 9:51	-1.1	
6/7/2006 9:51	-1.1	
6/7/2006 9:52	-1.2	
6/7/2006 9:52	-1.2	
6/7/2006 9:52	-1.1	
6/7/2006 9:52	-1.2	
6/7/2006 9:52	-1.1	
6/7/2006 9:52	-1.1	
6/7/2006 9:53	-1.1	
6/7/2006 9:53	-1.0	
6/7/2006 9:53	-0.9	
6/7/2006 9:53	-0.8	
6/7/2006 9:53	-0.8	
6/7/2006 9:53	-0.8	
6/7/2006 9:54	-0.9	
6/7/2006 9:54	-1.0	
6/7/2006 9:54	-1.0	
6/7/2006 9:54	-1.0	
6/7/2006 9:54	-0.8	
6/7/2006 9:54	-0.6	
6/7/2006 9:55	-0.6	
6/7/2006 9:55	-0.7	
6/7/2006 9:55	-1.0	
6/7/2006 9:55	-1.0	
6/7/2006 9:55	-1.1	
6/7/2006 9:55	-0.9	
6/7/2006 9:56	-0.8	
6/7/2006 9:56	-0.8	
6/7/2006 9:56	-0.4	
6/7/2006 9:56	0.2	
6/7/2006 9:56	-0.8	
6/7/2006 9:56	-1.0	
6/7/2006 9:57	-1.0	
6/7/2006 9:57	-1.0	
6/7/2006 9:57	-0.9	
6/7/2006 9:57	-1.0	
6/7/2006 9:57	-1.1	
6/7/2006 9:57	-0.9	
6/7/2006 9:58	-0.8	
6/7/2006 9:58	-1.0	
6/7/2006 9:58	-1.1	
6/7/2006 9:58	-0.8	
6/7/2006 9:58	-0.8	
6/7/2006 9:58	-0.7	Run 1
6/7/2006 9:59	-0.5	
6/7/2006 9:59	-0.7	
6/7/2006 9:59	-0.6	
6/7/2006 9:59	-0.7	Cal R1
6/7/2006 9:59	-0.8	
6/7/2006 9:59	-1.1	

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:00	25.5
6/7/2006 10:00	1.5
6/7/2006 10:00	-1.0
6/7/2006 10:00	-1.2
6/7/2006 10:00	-1.2
6/7/2006 10:00	-1.3
6/7/2006 10:01	-1.3
6/7/2006 10:01	-1.3
6/7/2006 10:01	-1.3
6/7/2006 10:01	-1.3
6/7/2006 10:01	-1.3
6/7/2006 10:01	-0.4
6/7/2006 10:02	13.2
6/7/2006 10:02	13.7
6/7/2006 10:02	13.7
6/7/2006 10:02	13.7
6/7/2006 10:02	13.7
6/7/2006 10:02	13.7
6/7/2006 10:03	13.7
6/7/2006 10:03	13.7
6/7/2006 10:03	13.7
6/7/2006 10:03	13.7
6/7/2006 10:03	13.7
6/7/2006 10:03	13.3
6/7/2006 10:04	3.6
6/7/2006 10:04	0.7
6/7/2006 10:04	1.6
6/7/2006 10:04	1.0
6/7/2006 10:04	0.4
6/7/2006 10:04	0.6
6/7/2006 10:05	0.0
6/7/2006 10:05	0.8
6/7/2006 10:05	0.6
6/7/2006 10:05	0.2
6/7/2006 10:05	-0.7
6/7/2006 10:05	-0.3
6/7/2006 10:06	-0.3
6/7/2006 10:06	-0.1
6/7/2006 10:06	-0.3
6/7/2006 10:06	-0.1
6/7/2006 10:06	-0.2
6/7/2006 10:06	-0.3
6/7/2006 10:07	-0.4
6/7/2006 10:07	0.2
6/7/2006 10:07	0.0
6/7/2006 10:07	-0.5
6/7/2006 10:07	-0.6
6/7/2006 10:07	-1.0
6/7/2006 10:08	-0.7
6/7/2006 10:08	-0.6
6/7/2006 10:08	-0.6

Run 2

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:08	-0.2
6/7/2006 10:08	0.7
6/7/2006 10:08	1.0
6/7/2006 10:09	3.4
6/7/2006 10:09	1.0
6/7/2006 10:09	-0.4
6/7/2006 10:09	0.5
6/7/2006 10:09	0.2
6/7/2006 10:09	0.1
6/7/2006 10:10	2.2
6/7/2006 10:10	0.5
6/7/2006 10:10	-0.6
6/7/2006 10:10	-0.3
6/7/2006 10:10	0.0
6/7/2006 10:10	-0.5
6/7/2006 10:11	0.0
6/7/2006 10:11	-0.4
6/7/2006 10:11	1.1
6/7/2006 10:11	1.4
6/7/2006 10:11	1.7
6/7/2006 10:11	0.9
6/7/2006 10:12	0.9
6/7/2006 10:12	2.1
6/7/2006 10:12	3.4
6/7/2006 10:12	2.3
6/7/2006 10:12	2.4
6/7/2006 10:12	3.9
6/7/2006 10:13	3.3
6/7/2006 10:13	4.9
6/7/2006 10:13	2.7
6/7/2006 10:13	0.7
6/7/2006 10:13	0.5
6/7/2006 10:13	1.1
6/7/2006 10:14	0.7
6/7/2006 10:14	1.2
6/7/2006 10:14	0.5
6/7/2006 10:14	0.2
6/7/2006 10:14	1.5
6/7/2006 10:14	2.1
6/7/2006 10:15	1.7
6/7/2006 10:15	2.6
6/7/2006 10:15	1.1
6/7/2006 10:15	0.8
6/7/2006 10:15	1.0
6/7/2006 10:15	1.3
6/7/2006 10:16	1.1
6/7/2006 10:16	0.5
6/7/2006 10:16	1.6
6/7/2006 10:16	1.4
6/7/2006 10:16	1.6
6/7/2006 10:16	1.1

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:17	0.9
6/7/2006 10:17	2.6
6/7/2006 10:17	1.6
6/7/2006 10:17	1.3
6/7/2006 10:17	2.7
6/7/2006 10:17	1.1
6/7/2006 10:18	1.6
6/7/2006 10:18	3.6
6/7/2006 10:18	3.6
6/7/2006 10:18	4.4
6/7/2006 10:18	1.8
6/7/2006 10:18	1.5
6/7/2006 10:19	1.2
6/7/2006 10:19	2.1
6/7/2006 10:19	1.4
6/7/2006 10:19	1.6
6/7/2006 10:19	1.9
6/7/2006 10:19	2.1
6/7/2006 10:20	1.8
6/7/2006 10:20	2.2
6/7/2006 10:20	3.6
6/7/2006 10:20	2.3
6/7/2006 10:20	3.2
6/7/2006 10:20	2.2
6/7/2006 10:21	4.2
6/7/2006 10:21	4.5
6/7/2006 10:21	4.5
6/7/2006 10:21	5.5
6/7/2006 10:21	5.5
6/7/2006 10:21	2.3
6/7/2006 10:22	0.5
6/7/2006 10:22	1.0
6/7/2006 10:22	1.4
6/7/2006 10:22	0.9
6/7/2006 10:22	1.3
6/7/2006 10:22	1.4
6/7/2006 10:23	1.9
6/7/2006 10:23	3.2
6/7/2006 10:23	2.6
6/7/2006 10:23	3.5
6/7/2006 10:23	4.3
6/7/2006 10:23	1.2
6/7/2006 10:24	0.5
6/7/2006 10:24	0.4
6/7/2006 10:24	0.7
6/7/2006 10:24	0.4
6/7/2006 10:24	0.5
6/7/2006 10:24	1.6
6/7/2006 10:25	1.6
6/7/2006 10:25	1.8
6/7/2006 10:25	1.5

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:25	3.0
6/7/2006 10:25	2.9
6/7/2006 10:25	2.9
6/7/2006 10:26	1.2
6/7/2006 10:26	0.9
6/7/2006 10:26	0.8
6/7/2006 10:26	1.5
6/7/2006 10:26	2.1
6/7/2006 10:26	0.8
6/7/2006 10:27	1.6
6/7/2006 10:27	1.2
6/7/2006 10:27	2.3
6/7/2006 10:27	2.7
6/7/2006 10:27	1.9
6/7/2006 10:27	1.9
6/7/2006 10:28	2.8
6/7/2006 10:28	4.8
6/7/2006 10:28	5.3
6/7/2006 10:28	4.0
6/7/2006 10:28	6.6
6/7/2006 10:28	5.9
6/7/2006 10:29	4.5
6/7/2006 10:29	5.6
6/7/2006 10:29	4.9
6/7/2006 10:29	4.1
6/7/2006 10:29	3.8
6/7/2006 10:29	3.8
6/7/2006 10:30	4.9
6/7/2006 10:30	3.9
6/7/2006 10:30	2.0
6/7/2006 10:30	2.2
6/7/2006 10:30	2.4
6/7/2006 10:30	2.0
6/7/2006 10:31	2.2
6/7/2006 10:31	2.7
6/7/2006 10:31	2.7
6/7/2006 10:31	2.7
6/7/2006 10:31	1.5
6/7/2006 10:31	3.9
6/7/2006 10:32	3.9
6/7/2006 10:32	1.8
6/7/2006 10:32	1.2
6/7/2006 10:32	1.0
6/7/2006 10:32	1.6
6/7/2006 10:32	1.8
6/7/2006 10:33	1.2
6/7/2006 10:33	1.5
6/7/2006 10:33	1.1
6/7/2006 10:33	1.2
6/7/2006 10:33	2.1
6/7/2006 10:33	2.0

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:34	3.3
6/7/2006 10:34	3.3
6/7/2006 10:34	3.9
6/7/2006 10:34	2.8
6/7/2006 10:34	5.0
6/7/2006 10:34	4.4
6/7/2006 10:35	3.4
6/7/2006 10:35	4.9
6/7/2006 10:35	5.1
6/7/2006 10:35	1.4
6/7/2006 10:35	1.1
6/7/2006 10:35	1.6
6/7/2006 10:36	2.1
6/7/2006 10:36	2.8
6/7/2006 10:36	3.2
6/7/2006 10:36	3.5
6/7/2006 10:36	2.5
6/7/2006 10:36	3.3
6/7/2006 10:37	2.3
6/7/2006 10:37	2.5
6/7/2006 10:37	1.8
6/7/2006 10:37	3.6
6/7/2006 10:37	3.1
6/7/2006 10:37	4.2
6/7/2006 10:38	4.8
6/7/2006 10:38	4.2
6/7/2006 10:38	4.7
6/7/2006 10:38	6.3
6/7/2006 10:38	2.5
6/7/2006 10:38	1.8
6/7/2006 10:39	1.9
6/7/2006 10:39	1.9
6/7/2006 10:39	2.4
6/7/2006 10:39	2.9
6/7/2006 10:39	3.2
6/7/2006 10:39	2.7
6/7/2006 10:40	2.6
6/7/2006 10:40	3.7
6/7/2006 10:40	3.1
6/7/2006 10:40	4.5
6/7/2006 10:40	3.7
6/7/2006 10:40	5.3
6/7/2006 10:41	2.5
6/7/2006 10:41	1.0
6/7/2006 10:41	1.8
6/7/2006 10:41	1.1
6/7/2006 10:41	1.3
6/7/2006 10:41	1.5
6/7/2006 10:42	1.8
6/7/2006 10:42	2.2
6/7/2006 10:42	2.2

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:42	2.7
6/7/2006 10:42	3.1
6/7/2006 10:42	3.6
6/7/2006 10:43	3.5
6/7/2006 10:43	4.2
6/7/2006 10:43	5.7
6/7/2006 10:43	5.4
6/7/2006 10:43	5.6
6/7/2006 10:43	6.0
6/7/2006 10:44	5.0
6/7/2006 10:44	6.1
6/7/2006 10:44	6.3
6/7/2006 10:44	6.8
6/7/2006 10:44	2.6
6/7/2006 10:44	2.7
6/7/2006 10:45	1.7
6/7/2006 10:45	2.5
6/7/2006 10:45	4.1
6/7/2006 10:45	2.7
6/7/2006 10:45	3.6
6/7/2006 10:45	3.4
6/7/2006 10:46	4.4
6/7/2006 10:46	4.8
6/7/2006 10:46	3.8
6/7/2006 10:46	5.4
6/7/2006 10:46	5.3
6/7/2006 10:46	5.8
6/7/2006 10:47	5.3
6/7/2006 10:47	7.3
6/7/2006 10:47	6.9
6/7/2006 10:47	2.6
6/7/2006 10:47	1.7
6/7/2006 10:47	2.2
6/7/2006 10:48	2.4
6/7/2006 10:48	2.5
6/7/2006 10:48	2.7
6/7/2006 10:48	3.5
6/7/2006 10:48	3.8
6/7/2006 10:48	4.3
6/7/2006 10:49	5.0
6/7/2006 10:49	5.4
6/7/2006 10:49	4.3
6/7/2006 10:49	1.1
6/7/2006 10:49	1.3
6/7/2006 10:49	2.0
6/7/2006 10:50	1.4
6/7/2006 10:50	2.8
6/7/2006 10:50	2.4
6/7/2006 10:50	2.2
6/7/2006 10:50	2.3
6/7/2006 10:50	3.1

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:51	3.6
6/7/2006 10:51	3.2
6/7/2006 10:51	3.7
6/7/2006 10:51	4.7
6/7/2006 10:51	4.8
6/7/2006 10:51	3.9
6/7/2006 10:52	1.3
6/7/2006 10:52	1.7
6/7/2006 10:52	2.5
6/7/2006 10:52	1.7
6/7/2006 10:52	1.3
6/7/2006 10:52	2.4
6/7/2006 10:53	2.0
6/7/2006 10:53	2.7
6/7/2006 10:53	2.1
6/7/2006 10:53	3.0
6/7/2006 10:53	3.1
6/7/2006 10:53	3.6
6/7/2006 10:54	3.3
6/7/2006 10:54	4.6
6/7/2006 10:54	4.7
6/7/2006 10:54	6.0
6/7/2006 10:54	5.5
6/7/2006 10:54	5.2
6/7/2006 10:55	5.6
6/7/2006 10:55	7.0
6/7/2006 10:55	7.0
6/7/2006 10:55	7.1
6/7/2006 10:55	5.3
6/7/2006 10:55	2.0
6/7/2006 10:56	1.4
6/7/2006 10:56	2.1
6/7/2006 10:56	2.6
6/7/2006 10:56	3.3
6/7/2006 10:56	3.4
6/7/2006 10:56	3.5
6/7/2006 10:57	3.6
6/7/2006 10:57	3.1
6/7/2006 10:57	4.0
6/7/2006 10:57	5.7
6/7/2006 10:57	4.2
6/7/2006 10:57	4.6
6/7/2006 10:58	4.6
6/7/2006 10:58	4.3
6/7/2006 10:58	5.2
6/7/2006 10:58	5.3
6/7/2006 10:58	6.4
6/7/2006 10:58	2.8
6/7/2006 10:59	2.3
6/7/2006 10:59	0.7
6/7/2006 10:59	2.0

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 10:59	2.1
6/7/2006 10:59	2.1
6/7/2006 10:59	2.8
6/7/2006 11:00	2.4
6/7/2006 11:00	2.4
6/7/2006 11:00	3.4
6/7/2006 11:00	3.9
6/7/2006 11:00	5.3
6/7/2006 11:00	5.4
6/7/2006 11:01	5.6
6/7/2006 11:01	7.0
6/7/2006 11:01	4.9
6/7/2006 11:01	6.0
6/7/2006 11:01	6.2
6/7/2006 11:01	5.0
6/7/2006 11:02	7.9
6/7/2006 11:02	7.9
6/7/2006 11:02	8.7
6/7/2006 11:02	8.9
6/7/2006 11:02	7.4
6/7/2006 11:02	7.9
6/7/2006 11:03	7.5
6/7/2006 11:03	8.8
6/7/2006 11:03	8.5
6/7/2006 11:03	8.7
6/7/2006 11:03	9.9
6/7/2006 11:03	11.1
6/7/2006 11:04	9.3
6/7/2006 11:04	10.5
6/7/2006 11:04	11.2
6/7/2006 11:04	12.1
6/7/2006 11:04	9.0
6/7/2006 11:04	9.4
6/7/2006 11:05	12.5
6/7/2006 11:05	13.2
6/7/2006 11:05	10.9
6/7/2006 11:05	9.1
6/7/2006 11:05	8.1
6/7/2006 11:05	8.0
6/7/2006 11:06	7.9
6/7/2006 11:06	13.2
6/7/2006 11:06	14.8
6/7/2006 11:06	10.4
6/7/2006 11:06	12.6
6/7/2006 11:06	11.2
6/7/2006 11:07	12.0
6/7/2006 11:07	11.9
6/7/2006 11:07	11.8
6/7/2006 11:07	12.1
6/7/2006 11:07	10.7
6/7/2006 11:07	11.4

Run 2

Calibration Log

Time	TVOC (ppmvw as C_3H_8)	
6/7/2006 11:08	11.1	Cal R2
6/7/2006 11:08	12.7	
6/7/2006 11:08	12.4	
6/7/2006 11:08	13.1	
6/7/2006 11:08	12.2	
6/7/2006 11:08	22.3	
6/7/2006 11:09	10.0	
6/7/2006 11:09	-0.9	
6/7/2006 11:09	-1.1	
6/7/2006 11:09	-1.1	
6/7/2006 11:09	-1.2	
6/7/2006 11:09	-1.2	
6/7/2006 11:10	-1.2	
6/7/2006 11:10	-1.3	
6/7/2006 11:10	-1.3	
6/7/2006 11:10	-1.3	
6/7/2006 11:10	0.3	
6/7/2006 11:10	12.8	
6/7/2006 11:11	13.0	
6/7/2006 11:11	13.0	
6/7/2006 11:11	13.0	
6/7/2006 11:11	13.0	
6/7/2006 11:11	13.0	
6/7/2006 11:11	13.0	
6/7/2006 11:12	13.0	
6/7/2006 11:12	13.1	
6/7/2006 11:12	13.0	
6/7/2006 11:12	13.1	
6/7/2006 11:12	13.1	
6/7/2006 11:12	13.1	
6/7/2006 11:13	13.1	
6/7/2006 11:13	13.1	
6/7/2006 11:13	13.0	
6/7/2006 11:13	13.1	
6/7/2006 11:13	13.1	
6/7/2006 11:13	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:14	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:15	13.1	
6/7/2006 11:16	13.1	
6/7/2006 11:16	13.1	
6/7/2006 11:16	13.1	

