TEST REPORT

LANDFILL GAS FLARE TEST PROGRAM
1 ENCLOSED FLARE
FACILITY ID NO. 097200AAV
APPLICATION NO. 06100001

VEOLIA ENVIRONMENTAL SERVICES – ZION LANDFILL
ZION, ILLINOIS

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SECTIONONE Introduction and Summary

ARI Environmental, Inc. (ARI) was retained by Veolia Environmental Services (VES) to conduct an emission test program at the Zion Landfill located in Zion, Illinois. The purpose of this test report is to detail the testing and analytical procedures conducted at the enclosed landfill gas flare. Testing was conducted on December 7, 2007 as follows:

Parameter	No. of Test Runs	Test Run Duration
Nitrogen Oxides (NO_x)*, Carbon Monoxide (CO)*	4	60 minutes
Volatile Organic Compounds (VOC)	3	60 minutes
Visible Emissions	1	120 minutes

*NO_x and CO testing was voluntarily conducted to determine if the actual flare emissions factors are lower than the manufacturer's guarantee.

Sampling was conducted in accordance with the following regulatory requirements and procedures:

- 40 CFR Part 51, Appendix M, USEPA Method 205
- 40 CFR Part 60, Appendix A, USEPA Methods 1-4, 7E, 10, 18, 19, 22 and 25A
- 40 CFR Part 60, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods

The ARI test team consisted of Messrs. Rob Burton, Ryan Mahoney and Nathan Sekulic of ARI. The testing was coordinated by Mr. Jim Lewis of VES and Ms. Laura Niemann of Environmental Information Logistics, LLC.

This report details the test procedures and results of the testing. Included in the appendices is complete documentation of all field test data, calculation summary data, process data, ARI reference method monitoring data and test equipment calibration data.

A summary of the test results is presented in Table 1-1.

TABLE 1-1. SUMMARY OF EMISSION TEST RESULTS

Test Run :		1	2	3	4	Average
Nitrogen Oxides (NO_x)						
Concentration,	ppmv db	10.43	10.63	10.74	11.42	10.81
Emission Rate,	lb/MMBtu	0.03128	0.03225	0.03257	0.03351	0.03240
Carbon Monoxide (CO)						
Concentration,	ppmv db	12.17	20.31	25.91	6.71	16.27
Emission Rate,	lb/MMBtu	0.02221	0.03751	0.04781	0.01198	0.02988
Total Volatile Organic Compounds (VOC)						
Concentration,	ppmv wb	1.43	2.84	2.31	ND	2.19
Non-Methane Organic Compounds (NMOC) as Hexane						
Concentration,	ppmv db @ 3% O_2	0.523	1.207	0.810	ND	0.847

ND = Not Determined

SECTIONTWO Testing and Analytical Procedures

2.1 OVERVIEW

ARI was retained by VES to conduct an emission compliance test program on an enclosed landfill gas flare at the Zion Landfill located in Zion, Illinois. Four (4) 60-minute test runs were conducted on December 7, 2007. Test Run Nos. 1 through 3 were conducted at a flare operating temperature of 1,530°F and Test Run No. 4 was conducted at 1,575°F. These temperature measurements were taken from the flare control panel.

It should be noted that the stack gas temperature was measured in conjunction with the volumetric flow rate at the stack test ports. Since the test ports are located approximately 50 feet above the burners, the stack gas temperatures are lower than the actual flare operating temperatures.

2.2 METHODOLOGY

All testing was conducted in accordance with the following procedures:

- 40 CFR Part 51, Appendix M, USEPA Method 205
- 40 CFR Part 60, Appendix A, USEPA Methods 1-4, 7E, 10, 18, 19, 22 and 25A
- 40 CFR Part 60, Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills
- Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III, Stationary Source Specific Methods

2.2.1 USEPA Method 1 - Sampling Location

The sampling point locations were determined following the procedural requirements as detailed in USEPA Method 1. Sampling at the flare was conducted in the two (2) sampling ports provided in the 156-inch diameter duct. The sample ports are located approximately 96 inches (0.6 duct diameters) upstream and approximately 600 inches (3.8 duct diameters) downstream from the nearest flow disturbances. Sixteen (16) traverse points were used to sample the cross-sectional area of the stack.

2.2.2 USEPA Method 2 - Volumetric Flow Rate

Gas velocity and volumetric flow rate were determined following USEPA Method 2. Velocity head measurements were performed using a Type S pitot tube and Dwyer inclined 0 – 10-in. water manometer. Temperature measurements were conducted using a digital temperature meter and chromel-alumel thermocouple.

2.2.3 USEPA Method 3A - Molecular Weight

The stack gas molecular weight was determined following USEPA Method 3A procedures. A complete description of this method is given in Subsection 2.2.5 detailing instrument analyzer methods.

2.2.4 USEPA Method 4 - Moisture Content

Moisture determination was conducted in accordance with USEPA Method 4 procedures. Stack gas was extracted at a constant rate through a series of chilled impingers, the first two contained deionized/distilled water, the third was initially empty and the final impinger contained silica gel for final water vapor removal. See Figure 2-1. Total moisture collected was determined based upon the volumetric gains of impingers one through three and the weight gain of the silica gel contained in impinger four. One moisture sample was collected in conjunction with each 60-minute test run.

2.2.5 USEPA Methods 3A, 7E and 10 - O_2, CO_2, NO_x and CO

ARI's sampling system consisted of a heated probe with in-stack filter followed by a three-way calibration valve connected to a heated Teflon sample line. The Teflon sample line was connected to an electronic sample conditioner (Universal Analyzer Model No. 3082) to remove moisture. A sample manifold was connected to the exhaust side of the sample conditioner with intake lines for ARI's O_2, CO_2, NO_x, and CO analyzers. See Figure 2-2.

Continuous O_2 sampling was conducted following USEPA Method 3A. O_2 was measured using ARI's Servomex, Inc. Model 1440C paramagnetic analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted O_2 balance nitrogen standards of zero, 10.0% and 20.0% at an analyzer span of 20%.

Continuous CO_2 sampling was conducted following USEPA Method 3A. CO_2 was measured using ARI's Servomex, Inc. Model 1440C non-dispersive infrared analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted CO_2 balance nitrogen standards of zero, 10.0% and 20.0% at an analyzer span of 20%.

Continuous NO_x sampling was conducted following USEPA Method 7E procedures. NO_x was measured using ARI's Thermo Environmental Instruments, Inc. Model 42C chemiluminescent analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted NO_x balance nitrogen standards of zero, 22.5 ppm, 45.0 ppm and 88.98 ppm at an analyzer span of 88.98 ppm. The NO_X pre-test converter efficiency test was conducted following the procedures described in paragraph 8.2.4.1 of USEPA Method 7E (40 CFR 60, Appendix A). The converter is acceptable if the NO_2 to NO conversion rate is greater than 90%. The converter used was internal to the Thermo Environmental, Inc. Model 42C that uses a high temperature converter operating at approximately 625°C. The converter check was conducted at 08:22 on December 7, 2007 and demonstrated a NO_2 to NO conversion efficiency of 95.6%.

Continuous CO sampling was conducted following USEPA Method 10 procedures. CO was measured using ARI's Thermo Environmental Instruments, Inc. Model 48C analyzer. A pre-test and post-test system bias along with the initial calibration error test were performed using diluted CO balance nitrogen standards of zero, 22.5 ppm, 45.0 ppm and 90.4 ppm at an analyzer span of 90.4 ppm.

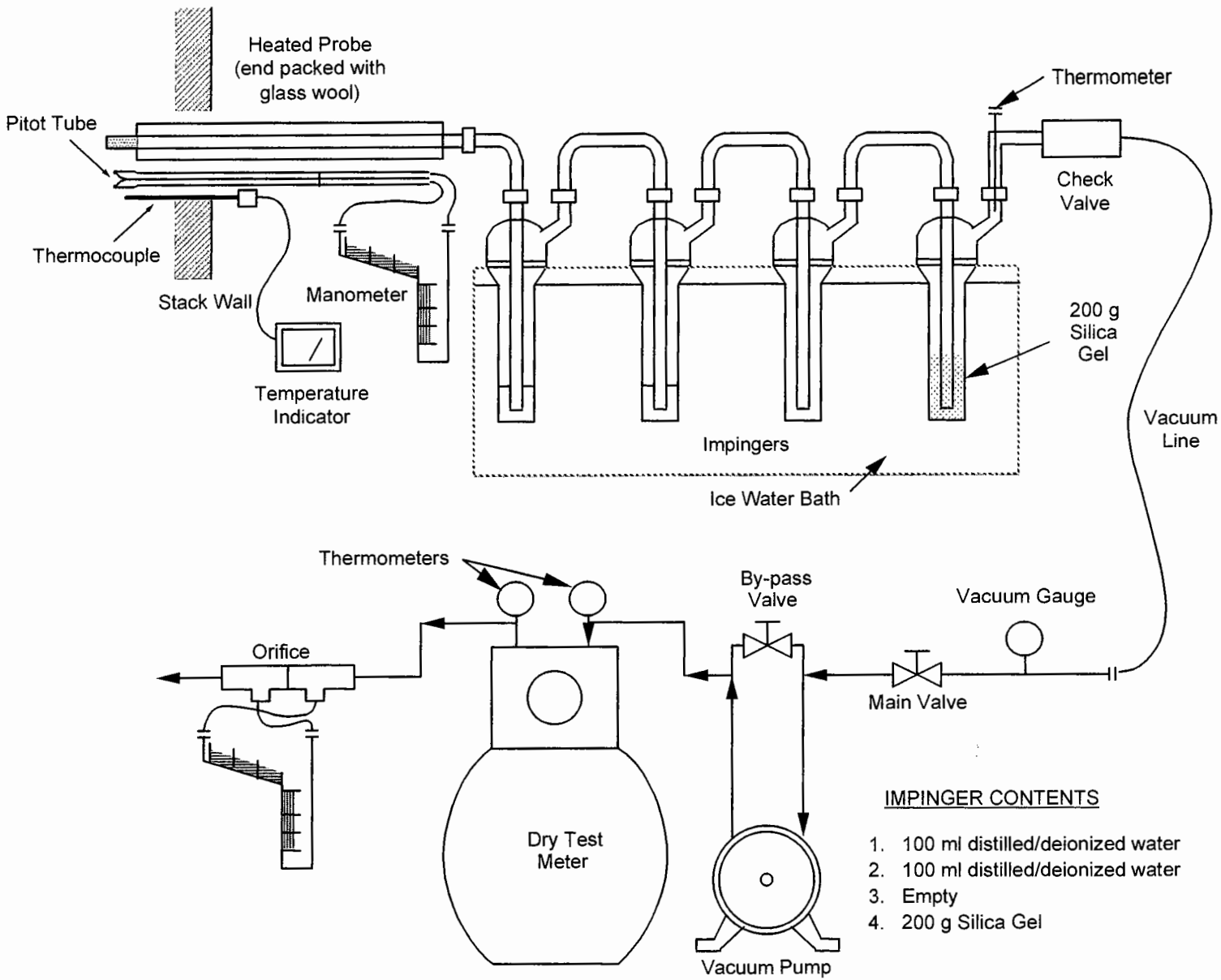


FIGURE 2-1. USEPA METHOD 4 SAMPLING TRAIN (MOISTURE)

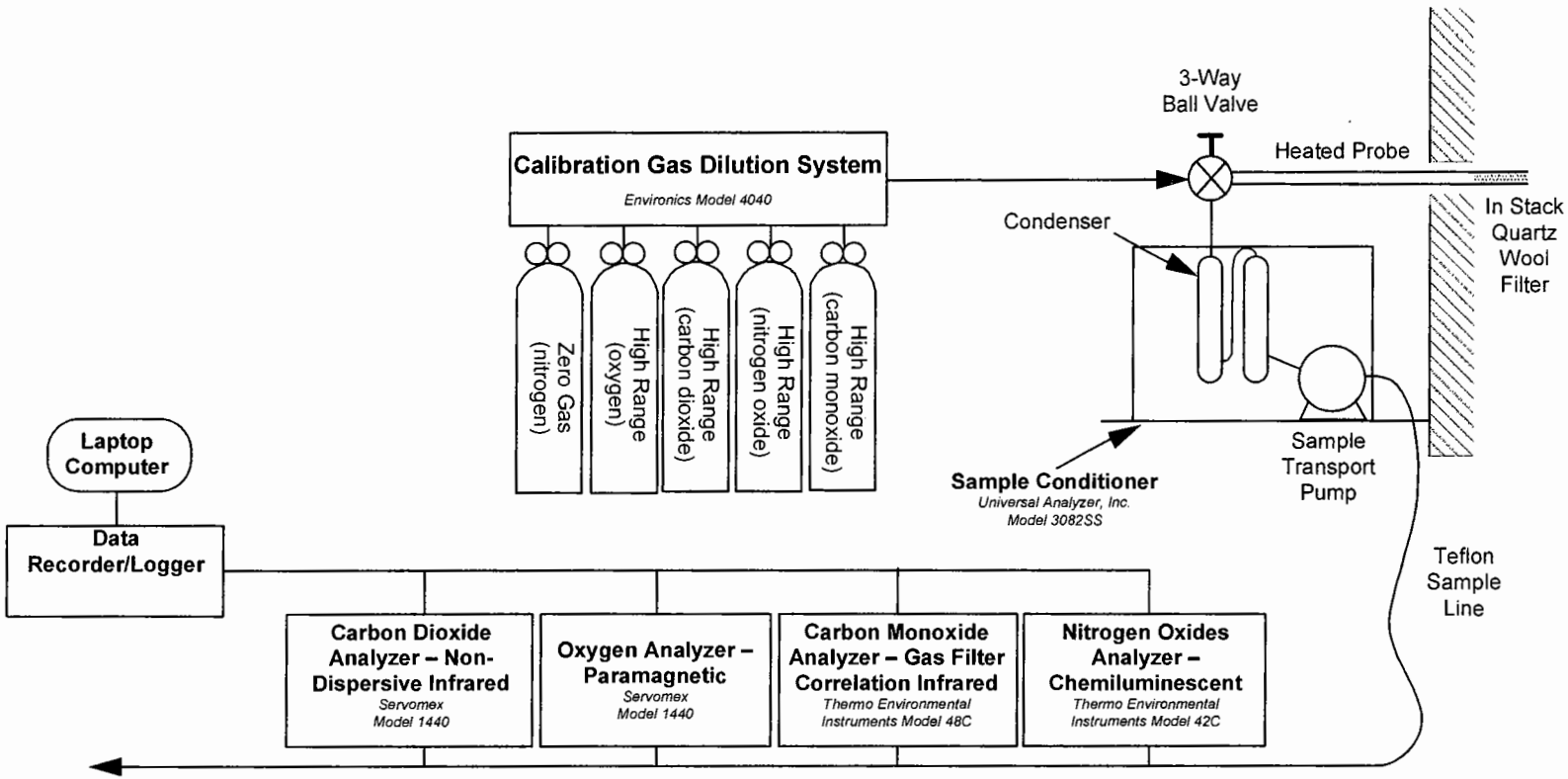


FIGURE 2-2. ARI REFERENCE METHOD O_2, CO_2, NO_X AND CO SAMPLING SYSTEM

Calibration gases were introduced at the three-way valve located at the exit end of the sample probe to perform the system bias test. The results of the initial calibration error test performed before the test program were within 2% of span for each calibration gas. The pre-test and post-test system bias results were within the 5% of span allowed for each calibration gas. The system bias drift results were within the 3% of span allowed for each test run. The zero and upscale calibration gas system bias values obtained before and after each run were averaged and used to correct the data for that test run.

Data was recorded and archived on ARI's data acquisition system consisting of an Omega OMB-DAQ-56 data acquisition module connected to a computer running DAQViewXL software for digital data archiving. Excel spreadsheet computer software was used for data reduction and emission calculations.

2.2.6 USEPA Method 19 – Emission Rate Calculations

The pollutant emission rates in pounds per million Btu (lb/MMBtu) were determined in accordance with USEPA Method 19 procedures. The emission rates were calculated using the oxygen-based F-factor (F_d) method. As presented in section 3.2.1 of USEPA Method 19, an F-factor was calculated from a compositional analysis of the fuel gas based on a gas sample obtained during each sample run.

F-factor determination:

$$F_d = \frac{10^6\left[(3.64 \times \%H) + (1.53 \times \%C) + (0.57 \times \%S) + (0.14 \times \%N) - (0.46 \times \%O)\right]}{GCV}$$

where: F_d = O_2 based F Factor, dscf/MMBtu
GCV = gross calorific value of the fuel, Btu/lb
%H, %C, %S, %N, %O = concentration of hydrogen, carbon, sulfur, nitrogen and oxygen from the ultimate analysis of the fuel gas, % by weight

Emission rate calculation in pounds per million Btu:

$$E_d = C_d F_d \left(\frac{20.9}{20.9 - \%O_2}\right)$$

where: E_d = Pollutant emission rate, lb/MMBtu
C_d = Pollutant concentration, lb/dscf
F_d = O_2 based F Factor
O_2 = % oxygen in stack gas

2.2.7 USEPA Method 22 - Visible Emissions Determination

The determination of visible emissions (VE) was conducted following the procedures described in USEPA Method 22, 40CFR, Subpart 60, Appendix A, Visible Determination of Fugitive Emissions From Material Sources and Smoke Emissions From Flares.

The flare was observed for a period of 120 minutes. Observation periods and emission duration were recorded by employing two stopwatches. The first stopwatch was started and stopped during each observation period. The second stopwatch was employed to record the cumulative emissions during each test. The sum of the timed emissions was the basis for compliance determination. The visual observation measurements were performed at 20-minute intervals with a five-minute break between each interval.

2.2.8 USEPA Methods 18 and 25A - VOC Concentration

Total VOC sampling was conducted in accordance with USEPA Method 25A using a hydrocarbon analyzer equipped with a heated FID detector.

The sampling delivery system consisted of a stainless steel probe, filter and 3-way calibration valve (on the end of the probe) connected to a heated 250° F Teflon sampling line. The sampling line connected directly into the analyzer located in ARI's mobile lab. The hydrocarbon analyzer is internally heated to keep the sample gas stream above its dew point (see Figure 2-3).

In addition, USEPA Method 18 procedures were conducted to determine the concentration of methane. Any methane detected was subtracted from the total VOC measured by the USEPA Method 25A procedures to yield the non-methane organic compounds (NMOC) concentration as C_1. Specifically, the methane concentrations were determined on-site using ARI's VIG Model 300 Methane/Non-methane Hydrocarbon Analyzer. This analyzer splits the sample gas between two (2) channels, one is a continuously heated FID and the second is a gas chromatograph (GC) equipped with a FID and separation column that is specific to methane. The GC/FID was calibrated by cylinder gas standards of methane in air to calculate a 3-point calibration curve.

The analyzers were calibrated with applicable zero, low-range, mid-range and high-range gases as specified in USEPA Method 25A. The calibration gases were generated from Protocol 1 calibration standards using an Environics Model 4040 mass flow gas dilution system. The dilution system was verified on-site in strict accordance with USEPA Method 205.

The gases met the calibration gas verification protocols of Alternate Number 1 or Alternate Number 2 as specified in USEPA Method 6C, Section 6.

A calibration error test and measurement system bias test were performed prior to testing and a post calibration drift test was done after each test repetition on each monitor. The average zero calibration drift values obtained during each test run on the monitor were used to correct the raw monitor data for each respective test run.

Each monitor's data was collected at 15-second intervals by ARI's data acquisition system. The data acquisition system consisted of an Omega OMB-DAQ-56 datalogger connected to a computer for digital data archiving and data reduction. DaqViewXL and Excel spreadsheet computer software were used for calculation of emission rates.

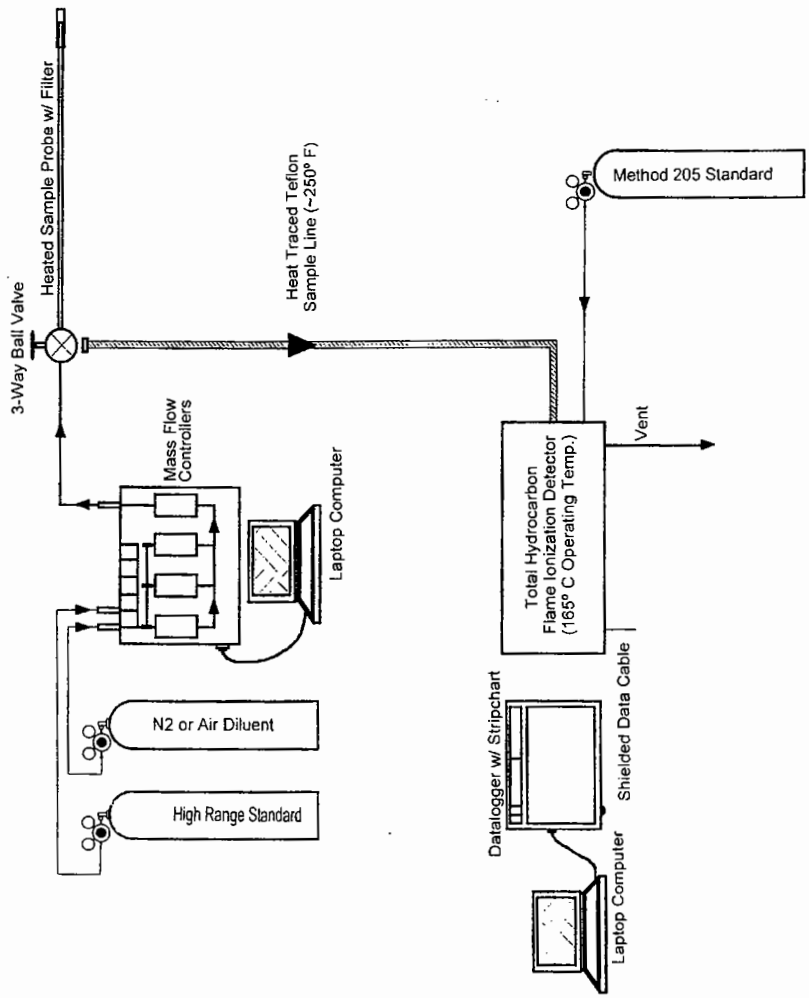


FIGURE 2-3. USEPA METHOD 25A VOC SAMPLING SYSTEM

The measured NMOC concentration (ppmv as carbon) was converted to NMOC concentration as hexane using the following Subpart WWW and Method 25A equation:

$$C_c = \frac{KC_{measured}}{6}$$

Where:

C_C = organic concentration as hexane, ppmv
K = 1 for methane
$C_{measured}$ = organic concentration as measured, ppmv as carbon
6 = conversion, carbon (C_1) to hexane (C_6)

The NMOC as hexane concentration was corrected to a 3% O_2 basis using the following equation:

$$\text{Concentration @ 3\% } O_2 = \text{Uncorrected Concentration } \frac{(20.9 - 3.0)}{(20.9 - \%\ O_2)}$$

Where:

% O_2 = measured oxygen concentration

2.2.9 USEPA Method 205 - Gas Dilution System Verification

All calibration gases were certified by USEPA Protocol 1 procedures. All diluted calibration standards were prepared using an Environics Model 4040 Dilution System that was verified by a field evaluation at the job site prior to testing following the requirements of USEPA Method 205 (40 CFR 51, Appendix M).

ARI's Servomex, Inc. Model 1440C paramagnetic O_2 gas analyzer was calibrated following USEPA Method 3A procedures. After the calibration procedure was complete, diluted standards of 6.00% and 12.50% and a mid-range EPA Protocol 1 standard of 12.48% were alternately introduced in triplicate, and an average instrument response was calculated for each standard. No single response differed by more than $\pm$2% from the average response for each standard.

The difference between the instrument average and the predicted concentration was within +2% for each diluted standard. The difference between the certified gas concentration, and the average instrument response for the mid-range EPA Protocol 1 standard was within +2%.

SECTIONTHREE Results

The test results are presented in Table 3-1.

All computer printouts and example calculations are included in the calculation summaries presented in Appendix A. All field data are presented in Appendix B. ARI's reference method monitoring data are presented in 15-second intervals in Appendix C. Appendix D presents the collected process data. Appendix E presents the calibration data on the equipment used during the compliance test program including calibration gas certifications from the specialty gas supplier.

TABLE 3-1. ENCLOSED FLARE EMISSION TEST RESULTS

COMPANY : Veolia Services - Zion Landfill
LOCATION : Zion, Illinois
SOURCE : Thermal Control

RUN NO. :	1	2	3	4	
TEST DATE :	12/7/2007	12/7/2007	12/7/07	12/7/07	
TEST TIME :	14:33-15:33	16:15-17:15	17:51-18:51	19:48-20:48	Average
Flare Operating Temperature, °F	1,530	1,530	1,530	1,575	1,541
Stack Gas Parameters					
Temperature, °F*	1,452.8	1,451.8	1,456.4	1,455.6	1,453.7
Velocity, av. ft/sec	26.95	26.54	27.11	27.11	26.87
Volumetric flow, acfm	214,666	211,341	215,922	215,928	213,976
Volumetric flow, scfm	58,289	57,415	58,513	58,541	58,073
Volumetric flow, scfh	3,497,364	3,444,922	3,510,809	3,512,469	3,484,365
Volumetric flow, dscfm	54,226	52,953	54,151	53,261	53,777
Volumetric flow, dscfh	3,253,540	3,177,205	3,249,054	3,195,645	3,226,600
Moisture, av. % vol	6.97	7.77	7.46	9.02	7.40
O_2, av. % vol db	13.20	13.28	13.27	13.02	13.25
CO_2, av. % vol db	6.80	6.79	6.84	7.11	6.81
Nitrogen Oxides (NO_x)					
Concentration					
ppmv db	10.43	10.63	10.74	11.42	10.81
x 10^{-6} lb/dscf	1.25	1.27	1.28	1.36	1.29
Emission Rate					
lb/MMBtu	0.03128	0.03225	0.03257	0.03351	0.03240
Carbon Monoxide (CO)					
Concentration					
ppmv db	12.17	20.31	25.91	6.71	16.27
x 10^{-6} lb/dscf	0.884	1.48	1.88	0.487	1.18
Emission Rate					
lb/MMBtu	0.02221	0.03751	0.04781	0.01198	0.02988
Total Volatile Organic Compounds (VOC)					
Concentration					
ppmv wb	1.43	2.84	2.31	ND	2.19
x 10^{-6} lb/scf	0.059	0.118	0.096	ND	0.091
Non-Methane Organic Compounds (NMOC) as Hexane					
Concentration					
ppmv wb	0.225	0.514	0.345	ND	0.361
ppmv db @ 3% Oxygen	0.523	1.207	0.810	ND	0.847
x 10^{-6} lb/scf	0.051	0.116	0.078	ND	0.081

ND = Not determined

* Measurements taken at the stack test ports located approximately 50 feet above the burners.

APPENDIX A Calculation Summaries

Reference Method Monitor Data
One-Minute Averages

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Run #: 1
Test Time: 1433-1533

Reference Method Monitor #1:

Analyzer Type:	**Oxygen**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.84 %
Post-test calibration span value	9.88 %
Pre-test calibration zero value:	0.06 %
Post-test calibration zero value:	0.08 %
Calibration gas type:	Protocol 1 Oxygen %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	12.99 %
Monitor drift corrected average:	**13.20 %**

Reference Method Monitor #2:

Analyzer Type:	**CO2**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.83 %
Post-test calibration span value	9.83 %
Pre-test calibration zero value:	0.02 %
Post-test calibration zero value:	0.03 %
Calibration gas type:	Protocol 1 CO2 %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	6.70 %
Monitor drift corrected average:	**6.80 %**

Reference Method Monitor #3:

Analyzer Type:	**SO2**
Analyzer Scale:	ppm
Pre-test calibration span value:	ppm
Post-test calibration span value	ppm
Pre-test calibration zero value:	ppm
Post-test calibration zero value:	ppm
Calibration gas type:	ppm
Calibration gas concentration:	ppm
Monitor uncorrected average:	ppm
Monitor drift corrected average:	**ppm**

Reference Method Monitor #4:

Analyzer Type:	**NOx**
Analyzer Scale:	88.98 ppm
Pre-test calibration span value:	45.59 ppm
Post-test calibration span value	44.37 ppm
Pre-test calibration zero value:	0.20 ppm
Post-test calibration zero value:	-0.01 ppm
Calibration gas type:	Protocol 1 NOx ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	10.56 ppm
Monitor drift corrected average:	**10.43 ppm**

Reference Method Monitor #5:

Analyzer Type:	**CO**
Analyzer Scale:	90.41 ppm
Pre-test calibration span value:	45.37 ppm
Post-test calibration span value	44.94 ppm
Pre-test calibration zero value:	0.62 ppm
Post-test calibration zero value:	0.61 ppm
Calibration gas type:	Protocol 1 CO ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	12.66 ppm
Monitor drift corrected average:	**12.17 ppm**

Reference Method Monitor #6:

Analyzer Type:	**Total VOC**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.08 ppm
Post-test calibration span value	49.44 ppm
Pre-test calibration zero value:	0.29 ppm
Post-test calibration zero value:	0.60 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	1.84 ppm
Monitor drift corrected average:	**1.43 ppm**

Reference Method Monitor #7:

Analyzer Type:	**CH4**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.67 ppm
Post-test calibration span value	50.28 ppm
Pre-test calibration zero value:	0.57 ppm
Post-test calibration zero value:	0.53 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	0.72 ppm
Monitor drift corrected average:	**0.18 ppm**

Clock Time	Elapsed Time	Monitor #1 Oxygen %	Monitor #2 CO2 %	Monitor #4 NOx ppm	Monitor #5 CO ppm	Monitor #6 Total VOC ppm	Monitor #7 CH4 ppm
14 : 33	0						
14 : 34	1	13.0	6.7	10.3	14.5	1.9	1.0
14 : 35	2	13.0	6.6	10.4	15.4	2.0	1.0
14 : 36	3	13.0	6.6	10.3	13.4	1.9	0.6
14 : 37	4	13.0	6.7	10.5	11.1	1.9	0.5
14 : 38	5	13.0	6.7	10.4	11.5	1.9	0.5
14 : 39	6	12.9	6.7	10.5	9.8	2.0	0.9
14 : 40	7	13.0	6.7	10.4	11.5	1.9	1.0
14 : 41	8	13.0	6.6	10.5	10.5	2.1	1.0
14 : 42	9	13.1	6.6	10.3	9.9	2.0	1.0
14 : 43	10	12.9	6.7	10.5	8.7	1.9	1.0
14 : 44	11	13.0	6.7	10.5	9.4	1.9	1.0
14 : 45	12	13.0	6.7	10.4	9.5	2.0	0.6
14 : 46	13	13.0	6.7	10.4	9.3	1.9	0.5
14 : 47	14	13.0	6.7	10.5	9.6	1.9	0.5
14 : 48	15	13.1	6.6	10.3	11.3	1.7	0.9
14 : 49	16	13.1	6.6	10.2	11.7	1.9	1.0
14 : 50	17	13.1	6.6	10.2	11.4	1.8	1.0
14 : 51	18	13.1	6.6	10.3	10.6	1.8	0.6
14 : 52	19	12.9	6.8	10.6	8.5	1.9	0.5
14 : 53	20	12.7	7.0	10.9	7.0	1.8	0.5
14 : 54	21	13.0	6.7	10.8	8.9	1.8	0.5
14 : 55	22	13.0	6.7	10.4	8.7	1.8	0.5
14 : 56	23	13.0	6.7	10.6	7.7	1.7	0.5
14 : 57	24	12.9	6.8	10.7	7.5	1.7	0.5
14 : 58	25	13.1	6.6	10.4	10.2	1.7	0.5
14 : 59	26	13.1	6.6	10.3	12.5	1.7	0.5
15 : 0	27	13.0	6.6	10.4	14.3	1.8	0.5
15 : 1	28	13.1	6.6	10.4	13.8	1.8	0.5
15 : 2	29	13.0	6.7	10.4	10.7	1.8	0.5
15 : 3	30	12.9	6.8	10.6	9.2	1.8	0.5
15 : 4	31	13.0	6.7	10.6	10.7	1.8	0.5
15 : 5	32	13.1	6.6	10.3	12.0	1.9	0.5
15 : 6	33	13.0	6.7	10.5	12.2	1.8	0.5
15 : 7	34	13.1	6.6	10.3	14.4	1.8	0.5
15 : 8	35	12.9	6.7	10.7	13.8	1.8	0.5
15 : 9	36	13.0	6.7	10.4	11.0	1.8	0.9
15 : 10	37	12.9	6.8	10.7	8.6	1.8	1.0
15 : 11	38	13.0	6.7	10.5	9.1	1.7	1.0
15 : 12	39	12.9	6.8	10.6	9.1	1.7	0.6
15 : 13	40	12.9	6.8	10.8	9.7	1.7	0.5
15 : 14	41	13.4	6.3	10.0	41.1	1.9	0.5
15 : 15	42	13.6	6.3	9.3	76.2	1.8	1.7
15 : 16	43	13.0	6.7	10.6	21.4	1.8	2.0
15 : 17	44	13.1	6.7	10.3	17.7	1.7	2.0
15 : 18	45	13.0	6.7	11.2	8.7	1.8	0.8
15 : 19	46	12.6	7.1	11.5	7.6	1.8	0.5
15 : 20	47	13.0	6.7	10.3	10.9	1.9	0.5
15 : 21	48	12.7	7.0	11.1	6.6	1.8	0.5
15 : 22	49	12.9	6.8	10.9	8.0	1.8	0.5
15 : 23	50	13.1	6.6	10.4	11.0	1.8	0.5
15 : 24	51	13.0	6.8	10.2	11.9	1.8	0.5
15 : 25	52	13.1	6.6	10.4	16.8	2.0	0.5
15 : 26	53	13.0	6.7	10.1	17.6	1.9	0.5
15 : 27	54	12.8	6.9	10.8	11.1	1.9	0.5
15 : 28	55	12.9	6.8	10.7	9.6	1.9	0.5
15 : 29	56	13.0	6.7	10.5	10.5	1.9	0.5
15 : 30	57	12.9	6.9	10.6	11.8	1.9	0.5
15 : 31	58	13.0	6.8	10.7	11.9	1.9	0.5
15 : 32	59	12.9	6.8	10.6	9.2	1.9	0.5
15 : 33	60	13.0	6.7	10.3	11.0	1.9	0.5
	AVERAGE:	**13.0**	**6.7**	**10.5**	**12.7**	**1.8**	**0.7**

USEPA Method 4
Moisture Determination Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	1
Time:	1433-1533

Data Input:

Volume metered (V_m):	47.280	**ft^3**
Meter calibration coefficient (Y_d):	0.999	**dimensionless**
Barometric pressure (P_{bar}):	29.47	**inches Hg**
Meter sample rate (ΔH):	1.60	**inches H_2O**
Meter inlet/outlet temperature (T_m):	31.4	**°F**
Volume of moisture collected (V_{lc}):	79.9	**milliliters**
Stack Temperature (T_s):	1,452.8	**°F**
Static Pressure (St):	-0.5	**inches H_2O**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Volume of sample, dry basis:

$$Vm_{std} = V_m \times Y_d \times \left(\frac{528.0°R}{29.92"Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m + 460}\right)$$ = **50.185 dscf**

Volume of water vapor in sample:

$$Vw_{std} = \frac{0.04707 ft^3}{ml} \times V_{lc}$$ = **3.761 scf**

Fractional moisture content of stack gas:

$$B_{wo} = \frac{Vw_{std}}{(Vm_{std} + Vw_{std})}$$ = **0.0697 B_{wo}**

Percent Moisture:

$$\%moisture = B_{wo} \times 100$$ = **6.97 %**

Fractional moisture content of stack gas at saturated conditions:

$$T_{s(°K)} = ((T_s - 32) * 0.5556) + 273$$ = **1,062.4 °Kelvin**

$$P_{s(mmHg)} = \left(P_{bar} + \frac{S_t}{13.6}\right) \times 25.401$$ = **748.57 mm Hg**

$$B_{wos} = \frac{\left(10^{\left(A - \left(\frac{B}{(T_{s(°K)} - C)}\right)\right)}\right) - 0.5}{P_{s(mmHg)}}$$

where:
A= 8.361
B=1893.5
C=27.65

= **1.0000 B_{wos}**

Percent moisture at saturated conditions:

$$\%moisture_{saturated} = B_{wos} \times 100$$ = **100.00 %**

Percent moisture used for emissions calculations:

= **6.97 %**

USEPA Method 2
Volumetric Flow Rate Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	1
Time:	1433-1533

Data Input

Carbon Dioxide (CO_2):	6.8	**%**
Oxygen (O_2):	13.2	**%**
Nitrogen (N_2):	80.0	**%**
Fractional Moisture Content (B_{wo})	0.0697	**dimensionless**
Stack Temperature (T_s):	1,452.8	**°F**
Pitot Coefficient (C_p):	0.84	**dimensionless**
Average square root of ΔP	0.2499	
Barometric Pressure (P_{bar}):	29.47	**inches Hg**
Static Pressure (S_t)	-0.51	**inches H_2O**
Stack diameter:	156.00	**inches**
Stack width:	n/a	**inches**
Stack length:	n/a	**inches**
Stack area (A_s):	132.7323	**ft^2**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Dry molecular weight of stack gas:

$$M_d = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2)$$ = **29.62 lb/lb-mole**

Molecular weight of stack gas, wet basis:

$$M_s = (M_d \times (1 - B_{ws})) + (18 \times B_{ws})$$ = **28.81 lb/lb-mole**

Absolute stack gas pressure:

$$P_s = P_{bar} + \left(\frac{S_t}{13.6}\right)$$ = **29.43 inches Hg**

Stack gas velocity:

$$V_s = 85.49 \times C_p \times \sqrt{\Delta P} \times \sqrt{\frac{(T_s + 460)}{(P_s \times M_s)}}$$ = **26.95 feet/second**

Stack gas volumetric flow rate:

$$Q_a = A_s \times V_s \times 60$$ = **214,666 acfm**

Stack gas volumetric flow rate, wet basis:

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right]$$ = **58,289 scfm**

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right] \times 60$$ = **3,497,364 scfh**

Stack gas volumetric flow rate, dry basis:

$$Q_{std} = Q_{sw} \times (1 - B_{wo})$$ = **54,226 dscfm**

$$Q_{std} = Q_{sw} \times (1 - B_{wo}) \times 60$$ = **3,253,540 dscfh**

USEPA Method 3-A
Oxygen
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	12.99	**% db**
Average pre/post-test zero calibration reading (C_o):	0.07	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.86	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,253,540	**dscfh**
Compound molecular weight (MW):	32.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.20	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Oxygen

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{13.20\ \%\ db}$$

USEPA Method 3-A
CO2
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	6.70	**% db**
Average pre/post-test zero calibration reading (C_o):	0.02	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.83	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,253,540	**dscfh**
Compound molecular weight (MW):	44.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.20	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO2

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{6.80\ \%\ db}$$

USEPA Method 7-E
NOx
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	10.50	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	0.09	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.98	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,253,540	**dscfh**
Compound molecular weight (MW):	46.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.20	**% db**
Fuel gas F-factor (F_d):	9253	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

NOx
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **10.43 ppmv db**

NOx
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **1.245 x 10-6 lb/dscf**

NOx
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **4.05 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **17.74 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0313 lb/MMBtu**

USEPA Method 10
CO
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	12.66	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	0.61	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	45.16	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,253,540	**dscfh**
Compound molecular weight (MW):	28.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.20	**% db**
Fuel gas F-factor (F_d):	9253	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **12.17 ppmv db**

CO
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **0.884 x 10-6 lb/dscf**

CO
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **2.88 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **12.6 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0222 lb/MMBtu**

USEPA Method 18
CH4
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	0.72	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.55	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	49.98	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,497,364	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.20	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CH4
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **0.175 ppmv wb**

CH4
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **0.00728 x 10-6 lb/scf**

CH4
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **0.0254 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **0.1115 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.000183 lb/MMBtu**

USEPA Method 25-A
Total VOC
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	1.84	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.45	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	49.26	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,497,364	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.20	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Total VOC
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **1.43 ppmv wb**

Total VOC
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **0.0594 x 10-6 lb/scf**

Total VOC
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **0.208 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **0.910 tons/year**