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:16	13.1
6/7/2006 11:16	13.1
6/7/2006 11:16	13.1
6/7/2006 11:17	13.1
6/7/2006 11:17	13.1
6/7/2006 11:17	13.1
6/7/2006 11:17	13.1
6/7/2006 11:17	13.1
6/7/2006 11:17	13.1
6/7/2006 11:18	13.1
6/7/2006 11:18	13.1
6/7/2006 11:18	13.0
6/7/2006 11:18	13.0
6/7/2006 11:18	13.0
6/7/2006 11:18	13.0
6/7/2006 11:19	13.0
6/7/2006 11:19	13.0
6/7/2006 11:19	9.8
6/7/2006 11:19	12.0
6/7/2006 11:19	9.6
6/7/2006 11:19	10.3
6/7/2006 11:20	10.3
6/7/2006 11:20	13.6
6/7/2006 11:20	11.2
6/7/2006 11:20	10.0
6/7/2006 11:20	11.1
6/7/2006 11:20	10.6
6/7/2006 11:21	10.0
6/7/2006 11:21	9.4
6/7/2006 11:21	10.7
6/7/2006 11:21	9.9
6/7/2006 11:21	10.2
6/7/2006 11:21	12.3
6/7/2006 11:22	10.2
6/7/2006 11:22	10.1
6/7/2006 11:22	9.6
6/7/2006 11:22	8.7
6/7/2006 11:22	9.2
6/7/2006 11:22	10.0
6/7/2006 11:23	9.8
6/7/2006 11:23	8.1
6/7/2006 11:23	1.3
6/7/2006 11:23	1.1
6/7/2006 11:23	1.4
6/7/2006 11:23	1.4
6/7/2006 11:24	1.5
6/7/2006 11:24	1.6
6/7/2006 11:24	2.4
6/7/2006 11:24	2.8
6/7/2006 11:24	2.8
6/7/2006 11:24	2.6

Run 3

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:25	3.8
6/7/2006 11:25	3.1
6/7/2006 11:25	4.1
6/7/2006 11:25	4.5
6/7/2006 11:25	3.0
6/7/2006 11:25	4.0
6/7/2006 11:26	4.6
6/7/2006 11:26	4.0
6/7/2006 11:26	4.5
6/7/2006 11:26	5.7
6/7/2006 11:26	6.3
6/7/2006 11:26	6.3
6/7/2006 11:27	5.2
6/7/2006 11:27	6.7
6/7/2006 11:27	7.9
6/7/2006 11:27	6.5
6/7/2006 11:27	7.3
6/7/2006 11:27	8.7
6/7/2006 11:28	7.8
6/7/2006 11:28	7.7
6/7/2006 11:28	7.7
6/7/2006 11:28	8.1
6/7/2006 11:28	6.8
6/7/2006 11:28	8.5
6/7/2006 11:29	6.6
6/7/2006 11:29	7.8
6/7/2006 11:29	7.1
6/7/2006 11:29	8.3
6/7/2006 11:29	9.3
6/7/2006 11:29	10.8
6/7/2006 11:30	9.0
6/7/2006 11:30	11.4
6/7/2006 11:30	11.8
6/7/2006 11:30	11.0
6/7/2006 11:30	10.6
6/7/2006 11:30	9.4
6/7/2006 11:31	11.5
6/7/2006 11:31	10.5
6/7/2006 11:31	11.3
6/7/2006 11:31	11.4
6/7/2006 11:31	13.8
6/7/2006 11:31	12.2
6/7/2006 11:32	9.5
6/7/2006 11:32	9.3
6/7/2006 11:32	12.2
6/7/2006 11:32	10.1
6/7/2006 11:32	11.8
6/7/2006 11:32	13.4
6/7/2006 11:33	10.7
6/7/2006 11:33	14.8
6/7/2006 11:33	11.5

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:33	13.4
6/7/2006 11:33	12.3
6/7/2006 11:33	12.2
6/7/2006 11:34	12.1
6/7/2006 11:34	13.5
6/7/2006 11:34	12.5
6/7/2006 11:34	12.6
6/7/2006 11:34	12.8
6/7/2006 11:34	11.3
6/7/2006 11:35	12.1
6/7/2006 11:35	12.0
6/7/2006 11:35	8.7
6/7/2006 11:35	10.8
6/7/2006 11:35	12.4
6/7/2006 11:35	11.0
6/7/2006 11:36	10.2
6/7/2006 11:36	10.2
6/7/2006 11:36	11.0
6/7/2006 11:36	10.9
6/7/2006 11:36	11.9
6/7/2006 11:36	11.5
6/7/2006 11:37	9.8
6/7/2006 11:37	11.0
6/7/2006 11:37	11.0
6/7/2006 11:37	11.2
6/7/2006 11:37	13.8
6/7/2006 11:37	14.6
6/7/2006 11:38	12.8
6/7/2006 11:38	13.6
6/7/2006 11:38	14.5
6/7/2006 11:38	12.7
6/7/2006 11:38	13.6
6/7/2006 11:39	13.2
6/7/2006 11:39	15.8
6/7/2006 11:39	14.2
6/7/2006 11:39	12.6
6/7/2006 11:39	14.1
6/7/2006 11:39	14.4
6/7/2006 11:40	11.7
6/7/2006 11:40	12.0
6/7/2006 11:40	12.8
6/7/2006 11:40	11.6
6/7/2006 11:40	6.2
6/7/2006 11:40	6.8
6/7/2006 11:41	6.8
6/7/2006 11:41	6.7
6/7/2006 11:41	6.6
6/7/2006 11:41	6.5
6/7/2006 11:41	5.7
6/7/2006 11:41	7.6
6/7/2006 11:42	6.2

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:42	8.8
6/7/2006 11:42	9.9
6/7/2006 11:42	8.5
6/7/2006 11:42	8.4
6/7/2006 11:42	2.1
6/7/2006 11:43	1.7
6/7/2006 11:43	1.6
6/7/2006 11:43	1.7
6/7/2006 11:43	2.2
6/7/2006 11:43	2.7
6/7/2006 11:43	3.3
6/7/2006 11:44	2.7
6/7/2006 11:44	3.6
6/7/2006 11:44	4.1
6/7/2006 11:44	2.5
6/7/2006 11:44	3.8
6/7/2006 11:44	4.2
6/7/2006 11:45	3.8
6/7/2006 11:45	4.1
6/7/2006 11:45	5.2
6/7/2006 11:45	5.8
6/7/2006 11:45	3.8
6/7/2006 11:45	7.1
6/7/2006 11:46	5.3
6/7/2006 11:46	6.3
6/7/2006 11:46	6.4
6/7/2006 11:46	9.6
6/7/2006 11:46	8.4
6/7/2006 11:46	8.2
6/7/2006 11:47	7.9
6/7/2006 11:47	11.4
6/7/2006 11:47	9.3
6/7/2006 11:47	8.9
6/7/2006 11:47	8.8
6/7/2006 11:47	9.5
6/7/2006 11:48	9.8
6/7/2006 11:48	12.1
6/7/2006 11:48	12.3
6/7/2006 11:48	9.4
6/7/2006 11:48	11.9
6/7/2006 11:48	11.6
6/7/2006 11:49	10.2
6/7/2006 11:49	12.2
6/7/2006 11:49	12.6
6/7/2006 11:49	13.1
6/7/2006 11:49	10.9
6/7/2006 11:49	12.1
6/7/2006 11:50	10.1
6/7/2006 11:50	11.8
6/7/2006 11:50	10.3
6/7/2006 11:50	10.7

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:50	11.0
6/7/2006 11:50	9.4
6/7/2006 11:51	10.7
6/7/2006 11:51	9.6
6/7/2006 11:51	9.3
6/7/2006 11:51	12.2
6/7/2006 11:51	14.8
6/7/2006 11:51	11.2
6/7/2006 11:52	10.8
6/7/2006 11:52	10.8
6/7/2006 11:52	10.6
6/7/2006 11:52	13.3
6/7/2006 11:52	12.0
6/7/2006 11:52	14.2
6/7/2006 11:53	11.8
6/7/2006 11:53	13.6
6/7/2006 11:53	11.3
6/7/2006 11:53	11.6
6/7/2006 11:53	12.8
6/7/2006 11:53	13.6
6/7/2006 11:54	13.8
6/7/2006 11:54	11.8
6/7/2006 11:54	0.4
6/7/2006 11:54	-0.3
6/7/2006 11:54	-0.4
6/7/2006 11:54	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:55	-0.4
6/7/2006 11:56	-0.5
6/7/2006 11:56	-0.5
6/7/2006 11:56	-0.4
6/7/2006 11:56	-0.4
6/7/2006 11:56	-0.4
6/7/2006 11:56	-0.4
6/7/2006 11:57	-0.4
6/7/2006 11:57	-0.4
6/7/2006 11:57	-0.4
6/7/2006 11:57	-0.5
6/7/2006 11:57	-0.5
6/7/2006 11:57	-0.4
6/7/2006 11:58	-0.5
6/7/2006 11:58	-0.4
6/7/2006 11:58	-0.4
6/7/2006 11:58	-0.4
6/7/2006 11:58	-0.3
6/7/2006 11:58	-0.3
6/7/2006 11:59	-0.3

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 11:59	0.0
6/7/2006 11:59	0.0
6/7/2006 11:59	0.1
6/7/2006 11:59	0.4
6/7/2006 11:59	0.4
6/7/2006 12:00	0.7
6/7/2006 12:00	0.7
6/7/2006 12:00	0.4
6/7/2006 12:00	0.2
6/7/2006 12:00	0.2
6/7/2006 12:00	0.7
6/7/2006 12:01	1.2
6/7/2006 12:01	1.7
6/7/2006 12:01	1.9
6/7/2006 12:01	2.3
6/7/2006 12:01	2.7
6/7/2006 12:01	3.4
6/7/2006 12:02	3.9
6/7/2006 12:02	3.8
6/7/2006 12:02	3.2
6/7/2006 12:02	2.7
6/7/2006 12:02	2.6
6/7/2006 12:02	2.3
6/7/2006 12:03	3.7
6/7/2006 12:03	4.5
6/7/2006 12:03	4.0
6/7/2006 12:03	4.7
6/7/2006 12:03	5.3
6/7/2006 12:03	5.2
6/7/2006 12:04	4.1
6/7/2006 12:04	5.3
6/7/2006 12:04	6.6
6/7/2006 12:04	7.0
6/7/2006 12:04	8.1
6/7/2006 12:04	8.2
6/7/2006 12:05	8.6
6/7/2006 12:05	8.7
6/7/2006 12:05	9.3
6/7/2006 12:05	11.1
6/7/2006 12:05	10.0
6/7/2006 12:05	10.9
6/7/2006 12:06	8.1
6/7/2006 12:06	6.8
6/7/2006 12:06	8.4
6/7/2006 12:06	10.0
6/7/2006 12:06	11.2
6/7/2006 12:06	7.4
6/7/2006 12:07	9.1
6/7/2006 12:07	9.3
6/7/2006 12:07	9.8
6/7/2006 12:07	9.9

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 12:07	9.2
6/7/2006 12:07	11.9
6/7/2006 12:08	9.3
6/7/2006 12:08	12.1
6/7/2006 12:08	9.0
6/7/2006 12:08	12.1
6/7/2006 12:08	12.6
6/7/2006 12:08	11.0
6/7/2006 12:09	13.3
6/7/2006 12:09	13.2
6/7/2006 12:09	11.0
6/7/2006 12:09	13.9
6/7/2006 12:09	10.5
6/7/2006 12:09	9.3
6/7/2006 12:10	10.0
6/7/2006 12:10	12.3
6/7/2006 12:10	12.4
6/7/2006 12:10	12.1
6/7/2006 12:10	12.6
6/7/2006 12:10	12.6
6/7/2006 12:11	12.4
6/7/2006 12:14	17.7
6/7/2006 12:15	17.2
6/7/2006 12:15	14.6
6/7/2006 12:15	15.5
6/7/2006 12:15	10.6
6/7/2006 12:15	11.0
6/7/2006 12:15	12.4
6/7/2006 12:16	10.5
6/7/2006 12:16	12.4
6/7/2006 12:16	12.9
6/7/2006 12:16	12.6
6/7/2006 12:16	13.0
6/7/2006 12:16	13.5
6/7/2006 12:17	15.1
6/7/2006 12:17	12.9
6/7/2006 12:17	14.5
6/7/2006 12:17	12.8
6/7/2006 12:17	13.5
6/7/2006 12:17	12.4
6/7/2006 12:18	13.5
6/7/2006 12:18	11.7
6/7/2006 12:18	11.8
6/7/2006 12:18	12.5
6/7/2006 12:18	12.8
6/7/2006 12:18	11.6
6/7/2006 12:19	12.5
6/7/2006 12:19	13.1
6/7/2006 12:19	10.9
6/7/2006 12:19	12.1
6/7/2006 12:19	12.5

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 12:19	11.8
6/7/2006 12:20	13.5
6/7/2006 12:20	12.9
6/7/2006 12:20	11.0
6/7/2006 12:20	13.1
6/7/2006 12:20	15.2
6/7/2006 12:20	11.8
6/7/2006 12:21	12.7
6/7/2006 12:21	9.9
6/7/2006 12:21	10.8
6/7/2006 12:21	11.0
6/7/2006 12:21	10.2
6/7/2006 12:21	11.2
6/7/2006 12:22	11.1
6/7/2006 12:22	11.7
6/7/2006 12:22	7.8
6/7/2006 12:22	11.2
6/7/2006 12:22	10.1
6/7/2006 12:22	9.4
6/7/2006 12:23	10.6
6/7/2006 12:23	11.6
6/7/2006 12:23	14.4
6/7/2006 12:23	11.3
6/7/2006 12:23	11.5
6/7/2006 12:23	9.8
6/7/2006 12:24	8.0
6/7/2006 12:24	10.1
6/7/2006 12:24	10.0
6/7/2006 12:24	9.7
6/7/2006 12:24	9.3
6/7/2006 12:24	10.4
6/7/2006 12:25	8.5
6/7/2006 12:25	9.8
6/7/2006 12:25	11.7
6/7/2006 12:25	12.6
6/7/2006 12:25	13.0
6/7/2006 12:25	11.7
6/7/2006 12:26	11.3
6/7/2006 12:26	10.3
6/7/2006 12:26	10.2
6/7/2006 12:26	10.6
6/7/2006 12:26	12.2
6/7/2006 12:26	9.6
6/7/2006 12:27	9.2
6/7/2006 12:27	10.4
6/7/2006 12:27	8.3
6/7/2006 12:27	10.3
6/7/2006 12:27	10.7
6/7/2006 12:27	12.9
6/7/2006 12:28	12.1
6/7/2006 12:28	11.8

Run 3

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 12:28	10.1
6/7/2006 12:28	10.1
6/7/2006 12:28	10.8
6/7/2006 12:28	10.6
6/7/2006 12:29	9.1
6/7/2006 12:29	10.4
6/7/2006 12:29	10.7
6/7/2006 12:29	9.6
6/7/2006 12:29	11.5
6/7/2006 12:29	13.3
6/7/2006 12:30	15.2
6/7/2006 12:30	17.2
6/7/2006 12:30	46.6
6/7/2006 12:30	83.7
6/7/2006 12:30	114.8
6/7/2006 12:30	109.2
6/7/2006 12:31	107.0
6/7/2006 12:31	136.4
6/7/2006 12:31	139.0
6/7/2006 12:31	139.0
6/7/2006 12:31	139.0
6/7/2006 12:31	139.0
6/7/2006 12:32	139.0
6/7/2006 12:32	139.0
6/7/2006 12:32	139.0
6/7/2006 12:32	139.0
6/7/2006 12:32	139.0
6/7/2006 12:32	139.0
6/7/2006 12:33	139.0
6/7/2006 12:33	139.0
6/7/2006 12:33	139.0
6/7/2006 12:33	139.0
6/7/2006 12:33	139.0
6/7/2006 12:33	139.0
6/7/2006 12:34	139.0
6/7/2006 12:34	139.0
6/7/2006 12:34	139.0
6/7/2006 12:34	139.0
6/7/2006 12:34	139.0
6/7/2006 12:34	139.0
6/7/2006 12:35	139.0
6/7/2006 12:35	139.0
6/7/2006 12:35	138.9
6/7/2006 12:35	139.0
6/7/2006 12:35	139.0
6/7/2006 12:35	139.0
6/7/2006 12:36	139.0
6/7/2006 12:36	136.0
6/7/2006 12:36	138.7
6/7/2006 12:36	139.0
6/7/2006 12:36	126.7

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 12:36	87.1
6/7/2006 12:37	24.8
6/7/2006 12:37	16.0
6/7/2006 12:37	12.1
6/7/2006 12:37	14.0
6/7/2006 12:37	13.7
6/7/2006 12:37	12.0
6/7/2006 12:38	10.7
6/7/2006 12:38	11.0
6/7/2006 12:38	11.9
6/7/2006 12:38	9.5
6/7/2006 12:38	8.1
6/7/2006 12:38	10.8
6/7/2006 12:39	11.1
6/7/2006 12:39	11.2
6/7/2006 12:39	12.0
6/7/2006 12:39	10.2
6/7/2006 12:39	10.8
6/7/2006 12:39	10.4
6/7/2006 12:40	11.2
6/7/2006 12:40	12.2
6/7/2006 12:40	12.9
6/7/2006 12:40	11.8
6/7/2006 12:40	12.8
6/7/2006 12:40	12.8
6/7/2006 12:41	10.9
6/7/2006 12:41	10.0
6/7/2006 12:41	12.2
6/7/2006 12:41	12.1
6/7/2006 12:41	11.3
6/7/2006 12:41	10.6
6/7/2006 12:42	14.6
6/7/2006 12:42	13.0
6/7/2006 12:42	10.7
6/7/2006 12:42	11.8
6/7/2006 12:42	10.4
6/7/2006 12:42	11.0
6/7/2006 12:43	11.2
6/7/2006 12:43	11.3
6/7/2006 12:43	8.8
6/7/2006 12:43	10.8
6/7/2006 12:43	12.2
6/7/2006 12:43	12.5
6/7/2006 12:44	12.3
6/7/2006 12:44	10.0
6/7/2006 12:44	9.6
6/7/2006 12:44	9.6
6/7/2006 12:44	11.2
6/7/2006 12:44	12.1
6/7/2006 12:45	10.0
6/7/2006 12:45	8.4

Calibration Log

Time	TVOC (ppmvw as C_3H_8)	
6/7/2006 12:45	8.7	
6/7/2006 12:45	10.6	
6/7/2006 12:45	9.3	
6/7/2006 12:45	8.3	
6/7/2006 12:46	9.9	
6/7/2006 12:46	9.2	
6/7/2006 12:46	9.0	
6/7/2006 12:46	8.8	
6/7/2006 12:46	7.5	
6/7/2006 12:46	8.8	
6/7/2006 12:47	9.2	
6/7/2006 12:47	9.7	
6/7/2006 12:47	9.3	
6/7/2006 12:47	11.5	
6/7/2006 12:47	11.4	
6/7/2006 12:47	11.4	
6/7/2006 12:48	10.7	
6/7/2006 12:48	11.7	
6/7/2006 12:48	10.8	
6/7/2006 12:48	10.9	
6/7/2006 12:48	13.5	
6/7/2006 12:48	15.5	
6/7/2006 12:49	15.3	
6/7/2006 12:49	15.9	
6/7/2006 12:49	13.1	
6/7/2006 12:49	10.6	
6/7/2006 12:49	11.3	
6/7/2006 12:49	14.6	
6/7/2006 12:50	14.3	
6/7/2006 12:50	20.7	
6/7/2006 12:50	15.2	
6/7/2006 12:50	13.3	
6/7/2006 12:50	11.5	
6/7/2006 12:50	10.8	
6/7/2006 12:51	11.1	
6/7/2006 12:51	17.6	
6/7/2006 12:51	18.1	
6/7/2006 12:51	12.5	
6/7/2006 12:51	12.3	
6/7/2006 12:51	12.2	Cal R3
6/7/2006 12:52	12.2	
6/7/2006 12:52	12.2	
6/7/2006 12:52	12.2	
6/7/2006 12:52	12.1	
6/7/2006 12:52	12.2	
6/7/2006 12:52	12.2	
6/7/2006 12:53	12.1	
6/7/2006 12:53	12.1	
6/7/2006 12:53	12.1	
6/7/2006 12:53	12.1	
6/7/2006 12:53	12.1 S	