USEPA Method 25A
Non-Methane Volatile Organics (as Hexane)
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 1
Test Time: 1433-1533

Data Input:

Average chart reading (C):	1.84	**ppmv**
Average pre/post-test zero calibration reading (C_o):	0.45	**ppmv**
Calibration gas concentration (C_{ma}):	50.00	**ppmv**
Average pre/post-test calibration gas reading (C_m):	49.26	**ppmv**
Stack gas volumetric flow rate (Q_{std}):	3,253,540	**dscfh**
Compound molecular weight (MW):	86.70	**lb/lb-mole**
Stack gas fractional moisture content (B_{wo}):	0.0697	**fractional**
Methane concentration:	0.18	**ppmv wb**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Non-Methane Volatile Organics (as C_1)
Corrected for zero and calibration drift:

$$C_{gas,ppm\ wet\ basis} = \left(\left[\left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}\right]\right) - methane_{ppmv\ wb}$$ = **1.25 ppmv wb**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to Dry Basis:

$$C_{gas,ppm\ dry\ basis} = \frac{\left(C_{gas,ppm\ wet\ basis}\right)}{\left(1 - B_{wo}\right)} x 0.1667$$ = **0.22 ppmv db as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to 3% Oxygen:

$$C_{gas,@3\%O_2 as C_6H_{14}} = C_{gas}\ x 0.1667 x \left(\frac{17.9}{(20.9 - \%O_2)}\right)$$ = **0.52 ppmv @ 3% O_2 as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Concentration:

$$C_{gas,lb/dscf} = C_{gas,ppm}\ x \left(\frac{MW\ lb/lb-mole}{385.26 x 10^6\ ft^3/lb-mole}\right)$$ = **0.051 x 10^{-6} lbs/dscf as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Emission Rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **0.165 lbs/hr as Hexane**

Reference Method Monitor Data
One-Minute Averages

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Run #: 2
Test Time: 1615-1715

Reference Method Monitor #1:	
Analyzer Type:	**Oxygen**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.88 %
Post-test calibration span value	9.86 %
Pre-test calibration zero value:	0.08 %
Post-test calibration zero value:	0.07 %
Calibration gas type:	Protocol 1 Oxygen %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	13.08 %
Monitor drift corrected average:	**13.28 %**

Reference Method Monitor #2:	
Analyzer Type:	**CO2**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.83 %
Post-test calibration span value	9.85 %
Pre-test calibration zero value:	0.03 %
Post-test calibration zero value:	0.05 %
Calibration gas type:	Protocol 1 CO2 %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	6.70 %
Monitor drift corrected average:	**6.79 %**

Reference Method Monitor #3:	
Analyzer Type:	**SO2**
Analyzer Scale:	ppm
Pre-test calibration span value:	ppm
Post-test calibration span value	ppm
Pre-test calibration zero value:	ppm
Post-test calibration zero value:	ppm
Calibration gas type:	ppm
Calibration gas concentration:	ppm
Monitor uncorrected average:	ppm
Monitor drift corrected average:	**ppm**

Reference Method Monitor #4:	
Analyzer Type:	**NOx**
Analyzer Scale:	88.98 ppm
Pre-test calibration span value:	44.37 ppm
Post-test calibration span value	44.37 ppm
Pre-test calibration zero value:	-0.01 ppm
Post-test calibration zero value:	-0.01 ppm
Calibration gas type:	Protocol 1 NOx ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	10.47 ppm
Monitor drift corrected average:	**10.63 ppm**

Reference Method Monitor #5:	
Analyzer Type:	**CO**
Analyzer Scale:	90.41 ppm
Pre-test calibration span value:	44.94 ppm
Post-test calibration span value	44.95 ppm
Pre-test calibration zero value:	0.61 ppm
Post-test calibration zero value:	0.66 ppm
Calibration gas type:	Protocol 1 CO ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	20.63 ppm
Monitor drift corrected average:	**20.31 ppm**

Reference Method Monitor #6:	
Analyzer Type:	**Total VOC**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.44 ppm
Post-test calibration span value	50.35 ppm
Pre-test calibration zero value:	0.60 ppm
Post-test calibration zero value:	-0.42 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	2.92 ppm
Monitor drift corrected average:	**2.84 ppm**

Reference Method Monitor #7:	
Analyzer Type:	**CH4**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.67 ppm
Post-test calibration span value	50.28 ppm
Pre-test calibration zero value:	0.57 ppm
Post-test calibration zero value:	0.53 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	0.54 ppm
Monitor drift corrected average:	**-0.01 ppm**

Clock Time	Elapsed Time	Monitor #1 Oxygen %	Monitor #2 CO2 %	Monitor #4 NOx ppm	Monitor #5 CO ppm	Monitor #6 Total VOC ppm	Monitor #7 CH4 ppm
16 : 15	0						
16 : 16	1	13.0	6.7	10.7	21.6	1.6	0.5
16 : 17	2	13.1	6.7	10.4	28.3	1.6	0.5
16 : 18	3	13.1	6.7	10.6	30.8	1.5	0.5
16 : 19	4	13.2	6.6	10.3	32.5	2.0	0.5
16 : 20	5	13.1	6.7	10.4	34.0	1.9	0.5
16 : 21	6	13.1	6.7	10.5	24.6	2.0	1.0
16 : 22	7	13.0	6.7	10.4	18.0	2.2	1.0
16 : 23	8	13.2	6.6	10.5	19.7	2.0	1.0
16 : 24	9	13.1	6.7	10.3	17.5	1.9	0.6
16 : 25	10	13.2	6.6	10.3	23.1	1.8	0.5
16 : 26	11	13.1	6.7	10.1	20.5	1.8	0.5
16 : 27	12	13.1	6.7	10.6	17.8	2.0	0.5
16 : 28	13	13.1	6.6	10.4	18.6	2.0	0.5
16 : 29	14	13.0	6.8	10.6	21.2	1.9	0.5
16 : 30	15	13.1	6.7	10.5	22.3	2.0	0.5
16 : 31	16	13.1	6.7	10.4	20.5	1.9	0.5
16 : 32	17	13.1	6.7	10.5	20.5	2.0	0.5
16 : 33	18	13.1	6.6	10.5	21.6	1.9	0.5
16 : 34	19	13.2	6.6	10.2	26.1	1.9	0.5
16 : 35	20	13.2	6.6	10.4	27.9	1.9	0.5
16 : 36	21	13.3	6.5	9.9	29.9	1.9	0.5
16 : 37	22	13.1	6.7	10.3	23.7	2.0	0.5
16 : 38	23	13.0	6.8	10.6	18.8	1.8	0.5
16 : 39	24	13.0	6.7	10.6	16.3	18.2	0.5
16 : 40	25	13.1	6.7	10.6	19.4	57.0	0.5
16 : 41	26	13.3	6.5	10.3	24.1	0.5	0.5
16 : 42	27	13.1	6.7	10.3	23.5	1.4	0.5
16 : 43	28	13.2	6.5	10.3	25.9	1.5	0.5
16 : 44	29	13.2	6.6	10.1	32.9	1.7	0.5
16 : 45	30	13.1	6.7	10.3	26.1	1.8	0.5
16 : 46	31	13.1	6.7	10.5	21.0	1.7	0.5
16 : 47	32	13.0	6.8	10.5	17.6	1.7	0.5
16 : 48	33	12.8	7.0	11.0	9.1	1.8	0.5
16 : 49	34	12.8	6.9	11.0	7.1	1.7	0.5
16 : 50	35	13.0	6.8	10.8	9.8	1.6	0.5
16 : 51	36	13.1	6.7	10.5	16.5	1.7	0.5
16 : 52	37	13.0	6.8	10.6	21.3	1.5	0.5
16 : 53	38	13.1	6.6	10.6	28.5	1.6	0.5
16 : 54	39	13.1	6.7	10.4	32.0	1.6	0.5
16 : 55	40	13.0	6.7	10.7	24.3	1.7	0.5
16 : 56	41	13.0	6.8	10.7	19.3	1.6	0.5
16 : 57	42	13.1	6.7	10.5	21.4	1.7	0.5
16 : 58	43	13.0	6.8	10.7	19.5	1.7	0.5
16 : 59	44	13.0	6.8	10.7	16.5	1.6	0.5
17 : 0	45	13.1	6.7	10.5	18.3	1.6	0.5
17 : 1	46	13.1	6.7	10.3	15.3	1.7	0.5
17 : 2	47	13.2	6.6	10.3	18.3	1.6	0.5
17 : 3	48	13.0	6.8	10.3	17.1	1.6	0.5
17 : 4	49	13.2	6.6	10.4	21.1	1.6	0.5
17 : 5	50	13.1	6.7	10.3	20.1	1.5	0.5
17 : 6	51	13.0	6.8	10.7	15.8	1.6	0.5
17 : 7	52	13.2	6.6	10.4	15.8	1.8	0.5
17 : 8	53	13.2	6.6	10.1	21.4	1.7	0.5
17 : 9	54	13.1	6.7	10.2	22.8	1.7	0.5
17 : 10	55	13.0	6.8	10.6	16.9	1.6	0.5
17 : 11	56	13.1	6.7	10.5	13.0	1.5	0.5
17 : 12	57	13.0	6.8	10.4	13.5	1.7	0.5
17 : 13	58	13.0	6.8	10.6	13.4	1.6	0.5
17 : 14	59	13.0	6.8	10.9	12.9	1.6	0.5
17 : 15	60	12.9	6.9	10.8	10.7	1.5	0.1
	AVERAGE:	**13.1**	**6.7**	**10.5**	**20.6**	**2.9**	**0.5**

USEPA Method 4
Moisture Determination Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	2
Time:	1615-1715

Data Input:

Volume metered (V_m):	42.585 **ft^3**
Meter calibration coefficient (Y_d):	0.999 **dimensionless**
Barometric pressure (P_{bar}):	29.47 **inches Hg**
Meter sample rate (ΔH):	1.60 **inches H_2O**
Meter inlet/outlet temperature (T_m):	33.4 **°F**
Volume of moisture collected (V_{lc}):	80.6 **milliliters**
Stack Temperature (T_s):	1,451.8 **°F**
Static Pressure (St):	-0.5 **inches H_2O**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Volume of sample, dry basis:

$$Vm_{std} = V_m \times Y_d \times \left(\frac{528.0^oR}{29.92"Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m + 460}\right)$$ = **45.024 dscf**

Volume of water vapor in sample:

$$Vw_{std} = \frac{0.04707ft^3}{ml} \times V_{lc}$$ = **3.794 scf**

Fractional moisture content of stack gas:

$$B_{wo} = \frac{Vw_{std}}{(Vm_{std} + Vw_{std})}$$ = **0.0777 B_{wo}**

Percent Moisture:

$$\%moisture = B_{wo} \times 100$$ = **7.77 %**

Fractional moisture content of stack gas at saturated conditions:

$$T_{s(^oK)} = ((T_s - 32) * 0.5556) + 273$$ = **1,061.8 °Kelvin**

$$P_{s(mmHg)} = \left(P_{bar} + \frac{S_t}{13.6}\right) \times 25.401$$ = **748.57 mm Hg**

$$B_{wos} = \frac{\left(10^{\left(A - \left(\frac{B}{(T_{s(^oK)} - C)}\right)\right)}\right) - 0.5}{P_{s(mmHg)}}$$

where:
A= 8.361
B=1893.5
C=27.65

= **1.0000 B_{wos}**

Percent moisture at saturated conditions:

$$\%moisture_{saturated} = B_{wos} \times 100$$ = **100.00 %**

Percent moisture used for emissions calculations:

= **7.77 %**

USEPA Method 2
Volumetric Flow Rate Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	2
Time:	1615-1715

Data Input

Carbon Dioxide (CO_2):	6.8	**%**
Oxygen (O_2):	13.3	**%**
Nitrogen (N_2):	79.9	**%**
Fractional Moisture Content (B_{wo})	0.0777	**dimensionless**
Stack Temperature (T_s):	1,451.8	**°F**
Pitot Coefficient (C_p):	0.84	**dimensionless**
Average square root of ΔP	0.2457	
Barometric Pressure (P_{bar}):	29.47	**inches Hg**
Static Pressure (S_t)	-0.53	**inches H_2O**
Stack diameter:	156.00	**inches**
Stack width:	n/a	**inches**
Stack length:	n/a	**inches**
Stack area (A_s):	132.7323	**ft^2**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Dry molecular weight of stack gas:

$$M_d = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2)$$ = **29.62 lb/lb-mole**

Molecular weight of stack gas, wet basis:

$$M_s = (M_d \times (1 - B_{ws})) + (18 \times B_{ws})$$ = **28.72 lb/lb-mole**

Absolute stack gas pressure:

$$P_s = P_{bar} + \left(\frac{S_t}{13.6}\right)$$ = **29.43 inches Hg**

Stack gas velocity:

$$V_s = 85.49 \times C_p \times \sqrt{\Delta P} \times \sqrt{\frac{(T_s + 460)}{(P_s \times M_s)}}$$ = **26.54 feet/second**

Stack gas volumetric flow rate:

$$Q_a = A_s \times V_s \times 60$$ = **211,341 acfm**

Stack gas volumetric flow rate, wet basis:

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right]$$ = **57,415 scfm**

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right] \times 60$$ = **3,444,922 scfh**

Stack gas volumetric flow rate, dry basis:

$$Q_{std} = Q_{sw} \times (1 - B_{wo})$$ = **52,953 dscfm**

$$Q_{std} = Q_{sw} \times (1 - B_{wo}) \times 60$$ = **3,177,205 dscfh**

USEPA Method 3-A
Oxygen
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	13.08	**% db**
Average pre/post-test zero calibration reading (C_o):	0.08	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.87	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**dscfh**
Compound molecular weight (MW):	32.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.28	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Oxygen

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O} = \mathbf{13.28\ \%\ db}$$

USEPA Method 3-A
CO2
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	6.70	**% db**
Average pre/post-test zero calibration reading (C_o):	0.04	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.84	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**dscfh**
Compound molecular weight (MW):	44.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.28	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO2

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{6.79\ \%\ db}$$

USEPA Method 7-E
NOx
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	10.47	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	-0.01	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.37	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**dscfh**
Compound molecular weight (MW):	46.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.28	**% db**
Fuel gas F-factor (F_d):	9266	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

NOx
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **10.63 ppmv db**

NOx
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **1.269 x 10-6 lb/dscf**

NOx
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **4.03 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **17.66 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0322 lb/MMBtu**

USEPA Method 10
CO
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	20.63	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	0.63	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.95	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**dscfh**
Compound molecular weight (MW):	28.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.28	**% db**
Fuel gas F-factor (F_d):	9266	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **20.31 ppmv db**

CO
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **1.476 x 10-6 lb/dscf**

CO
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) \times \left(Q_{std}\right)$$ = **4.69 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **20.5 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0375 lb/MMBtu**

USEPA Method 18
CH4
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	0.54	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.55	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	49.98	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.28	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CH4
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **-0.005 ppmv wb**

CH4
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **-0.00021 x 10-6 lb/scf**

CH4
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **-0.0007 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **-0.0029 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **-0.000005 lb/MMBtu**

USEPA Method 25-A
Total VOC
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1615-1715

Data Input:

Average chart reading (C):	2.92	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.09	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	49.90	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,444,922	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.28	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Total VOC
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **2.84 ppmv wb**

Total VOC
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **0.1179 x 10-6 lb/scf**

Total VOC
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **0.406 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **1.78 tons/year**

USEPA Method 25A
Non-Methane Volatile Organics (as Hexane)
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 2
Test Time: 1235-1358

Data Input:

Average chart reading (C):	2.92	**ppmv**
Average pre/post-test zero calibration reading (C_o):	0.09	**ppmv**
Calibration gas concentration (C_{ma}):	50.00	**ppmv**
Average pre/post-test calibration gas reading (C_m):	49.90	**ppmv**
Stack gas volumetric flow rate (Q_{std}):	3,177,205	**dscfh**
Compound molecular weight (MW):	86.70	**lb/lb-mole**
Stack gas fractional moisture content (B_{wo}):	0.0777	**fractional**
Methane concentration:	-0.01	**ppmv wb**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Non-Methane Volatile Organics (as C_1)
Corrected for zero and calibration drift:

$$C_{gas,ppm\ wet\ basis} = \left(\left[\left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}\right]\right) - methane_{ppmv\ wb}$$ = **2.84 ppmv wb**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to Dry Basis:

$$C_{gas,ppm\ dry\ basis} = \frac{\left(C_{gas,ppm\ wet\ basis}\right)}{\left(1 - B_{wo}\right)} x\,0.1667$$ = **0.51 ppmv db as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to 3% Oxygen:

$$C_{gas,@3\%O_2 as C_6H_{14}} = C_{gas}\ x\,0.1667\ x\left(\frac{17.9}{(20.9 - \%O_2)}\right)$$ = **1.21 ppmv @ 3% O_2 as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Concentration:

$$C_{gas,lb/dscf} = C_{gas,ppm}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3/lb-mole}\right)$$ = **0.116 x 10^{-6} lbs/dscf as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Emission Rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **0.368 lbs/hr as Hexane**

Reference Method Monitor Data
One-Minute Averages

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Run #: 3
Test Time: 1751-1851

Reference Method Monitor #1:	
Analyzer Type:	**Oxygen**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.86 %
Post-test calibration span value	9.87 %
Pre-test calibration zero value:	0.07 %
Post-test calibration zero value:	0.09 %
Calibration gas type:	Protocol 1 Oxygen %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	13.06 %
Monitor drift corrected average:	**13.27 %**

Reference Method Monitor #2:	
Analyzer Type:	**CO2**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.85 %
Post-test calibration span value	9.86 %
Pre-test calibration zero value:	0.05 %
Post-test calibration zero value:	0.05 %
Calibration gas type:	Protocol 1 CO2 %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	6.75 %
Monitor drift corrected average:	**6.84 %**

Reference Method Monitor #3:	
Analyzer Type:	**SO2**
Analyzer Scale:	ppm
Pre-test calibration span value:	ppm
Post-test calibration span value	ppm
Pre-test calibration zero value:	ppm
Post-test calibration zero value:	ppm
Calibration gas type:	ppm
Calibration gas concentration:	ppm
Monitor uncorrected average:	ppm
Monitor drift corrected average:	**ppm**

Reference Method Monitor #4:	
Analyzer Type:	**NOx**
Analyzer Scale:	88.98 ppm
Pre-test calibration span value:	44.37 ppm
Post-test calibration span value	44.55 ppm
Pre-test calibration zero value:	-0.01 ppm
Post-test calibration zero value:	-0.01 ppm
Calibration gas type:	Protocol 1 NOx ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	10.61 ppm
Monitor drift corrected average:	**10.74 ppm**

Reference Method Monitor #5:	
Analyzer Type:	**CO**
Analyzer Scale:	90.41 ppm
Pre-test calibration span value:	44.95 ppm
Post-test calibration span value	45.03 ppm
Pre-test calibration zero value:	0.66 ppm
Post-test calibration zero value:	0.61 ppm
Calibration gas type:	Protocol 1 CO ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	26.18 ppm
Monitor drift corrected average:	**25.91 ppm**

Reference Method Monitor #6:	
Analyzer Type:	**Total VOC**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	50.35 ppm
Post-test calibration span value	49.85 ppm
Pre-test calibration zero value:	-0.42 ppm
Post-test calibration zero value:	0.51 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	2.36 ppm
Monitor drift corrected average:	**2.31 ppm**

Reference Method Monitor #7:	
Analyzer Type:	**CH4**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.67 ppm
Post-test calibration span value	50.28 ppm
Pre-test calibration zero value:	0.57 ppm
Post-test calibration zero value:	0.53 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	0.94 ppm
Monitor drift corrected average:	**0.40 ppm**

Clock Time	Elapsed Time	Monitor #1 Oxygen %	Monitor #2 CO2 %	Monitor #4 NOx ppm	Monitor #5 CO ppm	Monitor #6 Total VOC ppm	Monitor #7 CH4 ppm
17 : 51	0						
17 : 52	1	12.9	6.9	10.9	16.4	1.3	0.5
17 : 53	2	13.0	6.8	10.8	18.3	1.3	0.5
17 : 54	3	13.2	6.6	10.4	28.1	1.8	0.5
17 : 55	4	13.1	6.7	10.6	34.0	1.8	0.5
17 : 56	5	13.2	6.6	10.3	32.9	1.8	0.5
17 : 57	6	13.1	6.7	10.5	30.9	1.6	0.5
17 : 58	7	13.1	6.7	10.6	28.8	1.6	0.5
17 : 59	8	13.1	6.7	10.3	25.9	1.5	0.5
18 : 0	9	13.0	6.8	10.6	26.4	1.7	0.5
18 : 1	10	12.9	6.9	10.7	23.5	1.6	0.5
18 : 2	11	13.0	6.8	10.7	20.8	1.6	0.5
18 : 3	12	13.0	6.8	10.7	23.5	1.7	1.0
18 : 4	13	13.1	6.7	10.6	27.4	1.7	1.0
18 : 5	14	12.9	6.9	10.7	25.2	1.7	1.0
18 : 6	15	13.1	6.7	10.7	24.9	1.3	0.6
18 : 7	16	13.0	6.9	10.7	20.2	1.3	0.5
18 : 8	17	13.0	6.8	10.9	19.2	1.5	0.5
18 : 9	18	13.0	6.8	10.7	23.8	1.3	2.3
18 : 10	19	12.9	6.9	10.8	22.0	1.4	2.5
18 : 11	20	13.1	6.7	10.7	27.6	1.3	2.5
18 : 12	21	13.1	6.8	10.5	25.5	1.2	2.1
18 : 13	22	13.0	6.8	10.6	21.4	1.3	2.0
18 : 14	23	13.0	6.8	10.7	23.4	1.2	2.0
18 : 15	24	13.0	6.9	10.7	24.4	1.3	1.6
18 : 16	25	13.1	6.7	10.6	30.1	1.3	1.5
18 : 17	26	13.0	6.9	10.6	25.2	1.3	1.5
18 : 18	27	12.9	6.9	11.0	18.8	1.3	1.1
18 : 19	28	12.8	7.0	11.0	15.7	1.2	1.0
18 : 20	29	13.0	6.8	10.9	20.2	1.3	1.0
18 : 21	30	13.0	6.8	10.7	25.4	1.3	1.0
18 : 22	31	13.2	6.6	10.5	33.4	1.3	1.0
18 : 23	32	13.1	6.7	10.5	33.6	1.2	1.0
18 : 24	33	13.2	6.6	10.4	35.2	1.2	1.0
18 : 25	34	13.1	6.7	10.5	30.6	1.3	1.0
18 : 26	35	13.1	6.7	10.6	31.3	1.3	1.0
18 : 27	36	13.1	6.8	10.5	26.0	1.3	0.6
18 : 28	37	13.1	6.7	10.6	24.7	1.1	0.5
18 : 29	38	13.2	6.7	10.4	27.3	1.2	0.5
18 : 30	39	13.1	6.7	10.4	26.7	1.3	0.5
18 : 31	40	13.2	6.6	10.4	32.1	1.3	0.5
18 : 32	41	13.0	6.8	10.5	20.6	1.1	0.5
18 : 33	42	13.0	6.8	10.7	21.1	1.2	1.0
18 : 34	43	13.1	6.7	10.5	23.2	1.2	1.0
18 : 35	44	13.0	6.8	10.7	24.0	1.2	1.0
18 : 36	45	13.1	6.7	10.7	24.8	24.2	0.6
18 : 37	46	13.1	6.7	10.4	23.4	42.2	0.5
18 : 38	47	13.2	6.6	10.5	23.8	0.0	0.5
18 : 39	48	13.1	6.8	10.6	23.3	0.8	1.0
18 : 40	49	13.2	6.7	10.4	30.5	1.0	1.0
18 : 41	50	13.1	6.7	10.5	33.2	1.0	1.0
18 : 42	51	13.3	6.6	10.3	29.4	1.2	1.5
18 : 43	52	13.2	6.7	10.4	26.0	1.2	1.5
18 : 44	53	13.0	6.9	10.5	21.2	1.2	1.5
18 : 45	54	13.1	6.7	10.6	25.2	1.3	0.6
18 : 46	55	13.1	6.7	10.6	32.6	1.1	0.5
18 : 47	56	13.3	6.6	10.4	46.4	1.2	0.5
18 : 48	57	13.2	6.6	10.4	42.1	1.1	0.5
18 : 49	58	13.1	6.7	10.5	29.4	1.2	0.5
18 : 50	59	13.0	6.9	10.8	19.9	1.2	0.5
18 : 51	60	12.9	6.9	10.9	19.4	1.2	0.5
	AVERAGE:	**13.1**	**6.8**	**10.6**	**26.2**	**2.4**	**0.9**

USEPA Method 4
Moisture Determination Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	3
Time:	1751-1851

Data Input:

Volume metered (V_m):	41.400	**ft^3**
Meter calibration coefficient (Y_d):	0.999	**dimensionless**
Barometric pressure (P_{bar}):	29.47	**inches Hg**
Meter sample rate (ΔH):	1.60	**inches H_2O**
Meter inlet/outlet temperature (T_m):	32.8	**°F**
Volume of moisture collected (V_{lc}):	75.0	**milliliters**
Stack Temperature (T_s):	1,456.4	**°F**
Static Pressure (St):	-0.6	**inches H_2O**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Volume of sample, dry basis:

$$Vm_{std} = V_m \times Y_d \times \left(\frac{528.0°R}{29.92"Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m + 460}\right) = \mathbf{43.820\ dscf}$$

Volume of water vapor in sample:

$$Vw_{std} = \frac{0.04707 ft^3}{ml} \times V_{lc} = \mathbf{3.530\ scf}$$

Fractional moisture content of stack gas:

$$B_{wo} = \frac{Vw_{std}}{(Vm_{std} + Vw_{std})} = \mathbf{0.0746\ B_{wo}}$$

Percent Moisture:

$$\%moisture = B_{wo} \times 100 = \mathbf{7.46\ \%}$$

Fractional moisture content of stack gas at saturated conditions:

$$T_{s(°K)} = ((T_s - 32) * 0.5556) + 273 = \mathbf{1{,}064.4\ °Kelvin}$$

$$P_{s(mmHg)} = \left(P_{bar} + \frac{S_t}{13.6}\right) \times 25.401 = \mathbf{748.57\ mm\ Hg}$$

$$B_{wos} = \frac{\left(10^{\left(A - \left(\frac{B}{(T_{s(°K)} - C)}\right)\right)}\right) - 0.5}{P_{s(mmHg)}} = \mathbf{1.0000\ B_{wos}}$$

where:
A= 8.361
B=1893.5
C=27.65

Percent moisture at saturated conditions:

$$\%moisture_{saturated} = B_{wos} \times 100 = \mathbf{100.00\ \%}$$

Percent moisture used for emissions calculations:

$$= \mathbf{7.46\ \%}$$

USEPA Method 2
Volumetric Flow Rate Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	3
Time:	1751-1851

Data Input

Carbon Dioxide (CO_2):	6.8	**%**
Oxygen (O_2):	13.3	**%**
Nitrogen (N_2):	79.9	**%**
Fractional Moisture Content (B_{wo})	0.0746	**dimensionless**
Stack Temperature (T_s):	1,456.4	**°F**
Pitot Coefficient (C_p):	0.84	**dimensionless**
Average square root of ΔP	0.2509	
Barometric Pressure (P_{bar}):	29.47	**inches Hg**
Static Pressure (S_t)	-0.55	**inches H_2O**
Stack diameter:	156.00	**inches**
Stack width:	n/a	**inches**
Stack length:	n/a	**inches**
Stack area (A_s):	132.7323	**ft^2**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Dry molecular weight of stack gas:

$$M_d = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2)$$ = **29.63 lb/lb-mole**

Molecular weight of stack gas, wet basis:

$$M_s = (M_d \times (1 - B_{ws})) + (18 \times B_{ws})$$ = **28.76 lb/lb-mole**

Absolute stack gas pressure:

$$P_s = P_{bar} + \left(\frac{S_t}{13.6}\right)$$ = **29.43 inches Hg**

Stack gas velocity:

$$V_s = 85.49 \times C_p \times \sqrt{\Delta P} \times \sqrt{\frac{(T_s + 460)}{(P_s \times M_s)}}$$ = **27.11 feet/second**

Stack gas volumetric flow rate:

$$Q_a = A_s \times V_s \times 60$$ = **215,922 acfm**

Stack gas volumetric flow rate, wet basis:

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right]$$ = **58,513 scfm**

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right] \times 60$$ = **3,510,809 scfh**

Stack gas volumetric flow rate, dry basis:

$$Q_{std} = Q_{sw} \times (1 - B_{wo})$$ = **54,151 dscfm**

$$Q_{std} = Q_{sw} \times (1 - B_{wo}) \times 60$$ = **3,249,054 dscfh**

USEPA Method 3-A
Oxygen
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	13.06	**% db**
Average pre/post-test zero calibration reading (C_o):	0.08	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.86	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**dscfh**
Compound molecular weight (MW):	32.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.27	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Oxygen

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{13.27\ \%\ db}$$

USEPA Method 3-A
CO2
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	6.75	**% db**
Average pre/post-test zero calibration reading (C_o):	0.05	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.85	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**dscfh**
Compound molecular weight (MW):	44.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.27	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO2

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{6.84\ \%\ db}$$

USEPA Method 7-E
NOx
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	10.61	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	-0.01	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.46	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**dscfh**
Compound molecular weight (MW):	46.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.27	**% db**
Fuel gas F-factor (F_d):	9267	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

NOx
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **10.74 ppmv db**

NOx
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **1.283 x 10-6 lb/dscf**

NOx
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **4.17 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **18.26 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0326 lb/MMBtu**

USEPA Method 10
CO
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	26.18	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	0.63	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.99	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**dscfh**
Compound molecular weight (MW):	28.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.27	**% db**
Fuel gas F-factor (F_d):	9267	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **25.91 ppmv db**

CO
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **1.883 x 10-6 lb/dscf**

CO
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) \times \left(Q_{std}\right)$$ = **6.12 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **26.8 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0478 lb/MMBtu**

USEPA Method 18
CH4
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	0.94	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.55	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	49.98	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.27	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CH4
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **0.400 ppmv wb**

CH4
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **0.01663 x 10-6 lb/scf**

CH4
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) \times \left(Q_{std}\right)$$ = **0.0540 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **0.2366 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.000422 lb/MMBtu**

USEPA Method 25-A
Total VOC
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1751-1851

Data Input:

Average chart reading (C):	2.36	**ppmv wb**
Average pre/post-test zero calibration reading (C_o):	0.05	**ppmv wb**
Calibration gas concentration (C_{ma}):	50.0	**ppmv wb**
Average pre/post-test calibration gas reading (C_m):	50.10	**ppmv wb**
Stack gas volumetric flow rate (Q_{std}):	3,510,809	**scfh**
Compound molecular weight (MW):	16.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.27	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Total VOC
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **2.31 ppmv wb**

Total VOC
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **0.0960 x 10-6 lb/scf**

Total VOC
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **0.337 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **1.48 tons/year**

USEPA Method 25A
Non-Methane Volatile Organics (as Hexane)
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 3
Test Time: 1503-1621

Data Input:

Average chart reading (C):	2.36	**ppmv**
Average pre/post-test zero calibration reading (C_o):	0.05	**ppmv**
Calibration gas concentration (C_{ma}):	50.00	**ppmv**
Average pre/post-test calibration gas reading (C_m):	49.98	**ppmv**
Stack gas volumetric flow rate (Q_{std}):	3,249,054	**dscfh**
Compound molecular weight (MW):	86.70	**lb/lb-mole**
Stack gas fractional moisture content (B_{wo}):	0.0746	**fractional**
Methane concentration:	0.40	**ppmv wb**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Non-Methane Volatile Organics (as C_1)
Corrected for zero and calibration drift:

$$C_{gas,ppm\ wet\ basis} = \left(\left[\left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}\right]\right) - methane_{ppmv\ wb}$$

= **1.92 ppmv wb**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to Dry Basis:

$$C_{gas,ppm\ dry\ basis} = \frac{\left(C_{gas,ppm\ wet\ basis}\right)}{\left(1 - B_{wo}\right)} x 0.1667$$

= **0.35 ppmv db as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Corrected to 3% Oxygen:

$$C_{gas,@3\%O_2 as C_6H_{14}} = C_{gas}\ x 0.1667 x \left(\frac{17.9}{(20.9 - \%O_2)}\right)$$

= **0.81 ppmv @ 3% O_2 as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Concentration:

$$C_{gas,lb/dscf} = C_{gas,ppm}\ x \left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3/lb-mole}\right)$$

= **0.078 x 10^{-6} lbs/dscf as Hexane**

Non-Methane Volatile Organics (as C_6H_{14})
Emission Rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$

= **0.252 lbs/hr as Hexane**

Reference Method Monitor Data
One-Minute Averages

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Run #: 4
Test Time: 1948-2048

Reference Method Monitor #1:

Analyzer Type:	**Oxygen**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.87 %
Post-test calibration span value	9.88 %
Pre-test calibration zero value:	0.09 %
Post-test calibration zero value:	0.08 %
Calibration gas type:	Protocol 1 Oxygen %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	12.83 %
Monitor drift corrected average:	13.02 %

Reference Method Monitor #2:

Analyzer Type:	**CO2**
Analyzer Scale:	20.00 %
Pre-test calibration span value:	9.86 %
Post-test calibration span value	9.89 %
Pre-test calibration zero value:	0.05 %
Post-test calibration zero value:	0.05 %
Calibration gas type:	Protocol 1 CO2 %
Calibration gas concentration:	10.00 %
Monitor uncorrected average:	7.03 %
Monitor drift corrected average:	7.11 %

Reference Method Monitor #3:

Analyzer Type:	**SO2**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	0.00 ppm
Post-test calibration span value	0.00 ppm
Pre-test calibration zero value:	0.00 ppm
Post-test calibration zero value:	0.00 ppm
Calibration gas type:	Protocol 1 SO2 ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	30.14 ppm
Monitor drift corrected average:	#DIV/0! ppm

Reference Method Monitor #4:

Analyzer Type:	**NOx**
Analyzer Scale:	88.98 ppm
Pre-test calibration span value:	44.55 ppm
Post-test calibration span value	44.99 ppm
Pre-test calibration zero value:	-0.01 ppm
Post-test calibration zero value:	-0.01 ppm
Calibration gas type:	Protocol 1 NOx ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	11.35 ppm
Monitor drift corrected average:	11.42 ppm

Reference Method Monitor #5:

Analyzer Type:	**CO**
Analyzer Scale:	90.41 ppm
Pre-test calibration span value:	45.03 ppm
Post-test calibration span value	45.38 ppm
Pre-test calibration zero value:	0.61 ppm
Post-test calibration zero value:	0.81 ppm
Calibration gas type:	Protocol 1 CO ppm
Calibration gas concentration:	45.00 ppm
Monitor uncorrected average:	7.34 ppm
Monitor drift corrected average:	6.71 ppm

Reference Method Monitor #6:

Analyzer Type:	**Total VOC**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	49.85 ppm
Post-test calibration span value	0.00 ppm
Pre-test calibration zero value:	0.51 ppm
Post-test calibration zero value:	0.00 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	0.83 ppm
Monitor drift corrected average:	1.17 ppm

Reference Method Monitor #7:

Analyzer Type:	**CH4**
Analyzer Scale:	100.00 ppm
Pre-test calibration span value:	50.28 ppm
Post-test calibration span value	0.00 ppm
Pre-test calibration zero value:	0.53 ppm
Post-test calibration zero value:	0.00 ppm
Calibration gas type:	Protocol 1 Methane ppm
Calibration gas concentration:	50.00 ppm
Monitor uncorrected average:	-0.26 ppm
Monitor drift corrected average:	-1.06 ppm

Clock Time	Elapsed Time	Monitor #1 Oxygen %	Monitor #2 CO2 %	Monitor #4 NOx ppm	Monitor #5 CO ppm	Monitor #6 Total VOC ppm	Monitor #7 CH4 ppm
19 : 48	0						
19 : 49	1	13.1	6.8	10.9	8.6	1.1	0.5
19 : 50	2	13.0	6.9	11.0	9.3	1.0	0.5
19 : 51	3	13.0	6.8	11.0	8.9	1.0	0.1
19 : 52	4	12.8	7.1	11.2	7.6	1.0	0.0
19 : 53	5	12.9	7.0	11.2	7.8	0.9	0.0
19 : 54	6	13.0	6.9	11.2	9.0	0.9	0.0
19 : 55	7	12.8	7.0	11.3	8.4	0.8	0.0
19 : 56	8	12.9	7.0	11.4	8.0	0.8	0.0
19 : 57	9	12.9	6.9	11.3	7.4	0.9	0.0
19 : 58	10	12.9	7.0	11.2	8.8	0.8	0.0
19 : 59	11	12.9	7.0	11.4	10.8	0.9	0.0
20 : 0	12	12.9	7.0	11.3	9.4	0.8	0.0
20 : 1	13	12.9	7.0	11.2	9.6	0.8	0.0
20 : 2	14	12.8	7.0	11.4	9.5	0.8	0.0
20 : 3	15	12.8	7.0	11.2	8.3	0.9	(0.4)
20 : 4	16	12.8	7.0	11.5	5.9	0.8	(0.5)
20 : 5	17	12.8	7.1	11.3	4.9	0.8	(0.5)
20 : 6	18	12.8	7.0	11.5	4.6	0.9	(0.5)
20 : 7	19	12.7	7.1	11.6	4.2	0.8	(0.5)
20 : 8	20	12.6	7.2	11.7	4.2	0.9	(0.5)
20 : 9	21	12.5	7.3	12.0	4.2	0.9	(0.5)
20 : 10	22	12.6	7.3	12.0	4.7	0.9	(0.5)
20 : 11	23	12.6	7.2	11.8	5.4	0.9	(0.5)
20 : 12	24	12.7	7.1	11.7	7.2	0.8	(0.0)
20 : 13	25	12.8	7.0	11.4	8.7	0.9	0.0
20 : 14	26	12.7	7.2	11.6	8.4	0.9	0.0
20 : 15	27	12.8	7.1	11.5	8.8	0.8	(0.4)
20 : 16	28	12.7	7.1	11.5	6.1	0.9	(0.5)
20 : 17	29	12.7	7.1	11.7	6.1	0.8	(0.5)
20 : 18	30	12.8	7.0	11.5	6.7	0.8	(0.0)
20 : 19	31	12.9	7.0	11.3	7.1	0.8	0.0
20 : 20	32	12.8	7.1	11.5	7.1	0.8	0.0
20 : 21	33	12.9	6.9	11.2	7.9	0.7	0.0
20 : 22	34	12.8	7.0	11.2	7.7	0.7	0.0
20 : 23	35	12.8	7.0	11.3	7.7	0.8	0.0
20 : 24	36	12.9	7.0	11.3	7.3	0.8	(0.4)
20 : 25	37	12.7	7.1	11.4	6.1	0.8	(0.5)
20 : 26	38	12.8	7.1	11.5	6.9	0.7	(0.5)
20 : 27	39	12.8	7.0	11.4	7.8	0.8	(0.5)
20 : 28	40	12.8	7.0	11.3	7.8	0.8	(0.5)
20 : 29	41	12.9	7.0	11.3	7.2	0.8	(0.5)
20 : 30	42	12.9	7.0	11.2	7.4	0.8	(0.5)
20 : 31	43	12.8	7.0	11.3	6.7	0.8	(0.5)
20 : 32	44	12.9	7.0	11.3	6.3	0.7	(0.5)
20 : 33	45	12.8	7.1	11.3	7.5	0.7	(0.5)
20 : 34	46	12.8	7.1	11.4	6.9	0.8	(0.5)
20 : 35	47	12.8	7.1	11.5	6.0	0.8	(0.5)
20 : 36	48	12.9	7.0	11.2	7.0	0.8	(0.5)
20 : 37	49	12.9	7.0	11.2	6.9	0.8	(0.5)
20 : 38	50	12.8	7.1	11.4	5.9	0.8	(0.5)
20 : 39	51	12.8	7.0	11.5	5.9	0.9	(0.5)
20 : 40	52	12.9	7.0	11.1	7.9	0.8	(0.5)
20 : 41	53	12.9	7.0	11.1	6.9	0.7	(0.5)
20 : 42	54	12.8	7.1	11.5	6.6	0.8	(0.5)
20 : 43	55	12.9	7.0	11.2	7.6	0.9	(0.5)
20 : 44	56	13.0	6.9	11.1	9.6	0.9	(0.5)
20 : 45	57	13.0	6.9	10.9	10.4	0.9	(0.5)
20 : 46	58	12.8	7.1	11.3	8.4	0.9	(0.5)
20 : 47	59	12.9	7.0	11.2	8.4	0.8	(0.5)
20 : 48	60	12.8	7.1	11.3	6.3	0.8	(0.5)
	AVERAGE:	**12.8**	**7.0**	**11.4**	**7.3**	**0.8**	**-0.3**