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 12:53	**12.1**
6/7/2006 12:54	12.1
6/7/2006 12:54	12.1
6/7/2006 12:54	12.1
6/7/2006 12:54	12.1
6/7/2006 12:54	12.1
6/7/2006 12:54	12.1
6/7/2006 12:55	12.1
6/7/2006 12:55	12.1
6/7/2006 12:55	12.1
6/7/2006 12:55	12.1
6/7/2006 12:55	12.1
6/7/2006 12:55	12.1
6/7/2006 12:56	12.1
6/7/2006 12:56	12.1
6/7/2006 12:56	12.1
6/7/2006 12:56	12.1
6/7/2006 12:56	12.1
6/7/2006 12:56	12.1
6/7/2006 12:57	12.0
6/7/2006 12:57	12.1
6/7/2006 12:57	12.0
6/7/2006 12:57	12.0
6/7/2006 12:57	12.0
6/7/2006 12:57	12.0
6/7/2006 12:58	11.3
6/7/2006 12:58	-0.6
6/7/2006 12:58	-1.3
6/7/2006 12:58	-1.3
6/7/2006 12:58	-1.4
6/7/2006 12:58	-1.4
6/7/2006 12:59	-1.4
6/7/2006 12:59	-1.4
6/7/2006 12:59	**-1.4**
6/7/2006 12:59	-1.4
6/7/2006 12:59	-1.4
6/7/2006 12:59	-1.4
6/7/2006 13:00	-1.4
6/7/2006 13:00	-1.5
6/7/2006 13:00	-1.4
6/7/2006 13:00	-1.4
6/7/2006 13:00	-1.4
6/7/2006 13:00	-1.4
6/7/2006 13:01	-1.4
6/7/2006 13:01	-1.5
6/7/2006 13:01	-1.4
6/7/2006 13:01	-1.5
6/7/2006 13:01	8.0
6/7/2006 13:01	13.7
6/7/2006 13:02	13.5
6/7/2006 13:02	14.7

Calibration Log

Time	TVOC (ppmvw as C_3H_8)
6/7/2006 13:02	13.3
6/7/2006 13:02	10.5
6/7/2006 13:02	1.9
6/7/2006 13:02	1.6
6/7/2006 13:03	5.7
6/7/2006 13:03	4.7
6/7/2006 13:03	0.6
6/7/2006 13:03	0.3
6/7/2006 13:03	3.7
6/7/2006 13:03	4.0
6/7/2006 13:04	2.5
6/7/2006 13:04	-0.6
6/7/2006 13:04	-0.7
6/7/2006 13:04	3.4
6/7/2006 13:04	1.3
6/7/2006 13:04	-0.3
6/7/2006 13:05	-0.6
6/7/2006 13:05	-0.7
6/7/2006 13:05	1.0
6/7/2006 13:05	2.9
6/7/2006 13:05	7.1
6/7/2006 13:05	5.4
6/7/2006 13:06	5.2
6/7/2006 13:06	3.7
6/7/2006 13:06	4.7
6/7/2006 13:06	5.4
6/7/2006 13:06	4.9
6/7/2006 13:06	1.1
6/7/2006 13:07	1.9
6/7/2006 13:07	2.8
6/7/2006 13:07	1.0
6/7/2006 13:07	3.8
6/7/2006 13:07	1.5
6/7/2006 13:07	0.4
6/7/2006 13:08	1.7
6/7/2006 13:08	3.1
6/7/2006 13:08	2.8
6/7/2006 13:08	2.3
6/7/2006 13:08	-0.5
6/7/2006 13:08	-0.6
6/7/2006 13:09	1.2

AIR
POLLUTION
TESTING, INC.

Appendix Three: Gas Chromatography Data

Chain of Custody / Sample Log

T: (303) 420 5949
F: (303) 420 5920

Air Pollution Testing, Inc.
5530 Marshall Street
Arvada, Colorado 80002

Project Code	CFM6132
Client	Cimmaron
Facility Name	30" Flare
Project Manager	Lentzner

Page 1 of 1

Relinquished By: Kyle Hale Date: 6-7-06 Time: ~~3:4~~ 14:45

Received By: M Martinez Date: 6/7/06 Time: 3:38

Sample ID	Run #	Filter/Beaker ID	Date/Time Collected	Matrix	Analysis	Special Instructions
-01 Flash Gas	1A		6-7-06	Bags	Fuel Gas	
-02 Flash Gas	1B		↓	↓	↓	
-03 Flash Gas	2A		↓	↓	↓	
-04 Flash Gas	2B		↓	↓	↓	
-05 Flash Gas	3A		↓	↓	↓	
-06 Flash Gas	3B		↓	↓	↓	

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**01**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUN #1A; R1A FLASH GAS		
FIELD DATA			
SAMPLED BY :		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	0.34	-	-
NITROGEN	1.08	-	-
CO2	1.69	-	-
METHANE	27.78	-	-
ETHANE	22.62	6.017	6.050
PROPANE	20.24	5.547	5.577
ISOBUTANE	3.97	1.292	1.299
N-BUTANE	9.98	3.129	3.147
ISOPENTANE	2.89	1.052	1.058
N-PENTANE	3.17	1.142	1.148
HEXANES+	6.24	2.708	2.722
TOTAL	100.00	20.887	21.001

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2232.8	2245.0
GROSS WET REAL =	2193.7	2205.9

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.3884

COMPRESSIBILITY FACTOR : 0.98535

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

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**02**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUNE #1B; R1B FLASH GAS		
FIELD DATA			
SAMPLED BY :		AMBIENT TEMP.:	
SAMPLE PRES. :		GRAVITY :	
SAMPLE TEMP. :		VAPOR PRES. :	
COMMENTS :			

COMPONENTS	NORM. MOLE%	GPM @ **14.65**	GPM @ **14.73**
HELIUM	0.00	-	-
HYDROGEN	0.01	-	-
OXYGEN/ARGON	0.37	-	-
NITROGEN	1.17	-	-
CO2	1.70	-	-
METHANE	27.66	-	-
ETHANE	22.62	6.017	6.050
PROPANE	20.34	5.574	5.605
ISOBUTANE	3.99	1.298	1.305
N-BUTANE	9.99	3.133	3.150
ISOPENTANE	2.89	1.052	1.058
N-PENTANE	3.14	1.131	1.137
HEXANES+	6.12	2.655	2.670
TOTAL	100.00	20.861	20.975

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2227.5	2239.6
GROSS WET REAL =	2188.5	2200.7

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.3863

COMPRESSIBILITY FACTOR : 0.98542

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

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**03**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUN #2A; R2A FLASH GAS		
FIELD DATA			
SAMPLED BY :		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	0.43	-	-
NITROGEN	1.45	-	-
CO2	1.68	-	-
METHANE	27.38	-	-
ETHANE	22.50	5.985	6.018
PROPANE	20.33	5.572	5.602
ISOBUTANE	4.00	1.301	1.309
N-BUTANE	10.04	3.148	3.165
ISOPENTANE	2.90	1.056	1.062
N-PENTANE	3.16	1.138	1.145
HEXANES+	6.13	2.660	2.674
TOTAL	100.00	20.860	20.974

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2225.9	2238.1
GROSS WET REAL =	2187.0	2199.1

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.3889

COMPRESSIBILITY FACTOR : 0.98542

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

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**04**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUN #2B; R2B FLASH GAS		
FIELD DATA			
SAMPLED BY :		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	0.82	-	-
CO2	1.70	-	-
METHANE	27.43	-	-
ETHANE	22.65	6.025	6.058
PROPANE	20.49	5.615	5.646
ISOBUTANE	4.04	1.315	1.322
N-BUTANE	10.18	3.192	3.210
ISOPENTANE	2.95	1.074	1.080
N-PENTANE	3.21	1.156	1.163
HEXANES+	6.27	2.721	2.735
TOTAL	100.00	21.098	21.213

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2251.1	2263.4
GROSS WET REAL =	2211.8	2224.1

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.3966

COMPRESSIBILITY FACTOR : 0.98512

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

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**05**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUNE #3A @ 11:43; R3A FLASH GAS		
FIELD DATA			
SAMPLED BY :		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	0.37	-	-
NITROGEN	1.28	-	-
CO2	1.65	-	-
METHANE	26.79	-	-
ETHANE	22.36	5.948	5.980
PROPANE	20.51	5.621	5.652
ISOBUTANE	4.07	1.324	1.331
N-BUTANE	10.31	3.233	3.251
ISOPENTANE	2.99	1.089	1.095
N-PENTANE	3.26	1.174	1.181
HEXANES+	6.41	2.781	2.796
TOTAL	100.00	21.170	21.286

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2256.4	2268.7
GROSS WET REAL =	2216.9	2229.2

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.4055

COMPRESSIBILITY FACTOR : 0.98499

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

EMPACT ANALYTICAL SYSTEMS INC.
365 S. MAIN ST.
BRIGHTON, CO
80601
303-637-0150

NATURAL GAS ANALYSIS

PROJECT NO. :	**200606040**	ANALYSIS NO. :	**06**
COMPANY NAME :	**AIR POLLUTION**	ANALYSIS DATE:	JUNE 13, 2006
ACCOUNT NO. :	CIM6132	SAMPLE DATE :	JUNE 7, 2006
PRODUCER :		TO:	
LEASE NO. :		CYLINDER NO. :	1L TEDLAR BAG
NAME/DESCRIP :	CIMMERON; 30" FLARE RUN #3A @ 11:54; R3B FLASH GAS		
FIELD DATA			
SAMPLED BY :		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	0.80	-	-
CO2	1.68	-	-
METHANE	26.93	-	-
ETHANE	22.48	5.980	6.012
PROPANE	20.67	5.665	5.696
ISOBUTANE	4.10	1.334	1.341
N-BUTANE	10.37	3.252	3.270
ISOPENTANE	2.99	1.089	1.095
N-PENTANE	3.26	1.174	1.181
HEXANES+	6.46	2.803	2.818
TOTAL	100.00	21.296	21.413

BTU @ 60 DEG F	**14.65**	**14.73**
GROSS DRY REAL =	2269.9	2282.3
GROSS WET REAL =	2230.2	2242.6

RELATIVE DENSITY (AIR=1 @14.696 PSIA 60F) : 1.4082

COMPRESSIBILITY FACTOR : 0.98484

CIM6132 GC Runs Me/Et

Outlet flare R1 111
Outlet flare R2 111
Outlet flare R3 111

Chain of Custody / Sample Log

T: (303) 420 5949
F: (303) 420 5920

Air Pollution Testing, Inc.
5530 Marshall Street
Arvada, Colorado 80002

Project Code	CIM 6132
Client	Cimmaron
Facility Name	30" flare
Project Manager	T. Lentzner

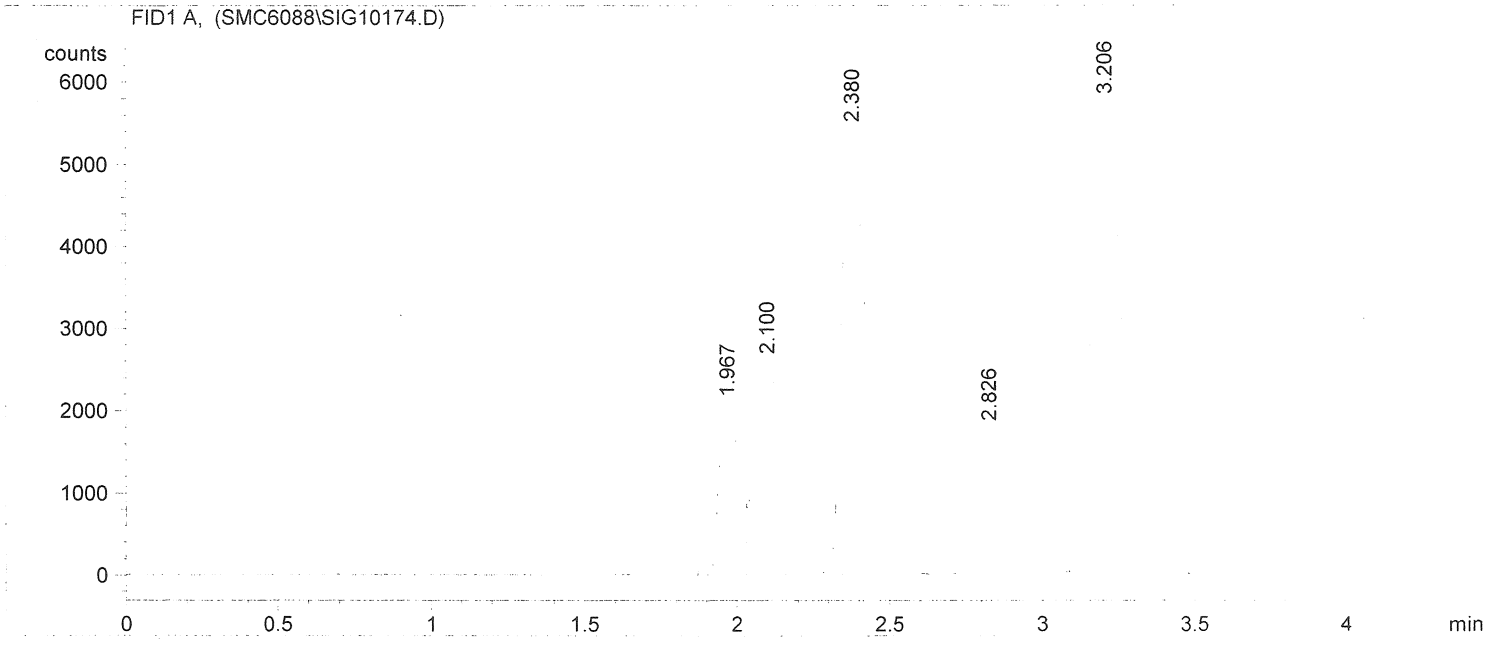
Page 1 of 1

Relinquished By: [signature] Date: 6/8/06 Time: 1300

Received By: Date: Time:

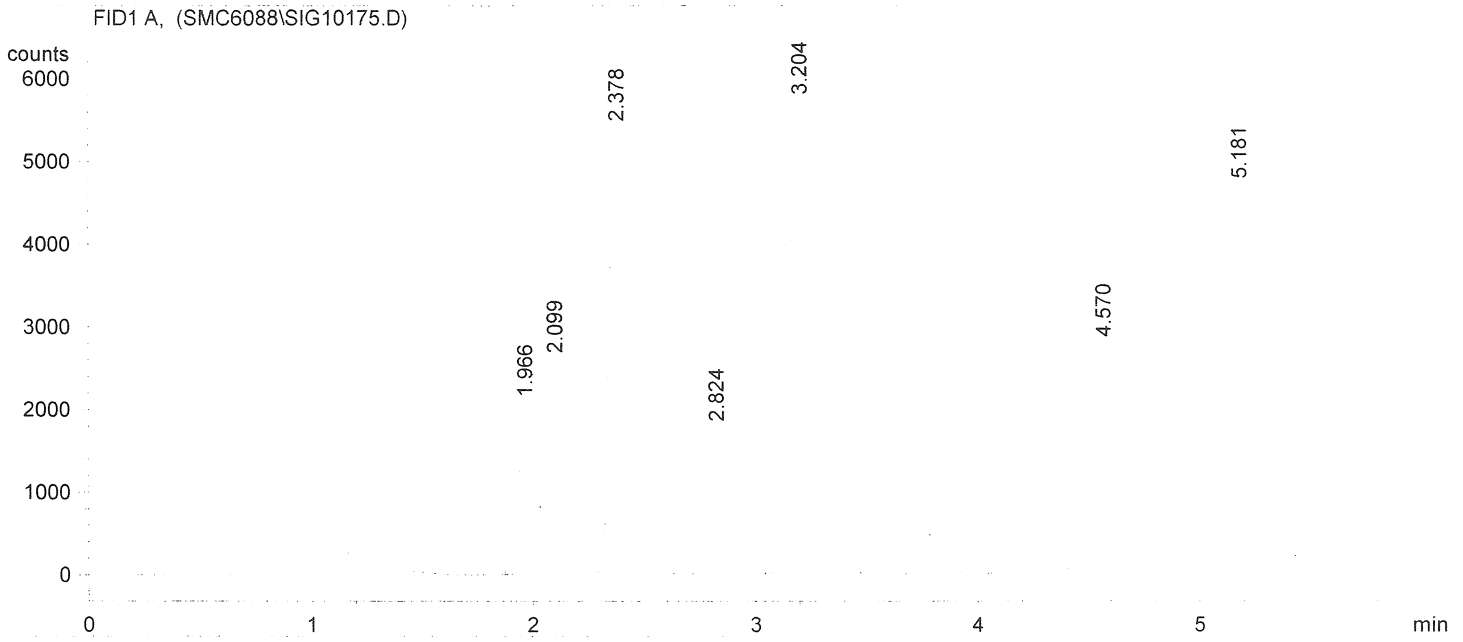
Sample ID	Run #	Filter/Beaker ID	Date/Time Collected	Matrix	Analysis	Special Instructions
Outlet 30" flare	1		6/7/06	Stack gas	meth/eth	
"	1	"	"	"	"	"
"	2	"	"	"	"	"
"	2	"	"	"	"	"
"	3	"	"	"	"	"
"	3	"	"	"	"	"

```
==========================================================================
Injection Date  : 6/23/2006 10:28:39 AM
Sample Name     : outlet Run 1                      Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                  Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.967 PV    0.0734 9582.85059 2092.38281  8.71577
   2   2.100 VV    0.0950 1.58820e4  2609.08887 14.44496
   3   2.380 VB    0.0889 3.11682e4  5431.86084 28.34806
   4   2.826 BB    0.1008 1.17602e4  1786.71118 10.69608
   5   3.206 BB    0.1027 4.15551e4  6162.96387 37.79512

Totals :                  1.09948e5  1.80830e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 10:41:38 AM
Sample Name     : outlet Run 1                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```

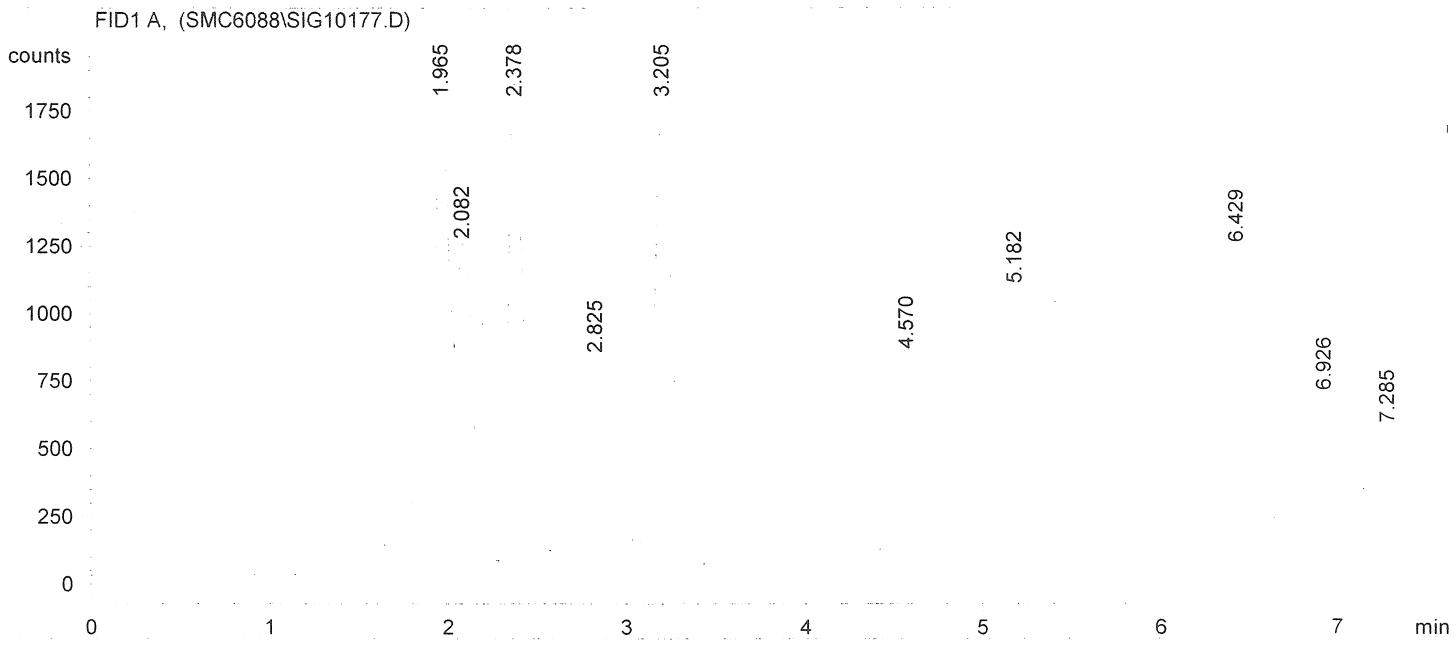