USEPA Method 4
Moisture Determination Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	4
Time:	1948-2048

Data Input:

Volume metered (V_m):	36.800 **ft^3**
Meter calibration coefficient (Y_d):	0.999 **dimensionless**
Barometric pressure (P_{bar}):	29.47 **inches Hg**
Meter sample rate (ΔH):	1.60 **inches H_2O**
Meter inlet/outlet temperature (T_m):	26.5 **°F**
Volume of moisture collected (V_{lc}):	83.1 **milliliters**
Stack Temperature (T_s):	1,455.6 **°F**
Static Pressure (St):	-0.6 **inches H_2O**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Volume of sample, dry basis:

$$Vm_{std} = V_m \times Y_d \times \left(\frac{528.0°R}{29.92"Hg}\right) \times \left(\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m + 460}\right)$$ = **39.453 dscf**

Volume of water vapor in sample:

$$Vw_{std} = \frac{0.04707 ft^3}{ml} \times V_{lc}$$ = **3.912 scf**

Fractional moisture content of stack gas:

$$B_{wo} = \frac{Vw_{std}}{(Vm_{std} + Vw_{std})}$$ = **0.0902 B_{wo}**

Percent Moisture:

$$\%moisture = B_{wo} \times 100$$ = **9.02 %**

Fractional moisture content of stack gas at saturated conditions:

$$T_{s(°K)} = ((T_s - 32) * 0.5556) + 273$$ = **1,063.9 °Kelvin**

$$P_{s(mmHg)} = \left(P_{bar} + \frac{S_t}{13.6}\right) \times 25.401$$ = **748.57 mm Hg**

$$B_{wos} = \frac{\left(10^{\left(A - \left(\frac{B}{(T_{s(°K)} - C)}\right)\right)}\right) - 0.5}{P_{s(mmHg)}}$$

where:
A= 8.361
B=1893.5
C=27.65

= **1.0000 B_{wos}**

Percent moisture at saturated conditions:

$$\%moisture_{saturated} = B_{wos} \times 100$$ = **100.00 %**

Percent moisture used for emissions calculations:

= **9.02 %**

USEPA Method 2
Volumetric Flow Rate Sample Calculations

Client:	Veolia Services - Zion Landfill
Location:	Zion, Illinois
Source:	Thermal Control
Date:	12/7/2007
Run #:	4
Time:	1948-2048

Data Input

Carbon Dioxide (CO_2):	7.1	**%**
Oxygen (O_2):	13.0	**%**
Nitrogen (N_2):	79.9	**%**
Fractional Moisture Content (B_{wo})	0.0902	**dimensionless**
Stack Temperature (T_s):	1,455.6	**°F**
Pitot Coefficient (C_p):	0.84	**dimensionless**
Average square root of ΔP	0.2503	
Barometric Pressure (P_{bar}):	29.47	**inches Hg**
Static Pressure (S_t)	-0.55	**inches H_2O**
Stack diameter:	156.00	**inches**
Stack width:	n/a	**inches**
Stack length:	n/a	**inches**
Stack area (A_s):	132.7323	**ft^2**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Dry molecular weight of stack gas:

$$M_d = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2)$$ = **29.66 lb/lb-mole**

Molecular weight of stack gas, wet basis:

$$M_s = (M_d \times (1 - B_{ws})) + (18 \times B_{ws})$$ = **28.61 lb/lb-mole**

Absolute stack gas pressure:

$$P_s = P_{bar} + \left(\frac{S_t}{13.6}\right)$$ = **29.43 inches Hg**

Stack gas velocity:

$$V_s = 85.49 \times C_p \times \sqrt{\Delta P} \times \sqrt{\frac{(T_s + 460)}{(P_s \times M_s)}}$$ = **27.11 feet/second**

Stack gas volumetric flow rate:

$$Q_a = A_s \times V_s \times 60$$ = **215,928 acfm**

Stack gas volumetric flow rate, wet basis:

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right]$$ = **58,541 scfm**

$$Q_{sw} = Q_a \times \left[\left(\frac{528°R}{29.92in.Hg}\right) \times \left(\frac{P_s}{T_s + 460}\right)\right] \times 60$$ = **3,512,469 scfh**

Stack gas volumetric flow rate, dry basis:

$$Q_{std} = Q_{sw} \times (1 - B_{wo})$$ = **53,261 dscfm**

$$Q_{std} = Q_{sw} \times (1 - B_{wo}) \times 60$$ = **3,195,645 dscfh**

USEPA Method 3-A
Oxygen
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 4
Test Time: 1948-2048

Data Input:

Average chart reading (C):	12.83	**% db**
Average pre/post-test zero calibration reading (C_o):	0.08	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.87	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,195,645	**dscfh**
Compound molecular weight (MW):	32.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.02	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

Oxygen

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o} = \mathbf{13.02\ \%\ db}$$

USEPA Method 3-A
CO2
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 4
Test Time: 1948-2048

Data Input:

Average chart reading (C):	7.03	**% db**
Average pre/post-test zero calibration reading (C_o):	0.05	**% db**
Calibration gas concentration (C_{ma}):	10.0	**% db**
Average pre/post-test calibration gas reading (C_m):	9.87	**% db**
Stack gas volumetric flow rate (Q_{std}):	3,195,645	**dscfh**
Compound molecular weight (MW):	44.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.02	**% db**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO2

Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O} = \mathbf{7.11\ \%\ db}$$

USEPA Method 7-E
NOx
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 4
Test Time: 1948-2048

Data Input:

Average chart reading (C):	11.35	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	-0.01	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	44.77	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,195,645	**dscfh**
Compound molecular weight (MW):	46.00	**lb/lb-mole**
Stack gas oxygen concentration ($\%O_2$):	13.02	**% db**
Fuel gas F-factor (F_d):	9271	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

NOx
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_O\right)\frac{C_{ma}}{C_m - C_O}$$ = **11.42 ppmv db**

NOx
Concentration:

$$C_{gas,lb/dscf} = C_{gas} \times \left(\frac{MW\ lb/lb-mole}{385.26 \times 10^6\ ft^3/lb-mole}\right)$$ = **1.364 x 10-6 lb/dscf**

NOx
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right) x \left(Q_{std}\right)$$ = **4.36 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **19.09 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0335 lb/MMBtu**

USEPA Method 10
CO
Calibration Drift Correction And Emission Rate Calculation

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007
Test Run #: 4
Test Time: 1948-2048

Data Input:

Average chart reading (C):	7.34	**ppmv db**
Average pre/post-test zero calibration reading (C_o):	0.71	**ppmv db**
Calibration gas concentration (C_{ma}):	45.0	**ppmv db**
Average pre/post-test calibration gas reading (C_m):	45.20	**ppmv db**
Stack gas volumetric flow rate (Q_{std}):	3,195,645	**dscfh**
Compound molecular weight (MW):	28.00	**lb/lb-mole**
Stack gas oxygen concentration (%O_2):	13.02	**% db**
Fuel gas F-factor (F_d):	9271	**dscf/MMBtu**

Sample calculations @ standard conditions (29.92 inches Hg, 68.0 °F):

CO
Corrected for zero and calibration drift:

$$C_{gas} = \left(\overline{C} - C_o\right)\frac{C_{ma}}{C_m - C_o}$$ = **6.71 ppmv db**

CO
Concentration:

$$C_{gas,lb/dscf} = C_{gas}\ x\left(\frac{MW\ lb/lb-mole}{385.26x10^6\ ft^3\ /\ lb-mole}\right)$$ = **0.487 x 10-6 lb/dscf**

CO
Emission rate:

$$E_{gas,lb/hr} = \left(C_{gas,lb/dscf}\right)x\left(Q_{std}\right)$$ = **1.558 lb/hr**

$$E_{gas,tons/year} = \left(\frac{E_{gas,lb/hr} \times 24 \times 365}{2000}\right)$$ = **6.822 tons/year**

$$E_{gas,lb/MMBtu} = C_{gas,lb/dscf} \times F_d \times \left(\frac{20.9}{20.9 - \%O_2}\right)$$ = **0.0120 lb/MMBtu**

APPENDIX B

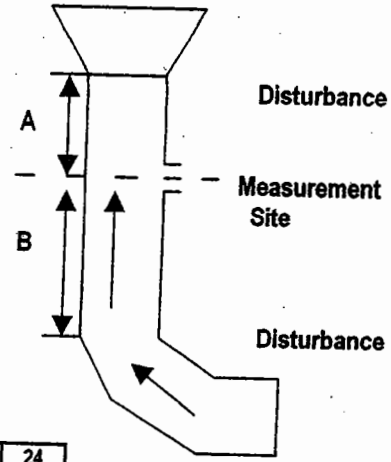
Field Data

TRAVERSE POINT LOCATION FOR CIRCULAR AND RECTANGULAR DUCTS

PLANT Veolia Services, Zion IL
DATE 12-7-07
SAMPLING LOCATION Enclosed Flare
INSIDE OF FAR WALL TO
OUTSIDE OF PORT (DISTANCE C) 162"
INSIDE OF NEAR WALL TO
OUTSIDE OF PORT (DISTANCE D) 6"
STACK ID 156"
NEAREST UPSTREAM FROM DISTURBANCE (A) 76 (0.615 DD)
NEAREST DOWNSTREAM FROM DISTURBANCE (B) 605" (3.55 DD)
CALCULATOR

Location of Traverse Points in Rectangular Stacks

	2	3	4	5	6	7	8	9	10	11	12
1	25.0	16.7	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2
2	75.0	50.0	37.5	30.0	25.0	21.4	18.8	16.7	15.0	13.6	12.5
3		83.3	62.5	50.0	41.7	35.7	31.3	27.8	25.0	22.7	20.8
4			87.5	70.0	58.3	50.0	43.8	38.9	35.0	31.8	29.2
5				90.0	75.0	64.3	56.3	50.0	45.0	40.9	37.5
6					91.7	78.6	68.8	61.1	55.0	50.0	45.8
7						92.9	81.3	72.2	65.0	59.1	54.2
8							93.8	83.3	75.0	68.2	62.5
9								94.4	85.0	77.3	70.8
10									95.0	86.4	79.2
11										95.5	87.5
12											95.8

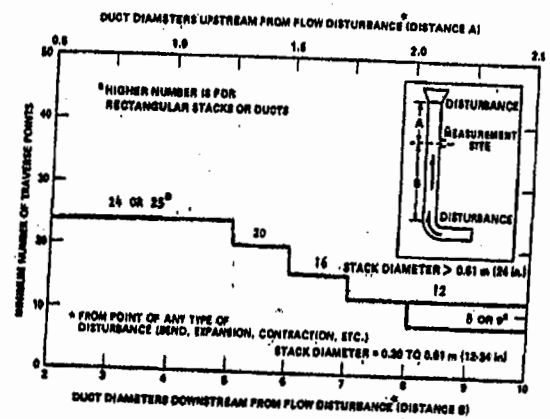


Rectangular Duct Equivalent Diameter Determination $\frac{2 \times L \times W}{L + W}$

LOCATION OF TRAVERSE POINTS ON CIRCULAR STACKS

	4	6	8	10	12	14	16	18	20	22	24
1	6.7	4.4	3.2	2.6	2.1	1.8	1.6	1.4	1.3	1.1	1.1
2	25.0	14.6	10.5	8.2	6.7	5.7	4.9	4.4	3.9	3.5	3.2
3	75.0	29.6	19.4	14.6	11.8	9.9	8.5	7.5	6.7	6.0	5.5
4	93.3	70.4	32.3	22.6	17.7	14.6	12.5	10.9	9.7	8.7	7.9
5		85.4	67.7	34.2	25.0	20.1	16.9	14.6	12.9	11.6	10.5
6		95.6	80.6	65.8	35.6	26.9	22.0	18.8	16.5	14.6	13.2
7			89.5	77.4	64.4	36.6	28.3	23.6	20.4	18.0	16.1
8			96.8	85.4	75.0	63.4	37.5	29.6	25.0	21.8	19.4
9				91.8	82.3	73.1	62.5	38.2	30.6	26.2	23.0
10				97.4	88.2	79.9	71.7	61.8	38.8	31.5	27.2
11					93.3	85.4	78.0	70.4	61.2	39.3	32.3
12					97.9	90.1	83.1	76.4	69.4	60.7	39.8
13						94.3	87.5	81.2	75.0	68.5	60.2
14						98.2	91.5	85.4	79.6	73.8	67.7
15							95.1	89.1	83.5	78.2	72.8
16							98.4	92.5	87.1	82.0	77.0
17								95.6	90.3	85.4	80.6
18								98.6	93.3	88.4	83.9
19									96.1	91.3	86.8
20									98.7	94.0	89.5
21										96.5	92.1
22										98.9	94.5
23											96.8
24											98.9

TRAVERSE POINT NUMBER	FRACTION OF STACK I.D.	STACK I.D.	PRODUCT OF COLUMNS 1 AND 2 (TO NEAREST 1/8 INCH)	DISTANCE D (PORT DEPTH)	TRAVERSE POINT LOCATION FROM OUTSIDE OF PORT (SUM OF COLUMNS 3 AND 4)
1	0.032	156	4.99	6"	10.99
2	.105	↓	16.38	↓	22.38
3	.194		30.26		36.26
4	.323		50.39		56.39
5	.677		105.61		111.61
6	.806		125.74		131.74
7	.895		139.62		145.62
8	.965	↓	151.05	↓	156.05
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					



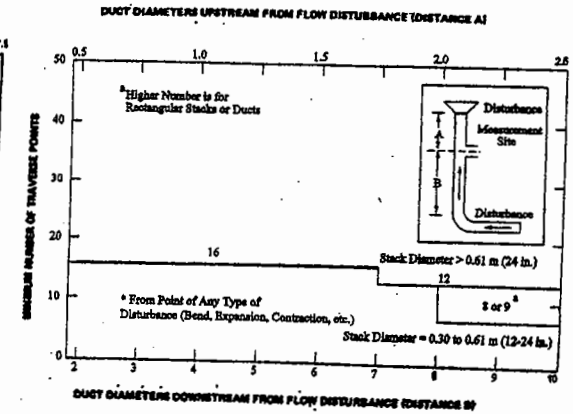


Figure 1-2. Minimum number of traverse points for velocity (nonparabolic) traverses.

VELOCITY TRAVERSE AND CYCLONIC FLOW VERIFICATION

ARI ENVIRONMENTAL INC.

PLANT Veolia Services
DATE 12-5-07
LOCATION Zion IL
SOURCE Enclosed Flare
STACK ID 156.0"
PROBE # / TC # 14' Pitot
BAROMETRIC PRESSURE, in. Hg 29.47
OPERATORS RM BB

SCHEMATIC OF TRAVERSE POINT LAYOUT

RUN NO. Pre 1 **STATIC, in.H2O** -0.51

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
1	.03	1483	5
2	.07	1499	4
3	.07	1504	1
4	.03	1475	0
5	.03	1450	2
6	.05	1441	1
7	.05	1445	3
8	.05	1454	2
1	.05	1431	1
2	.05	1427	2
3	.05	1423	2
4	.05	1424	0
5	.05	1430	0
6	.07	1445	1
7	.05	1474	3
8	.05	1485	5
	4.1192	23300	
AVERAGE	.2574	1456.25	

Ri Avg .2499

RUN NO. Post 1/Pre 2 **STATIC, in.H2O** -0.51

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
1	.08	1495	
2	.05	1483	
3	.07	1463	
4	.07	1446	
5	.05	1439	
6	.05	1429	
7	.05	1429	
8	.05	1435	
1	.07	1466	
2	.05	1451	
3	.05	1445	
4	.05	1440	
5	.05	1437	
6	.07	1455	
7	.05	1436	
8	.05	1447	
	3.9785	23190	
AVERAGE	.2421	1449.375	

Ts avg 1452.81

VELOCITY TRAVERSE AND CYCLONIC FLOW VERIFICATION

ARI ENVIRONMENTAL INC.

PLANT Veolia Services
DATE 12-7-07
LOCATION Zion IL
SOURCE Enclosed Flare
STACK ID 156-0"
PROBE # / TC # 14 point
BAROMETRIC PRESSURE, In. Hg 29.42
OPERATORS RM RB

SCHEMATIC OF TRAVERSE POINT LAYOUT

RUN NO. 1 **STATIC, in.H2O** -0.55

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
1	.07	1492	
2	.09	1488	
3	.08	1473	
4	.07	1469	
5	.06	1465	
6	.05	1442	
7	.05	1451	
8	.07	1455	
1	.06	1459	
2	.05	1448	
3	.05	1439	
4	.06	1437	
5	.07	1429	
6	.06	1433	
7	.05	1440	
8	.06	1446	
	3.9939	23266	
AVERAGE	.2490	1454.125	

R2 AVG .2457 Ts 1451.75

RUN NO. 1 **STATIC, In.H2O** -0.56

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
1	.09	1486	
2	.08	1503	
3	.07	1497	
4	.07	1481	
5	.07	1459	
6	.06	1442	
7	.05	1451	
8	.05	1458	
1	.07	1472	
2	.06	1461	
3	.06	1455	
4	.05	1442	
5	.06	1429	
6	.07	1427	
7	.06	1433	
8	.06	1441	
	4.0462	23340	
AVERAGE	.2529	1458.75	

R3 AVG .2569 Ts 1456.4375

VELOCITY TRAVERSE AND CYCLONIC FLOW VERIFICATION

ARI ENVIRONMENTAL INC.

PLANT: Veolia Services
DATE: 12-7-07
LOCATION: Zion IL
SOURCE: Enclosed Flare
STACK ID: 156.0"
PROBE # / TC #: 14' pitot
BAROMETRIC PRESSURE, in. Hg: 29.47
OPERATORS: RM RB

SCHEMATIC OF TRAVERSE POINT LAYOUT

RUN NO. Post 4 STATIC, in.H2O -0.54

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
1	.08	1479	
2	.07	1488	
3	.06	1484	
4	.06	1462	
5	.05	1453	
6	.04	1443	
7	.05	1450	
8	.06	1438	
1	.07	1462	
2	.08	1457	
3	.07	1446	
4	.07	1435	
5	.06	1424	
6	.07	1430	
7	.05	1438	
8	.05	1450	
	3.9649	23239	
AVERAGE	.2477	1452.44	

RUN NO. _____ STATIC, in.H2O _____

TRAVERSE POINT NUMBER	VELOCITY HEAD (ΔPs), in.H2O	STACK TEMP. (Ts), °F	YAW ANGLE °
AVERAGE			

ΔP Avg .2503

Ts 1455.54

FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	Veolia Service	AMBIENT TEMPERATURE	25	PROBE HEATER SETTING	NA
DATE	12-7-07	BAROMETRIC PRESSURE	29.47	HEATER BOX SETTING	
LOCATION	Zion IL	ASSUMED MOISTURE, %	NA	METER $H_@$	1.639
OPERATOR	DM	PROBE LENGTH, in.	141	C_p FACTOR	0.84
STACK NO.	Enclosed Flare	NOZZLE DIAMETER, in.	NA	Y_d FACTOR	0.999
RUN NO.	1	STACK DIAMETER, in.	156	PITOT/THERM #	
SAMPLE BOX NO.		MINUTES PER POINT	NA		
METER BOX NO.		NUMBER OF POINTS	16		
START TIME	1433	NUMBER OF PORTS	0		

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt	
Tare wt	
Weight	
TOTAL	mg

A= B=

CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	$\sqrt{\Delta P_s}$	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
1433		0					1.6	1.639	945.000	28	28				28	8
1438		5							949.9	28	28				30	8
1443		10							954.8	30	28				34	8
1448		15							959.5	32	28				35	8
1453		20							963.1	37	28				34	8
1458		25							966.7	38	29				34	8
1503		30							970.3	38	29				34	8
1508		35							974.0	38	30				34	8
1513		40							977.6	39	30				34	8
1518		45							981.3	39	30				34	8
1523		50							984.9	40	30				35	8
1528		55							988.6	40	30				35	8
1533		60							992.280	39	31				34	8
										46	349					
AVERAGE							1.6		47.280	31.35						

IMPINGER VOLUME (ml) OR WEIGHT (g)	#1	#2	#3	#4	SILICA GEL WEIGHT
FINAL	174	100	0		5.9
INITIAL					
LIQUID COLLECTED					
TOTAL COLLECTED (specify ml or g)					195

DRIFT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0 cfm	CFM@15"Hg
POST:	0 cfm	CFM@15"Hg
PITOT PRE:	OK	@>3"H_2O
POST:	OK	@>3"H_2O

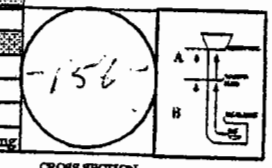
FIELD DATA

ARI ENVIRONMENTAL INC.

PLANT	Veolia Services	AMBIENT TEMPERATURE	25	PROBE HEATER SETTING	NA
DATE	12-7-07	BAROMETRIC PRESSURE	29.41	HEATER BOX SETTING	NA
LOCATION	Zion, IL	ASSUMED MOISTURE, %	NA	METER $H_@$	1.639
OPERATOR	Dm	PROBE LENGTH, in.	1.4	C_p FACTOR	0.84
STACK NO.	Enclosed Flare	NOZZLE DIAMETER, in.	NA	Y_d FACTOR	0.909
RUN NO.	2	STACK DIAMETER, in.	156	PITOT/THERM #	
SAMPLE BOX NO.		MINUTES PER POINT	NA		
METER BOX NO.	3003844	NUMBER OF POINTS	16		
START TIME	1615	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt	
Tare wt	
Weight	
TOTAL	mg

A= 96 B= 600



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	$\sqrt{\Delta P_s}$	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP °F	CROSS SECTION EAST IMPINGER OUTLET TEMP °F	FINAL VACUUM in. Hg
1615		0					1.6	~~0.909~~ 1.639	993.000	29	29				31	8
1620		5							996.7	32	29				31	8
1625		10							000.2	35	29				31	8
1630		15							003.8	37	29				34	8
1635		20							007.3	38	29				35	8
1640		25							010.9	39	29				35	8
1645		30							014.4	39	29				35	8
1650		35							017.9	39	29				36	8
1655		40							021.5	40	30				36	8
1700		45							025.0	40	30				36	8
1705		50							028.5	39	30				36	8
1710		55							032.0	39	30				36	8
1715		60							035.585	39	30				36	8
										485	242					
AVERAGE							1.6		42.585	33	35					

SUMMARY OF WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT
FINAL	171	104	0		g
INITIAL					5.6
LIQUID COLLECTED					
TOTAL					
COLLECTED (specify ml or g)					806

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.001	CFM@15"H_g
POST:	0.001	CFM@15"H_g
PITOT PRE:	OK	@>3"H_2O
POST:	OK	@>3"H_2O

FIELD DATA

PLANT	Veolia Services	AMBIENT TEMPERATURE	25	PROBE HEATER SETTING	
DATE	12-7-07	BAROMETRIC PRESSURE	29.47	HEATER BOX SETTING	
LOCATION	Zion IL	ASSUMED MOISTURE, %	N/A	METER $H_@$	1.639
OPERATOR		PROBE LENGTH, in.	144	C_p FACTOR	0.84
STACK NO.	Enclosed Flare	NOZZLE DIAMETER, in.	N/A	Y_d FACTOR	0.999
RUN NO.	3	STACK DIAMETER, in.	156	PITOT/THERM #	
SAMPLE BOX NO.	300964	MINUTES PER POINT	5		
METER BOX NO.	300964	NUMBER OF POINTS	16		
START TIME	1751	NUMBER OF PORTS	2		

WEIGHT OF PARTICULATE, mg		
Filter No.		
Sample		
Final wt		
Tare wt		
Wt. gain		
TOTAL		mg

A= 96 B= 60

CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	$\sqrt{\Delta P_s}$	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft^3	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP. °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	FINAL VACUUM in. Hg
1751		0					1.6	1.639	036.000	30	28				29	4
1856		5							039.5	30	28				29	
1801		10							043.0	35	27				32	
1806		15							046.6	37	28				34	
1811		20							050.2	38	28				34	
1816		25							053.8	40	28				34	
1821		30							057.4	40	28				34	
1826		35							060.9	39	25				34	
1831		40							064.4	39	25				37	
1836		45							067.9	38	29				35	
1841		50							070.9	39	29				33	
1846		55							073.9	40	29				33	
1851		60							077.400	40	29				33	
										485	368					
AVERAGE								1.6	44.400	32.81						

WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL	162	200	0		2.0
INITIAL					
LIQUID COLLECTED					
TOTAL COLLECTED (specify ml or g)					75

ORSAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

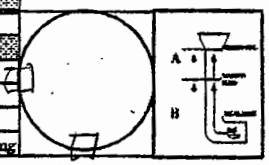
LEAK CHECK		
SYSTEM PRE:	0.00	CFM@15"Hg
POST:	0.00	CFM@15"Hg
PITOT PRE:	OK	@>3"H_2O
POST:	OK	@>3"H_2O

FIELD DATA

PLANT	Veolia Services	AMBIENT TEMPERATURE	25	PROBE HEATER SETTING	NA
DATE	12-7-07	BAROMETRIC PRESSURE	29.97	HEATER BOX SETTING	
LOCATION	Zion IL	ASSUMED MOISTURE, %	NA	METER $H_@$	1.639
OPERATOR	Rm	PROBE LENGTH, in.	144	C_p FACTOR	0.84
STACK NO.	Incinerator Line	NOZZLE DIAMETER, in.	NA	Y_d FACTOR	0.996
RUN NO.	4	STACK DIAMETER, in.	156	PITOT/THERM #	
SAMPLE BOX NO.	00367	MINUTES PER POINT	NA		
METER BOX NO.	NA	NUMBER OF POINTS	16		
START TIME	1645	NUMBER OF PORTS	2		

A= 96 B= 600

WEIGHT OF PARTICULATE, mg	
Filter No.	
Sample	
Final wt.	
Tare wt.	
Wt. gain	
TOTAL	mg



CROSS SECTION

CLOCK TIME	TRAVERSE POINT NUMBER	SAMPLING TIME (θ) min.	STATIC PRESSURE (in. H_2O)	STACK TEMP (T_s) °F	VELOCITY HEAD (ΔP_s)	$\sqrt{\Delta P_s}$	PRESSURE DIFFERENTIAL ACROSS ORIFICE METER (ΔH) in. H_2O ACTUAL	DESIRED	GAS SAMPLE VOLUME (V_m) ft³	GAS SAMPLE TEMP AT DRY GAS METER INLET ($T_{m_{in}}$) °F	OUTLET ($T_{m_{out}}$) °F	SAMPLE BOX TEMP. °F	COND. EXIT TEMP °F	SORBENT MODULE TEMP. °F	LAST IMPINGER OUTLET TEMP. °F	PUMP VACUUM in. Hg
1645		0					1.6	1.639	80.000	25	24				25	3
1653		5							83.7	25	24				27	
1655		10							86.9	27	24				28	
1703		15							90.2	30	24				28	
1705		20							93.9	33	24				28	
1713		25							97.5	31	25				28	
1715		30					1.3		101.0	28	24				27	15
1723		35							104.4	25	24				28	
1725		40							107.0	28	24				28	
1733		45							109.9	29	24				28	
1735		50					1.5		112.8	30	24				27	3
1743		55							114.9	30	24				27	
1745		60							116.9	30	24				26	
										317	313					
									36.900							
AVERAGE							1.6			26.53						

VOLUME OF WATER OR WEIGHT OF LIQUID COLLECTED	IMPINGER VOLUME (ml) OR WEIGHT (g) #1	#2	#3	#4	SILICA GEL WEIGHT g
FINAL					5.1
INITIAL	178	100	0	56	500
LIQUID COLLECTED					
TOTAL COLLECTED (specify ml or g)					851

GREAT DATA	TIME	CO_2	O_2
TRIAL 1			
TRIAL 2			
TRIAL 3			
Average			

LEAK CHECK		
SYSTEM PRE:	0.001 cfm	CFM@15"Hg
POST:	0.001 cfm	CFM@15"Hg
PITOT PRE:	OK	@>3"H_2O
POST:	OK	@>3"H_2O

ARI ENVIRONMENTAL INC.

FUGITIVE OR SMOKE EMISSION INSPECTION
OUTDOOR LOCATION

COMPANY Zion Landfill OBSERVER R Burton

LOCATION Zion IL AFFILIATION ARI Env.

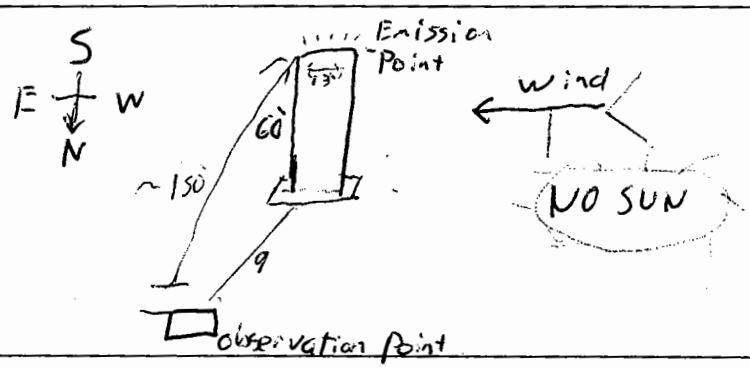
COMPANY REPRESENTATIVE Jim Lewis DATE 12-7-07

SKY CONDITIONS overcast WIND DIRECTION W, 10-15 mph

PRECIPITATION none WIND SPEED 10-15mph

INDUSTRY Landfill PROCESS UNIT enclosed flare

Sketch process unit; indicate observer position relative to source and sun; indicate potential emission points and/or actual emission points.



OBSERVATIONS

Begin Observation 1433

Clock time	Observation period duration min:sec	Accumulated emission time min:sec
1433-1453	0:00	0:00
1458-1518	0:00	0:00
1523-1543	0:00	0:00
1548-1608	0:00	0:00
1613-1633	0:00	0:00
1638-1659	0:00	0:00

End Observation 1658

INTEGRATED GAS SAMPLING FIELD DATA

Method 25C / Astm Drill

CLIENT: EFI - Veolia Services

FACILITY: Zion Landfill

SAMPLE LOCATION: Enclosed Flare ~~Exhaust~~ Inlet

PROCESS:

DATE: 12/7/2005

RUN NO.: 1

Tank ID: N 83

Console # C205

LEAK CHECK

Pre: 0.000

Post: None

Barometric 29.47

Beginning tank Pressure 18.0

End Tank Pressure 5.0

CLOCK TIME hours:minutes	RUN TIME minutes	FLOW METER SETTING cc ~~liters~~/minute	Tank Pressure ~~COMMENTS~~
14:33	0	30	18
	10	30	16
	20	30	14
	30	30	11.5
	40	30	9.5
	50	30	7.5
1533	60		5
			4.7
			[illegible]
			to
			[illegible]

INTEGRATED GAS SAMPLING FIELD DATA

Method 25 C (ASTM D1946) –

CLIENT: EFI – Veolia Jenson

FACILITY: Zion Landfill

SAMPLE LOCATION: Enclosed Flare Inlet

PROCESS:

DATE: 12/7/2011

RUN NO.: 2

Tank ID: 374

Cylinder: C205

LEAK CHECK

Pre: 0.0

Post: None

Barometric 29.47

Beginning tank pressure 17.5

End tank pressure 2.0

CLOCK TIME hours:minutes	RUN TIME minutes	FLOW METER SETTING ~~cc liters/~~minute	Tank pressure ~~COMMENTS~~
1615	0	30	17.5
	10		16.
	20		14
	30		12
	40		9.5
	50		7.0
1715	60		4.5
			2.0

INTEGRATED GAS SAMPLING FIELD DATA

Method/Use ASTM D1945

CLIENT: ESI – Veolia

FACILITY: Zion Landfill

SAMPLE LOCATION: Enclosed flare Inlet

PROCESS:

DATE: 12-7-2005

RUN NO.: 3

Tank ID: N409

Console: C2[illegible]

LEAK CHECK

Pre: 0.0

Post: None

Barometric 29.07

Beginning tank pressure 16.0

End tank pressure

CLOCK TIME hours:minutes	RUN TIME minutes	FLOW METER SETTING cc ~~liters~~/minute	Tank Pressure ~~COMMENTS~~
1751	0	30	16.0
	10		13.5
	20		11.0
	30		9.0
	40		7.0
	50		4.5
1851	60		2.0
			1.9 accounting mercury

INTEGRATED GAS SAMPLING FIELD DATA

Method 25C / ASTM D1946

CLIENT: EGI - Veolia Services

FACILITY: Zion Landfill

SAMPLE LOCATION: Enclosed Flare Inlet

PROCESS:

DATE: 12/7/2005

RUN NO.: 4

LEAK CHECK

Pre: 0.0

Post: NVR

TANK # N437

Console # C205

Barometric 29.47

Beginning tank pressure 17.0

End tank pressure

CLOCK TIME hours:minutes	RUN TIME minutes	FLOW METER SETTING liters/minute	Tank Pressure ~~COMMENTS~~
1948	0	30	17.0
	10		14.0
	20		12.0
	30		9.5
	40		7.0
	50		4.5
2048	60		2.5
			1.7
			calculating
			to mercury

APPENDIX C ARI Reference Method Monitoring Data

Client Veolia Services - Zion Landfill
Location Zion, Illinois
Source Thermal Control
Date 12/07/07

Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
12/07/07 7:09:00	20.78	0.03	0.00	-0.58	240.45	-0.99	
12/07/07 7:09:15	20.78	0.03	0.00	-0.58	140.50	-0.99	
12/07/07 7:09:30	20.78	0.03	0.00	-0.58	32.11	-0.99	
12/07/07 7:09:45	20.76	0.03	0.00	-0.58	0.51	-0.99	
12/07/07 7:10:00	20.76	0.03	0.00	-0.58	0.17	-0.99	
12/07/07 7:10:15	20.76	0.03	0.00	-0.58	1.13	-0.99	
12/07/07 7:10:30	20.76	0.04	0.00	-0.58	1.55	-0.99	
12/07/07 7:10:45	20.76	0.04	0.00	-0.48	1.98	-0.99	
12/07/07 7:11:00	20.76	0.04	0.00	-0.58	2.05	-0.99	
12/07/07 7:11:15	20.76	0.04	0.00	-0.58	2.16	-0.99	
12/07/07 7:11:30	20.78	0.04	0.00	-0.63	2.24	-0.99	
12/07/07 7:11:45	18.58	0.04	0.00	-0.68	137.37	-0.99	
12/07/07 7:12:00	7.07	0.02	0.00	-1.03	173.52	-0.99	
12/07/07 7:12:15	0.72	-0.01	0.00	-1.18	177.95	-0.99	
12/07/07 7:12:30	0.07	-0.01	0.00	-1.18	122.20	-0.99	
12/07/07 7:12:45	0.02	-0.01	0.00	-1.18	144.30	-0.98	
12/07/07 7:13:00	0.02	-0.01	0.00	-1.17	106.31	-0.98	
12/07/07 7:13:15	0.01	-0.01	0.00	-1.18	54.93	-0.99	
12/07/07 7:13:30	0.01	-0.01	0.00	-1.18	4.50	55.08	
12/07/07 7:13:45	0.00	-0.01	0.00	-1.18	49.88	111.15	
12/07/07 7:14:00	0.00	-0.01	0.00	0.02	93.22	111.15	
12/07/07 7:14:15	0.00	-0.01	0.00	0.02	61.65	111.16	
12/07/07 7:14:30	0.00	-0.01	0.00	0.02	8.47	111.16	
12/07/07 7:14:45	-0.01	-0.01	0.00	0.02	30.73	111.16	
12/07/07 7:15:00	-0.01	-0.01	0.00	0.02	88.63	111.16	
12/07/07 7:15:15	0.02	-0.01	0.00	0.02	53.97	111.16	
12/07/07 7:15:30	0.04	-0.01	0.00	0.02	11.03	111.16	
12/07/07 7:15:45	0.04	-0.01	0.00	0.02	18.47	111.16	
12/07/07 7:16:00	0.04	-0.01	0.00	0.02	49.67	111.18	
12/07/07 7:16:15	0.04	-0.01	0.00	0.02	45.35	111.18	
12/07/07 7:16:30	0.04	-0.01	0.00	0.02	121.53	75.12	
12/07/07 7:16:45	0.04	-0.01	0.00	0.02	134.02	39.08	
12/07/07 7:17:00	0.04	-0.01	0.00	0.02	38.28	39.08	
12/07/07 7:17:15	0.03	0.00	0.00	0.02	34.13	39.08	
12/07/07 7:17:30	0.04	0.01	0.00	0.02	11.24	39.08	
12/07/07 7:17:45	0.03	0.01	0.00	0.02	7.68	39.08	Calibration Error
12/07/07 7:18:00	0.03	0.01	0.00	0.02	24.51	39.08	Zero N2 Injection
12/07/07 7:18:15	0.03	0.01	0.00	0.02	28.47	39.08	0.03 % db Oxygen
12/07/07 7:18:30	0.03	0.01	0.00	0.02	12.67	39.08	0.01 % db Carbon Dioxide
12/07/07 7:18:45	0.03	0.01	0.00	0.02	7.00	39.08	0.00 ppmv NOx
12/07/07 7:19:00	0.03	0.01	0.00	0.02	18.00	39.08	0.02 ppmv CO
12/07/07 7:19:15	0.03	0.01	0.00	0.02	22.73	39.08	
12/07/07 7:19:30	0.03	0.01	0.00	0.02	12.71	22.81	
12/07/07 7:19:45	0.31	0.53	0.00	-0.18	6.34	6.54	
12/07/07 7:20:00	6.43	6.69	0.00	-0.43	1,024.03	6.53	
12/07/07 7:20:15	13.56	12.36	0.00	-0.58	1,024.37	6.54	
12/07/07 7:20:30	17.72	16.66	0.00	-0.78	290.08	6.54	
12/07/07 7:20:45	19.49	19.29	0.00	-0.78	4.45	6.54	Rerange CH4 to 100
12/07/07 7:21:00							
12/07/07 7:21:15	19.95	20.27	0.00	-0.93	5.50	0.65	
12/07/07 7:21:30	19.96	20.29	0.00	-0.78	0.46	0.65	
12/07/07 7:21:45	19.96	20.31	0.00	-0.93	1.90	0.65	
12/07/07 7:22:00	19.96	20.30	0.00	-0.88	5.75	0.65	
12/07/07 7:22:15	19.96	20.33	0.00	-0.98	4.57	0.26	
12/07/07 7:22:30	19.97	20.34	0.00	-0.88	0.80	-0.10	
12/07/07 7:22:45	19.97	20.34	0.00	-0.78	1.35	-0.10	
12/07/07 7:23:00	19.97	20.32	0.00	-0.78	4.28	-0.10	Calibration Error
12/07/07 7:23:15	19.97	20.35	0.00	-0.83	3.89	-0.10	20.0% Oxygen Injection
12/07/07 7:23:30	19.97	20.36	0.00	-0.68	1.70	-0.10	19.97 % db Oxygen
12/07/07 7:23:45	19.97	20.36	0.00	-0.78	1.03	-0.10	
12/07/07 7:24:00	19.97	20.29	0.00	-0.68	-0.04	-0.10	
12/07/07 7:24:15	19.97	20.36	0.00	-0.78	-0.05	-0.10	
12/07/07 7:24:30	18.41	17.78	0.00	-0.78	-0.05	-0.10	
12/07/07 7:24:45	13.89	13.22	0.00	-0.78	-0.05	-0.10	
12/07/07 7:25:00	10.66	10.64	0.00	-0.98	-0.05	-0.10	
12/07/07 7:25:15	9.95	10.12	0.00	-0.56	-0.05	-0.10	
12/07/07 7:25:30	9.91	10.09	0.00	-0.58	-0.05	-0.10	Calibration Error
12/07/07 7:25:45	9.91	10.08	0.00	-0.58	-0.05	-0.10	10.0% Oxygen Injection
12/07/07 7:26:00	9.91	10.07	0.00	-0.58	-0.05	-0.10	9.91 % db Oxygen
12/07/07 7:26:15	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:26:30	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:26:45	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:27:00	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:27:15	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:27:30	9.91	10.08	0.00	-0.58	-0.05	-0.10	
12/07/07 7:27:45	9.91	10.06	0.00	-0.58	-0.05	-0.10	
12/07/07 7:28:00	9.91	10.07	0.00	-0.58	-0.05	-0.10	
12/07/07 7:28:15	11.61	12.80	0.00	-0.63	-0.05	-0.10	
12/07/07 7:28:30	18.21	18.87	0.00	-0.78	-0.05	-0.10	
12/07/07 7:28:45	18.93	19.35	0.00	-0.78	-0.05	-0.10	
12/07/07 7:29:00	19.75	20.09	0.00	-0.78	-0.05	-0.10	
12/07/07 7:29:15	19.83	20.20	0.00	-0.78	-0.05	-0.10	
12/07/07 7:29:30	19.83	20.21	0.00	-0.78	-0.05	-0.10	
12/07/07 7:29:45	19.83	20.21	0.00	-0.78	-0.05	-0.10	
12/07/07 7:30:00	19.84	20.15	0.00	-0.78	-0.05	-0.10	
12/07/07 7:30:15	19.84	20.02	0.00	-0.78	-0.05	-0.10	
12/07/07 7:30:30	19.84	20.02	0.00	-0.78	-0.05	-0.10	Calibration Error
12/07/07 7:30:45	19.84	20.02	0.00	-0.78	-0.05	-0.10	20.0% CO2 Injection
12/07/07 7:31:00	19.84	20.01	0.00	-0.78	-0.05	-0.10	20.02 % db Carbon Dioxide
12/07/07 7:31:15	19.84	20.02	0.00	-0.78	-0.05	-0.10	
12/07/07 7:31:30	19.84	20.02	0.00	-0.78	-0.05	-0.10	
12/07/07 7:31:45	19.84	20.02	0.00	-0.78	-0.05	-0.10	
12/07/07 7:32:00	19.64	20.00	0.00	-0.78	-0.05	-0.10	
12/07/07 7:32:15	19.84	20.03	0.00	-0.78	-0.05	-0.10	
12/07/07 7:32:30	19.84	19.98	0.00	-0.78	-0.05	-0.10	
12/07/07 7:32:45	19.84	20.03	0.00	-0.78	-0.05	-0.10	
12/07/07 7:33:00	19.04	18.48	0.00	-0.78	-0.05	-0.10	
12/07/07 7:33:15	14.80	13.88	0.00	-0.78	-0.05	-0.10	
12/07/07 7:33:30	11.02	10.84	0.00	-0.65	-0.05	-0.10	
12/07/07 7:33:45	9.93	9.99	0.00	-0.58	-0.05	-0.10	Calibration Error
12/07/07 7:34:00	9.84	9.92	0.00	-0.58	-0.05	-0.10	10.0% CO2 Injection
12/07/07 7:34:15	9.84	9.92	0.00	-0.58	-0.05	-0.10	9.92 % db Carbon Dioxide
12/07/07 7:34:30	9.84	9.92	0.00	-0.58	-0.05	-0.10	
12/07/07 7:34:45	9.84	9.91	0.00	-0.58	-0.05	-0.10	
12/07/07 7:35:00	9.84	9.89	0.00	-0.58	-0.05	-0.10	
12/07/07 7:35:15	9.85	9.91	0.00	-0.53	-0.05	-0.10	
12/07/07 7:35:30	9.81	9.81	0.00	9.62	-0.05	-0.10	
12/07/07 7:35:45	7.40	6.59	0.00	44.81	-0.05	-0.10	
12/07/07 7:36:00	2.97	2.34	0.00	80.23	-0.05	-0.10	
12/07/07 7:36:15	0.58	0.40	0.00	98.01	-0.05	-0.10	
12/07/07 7:36:30	0.16	0.13	0.00	102.65	-0.05	-0.10	
12/07/07 7:36:45	0.08	0.10	0.00	103.70	-0.05	-0.10	
12/07/07 7:37:00	0.07	0.09	0.00	104.00	-0.05	-0.10	
12/07/07 7:37:15	0.08	0.06	0.00	104.20	-0.05	-0.10	
12/07/07 7:37:30	0.08	0.07	0.00	104.05	-0.05	-0.10	
12/07/07 7:37:45	0.08	0.07	0.00	104.30	-0.05	-0.10	
12/07/07 7:38:00	0.05	0.07	0.00	104.75	-0.05	-0.10	
12/07/07 7:38:15	0.05	0.06	0.00	104.85	-0.05	-0.10	
12/07/07 7:38:30	0.05	0.06	0.00	105.00	-0.05	-0.10	
12/07/07 7:38:45	0.05	0.06	0.00	105.10	-0.05	-0.10	
12/07/07 7:39:00	0.05	0.05	0.00	102.48	-0.05	-0.10	
12/07/07 7:39:15	0.05	0.05	0.00	99.81	-0.05	-0.10	
12/07/07 7:39:30	0.04	0.05	0.00	99.68	-0.03	-0.10	
12/07/07 7:39:45	0.04	0.05	0.00	100.06	-0.01	-0.10	
12/07/07 7:40:00	0.04	0.05	0.00	100.21	-0.05	-0.10	
12/07/07 7:40:15	0.04	0.05	0.00	100.06	-0.05	-0.10	
12/07/07 7:40:30	0.04	0.05	0.00	100.06	-0.05	-0.10	
12/07/07 7:40:45	0.04	0.04	0.00	100.08	-0.05	-0.10	
12/07/07 7:41:00	0.04	0.04	0.00	100.21	-0.05	-0.10	
12/07/07 7:41:15	0.04	0.04	0.00	100.41	-0.05	-0.10	
12/07/07 7:41:30	0.03	0.04	0.00	93.53	29.06	-0.10	
12/07/07 7:41:45	0.04	0.05	0.00	66.12	11.91	-0.10	
12/07/07 7:42:00	0.03	0.09	0.00	50.64	6.37	-0.10	
12/07/07 7:42:15	0.05	0.06	0.00	47.30	0.91	-0.10	
12/07/07 7:42:30	0.03	0.04	0.00	47.45	-0.05	-0.10	
12/07/07 7:42:45	0.02	0.04	0.00	47.45	-0.05	-0.10	
12/07/07 7:43:00	0.03	0.04	0.00	47.60	-0.05	-0.10	
12/07/07 7:43:15	0.02	0.04	0.00	47.50	-0.05	-0.10	
12/07/07 7:43:30	0.02	0.04	0.00	47.50	-0.05	-0.10	
12/07/07 7:43:45	0.02	0.04	0.00	47.50	51.19	-0.10	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
12/07/07 7:44:00	0.02	0.04	0.00	47.50	102.44	-0.10	
12/07/07 7:44:15	0.02	0.04	0.00	47.50	86.97	-0.10	
12/07/07 7:44:30	0.02	0.03	0.00	46.50	1.29	-0.10	
12/07/07 7:44:45	0.13	0.04	0.00	39.28	-0.05	-0.10	
12/07/07 7:45:00	0.68	0.05	0.00	18.06	-0.05	-0.10	
12/07/07 7:45:15	0.30	0.04	0.95	4.20	-0.06	-0.10	
12/07/07 7:45:30	0.20	0.03	4.70	1.21	-0.05	-0.10	
12/07/07 7:45:45	0.11	0.03	5.95	0.82	-0.05	-0.10	
12/07/07 7:46:00	0.03	0.03	9.39	0.62	0.46	-0.10	
12/07/07 7:46:15	0.02	0.03	14.34	0.62	0.43	-0.10	
12/07/07 7:46:30	0.02	0.03	15.24	0.62	26.15	-0.10	
12/07/07 7:46:45	0.02	0.03	14.89	0.62	102.45	-0.10	
12/07/07 7:47:00	0.02	0.03	13.99	0.62	94.90	-0.10	
12/07/07 7:47:15	0.02	0.03	12.79	0.62	9.35	-0.10	
12/07/07 7:47:30	0.02	0.02	89.26	0.62	-0.05	-0.10	
12/07/07 7:47:45	0.02	0.02	108.25	0.42	-0.05	-0.10	
12/07/07 7:48:00	0.02	0.02	50.88	0.42	0.05	-0.10	
12/07/07 7:48:15	0.02	0.02	48.53	0.42	0.37	-0.10	
12/07/07 7:48:30	0.02	0.02	47.03	0.42	0.55	-0.10	
12/07/07 7:48:45	0.02	0.02	46.53	0.62	0.52	-0.10	
12/07/07 7:49:00	3.26	0.06	46.88	0.77	0.38	-0.10	
12/07/07 7:49:15	14.23	0.13	44.13	1.22	0.44	-0.10	
12/07/07 7:49:30	19.73	0.16	22.09	42.02	0.77	-0.10	
12/07/07 7:49:45	18.75	0.15	8.15	90.10	1.06	-0.10	
12/07/07 7:50:00	7.69	0.06	9.94	102.51	77.10	-0.10	
12/07/07 7:50:15	0.80	0.03	20.94	88.22	35.92	-0.10	
12/07/07 7:50:30	0.07	0.02	7.45	96.57	8.13	-0.10	
12/07/07 7:50:45	0.03	0.02	2.40	95.03	0.73	-0.10	
12/07/07 7:51:00	0.02	0.02	0.60	94.13	0.56	-0.10	
12/07/07 7:51:15	0.02	0.02	0.40	93.73	0.64	-0.10	
12/07/07 7:51:30	14.21	5.75	9.34	538.15	51.78	110.29	
12/07/07 7:51:45	0.01	0.02	0.20	93.53	6.71	-0.97	
12/07/07 7:52:00	0.01	0.02	0.20	91.09	6.55	-0.97	
12/07/07 7:52:15	0.02	0.02	0.20	90.24	7.09	-0.97	Calibration Error
12/07/07 7:52:30	0.01	0.02	0.20	90.10	2.07	-0.97	90.41 ppmv CO injection
12/07/07 7:52:45	0.01	0.02	0.20	89.96	0.68	-0.97	90.08 ppmv CO
12/07/07 7:53:00	0.01	0.02	0.20	90.15	0.74	-0.97	
12/07/07 7:53:15	0.01	0.02	0.20	90.15	0.84	-0.97	
12/07/07 7:53:30	0.01	0.02	0.20	89.95	0.76	-0.98	
12/07/07 7:53:45	0.01	0.02	0.20	90.10	0.61	-0.97	
12/07/07 7:54:00	0.01	0.02	0.20	68.40	0.81	-0.97	
12/07/07 7:54:15	0.01	0.02	0.20	72.71	0.67	-0.97	
12/07/07 7:54:30	0.01	0.02	0.00	53.43	0.41	-0.97	
12/07/07 7:54:45	0.02	0.02	0.15	45.66	0.53	-0.97	Calibration Error
12/07/07 7:55:00	0.01	0.02	0.20	44.68	0.80	-0.97	45.0 ppmv CO injection
12/07/07 7:55:15	0.01	0.02	0.05	44.66	0.36	-0.97	44.66 ppmv CO
12/07/07 7:55:30	0.01	0.02	0.00	44.68	0.50	-0.97	
12/07/07 7:55:45	0.01	0.02	0.00	44.68	0.41	-0.97	
12/07/07 7:56:00	0.01	0.02	0.00	44.61	48.01	-0.97	
12/07/07 7:56:15	0.01	0.02	0.00	44.66	119.31	-0.97	
12/07/07 7:56:30	0.01	0.02	0.00	43.71	123.46	-0.97	
12/07/07 7:56:45	0.01	0.02	0.00	34.90	8.89	-0.97	
12/07/07 7:57:00	0.01	0.02	0.00	26.03	-0.54	-0.97	
12/07/07 7:57:15	0.01	0.02	0.00	22.59	-0.54	-0.97	Calibration Error
12/07/07 7:57:30	0.01	0.02	0.00	22.34	-0.54	-0.97	22.6 ppmv CO injection
12/07/07 7:57:45	0.01	0.01	0.00	22.34	-0.54	-0.97	22.34 ppmv CO
12/07/07 7:58:00	0.01	0.01	0.00	22.34	-0.45	-0.97	
12/07/07 7:58:15	0.01	0.01	0.00	22.34	-0.50	-0.97	
12/07/07 7:58:30	0.01	0.01	0.00	22.34	-0.23	-0.97	
12/07/07 7:58:45	0.01	0.01	0.00	22.34	-0.20	-0.97	
12/07/07 7:59:00	0.01	0.01	0.00	22.14	-0.21	-0.97	
12/07/07 7:59:15	0.02	0.01	0.00	17.96	0.01	-0.97	
12/07/07 7:59:30	1.53	0.03	0.00	8.54	0.08	-0.97	
12/07/07 7:59:45	1.32	0.02	40.03	2.11	0.12	-0.97	
12/07/07 8:00:00	0.14	0.01	111.06	0.62	-0.04	-0.97	
12/07/07 8:00:15	0.02	0.01	145.99	0.62	0.27	-0.97	
12/07/07 8:00:30	0.02	0.01	130.40	0.62	0.09	-0.97	
12/07/07 8:00:45	0.01	0.01	112.28	0.62	0.11	-0.97	
12/07/07 8:01:00	0.01	0.01	103.81	0.62	0.03	-0.97	
12/07/07 8:01:15	0.01	0.01	99.47	0.62	-0.15	-0.97	
12/07/07 8:01:30	0.01	0.01	97.02	0.62	-0.17	-0.97	
12/07/07 8:01:45	0.01	0.02	95.22	0.62	0.01	-0.97	
12/07/07 8:02:00	0.01	0.02	94.02	0.62	-0.14	-0.97	
12/07/07 8:02:15	0.01	0.02	93.27	0.62	-0.06	-0.97	
12/07/07 8:02:30	0.01	0.02	92.47	0.62	-0.10	-0.97	
12/07/07 8:02:45	0.01	0.02	91.87	0.62	0.20	-0.97	
12/07/07 8:03:00	0.01	0.02	91.52	0.47	28.64	-0.97	
12/07/07 8:03:15	0.01	0.02	91.07	0.62	120.75	-0.97	
12/07/07 8:03:30	0.01	0.02	90.92	0.57	113.38	-0.97	
12/07/07 8:03:45	0.01	0.02	90.62	0.57	4.72	-0.97	
12/07/07 8:04:00	0.01	0.02	90.32	0.62	-0.53	-0.97	
12/07/07 8:04:15	0.01	0.02	90.02	0.62	-0.53	-0.97	
12/07/07 8:04:30	0.01	0.02	89.92	0.62	-0.53	-0.97	
12/07/07 8:04:45	0.01	0.02	89.77	0.62	-0.53	-0.97	
12/07/07 8:05:00	0.01	0.02	89.57	0.62	-0.53	-0.97	
12/07/07 8:05:15	0.01	0.02	89.57	0.62	-0.53	-0.97	
12/07/07 8:05:30	0.01	0.02	89.37	0.62	-0.53	-0.97	
12/07/07 8:05:45	0.01	0.02	89.22	0.62	-0.53	-0.97	
12/07/07 8:06:00	0.01	0.02	89.17	0.62	-0.46	-0.97	
12/07/07 8:06:15	0.01	0.02	89.17	0.62	-0.53	-0.97	
12/07/07 8:06:30	0.01	0.02	91.37	0.62	-0.40	-0.97	
12/07/07 8:06:45	0.01	0.02	90.32	0.62	-0.50	-0.97	
12/07/07 8:07:00	0.01	0.02	89.97	0.62	-0.47	-0.97	
12/07/07 8:07:15	0.01	0.02	89.82	0.62	-0.28	-0.97	
12/07/07 8:07:30	0.01	0.02	89.77	0.62	-0.33	-0.97	
12/07/07 8:07:45	0.01	0.02	89.77	0.62	-0.37	-0.97	
12/07/07 8:08:00	0.01	0.02	89.70	0.82	-0.51	-0.97	
12/07/07 8:08:15	0.01	0.02	89.57	0.62	-0.43	-0.96	
12/07/07 8:08:30	0.01	0.02	89.57	0.62	-0.46	-0.96	
12/07/07 8:08:45	0.02	0.02	89.57	0.62	-0.53	-0.97	Calibration Error
12/07/07 8:09:00	0.01	0.02	89.37	0.62	-0.52	-0.97	88.98 ppmv db NOx
12/07/07 8:09:15	0.01	0.02	89.37	0.62	-0.39	-0.96	89.37 ppmv db NOx
12/07/07 8:09:30	0.01	0.02	89.37	0.57	-0.38	-0.97	
12/07/07 8:09:45	0.01	0.02	89.37	0.42	-0.16	-0.97	
12/07/07 8:10:00	0.02	0.02	81.27	0.42	-0.42	-0.97	
12/07/07 8:10:15	0.01	0.01	60.83	0.42	-0.47	-0.97	
12/07/07 8:10:30	0.01	0.01	48.36	0.42	-0.34	-0.96	
12/07/07 8:10:45	0.01	0.01	45.24	0.42	-0.34	-0.96	
12/07/07 8:11:00	0.01	0.01	44.89	0.42	167.80	-0.97	Calibration Error
12/07/07 8:11:15	0.01	0.01	44.79	0.42	134.41	-0.97	45.0 ppmv db NOx
12/07/07 8:11:30	0.01	0.01	44.79	0.42	29.15	-0.96	44.79 ppmv db NOx
12/07/07 8:11:45	0.01	0.01	44.79	0.42	-0.53	-0.96	
12/07/07 8:12:00	0.01	0.01	44.79	0.42	-0.53	-0.96	
12/07/07 8:12:15	0.01	0.01	44.94	0.42	-0.53	-0.96	
12/07/07 8:12:30	0.01	0.01	44.79	0.42	-0.53	-0.96	
12/07/07 8:12:45	0.01	0.01	44.79	0.42	-0.53	-0.96	
12/07/07 8:13:00	0.01	0.01	43.39	0.32	-0.53	-0.96	
12/07/07 8:13:15	0.01	0.01	39.84	0.22	-0.53	-0.96	
12/07/07 8:13:30	0.01	0.01	27.09	0.22	-0.53	-0.96	
12/07/07 8:13:45	0.01	0.01	22.69	0.22	-0.43	-0.96	
12/07/07 8:14:00	0.01	0.01	22.19	0.32	-0.53	-0.96	
12/07/07 8:14:15	0.01	0.01	22.19	0.22	-0.53	-0.96	Calibration Error
12/07/07 8:14:30	0.01	0.02	21.99	0.22	-0.48	-0.96	22.6 ppmv db NOx
12/07/07 8:14:45	0.01	0.02	21.99	0.22	-0.53	-0.96	21.99 ppmv db NOx
12/07/07 8:15:00	0.01	0.02	21.99	0.22	-0.53	-0.96	
12/07/07 8:15:15	0.01	0.02	21.99	0.22	-0.45	-0.96	
12/07/07 8:15:30	0.01	0.02	21.99	0.22	-0.53	-0.96	
12/07/07 8:15:45	0.01	0.02	21.99	0.37	-0.42	-0.96	
12/07/07 8:18:00	0.01	0.02	21.99	0.42	-0.33	-0.96	
12/07/07 8:18:15	0.17	0.03	21.99	0.42	-0.45	-0.96	
12/07/07 8:16:30	0.22	0.03	30.79	0.32	-0.47	-0.96	
12/07/07 8:16:45	0.12	0.02	35.29	0.22	-0.42	-0.95	
12/07/07 8:17:00	0.08	0.02	37.79	0.22	-0.51	-0.96	
12/07/07 8:17:15	0.03	0.02	38.14	0.22	-0.41	-0.96	
12/07/07 8:17:30	0.02	0.02	40.69	0.22	-0.41	-0.96	
12/07/07 8:17:45	0.01	0.02	42.79	0.22	-0.43	-0.96	
12/07/07 8:18:00	0.01	0.02	45.09	0.22	-0.08	-0.96	
12/07/07 8:18:15	0.01	0.02	45.99	0.22	-0.32	-0.96	
12/07/07 8:18:30	0.01	0.02	46.59	0.22	-0.02	-0.96	
12/07/07 8:18:45	0.01	0.02	48.94	0.22	-0.20	-0.96	
12/07/07 8:19:00	0.01	0.02	47.29	0.22	-0.18	-0.96	
12/07/07 8:19:15	0.01	0.02	47.39	0.22	0.36	-0.96	
12/07/07 8:19:30	0.01	0.02	47.59	0.22	0.65	-0.96	
12/07/07 8:19:45	0.01	0.02	47.74	0.22	0.91	-0.96	

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
12/07/07 8:20:00	0.01	0.02	47.88	0.22	0.97	-0.96	
12/07/07 8:20:15	0.01	0.02	47.99	0.22	0.94	-0.96	
12/07/07 8:20:30	0.01	0.02	48.09	0.22	0.81	-0.96	
12/07/07 8:20:45	0.01	0.02	48.19	0.22	0.78	-0.95	
12/07/07 8:21:00	0.01	0.02	48.29	0.22	0.73	-0.96	
12/07/07 8:21:15	0.01	0.02	48.39	0.22	1.55	-0.96	
12/07/07 8:21:30	0.01	0.02	48.39	0.22	4.56	-0.96	
12/07/07 8:21:45	0.01	0.02	48.39	0.22	3.49	-0.05	
12/07/07 8:22:00	0.01	0.02	48.49	0.22	3.34	0.05	NOx Converter Efficiency
12/07/07 8:22:15	0.01	0.02	48.59	0.22	3.55	0.05	60.8 ppmv db NO2
12/07/07 8:22:30	0.00	0.02	48.59	0.22	4.66	0.05	48.59 ppmv db NOx
12/07/07 8:22:45	0.01	0.02	48.59	0.22	4.76	0.05	96.6 % Efficient
12/07/07 8:23:00	0.01	0.02	48.59	0.22	4.97	0.05	Cylinder Num ALM-026305
12/07/07 8:23:15	0.01	0.02	48.59	0.22	5.15	0.05	
12/07/07 8:23:30	0.07	0.02	48.59	2.71	5.88	0.05	
12/07/07 8:23:45	5.18	0.05	48.14	6.25	6.34	0.05	
12/07/07 8:24:00	15.78	0.09	39.09	7.39	5.36	0.05	
12/07/07 8:24:15	20.28	0.11	18.34	4.85	4.96	0.05	
12/07/07 8:24:30	14.55	0.08	4.80	1.51	4.44	0.05	
12/07/07 8:24:45	3.53	0.03	1.90	0.72	4.03	-0.89	
12/07/07 8:25:00	0.37	0.02	2.00	0.62	3.66	-0.95	
12/07/07 8:25:15	0.16	0.02	0.85	0.62	2.93	-0.95	
12/07/07 8:25:30	0.12	0.02	0.50	0.62	2.38	-0.95	
12/07/07 8:25:45	0.11	0.02	0.40	0.62	2.33	-0.95	
12/07/07 8:26:00	0.10	0.02	0.40	0.62	1.77	-0.95	
12/07/07 8:28:15	0.09	0.02	0.40	0.62	1.28	-0.95	
12/07/07 8:28:30	0.09	0.02	0.40	0.62	1.02	-0.95	
12/07/07 8:28:45	0.08	0.02	0.25	0.62	1.01	-0.95	
12/07/07 8:27:00	0.08	0.02	0.20	0.62	0.74	-0.95	
12/07/07 8:27:15	0.08	0.02	0.20	0.62	0.85	-0.95	
12/07/07 8:27:30	0.08	0.02	0.20	0.62	0.33	-0.95	
12/07/07 8:27:45	0.08	0.02	0.20	0.62	0.38	-0.95	
12/07/07 8:28:00	0.07	0.02	0.20	0.62	0.24	-0.95	
12/07/07 8:28:15	0.07	0.02	0.20	0.62	0.05	-0.95	
12/07/07 8:28:30	0.07	0.02	0.20	0.62	0.18	-0.95	
12/07/07 8:28:45	0.07	0.02	0.20	0.62	0.18	-0.95	
12/07/07 8:29:00	0.07	0.02	0.20	0.62	-0.18	-0.95	
12/07/07 8:29:15	0.07	0.02	0.20	0.62	0.01	-0.95	
12/07/07 8:29:30	0.07	0.02	0.20	0.62	-0.25	-0.95	
12/07/07 8:29:45	0.07	0.02	0.20	0.62	-0.28	-0.95	
12/07/07 8:30:00	0.07	0.02	0.20	0.62	-0.36	-0.95	
12/07/07 8:30:15	0.07	0.03	0.20	0.62	-0.22	-0.95	
12/07/07 8:30:30	0.06	0.03	0.20	0.62	-0.47	-0.95	
12/07/07 8:30:45	0.06	0.03	0.20	0.62	-0.51	-0.95	Calibration Bias
12/07/07 8:31:00	0.06	0.02	0.20	0.62	-0.41	-0.95	Zero N2 Injection
12/07/07 8:31:15	0.06	0.02	0.20	0.62	-0.49	-0.95	0.06 % db Oxygen
12/07/07 8:31:30	0.06	0.02	0.20	0.62	-0.40	-0.95	0.02 % db Carbon Dioxide
12/07/07 8:31:45	0.06	0.02	0.20	0.62	-0.52	-0.95	0.20 ppmv NOx
12/07/07 8:32:00	0.06	0.02	0.20	0.62	-0.35	-0.95	0.62 ppmv CO
12/07/07 8:32:15	0.06	0.02	0.20	0.62	-0.52	-0.95	
12/07/07 8:32:30	0.06	0.02	0.20	0.62	-0.52	-0.95	
12/07/07 8:32:45	0.06	0.02	0.20	0.62	-0.52	-0.95	
12/07/07 8:33:00	0.06	0.02	0.00	0.62	-0.52	-0.95	
12/07/07 8:33:15	0.06	0.02	0.00	0.62	-0.52	-0.95	
12/07/07 8:33:30	0.06	0.02	0.00	0.62	-0.52	-0.95	
12/07/07 8:33:45	0.06	0.02	0.00	0.62	-0.52	-0.95	O2-CO2 Response Time
12/07/07 8:34:00	0.11	0.02	0.00	0.72	1.02	-0.95	Upscale
12/07/07 8:34:15	0.88	0.07	0.00	0.97	1.17	-0.95	90 seconds
12/07/07 8:34:30	2.85	3.09	0.00	0.72	0.99	-0.95	
12/07/07 8:34:45	6.92	7.00	0.60	0.32	0.91	-0.95	
12/07/07 8:35:00	9.18	9.06	1.20	0.02	0.78	-0.95	
12/07/07 8:35:15	9.75	9.51	0.70	0.02	0.80	-0.95	
12/07/07 8:35:30	9.82	9.42	0.30	0.02	0.74	-0.95	
12/07/07 8:35:45	9.85	9.36	0.20	0.02	0.90	-0.95	
12/07/07 8:36:00	9.66	9.41	0.20	0.02	0.88	-0.95	
12/07/07 8:36:15	9.86	9.57	0.20	0.02	0.87	-0.94	
12/07/07 8:36:30	9.85	9.73	0.20	0.02	0.65	-0.95	Calibration Bias
12/07/07 8:36:45	9.84	9.81	0.20	0.02	0.95	-0.95	10.0% Oxygen Injection
12/07/07 8:37:00	9.84	9.84	0.20	0.02	0.69	-0.95	9.84 % db Oxygen
12/07/07 8:37:15	9.84	9.85	0.20	0.02	0.97	-0.95	
12/07/07 8:37:30	9.84	9.86	0.20	0.02	0.78	-0.95	
12/07/07 8:37:45	9.85	9.86	0.20	0.02	0.54	-0.95	
12/07/07 8:38:00	9.85	9.87	0.20	0.02	0.62	-0.94	
12/07/07 8:38:15	9.85	9.87	0.20	0.02	0.78	-0.95	
12/07/07 8:38:30	9.84	9.88	0.20	0.02	0.73	-0.95	
12/07/07 8:38:45	9.84	9.88	0.20	0.02	0.75	-0.94	
12/07/07 8:39:00	9.79	9.81	0.20	0.02	0.58	-0.94	
12/07/07 8:39:15	9.75	9.80	0.20	0.02	0.72	-0.94	
12/07/07 8:39:30	9.77	9.62	0.20	0.02	0.60	-0.94	
12/07/07 8:39:45	9.78	9.62	0.20	0.02	0.51	-0.94	
12/07/07 8:40:00	9.78	9.82	0.20	0.02	0.84	-0.94	Calibration Bias
12/07/07 8:40:15	9.79	9.83	0.20	0.02	0.64	-0.94	10.0% CO2 Injection
12/07/07 8:40:30	9.79	9.83	0.20	0.02	0.85	-0.94	9.83 % db CO2
12/07/07 8:40:45	9.79	9.83	0.20	0.02	0.79	-0.94	
12/07/07 8:41:00	9.80	9.84	0.20	0.02	0.86	-0.94	O2-CO2 Response Time
12/07/07 8:41:15	9.81	9.84	0.20	0.02	0.88	-0.94	Downscale
12/07/07 8:41:30	9.93	9.84	0.20	0.02	1.05	-0.94	90 seconds
12/07/07 8:41:45	10.87	8.60	0.20	0.17	1.09	-0.94	
12/07/07 8:42:00	7.63	5.99	1.60	0.32	0.94	-0.94	Nox Response Time
12/07/07 8:42:15	2.52	2.00	8.20	0.57	0.96	-0.94	Upscale
12/07/07 8:42:30	0.41	0.38	29.50	0.82	0.80	-0.95	90 seconds
12/07/07 8:42:45	0.14	0.19	41.64	0.82	0.67	-0.94	
12/07/07 8:43:00	0.11	0.15	45.89	0.82	0.85	-0.94	
12/07/07 8:43:15	0.10	0.13	36.54	0.82	0.90	-0.94	
12/07/07 8:43:30	0.09	0.11	40.49	0.82	0.76	-0.95	
12/07/07 8:43:45	0.08	0.10	44.79	0.82	0.89	-0.95	
12/07/07 8:44:00	0.08	0.09	46.89	0.82	0.85	-0.94	
12/07/07 8:44:15	0.08	0.08	46.99	0.82	0.94	-0.95	
12/07/07 8:44:30	0.08	0.08	46.89	0.82	0.76	-0.94	
12/07/07 8:44:45	0.08	0.07	46.65	0.82	0.66	-0.94	
12/07/07 8:45:00	0.07	0.07	46.50	0.82	0.93	-0.94	
12/07/07 8:45:15	0.07	0.07	46.35	0.82	0.67	-0.94	
12/07/07 8:45:30	0.07	0.06	46.10	0.82	0.98	-0.95	
12/07/07 8:45:45	0.07	0.06	46.00	0.82	0.88	-0.94	
12/07/07 8:46:00	0.06	0.06	45.99	0.82	0.84	-0.94	
12/07/07 8:46:15	0.06	0.06	45.85	0.82	0.57	-0.94	
12/07/07 8:46:30	0.06	0.05	45.80	0.82	0.94	-0.95	
12/07/07 8:46:45	0.06	0.05	45.75	0.82	0.63	-0.95	Calibration Bias
12/07/07 8:47:00	0.06	0.05	45.59	0.82	0.80	-0.94	45.0 ppmv db NOx Injection
12/07/07 8:47:15	0.06	0.05	45.59	0.82	0.59	-0.94	45.59 ppmv db NOx
12/07/07 8:47:30	0.06	0.05	45.59	0.82	0.72	-0.94	
12/07/07 8:47:45	0.06	0.04	45.59	0.82	0.61	-0.94	
12/07/07 8:48:00	0.06	0.04	45.50	0.82	0.60	-0.94	
12/07/07 8:48:15	0.06	0.04	45.40	0.82	0.39	-0.94	
12/07/07 8:46:30	0.06	0.04	45.40	0.82	0.55	-0.95	
12/07/07 8:48:45	0.07	0.04	45.35	0.82	0.67	-0.94	
12/07/07 8:49:00	0.16	0.04	45.20	0.82	0.88	-0.94	
12/07/07 8:49:15	0.15	0.05	44.75	0.77	0.55	-0.94	
12/07/07 8:49:30	0.06	0.05	42.70	0.62	0.81	-0.94	
12/07/07 8:49:45	0.06	0.04	33.00	0.62	0.53	-0.94	
12/07/07 8:50:00	0.05	0.04	23.60	0.62	0.57	-0.94	
12/07/07 8:50:15	0.05	0.03	22.60	0.62	0.39	-0.94	
12/07/07 8:50:30	0.05	0.03	22.40	0.62	0.54	-0.94	
12/07/07 8:50:45	0.05	0.03	22.25	0.67	0.41	-0.94	
12/07/07 8:51:00	0.05	0.03	22.20	0.72	0.49	-0.94	
12/07/07 8:51:15	0.05	0.03	22.20	0.67	0.48	-0.94	
12/07/07 8:51:30	0.05	0.04	22.20	0.82	0.61	-0.94	Calibration Bias
12/07/07 8:51:45	0.05	0.03	22.05	0.77	0.59	-0.94	22.5 ppmv db NOx Injection
12/07/07 8:52:00	0.05	0.03	22.00	0.62	0.72	-0.94	22.04 ppmv db NOx
12/07/07 8:52:15	0.05	0.04	22.10	0.62	0.60	-0.94	
12/07/07 8:52:30	0.05	0.03	22.00	0.62	0.41	-0.94	CO Response time
12/07/07 8:52:45	0.05	0.03	22.05	0.77	0.71	-0.94	Upscale
12/07/07 8:53:00	0.06	0.03	22.20	4.21	0.49	-0.94	75 seconds
12/07/07 8:53:15	0.07	0.05	22.20	22.40	0.45	-0.94	
12/07/07 8:53:30	0.19	0.17	22.20	39.79	0.48	-0.94	
12/07/07 8:53:45	0.13	0.06	16.85	48.62	0.83	-0.94	Nox Response time
12/07/07 8:54:00	0.06	0.05	8.70	47.76	0.67	-0.94	Downscale
12/07/07 8:54:15	0.06	0.04	2.10	49.11	0.75	-0.94	75 seconds
12/07/07 8:54:30	0.06	0.04	0.40	49.66	0.78	-0.94	
12/07/07 8:54:45	0.06	0.04	0.20	48.86	0.34	-0.94	
12/07/07 8:55:00	0.06	0.04	0.20	47.66	0.66	-0.94	
12/07/07 8:55:15	0.06	0.04	0.20	46.51	0.52	-0.94	
12/07/07 8:55:30	0.06	0.04	0.20	45.77	0.45	-0.94	
12/07/07 8:55:45	0.05	0.04	0.20	45.52	0.57	-0.94	Calibration Bias