```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.966 PV    0.0733 9480.86133 2077.16724  5.63515
   2   2.099 VV    0.0947 1.58080e4  2610.09058  9.39583
   3   2.378 VB    0.0890 3.10325e4  5403.32568 18.44480
   4   2.824 PB    0.1026 1.16771e4  1778.86670  6.94056
   5   3.204 BB    0.1046 4.12112e4  6120.32910 24.49476
   6   4.570 BB    0.1299 2.27915e4  2715.00854 13.54659
   7   5.181 BB    0.1196 3.62439e4  4517.62500 21.54232

Totals :                  1.68245e5  2.52224e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==================================================================
Injection Date  : 6/23/2006 10:53:25 AM
Sample Name     : outlet Run 1                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==================================================================
```


```
==================================================================
                        Area Percent Report
==================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.967 PV    0.0731 9441.34863 2073.42944  5.99487
   2   2.099 VP    0.0938 1.55082e4  2592.08179  9.84709
   3   2.379 VB    0.0878 3.02917e4  5367.55518 19.23397
   4   2.824 BP    0.1015 1.14081e4  1761.76367  7.24368
   5   3.205 PB    0.1043 4.10317e4  6117.44141 26.05343
   6   4.571 PB    0.1244 2.10457e4  2657.01587 13.36314
   7   5.182 PBA   0.1043 2.87638e4  4284.31934 18.26382

Totals :                  1.57490e5  2.48536e4

 Results obtained with enhanced integrator!
==================================================================
                        *** End of Report ***
```

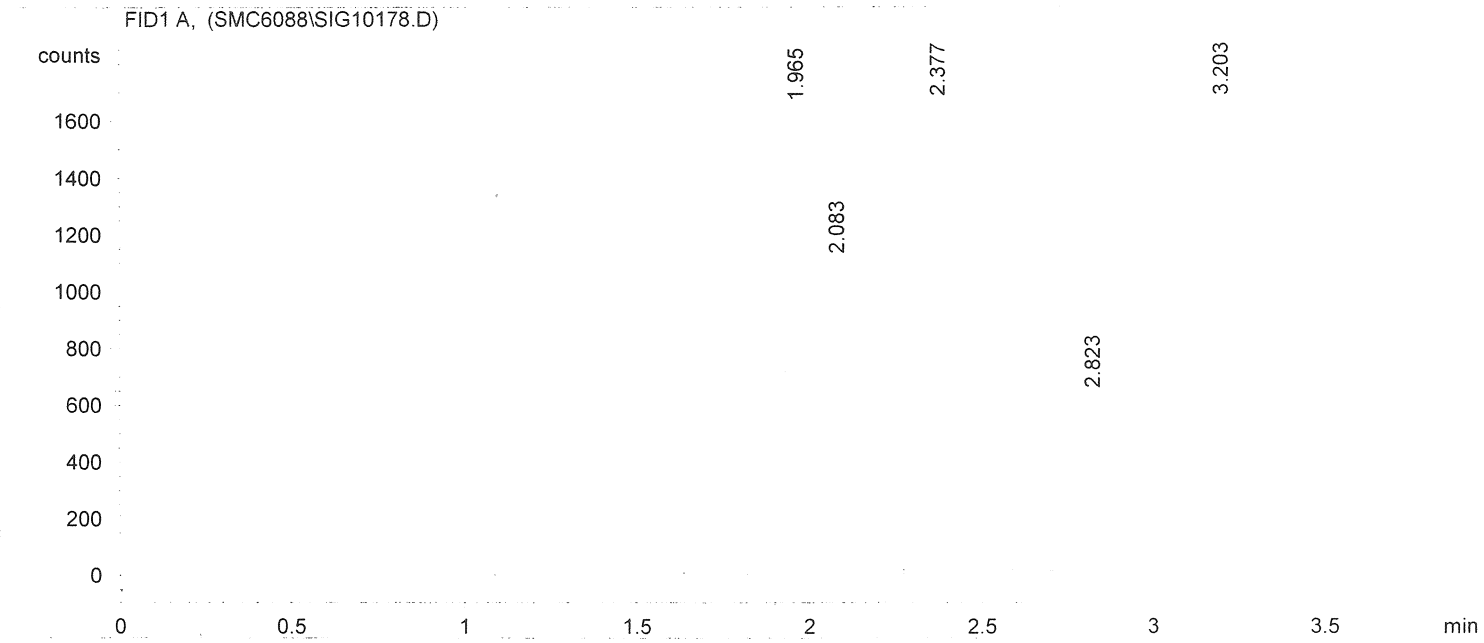
```
==========================================================================
Injection Date  : 6/23/2006 11:06:06 AM
Sample Name     : outlet Run 2                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.965 BV    0.0977 1.21455e4  1824.29565 16.14537
   2   2.082 VP    0.0966 7311.27295 1174.69153  9.71908
   3   2.378 VP    0.0874 9809.58789 1749.72229 13.04016
   4   2.825 BB    0.1151 5514.56689  706.58105  7.33067
   5   3.205 BB    0.1050 1.14706e4  1693.83606 15.24818
   6   4.570 BP    0.1271 6112.16650  749.46790  8.12507
   7   5.182 BB    0.1106 6638.60938  938.16180  8.82489
   8   6.429 BP    0.1374 9201.39844 1018.33221 12.23168
   9   6.926 BB    0.1384 4396.33057  440.61234  5.84417
  10   7.285 BV    0.1177 2625.94531  320.09903  3.49074

Totals :                  7.52260e4  1.06158e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

CIM6132 outlet run 2 inj #2

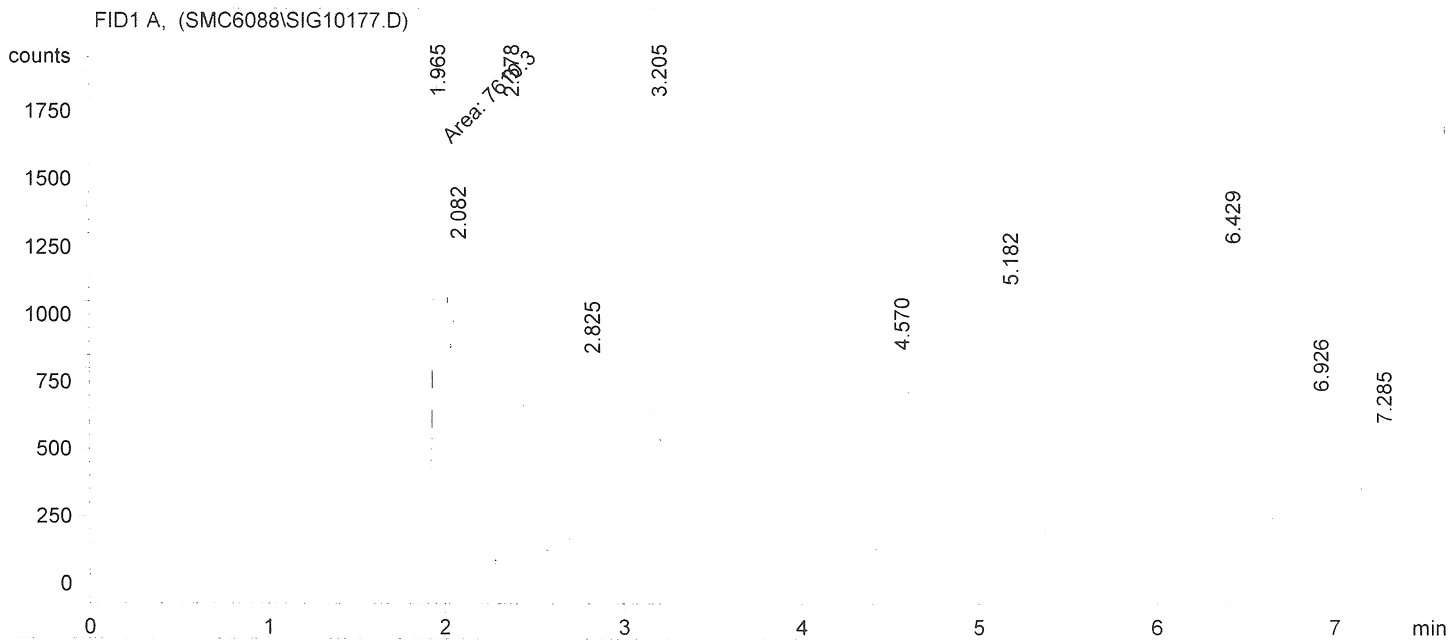
```
==========================================================================
Injection Date  : 6/23/2006 11:25:33 AM
Sample Name     : outlet Run 2                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.965 PV    0.0732 7790.37354 1645.29907 19.46373
   2   2.083 VV    0.0971 6942.81152 1107.92554 17.34615
   3   2.377 VB    0.0889 1.01618e4  1772.94934 25.38862
   4   2.823 BB    0.1006 3947.31494  617.46173  9.86210
   5   3.203 BB    0.1018 1.11828e4  1677.66553 27.93940

Totals :                  4.00251e4  6821.30121

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

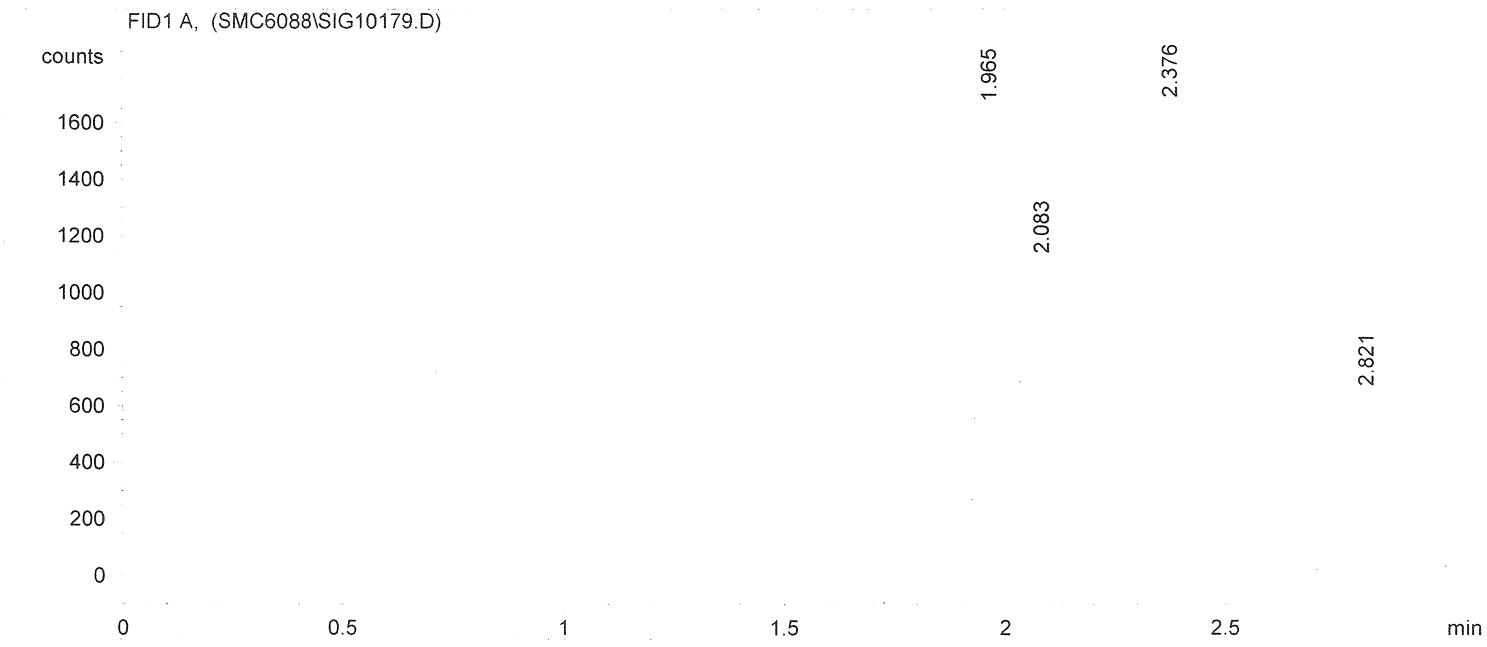
CIM6132 outlet run 2 inj #1

```
==========================================================================
Injection Date  : 6/23/2006 11:06:06 AM
Sample Name     : outlet Run 2                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```



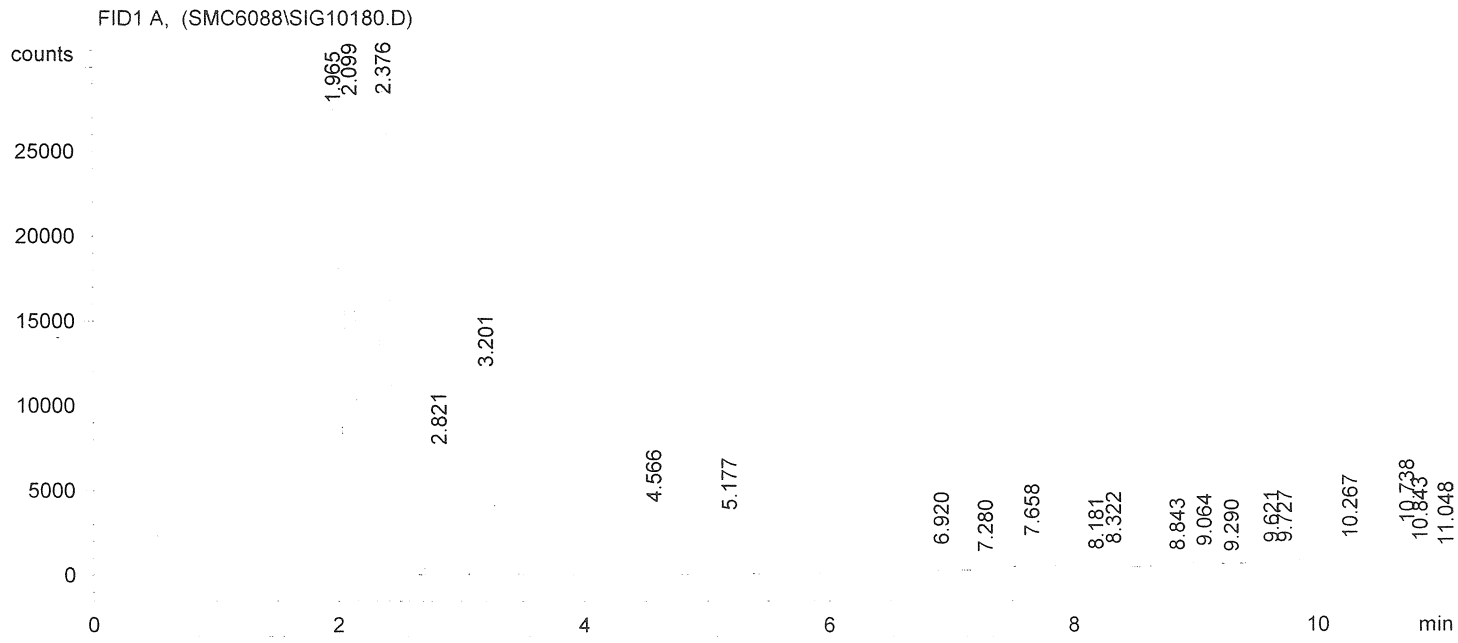

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.965 MM    0.0698 7610.29736 1816.12402 10.76562
   2   2.082 VP    0.0966 7311.27295 1174.69153 10.34261
   3   2.378 VP    0.0874 9809.58789 1749.72229 13.87676
   4   2.825 BB    0.1151 5514.56689  706.58105  7.80097
   5   3.205 BB    0.1050 1.14706e4  1693.83606 16.22643
   6   4.570 BP    0.1271 6112.16650  749.46790  8.64634
   7   5.182 BB    0.1106 6638.60938  938.16180  9.39106
   8   6.429 BP    0.1374 9201.39844 1018.33221 13.01641
   9   6.926 BB    0.1384 4396.33057  440.61234  6.21910
  10   7.285 BV    0.1177 2625.94531  320.09903  3.71469

Totals :                  7.06908e4  1.06076e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 11:37:44 AM
Sample Name     : outlet Run 2                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.965 PV    0.0727 7705.32178 1644.30408 26.91413
   2   2.083 VB    0.0969 6904.82764 1105.65259 24.11806
   3   2.376 BB    0.0885 1.00896e4  1769.10132 35.24209
   4   2.821 PP    0.0978 3929.57471  621.42676 13.72572

Totals :                  2.86293e4  5140.48474

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==================================================================
Injection Date  : 6/23/2006 11:47:57 AM
Sample Name     : outlet Run 3                  Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==================================================================
```