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
12/07/07 8:56:00	0.05	0.04	0.20	45.37	0.43	-0.94	45.0 ppmv db CO injection
12/07/07 8:56:15	0.05	0.04	0.20	45.37	0.41	-0.94	45.37 ppmv db CO
12/07/07 8:56:30	0.05	0.04	0.20	45.37	0.60	-0.94	
12/07/07 8:56:45	0.05	0.04	0.15	45.37	0.59	-0.94	
12/07/07 8:57:00	0.05	0.04	0.00	45.47	0.56	-0.94	
12/07/07 8:57:15	0.05	0.03	0.00	45.32	0.21	-0.94	
12/07/07 8:57:30	0.05	0.03	0.00	45.37	0.51	-0.94	
12/07/07 8:57:45	0.05	0.03	0.00	44.52	0.42	-0.94	
12/07/07 8:58:00	0.13	0.03	0.00	41.68	0.45	-0.94	
12/07/07 8:58:15	1.32	0.04	0.00	34.25	0.45	-0.94	
12/07/07 8:58:30	0.61	0.04	0.00	28.34	0.37	-0.94	
12/07/07 8:58:45	0.09	0.03	0.00	23.39	0.53	-0.94	Calibration Bias
12/07/07 8:59:00	0.05	0.03	0.00	22.94	0.36	-0.94	22.6 ppmv db CO injection
12/07/07 8:59:15	0.05	0.03	0.00	22.94	0.52	-0.94	22.93 ppmv db CO
12/07/07 8:59:30	0.05	0.03	0.00	22.94	0.59	-0.94	
12/07/07 8:59:45	0.05	0.03	0.00	22.89	0.58	-0.94	
12/07/07 9:00:00	0.05	0.03	0.00	22.84	0.34	-0.94	
12/07/07 9:00:15	0.04	0.03	0.00	22.84	0.52	-0.94	CO Response time
12/07/07 9:00:30	0.05	0.03	0.00	22.94	0.82	-0.94	Downscale
12/07/07 9:00:45	0.05	0.03	0.00	20.70	3.21	-0.94	90 seconds
12/07/07 9:01:00	0.43	0.03	0.00	12.68	2.85	-0.94	
12/07/07 9:01:15	8.38	0.05	0.05	4.86	3.18	-0.94	
12/07/07 9:01:30	17.79	0.06	0.20	1.61	3.32	-0.94	
12/07/07 9:01:45	20.52	0.07	0.20	1.06	3.08	-0.94	
12/07/07 9:02:00	20.80	0.07	0.20	1.01	3.08	-0.94	
12/07/07 9:02:15	20.83	0.07	0.20	1.01	2.72	-0.94	
12/07/07 9:02:30	20.85	0.07	0.20	1.01	2.72	-0.94	
12/07/07 9:02:45	20.86	0.07	0.20	1.01	2.83	-0.94	
12/07/07 9:03:00	20.86	0.07	0.20	1.01	2.73	-0.94	
12/07/07 9:03:15	20.86	0.07	0.20	1.01	2.47	-0.94	
12/07/07 9:03:30	20.86	0.07	0.20	1.01	2.22	-0.94	
12/07/07 9:03:45	20.86	0.07	0.15	4.61	1.02	0.06	
12/07/07 9:04:00	19.96	0.07	0.00	12.38	-0.01	0.06	
12/07/07 9:04:15	10.11	0.05	0.05	11.53	0.00	0.06	
12/07/07 9:04:30	7.49	0.04	0.20	5.21	-0.14	0.06	
12/07/07 9:04:45	17.02	0.03	0.15	1.71	-0.27	0.06	
12/07/07 9:05:00	20.47	0.03	0.00	0.82	-0.18	0.06	
12/07/07 9:05:15	20.83	0.03	0.00	0.82	-0.20	0.06	
12/07/07 9:05:30	20.86	0.03	0.00	0.82	-0.14	0.06	
12/07/07 9:05:45	20.87	0.03	0.00	0.82	0.08	0.06	
12/07/07 9:06:00	20.89	0.03	0.00	0.72	1.07	0.06	
12/07/07 9:06:15	20.90	0.03	0.00	0.77	0.72	0.06	
12/07/07 9:06:30	20.91	0.03	0.00	0.82	0.99	0.06	
12/07/07 9:06:45	20.91	0.03	0.00	0.82	1.10	-0.94	
12/07/07 9:07:00	20.92	0.03	0.00	0.82	0.99	-0.94	
12/07/07 9:07:15	20.93	0.03	0.00	0.77	1.09	-0.94	
12/07/07 9:07:30	20.93	0.03	0.00	0.72	0.89	-0.94	
12/07/07 9:07:45	20.94	0.03	0.00	0.67	1.04	-0.94	
12/07/07 9:08:00	20.94	0.03	0.00	0.62	0.86	-0.94	
12/07/07 9:08:15	20.95	0.03	0.00	0.72	0.76	-0.94	
12/07/07 9:08:30	20.95	0.03	0.00	0.82	0.83	-0.94	
12/07/07 9:08:45	20.95	0.03	0.00	0.77	0.80	-0.94	
12/07/07 9:09:00	20.95	0.03	0.00	0.72	0.82	-0.94	
12/07/07 9:09:15	20.95	0.03	0.00	0.67	0.84	-0.94	
12/07/07 9:09:30	20.96	0.03	0.00	0.72	0.77	-0.94	
12/07/07 9:09:45	20.96	0.03	0.00	0.77	0.72	-0.94	
12/07/07 9:10:00	20.96	0.03	0.00	0.82	0.75	-0.94	
12/07/07 9:10:15	20.96	0.03	0.00	0.82	0.78	-0.94	
12/07/07 9:10:30	20.96	0.03	0.00	0.72	0.82	-0.94	
12/07/07 9:10:45	20.97	0.03	0.00	0.77	0.59	-0.94	
12/07/07 9:11:00	20.97	0.03	0.00	0.82	0.70	-0.94	
12/07/07 9:11:15	20.97	0.03	0.00	0.77	0.78	-0.94	
12/07/07 9:11:30	20.97	0.03	-0.01	0.72	0.78	-0.94	
12/07/07 9:11:45	20.97	0.03	0.00	0.82	0.75	-0.94	
12/07/07 9:12:00	20.97	0.03	0.00	0.82	0.69	-0.94	
12/07/07 9:12:15	20.98	0.03	0.00	0.72	0.84	-0.94	
12/07/07 9:12:30	20.97	0.03	-0.01	0.82	0.82	-0.94	Calibration Bias
12/07/07 9:12:45	20.97	0.03	0.00	0.82	0.71	0.57	Zero Air Injection
12/07/07 9:13:00	20.97	0.03	0.00	0.72	0.98	0.57	
12/07/07 9:13:15	20.98	0.03	-0.01	0.77	0.78	0.57	0.57 ppm Methane
12/07/07 9:13:30	20.98	0.02	-0.01	0.82	0.91	0.57	
12/07/07 9:13:45	20.98	0.02	-0.01	0.77	0.78	0.57	
12/07/07 9:14:00	20.98	0.02	-0.01	0.72	0.93	0.57	
12/07/07 9:14:15	20.98	0.02	-0.01	0.82	0.94	0.57	
12/07/07 9:14:30	20.98	0.02	-0.01	0.82	0.72	0.57	
12/07/07 9:14:45	20.98	0.02	-0.01	0.77	0.50	0.57	
12/07/07 9:15:00	20.98	0.03	0.00	0.72	0.33	0.57	
12/07/07 9:15:15	20.98	0.03	-0.01	0.82	0.40	0.57	
12/07/07 9:15:30	20.99	0.03	0.00	0.82	0.14	0.57	
12/07/07 9:15:45	20.99	0.03	-0.01	0.82	0.59	0.07	
12/07/07 9:16:00	20.99	0.03	0.00	0.82	0.31	0.07	
12/07/07 9:16:15	20.99	0.03	-0.01	0.77	0.48	0.07	
12/07/07 9:16:30	20.99	0.03	-0.01	0.72	0.38	0.07	
12/07/07 9:16:45	20.99	0.03	-0.01	0.82	0.49	0.06	
12/07/07 9:17:00	20.99	0.03	0.00	0.82	0.22	0.07	
12/07/07 9:17:15	20.99	0.03	0.00	0.77	0.44	0.06	
12/07/07 9:17:30	20.99	0.03	-0.01	0.72	0.33	0.07	Calibration Bias
12/07/07 9:17:45	20.99	0.03	0.00	0.82	0.28	0.07	Zero Air Injection
12/07/07 9:18:00	20.99	0.03	-0.01	0.82	0.24	0.06	0.29 ppm Total VOC
12/07/07 9:18:15	20.99	0.03	0.00	0.82	0.34	0.06	
12/07/07 9:18:30	20.99	0.03	-0.01	0.82	0.33	0.06	
12/07/07 9:18:45	20.99	0.03	0.00	0.82	0.42	0.57	Calibration Bias
12/07/07 9:19:00	20.99	0.03	-0.01	0.82	0.32	0.57	Zero Air Injection
12/07/07 9:19:15	20.99	0.03	0.00	0.82	0.53	0.57	
12/07/07 9:19:30	20.99	0.03	-0.01	0.82	0.38	0.57	0.57 ppm Methane
12/07/07 9:19:45	21.00	0.03	-0.01	0.82	0.87	0.57	
12/07/07 9:20:00	20.99	0.03	0.00	0.72	0.57	0.57	
12/07/07 9:20:15	21.00	0.03	-0.01	0.77	0.57	0.57	
12/07/07 9:20:30	20.99	0.03	0.00	0.82	0.33	0.57	
12/07/07 9:20:45	21.00	0.03	-0.01	0.82	0.05	0.57	
12/07/07 9:21:00	21.00	0.03	0.00	0.82	0.04	0.57	
12/07/07 9:21:15	21.00	0.03	0.00	0.82	0.54	0.57	
12/07/07 9:21:30	21.00	0.03	-0.01	0.82	0.28	0.57	
12/07/07 9:21:45	21.00	0.03	-0.01	0.82	0.33	0.57	
12/07/07 9:22:00	21.00	0.03	-0.01	0.82	0.32	0.57	
12/07/07 9:22:15	21.00	0.03	-0.01	0.82	0.15	0.57	
12/07/07 9:22:30	21.00	0.03	-0.01	0.82	0.35	0.57	
12/07/07 9:22:45	21.00	0.03	-0.01	0.72	0.46	0.57	
12/07/07 9:23:00	21.00	0.03	-0.01	0.82	1.26	0.57	
12/07/07 9:23:15	21.00	0.03	0.00	1.07	46.72	0.57	
12/07/07 9:23:30	20.99	0.04	0.00	2.41	88.89	0.57	Calibration Bias
12/07/07 9:23:45	20.69	0.05	-0.01	2.86	90.51	0.57	Zero Air Injection
12/07/07 9:24:00	19.82	0.06	0.10	2.01	90.94	0.57	
12/07/07 9:24:15	20.14	0.04	0.35	1.24	90.63	0.57	0.57 ppm Methane
12/07/07 9:24:30	20.20	0.03	0.20	1.22	90.57	0.57	
12/07/07 9:24:45	20.20	0.03	0.15	1.22	89.36	94.24	
12/07/07 9:25:00	20.25	0.03	-0.01	1.12	89.22	94.25	Methane Calibration
12/07/07 9:25:15	20.33	0.03	0.00	1.07	89.16	94.25	Zero Air Injection
12/07/07 9:25:30	20.40	0.03	-0.01	1.22	89.15	94.25	
12/07/07 9:25:45	20.42	0.03	0.00	1.22	89.41	94.25	0.57 ppm Methane
12/07/07 9:26:00	20.42	0.03	-0.01	1.12	89.37	94.25	
12/07/07 9:26:15	20.42	0.03	0.00	1.06	89.51	94.25	
12/07/07 9:26:30	20.42	0.03	0.00	1.12	89.42	94.25	
12/07/07 9:26:45	20.43	0.03	-0.01	1.22	89.16	94.25	
12/07/07 9:27:00	20.43	0.03	0.00	1.12	89.35	94.25	
12/07/07 9:27:15	20.43	0.03	-0.01	1.07	89.23	94.25	
12/07/07 9:27:30	20.43	0.03	0.00	1.22	89.23	94.25	
12/07/07 9:27:45	20.43	0.03	0.00	1.17	89.27	93.24	
12/07/07 9:28:00	20.43	0.03	0.00	1.12	89.32	93.24	
12/07/07 9:28:15	20.43	0.03	0.00	1.07	89.26	93.25	
12/07/07 9:28:30	20.43	0.03	-0.01	1.12	89.24	93.24	
12/07/07 9:28:45	20.43	0.03	0.00	1.01	89.05	93.24	
12/07/07 9:29:00	20.43	0.03	-0.01	1.01	89.29	93.24	
12/07/07 9:29:15	20.43	0.03	0.00	1.22	89.36	93.24	
12/07/07 9:29:30	20.43	0.03	0.00	1.12	89.14	93.25	
12/07/07 9:29:45	20.43	0.03	0.00	1.07	89.36	93.24	
12/07/07 9:30:00	20.43	0.03	0.00	1.22	89.08	93.25	
12/07/07 9:30:15	20.43	0.03	0.00	1.17	89.15	93.25	
12/07/07 9:30:30	20.43	0.03	0.00	1.01	89.14	93.25	
12/07/07 9:30:45	20.43	0.03	-0.01	1.01	89.48	91.74	Calibration Bias
12/07/07 9:31:00	20.43	0.03	0.00	1.12	89.96	91.24	90.02 ppm CH4 Injection
12/07/07 9:31:15	20.43	0.03	0.00	1.02	89.68	91.24	
12/07/07 9:31:30	20.43	0.03	0.00	1.12	90.11	91.24	91.24 ppm Methane
12/07/07 9:31:45	20.43	0.03	0.00	1.07	89.97	91.24	

Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
12/07/07 9:32:00	20.43	0.03	0.00	1.22	90.03	91.24	
12/07/07 9:32:15	20.43	0.03	0.00	1.02	89.71	91.24	
12/07/07 9:32:30	20.43	0.03	0.00	1.02	89.77	91.24	
12/07/07 9:32:45	20.43	0.03	0.00	1.17	89.71	91.24	
12/07/07 9:33:00	20.43	0.03	0.00	1.02	89.90	91.24	
12/07/07 9:33:15	20.43	0.03	0.00	1.07	89.60	91.24	
12/07/07 9:33:30	20.44	0.03	0.00	1.22	89.56	91.24	
12/07/07 9:33:45	20.43	0.03	0.00	1.02	89.68	90.87	Calibration Bias
12/07/07 9:34:00	20.44	0.03	-0.01	1.02	89.67	90.74	90.02 ppm CH4 Injection
12/07/07 9:34:16	20.44	0.03	0.00	1.17	89.57	90.74	
12/07/07 9:34:30	20.44	0.03	-0.01	1.12	89.46	90.74	90.74 ppm Methane
12/07/07 9:34:45	20.44	0.03	0.00	1.17	89.56	90.74	
12/07/07 9:35:00	20.43	0.03	0.00	1.02	89.70	90.74	
12/07/07 9:35:15	20.43	0.03	0.00	1.07	89.43	90.74	
12/07/07 9:35:30	20.43	0.03	0.00	1.12	89.47	90.74	
12/07/07 9:35:45	20.43	0.03	0.00	1.02	89.38	90.74	
12/07/07 9:36:00	20.44	0.03	0.00	1.02	89.41	90.74	
12/07/07 9:36:15	20.44	0.03	0.00	1.07	89.22	90.74	
12/07/07 9:36:30	20.44	0.03	0.00	1.12	89.29	90.74	
12/07/07 9:36:45	20.44	0.03	0.00	1.02	89.44	90.74	
12/07/07 9:37:00	20.44	0.03	0.00	1.12	89.31	90.74	
12/07/07 9:37:15	20.43	0.03	0.00	1.01	89.30	90.74	
12/07/07 9:37:30	20.44	0.03	0.00	1.11	89.40	90.74	
12/07/07 9:37:45	20.44	0.03	0.00	1.07	89.28	90.75	
12/07/07 9:38:00	20.43	0.03	0.00	1.12	89.29	90.74	
12/07/07 9:38:15	20.44	0.03	-0.01	1.02	89.44	90.74	
12/07/07 9:38:30	20.43	0.03	0.00	1.02	89.38	90.75	
12/07/07 9:38:45	20.44	0.03	-0.01	1.07	89.45	90.75	
12/07/07 9:39:00	20.44	0.03	0.00	1.12	89.26	90.75	
12/07/07 9:39:15	20.44	0.03	0.00	1.02	89.10	90.75	
12/07/07 9:39:30	20.44	0.03	-0.01	1.02	89.16	90.75	
12/07/07 9:39:45	20.44	0.03	0.00	1.22	89.22	90.75	
12/07/07 9:40:00	20.44	0.03	-0.01	1.12	89.10	90.74	
12/07/07 9:40:15	20.44	0.03	0.00	1.02	89.14	90.75	Calibration Bias
12/07/07 9:40:30	20.44	0.03	0.00	1.12	88.93	90.76	90.02 ppm CH4 Injection
12/07/07 9:40:45	20.44	0.03	0.00	1.17	88.70	90.76	88.82 ppm Total VOC
12/07/07 9:41:00	20.44	0.03	0.00	1.02	88.77	90.76	90.76 ppm Methane
12/07/07 9:41:15	20.44	0.03	0.00	1.07	88.87	90.75	
12/07/07 9:41:30	20.44	0.03	0.00	1.22	85.73	90.75	Methane Calibration
12/07/07 9:41:45	20.44	0.03	-0.01	1.02	53.56	90.75	90.02 CH4 Injection
12/07/07 9:42:00	20.44	0.03	0.00	1.02	49.39	90.75	
12/07/07 9:42:15	20.47	0.03	0.00	1.02	49.31	90.75	90.91 ppm Methane
12/07/07 9:42:30	20.59	0.03	0.00	1.02	49.35	90.75	
12/07/07 9:42:45	20.65	0.03	0.00	1.02	49.16	50.32	
12/07/07 9:43:00	20.68	0.03	0.00	1.02	49.12	50.17	
12/07/07 9:43:15	20.68	0.03	0.00	1.01	49.24	50.17	
12/07/07 9:43:30	20.68	0.03	0.00	1.01	49.09	50.17	
12/07/07 9:43:45	20.68	0.03	0.00	1.02	49.13	50.17	
12/07/07 9:44:00	20.67	0.03	0.00	1.02	49.15	50.17	
12/07/07 9:44:15	20.67	0.03	-0.01	1.02	49.19	50.17	
12/07/07 9:44:30	20.67	0.03	0.00	1.01	48.91	50.17	Calibration Bias
12/07/07 9:44:45	20.68	0.03	-0.01	1.01	49.05	50.17	50.0 ppm CH4 Injection
12/07/07 9:45:00	20.68	0.03	0.00	1.02	49.09	50.17	49.08 ppm Total VOC
12/07/07 9:45:15	20.68	0.03	0.00	0.87	49.09	50.17	
12/07/07 9:45:30	20.68	0.03	0.00	0.92	49.09	50.17	
12/07/07 9:45:45	20.69	0.03	0.00	1.02	48.91	49.80	Calibration Bias
12/07/07 9:46:00	20.68	0.03	0.00	0.92	49.05	49.67	50.0 ppm CH4 Injection
12/07/07 9:46:15	20.69	0.03	0.00	1.02	49.00	49.67	
12/07/07 9:46:30	20.69	0.03	0.00	1.02	49.02	49.67	49.67 ppm Methane
12/07/07 9:46:45	20.69	0.03	0.00	1.02	49.13	49.67	
12/07/07 9:47:00	20.69	0.03	-0.01	1.02	48.87	49.67	
12/07/07 9:47:15	20.69	0.03	0.00	1.02	49.08	49.67	
12/07/07 9:47:30	20.69	0.03	0.00	1.02	46.93	49.67	
12/07/07 9:47:45	20.68	0.03	0.00	0.87	46.89	49.67	
12/07/07 9:48:00	20.69	0.03	0.00	1.02	49.23	49.67	
12/07/07 9:48:15	20.68	0.03	0.00	1.02	49.05	49.67	
12/07/07 9:48:30	20.68	0.03	0.00	0.92	49.05	49.67	
12/07/07 9:48:45	20.69	0.03	0.00	1.02	48.71	49.67	Calibration Bias
12/07/07 9:49:00	20.69	0.03	0.00	1.02	48.58	49.67	50.0 ppm CH4 Injection
12/07/07 9:49:16	20.69	0.03	0.00	1.02	48.70	49.67	
12/07/07 9:49:30	20.68	0.03	0.00	1.02	48.65	49.67	49.67 ppm Methane
12/07/07 9:49:45	20.68	0.03	0.00	1.02	48.78	49.67	
12/07/07 9:50:00	20.69	0.03	0.00	1.02	48.95	49.67	
12/07/07 9:50:15	20.68	0.03	0.00	0.97	48.82	49.67	
12/07/07 9:50:30	20.68	0.03	0.00	0.92	48.76	49.67	
12/07/07 9:50:45	20.59	0.03	-0.01	1.02	48.65	49.67	
12/07/07 9:51:00	20.59	0.03	0.00	1.02	48.82	49.67	Methane Calibration
12/07/07 9:51:15	20.59	0.03	0.00	1.02	48.83	49.67	50.0 CH4 Injection
12/07/07 9:51:30	20.69	0.03	0.00	1.11	29.52	49.67	
12/07/07 9:51:45	20.68	0.03	0.00	1.17	24.21	49.67	49.67 ppm Methane
12/07/07 9:52:00	20.70	0.03	-0.01	0.92	23.98	49.87	
12/07/07 9:52:15	20.80	0.03	0.00	0.82	24.03	49.67	
12/07/07 9:52:30	20.84	0.03	0.00	0.82	23.91	49.67	
12/07/07 9:52:45	20.85	0.03	0.00	0.82	24.05	49.67	Calibration Bias
12/07/07 9:53:00	20.85	0.03	-0.01	0.82	24.18	49.67	50.0 ppm CH4 Injection
12/07/07 9:53:16	20.85	0.03	0.00	0.87	24.05	49.67	
12/07/07 9:53:30	20.85	0.03	0.00	1.02	24.13	49.67	49.67 ppm Methane
12/07/07 9:53:45	20.85	0.03	0.00	0.82	24.05	49.67	
12/07/07 9:54:00	20.85	0.03	0.00	0.82	23.90	49.67	
12/07/07 9:54:15	20.85	0.03	0.00	0.82	23.85	49.58	
12/07/07 9:54:30	20.85	0.03	0.00	0.82	24.05	49.68	
12/07/07 9:54:45	20.85	0.03	0.00	0.82	23.82	31.25	Calibration Bias
12/07/07 9:55:00	20.85	0.03	0.00	0.82	24.04	25.12	25 ppm CH4 Injection
12/07/07 9:55:16	20.85	0.03	0.00	0.82	23.94	25.12	
12/07/07 9:55:30	20.85	0.03	0.00	0.82	23.96	25.12	25.12 ppm Methane
12/07/07 9:55:45	20.85	0.03	0.00	0.82	24.01	25.12	
12/07/07 9:56:00	20.85	0.03	0.00	0.82	23.70	25.12	
12/07/07 9:56:15	20.85	0.03	0.00	0.82	23.81	25.12	
12/07/07 9:56:30	20.85	0.03	0.00	0.82	23.87	25.11	
12/07/07 9:56:45	20.85	0.03	0.00	0.82	23.83	25.11	
12/07/07 9:57:00	20.85	0.03	0.00	0.82	24.04	25.11	
12/07/07 9:57:15	20.85	0.03	0.00	0.82	23.89	25.12	
12/07/07 9:57:30	20.85	0.03	0.00	0.82	23.91	25.12	
12/07/07 9:57:45	20.85	0.03	0.00	0.97	23.92	24.37	Calibration Bias
12/07/07 9:58:00	20.85	0.03	0.00	0.82	23.94	24.12	25 ppm CH4 Injection
12/07/07 9:58:16	20.85	0.03	0.00	0.82	23.87	24.11	
12/07/07 9:58:30	20.85	0.03	0.00	0.82	23.99	24.12	24.12 ppm Methane
12/07/07 9:58:45	20.85	0.03	0.00	0.82	24.00	24.12	
12/07/07 9:59:00	20.85	0.03	0.00	0.82	23.86	24.11	
12/07/07 9:59:15	20.85	0.03	0.00	0.82	23.77	24.11	
12/07/07 9:59:30	20.85	0.03	0.00	0.82	23.97	24.11	
12/07/07 9:59:45	20.85	0.03	0.00	0.82	23.97	24.12	
12/07/07 10:00:00	20.85	0.03	0.00	0.82	23.90	24.12	
12/07/07 10:00:15	20.85	0.03	0.00	0.87	24.02	24.12	
12/07/07 10:00:30	20.85	0.03	0.00	0.87	23.79	24.12	Calibration Bias
12/07/07 10:00:45	20.85	0.03	0.00	0.82	23.92	24.12	25 ppm CH4 Injection
12/07/07 10:01:00	20.85	0.03	0.00	0.82	23.96	24.12	23.96 ppm Total VOC
12/07/07 10:01:16	20.85	0.03	0.00	0.87	24.11	24.12	24.12 ppm Methane
12/07/07 10:01:30	20.85	0.03	0.00	0.87	23.92	24.12	
12/07/07 10:01:45	20.85	0.03	0.00	0.82	23.71	24.12	
12/07/07 10:02:00	20.85	0.03	0.00	0.82	23.87	24.12	
12/07/07 10:02:15	20.85	0.03	0.00	0.82	23.76	24.12	
12/07/07 10:02:30	20.85	0.03	0.00	0.82	23.67	24.11	Methane Calibration
12/07/07 10:02:45	20.85	0.03	0.00	0.82	23.68	24.11	50.0 CH4 Injection
12/07/07 10:03:00	20.85	0.03	-0.01	0.82	23.55	24.11	
12/07/07 10:03:15	20.85	0.03	0.00	0.82	24.07	24.11	24.28 ppm Methane
12/07/07 10:03:30	20.85	0.03	0.00	0.82	23.84	24.12	
12/07/07 10:03:45	20.85	0.03	0.00	0.82	23.58	24.49	
12/07/07 10:04:00	20.85	0.03	-0.01	0.82	23.96	24.62	
12/07/07 10:04:15	20.85	0.03	0.00	0.82	23.56	24.62	
12/07/07 10:04:30	20.55	0.03	0.00	0.82	10.27	24.62	
12/07/07 10:04:45	20.85	0.03	0.00	7.80	2.41	24.61	Calibration Bias
12/07/07 10:05:00	20.05	1.18	0.00	24.54	4.24	24.62	25 ppm CH4 Injection
12/07/07 10:06:15	15.57	5.30	1.10	32.97	3.76	24.62	
12/07/07 10:06:30	12.47	7.52	7.55	30.57	3.27	24.62	24.62 ppm Methane
12/07/07 10:06:45	11.86	7.93	14.94	28.83	2.95	24.62	
12/07/07 10:06:00	11.73	8.03	19.15	33.46	2.75	24.62	
12/07/07 10:06:15	11.83	7.93	20.60	38.70	2.69	24.62	
12/07/07 10:06:30	12.03	7.75	20.80	41.24	2.42	24.62	
12/07/07 10:06:45	12.03	7.81	19.84	39.79	2.73	5.83	
12/07/07 10:07:00	11.91	7.88	19.45	43.68	2.40	-0.43	On Stack Gas
12/07/07 10:07:15	12.04	7.75	19.20	51.68	2.40	-0.43	
12/07/07 10:07:30	12.09	7.74	19.20	56.69	2.49	-0.43	
12/07/07 10:07:45	12.05	7.77	18.70	57.04	2.14	-0.43	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
12/07/07 10:08:00	12.04	7.74	18.60	55.85	2.20	-0.43	
12/07/07 10:08:15	12.08	7.75	18.30	57.48	2.13	-0.43	
12/07/07 10:08:30	12.02	7.77	18.05	47.77	2.06	-0.43	
12/07/07 10:08:45	11.89	7.93	18.10	35.81	2.26	-0.43	
12/07/07 10:09:00	11.66	8.08	18.35	35.81	2.03	-0.43	
12/07/07 10:09:15	11.76	7.97	18.40	35.46	2.05	-0.43	
12/07/07 10:09:30	11.90	7.90	18.05	33.66	2.01	-0.43	
12/07/07 10:09:45	11.79	7.99	17.50	25.69	1.98	-0.43	
12/07/07 10:10:00	11.62	8.18	17.40	28.53	2.09	-0.43	
12/07/07 10:10:15	11.51	8.19	17.80	43.46	2.10	-0.43	
12/07/07 10:10:30	11.80	7.91	18.15	48.72	1.68	-0.43	
12/07/07 10:10:45	12.13	7.67	17.50	48.42	2.33	-0.43	
12/07/07 10:11:00	12.01	7.82	17.05	78.02	1.98	-0.42	
12/07/07 10:11:15	12.21	7.50	16.80	85.00	1.92	-0.43	
12/07/07 10:11:30	12.71	7.16	16.60	74.83	1.61	-0.43	
12/07/07 10:11:45	12.80	7.28	15.00	68.08	1.97	-0.43	
12/07/07 10:12:00	12.50	7.34	14.70	71.79	1.87	-0.42	
12/07/07 10:12:15	12.72	7.10	15.20	78.67	1.82	-0.43	
12/07/07 10:12:30	12.81	7.04	15.20	88.28	1.89	-0.43	
12/07/07 10:12:45	12.98	6.87	14.80	96.01	1.82	-0.43	
12/07/07 10:13:00	13.11	6.77	14.30	86.30	1.79	-0.43	
12/07/07 10:13:15	12.89	7.01	14.00	71.99	1.72	-0.42	
12/07/07 10:13:30	12.62	7.27	14.14	60.48	1.84	-0.42	
12/07/07 10:13:45	12.63	7.18	14.80	62.22	1.76	-0.43	
12/07/07 10:14:00	12.90	6.92	14.70	71.84	1.77	-0.42	
12/07/07 10:14:15	13.11	6.77	14.20	84.45	1.83	-0.42	
12/07/07 10:14:30	13.02	6.87	13.69	92.08	1.66	-0.42	
12/07/07 10:14:45	12.95	6.92	13.69	70.80	1.75	-0.43	
12/07/07 10:15:00	12.91	7.00	13.80	45.53	6.14	-0.42	
12/07/07 10:15:15	12.31	7.56	14.10	35.96	11.55	-0.42	
12/07/07 10:15:30	12.53	7.25	14.85	29.23	7.24	-0.42	
12/07/07 10:15:45	12.47	7.42	14.50	22.55	6.75	-0.42	
12/07/07 10:16:00	11.96	7.69	15.29	21.80	4.76	-0.42	
12/07/07 10:16:15	11.71	8.02	16.70	18.21	5.52	-0.42	
12/07/07 10:16:30	11.79	7.96	16.95	13.13	7.43	-0.42	
12/07/07 10:16:45	11.60	8.16	16.30	10.88	5.98	-0.42	
12/07/07 10:17:00	11.59	8.11	16.30	11.04	4.50	-0.43	
12/07/07 10:17:15	11.71	8.02	15.70	14.97	4.48	-0.42	
12/07/07 10:17:30	12.04	7.64	16.60	19.01	4.03	-0.43	
12/07/07 10:17:45	12.39	7.46	15.70	20.50	3.75	-0.43	
12/07/07 10:18:00	12.04	7.76	15.40	23.20	3.41	-0.42	
12/07/07 10:18:15	12.16	7.59	15.30	23.35	2.99	-0.43	
12/07/07 10:18:30	12.18	7.66	15.55	20.60	2.83	-0.42	
12/07/07 10:18:45	11.61	7.96	15.50	23.10	2.63	-0.43	
12/07/07 10:19:00	11.81	7.91	15.85	26.39	2.41	-0.42	
12/07/07 10:19:15	11.83	7.94	16.20	30.87	2.51	-0.43	
12/07/07 10:19:30	11.73	7.99	15.85	27.29	2.35	-0.43	
12/07/07 10:19:45	11.74	8.01	16.10	19.21	2.55	-0.43	
12/07/07 10:20:00	11.41	8.32	16.05	14.87	3.38	-0.43	
12/07/07 10:20:15	11.21	8.45	16.00	13.28	3.39	-0.43	
12/07/07 10:20:30	11.18	8.49	16.65	11.63	3.21	-0.43	
12/07/07 10:20:45	11.07	8.57	16.90	11.68	3.13	-0.42	
12/07/07 10:21:00	11.09	8.53	17.15	13.16	2.75	-0.43	
12/07/07 10:21:15	11.04	8.59	17.30	14.47	2.43	-0.43	
12/07/07 10:21:30	11.09	8.51	17.20	15.82	2.81	-0.43	
12/07/07 10:21:45	11.19	8.46	17.20	15.92	2.46	-0.05	
12/07/07 10:22:00	11.10	8.53	17.05	16.37	2.18	0.07	
12/07/07 10:22:15	11.10	8.52	17.00	16.17	2.19	0.07	
12/07/07 10:22:30	11.16	8.49	17.00	15.12	2.26	0.07	
12/07/07 10:22:45	11.14	8.50	16.79	14.67	1.94	0.07	
12/07/07 10:23:00	11.15	8.50	16.65	14.97	1.67	0.07	
12/07/07 10:23:15	11.06	8.55	16.70	19.11	2.98	0.07	
12/07/07 10:23:30	11.23	8.40	16.95	25.69	7.28	0.07	
12/07/07 10:23:45	11.45	8.17	16.50	25.44	7.92	0.07	
12/07/07 10:24:00	11.52	8.23	16.10	28.04	7.52	0.07	
12/07/07 10:24:15	11.29	8.40	16.00	28.39	7.01	0.08	
12/07/07 10:24:30	11.09	8.56	16.50	23.55	6.76	0.08	
12/07/07 10:24:45	11.07	8.56	16.90	25.04	6.20	-0.30	
12/07/07 10:25:00	11.14	8.48	16.65	31.17	6.34	-0.43	
12/07/07 10:25:15	11.50	8.12	16.50	32.37	5.71	-0.43	
12/07/07 10:25:30	11.91	7.67	16.25	28.78	6.54	-0.43	
12/07/07 10:25:45	11.60	8.16	15.20	21.70	5.44	-0.43	
12/07/07 10:26:00	11.20	8.51	15.10	17.52	5.32	-0.43	
12/07/07 10:26:15	10.99	8.60	18.00	17.91	5.08	-0.43	
12/07/07 10:26:30	11.10	8.53	16.65	16.42	4.98	-0.43	
12/07/07 10:26:45	11.09	8.53	16.60	16.17	4.73	-0.43	
12/07/07 10:27:00	11.13	8.50	16.60	17.82	4.61	-0.42	
12/07/07 10:27:15	11.17	8.46	16.40	22.10	4.65	-0.42	
12/07/07 10:27:30	11.36	8.29	16.55	27.34	4.60	-0.43	
12/07/07 10:27:45	11.39	8.30	16.00	28.56	4.33	-0.05	
12/07/07 10:28:00	11.31	8.37	15.80	26.04	4.56	0.07	
12/07/07 10:28:15	11.21	8.43	15.90	23.40	4.35	0.07	
12/07/07 10:28:30	11.42	8.25	16.15	20.70	4.22	0.08	
12/07/07 10:28:45	11.36	8.33	15.80	18.36	4.26	0.07	
12/07/07 10:29:00	11.30	8.35	15.55	17.17	4.02	0.08	
12/07/07 10:29:15	11.31	8.38	15.80	15.87	4.03	0.07	
12/07/07 10:29:30	11.06	8.60	15.55	19.01	4.57	0.08	
12/07/07 10:29:45	10.90	8.65	16.10	23.15	5.99	0.07	
12/07/07 10:30:00	11.41	8.22	16.35	22.40	7.74	0.07	
12/07/07 10:30:15	11.59	8.14	16.20	39.55	6.61	0.07	
12/07/07 10:30:30	11.90	7.80	15.55	51.21	6.14	0.07	
12/07/07 10:30:45	11.97	7.87	15.70	47.17	5.63	-0.30	
12/07/07 10:31:00	11.43	8.26	15.55	36.65	5.02	-0.43	
12/07/07 10:31:15	11.71	7.97	15.40	29.98	4.94	-0.42	
12/07/07 10:31:30	11.71	8.01	15.40	27.13	4.71	-0.43	
12/07/07 10:31:45	12.00	7.70	15.40	25.44	4.56	-0.43	
12/07/07 10:32:00	12.02	7.50	14.95	23.85	4.38	-0.43	
12/07/07 10:32:15	11.74	7.97	14.40	20.70	4.19	-0.43	
12/07/07 10:32:30	11.66	8.09	15.05	20.26	4.40	-0.42	
12/07/07 10:32:45	11.41	8.23	15.00	21.45	4.39	-0.43	
12/07/07 10:33:00	11.77	7.92	15.00	20.70	4.45	-0.43	
12/07/07 10:33:15	11.68	8.08	15.10	20.55	4.27	-0.43	
12/07/07 10:33:30	11.31	8.36	14.85	19.86	4.25	-0.42	
12/07/07 10:33:45	11.11	8.54	15.70	19.36	3.92	-0.05	
12/07/07 10:34:00	10.95	8.63	15.15	22.05	4.08	0.08	
12/07/07 10:34:15	11.34	8.23	18.50	21.70	3.79	0.08	
12/07/07 10:34:30	11.80	8.14	16.40	19.31	3.83	0.07	
12/07/07 10:34:45	11.25	8.40	15.40	20.60	3.76	0.08	
12/07/07 10:35:00	11.41	8.21	15.45	24.69	3.62	0.07	
12/07/07 10:35:15	11.54	8.04	15.60	26.11	3.60	0.08	
12/07/07 10:35:30	11.56	8.15	15.30	26.23	3.31	0.08	
12/07/07 10:35:45	11.52	8.15	15.20	31.38	3.45	0.08	
12/07/07 10:36:00	11.49	8.20	15.20	72.19	3.39	0.08	
12/07/07 10:36:15	11.77	7.80	15.20	167.50	3.75	0.08	
12/07/07 10:36:30	13.22	6.46	14.92	199.39	3.14	0.08	
12/07/07 10:36:45	13.68	6.26	12.20	199.39	3.04	-0.30	
12/07/07 10:37:00	13.56	6.34	10.60	192.51	3.03	-0.42	
12/07/07 10:37:15	13.44	6.44	10.50	167.96	3.11	-0.42	
12/07/07 10:37:30	13.42	6.42	10.75	192.01	4.24	-0.42	
12/07/07 10:37:45	13.55	6.31	10.60	199.39	6.56	-0.42	
12/07/07 10:38:00	13.65	6.05	10.55	199.39	21.42	-0.42	
12/07/07 10:38:15	14.26	5.73	10.30	199.39	35.46	-0.42	
12/07/07 10:38:30	14.42	6.52	9.60	199.39	26.47	-0.42	
12/07/07 10:38:45	14.52	5.55	9.10	199.39	13.62	-0.42	
12/07/07 10:39:00	14.46	5.61	9.00	199.39	7.39	-0.42	
12/07/07 10:39:15	14.36	5.71	9.00	199.39	8.82	-0.42	
12/07/07 10:39:30	14.10	5.94	9.20	199.39	6.40	-0.42	
12/07/07 10:39:45	13.90	6.07	9.80	199.39	4.74	-0.05	
12/07/07 10:40:00	13.86	6.09	10.00	199.39	5.01	0.08	
12/07/07 10:40:15	13.86	6.08	10.20	199.39	5.29	0.08	
12/07/07 10:40:30	14.09	5.86	10.25	199.39	5.41	0.08	
12/07/07 10:40:45	14.20	5.82	9.90	199.39	4.88	0.08	
12/07/07 10:41:00	14.09	5.92	9.65	199.39	4.08	0.08	
12/07/07 10:41:15	14.05	5.91	9.70	199.39	4.55	0.08	
12/07/07 10:41:30	14.12	5.86	10.05	199.39	3.82	0.08	
12/07/07 10:41:45	14.21	5.78	10.00	199.39	4.16	0.08	
12/07/07 10:42:00	14.26	5.75	9.80	199.39	3.42	0.08	
12/07/07 10:42:15	14.12	5.86	9.70	199.39	3.19	0.08	
12/07/07 10:42:30	13.85	6.07	9.85	199.39	2.99	0.08	
12/07/07 10:42:45	13.95	5.93	10.20	182.54	3.01	0.08	
12/07/07 10:43:00	14.09	5.68	10.00	133.25	2.72	0.08	
12/07/07 10:43:15	13.98	5.97	9.70	101.70	2.68	0.08	
12/07/07 10:43:30	13.95	5.96	9.85	107.24	2.73	0.08	
12/07/07 10:43:45	13.98	5.95	10.00	122.14	2.64	0.08	
12/07/07 10:44:00	13.96	5.97	10.00	122.99	2.48	0.08	