```
==================================================================
                        Area Percent Report
==================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,
```

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Height [counts]	Area %
1	1.965	BV	0.0750	1.24721e5	2.74521e4	17.24031
2	2.099	VV	0.0917	1.61984e5	2.79232e4	22.39124
3	2.376	VB	0.0882	1.69697e5	2.99230e4	23.45738
4	2.821	BV	0.1003	4.78914e4	7325.35693	6.62009
5	3.201	VB	0.1042	7.97149e4	1.18988e4	11.01910
6	4.566	BB	0.1290	3.27424e4	3936.67407	4.52603
7	5.177	BB	0.1076	2.38493e4	3410.37549	3.29672
8	6.920	PB	0.1174	9804.17773	1199.04895	1.35524
9	7.280	BB	0.1211	5874.77539	705.95923	0.81208
10	7.658	BB	0.0961	1.02671e4	1573.30615	1.41923
11	8.181	BV	0.2068	1.02014e4	688.81592	1.41015
12	8.322	VP	0.0856	5834.28906	1006.35883	0.80648
13	8.843	BV	0.1316	5090.12939	513.82544	0.70362
14	9.064	VV	0.1053	4774.16699	720.84058	0.65994
15	9.290	VP	0.0672	1480.40796	351.00467	0.20464
16	9.621	VV	0.1122	5659.88965	732.01556	0.78237

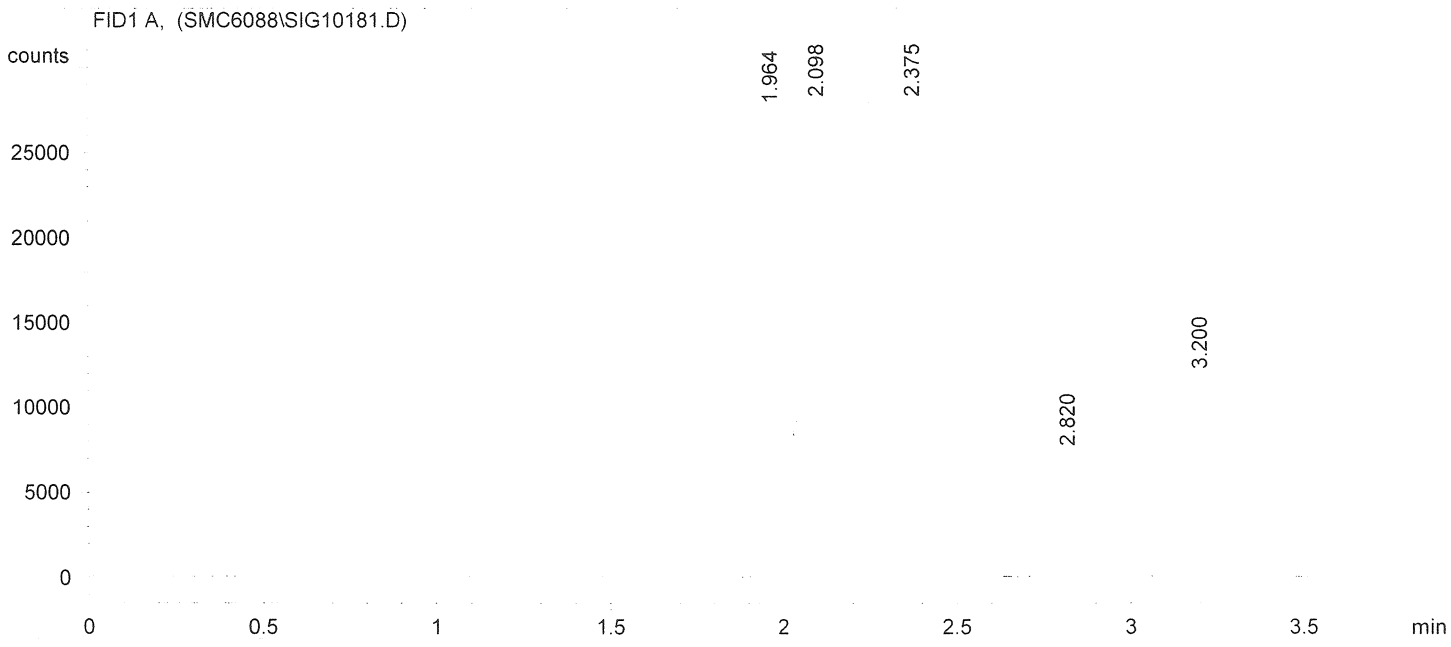
CIM6132 outlet run 3 inj #1

```
==================================================================
Injection Date  : 6/23/2006 11:47:57 AM
Sample Name     : outlet Run 3                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==================================================================
```

Peak #	RetTime [min]	Type	Width [min]	Area counts*s	Height [counts]	Area %
17	9.727	VB	0.0671	3400.16431	719.64191	0.47001
18	10.267	BB	0.0747	3926.42505	780.00146	0.54275
19	10.738	BV	0.0961	1.07055e4	1640.70605	1.47984
20	10.843	VV	0.0901	3910.76782	584.52948	0.54059
21	11.048	VBA	0.0922	1896.72900	282.81039	0.26219
Totals :				7.23425e5	1.23368e5	

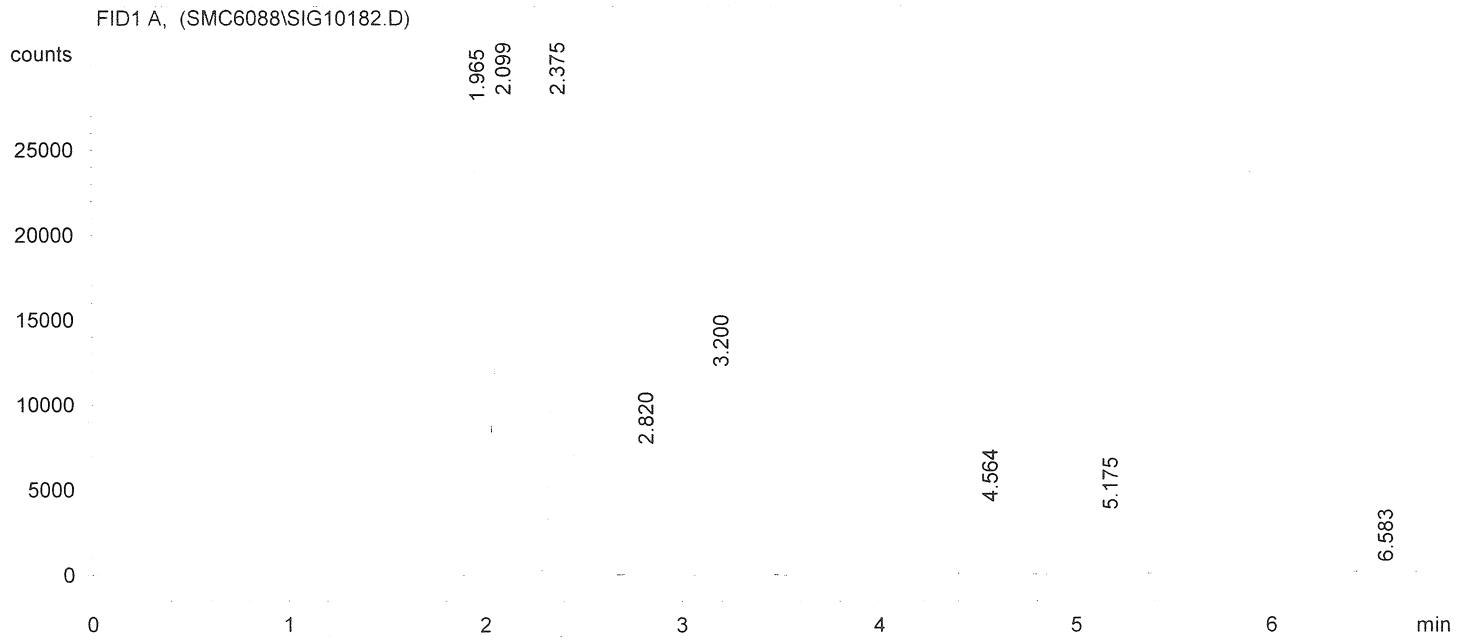
```
 Results obtained with enhanced integrator!
==================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 12:04:42 PM
Sample Name     : outlet Run 3                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.964 PV    0.0726 1.23920e5  2.74655e4  21.33067
   2   2.098 VV    0.0914 1.61088e5  2.78728e4  27.72854
   3   2.375 VB    0.0880 1.68645e5  2.98221e4  29.02937
   4   2.820 BV    0.1003 4.77863e4  7305.07373  8.22559
   5   3.200 VB    0.1023 7.95075e4  1.18480e4  13.68583

Totals :                  5.80947e5  1.04313e5

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 12:15:14 PM
Sample Name     : outlet Run 3                    Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```

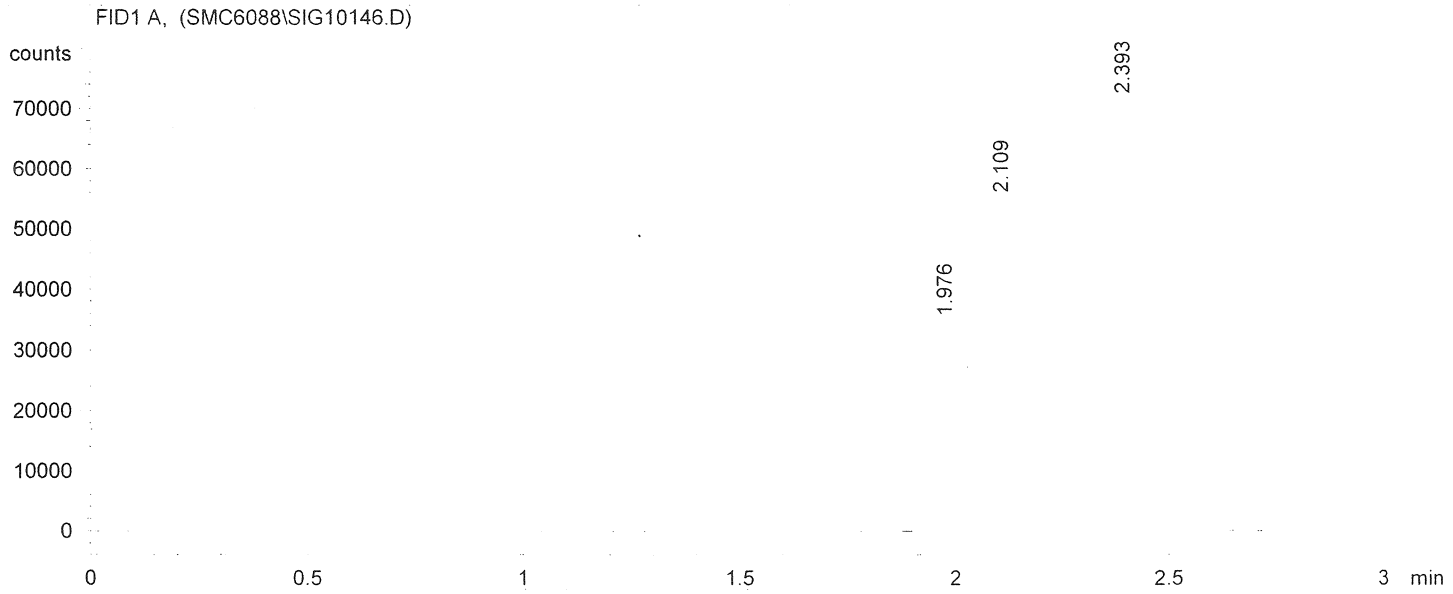



```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.965 BV    0.0747 1.24101e5  2.74810e4  19.30910
   2   2.099 VV    0.0916 1.61530e5  2.78710e4  25.13269
   3   2.375 VB    0.0883 1.69402e5  2.98211e4  26.35761
   4   2.820 BV    0.1011 4.84471e4  7335.33887  7.53797
   5   3.200 VB    0.1025 7.97648e4  1.18566e4  12.41075
   6   4.564 BP    0.1293 3.26019e4  3909.21802  5.07260
   7   5.175 BB    0.1078 2.38193e4  3399.23389  3.70608
   8   6.583 BV    0.1651 3041.31104  255.02158  0.47320

Totals :                  6.42707e5  1.11929e5

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

Pre Cal 100 - 50 - 5 ppm C_1 - 3 CIM6132

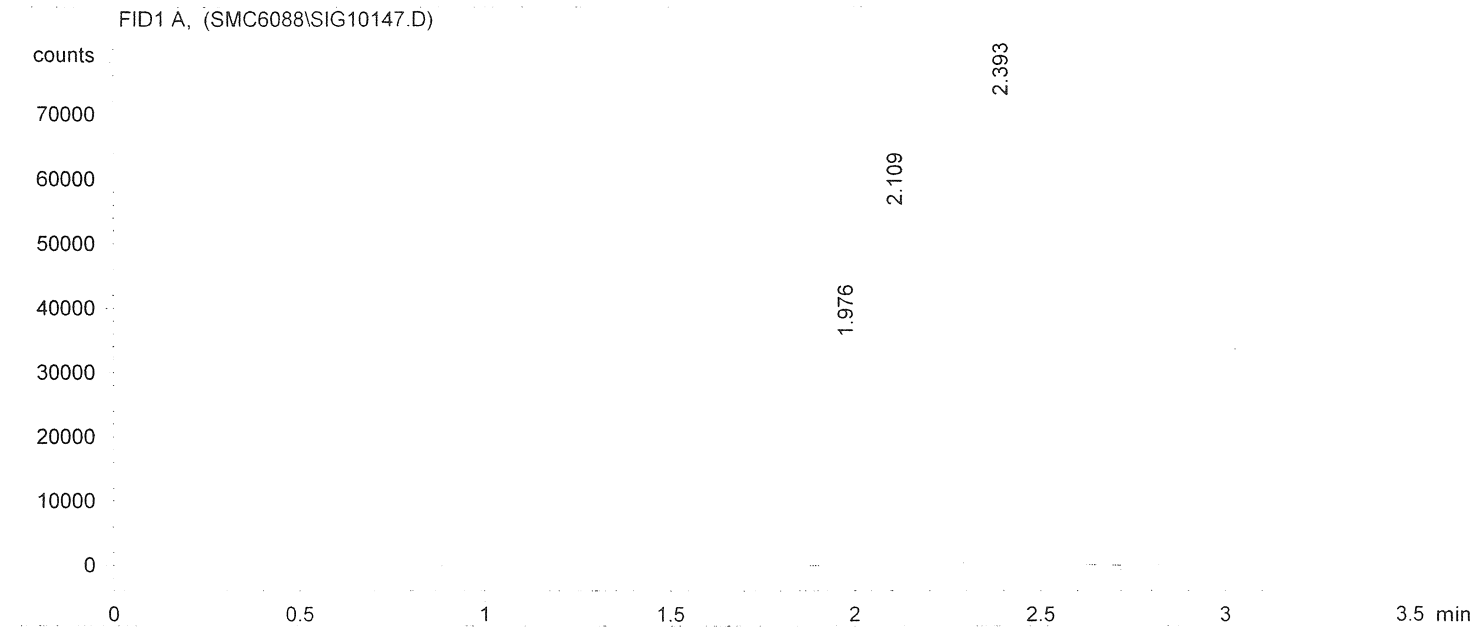
Post cal 50ppm

```
==========================================================================
Injection Date  : 6/21/2006 9:51:16 AM
Sample Name     : 100 ppm C1-3 pre              Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII               Inj Volume : External
Acq. Method     : C:\BTEX.M
Last changed    : 6/21/2006 9:53:45 AM by mbp
                  (modified after loading)
Analysis Method : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



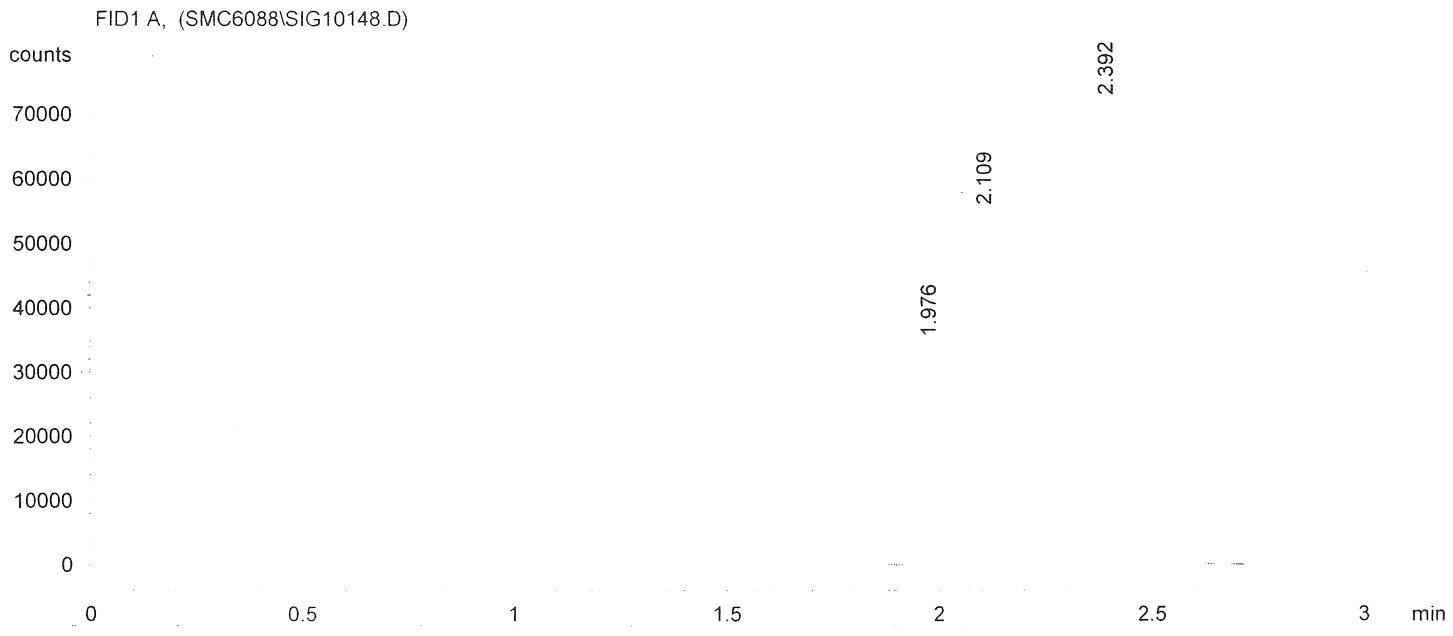

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.976 PV    0.0775 1.64791e5  3.46442e4  17.56222
   2   2.109 VV    0.0931 3.25894e5  5.50079e4  34.73139
   3   2.393 VB    0.0917 4.47643e5  7.71890e4  47.70638

Totals :                  9.38328e5  1.66841e5

Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 9:56:17 AM
Sample Name     : 100 ppm C1-3 pre              Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII              Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



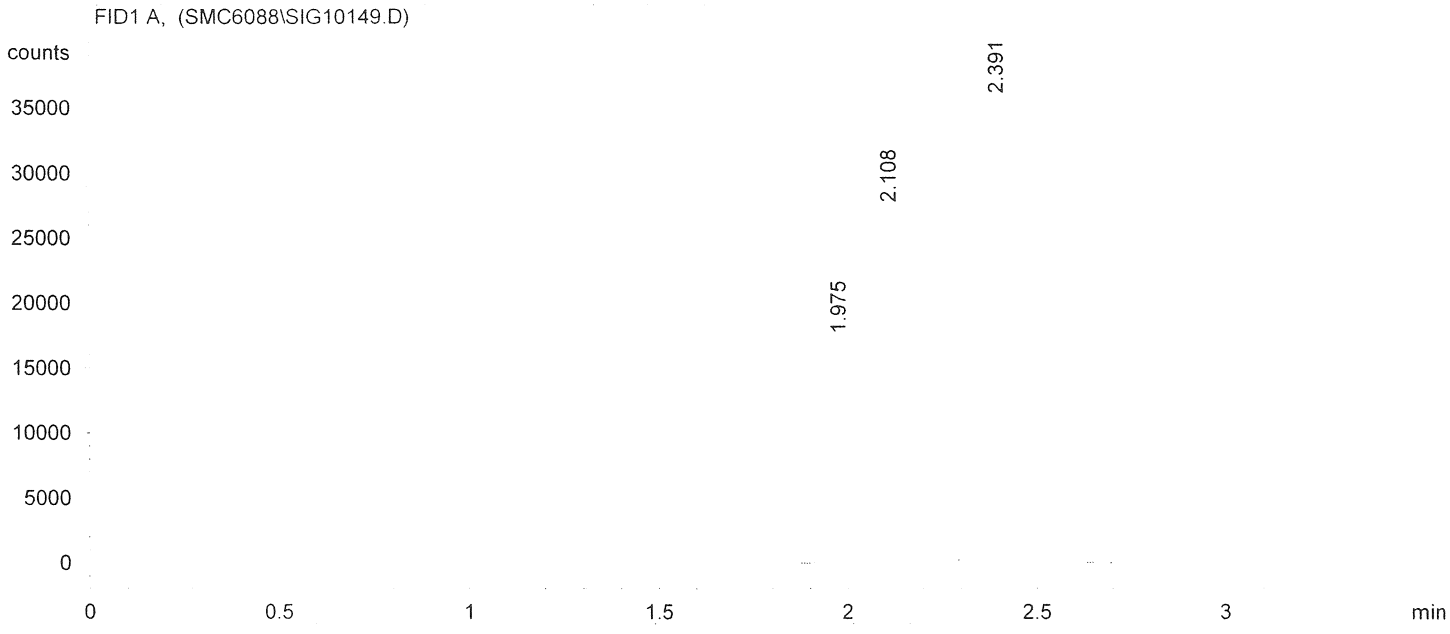

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.976 PV    0.0774 1.64093e5  3.45836e4  17.56607
   2   2.109 VV    0.0928 3.24332e5  5.49786e4  34.71955
   3   2.393 VB    0.0914 4.45724e5  7.71055e4  47.71439

Totals :                  9.34149e5  1.66668e5

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:01:24 AM
Sample Name     : 100 ppm C1-3 pre              Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII              Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



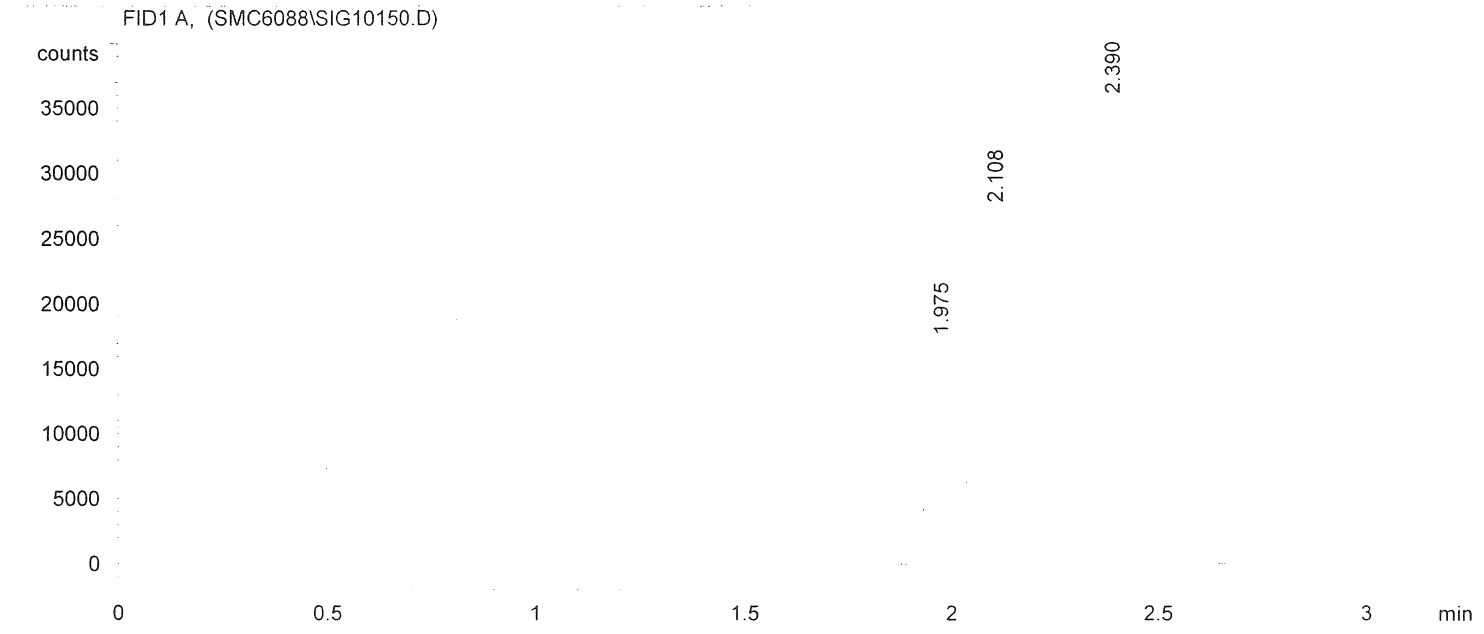

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.976 PV    0.0773 1.64122e5  3.45945e4  17.55367
   2   2.109 VV    0.0928 3.24687e5  5.50309e4  34.72701
   3   2.392 VB    0.0915 4.46161e5  7.71601e4  47.71933

Totals :                  9.34970e5  1.66786e5

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:10:34 AM
Sample Name     : 50 ppm C1-3 pre                 Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



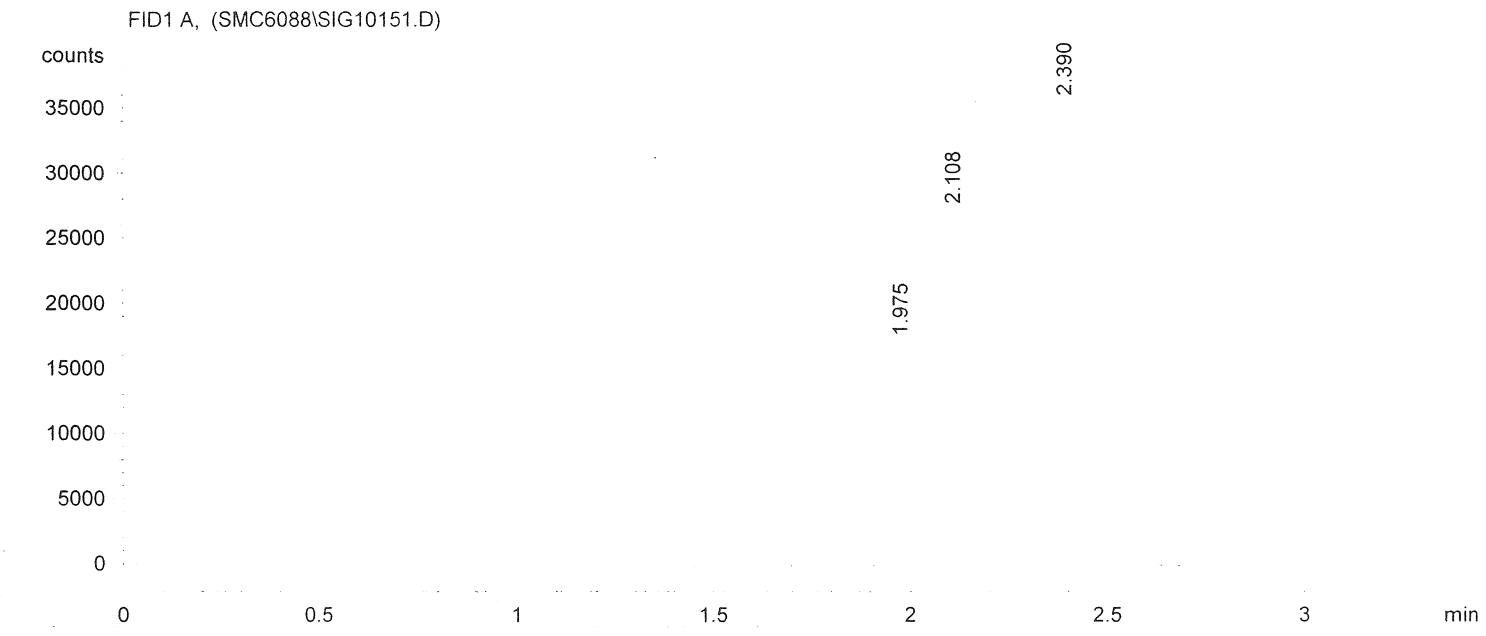

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 PV    0.0773 8.15558e4  1.72069e4  17.60202
   2   2.108 VV    0.0927 1.60874e5  2.73196e4  34.72110
   3   2.391 VB    0.0914 2.20902e5  3.82117e4  47.67688

Totals :                  4.63332e5  8.27383e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:18:31 AM
Sample Name     : 50 ppm C1-3 pre                 Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



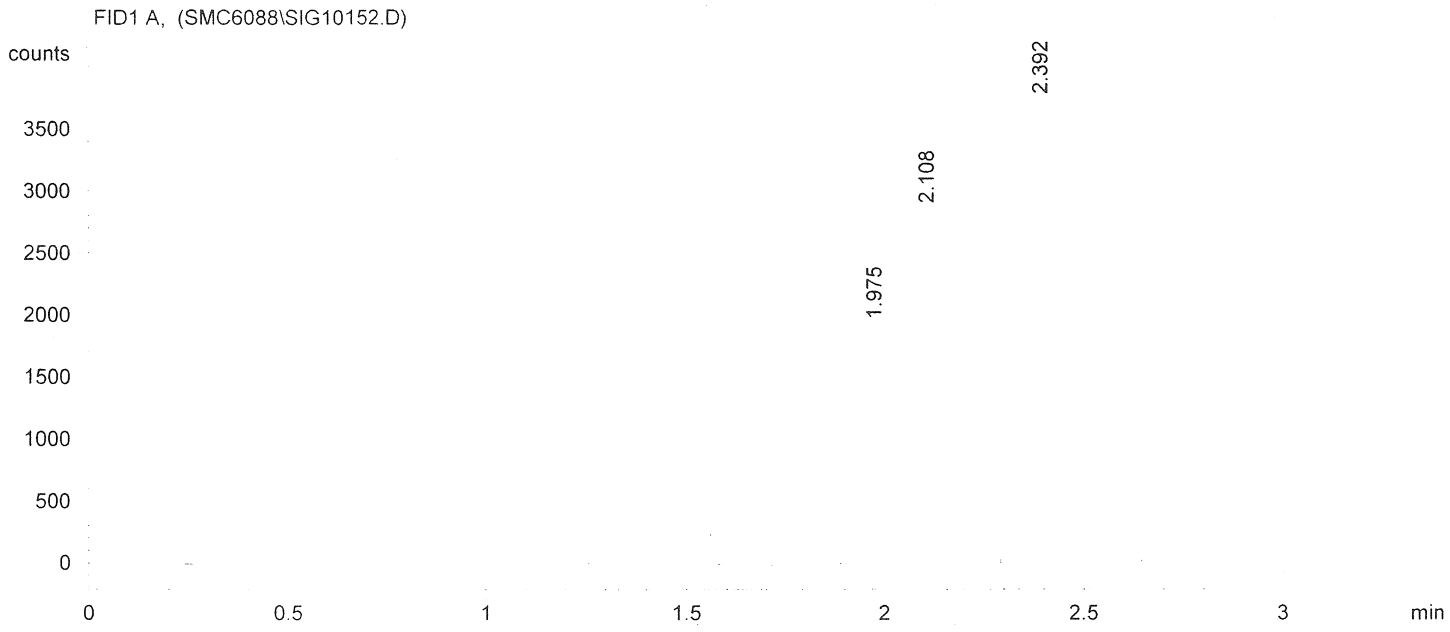

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 PV    0.0772 8.12651e4  1.71699e4  17.61469
   2   2.108 VV    0.0925 1.60147e5  2.72835e4  34.71275
   3   2.390 VB    0.0912 2.19937e5  3.81650e4  47.67256

Totals :                  4.61348e5  8.26183e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:24:13 AM
Sample Name     : 50 ppm C1-3 pre                 Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



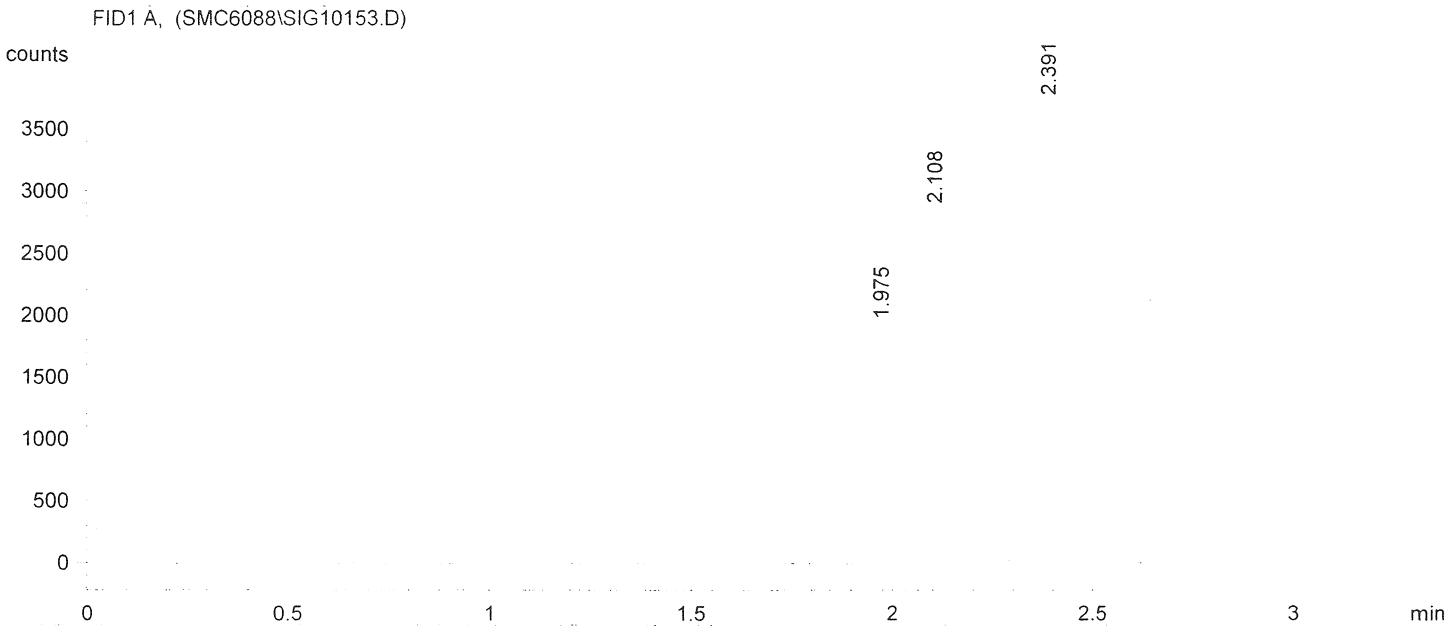

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 PV    0.0772 8.12802e4  1.71741e4  17.62560
   2   2.108 VV    0.0924 1.60013e5  2.72812e4  34.69883
   3   2.390 VB    0.0912 2.19855e5  3.81573e4  47.67557

Totals :                  4.61149e5  8.26126e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:36:18 AM
Sample Name     : 5 ppm C1-3 pre                  Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



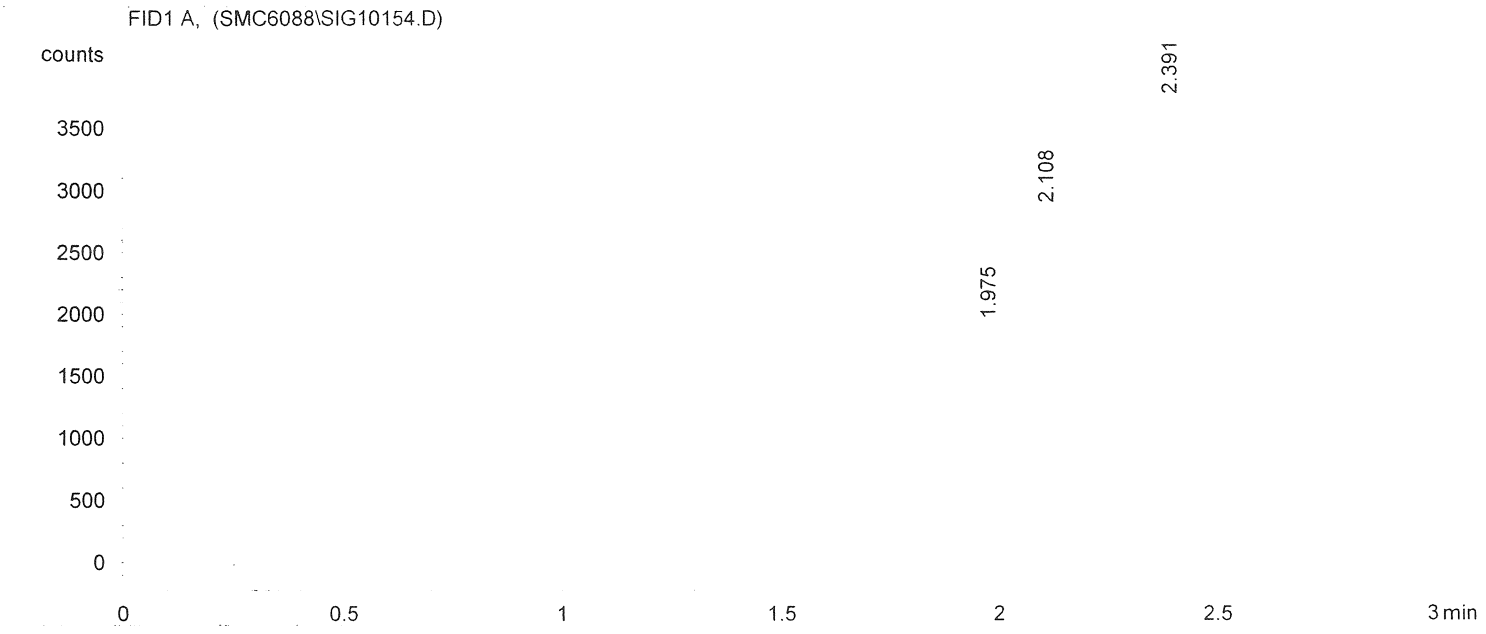

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 PV    0.0778 9177.21973 1918.68030 18.70747
   2   2.108 VV    0.0929 1.68276e4  2850.51440 34.30261
   3   2.392 VB    0.0914 2.30516e4  3987.51025 46.98992

Totals :                  4.90565e4  8756.70496

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:41:37 AM
Sample Name     : 5 ppm C1-3 pre                  Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