Range Units	20.0 %	20.0 %	88.88 ppm	90.41 ppm	100.0 ppm	100.0 ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
12/07/07 10:44:15	14.10	5.84	10.00	96.02	2.61	0.08	
12/07/07 10:44:30	14.11	5.89	9.95	80.52	2.80	0.08	
12/07/07 10:44:45	13.97	5.97	9.80	67.11	2.58	0.08	
12/07/07 10:45:00	14.06	5.88	9.85	57.89	2.50	0.08	
12/07/07 10:45:15	14.06	5.90	10.00	50.38	2.39	0.08	
12/07/07 10:45:30	13.97	5.98	9.90	48.17	2.37	0.08	
12/07/07 10:45:45	13.97	5.96	10.10	41.09	2.39	-0.30	
12/07/07 10:46:00	13.77	6.13	10.05	37.10	2.45	-0.42	
12/07/07 10:46:15	13.91	5.96	10.10	30.73	2.31	-0.42	
12/07/07 10:46:30	13.82	6.09	10.25	28.53	2.50	-0.42	
12/07/07 10:46:45	13.67	6.18	10.40	28.03	2.36	-0.42	
12/07/07 10:47:00	13.67	6.17	10.55	27.34	2.44	-0.42	
12/07/07 10:47:15	13.81	6.02	10.60	28.34	2.38	-0.42	
12/07/07 10:47:30	14.06	5.85	10.40	24.59	2.54	-0.42	
12/07/07 10:47:45	14.08	5.87	9.90	22.05	2.39	-0.42	
12/07/07 10:48:00	13.96	5.96	9.60	20.45	2.42	-0.42	
12/07/07 10:48:15	13.95	5.97	9.70	17.37	2.46	-0.42	
12/07/07 10:48:30	13.75	6.17	10.00	16.62	2.50	-0.42	
12/07/07 10:48:45	13.50	6.22	10.30	16.87	2.40	-0.42	
12/07/07 10:49:00	13.80	6.07	10.40	16.97	2.38	-0.42	
12/07/07 10:49:15	13.85	6.04	10.30	16.87	2.42	-0.42	
12/07/07 10:49:30	13.87	6.03	10.05	17.27	2.00	-0.42	
12/07/07 10:49:45	13.92	5.98	9.90	18.96	2.39	-0.42	
12/07/07 10:50:00	14.02	5.90	9.80	20.60	2.12	-0.42	
12/07/07 10:50:15	14.06	5.87	9.70	23.65	2.02	-0.42	
12/07/07 10:50:30	14.09	5.86	9.45	27.78	2.42	-0.42	
12/07/07 10:50:45	14.16	5.82	9.40	31.52	2.27	-0.42	
12/07/07 10:51:00	14.04	5.94	9.35	29.88	2.28	-0.42	
12/07/07 10:51:15	13.86	6.08	9.30	23.15	2.34	-0.42	
12/07/07 10:51:30	13.67	6.21	9.75	19.86	2.19	-0.42	
12/07/07 10:51:45	13.69	6.16	10.10	17.67	2.09	-0.42	
12/07/07 10:52:00	13.70	6.18	10.20	17.66	2.07	-0.42	
12/07/07 10:52:15	13.68	6.15	10.30	20.16	1.94	-0.42	
12/07/07 10:52:30	14.03	5.87	10.40	23.10	2.01	-0.42	Flare set to 1500 degreess
12/07/07 10:52:45	14.15	5.83	9.80	25.14	2.11	-0.42	
12/07/07 10:53:00	14.02	5.96	9.40	25.89	2.01	-0.42	
12/07/07 10:53:15	13.92	6.00	9.30	26.04	1.98	-0.42	
12/07/07 10:53:30	13.97	5.98	9.65	26.29	2.01	-0.42	
12/07/07 10:53:45	14.03	5.92	9.60	27.63	2.12	-0.42	
12/07/07 10:54:00	14.04	5.91	9.55	28.78	2.15	-0.42	
12/07/07 10:54:15	14.07	5.89	9.40	30.03	1.92	-0.43	
12/07/07 10:54:30	14.11	5.88	9.40	34.56	1.90	-0.42	
12/07/07 10:54:45	14.05	5.91	9.30	41.89	2.10	-0.80	
12/07/07 10:55:00	14.20	5.78	9.20	44.56	2.18	-0.93	
12/07/07 10:55:15	14.12	5.88	9.20	54.45	9.06	-0.93	
12/07/07 10:55:30	14.01	5.94	9.10	134.30	232.28	-0.93	
12/07/07 10:55:45	14.26	5.58	9.30	199.38	315.38	-0.93	
12/07/07 10:56:00	15.24	4.79	9.00	199.38	289.40	-0.93	
12/07/07 10:56:15	15.51	4.71	8.10	199.38	363.32	-0.93	
12/07/07 10:56:30	14.93	5.25	6.65	199.38	343.68	-0.93	
12/07/07 10:56:45	14.67	5.41	7.30	199.38	615.21	-0.93	
12/07/07 10:57:00	14.66	5.43	7.80	199.38	652.00	-0.93	
12/07/07 10:57:15	14.66	5.39	8.00	199.38	599.01	-0.93	
12/07/07 10:57:30	14.89	5.19	7.95	199.38	583.73	-0.93	
12/07/07 10:57:45	14.88	5.25	7.70	199.38	866.84	369.17	
12/07/07 10:58:00	14.84	5.27	7.65	199.38	624.42	492.54	
12/07/07 10:58:15	14.84	5.26	7.80	199.38	617.03	492.54	
12/07/07 10:58:30	14.88	5.26	7.60	199.38	648.75	492.54	
12/07/07 10:58:45	14.78	5.34	7.80	199.38	499.11	492.54	
12/07/07 10:59:00	14.74	5.37	7.85	199.38	496.29	492.55	
12/07/07 10:59:15	14.78	5.34	8.00	199.38	656.43	492.54	
12/07/07 10:59:30	14.76	5.35	8.15	199.38	558.47	492.54	
12/07/07 10:59:45	14.73	5.38	8.20	199.38	717.01	492.54	
12/07/07 11:00:00	14.78	5.33	8.20	199.38	787.37	492.54	
12/07/07 11:00:15	14.74	5.37	8.20	199.38	784.18	492.54	
12/07/07 11:00:30	14.81	5.31	8.05	199.38	760.84	492.54	
12/07/07 11:00:45	14.65	5.28	8.00	199.38	840.41	815.67	
12/07/07 11:01:00	14.87	5.28	8.00	199.38	627.17	923.38	
12/07/07 11:01:15	14.81	5.32	8.00	199.38	908.14	923.38	
12/07/07 11:01:30	14.79	5.32	8.00	199.38	745.63	923.38	
12/07/07 11:01:45	14.84	5.27	8.00	199.38	770.54	923.38	
12/07/07 11:02:00	14.94	5.21	7.85	199.38	819.05	923.38	
12/07/07 11:02:15	14.88	5.26	7.80	199.38	832.39	923.38	
12/07/07 11:02:30	14.90	5.23	7.80	199.38	640.99	923.38	
12/07/07 11:02:45	14.96	5.17	7.80	199.38	780.26	923.38	
12/07/07 11:03:00	14.94	5.22	7.75	199.38	762.09	923.38	
12/07/07 11:03:15	14.88	5.27	7.70	199.38	895.58	923.38	
12/07/07 11:03:30	14.86	5.28	7.95	199.38	823.01	923.38	
12/07/07 11:03:45	14.96	5.18	7.90	199.38	641.92	999.29	
12/07/07 11:04:00	15.01	5.18	7.75	199.38	391.87	1,024.59	CO @990
12/07/07 11:04:15	14.88	5.28	7.70	199.38	574.40	1,024.59	
12/07/07 11:04:30	14.75	5.39	7.65	199.38	585.75	1,024.59	
12/07/07 11:04:45	14.61	5.47	8.00	199.38	669.22	1,024.59	
12/07/07 11:05:00	14.73	5.38	8.21	199.38	491.66	1,024.60	
12/07/07 11:05:15	14.83	5.28	8.30	199.38	495.42	1,024.60	
12/07/07 11:05:30	14.81	5.33	8.02	199.38	519.94	1,024.58	
12/07/07 11:05:45	14.67	5.43	8.00	199.38	654.26	1,024.58	
12/07/07 11:06:00	14.67	5.42	8.18	199.38	505.02	1,024.58	
12/07/07 11:06:15	14.71	5.38	8.20	199.38	778.37	1,024.58	
12/07/07 11:06:30	14.79	5.33	8.00	199.38	1,025.07	1,024.59	
12/07/07 11:06:45	14.74	5.36	8.00	199.38	1,025.07	683.06	
12/07/07 11:07:00	15.28	4.76	8.05	199.38	238.52	569.22	
12/07/07 11:07:15	16.84	3.41	7.60	199.38	850.17	569.22	
12/07/07 11:07:30	15.84	4.93	6.10	199.38	1,025.07	569.22	
12/07/07 11:07:45	13.17	6.88	6.40	199.38	846.29	569.22	
12/07/07 11:08:00	14.92	4.94	9.95	199.38	327.89	569.22	
12/07/07 11:08:15	16.00	4.39	10.70	199.38	153.66	569.22	
12/07/07 11:08:30	15.11	5.23	8.55	199.38	106.56	569.21	
12/07/07 11:08:45	14.37	5.76	7.20	199.38	246.25	569.21	
12/07/07 11:09:00	14.04	5.98	8.35	199.38	285.58	569.21	
12/07/07 11:09:15	14.02	5.92	8.90	199.38	247.53	569.21	
12/07/07 11:09:30	14.39	5.61	9.30	199.38	248.95	569.21	
12/07/07 11:09:45	14.60	5.48	8.80	199.39	225.25	377.57	
12/07/07 11:10:00	14.52	5.65	8.35	199.39	216.82	313.68	
12/07/07 11:10:15	14.48	5.58	8.30	199.39	280.69	313.68	
12/07/07 11:10:30	14.48	5.59	8.40	199.39	321.25	313.68	CO @770
12/07/07 11:10:45	14.38	5.66	8.50	199.39	114.06	313.69	
12/07/07 11:11:00	14.42	5.61	8.60	199.39	58.35	313.69	
12/07/07 11:11:15	14.39	5.67	8.50	199.39	60.14	313.88	electronically rerange CO
12/07/07 11:11:30	14.12	5.69	8.50	199.39	76.86	313.69	
12/07/07 11:11:45							
12/07/07 11:12:00							
12/07/07 11:12:15							
11/14/07 11:15:00	14.03	5.91	8.99	507.50	69.89	110.28	
11/14/07 11:15:15	14.10	5.85	9.09	576.29	141.17	110.28	
11/14/07 11:15:30	14.17	5.78	9.19	851.31	138.97	110.28	
11/14/07 11:15:45	14.23	5.73	9.09	715.84	134.21	110.28	
11/14/07 11:16:00	14.41	5.56	8.79	718.83	142.27	110.28	
11/14/07 11:16:15	14.38	5.64	8.67	889.43	77.00	110.28	
11/14/07 11:16:30	14.25	5.74	8.44	563.83	5.03	110.28	
11/14/07 11:16:45	14.14	5.88	8.72	318.09	2.47	110.28	
11/14/07 11:17:00	13.25	6.73	8.99	114.98	2.39	110.28	
11/14/07 11:17:15	12.54	7.18	10.08	38.47	2.40	82.72	
11/14/07 11:17:30	13.05	6.59	12.09	30.26	2.16	0.06	
11/14/07 11:17:45	13.28	6.48	11.49	28.01	2.04	0.06	
11/14/07 11:18:00	12.92	6.81	10.94	24.02	2.11	0.06	
11/14/07 11:18:15	12.61	7.13	10.94	21.53	2.06	0.06	
11/14/07 11:18:30	12.51	7.07	11.29	17.04	2.09	0.05	
11/14/07 11:18:45	12.77	6.92	11.89	13.55	2.10	0.06	
11/14/07 11:19:00	12.76	6.89	11.74	12.05	1.95	0.06	
11/14/07 11:19:15	12.52	7.22	11.59	11.05	2.13	0.05	
11/14/07 11:19:30	12.06	7.48	11.59	10.30	1.97	0.06	
11/14/07 11:19:45	12.85	6.65	12.79	10.55	1.83	0.06	
11/14/07 11:20:00	13.39	6.27	11.69	13.30	1.81	0.05	
11/14/07 11:20:16	13.81	6.15	10.49	18.05	1.97	-0.07	
11/14/07 11:20:30	13.60	8.02	9.94	24.52	2.02	-0.44	
11/14/07 11:20:45	13.84	6.06	9.84	33.00	1.84	-0.44	
11/14/07 11:21:00	13.81	6.23	9.54	41.98	2.07	-0.45	
11/14/07 11:21:15	13.63	8.20	9.54	51.92	1.85	-0.45	
11/14/07 11:21:30	13.62	6.22	9.84	66.13	1.78	-0.44	
11/14/07 11:21:45	13.78	5.08	9.79	175.04	1.73	-0.45	
11/14/07 11:22:00							
11/14/07 11:22:15							
11/14/07 11:22:30							
11/14/07 11:22:45							

Range Units	20.0 %	20.0 %	88.98 ppm	90.41 ppm	100.0 ppm	100.0 ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 11:23:00	13.59	6.22	9.84	131.76	1.88	-0.45	inlet pressure at 75psi
11/14/07 11:23:15	13.73	6.14	9.79	148.75	2.03	-0.44	
11/14/07 11:23:30	13.61	6.08	8.59	180.30	2.20	-0.45	
11/14/07 11:23:45	14.00	5.96	8.99	996.91	4.11	-0.44	reranging co again
11/14/07 11:24:00	13.84	8.09	8.84	593.94	2.87	-0.45	
11/14/07 11:24:15	13.88	8.20	9.28	214.40	2.16	-0.44	
11/14/07 11:24:30	13.81	6.06	9.64	232.09	2.23	-0.44	
11/14/07 11:24:45	14.01	5.93	9.64	224.86	2.26	-0.44	
11/14/07 11:25:00	13.84	6.10	9.19	221.83	2.15	-0.44	
11/14/07 11:25:15	13.76	6.12	9.19	218.86	1.99	-0.44	
11/14/07 11:25:30	13.86	8.05	9.44	209.42	1.75	-0.44	
11/14/07 11:25:45	13.86	6.06	9.44	209.91	1.88	-0.44	
11/14/07 11:26:00	13.88	6.03	9.32	205.18	1.87	-0.45	
11/14/07 11:26:15	13.92	6.02	9.19	195.45	1.87	-0.44	
11/14/07 11:26:30	13.89	6.03	8.99	199.94	1.70	-0.20	
11/14/07 11:26:45	13.96	5.95	9.14	188.97	2.00	0.05	
11/14/07 11:27:00	14.09	5.89	9.11	148.11	1.49	0.05	
11/14/07 11:27:15	13.85	6.07	8.84	133.16	1.60	0.05	
11/14/07 11:27:30	13.92	5.98	9.29	139.39	1.74	0.05	
11/14/07 11:27:45	14.05	5.90	9.24	148.63	1.69	0.05	
11/14/07 11:28:00	14.04	5.91	8.99	134.91	1.82	0.05	
11/14/07 11:28:15	13.85	6.09	8.84	123.19	1.90	0.05	
11/14/07 11:28:30	13.88	6.16	9.09	106.99	1.71	0.05	
11/14/07 11:28:45	13.84	6.06	9.19	95.28	1.65	0.05	
11/14/07 11:29:00	13.80	6.08	9.19	109.48	2.23	0.05	
11/14/07 11:29:15	13.95	5.93	9.19	156.56	3.34	0.05	
11/14/07 11:29:30	14.16	5.60	9.09	248.29	9.43	-0.20	
11/14/07 11:29:45	14.21	5.77	8.84	316.08	15.17	-0.45	
11/14/07 11:30:00	14.15	5.81	6.79	416.60	19.62	-0.45	
11/14/07 11:30:15	14.27	5.72	6.79	444.16	5.07	-0.45	
11/14/07 11:30:30	14.22	5.77	6.49	325.78	1.80	-0.45	
11/14/07 11:30:45	14.03	5.97	6.54	177.02	1.65	-0.45	flare at 1660 degrees
11/14/07 11:31:00	13.44	6.41	9.09	55.41	1.81	-0.45	actual 1542
11/14/07 11:31:15	13.33	6.40	9.84	39.45	1.63	-0.45	
11/14/07 11:31:30	13.79	6.04	10.29	34.48	1.88	-0.45	
11/14/07 11:31:45	14.03	5.89	9.94	32.48	1.69	-0.45	
11/14/07 11:32:00	13.90	6.02	9.19	28.75	1.73	-0.45	
11/14/07 11:32:15	13.75	6.13	9.19	27.51	1.56	-0.45	
11/14/07 11:32:30	13.74	6.06	9.49	28.50	1.53	-0.45	
11/14/07 11:32:45	13.96	5.91	9.44	30.49	1.36	-0.45	
11/14/07 11:33:00	13.96	5.97	9.09	33.96	1.53	-0.45	
11/14/07 11:33:15	13.92	5.96	8.84	33.48	1.86	-0.45	
11/14/07 11:33:30	13.96	5.97	8.99	29.50	1.86	-0.45	
11/14/07 11:33:45	13.84	6.05	8.99	27.01	1.80	-0.45	
11/14/07 11:34:00	13.84	6.04	9.19	25.00	1.87	-0.45	
11/14/07 11:34:15	13.67	6.16	9.19	24.51	1.81	-0.45	
11/14/07 11:34:30	13.80	6.03	9.59	24.26	1.70	-0.45	reranging co again
11/14/07 11:34:45							
11/14/07 11:35:00	13.80	6.06	8.89	26.53	1.69	-0.45	
11/14/07 11:35:15	13.80	6.07	9.31	24.29	1.38	-0.45	
11/14/07 11:35:30	13.62	6.23	9.29	21.85	1.54	-0.44	
11/14/07 11:35:45	13.53	6.24	9.59	21.70	1.62	-0.45	
11/14/07 11:36:00	13.80	6.04	9.89	23.04	1.67	-0.44	
11/14/07 11:36:15	13.91	5.98	9.37	23.99	1.59	-0.44	
11/14/07 11:36:30	13.81	6.07	9.09	25.94	1.93	-0.44	
11/14/07 11:36:45	13.74	6.10	9.24	26.78	1.59	-0.45	
11/14/07 11:37:00	13.85	6.02	9.39	25.44	1.64	-0.44	
11/14/07 11:37:15	13.88	6.00	9.19	24.29	1.57	-0.44	
11/14/07 11:37:30	13.85	6.03	9.09	23.94	1.71	-0.45	
11/14/07 11:37:45	13.81	6.07	9.19	24.89	1.49	-0.45	
11/14/07 11:38:00	13.74	6.10	9.29	26.53	1.77	-0.44	
11/14/07 11:38:15	13.83	6.03	9.39	27.23	1.77	0.05	
11/14/07 11:38:30	13.84	6.05	9.29	27.73	1.80	0.05	
11/14/07 11:38:45	13.82	6.04	9.19	27.53	1.73	0.05	
11/14/07 11:39:00	13.83	6.07	9.19	27.23	1.70	0.06	
11/14/07 11:39:15	13.61	6.20	9.09	26.63	1.71	0.05	
11/14/07 11:39:30	13.79	6.07	9.49	26.33	1.79	0.05	
11/14/07 11:39:45	13.82	6.03	9.34	30.22	1.77	0.05	
11/14/07 11:40:00	14.02	5.68	9.09	31.22	1.62	0.06	
11/14/07 11:40:15	14.02	5.91	8.94	33.21	1.47	0.05	
11/14/07 11:40:30	14.00	5.91	8.79	35.40	1.75	0.05	
11/14/07 11:40:45	13.98	5.94	8.79	35.45	1.53	0.05	
11/14/07 11:41:00	13.90	5.99	8.89	35.20	1.67	0.05	
11/14/07 11:41:15	13.90	5.99	8.99	35.95	1.75	0.05	
11/14/07 11:41:30	13.94	5.96	8.99	36.40	1.65	0.05	
11/14/07 11:41:45	13.87	6.02	6.99	36.65	1.55	0.05	
11/14/07 11:42:00	13.87	6.00	6.99	37.20	1.88	0.05	
11/14/07 11:42:15	13.91	5.98	9.14	39.39	1.62	0.05	
11/14/07 11:42:30	13.93	5.97	8.89	42.08	1.39	0.06	
11/14/07 11:42:45	13.91	5.99	8.79	44.52	1.88	0.05	
11/14/07 11:43:00	13.95	5.95	8.79	52.35	1.65	0.05	
11/14/07 11:43:15	13.98	5.94	8.99	58.33	2.01	0.06	
11/14/07 11:43:30	14.00	5.92	6.99	56.54	1.69	0.06	
11/14/07 11:43:45	13.92	6.00	8.94	51.80	1.65	0.05	
11/14/07 11:44:00	13.81	6.06	8.69	49.06	1.54	0.05	
11/14/07 11:44:15	13.93	5.95	9.14	44.57	1.62	-0.45	
11/14/07 11:44:30	13.85	6.06	8.89	39.89	1.49	-0.45	
11/14/07 11:44:45	13.82	6.02	9.04	40.14	1.84	-0.45	
11/14/07 11:45:00	14.02	5.90	9.09	41.48	1.88	-0.45	
11/14/07 11:45:15	13.97	5.94	8.84	44.42	1.61	-0.45	
11/14/07 11:45:30	14.13	5.79	8.99	50.06	1.59	-0.45	
11/14/07 11:45:45	14.11	5.83	8.59	54.49	1.61	-0.44	
11/14/07 11:46:00	14.14	5.80	8.49	54.45	1.56	-0.45	
11/14/07 11:46:15	14.13	5.64	6.59	54.50	1.59	-0.45	flare at 1630 da system
11/14/07 11:46:30	13.99	5.91	8.49	60.03	1.80	-0.45	
11/14/07 11:46:45	14.08	5.85	8.64	60.42	1.44	-0.45	
11/14/07 11:47:00	14.05	5.90	8.79	57.53	1.56	-0.45	
11/14/07 11:47:15	13.88	6.02	8.64	60.55	1.60	-0.45	
11/14/07 11:47:30	13.97	5.91	8.99	73.88	1.51	-0.45	
11/14/07 11:47:45	14.11	5.83	6.89	85.02	1.55	-0.45	
11/14/07 11:48:00	14.17	5.79	8.59	95.51	2.02	-0.45	
11/14/07 11:48:15	14.17	5.80	8.54	95.43	1.63	-0.45	
11/14/07 11:48:30	14.06	5.90	8.39	86.43	1.47	-0.45	
11/14/07 11:48:45	13.93	5.96	8.64	79.45	1.44	-0.45	
11/14/07 11:49:00	13.94	5.97	8.79	74.88	1.50	-0.45	
11/14/07 11:49:15	13.90	5.99	8.84	73.02	1.46	-0.44	
11/14/07 11:49:30	14.04	5.88	8.99	70.69	1.59	-0.45	
11/14/07 11:49:45	14.03	5.91	8.74	62.52	1.60	-0.44	
11/14/07 11:50:00	13.96	5.97	8.89	49.96	1.59	-0.44	
11/14/07 11:50:15	13.74	8.15	8.84	40.68	1.36	-0.45	
11/14/07 11:50:30	13.74	8.09	9.19	38.70	1.59	-0.45	flare at 1643
11/14/07 11:50:45	13.97	5.92	9.14	37.30	1.56	-0.45	
11/14/07 11:51:00	13.98	5.93	8.89	41.16	1.66	-0.45	
11/14/07 11:51:15	14.04	5.87	8.59	44.12	1.63	-0.45	
11/14/07 11:51:30	14.09	5.86	8.59	46.47	1.50	-0.44	
11/14/07 11:51:45	13.92	5.98	8.59	50.41	1.74	-0.45	
11/14/07 11:52:00	14.00	5.90	8.59	53.65	1.66	-0.44	
11/14/07 11:52:15	14.07	5.87	8.74	54.44	1.66	-0.45	
11/14/07 11:52:30	13.97	5.96	8.59	55.14	1.53	-0.44	
11/14/07 11:52:45	13.88	6.01	8.79	55.59	1.70	-0.45	
11/14/07 11:53:00	13.91	5.99	8.79	54.35	1.49	-0.45	
11/14/07 11:53:15	13.93	5.97	8.79	56.09	1.56	-0.45	
11/14/07 11:53:30	13.95	5.96	8.79	60.52	1.50	-0.45	
11/14/07 11:53:45	14.02	5.89	8.79	62.12	1.87	-0.45	
11/14/07 11:54:00	14.02	5.92	6.79	62.82	1.51	-0.45	
11/14/07 11:54:15	13.90	6.00	6.54	62.92	1.51	-0.44	
11/14/07 11:54:30	13.87	6.03	6.89	56.33	1.63	-0.45	
11/14/07 11:54:45	13.87	6.04	6.99	48.62	1.54	-0.45	
11/14/07 11:55:00	13.88	6.16	9.09	35.70	1.72	-0.45	
11/14/07 11:55:15	13.69	6.14	9.19	29.12	1.51	-0.45	
11/14/07 11:55:30	13.72	6.12	9.19	23.64	1.48	-0.45	
11/14/07 11:55:45	13.69	6.16	9.19	20.20	1.50	-0.45	
11/14/07 11:56:00	13.61	6.19	9.29	16.96	1.72	-0.45	
11/14/07 11:56:15	13.68	6.13	9.39	19.18	1.71	0.05	
11/14/07 11:56:30	13.73	6.11	9.39	19.55	1.49	0.05	flare at 1675
11/14/07 11:56:45	13.73	6.10	9.39	17.11	1.84	0.05	1685 actual
11/14/07 11:57:00	13.42	6.41	9.39	13.67	1.82	0.05	
11/14/07 11:57:15	13.02	6.64	9.54	11.93	1.66	0.05	
11/14/07 11:57:30	13.48	6.22	10.39	12.56	1.39	0.05	
11/14/07 11:57:45	13.75	6.03	9.84	16.12	1.44	0.05	
11/14/07 11:58:00	13.88	5.97	9.29	21.65	1.37	0.05	
11/14/07 11:58:15	13.90	5.96	6.99	28.06	1.27	0.05	
11/14/07 11:58:30	13.88	6.01	6.99	31.62	1.49	0.05	
11/14/07 11:58:45	13.86	6.02	6.99	30.57	1.58	0.05	
11/14/07 11:59:00	13.75	6.11	6.99	28.33	1.61	0.05	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 11:59:15	13.75	6.09	8.99	24.69	1.69	-0.44	
11/14/07 11:59:30	13.80	6.06	9.09	21.05	1.64	-0.45	
11/14/07 11:59:45	13.71	6.13	8.94	16.46	1.45	-0.44	
11/14/07 12:00:00	13.67	6.15	8.89	16.76	1.70	-0.45	
11/14/07 12:00:15	13.62	6.16	9.19	15.92	1.76	-0.45	
11/14/07 12:00:30	13.64	6.15	9.19	15.77	1.72	-0.44	
11/14/07 12:00:45	13.74	6.06	9.19	15.47	1.56	-0.44	
11/14/07 12:01:00	13.67	6.14	9.19	15.57	1.56	-0.45	
11/14/07 12:01:15	13.85	6.14	9.04	16.27	1.43	-0.45	
11/14/07 12:01:30	13.77	6.03	9.19	16.56	1.58	-0.45	
11/14/07 12:01:45	13.70	6.14	9.14	16.51	1.45	-0.44	
11/14/07 12:02:00	13.62	6.15	9.09	18.37	1.57	-0.44	
11/14/07 12:02:15	13.73	6.07	9.34	15.52	1.50	-0.45	
11/14/07 12:02:30	13.72	6.11	9.09	14.97	1.36	-0.45	
11/14/07 12:02:45	13.63	6.14	8.99	15.32	1.56	-0.45	
11/14/07 12:03:00	13.78	6.03	8.99	16.56	1.44	-0.45	
11/14/07 12:03:15	13.73	6.10	8.99	18.01	1.74	-0.45	
11/14/07 12:03:30	13.70	6.11	9.09	19.75	1.52	-0.45	
11/14/07 12:03:45	13.68	6.12	9.19	22.04	1.51	-0.45	
11/14/07 12:04:00	13.68	6.14	9.19	23.34	1.56	-0.45	
11/14/07 12:04:15	13.68	6.14	9.19	23.09	1.47	-0.45	
11/14/07 12:04:30	13.67	6.13	9.19	23.14	1.55	-0.45	
11/14/07 12:04:45	13.72	6.09	9.19	22.69	1.62	-0.45	
11/14/07 12:05:00	13.73	6.10	9.19	21.94	1.50	-0.39	
11/14/07 12:05:15	13.64	6.17	9.19	21.50	1.54	0.05	
11/14/07 12:05:30	13.61	6.17	9.32	21.05	1.47	0.05	
11/14/07 12:05:45	13.70	6.10	9.19	21.20	1.46	0.05	
11/14/07 12:06:00	13.76	6.06	9.06	21.65	1.42	0.05	
11/14/07 12:06:15	13.75	6.07	8.99	21.55	1.55	0.05	
11/14/07 12:06:30	13.70	6.12	8.99	21.55	1.33	0.05	
11/14/07 12:06:45	13.76	6.04	9.04	22.64	1.47	0.05	
11/14/07 12:07:00	13.82	5.94	9.04	23.64	1.42	0.05	
11/14/07 12:07:15	13.80	6.05	8.64	23.89	1.57	0.05	
11/14/07 12:07:30	13.70	6.11	8.79	22.94	1.47	0.05	
11/14/07 12:07:45	13.68	6.13	8.99	20.00	1.32	0.05	flare 1573 actual
11/14/07 12:08:00	13.51	6.28	9.14	16.96	1.44	0.05	
11/14/07 12:08:15	13.43	6.29	9.24	14.67	1.49	0.05	
11/14/07 12:08:30	13.53	6.21	9.59	13.47	1.54	0.05	
11/14/07 12:08:45	13.62	6.13	9.54	13.37	1.84	0.05	
11/14/07 12:09:00	13.73	6.06	9.24	13.47	1.51	0.05	
11/14/07 12:09:15	13.64	6.14	8.99	13.57	1.76	0.05	
11/14/07 12:09:30	13.58	6.18	9.14	13.47	1.67	0.05	
11/14/07 12:09:45	13.51	6.22	9.24	13.17	1.73	0.05	
11/14/07 12:10:00	13.48	6.26	9.39	12.67	1.45	0.05	
11/14/07 12:10:15	13.42	6.28	9.44	12.72	1.56	0.05	
11/14/07 12:10:30	13.52	6.20	9.59	12.97	1.69	0.05	
11/14/07 12:10:45	13.53	6.21	9.34	13.07	1.48	0.05	
11/14/07 12:11:00	13.55	6.17	9.34	12.67	1.47	-0.05	
11/14/07 12:11:15	13.56	6.17	9.39	12.23	1.60	-0.45	
11/14/07 12:11:30	13.49	6.26	9.24	11.58	1.51	-0.45	
11/14/07 12:11:45	13.30	6.36	9.44	11.18	1.60	-0.45	
11/14/07 12:12:00	13.39	6.27	9.59	11.08	1.69	-0.45	
11/14/07 12:12:15	13.58	6.12	8.54	11.58	1.58	-0.44	
11/14/07 12:12:30	13.81	5.96	9.24	12.28	1.47	-0.45	
11/14/07 12:12:45	13.82	5.97	8.94	12.97	1.59	-0.45	
11/14/07 12:13:00	13.79	6.01	8.84	13.67	1.67	-0.45	
11/14/07 12:13:15	13.65	6.12	8.64	14.62	1.64	-0.45	
11/14/07 12:13:30	13.65	6.10	8.94	16.36	1.61	-0.45	
11/14/07 12:13:45	13.76	6.02	8.99	18.48	1.58	-0.45	
11/14/07 12:14:00	13.71	6.09	8.84	19.85	1.48	-0.45	
11/14/07 12:14:15	13.71	6.06	8.64	19.45	1.42	-0.45	
11/14/07 12:14:30	13.59	6.20	8.79	18.56	1.59	-0.45	
11/14/07 12:14:45	13.51	6.23	9.24	17.91	1.51	-0.45	
11/14/07 12:15:00	13.59	6.17	9.39	17.08	1.50	-0.45	
11/14/07 12:15:15	13.60	6.16	9.34	15.22	1.73	-0.45	
11/14/07 12:15:30	13.56	6.23	9.19	13.17	1.44	-0.45	
11/14/07 12:15:45	13.35	6.33	9.19	12.13	1.53	-0.45	
11/14/07 12:16:00	13.55	6.15	9.34	12.28	1.54	-0.45	
11/14/07 12:16:15	13.70	6.06	9.34	13.62	1.59	-0.45	
11/14/07 12:16:30	13.68	6.09	8.89	15.37	1.42	-0.45	
11/14/07 12:16:45	13.73	6.05	8.84	17.61	1.42	-0.45	
11/14/07 12:17:00	13.72	6.06	8.84	20.15	1.46	-0.45	
11/14/07 12:17:15	13.62	6.00	8.79	22.49	1.43	-0.45	
11/14/07 12:17:30	13.83	5.99	8.84	25.34	1.47	-0.45	
11/14/07 12:17:45	13.68	5.96	8.59	27.63	1.34	-0.45	
11/14/07 12:18:00	13.78	6.06	8.59	28.53	1.31	-0.45	
11/14/07 12:18:15	13.84	6.15	8.84	28.23	1.57	-0.45	
11/14/07 12:18:30	13.67	6.12	8.94	25.63	1.48	-0.45	
11/14/07 12:18:45	13.62	6.16	8.99	21.50	1.53	-0.45	
11/14/07 12:19:00	13.39	6.36	9.14	18.08	1.52	-0.45	
11/14/07 12:19:16	13.33	6.36	9.44	16.21	1.47	-0.45	
11/14/07 12:19:30	13.42	6.29	9.74	14.77	1.43	-0.45	
11/14/07 12:19:45	13.48	6.25	9.59	13.87	1.55	-0.45	
11/14/07 12:20:00	13.59	6.14	9.44	13.57	1.45	-0.33	
11/14/07 12:20:15	13.74	6.04	9.29	13.62	1.37	0.05	
11/14/07 12:20:30	13.84	6.15	8.84	14.07	1.43	0.05	
11/14/07 12:20:45	13.55	6.16	9.04	14.22	1.35	0.05	
11/14/07 12:21:00	13.63	6.12	9.19	14.67	1.42	0.05	
11/14/07 12:21:15	13.63	6.13	9.14	15.47	1.52	0.05	flare at 1560
11/14/07 12:21:30	13.57	6.18	8.99	16.26	1.53	0.05	
11/14/07 12:21:45	13.59	6.16	9.19	16.71	1.39	0.05	
11/14/07 12:22:00	13.61	6.16	9.19	16.66	1.37	0.05	
11/14/07 12:22:15	13.58	6.20	9.19	16.21	1.50	0.05	
11/14/07 12:22:30	13.51	6.23	9.04	15.87	1.46	0.05	
11/14/07 12:22:45	13.47	6.25	9.19	15.42	1.51	0.05	
11/14/07 12:23:00	13.58	6.16	9.19	15.07	1.48	-0.07	
11/14/07 12:23:15	13.55	6.20	9.34	15.48	1.48	-0.45	
11/14/07 12:23:30	13.47	6.24	9.19	16.76	1.41	-0.45	
11/14/07 12:23:45	13.60	6.15	9.24	18.81	1.27	-0.45	
11/14/07 12:24:00	13.62	6.13	9.24	16.96	1.32	-0.45	
11/14/07 12:24:15	13.62	6.17	9.14	21.32	1.46	-0.45	
11/14/07 12:24:30	13.52	6.22	8.99	23.84	1.49	-0.45	
11/14/07 12:24:45	13.68	6.07	9.19	32.23	1.43	-0.45	
11/14/07 12:25:00	14.03	5.82	9.04	49.58	1.52	-0.45	
11/14/07 12:25:15	14.08	5.79	8.84	56.90	1.37	-0.45	
11/14/07 12:25:30	13.96	5.97	8.39	37.69	1.36	-0.45	
11/14/07 12:25:45	12.92	6.84	8.59	16.06	1.48	-0.45	
11/14/07 12:26:00	13.14	6.41	9.49	13.27	1.40	-0.33	
11/14/07 12:26:15	13.77	6.00	10.89	15.32	1.44	0.05	
11/14/07 12:26:30	13.77	6.01	9.09	19.95	1.44	0.05	
11/14/07 12:26:45	13.83	5.98	8.74	28.92	1.50	0.05	
11/14/07 12:27:00	13.87	5.95	8.59	33.01	1.47	0.05	
11/14/07 12:27:15	13.87	5.99	8.59	35.50	1.22	0.05	
11/14/07 12:27:30	13.73	6.09	8.44	36.40	1.37	0.05	
11/14/07 12:27:45	13.83	6.00	8.84	33.18	1.55	0.05	
11/14/07 12:28:00	13.78	6.09	8.84	31.81	1.33	0.05	
11/14/07 12:28:15	13.62	6.18	8.84	33.41	1.32	0.05	
11/14/07 12:28:30	13.63	6.16	8.94	39.78	1.31	0.04	
11/14/07 12:28:45	13.80	5.99	9.04	58.18	1.33	0.04	
11/14/07 12:29:00	14.00	5.86	8.69	92.12	2.09	-0.08	
11/14/07 12:29:15	14.01	5.86	8.59	176.19	3.14	-0.45	1550 actual
11/14/07 12:29:30	14.15	5.75	8.44	199.36	2.86	-0.46	co at 280
11/14/07 12:29:45	14.12	5.81	8.19	199.36	3.29	-0.45	
11/14/07 12:30:00	13.94	5.95	8.19	199.36	3.51	-0.45	
11/14/07 12:30:15	13.93	5.94	8.44	199.36	2.86	-0.45	
11/14/07 12:30:30	14.04	5.85	8.74	199.36	5.10	-0.45	
11/14/07 12:30:45	14.11	5.80	8.64	199.36	14.76	-0.45	co at 290
11/14/07 12:31:00	14.07	5.84	8.39	199.36	3.60	-0.45	
11/14/07 12:31:15	14.09	5.81	8.39	199.36	2.92	-0.45	
11/14/07 12:31:30	14.18	5.76	8.39	199.36	1.95	-0.45	
11/14/07 12:31:45	14.01	5.90	8.39	185.96	1.60	-0.45	
11/14/07 12:32:00	13.98	5.92	8.54	132.89	1.48	-0.33	
11/14/07 12:32:15	13.90	5.99	8.84	94.76	1.47	0.05	
11/14/07 12:32:30	13.92	5.97	8.99	98.10	1.54	0.05	
11/14/07 12:32:45	13.93	5.93	8.99	107.47	1.47	0.05	
11/14/07 12:33:00	14.14	5.78	8.84	109.48	1.51	0.05	
11/14/07 12:33:15	14.14	5.81	8.74	115.79	1.60	0.05	
11/14/07 12:33:30	13.99	5.89	8.44	136.98	1.92	0.05	
11/14/07 12:33:45	14.13	5.77	8.84	185.32	3.86	0.05	
11/14/07 12:34:00	14.33	5.62	8.69	199.37	5.08	0.05	
11/14/07 12:34:15	14.30	5.65	8.33	199.37	5.84	0.05	
11/14/07 12:34:30	14.24	5.71	8.19	199.37	11.53	0.05	
11/14/07 12:34:45	14.24	5.71	8.27	199.37	11.44	0.05	
11/14/07 12:35:00	14.25	5.68	8.39	199.37	14.19	1.66	
11/14/07 12:35:15	14.32	5.64	8.32	199.37	9.55	6.56	

Range Units	20.0 %	20.0 %	88.88 ppm	90.41 ppm	100.0 ppm	100.0 ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 12:35:30	14.24	5.72	8.19	199.37	10.01	6.56	
11/14/07 12:35:45	14.19	5.75	8.29	199.37	19.71	6.56	
11/14/07 12:36:00	14.14	5.80	8.39	199.37	19.22	6.56	
11/14/07 12:36:15	14.18	5.73	8.59	199.37	10.93	8.56	
11/14/07 12:36:30	14.35	5.62	8.59	199.37	21.40	6.56	
11/14/07 12:36:45	14.26	5.71	8.29	199.37	16.92	6.56	
11/14/07 12:37:00	14.08	5.86	8.34	199.37	37.71	6.56	
11/14/07 12:37:15	14.10	5.80	8.59	199.37	16.65	6.56	
11/14/07 12:37:30	14.26	5.69	8.74	199.37	37.62	6.56	
11/14/07 12:37:45	14.28	5.70	8.49	199.37	19.99	8.56	
11/14/07 12:38:00	14.17	5.76	8.39	199.36	17.37	27.97	
11/14/07 12:38:15	14.25	5.70	8.59	199.37	12.54	92.72	
11/14/07 12:38:30	14.20	5.75	8.58	199.37	10.86	92.72	
11/14/07 12:38:45	14.14	5.80	8.59	199.37	7.90	92.72	
11/14/07 12:39:00	14.03	5.90	8.59	199.37	4.44	92.72	
11/14/07 12:39:15	14.02	5.89	8.89	199.37	2.14	92.72	
11/14/07 12:39:30	14.09	5.84	8.99	199.36	2.28	92.72	
11/14/07 12:39:45	14.02	5.90	8.89	195.13	1.83	92.72	
11/14/07 12:40:00	14.00	5.90	8.94	175.35	1.99	92.72	
11/14/07 12:40:15	13.98	5.93	8.99	167.16	1.81	92.72	
11/14/07 12:40:30	14.01	5.88	8.99	154.62	1.50	92.72	
11/14/07 12:40:45	13.99	5.94	8.89	130.89	1.54	92.72	
11/14/07 12:41:00	13.84	8.01	8.94	114.55	1.46	69.63	
11/14/07 12:41:15	13.93	5.96	9.19	96.60	1.46	0.05	
11/14/07 12:41:30	13.90	8.00	9.04	87.53	1.27	0.05	
11/14/07 12:41:45	13.83	8.01	8.99	79.46	1.41	0.05	
11/14/07 12:42:00	13.98	5.90	8.99	74.87	1.52	0.05	
11/14/07 12:42:15	14.01	5.90	8.99	67.20	1.50	0.04	
11/14/07 12:42:30	13.93	5.96	8.84	70.79	1.46	0.04	
11/14/07 12:42:45	13.89	5.96	8.99	74.67	1.40	0.04	
11/14/07 12:43:00	14.13	5.79	8.99	68.09	1.42	0.04	
11/14/07 12:43:15	14.01	5.90	8.79	68.84	1.57	0.04	
11/14/07 12:43:30	13.97	5.90	8.79	62.51	1.45	0.05	
11/14/07 12:43:45	14.04	5.88	8.89	56.33	1.63	0.04	
11/14/07 12:44:00	13.84	8.02	8.99	60.02	1.46	-0.08	
11/14/07 12:44:15	13.90	5.95	8.99	71.78	1.54	-0.46	
11/14/07 12:44:30	13.99	5.88	9.14	71.38	1.59	-0.46	
11/14/07 12:44:45	14.00	5.90	8.89	67.05	1.36	-0.46	
11/14/07 12:45:00	13.90	5.96	8.94	75.27	1.28	-0.45	
11/14/07 12:45:15	14.08	5.79	8.99	88.93	1.60	-0.46	
11/14/07 12:45:30	14.24	5.71	8.84	96.00	1.61	-0.46	
11/14/07 12:45:45	14.08	5.85	8.59	106.07	1.28	-0.45	
11/14/07 12:46:00	14.08	5.84	8.74	103.08	1.46	-0.45	
11/14/07 12:46:15	14.01	5.89	8.99	105.23	1.54	-0.45	
11/14/07 12:46:30	14.08	5.81	8.99	108.17	1.55	-0.48	
11/14/07 12:46:45	14.09	5.83	8.79	108.96	1.48	-0.48	
11/14/07 12:47:00	14.03	5.88	8.79	112.65	1.38	-0.33	
11/14/07 12:47:15	13.96	5.91	8.89	117.98	1.76	0.05	
11/14/07 12:47:30	13.97	5.92	8.99	132.09	1.73	0.04	
11/14/07 12:47:45	14.06	5.82	8.99	145.79	1.57	0.05	
11/14/07 12:48:00	14.10	5.82	8.84	137.87	1.60	0.04	
11/14/07 12:48:15	13.97	5.92	8.69	139.91	1.81	0.04	
11/14/07 12:48:30	13.95	5.91	8.79	150.13	2.01	0.05	
11/14/07 12:48:45	14.01	5.88	8.99	171.61	1.76	0.04	
11/14/07 12:49:00	13.99	5.89	8.99	175.15	2.25	0.04	
11/14/07 12:49:15	14.10	5.81	8.79	155.66	2.04	0.05	
11/14/07 12:49:30	13.91	5.99	8.64	152.92	1.55	0.04	
11/14/07 12:49:45	13.79	6.05	8.89	144.15	1.74	0.04	
11/14/07 12:50:00	13.90	5.96	9.14	122.12	1.69	0.04	
11/14/07 12:50:15	13.81	6.05	9.19	90.27	1.51	0.04	
11/14/07 12:50:30	13.61	6.21	9.19	81.25	1.45	0.04	
11/14/07 12:50:45	13.66	6.13	9.49	71.58	1.35	0.04	
11/14/07 12:51:00	13.69	6.13	9.44	64.80	1.14	0.04	
11/14/07 12:51:15	13.60	6.18	9.49	66.80	1.64	0.04	
11/14/07 12:61:30	13.83	5.98	9.59	65.60	1.64	0.04	
11/14/07 12:51:45	13.84	6.02	9.09	57.58	1.29	0.04	
11/14/07 12:52:00	13.60	8.04	8.99	49.55	1.42	0.04	
11/14/07 12:52:15	13.73	8.09	9.19	41.43	1.59	0.04	
11/14/07 12:52:30	13.63	6.18	9.19	36.89	1.62	0.04	
11/14/07 12:52:45	13.48	6.25	9.39	28.32	1.49	0.04	
11/14/07 12:53:00	13.52	6.24	9.54	24.24	1.37	0.17	
11/14/07 12:53:15	13.49	6.23	9.79	24.83	1.52	0.55	
11/14/07 12:53:30	13.76	6.02	9.79	27.43	1.50	0.54	
11/14/07 12:53:45	13.83	5.98	9.39	31.06	1.52	0.55	
11/14/07 12:54:00	13.91	5.92	9.19	33.31	1.53	0.55	
11/14/07 12:54:15	13.83	6.01	8.99	38.49	1.42	0.54	
11/14/07 12:54:30	13.83	5.96	8.99	46.16	1.70	0.55	
11/14/07 12:54:45	13.90	5.94	8.99	51.95	1.82	0.55	
11/14/07 12:55:00	13.81	6.01	8.99	57.53	1.94	0.55	
11/14/07 12:55:15	13.86	5.95	8.99	79.45	1.49	0.54	
11/14/07 12:55:30	13.93	5.92	8.99	106.07	2.18	0.55	
11/14/07 12:55:45	13.90	5.94	8.99	149.08	1.72	0.54	
11/14/07 12:56:00	14.00	5.85	8.99	157.50	1.82	0.42	
11/14/07 12:56:15	14.04	5.85	8.89	125.11	1.66	0.04	
11/14/07 12:56:30	13.82	6.05	8.64	99.39	1.58	0.04	
11/14/07 12:56:45	13.56	6.21	8.89	90.17	1.92	0.04	
11/14/07 12:57:00	13.65	6.13	9.29	97.89	1.69	0.04	
11/14/07 12:57:15	13.76	6.05	9.49	94.80	1.75	0.04	
11/14/07 12:57:30	13.75	6.07	9.24	94.20	1.39	0.04	
11/14/07 12:57:45	13.69	6.11	9.19	107.37	1.79	0.04	
11/14/07 12:58:00	13.78	6.03	9.19	126.20	1.66	0.04	
11/14/07 12:58:15	13.98	5.85	9.19	135.42	1.78	0.04	
11/14/07 12:58:30	14.08	5.83	9.04	131.29	18.87	0.04	
11/14/07 12:58:45	13.92	5.94	8.59	91.47	8.92	0.04	
11/14/07 12:59:00	14.38	5.28	8.54	44.71	2.67	5.80	
11/14/07 12:59:15	15.86	1.71	7.79	7.94	2.54	23.07	
11/14/07 12:59:30	7.10	0.34	5.29	1.84	2.18	23.07	
11/14/07 12:59:45	0.91	0.13	1.56	1.01	2.48	23.07	
11/14/07 13:00:00	0.21	0.10	0.24	0.86	2.04	23.07	
11/14/07 13:00:15	0.16	0.09	-0.01	0.81	2.35	23.08	
11/14/07 13:00:30	0.13	0.08	-0.01	0.96	2.10	23.08	
11/14/07 13:00:45	0.12	0.07	-0.01	0.81	2.34	23.08	
11/14/07 13:01:00	0.11	0.07	-0.01	0.81	2.25	23.07	
11/14/07 13:01:15	0.11	0.06	-0.01	0.86	1.99	23.08	
11/14/07 13:01:30	0.10	0.06	-0.01	0.86	2.11	23.07	
11/14/07 13:01:45	0.10	0.06	-0.01	0.81	1.96	23.08	
11/14/07 13:02:00	0.10	0.06	-0.01	0.81	2.06	17.32	
11/14/07 13:02:15	0.09	0.06	-0.01	0.81	1.91	0.04	
11/14/07 13:02:30	0.09	0.06	-0.01	0.81	2.02	0.04	
11/14/07 13:02:45	0.09	0.06	-0.01	0.81	2.01	0.04	
11/14/07 13:03:00	0.09	0.06	-0.01	0.81	2.13	0.04	
11/14/07 13:03:15	0.09	0.04	-0.01	0.81	1.94	0.04	
11/14/07 13:03:30	0.08	0.04	-0.01	0.81	1.94	0.04	
11/14/07 13:03:45	0.08	0.04	-0.01	9.63	3.16	0.04	
11/14/07 13:04:00	1.13	0.80	-0.01	19.80	3.49	0.04	
11/14/07 13:04:15	4.01	1.78	0.69	26.83	2.33	0.04	
11/14/07 13:04:30	2.04	0.59	2.24	36.04	2.51	0.04	
11/14/07 13:04:45	0.47	0.09	1.59	45.36	2.65	0.04	
11/14/07 13:05:00	0.13	0.05	0.74	47.61	2.90	0.04	
11/14/07 13:05:15	0.10	0.04	0.19	48.66	2.61	0.04	
11/14/07 13:05:30	0.09	0.04	0.04	49.10	2.69	0.04	
11/14/07 13:05:45	0.09	0.04	-0.01	48.21	2.44	0.04	
11/14/07 13:06:00	0.08	0.04	-0.01	48.71	2.15	0.04	
11/14/07 13:06:15	0.08	0.03	-0.01	48.11	2.21	0.04	
11/14/07 13:06:30	0.08	0.03	-0.01	45.66	2.24	0.04	
11/14/07 13:06:45	0.08	0.03	-0.01	45.76	1.96	0.04	
11/14/07 13:07:00	0.07	0.03	-0.01	45.46	2.11	0.04	
11/14/07 13:07:15	0.07	0.03	-0.01	45.61	2.31	0.04	
11/14/07 13:07:30	0.07	0.03	-0.01	45.66	2.30	0.04	
11/14/07 13:07:45	0.07	0.03	-0.01	45.31	2.41	0.04	
11/14/07 13:08:00	0.07	0.03	-0.01	45.46	2.23	0.04	
11/14/07 13:08:15	0.07	0.03	-0.01	45.51	3.59	0.04	
11/14/07 13:08:30	0.07	0.03	-0.01	48.60	10.34	0.04	
11/14/07 13:08:45	0.21	0.20	-0.01	73.42	2.48	0.04	
11/14/07 13:09:00	2.95	1.44	0.19	66.17	2.54	0.04	
11/14/07 13:09:15	2.64	0.90	0.89	22.88	2.44	0.04	
11/14/07 13:09:30	0.51	0.14	6.54	4.46	2.33	0.04	
11/14/07 13:09:45	0.13	0.05	28.99	1.36	2.34	0.04	
11/14/07 13:10:00	0.09	0.04	56.78	1.36	2.03	0.04	
11/14/07 13:10:15	0.08	0.04	75.18	1.01	2.03	0.04	
11/14/07 13:10:30	0.07	0.04	70.88	1.01	2.01	0.04	
11/14/07 13:10:45	0.07	0.04	60.09	1.01	2.09	0.04	
11/14/07 13:11:00	0.06	0.04	53.73	1.01	2.26	0.16	
11/14/07 13:11:15	0.06	0.04	51.28	1.01	2.25	0.54	
11/14/07 13:11:30	0.06	0.04	50.23	1.01	2.19	0.54	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 13:11:45	0.06	0.04	49.28	1.01	2.11	0.54	
11/14/07 13:12:00	0.06	0.04	48.56	0.86	2.06	0.54	
11/14/07 13:12:15	0.06	0.04	47.96	1.01	2.13	0.54	
11/14/07 13:12:30	0.06	0.03	47.43	1.01	1.99	0.54	
11/14/07 13:12:45	0.06	0.03	47.06	0.96	2.13	0.54	
11/14/07 13:13:00	0.06	0.03	46.78	0.96	1.95	0.54	
11/14/07 13:13:15	0.06	0.03	46.49	1.01	2.15	0.54	
11/14/07 13:13:30	0.06	0.03	46.34	1.01	1.96	0.54	
11/14/07 13:13:45	0.06	0.03	48.09	0.96	2.29	0.54	
11/14/07 13:14:00	0.06	0.03	45.94	0.96	1.96	0.41	
11/14/07 13:14:15	0.06	0.03	45.79	1.01	2.02	0.03	
11/14/07 13:14:30	0.05	0.03	45.63	1.01	2.06	0.04	
11/14/07 13:14:45	0.06	0.03	45.58	0.86	2.15	0.04	
11/14/07 13:15:00	0.06	0.03	45.43	0.88	2.13	0.04	
11/14/07 13:15:15	0.06	0.03	45.38	0.88	2.19	0.04	
11/14/07 13:15:30	0.05	0.03	45.23	0.86	2.14	0.03	
11/14/07 13:15:45	0.06	0.03	45.18	0.96	2.19	0.03	
11/14/07 13:16:00	0.05	0.03	45.13	0.96	2.09	0.04	
11/14/07 13:16:15	0.06	0.03	44.99	1.01	2.21	0.04	
11/14/07 13:16:30	0.06	0.03	44.99	0.86	2.02	0.03	
11/14/07 13:16:45	0.05	0.03	44.99	0.96	2.14	0.03	
11/14/07 13:17:00	0.05	0.03	44.83	0.96	2.14	0.03	
11/14/07 13:17:15	0.06	0.03	44.78	0.96	2.02	0.04	
11/14/07 13:17:30	0.05	0.03	44.78	0.96	2.23	0.03	
11/14/07 13:17:45	0.05	0.02	44.78	1.26	1.88	0.03	
11/14/07 13:18:00	0.06	0.03	44.63	6.19	2.35	0.03	
11/14/07 13:18:15	1.65	1.38	44.28	8.34	2.44	0.03	
11/14/07 13:18:30	4.62	2.53	42.03	4.60	1.85	0.03	
11/14/07 13:18:45	4.21	3.59	32.98	1.26	1.81	0.03	
11/14/07 13:19:00	7.35	8.99	28.28	0.51	2.13	0.03	
11/14/07 13:19:15	9.30	8.77	17.29	0.06	1.84	0.03	
11/14/07 13:19:30	9.73	9.03	5.74	0.21	1.89	0.03	
11/14/07 13:19:45	9.76	8.95	1.49	0.21	2.00	0.03	
11/14/07 13:20:00	9.76	9.05	0.44	0.06	1.92	0.16	
11/14/07 13:20:15	9.80	9.29	0.39	0.16	1.80	0.53	
11/14/07 13:20:30	9.82	9.54	0.24	0.16	1.59	0.54	
11/14/07 13:20:45	9.83	9.70	0.19	0.16	1.83	0.54	
11/14/07 13:21:00	9.84	9.77	0.19	0.16	1.47	0.54	
11/14/07 13:21:15	9.84	9.80	0.19	0.06	1.66	0.54	
11/14/07 13:21:30	9.84	9.81	0.19	0.21	1.41	0.54	
11/14/07 13:21:45	9.84	9.83	0.19	0.01	1.34	0.54	
11/14/07 13:22:00	9.84	9.84	0.19	0.01	1.44	0.54	
11/14/07 13:22:15	9.85	9.84	0.19	0.01	1.54	0.53	
11/14/07 13:22:30	9.84	9.84	0.19	0.16	1.51	0.54	
11/14/07 13:22:45	9.85	9.85	0.19	2.70	1.59	0.54	
11/14/07 13:23:00	9.99	9.62	0.19	4.05	1.45	0.54	
11/14/07 13:23:15	10.58	9.14	0.69	2.16	1.53	0.54	
11/14/07 13:23:30	9.99	9.83	1.74	0.21	1.65	0.53	
11/14/07 13:23:45	9.79	9.77	0.99	0.16	1.65	0.54	
11/14/07 13:24:00	9.78	9.79	0.39	0.01	1.57	0.54	
11/14/07 13:24:15	9.78	9.79	0.19	0.16	1.43	0.53	
11/14/07 13:24:30	9.78	9.80	0.19	0.01	1.45	0.54	
11/14/07 13:24:45	9.78	9.80	0.29	0.01	1.48	0.53	
11/14/07 13:25:00	9.78	9.80	0.24	0.16	1.40	0.53	
11/14/07 13:25:15	9.78	9.80	0.19	0.01	1.45	0.53	
11/14/07 13:25:30	9.78	9.80	0.19	0.01	1.32	0.53	
11/14/07 13:25:45	9.79	9.81	0.19	1.06	1.68	0.53	
11/14/07 13:26:00	9.79	9.79	0.19	10.03	1.86	0.53	
11/14/07 13:26:15	10.55	8.80	0.29	20.99	1.84	0.53	
11/14/07 13:26:30	12.68	6.85	1.39	23.24	1.77	0.53	
11/14/07 13:26:45	13.16	6.55	6.39	19.74	1.74	0.53	
11/14/07 13:27:00	13.27	6.45	9.09	17.80	1.94	0.53	
11/14/07 13:27:15	13.32	6.42	9.89	13.97	1.49	0.53	
11/14/07 13:27:30	13.18	6.58	9.79	6.79	1.30	0.53	
11/14/07 13:27:45	11.95	7.50	9.79	1.71	1.28	0.53	
11/14/07 13:28:00	15.73	3.40	6.09	0.51	1.24	0.53	
11/14/07 13:28:15	19.94	0.52	1.99	0.66	1.31	0.53	
11/14/07 13:26:30	20.67	0.18	0.49	0.81	1.19	0.53	
11/14/07 13:26:45	20.72	0.14	0.09	0.61	1.02	0.53	
11/14/07 13:29:00	20.74	0.11	-0.01	0.66	1.32	0.53	
11/14/07 13:29:16	20.75	0.10	-0.01	0.81	1.06	0.53	
11/14/07 13:29:30	20.76	0.09	-0.01	0.61	1.09	0.53	
11/14/07 13:29:45	20.77	0.06	-0.01	0.76	1.06	0.53	
11/14/07 13:30:00	20.76	0.07	-0.01	0.76	1.15	0.53	
11/14/07 13:30:15	20.78	0.07	-0.01	0.81	0.99	0.53	
11/14/07 13:30:30	20.78	0.07	-0.01	0.81	1.08	0.53	
11/14/07 13:30:45	20.79	0.06	-0.01	0.81	0.86	0.53	
11/14/07 13:31:00	20.79	0.06	-0.01	0.81	1.05	0.53	
11/14/07 13:31:15	20.79	0.06	-0.01	0.81	0.94	0.53	
11/14/07 13:31:30	20.80	0.05	-0.01	0.61	1.18	0.53	
11/14/07 13:31:45	20.80	0.05	-0.01	2.01	17.11	0.53	
11/14/07 13:32:00	19.94	1.02	-0.01	2.46	49.25	0.53	
11/14/07 13:32:15	19.00	1.52	0.69	1.46	50.87	0.53	
11/14/07 13:32:30	20.22	0.89	2.29	0.86	50.97	0.53	
11/14/07 13:32:45	20.33	0.23	1.19	0.51	50.91	0.53	
11/14/07 13:33:00	20.32	0.08	0.34	0.96	50.69	0.53	
11/14/07 13:33:15	20.33	0.06	-0.01	0.96	50.99	0.53	
11/14/07 13:33:30	20.35	0.06	-0.01	0.96	51.01	0.53	
11/14/07 13:33:45	20.37	0.05	-0.01	1.01	50.83	0.53	
11/14/07 13:34:00	20.40	0.05	-0.01	1.01	50.88	0.53	
11/14/07 13:34:15	20.42	0.05	-0.01	0.96	50.65	0.53	
11/14/07 13:34:30	20.45	0.05	-0.01	0.96	50.80	0.53	
11/14/07 13:34:45	20.47	0.05	-0.01	0.94	50.78	0.53	
11/14/07 13:35:00	20.48	0.04	-0.01	0.96	50.83	12.93	
11/14/07 13:35:15	20.49	0.04	-0.01	0.81	51.02	50.11	
11/14/07 13:35:30	20.49	0.04	-0.01	0.96	50.83	50.11	
11/14/07 13:35:45	20.49	0.04	-0.01	0.91	37.79	50.12	
11/14/07 13:36:00	20.50	0.04	-0.01	1.61	3.98	50.11	
11/14/07 13:36:15	20.41	0.22	-0.01	10.27	1.99	50.11	
11/14/07 13:36:30	17.88	2.98	0.44	17.95	1.88	50.11	
11/14/07 13:36:45	14.58	5.65	2.59	20.85	2.11	50.11	
11/14/07 13:37:00	13.84	6.30	6.89	18.50	1.80	50.11	
11/14/07 13:37:15	13.22	6.55	9.29	17.05	1.77	50.11	
11/14/07 13:37:30	13.24	6.48	10.04	16.81	1.68	50.11	
11/14/07 13:37:45	13.37	6.40	10.29	15.96	1.81	50.12	
11/14/07 13:38:00	13.40	6.39	9.94	16.96	1.59	37.72	
11/14/07 13:38:15	13.39	6.38	9.89	17.75	1.57	0.53	
11/14/07 13:38:30	13.51	6.32	9.94	19.15	1.59	0.53	
11/14/07 13:38:45	13.40	6.38	9.89	19.94	1.72	0.53	
11/14/07 13:39:00	13.48	6.34	9.84	20.44	1.87	0.53	
11/14/07 13:39:15	13.39	6.40	9.89	21.04	1.53	0.53	
11/14/07 13:39:30	13.42	6.38	9.99	21.44	1.82	0.53	
11/14/07 13:39:45	13.33	6.45	9.99	21.24	1.79	0.53	
11/14/07 13:40:00	13.32	6.46	10.04	20.49	1.62	0.53	
11/14/07 13:40:15	13.23	6.54	10.19	18.85	1.75	0.53	
11/14/07 13:40:30	13.21	6.54	10.19	17.90	1.57	0.53	
11/14/07 13:40:45	13.22	6.53	10.19	16.88	1.55	0.53	
11/14/07 13:41:00	13.24	6.50	10.19	15.61	1.52	0.85	
11/14/07 13:41:15	13.22	6.53	10.19	14.88	1.46	1.02	
11/14/07 13:41:30	13.20	6.54	10.19	14.61	1.58	1.02	
11/14/07 13:41:45	13.25	6.49	10.19	14.56	1.49	1.02	flare at 1530
11/14/07 13:42:00	13.28	6.48	10.14	14.21	1.55	1.02	
11/14/07 13:42:15	13.27	6.47	9.99	13.96	1.73	1.02	
11/14/07 13:42:30	13.29	6.48	9.99	16.41	1.72	1.02	
11/14/07 13:42:45	13.35	6.41	9.99	18.25	1.48	1.02	
11/14/07 13:43:00	13.40	6.38	9.94	18.16	1.60	1.02	
11/14/07 13:43:15	13.39	6.41	9.79	17.76	1.55	1.02	
11/14/07 13:43:30	13.31	6.43	9.79	18.88	1.56	1.02	
11/14/07 13:43:45	13.45	6.34	9.89	18.26	1.84	1.02	
11/14/07 13:44:00	13.36	6.42	9.74	17.10	1.65	1.02	
11/14/07 13:44:15	13.31	6.45	9.69	16.96	1.84	1.02	
11/14/07 13:44:30	13.28	5.49	9.99	16.01	1.46	1.02	
11/14/07 13:44:45	13.09	6.64	9.99	15.36	1.75	1.02	
11/14/07 13:45:00	13.10	6.62	10.24	15.06	1.40	1.02	
11/14/07 13:45:15	13.12	6.61	10.39	13.27	2.36	1.02	
11/14/07 13:45:30	13.09	6.64	10.39	11.97	2.50	1.02	
11/14/07 13:45:45	13.00	6.73	10.39	11.17	2.29	1.03	
11/14/07 13:46:00	13.04	6.67	10.59	10.63	2.19	1.02	
11/14/07 13:46:15	13.12	6.58	10.49	11.47	2.20	1.02	
11/14/07 13:46:30	13.21	6.49	10.34	12.07	3.02	1.02	
11/14/07 13:46:45	13.33	6.40	10.19	12.57	2.89	1.02	
11/14/07 13:47:00	13.35	6.41	9.89	13.52	2.87	1.02	
11/14/07 13:47:15	13.35	6.40	9.69	14.96	2.70	1.02	
11/14/07 13:47:30	13.29	6.46	9.79	15.76	2.62	1.02	
11/14/07 13:47:45	13.21	6.51	9.79	15.66	2.50	1.02	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 13:48:00	13.18	6.55	10.04	15.41	2.71	1.02	
11/14/07 13:48:15	13.16	6.54	10.19	16.16	2.64	1.02	
11/14/07 13:48:30	13.26	6.43	10.19	16.28	2.55	1.02	
11/14/07 13:48:45	13.32	6.44	10.09	15.76	2.20	1.02	
11/14/07 13:49:00	13.22	6.50	9.94	16.41	2.17	1.02	
11/14/07 13:49:15	13.28	6.44	9.78	18.15	2.31	1.02	
11/14/07 13:49:30	13.32	6.43	9.94	18.70	2.29	1.02	
11/14/07 13:49:45	13.31	6.43	9.79	18.85	2.40	1.02	
11/14/07 13:50:00	13.42	6.35	9.79	20.34	2.44	0.90	
11/14/07 13:50:15	13.44	6.33	9.69	24.93	2.25	0.53	
11/14/07 13:50:30	13.49	6.30	9.54	27.22	2.29	0.53	
11/14/07 13:50:45	13.46	6.34	9.39	27.92	2.01	0.53	
11/14/07 13:51:00	13.40	6.37	9.59	27.62	2.21	0.53	
11/14/07 13:51:15	13.33	6.43	9.69	29.51	2.13	0.53	
11/14/07 13:51:30	13.35	6.40	9.79	33.45	2.12	0.53	
11/14/07 13:51:45	13.45	6.32	9.79	38.58	2.18	0.53	
11/14/07 13:52:00	13.51	6.29	9.54	41.67	2.25	0.53	
11/14/07 13:52:15	13.55	6.26	9.49	41.77	2.25	0.53	
11/14/07 13:52:30	13.48	6.35	9.59	44.38	2.50	0.53	
11/14/07 13:52:45	13.48	6.30	9.59	50.64	2.06	0.53	
11/14/07 13:53:00	13.44	6.37	9.54	56.47	2.37	0.65	
11/14/07 13:53:15	13.35	6.41	9.49	61.50	2.12	1.02	
11/14/07 13:53:30	13.37	6.40	9.94	64.20	2.06	1.02	
11/14/07 13:53:45	13.37	6.39	9.79	59.71	2.27	1.02	
11/14/07 13:54:00	13.32	6.44	9.74	49.89	2.23	1.02	
11/14/07 13:54:15	13.24	6.51	9.69	39.58	2.08	1.02	
11/14/07 13:54:30	13.27	6.45	9.99	35.69	2.06	1.02	
11/14/07 13:54:45	13.32	6.43	9.99	31.51	1.87	1.02	
11/14/07 13:55:00	13.27	6.47	9.99	29.12	1.92	1.02	
11/14/07 13:55:15	13.23	6.46	9.99	28.22	1.94	1.02	
11/14/07 13:55:30	13.39	6.35	10.09	29.81	2.02	1.02	
11/14/07 13:55:45	13.47	6.32	9.59	29.61	2.26	1.02	
11/14/07 13:56:00	13.38	6.39	9.54	27.82	2.26	1.14	
11/14/07 13:56:15	13.34	6.41	9.49	24.33	2.43	1.53	
11/14/07 13:56:30	13.29	6.44	9.79	21.14	2.08	1.53	
11/14/07 13:56:45	13.23	6.50	9.79	18.65	2.01	1.53	
11/14/07 13:57:00	13.18	6.51	10.04	17.60	2.10	1.52	
11/14/07 13:57:15	13.28	6.44	10.09	14.76	2.21	1.53	
11/14/07 13:57:30	13.15	6.59	9.84	12.07	2.09	1.52	
11/14/07 13:57:45	12.91	6.81	9.99	10.08	1.99	1.52	
11/14/07 13:58:00	12.77	6.91	10.49	9.78	1.99	1.52	
11/14/07 13:58:15	12.75	6.89	10.79	10.16	2.18	1.53	
11/14/07 13:58:30	12.96	6.67	10.94	10.23	2.13	1.53	
11/14/07 13:58:45	13.08	6.60	10.69	10.28	2.15	1.53	
11/14/07 13:59:00	13.06	6.61	10.34	10.33	1.93	1.40	
11/14/07 13:59:15	12.97	6.73	10.19	10.18	1.94	1.02	
11/14/07 13:59:30	12.91	6.74	10.39	10.16	2.05	1.02	
11/14/07 13:59:45	13.04	6.80	10.49	10.66	2.10	1.02	
11/14/07 14:00:00	13.18	6.47	10.34	11.57	2.16	1.02	
11/14/07 14:00:15	13.27	6.42	10.09	13.17	2.23	1.02	
11/14/07 14:00:30	13.23	6.45	9.79	14.51	2.16	1.02	
11/14/07 14:00:45	13.34	6.36	9.79	16.98	2.37	1.02	
11/14/07 14:01:00	13.34	6.40	9.74	20.04	2.17	1.02	
11/14/07 14:01:15	13.19	6.49	9.69	26.12	2.13	1.02	
11/14/07 14:01:30	13.36	6.35	9.94	29.51	2.34	1.02	
11/14/07 14:01:45	13.49	6.29	9.79	30.41	2.08	1.02	
11/14/07 14:02:00	13.35	6.42	9.54	32.05	2.25	1.02	
11/14/07 14:02:15	13.21	6.49	9.49	41.77	2.21	1.02	
11/14/07 14:02:30	13.37	6.35	9.94	46.95	2.04	1.02	
11/14/07 14:02:45	13.45	6.33	9.79	49.54	2.31	1.02	
11/14/07 14:03:00	13.35	6.40	9.54	47.30	2.16	1.02	
11/14/07 14:03:15	13.35	6.39	9.51	45.75	1.79	1.02	
11/14/07 14:03:30	13.43	6.33	9.74	41.57	2.14	1.02	
11/14/07 14:03:45	13.41	6.37	9.46	33.10	2.27	1.02	
11/14/07 14:04:00	13.21	6.52	9.59	27.57	2.19	1.02	
11/14/07 14:04:15	13.12	6.58	9.73	21.44	2.15	1.02	
11/14/07 14:04:30	13.10	6.59	10.19	18.35	2.16	1.02	
11/14/07 14:04:45	13.10	6.60	10.34	15.56	2.17	1.02	
11/14/07 14:05:00	12.93	6.78	10.39	14.61	2.32	1.02	
11/14/07 14:05:15	12.86	6.61	10.54	12.77	2.31	1.02	
11/14/07 14:05:30	12.90	6.76	10.76	11.72	2.23	1.02	
11/14/07 14:05:45	12.95	6.71	10.78	11.27	1.98	1.02	
11/14/07 14:06:00	13.01	6.64	10.58	11.67	1.98	1.02	
11/14/07 14:06:15	13.04	6.63	10.44	12.27	2.15	1.02	
11/14/07 14:06:30	12.88	6.69	10.24	12.72	2.00	1.02	
11/14/07 14:06:45	13.06	6.59	10.39	14.07	1.94	1.02	
11/14/07 14:07:00	13.10	6.58	10.34	14.27	2.16	1.02	
11/14/07 14:07:15	12.99	6.68	10.19	14.37	2.05	1.02	
11/14/07 14:07:30	12.97	6.71	10.38	13.92	2.04	1.02	
11/14/07 14:07:45	12.97	6.79	10.38	11.57	2.16	1.02	
11/14/07 14:08:00	12.94	6.81	10.58	10.92	1.90	0.90	
11/14/07 14:08:15	12.83	6.82	10.59	10.16	2.07	0.53	
11/14/07 14:08:30	12.83	6.81	10.58	10.03	1.98	0.53	
11/14/07 14:08:45	12.89	6.73	10.59	9.98	1.99	0.53	
11/14/07 14:09:00	12.87	6.76	10.59	9.73	1.93	0.52	
11/14/07 14:09:15	12.86	6.77	10.58	10.16	1.94	0.52	
11/14/07 14:09:30	12.90	6.72	10.74	10.56	2.04	0.53	
11/14/07 14:09:45	12.89	6.76	10.58	10.49	1.95	0.53	
11/14/07 14:10:00	12.74	6.89	10.59	11.28	2.21	0.52	
11/14/07 14:10:15	12.81	6.80	10.59	11.09	2.24	0.52	12.91 % db O2
11/14/07 14:10:30	12.85	6.77	10.78	10.63	2.19	0.53	6.74 % db CO2
11/14/07 14:10:45	12.98	6.76	10.54	10.88	2.11	0.52	10.62 ppmv db NOx
11/14/07 14:11:00	12.87	6.76	10.58	10.48	1.99	0.53	11.49 ppmv db CO
11/14/07 14:11:15	12.88	6.77	10.59	10.28	1.95	0.53	
11/14/07 14:11:30	12.80	6.83	10.59	10.00	2.28	0.53	
11/14/07 14:11:45	12.81	6.80	10.74	10.08	2.13	0.53	
11/14/07 14:12:00	12.86	6.77	10.78	10.26	2.05	0.53	
11/14/07 14:12:15	12.77	6.85	10.54	10.77	2.08	0.53	
11/14/07 14:12:30	12.77	6.83	10.54	11.37	2.08	0.53	
11/14/07 14:12:45	12.91	6.69	10.78	11.77	1.98	0.53	
11/14/07 14:13:00	12.98	6.68	10.54	11.97	2.14	0.53	
11/14/07 14:13:15	12.84	6.68	10.38	12.17	1.99	0.53	
11/14/07 14:13:30	13.02	6.60	10.39	12.27	2.13	0.52	
11/14/07 14:13:45	13.02	6.63	10.39	12.07	2.00	0.53	
11/14/07 14:14:00	12.92	6.74	10.39	12.02	2.09	0.85	
11/14/07 14:14:15	12.80	6.84	10.54	12.37	2.01	1.02	
11/14/07 14:14:30	12.88	6.73	10.78	12.72	2.19	1.02	
11/14/07 14:14:45	12.96	6.68	10.78	12.77	2.03	1.02	
11/14/07 14:15:00	12.86	6.77	10.54	13.02	2.34	1.02	
11/14/07 14:15:15	12.91	6.71	10.39	13.66	2.01	1.02	
11/14/07 14:15:30	13.03	6.59	10.38	13.78	1.84	1.02	12.90 % db O2
11/14/07 14:15:45	13.00	6.65	10.24	13.78	1.90	1.02	6.72 % db CO2
11/14/07 14:16:00	12.96	6.69	10.24	13.96	2.03	1.02	10.53 ppmv db NOx
11/14/07 14:16:15	12.97	6.67	10.38	14.26	1.95	1.02	12.15 ppmv db CO
11/14/07 14:16:30	12.96	6.68	10.59	14.31	1.92	1.02	
11/14/07 14:16:45	13.12	6.50	10.44	14.16	1.95	1.02	
11/14/07 14:17:00	13.18	6.51	10.14	14.45	1.64	0.90	
11/14/07 14:17:15	13.04	6.62	9.99	14.16	1.87	0.52	
11/14/07 14:17:30	12.92	6.74	10.04	13.51	2.09	0.52	
11/14/07 14:17:45	12.90	6.74	10.34	13.09	1.99	0.53	
11/14/07 14:18:00	12.98	6.68	10.38	13.07	1.95	0.53	
11/14/07 14:18:15	12.98	6.77	10.38	12.47	1.95	0.52	
11/14/07 14:18:30	12.86	6.68	10.19	11.52	1.94	0.53	
11/14/07 14:18:45	12.91	6.74	10.19	10.57	2.18	0.53	
11/14/07 14:19:00	12.97	6.64	10.44	10.57	2.13	0.53	
11/14/07 14:19:15	12.98	6.57	10.43	10.77	1.99	0.53	
11/14/07 14:19:30	12.88	6.77	10.24	10.97	2.05	0.53	
11/14/07 14:19:45	13.04	6.58	10.54	10.78	2.14	0.53	
11/14/07 14:20:00	13.10	6.53	10.29	12.26	2.02	0.53	
11/14/07 14:20:15	13.11	6.54	9.99	12.86	2.18	0.53	
11/14/07 14:20:30	12.99	6.65	10.04	12.21	2.07	0.52	
11/14/07 14:20:45	12.94	6.69	10.34	12.46	2.15	0.52	12.98 % db O2
11/14/07 14:21:00	12.96	6.68	10.38	12.36	2.12	0.52	6.66 % db CO2
11/14/07 14:21:15	12.99	6.66	10.24	12.46	1.98	0.53	10.23 ppmv db NOx
11/14/07 14:21:30	12.92	6.73	10.24	12.02	1.88	0.52	12.42 ppmv db CO
11/14/07 14:21:45	12.74	6.91	10.39	10.87	2.13	0.53	
11/14/07 14:22:00	12.73	6.85	10.69	9.93	2.16	0.53	
11/14/07 14:22:15	12.92	6.69	10.69	9.46	2.10	0.53	
11/14/07 14:22:30	12.89	6.72	10.39	9.38	1.95	0.53	
11/14/07 14:22:45	12.81	6.79	10.39	9.46	2.10	0.53	
11/14/07 14:23:00	12.93	6.64	10.44	10.03	2.11	0.65	
11/14/07 14:23:15	13.19	6.41	10.44	10.76	2.18	1.02	
11/14/07 14:23:30	13.16	6.47	9.99	11.62	2.08	1.03	
11/14/07 14:23:45	13.14	6.48	9.84	12.17	2.11	1.02	
11/14/07 14:24:00	13.05	6.50	9.79	12.47	1.83	1.02	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 14:24:15	12.91	6.70	9.94	12.27	2.13	1.02	
11/14/07 14:24:30	12.90	6.72	10.39	11.62	2.40	1.02	
11/14/07 14:24:45	12.94	6.69	10.39	10.98	2.08	1.02	
11/14/07 14:25:00	12.77	6.87	10.39	10.63	2.09	1.02	
11/14/07 14:25:15	12.84	6.74	10.54	10.58	1.99	1.03	
11/14/07 14:25:30	12.87	6.74	10.94	10.58	2.10	1.03	
11/14/07 14:25:45	12.91	6.71	10.64	10.68	2.09	1.03	
11/14/07 14:26:00	12.84	6.77	10.39	10.93	2.12	1.15	
11/14/07 14:26:15	12.85	6.75	10.54	10.98	1.89	1.53	
11/14/07 14:26:30	12.92	6.69	10.59	11.08	1.92	1.53	
11/14/07 14:26:45	12.97	6.64	10.44	10.88	2.09	1.53	
11/14/07 14:27:00	12.96	6.65	10.34	11.03	1.82	1.53	
11/14/07 14:27:15	13.03	6.57	10.19	11.47	2.01	1.53	
11/14/07 14:27:30	13.15	6.47	10.14	11.92	1.89	1.53	
11/14/07 14:27:45	13.14	6.49	9.94	12.37	1.91	1.53	
11/14/07 14:28:00	13.07	6.57	9.79	12.72	1.89	1.53	
11/14/07 14:28:15	13.02	6.62	9.94	12.97	2.01	1.53	
11/14/07 14:28:30	12.94	6.70	10.19	13.67	1.77	1.53	
11/14/07 14:28:45	12.96	6.65	10.34	14.86	1.95	1.53	
11/14/07 14:29:00	13.10	6.53	10.39	15.26	1.76	1.28	
11/14/07 14:29:15	13.04	6.62	10.24	15.86	1.64	0.53	
11/14/07 14:29:30	13.03	6.60	10.04	15.61	1.79	0.53	
11/14/07 14:29:45	13.07	6.56	10.19	18.46	1.54	0.53	
11/14/07 14:30:00	13.10	6.53	10.14	23.56	1.89	0.53	
11/14/07 14:30:15	13.28	6.35	9.99	73.47	17.55	0.53	
11/14/07 14:30:30	13.78	5.97	9.84	177.51	22.43	0.53	
11/14/07 14:30:45	14.42	5.46	9.09	199.34	27.99	0.53	
11/14/07 14:31:00	14.33	5.69	7.99	199.34	9.68	0.53	
11/14/07 14:31:15	13.72	6.15	7.94	199.34	8.40	0.53	
11/14/07 14:31:30	13.43	6.34	8.54	188.83	2.27	0.53	
11/14/07 14:31:45	13.34	6.42	9.29	126.59	1.69	0.53	
11/14/07 14:32:00	12.87	6.95	9.64	52.98	2.02	0.65	
11/14/07 14:32:15	12.37	7.25	10.54	20.25	2.14	1.03	
11/14/07 14:32:30	12.97	6.61	11.57	15.66	1.94	1.03	
11/14/07 14:32:45	13.21	6.47	10.89	14.56	1.98	1.03	Run 1
11/14/07 14:33:00	13.12	6.56	10.24	14.91	1.80	1.03	Cannister N83
11/14/07 14:33:15	12.96	6.72	10.14	15.06	2.04	1.03	
11/14/07 14:33:30	12.95	6.71	10.27	14.29	1.86	1.03	
11/14/07 14:33:45	12.92	6.76	10.84	13.67	1.77	1.03	
11/14/07 14:34:00	12.96	6.68	10.69	13.62	2.14	1.03	
11/14/07 14:34:15	13.01	6.64	10.44	14.56	1.83	1.03	
11/14/07 14:34:30	13.08	6.69	10.29	16.21	2.09	1.03	
11/14/07 14:34:45	13.13	6.63	10.39	17.26	2.00	1.03	
11/14/07 14:35:00	13.09	6.67	10.19	16.71	1.96	0.90	
11/14/07 14:35:15	13.07	6.61	10.19	14.26	1.93	0.53	
11/14/07 14:35:30	13.00	6.65	10.39	11.82	2.04	0.53	
11/14/07 14:35:45	12.99	6.68	10.54	10.88	1.74	0.53	
11/14/07 14:36:00	12.89	6.76	10.39	10.63	1.83	0.53	
11/14/07 14:36:15	12.89	6.68	10.54	10.68	1.92	0.53	
11/14/07 14:36:30	12.98	6.67	10.89	11.23	1.03	0.53	
11/14/07 14:36:45	12.98	6.68	10.56	11.67	1.96	0.53	
11/14/07 14:37:00	12.97	6.67	10.69	12.37	2.04	0.53	
11/14/07 14:37:15	13.01	6.65	10.44	12.17	1.96	0.53	
11/14/07 14:37:30	12.97	6.69	10.59	11.32	1.81	0.53	
11/14/07 14:37:45	12.94	6.72	10.39	10.08	1.94	0.53	
11/14/07 14:38:00	12.88	6.78	10.49	9.23	1.99	0.65	
11/14/07 14:38:15	12.83	6.82	10.69	9.38	1.99	1.03	
11/14/07 14:38:30	12.92	6.71	10.59	10.08	1.83	1.03	
11/14/07 14:38:45	13.03	6.69	10.44	10.38	2.02	1.02	
11/14/07 14:39:00	13.02	6.67	10.29	10.53	1.86	1.03	
11/14/07 14:39:15	12.84	6.81	10.34	11.37	1.84	1.03	
11/14/07 14:39:30	12.92	6.72	10.69	12.02	1.83	1.03	
11/14/07 14:39:45	13.03	6.61	10.68	11.87	1.96	1.03	
11/14/07 14:40:00	13.09	6.58	10.39	11.22	2.08	1.03	
11/14/07 14:40:15	13.02	6.68	10.39	10.68	1.80	1.03	
11/14/07 14:40:30	12.91	6.75	10.49	10.13	2.25	1.03	
11/14/07 14:40:45	13.03	6.61	10.74	9.88	2.16	1.03	
11/14/07 14:41:00	13.13	6.53	10.49	10.03	2.10	1.03	
11/14/07 14:41:15	13.07	6.59	10.39	10.38	1.89	1.03	
11/14/07 14:41:30	13.08	6.59	10.19	9.89	2.21	1.03	
11/14/07 14:41:45	12.99	6.68	10.19	9.29	1.99	1.03	
11/14/07 14:42:00	13.03	6.62	10.49	8.53	2.01	1.03	
11/14/07 14:42:15	12.85	6.83	10.44	8.38	1.97	1.03	
11/14/07 14:42:30	12.89	6.73	10.49	8.99	2.00	1.03	
11/14/07 14:42:45	12.98	6.68	10.74	9.18	1.85	1.03	
11/14/07 14:43:00	13.00	6.67	10.49	9.33	1.78	1.03	
11/14/07 14:43:15	12.88	6.78	10.54	9.49	2.00	1.03	
11/14/07 14:43:30	13.00	6.66	10.59	9.63	1.90	1.03	
11/14/07 14:43:45	13.09	6.57	10.59	9.29	1.90	1.03	
11/14/07 14:44:00	12.96	6.74	10.29	9.33	1.90	0.91	
11/14/07 14:44:15	12.88	6.76	10.34	9.38	1.86	0.53	
11/14/07 14:44:30	13.02	6.64	10.69	9.68	2.05	0.53	
11/14/07 14:44:45	12.88	6.66	10.44	9.78	2.09	0.53	
11/14/07 14:45:00	13.06	6.63	10.39	9.58	1.91	0.53	
11/14/07 14:45:15	12.92	6.74	10.38	9.38	1.70	0.53	
11/14/07 14:45:30	12.94	6.71	10.39	9.13	1.86	0.53	
11/14/07 14:45:45	12.99	6.70	10.38	9.18	2.04	0.53	
11/14/07 14:46:00	12.93	6.72	10.39	9.33	1.85	0.53	
11/14/07 14:46:15	13.00	6.66	10.84	9.38	1.78	0.53	
11/14/07 14:46:30	12.97	6.69	10.69	8.66	1.86	0.53	
11/14/07 14:46:45	12.92	6.73	10.44	9.98	1.82	0.53	
11/14/07 14:47:00	13.01	6.63	10.49	10.30	1.77	0.65	
11/14/07 14:47:15	13.10	6.57	10.29	10.98	1.83	1.03	
11/14/07 14:47:30	13.13	6.52	10.09	11.83	1.83	1.03	
11/14/07 14:47:45	13.14	6.54	10.19	12.17	1.45	1.03	
11/14/07 14:48:00	13.08	6.63	10.19	12.31	1.75	1.03	
11/14/07 14:48:15	13.01	6.68	10.19	12.17	2.04	1.03	
11/14/07 14:48:30	13.11	6.55	10.29	11.32	1.83	1.03	
11/14/07 14:48:45	13.14	6.54	10.19	11.17	1.84	1.03	
11/14/07 14:49:00	13.12	6.55	10.09	11.22	1.79	1.03	
11/14/07 14:49:15	13.07	6.59	10.14	11.47	1.74	1.03	
11/14/07 14:49:30	13.13	6.55	10.29	11.52	2.00	1.03	
11/14/07 14:49:45	13.08	6.60	10.19	11.47	1.75	1.03	
11/14/07 14:50:00	13.11	6.55	10.29	11.37	1.67	0.90	
11/14/07 14:50:15	13.12	6.56	10.39	11.07	1.94	0.53	
11/14/07 14:50:30	13.09	6.58	10.29	10.28	1.84	0.53	
11/14/07 14:50:45	13.04	6.67	10.39	9.88	1.91	0.53	
11/14/07 14:51:00	12.92	6.67	10.39	9.88	1.74	0.53	
11/14/07 14:51:15	12.83	6.81	10.64	9.68	1.92	0.53	
11/14/07 14:51:30	12.92	6.76	10.89	8.49	1.96	0.53	
11/14/07 14:51:45	12.89	6.79	10.54	7.89	1.87	0.53	
11/14/07 14:52:00	12.78	6.91	10.69	7.29	1.83	0.53	
11/14/07 14:52:15	12.63	7.02	10.74	6.99	1.79	0.53	
11/14/07 14:52:30	12.69	7.07	11.09	6.84	1.83	0.53	
11/14/07 14:52:45	12.64	6.96	11.18	7.09	1.78	0.53	
11/14/07 14:53:00	12.83	6.90	11.18	7.74	1.79	0.53	
11/14/07 14:53:15	12.87	6.77	11.04	8.46	1.76	0.53	
11/14/07 14:53:30	13.00	6.62	10.89	9.38	1.86	0.53	
11/14/07 14:53:45	13.14	6.52	10.89	10.18	1.70	0.53	
11/14/07 14:54:00	13.11	6.56	10.29	9.78	1.64	0.53	
11/14/07 14:54:15	13.08	6.64	10.19	8.68	1.78	0.53	
11/14/07 14:54:30	12.98	6.79	10.39	6.13	1.86	0.53	
11/14/07 14:54:45	12.96	6.70	10.74	7.99	1.82	0.53	
11/14/07 14:55:00	13.02	6.63	10.69	7.78	1.70	0.53	
11/14/07 14:55:15	13.00	6.67	10.59	7.89	1.71	0.53	
11/14/07 14:55:30	12.99	6.77	10.49	7.74	1.69	0.53	
11/14/07 14:55:45	12.93	6.73	10.74	7.49	1.67	0.53	
11/14/07 14:56:00	12.77	6.89	10.89	7.04	1.69	0.53	
11/14/07 14:56:15	12.82	6.79	10.74	7.29	1.85	0.53	
11/14/07 14:56:30	12.95	6.89	10.99	7.64	1.82	0.53	
11/14/07 14:56:45	12.96	6.67	10.54	7.98	1.85	0.53	
11/14/07 14:57:00	13.02	6.62	10.69	8.78	1.78	0.53	
11/14/07 14:57:15	13.12	6.52	10.44	9.78	1.71	0.53	
11/14/07 14:57:30	13.14	6.62	10.29	10.88	1.56	0.53	
11/14/07 14:57:45	13.11	6.57	10.15	11.27	1.62	0.53	
11/14/07 14:58:00	13.07	6.62	10.19	11.92	1.76	0.53	
11/14/07 14:58:15	13.09	6.68	10.34	12.37	1.70	0.53	
11/14/07 14:58:30	13.11	6.69	10.39	12.77	1.67	0.53	
11/14/07 14:58:45	12.98	6.73	10.24	12.77	1.74	0.53	
11/14/07 14:59:00	12.97	6.70	10.49	13.12	1.65	0.53	
11/14/07 14:59:15	13.05	6.64	10.39	14.07	1.74	0.53	
11/14/07 14:59:30	13.12	6.58	10.49	14.86	1.82	0.53	
11/14/07 14:59:45	13.00	6.68	10.24	16.15	2.09	0.53	
11/14/07 15:00:00	13.07	6.62	10.49	15.19	1.90	0.53	
11/14/07 15:00:15	13.11	6.60	10.44	14.86	1.88	0.53	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 15:00:30	13.08	6.62	10.39	13.27	1.72	0.53	
11/14/07 15:00:45	13.06	6.66	10.39	12.07	1.85	0.53	
11/14/07 15:01:00	12.97	6.73	10.39	11.42	1.84	0.53	
11/14/07 15:01:15	12.94	6.76	10.39	11.37	1.89	0.53	
11/14/07 15:01:30	13.00	6.67	10.39	10.38	1.64	0.53	
11/14/07 15:01:45	13.03	6.65	10.62	9.58	1.72	0.53	
11/14/07 15:02:00	12.90	6.76	10.39	9.13	1.96	0.53	
11/14/07 15:02:15	12.92	6.77	10.64	8.88	1.85	0.53	
11/14/07 15:02:30	12.88	6.82	10.69	9.19	1.90	0.53	
11/14/07 15:02:45	12.90	6.78	10.79	9.48	1.78	0.53	
11/14/07 15:03:00	12.94	6.75	10.69	9.83	1.90	0.53	
11/14/07 15:03:15	12.97	6.70	10.69	10.19	1.80	0.53	
11/14/07 15:03:30	12.89	6.70	10.69	10.96	1.91	0.53	
11/14/07 15:03:45	13.06	6.61	10.44	11.97	1.83	0.53	
11/14/07 15:04:00	13.15	6.56	10.39	12.57	2.29	0.53	
11/14/07 15:04:15	13.10	6.61	10.24	12.37	1.88	0.53	
11/14/07 15:04:30	13.06	6.64	10.19	11.82	1.79	0.53	
11/14/07 15:04:45	12.99	6.70	10.24	11.17	1.82	0.53	
11/14/07 15:05:00	12.98	6.73	10.48	11.42	1.72	0.53	
11/14/07 15:05:15	12.95	6.72	10.68	11.77	1.88	0.53	
11/14/07 15:05:30	13.03	6.66	10.59	12.52	1.73	0.53	
11/14/07 15:05:45	13.03	6.65	10.54	13.27	1.89	0.53	
11/14/07 15:06:00	13.10	6.60	10.39	14.31	1.89	0.53	
11/14/07 15:06:15	13.12	6.58	10.39	14.36	1.89	0.53	
11/14/07 15:06:30	13.18	6.58	10.29	14.51	1.86	0.53	
11/14/07 15:06:45	12.99	6.78	10.24	14.36	1.87	0.53	
11/14/07 15:07:00	12.90	6.79	10.59	13.86	1.83	0.53	
11/14/07 15:07:15	12.94	6.76	10.64	13.97	1.78	0.53	
11/14/07 15:07:30	12.91	6.79	10.69	14.11	1.64	0.53	
11/14/07 15:07:45	13.04	6.65	10.74	13.77	1.76	0.53	
11/14/07 15:08:00	13.08	6.62	10.49	12.62	1.93	0.86	
11/14/07 15:08:15	13.08	6.64	10.38	11.77	1.74	1.03	
11/14/07 15:08:30	13.00	6.72	10.39	10.03	1.68	1.02	
11/14/07 15:08:45	12.90	6.81	10.54	9.28	1.73	1.03	
11/14/07 15:09:00	12.87	6.83	10.69	8.68	1.91	1.03	
11/14/07 15:09:15	12.78	6.91	10.79	8.38	1.76	1.03	
11/14/07 15:09:30	12.88	6.81	10.78	8.48	1.96	1.02	
11/14/07 15:09:45	12.98	6.69	10.74	8.78	1.88	1.03	
11/14/07 15:10:00	13.06	6.63	10.59	8.53	1.74	1.02	
11/14/07 15:10:15	13.02	6.70	10.44	8.88	1.80	1.03	
11/14/07 15:10:30	12.91	6.77	10.49	9.53	1.82	1.02	
11/14/07 15:10:45	13.04	6.53	10.69	9.88	1.44	1.02	
11/14/07 15:11:00	13.07	6.64	10.49	9.13	1.64	0.90	
11/14/07 15:11:15	12.92	6.81	10.39	8.98	1.87	0.53	
11/14/07 15:11:30	12.83	6.86	10.59	9.18	1.79	0.53	
11/14/07 15:11:45	12.82	6.88	10.83	9.28	1.85	0.53	
11/14/07 15:12:00	12.89	6.80	10.89	9.28	1.79	0.53	
11/14/07 15:12:15	12.95	6.85	10.64	8.88	1.78	0.53	
11/14/07 15:12:30	12.94	6.74	10.79	9.63	1.87	0.53	
11/14/07 15:12:45	13.04	6.65	10.74	11.07	1.53	0.53	
11/14/07 15:13:00	13.18	6.51	10.49	14.71	1.69	0.53	
11/14/07 15:13:15	13.41	6.32	10.19	19.16	1.74	0.53	
11/14/07 15:13:30	13.59	6.21	8.78	39.98	2.12	0.53	
11/14/07 15:13:45	13.62	6.27	9.49	90.71	1.99	0.53	
11/14/07 15:14:00	13.97	5.88	9.63	116.88	1.91	0.90	
11/14/07 15:14:15	13.91	5.87	9.04	95.29	1.82	2.03	
11/14/07 15:14:30	13.33	6.49	9.78	54.33	1.89	2.03	
11/14/07 15:14:45	13.14	6.61	9.74	36.38	1.73	2.03	
11/14/07 15:15:00	13.04	6.74	10.29	22.88	1.72	2.03	
11/14/07 15:15:15	13.04	6.71	10.59	16.76	1.71	2.03	
11/14/07 15:15:30	13.03	6.72	10.78	13.45	1.74	2.03	
11/14/07 15:15:45	13.00	6.73	10.69	24.53	1.90	2.03	
11/14/07 15:16:00	13.31	6.40	10.78	28.67	1.81	2.03	
11/14/07 15:16:15	13.45	6.30	10.24	23.13	1.87	2.03	
11/14/07 15:16:30	13.10	6.71	10.34	9.88	1.56	2.03	
11/14/07 15:16:45	12.62	7.22	10.34	7.29	1.89	2.03	
11/14/07 15:17:00	12.13	7.49	11.29	6.39	1.93	1.86	
11/14/07 15:17:15	12.94	6.60	11.98	8.08	1.73	0.53	
11/14/07 15:17:30	13.78	6.03	11.68	10.57	1.66	0.53	
11/14/07 15:17:45	13.30	6.74	9.89	8.66	1.75	0.53	
11/14/07 15:18:00	11.79	7.89	9.89	8.14	1.68	0.53	
11/14/07 15:18:15	12.24	7.24	11.86	6.29	1.83	0.53	
11/14/07 15:18:30	13.04	6.67	13.18	7.98	1.93	0.53	
11/14/07 15:18:45	13.19	6.51	11.13	10.08	1.89	0.53	
11/14/07 15:19:00	13.17	6.54	10.39	12.92	1.91	0.53	
11/14/07 15:19:15	13.19	6.56	10.19	12.37	1.72	0.52	
11/14/07 15:19:30	12.96	6.83	10.29	10.18	1.96	0.52	
11/14/07 15:19:45	12.77	6.95	10.49	8.48	1.94	0.52	
11/14/07 15:20:00	12.68	7.03	10.88	7.09	1.75	0.53	
11/14/07 15:20:15	12.72	6.96	11.13	6.59	1.83	0.53	
11/14/07 15:20:30	12.74	6.96	11.19	6.24	1.84	0.53	
11/14/07 15:20:45	12.61	7.05	11.08	6.48	1.67	0.53	
11/14/07 15:21:00	12.79	6.85	11.29	7.24	1.98	0.53	
11/14/07 15:21:15	12.98	6.70	11.04	7.88	1.99	0.53	
11/14/07 15:21:30	12.94	6.76	10.69	8.28	1.70	0.53	
11/14/07 15:21:45	12.90	6.80	10.59	8.68	1.73	0.53	
11/14/07 15:22:00	12.96	6.71	10.69	8.33	1.84	0.53	
11/14/07 15:22:15	13.10	6.59	10.59	10.38	1.82	0.53	
11/14/07 15:22:30	13.15	6.55	10.29	11.62	1.76	0.52	
11/14/07 15:22:45	13.23	6.49	10.14	12.87	1.79	0.53	
11/14/07 15:23:00	13.14	6.59	9.89	12.62	1.71	0.53	
11/14/07 15:23:15	13.00	6.75	9.99	11.39	1.82	0.53	
11/14/07 15:23:30	12.85	6.87	10.29	11.42	1.61	0.52	
11/14/07 15:23:45	12.89	6.81	10.64	12.32	1.80	0.52	
11/14/07 15:24:00	13.02	6.68	10.69	13.57	1.87	0.53	
11/14/07 15:24:15	13.11	6.60	10.59	16.41	1.93	0.53	
11/14/07 15:24:30	13.20	6.51	10.29	18.20	2.02	0.53	
11/14/07 15:24:45	13.22	6.54	10.14	18.96	2.02	0.53	
11/14/07 15:25:00	13.10	6.64	9.98	19.38	1.84	0.53	
11/14/07 15:25:15	13.14	6.61	9.99	18.96	1.97	0.53	
11/14/07 15:25:30	13.02	6.74	10.19	17.20	2.05	0.53	
11/14/07 15:25:45	12.90	6.88	10.39	14.91	1.93	0.53	
11/14/07 15:26:00	12.88	6.87	10.59	12.37	1.68	0.53	
11/14/07 15:26:15	12.94	6.80	10.73	11.32	1.74	0.53	
11/14/07 15:26:30	12.80	6.90	10.78	10.98	1.93	0.53	
11/14/07 15:26:45	12.85	6.85	10.93	9.93	1.94	0.53	
11/14/07 15:27:00	12.98	6.74	10.88	9.38	2.04	0.53	
11/14/07 15:27:15	12.92	6.79	10.73	9.63	1.91	0.53	
11/14/07 15:27:30	12.94	6.78	10.59	9.58	1.86	0.53	
11/14/07 15:27:45	12.89	6.83	10.59	9.73	1.73	0.53	
11/14/07 15:28:00	12.92	6.78	10.59	9.88	1.94	0.53	
11/14/07 15:28:15	12.98	6.74	10.54	10.18	2.00	0.53	
11/14/07 15:28:30	12.90	6.71	10.49	10.57	1.83	0.53	
11/14/07 15:28:45	13.06	6.57	10.54	11.27	1.92	0.53	
11/14/07 15:29:00	12.98	6.78	10.38	11.47	1.79	0.53	
11/14/07 15:29:15	12.88	6.88	10.43	11.32	1.91	0.53	
11/14/07 15:29:30	12.62	6.81	10.88	11.87	1.78	0.53	
11/14/07 15:29:45	12.78	6.65	10.83	12.47	1.99	0.53	
11/14/07 15:30:00	12.68	6.81	11.08	13.07	1.94	0.93	
11/14/07 15:30:15	13.04	6.63	10.54	13.07	1.78	0.53	
11/14/07 15:30:30	13.06	6.70	10.49	11.42	1.96	0.53	
11/14/07 15:30:45	12.67	6.88	10.34	9.93	2.03	0.53	
11/14/07 15:31:00	12.78	6.94	10.59	9.08	1.89	0.53	
11/14/07 15:31:15	12.90	6.80	10.78	9.63	1.93	0.52	
11/14/07 15:31:30	12.94	6.77	10.88	8.13	1.97	0.53	
11/14/07 15:31:45	13.00	6.63	10.41	8.88	1.87	0.52	
11/14/07 15:32:00	13.06	6.66	10.38	10.92	2.15	0.53	
11/14/07 15:32:15	13.04	6.68	10.33	11.62	1.78	0.53	
11/14/07 15:32:30	13.11	6.63	10.19	10.97	1.86	0.52	
11/14/07 15:32:45	12.93	6.81	10.10	10.67	1.82	0.52	
11/14/07 15:33:00	12.58	6.83	10.49	10.57	1.97	0.53	
11/14/07 15:33:15	12.98	6.71	10.59	10.57	11.22	0.53	
11/14/07 15:33:30	13.06	6.65	10.49	0.76	43.45	0.52	
11/14/07 15:33:45	13.08	6.60	10.19	6.94	63.86	0.52	
11/14/07 15:34:00	15.24	4.14	10.28	3.35	122.15	0.52	
11/14/07 15:34:15	18.85	0.93	7.18	1.41	113.13	0.52	
11/14/07 15:34:30	20.03	0.20	4.19	1.01	39.44	0.52	
11/14/07 15:34:45	20.27	0.11	0.54	1.01	45.43	0.52	
11/14/07 15:35:00	20.31	0.09	0.18	1.01	46.20	12.17	
11/14/07 15:35:15	20.34	0.08	-0.01	0.86	47.04	48.09	
11/14/07 15:35:30	20.37	0.07	-0.01	0.96	48.09	48.10	
11/14/07 15:35:45	20.40	0.06	-0.01	0.81	48.48	48.10	
11/14/07 15:36:00	20.43	0.06	-0.01	0.86	48.36	48.10	
11/14/07 15:36:15	20.46	0.05	-0.01	1.01	48.74	48.10	
11/14/07 15:36:30	20.46	0.05	-0.01	0.86	48.90	48.10	