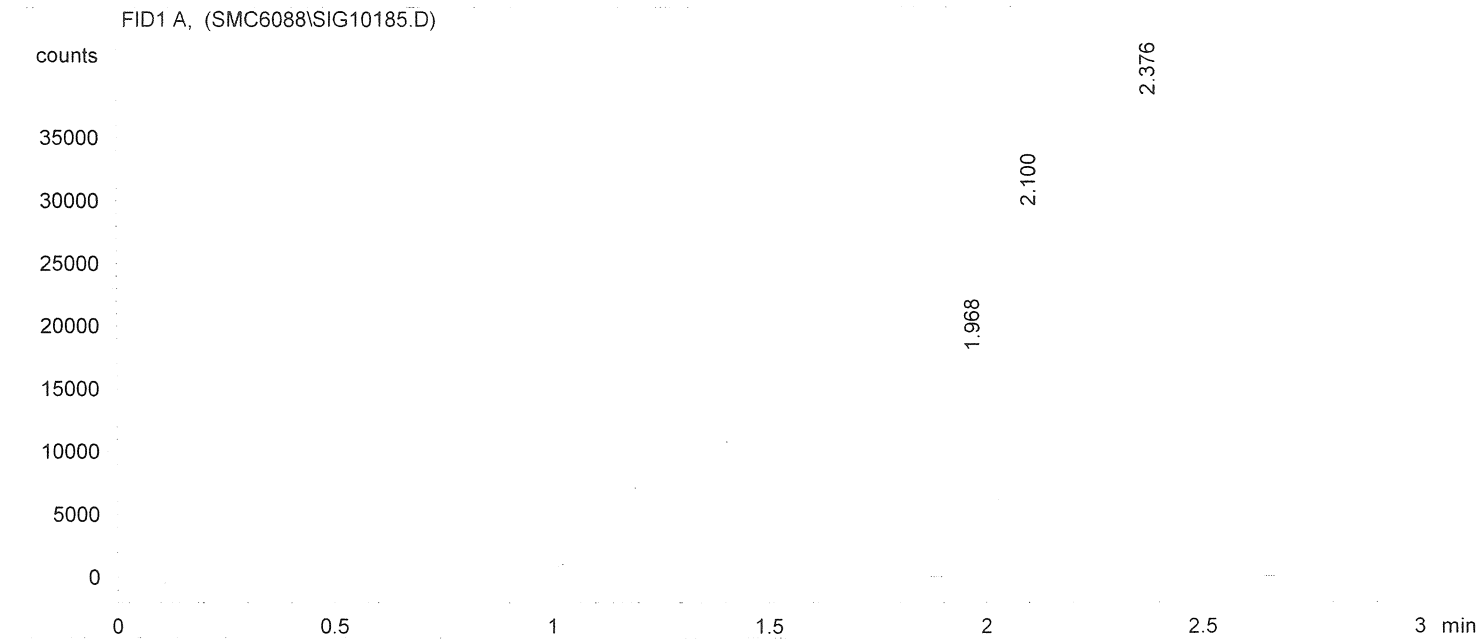

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 PV    0.0779 9227.37598 1925.93054 18.72596
   2   2.108 VV    0.0931 1.69314e4  2857.27734 34.36043
   3   2.391 VB    0.0915 2.31171e4  3993.34375 46.91362

Totals :                  4.92759e4  8776.55164

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/21/2006 10:46:26 AM
Sample Name     : 5 ppm C1-3 pre                  Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/21/2006 9:55:06 AM by mbp
                  (modified after loading)
==========================================================================
```



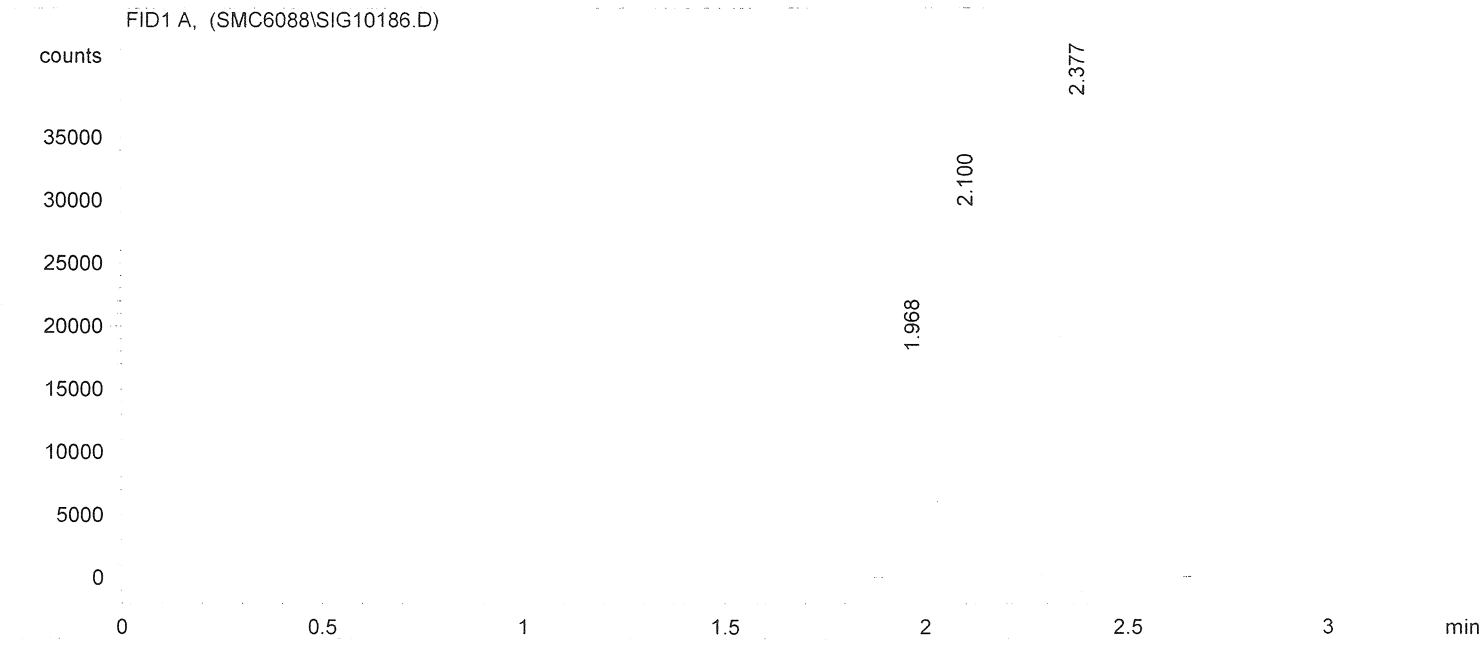

```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.975 BV    0.0777 9173.05469 1920.18555 18.68144
   2   2.108 VV    0.0929 1.68678e4  2856.03174 34.35213
   3   2.391 VB    0.0914 2.30617e4  3989.07031 46.96643

Totals :                  4.91025e4  8765.28760

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==============================================================================
Injection Date  : 6/23/2006 12:50:22 PM
Sample Name     : 50 ppm post                        Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                   Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==============================================================================
```



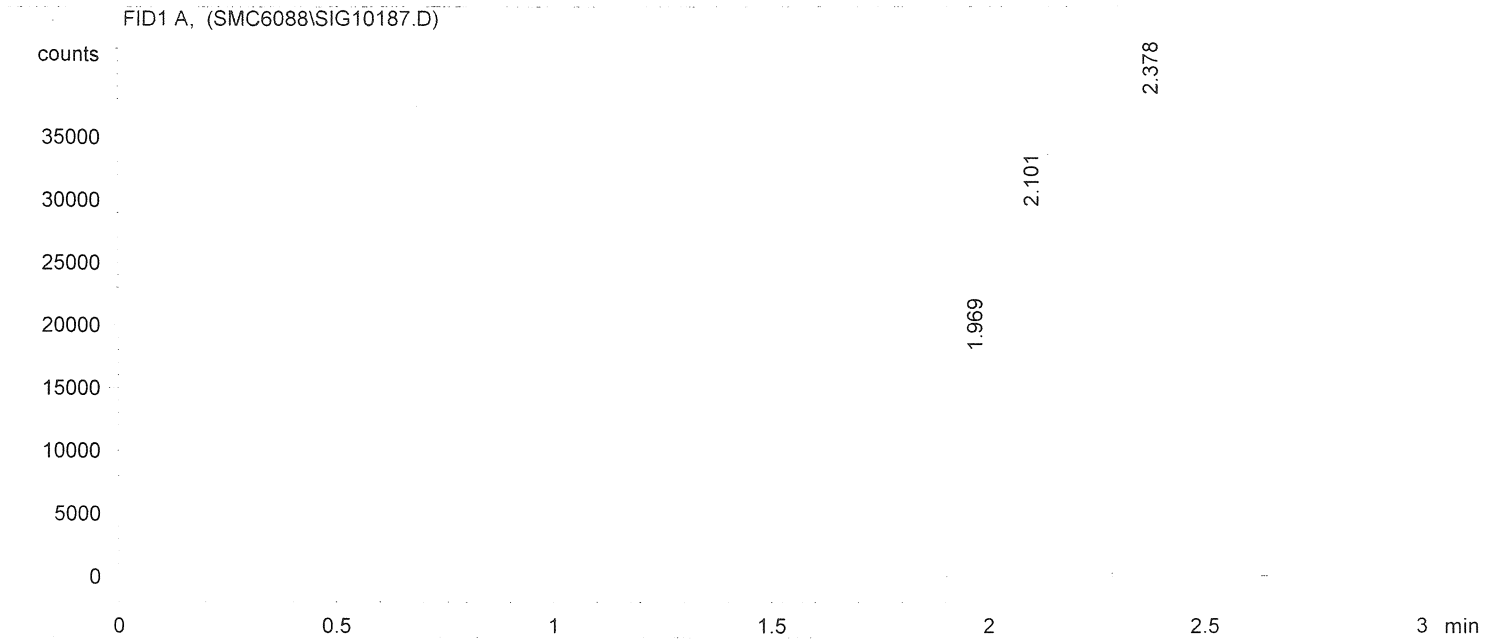

```
==============================================================================
                          Area Percent Report
==============================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]       [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.968 PV    0.0765 8.13371e4  1.74251e4  17.01826
   2   2.100 VV    0.0910 1.66395e5  2.89842e4  34.81503
   3   2.376 VB    0.0885 2.30208e5  4.03806e4  48.16671

Totals :                  4.77940e5  8.67899e4

 Results obtained with enhanced integrator!
==============================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 12:55:23 PM
Sample Name     : 50 ppm post                      Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.968 PV    0.0764 8.12532e4  1.74158e4  17.01955
   2   2.100 VV    0.0910 1.66208e5  2.89523e4  34.81449
   3   2.377 VB    0.0885 2.29950e5  4.03509e4  48.16596

Totals :                  4.77411e5  8.67191e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

```
==========================================================================
Injection Date  : 6/23/2006 1:08:19 PM
Sample Name     : 50 ppm post                      Location : Vial 1
Acq. Operator   : mbp
Acq. Instrument : 5890 seriesII                 Inj Volume : External
Method          : C:\BTEX.M
Last changed    : 6/23/2006 8:26:59 AM by mbp
==========================================================================
```




```
==========================================================================
                          Area Percent Report
==========================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
Sample Amount         :      1.00000  [ng/ul]   (not used in calc.)
Do not use Multiplier & Dilution Factor with ISTDs


Signal 1: FID1 A,

Peak RetTime Type  Width     Area      Height     Area
  #   [min]        [min]  counts*s   [counts]      %
----|-------|----|-------|----------|----------|--------|
   1   1.969 PV    0.0765 8.14975e4  1.74382e4  17.01655
   2   2.101 VV    0.0912 1.66744e5  2.89612e4  34.81588
   3   2.378 VB    0.0886 2.30689e5  4.04188e4  48.16757

Totals :                  4.78931e5  8.68182e4

 Results obtained with enhanced integrator!
==========================================================================
                          *** End of Report ***
```

AIR
POLLUTION
TESTING, INC.

Appendix Four: Calibration Information

Environmental Supply Company, Inc.
Quality Source Sampling Systems & Accessories

Wind Tunnel Pitot Calibration

Customer: **Air Pollution Testing**

S-type Pitot ID:	**P-420**	Date:	**1-Jul-04**
Standard Pitot ID:	**001**	Personnel:	**DH**
Cp(std):	**0.99**	Cp(actual):	**0.81**
Part Number:	**ppst12-p-36**	P(bar):	29.70
Test Velocity (fps):	50	T(°F):	80.00

A-SIDE

$\Delta P_{(std)}$ ["H_2O]	$\Delta P_{(s)}$ ["H_2O]	$Cp_{(s)}$	Deviation*
0.548	**0.825**	**0.807**	-0.002
0.549	**0.818**	**0.811**	0.002
0.550	**0.826**	**0.808**	0.000
0.549	**0.824**	**0.808**	0.000
	AVERAGE	**0.808**	0.001
		Std deviation	0.002

B-SIDE

$\Delta P_{(std)}$ ["H_2O]	$\Delta P_{(s)}$ ["H_2O]	$Cp_{(s)}$	Deviation*
0.545	**0.825**	**0.805**	-0.002
0.550	**0.824**	**0.809**	0.002
0.549	**0.823**	**0.809**	0.002
0.545	**0.824**	**0.805**	-0.002
	AVERAGE	**0.807**	0.002
		Std deviation	0.002

Cp(A) - Cp(B) = 0.001
{must be <0.010}

$Cp_{(s)} = Cp_{(std)} SQRT[\Delta P_{(std)}/\Delta P_{(s)}]$

*Deviation = |{Cp(s) - *AVG* Cp(s)}|
{must be <0.010}

Standard deviation of the deviations must be less than 0.02 for both sides.

Pitot tube S/N P-420 was calibrated in accordance with the Code of Federal Regulations, Title 40, Part 60, Appendix A, Method 2, Section 10

David R. Hess
Signature

7-1-2004
Date

2142 E. Geer Street, Durham, North Carolina 27704 800-STACKS-5 (782-2575) 919-956-9688 FAX: 919-682-0333

AIR
POLLUTION
TESTING, INC.
DENVER, DURANGO, SALT LAKE CITY

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

GAS METER ID :	M5-24
DATE :	3-Jan-06
BARO. PRESS. (MBAR) :	832

GAS METER CALIBRATION

Run #1	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	0.5	811.487	62	63	832.126	59	0.35	10	2:10 PM
Stop	0.5	823.244	66	63	843.831	58	0.35	10	2:35 PM
Avg.	**0.5**	**11.757**	**64**	**63**	**11.705**	**59**	**0.35**	**10**	**25.0**

Run #2	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.5	823.652	66	63	844.238	58	0.84	10	2:35 PM
Stop	1.5	835.863	69	64	856.441	59	0.82	10	2:51 PM
Avg.	**1.5**	**12.211**	**68**	**64**	**12.203**	**59**	**0.83**	**10**	**16.0**

Run #3	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	3.0	836.406	68	64	856.979	58	1.6	10	2:51 PM
Stop	3.0	856.863	69	64	877.568	59	1.6	10	3:10 PM
Avg.	**3.0**	**20.457**	**69**	**64**	**20.589**	**59**	**1.60**	**10**	**19.0**

	Run #1	Run #2	Run #3	***Average***
Yref	1.001	1.001	1.001	***1.001***
Yd	1.004	1.007	1.009	***1.006***
DH@	1.52	1.72	1.70	***1.64***

THERMOCOUPLE CALIBRATION

Calibration Temperature Reading (F)	Pyrometer Reading (F)	ABS (Relative Difference) % R
60	56	0.8
400	396	0.5
800	799	0.1
Max Absolute Difference %		0.8

PITOT LEAK CHECK

0.00 @ 7" H2O Positive
0.00 @ 7" H2O Negative

Technician: jvicory

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

AIR
POLLUTION
TESTING, INC.
DENVER, DURANGO, SALT LAKE CITY

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

GAS METER ID :	M5-24 post
DATE :	30-Jun-06
BARO. PRESS. (MBAR) :	839

GAS METER CALIBRATION

Run #1	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.0	643.596	72	72	815.308	73	0.62	7	12:10 PM
Stop	1.0	649.994	73	73	821.897	73	0.62	7	12:20 PM
Avg.	**1.0**	**6.398**	**73**	**73**	**6.589**	**73**	**0.62**	**7**	**10.0**

Run #2	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.0	649.994	73	73	821.897	73	0.62	7	12:20 PM
Stop	1.0	656.383	73	73	828.430	73	0.62	7	12:30 PM
Avg.	**1.0**	**6.389**	**73**	**73**	**6.533**	**73**	**0.62**	**7**	**10.0**

Run #3	DH	Vmet	Tin	Tout	Vref	Tref	DP	Vac	Time
Start	1.0	656.383	73	73	828.430	73	0.62	7	12:30 PM
Stop	1.0	662.858	75	74	835.052	73	0.62	7	12:40 PM
A...	**1.0**	**6.475**	**74**	**74**	**6.622**	**73**	**0.62**	**7**	**10.0**

	Run #1	Run #2	Run #3	***Average***
Yref	0.996	0.996	0.996	***0.996***
Yd	1.020	1.014	1.015	***1.016***
DH@	1.59	1.62	1.58	***1.60***

Post vs. Pre Calibration Check		
Pre Y_d	Post Y_d	Diff. in Y_d
1.009	1.016	0.72%

THERMOCOUPLE CALIBRATION

Calibration Temperature Reading (F)	Pyrometer Reading (F)	ABS (Relative Difference) % R
40	41	0.2
400	398	0.2
800	799	0.1
Max Absolute Difference %		0.2

PITOT LEAK CHECK

0.00 @ 3" H2O Positive
0.00 @ 3" H2O Negative

Technician: bg

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

Spectra Gases, Inc.

3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

SHIPPED FROM: 80 INDUSTRIAL DRIVE ALPHA, NJ. 08865

SHIPPED TO: Air Pollution Testing
5530 Marshall St.
Arvada, CO 80002

CERTIFICATE OF ANALYSIS

SGI ORDER # :	0079216		
ITEM# :	1	**CYLINDER # :**	CC-88333
CERTIFICATION DATE:	10/18/2005	**CYLINDER PRES:**	2000 psig
P.O.# :	GC10-7-05	**CYLINDER VALVE:**	CGA 350
BLEND TYPE:	CERTIFIED	**PRODUCT EXPIRATION DATE:**	10/18/2006

ANALYTICAL ACCURACY: +/- 2%

COMPONENT	REQUESTED GAS CONC	ANALYSIS
Methane	100 ppm	102 ppm
Ethane	100 ppm	102 ppm
Propane	100 ppm	101 ppm
Nitrogen	Balance	Balance

ANALYST: April Chamberlain

DATE: 10/18/2005

Tel: +1 908-252-9300 Fax: +1 908-252-0811
www.spectragases.com

Spectra Gases, Inc.

3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

SHIPPED FROM: 80 INDUSTRIAL DRIVE ALPHA, NJ. 08865

SHIPPED TO: Air Pollution Testing
5530 Marshall St.
Arvada, CO 80002

CERTIFICATE OF ANALYSIS

SGI ORDER # :	0076007		
ITEM# :	1	**CYLINDER # :**	CC-94803
CERTIFICATION DATE:	8/17/2005	**CYLINDER PRES:**	2000 psig
P.O.# :	GCM205	**CYLINDER VALVE:**	CGA 350
BLEND TYPE:	CERTIFIED	**PRODUCT EXPIRATION DATE:**	8/17/2006

ANALYTICAL ACCURACY: +/- 2%

COMPONENT	REQUESTED GAS CONC	ANALYSIS
Methane	5.00 ppm	5.00 ppm
Ethane	5.00 ppm	5.11 ppm
Propane	5.00 ppm	4.98 ppm
Nitrogen	Balance	Balance

ANALYST: April Chamberlain

DATE: 8/17/2005

Tel: +1 908-252-9300 Fax: +1 908-252-0811
www.spectragases.com

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 # : 0084455
ITEM# : 3
P.O.# : DOOFC

CYLINDER # : CC-38296
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	14.96 ppm	14.96 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 L Patino
CHERYL PATINO

DATE: 2/6/2006

Tel: +1 908-252-9300 Fax: +1 908-252-0811
www.spectragases.com

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 # : 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

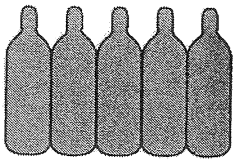
THIS STANDARD IS NIST TRACEABLE. IT WAS CERTIFIED ACCORDING TO THE EPA PROTOCOL PROCEDURES.
DO NOT USE THIS STANDARD IF THE CYLINDER PRESSURE IS LESS THAN 150 PSIG.

ANALYST: Cheryl L Patino
CHERYL PATINO

DATE: 2/6/2006

Tel: +1 908-252-9300 Fax: +1 908-252-0811
www.spectragases.com

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



CERTIFICATE OF ANALYSIS

EPA PROTOCOL MIXTURE

PROCEDURE # : G1

CUSTOMER: Air Pollution Testing
SGI ORDER # : 0052405
ITEM# : 3
P.O.# : DOOFC

CYLINDER # : CC-91113
CYLINDER PRES: 2000 PSIG
CGA OUTLET: 350

CERTIFICATION DATE: 4/20/2004
EXPIRATION DATE: 4/20/2007

CERTIFICATION HISTORY

COMPONENT	DATE OF ASSAY	MEAN CONCENTRATION	CERTIFIED CONCENTRATION	ANALYTICAL ACCURACY
Propane	4/20/2004	50.2 ppm	50.2 ppm	+/- 1%

BALANCE Nitrogen
PREVIOUS CERTIFICATION DATES: None

REFERENCE STANDARDS

COMPONENT	SRM/NTRM#	CYLINDER#	CONCENTRATION
Propane	SRM-2643a	SX20148	99.1 ppm

INSTRUMENTATION

COMPONENT	MAKE/MODEL	SERIAL #	DETECTOR	CALIBRATION DATE(S)
Propane	H. Packard 6890	US00001434	GC - FID	4/20/2004

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 L Patino
CHERYL PATINO

DATE: 4/20/2004

Spectra Gases Inc.

3434 Route 22 West, Branchburg, New Jersey 08876 USA

ISO 9001:2000

SHIPPED FROM: 80 INDUSTRIAL DRIVE ALPHA, NJ. 08865 TEL: (908) 454-7455

SHIPPED TO: Air Pollution Testing
5530 Marshall St.
Arvada, CO 80002

CERTIFICATE OF ANALYSIS

SGI ORDER # :	0085027		
ITEM# :	2	**CYLINDER # :**	CC-82073
CERTIFICATION DATE:	2/13/2006	**CYLINDER PRES:**	2000 psig
P.O.# :	DOOFC	**CYLINDER VALVE:**	CGA 590
BLEND TYPE:	ZERO AIR		

COMPONENT	REQUESTED GAS GRADE
AIR	ZERO

THC < 1.0 ppm

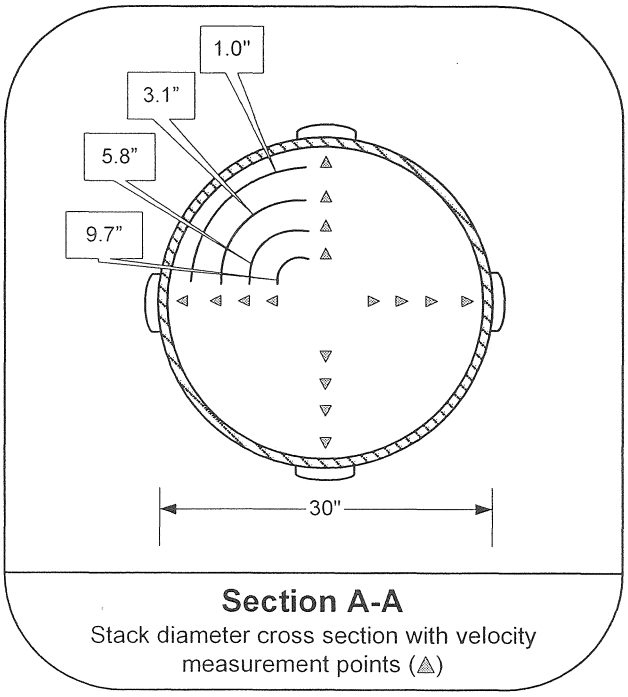
ANALYST: Cheryl L Patino
Cheryl Patino

DATE: 2/13/2006

Tel: +1 908-252-9300 Fax: +1 908-252-0811
www.spectragases.com

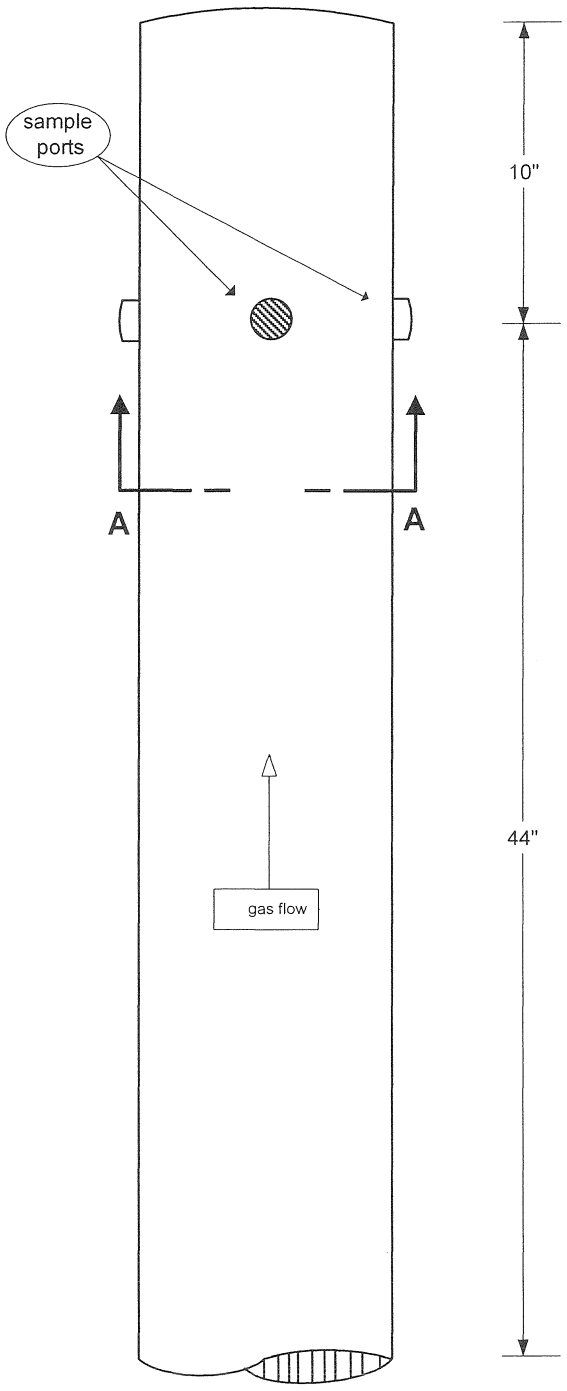
AIR
POLLUTION
TESTING, INC.

Appendix Five: Schematics

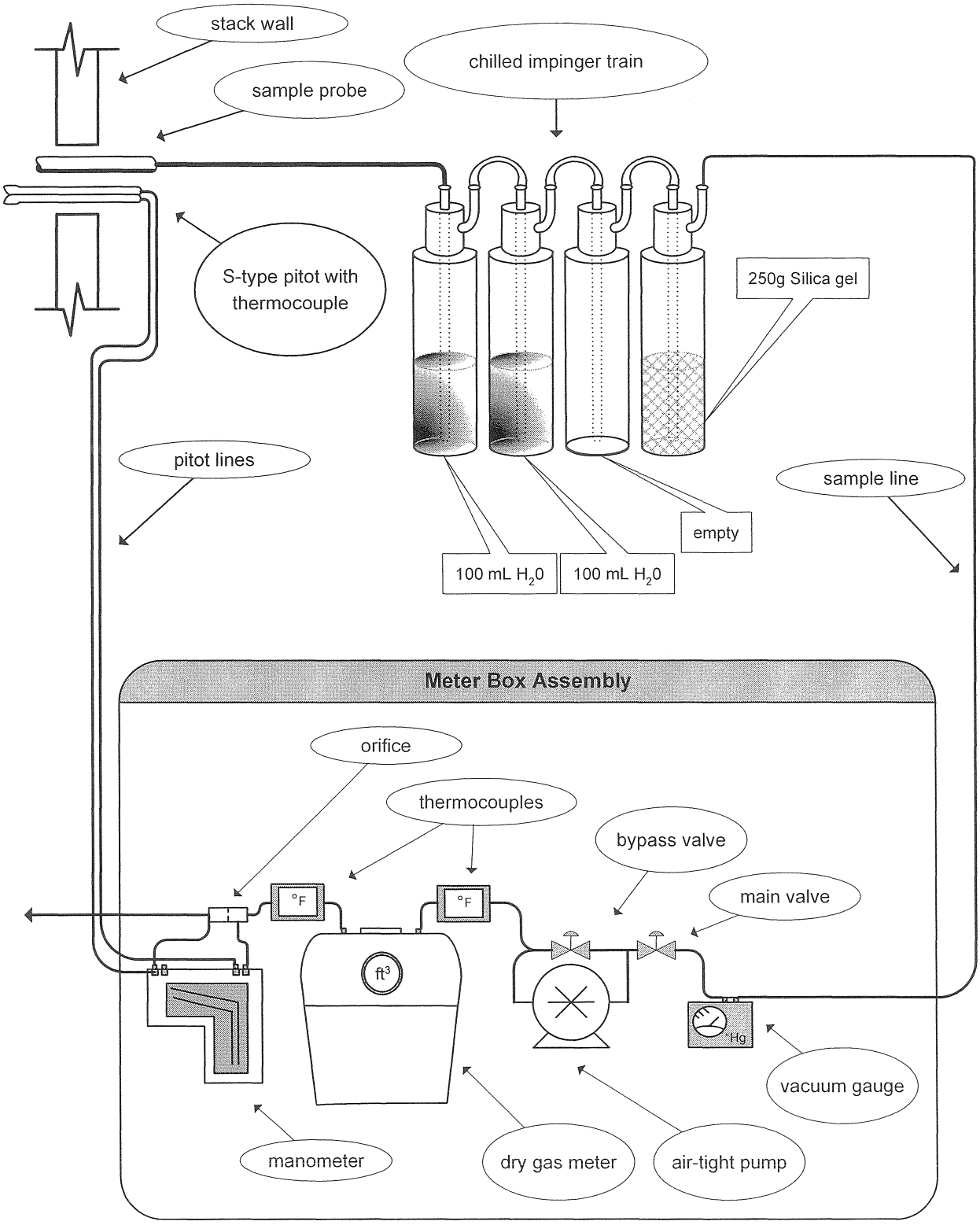


Section A-A

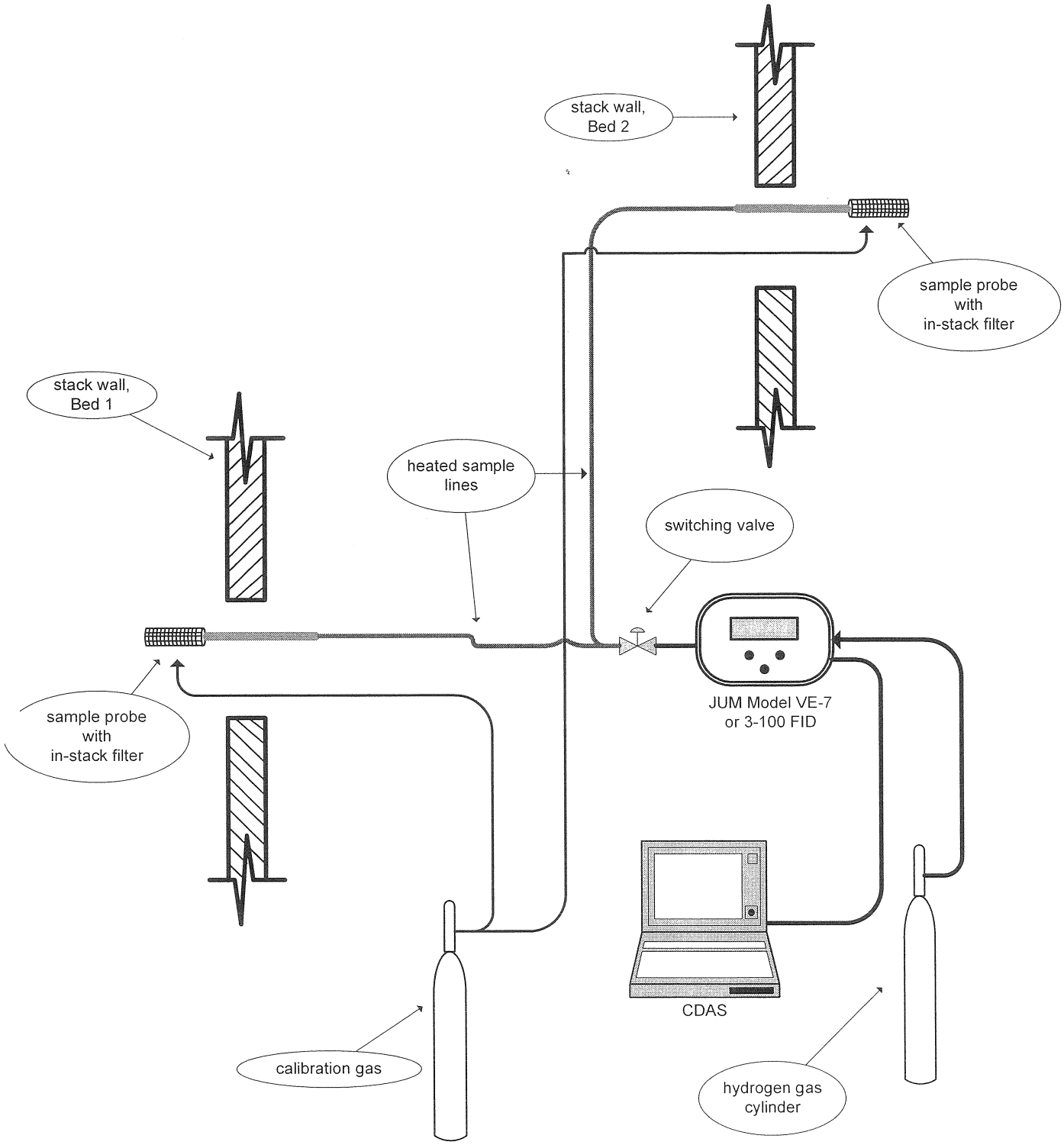
Stack diameter cross section with velocity measurement points (△)



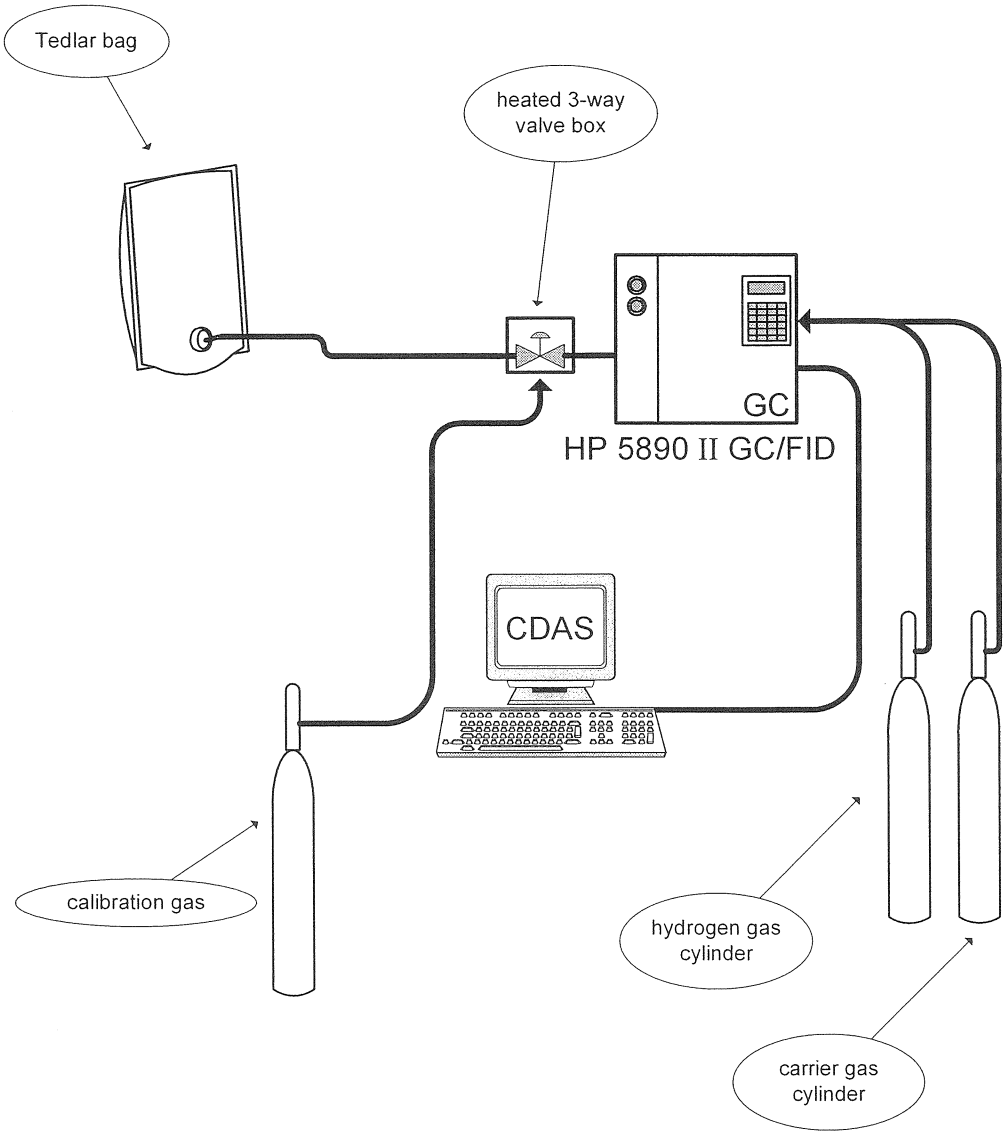
Cimarron LLC.
30" Flare
Sampling Location Schematic
(not to scale)



EPA Methods 1,2, & 4
sampling train schematic



EPA Method 25A
sampling train schematic



EPA Method 18
sampling train schematic