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 15:36:45	20.50	0.05	-0.01	1.01	49.17	48.09	
11/14/07 15:37:00	20.51	0.05	-0.01	0.86	49.15	48.09	
11/14/07 15:37:15	20.51	0.04	-0.01	0.86	49.41	48.09	Calibration Bias
11/14/07 15:37:30	20.52	0.04	-0.01	0.81	49.37	48.10	50.0 ppm CH4 Injection
11/14/07 15:37:48	20.52	0.04	-0.01	0.81	49.40	48.10	49.44 ppm Total VOC
11/14/07 15:38:00	20.52	0.04	-0.01	0.96	49.46	48.22	
11/14/07 15:38:16	20.52	0.04	-0.01	0.81	49.84	48.60	
11/14/07 15:38:30	20.52	0.04	-0.01	0.96	49.49	48.60	
11/14/07 15:38:45	20.52	0.04	-0.01	0.81	49.65	48.60	
11/14/07 15:39:00	20.53	0.04	-0.01	0.81	49.80	48.60	
11/14/07 15:39:15	20.52	0.04	-0.01	0.81	49.30	48.60	
11/14/07 15:39:30	20.52	0.04	-0.01	0.81	44.97	48.60	
11/14/07 15:39:45	20.53	0.04	-0.01	0.96	12.01	48.60	
11/14/07 15:40:00	20.29	0.30	-0.01	0.81	0.88	48.60	
11/14/07 15:40:15	20.26	0.26	0.29	0.81	0.90	48.60	
11/14/07 15:40:30	20.72	0.06	0.49	0.61	0.45	48.60	
11/14/07 15:40:45	20.84	0.04	0.14	0.61	0.53	48.60	
11/14/07 15:41:00	20.85	0.04	-0.01	0.61	0.57	35.96	Calibration Bias
11/14/07 15:41:15	20.85	0.04	-0.01	0.61	0.55	0.52	Zero Air Injection
11/14/07 15:41:30	20.85	0.03	-0.01	0.66	0.69	0.52	0.60 ppm Total VOC
11/14/07 15:41:45	20.85	0.03	-0.01	0.66	0.63	0.52	
11/14/07 15:42:00	20.85	0.03	-0.01	0.66	0.58	0.52	
11/14/07 15:42:15	20.85	0.03	-0.01	0.66	0.58	0.52	
11/14/07 15:42:30	20.85	0.03	-0.01	0.76	0.63	0.52	
11/14/07 15:42:45	20.85	0.03	-0.01	1.21	0.91	0.52	
11/14/07 15:43:00	20.69	0.31	-0.01	5.09	1.13	0.52	
11/14/07 15:43:15	17.59	3.47	0.19	9.28	1.94	0.52	
11/14/07 15:43:30	14.10	6.05	2.19	10.33	1.95	0.52	
11/14/07 15:43:45	13.12	6.83	8.44	10.16	1.62	0.52	
11/14/07 15:44:00	13.07	6.57	9.89	8.23	2.16	1.02	
11/14/07 15:44:15	13.85	5.66	10.59	3.90	2.42	1.02	
11/14/07 15:44:30	15.71	1.71	9.39	1.26	2.35	1.02	
11/14/07 15:44:45	7.00	0.31	5.49	0.66	2.20	1.02	
11/14/07 15:45:00	0.90	0.09	1.89	0.61	2.31	1.02	
11/14/07 15:45:15	0.21	0.06	0.14	0.61	2.09	1.02	
11/14/07 15:45:30	0.16	0.05	-0.01	0.61	2.12	1.02	
11/14/07 15:45:45	0.14	0.05	-0.01	0.61	1.97	1.02	
11/14/07 15:46:00	0.12	0.04	-0.01	0.61	2.05	1.02	
11/14/07 15:46:16	0.12	0.04	-0.01	0.61	2.03	1.02	
11/14/07 15:46:30	0.11	0.04	-0.01	0.61	2.02	1.02	
11/14/07 15:46:45	0.10	0.03	-0.01	0.61	2.21	1.02	
11/14/07 15:47:00	0.10	0.03	-0.01	0.61	1.77	1.02	
11/14/07 15:47:15	0.10	0.03	-0.01	0.61	1.98	1.02	
11/14/07 15:47:30	0.09	0.03	-0.01	0.46	2.14	1.02	
11/14/07 15:47:45	0.09	0.03	-0.01	0.46	1.92	1.02	Calibration Bias
11/14/07 15:48:00	0.09	0.03	-0.01	0.61	2.11	1.02	Zero N2 Injection
11/14/07 15:48:16	0.08	0.03	-0.01	0.61	1.88	1.02	0.08 % db Oxygen
11/14/07 15:48:30	0.08	0.03	-0.01	0.61	2.03	1.02	0.03 % db Carbon Dioxide
11/14/07 15:48:45	0.08	0.02	-0.01	0.61	1.59	1.02	-0.01 ppmv NOx
11/14/07 15:49:00	0.08	0.03	-0.01	2.90	3.73	1.02	0.61 ppmv CO
11/14/07 15:49:15	1.69	1.22	-0.01	4.10	2.61	1.02	
11/14/07 15:49:30	4.10	2.11	0.89	1.91	1.89	1.02	
11/14/07 15:49:45	5.20	4.78	3.09	0.41	1.65	1.02	
11/14/07 15:50:00	8.24	7.91	1.59	0.01	1.62	0.89	
11/14/07 15:50:15	9.60	9.27	0.49	0.01	1.70	0.52	
11/14/07 15:50:30	9.82	9.34	0.19	0.01	1.62	0.52	
11/14/07 15:50:45	9.83	9.28	-0.01	0.01	1.59	0.52	
11/14/07 15:51:00	9.84	9.37	-0.01	0.01	1.75	0.52	
11/14/07 15:51:15	9.86	9.55	-0.01	0.01	1.64	0.52	
11/14/07 15:51:30	9.87	9.72	-0.01	0.01	1.76	0.52	Calibration Bias
11/14/07 15:61:45	9.88	9.80	0.19	0.01	1.91	0.53	10.0% Oxygen Injection
11/14/07 15:62:00	9.88	9.84	0.19	0.01	1.83	0.52	9.88 % db Oxygen
11/14/07 15:62:15	9.88	9.86	0.19	0.01	1.58	0.52	
11/14/07 15:62:30	9.88	9.87	0.19	0.01	1.72	0.52	
11/14/07 15:52:45	9.88	9.87	0.19	0.01	1.59	0.52	
11/14/07 15:53:00	9.88	9.88	0.19	0.31	1.92	0.65	
11/14/07 15:53:15	9.92	9.81	0.19	0.61	1.90	1.02	
11/14/07 15:53:30	10.13	9.61	0.39	0.16	1.61	1.02	
11/14/07 15:53:45	9.90	9.75	0.89	0.01	1.71	1.02	
11/14/07 15:54:00	9.81	9.61	0.49	0.01	1.70	1.02	
11/14/07 15:54:15	9.81	9.82	0.19	0.01	1.64	1.02	Calibration Bias
11/14/07 15:54:30	9.81	9.83	0.19	0.01	1.65	1.02	10.0% CO2 Injection
11/14/07 15:54:45	9.81	9.83	0.19	-0.14	1.64	1.02	9.83 % db CO2
11/14/07 15:55:00	9.61	9.83	0.19	0.01	1.75	1.02	
11/14/07 15:55:15	9.81	9.83	0.19	0.01	1.66	1.02	
11/14/07 15:55:30	9.81	9.83	0.19	0.01	1.67	1.02	
11/14/07 15:55:45	9.81	9.84	0.19	0.01	1.76	1.02	
11/14/07 15:56:00	9.81	9.84	0.19	0.01	1.73	0.89	
11/14/07 15:56:15	9.81	9.84	0.19	0.01	1.59	0.52	
11/14/07 15:56:30	9.81	9.84	0.19	0.31	2.06	0.52	
11/14/07 15:56:45	9.81	9.63	0.19	1.51	2.10	0.52	
11/14/07 15:57:00	10.42	9.07	0.09	7.39	2.27	0.52	
11/14/07 15:57:15	9.85	7.88	2.24	24.88	2.41	0.52	
11/14/07 15:57:30	4.74	3.88	2.89	38.36	2.48	0.52	
11/14/07 15:57:45	1.16	0.91	0.89	43.76	2.73	0.52	
11/14/07 15:58:00	0.21	0.24	0.39	44.93	2.48	0.52	
11/14/07 15:58:15	0.13	0.16	0.14	45.20	2.34	0.52	Calibration Bias
11/14/07 15:58:30	0.12	0.14	-0.01	45.06	2.11	0.52	45.0 ppmv db CO Injection
11/14/07 15:58:45	0.11	0.12	-0.01	45.06	2.34	0.52	44.94 ppmv db CO
11/14/07 15:59:00	0.10	0.10	-0.01	44.85	2.15	0.65	
11/14/07 15:59:15	0.09	0.09	-0.01	44.81	2.16	1.02	
11/14/07 15:59:30	0.08	0.08	-0.01	44.85	2.38	1.02	
11/14/07 15:59:45	0.08	0.08	-0.01	45.00	2.01	1.02	
11/14/07 16:00:00	0.08	0.07	-0.01	41.87	2.01	1.02	
11/14/07 16:00:15	0.25	0.26	-0.01	38.43	2.46	1.02	
11/14/07 16:00:30	2.64	1.44	0.29	27.52	2.43	1.02	
11/14/07 16:00:45	1.95	0.79	1.24	13.88	2.27	1.02	
11/14/07 16:01:00	0.37	0.15	2.39	2.60	2.34	1.02	
11/14/07 16:01:15	0.11	0.06	27.28	1.26	2.01	1.02	
11/14/07 16:01:30	0.08	0.05	47.35	1.01	1.96	1.02	
11/14/07 16:01:45	0.08	0.05	58.62	1.01	2.03	1.02	
11/14/07 16:02:00	0.07	0.05	49.28	0.81	2.03	1.02	
11/14/07 16:02:15	0.06	0.04	48.58	0.81	2.05	1.02	
11/14/07 16:02:30	0.06	0.04	47.98	0.71	1.93	1.02	
11/14/07 16:02:45	0.06	0.04	47.43	0.91	1.95	1.02	
11/14/07 16:03:00	0.06	0.04	47.08	0.81	2.02	1.02	
11/14/07 16:03:15	0.06	0.04	46.76	0.81	2.09	1.02	
11/14/07 16:03:30	0.06	0.04	46.49	0.81	1.86	1.02	
11/14/07 16:03:45	0.06	0.04	48.34	0.81	1.97	1.02	
11/14/07 16:04:00	0.06	0.04	46.09	0.81	2.09	1.02	
11/14/07 16:04:15	0.06	0.04	45.84	0.81	1.95	1.02	
11/14/07 16:04:30	0.06	0.04	45.79	0.81	2.11	1.02	
11/14/07 16:04:45	0.06	0.04	45.53	0.81	2.09	1.02	
11/14/07 16:05:00	0.06	0.04	46.09	0.81	1.94	1.02	
11/14/07 16:05:15	0.06	0.03	45.94	0.81	2.15	1.02	
11/14/07 16:05:30	0.06	0.03	45.79	0.81	1.99	1.02	
11/14/07 16:05:45	0.05	0.03	45.63	0.61	2.03	1.02	
11/14/07 16:06:00	0.05	0.03	45.79	0.81	1.96	1.02	
11/14/07 16:06:15	0.05	0.04	45.63	0.81	2.16	1.02	
11/14/07 16:06:30	0.06	0.03	45.43	0.81	2.15	1.02	
11/14/07 16:06:45	0.05	0.03	45.18	0.61	1.84	1.02	
11/14/07 16:07:00	0.05	0.03	44.65	0.61	2.03	1.02	
11/14/07 16:07:15	0.05	0.03	44.77	0.81	1.65	1.02	
11/14/07 16:07:30	0.05	0.03	44.62	0.61	2.13	1.02	
11/14/07 16:07:45	0.05	0.03	44.57	0.81	1.83	1.02	
11/14/07 16:08:00	0.05	0.03	44.57	0.81	1.97	1.02	
11/14/07 16:08:15	0.05	0.03	44.52	0.81	1.91	1.02	Calibration Bias
11/14/07 16:08:30	0.05	0.03	44.37	0.81	2.04	1.02	45.0 ppmv db NOx Injection
11/14/07 16:08:45	0.05	0.03	44.37	0.81	2.08	1.02	44.37 ppmv db NOx
11/14/07 16:09:00	0.05	0.03	44.37	0.81	1.81	1.02	
11/14/07 16:09:15	0.05	0.03	44.37	0.81	1.93	1.02	
11/14/07 16:09:30	0.05	0.03	44.37	0.81	2.13	1.02	
11/14/07 16:09:45	0.05	0.03	44.37	0.81	1.86	1.02	
11/14/07 16:10:00	0.05	0.03	44.37	4.20	2.32	1.02	
11/14/07 16:10:15	0.64	0.79	44.18	11.92	2.23	1.02	
11/14/07 16:10:30	6.23	4.01	40.72	18.45	2.10	1.02	
11/14/07 16:10:45	10.77	6.06	32.86	18.65	1.94	1.02	
11/14/07 16:11:00	12.51	6.64	18.93	18.35	1.86	0.87	
11/14/07 16:11:15	12.83	6.67	13.23	18.16	1.82	0.52	
11/14/07 16:11:30	12.89	6.68	10.98	18.45	1.76	0.52	
11/14/07 16:11:45	12.93	6.65	10.76	19.29	1.68	0.52	
11/14/07 16:12:00	13.00	6.60	10.63	20.93	1.82	0.52	
11/14/07 16:12:15	13.08	6.56	10.53	21.24	1.70	0.52	
11/14/07 16:12:30	12.98	6.67	10.53	21.83	1.62	0.52	
11/14/07 16:12:45	12.95	6.71	10.58	23.23	1.64	0.52	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 16:13:00	13.03	6.61	10.73	25.12	1.65	0.52	
11/14/07 16:13:15	13.07	6.61	10.53	25.52	1.68	0.52	
11/14/07 16:13:30	13.09	6.60	10.38	24.73	1.69	0.52	
11/14/07 16:13:45	12.98	6.72	10.58	25.37	1.60	0.52	
11/14/07 16:14:00	12.97	6.72	10.73	24.43	1.59	0.52	
11/14/07 16:14:15	12.82	6.90	10.58	22.53	1.44	0.52	
11/14/07 16:14:30	12.78	6.90	10.88	20.84	1.57	0.52	
11/14/07 16:14:45	12.86	6.84	11.18	20.59	1.49	0.52	Run 2
11/14/07 16:15:00	12.89	6.79	11.03	20.14	1.72	0.53	Cannister 374
11/14/07 16:15:15	13.02	6.68	10.93	20.69	1.45	0.52	
11/14/07 16:15:30	13.08	6.62	10.63	22.23	1.78	0.52	
11/14/07 16:15:45	13.10	6.63	10.38	23.33	1.53	0.52	
11/14/07 16:16:00	13.07	6.65	10.38	26.62	1.63	0.52	
11/14/07 16:16:15	13.07	6.64	10.38	28.32	1.56	0.52	
11/14/07 16:16:30	13.08	6.67	10.38	29.21	1.64	0.52	
11/14/07 16:16:45	13.00	6.72	10.43	29.06	1.73	0.52	
11/14/07 16:17:00	13.11	6.62	10.73	29.21	1.53	0.52	
11/14/07 16:17:15	13.00	6.76	10.63	30.21	1.53	0.52	
11/14/07 16:17:30	12.99	6.72	10.63	31.41	1.60	0.53	
11/14/07 16:17:45	13.11	6.63	10.73	32.30	1.58	0.53	
11/14/07 16:18:00	13.11	6.63	10.43	34.19	1.81	0.52	
11/14/07 16:18:15	13.25	6.48	10.38	33.40	2.27	0.52	
11/14/07 16:18:30	13.21	6.57	10.23	31.10	2.07	0.52	
11/14/07 16:18:45	13.10	6.65	10.03	31.30	1.98	0.52	
11/14/07 16:19:00	13.12	6.62	10.33	33.69	1.91	0.52	
11/14/07 16:19:15	13.11	6.66	10.33	36.19	2.02	0.52	
11/14/07 16:19:30	13.13	6.62	10.33	34.79	1.86	0.52	
11/14/07 16:19:45	13.01	6.76	10.43	31.50	1.87	0.52	
11/14/07 16:20:00	12.97	6.77	10.56	27.22	1.88	0.78	
11/14/07 16:20:15	13.00	6.76	10.68	24.88	1.92	1.02	
11/14/07 16:20:30	13.15	6.68	10.68	23.73	1.77	1.02	
11/14/07 16:20:45	13.20	6.55	10.38	22.63	2.34	1.02	
11/14/07 16:21:00	13.14	6.63	10.23	19.64	2.34	1.02	
11/14/07 16:21:15	13.07	6.69	10.38	17.06	2.20	1.02	
11/14/07 16:21:30	13.03	6.74	10.38	17.06	2.19	1.02	
11/14/07 16:21:45	12.96	6.79	10.68	18.30	2.10	1.02	
11/14/07 16:22:00	13.08	6.65	10.73	18.75	1.86	1.02	
11/14/07 16:22:15	13.18	6.58	10.53	18.96	2.05	1.02	
11/14/07 16:22:30	13.12	6.62	10.38	20.24	2.10	1.02	
11/14/07 16:22:45	13.26	6.49	10.33	20.88	2.01	1.02	
11/14/07 16:23:00	13.24	6.53	10.03	16.58	2.06	0.78	
11/14/07 16:23:15	13.09	6.72	10.18	17.20	1.83	0.52	
11/14/07 16:23:30	12.96	6.79	10.33	17.06	1.92	0.52	
11/14/07 16:23:45	13.08	6.69	10.58	17.00	1.98	0.52	
11/14/07 16:24:00	13.04	6.72	10.43	20.04	1.84	0.52	
11/14/07 16:24:15	13.09	6.63	10.43	23.63	1.83	0.52	
11/14/07 16:24:30	13.31	6.46	10.28	24.93	1.82	0.52	
11/14/07 16:24:45	13.23	6.57	9.98	23.73	1.76	0.52	
11/14/07 16:25:00	13.18	6.59	9.98	22.73	1.83	0.52	
11/14/07 16:25:15	13.11	6.67	9.98	21.63	1.86	0.52	
11/14/07 16:25:30	13.06	6.70	10.13	19.44	1.76	0.52	
11/14/07 16:25:45	13.06	6.71	10.43	18.35	1.87	0.53	
11/14/07 16:26:00	13.08	6.68	10.68	17.96	1.90	0.52	
11/14/07 16:26:15	13.09	6.71	10.68	17.26	1.94	0.52	
11/14/07 16:26:30	12.99	6.76	10.68	17.66	2.01	0.52	
11/14/07 16:26:45	13.09	6.66	10.68	18.50	2.17	0.52	
11/14/07 16:27:00	13.14	6.62	10.58	18.64	2.06	0.52	
11/14/07 16:27:15	13.15	6.61	10.38	18.16	2.06	0.52	
11/14/07 16:27:30	13.16	6.63	10.38	17.76	2.03	0.52	
11/14/07 16:27:45	13.11	6.67	10.38	19.00	1.87	0.52	
11/14/07 16:28:00	13.01	6.77	10.38	20.34	1.92	0.52	
11/14/07 16:28:15	12.96	6.81	10.68	20.18	1.89	0.52	
11/14/07 16:28:30	12.98	6.82	10.58	21.33	1.94	0.52	
11/14/07 16:28:45	13.06	6.69	10.73	22.79	2.02	0.52	
11/14/07 16:29:00	13.16	6.64	10.58	23.63	2.06	0.52	
11/14/07 16:29:15	13.06	6.73	10.38	22.15	2.07	0.52	
11/14/07 16:29:30	13.06	6.71	10.38	21.44	1.97	0.53	
11/14/07 16:29:45	13.14	6.62	10.53	21.98	1.93	0.53	
11/14/07 16:30:00	13.17	6.59	10.38	20.54	1.99	0.52	
11/14/07 16:30:15	13.19	6.60	10.32	19.34	1.96	0.52	
11/14/07 16:30:30	13.06	6.72	10.33	20.24	1.96	0.52	
11/14/07 16:30:45	13.04	6.73	10.38	22.03	1.89	0.52	
11/14/07 16:31:00	13.10	6.67	10.53	22.83	2.11	0.52	
11/14/07 16:31:15	13.09	6.70	10.38	21.43	2.03	0.52	
11/14/07 16:31:30	12.99	6.78	10.53	19.24	1.98	0.52	
11/14/07 16:31:45	13.04	6.73	10.53	18.65	1.99	0.52	
11/14/07 16:32:00	13.09	6.68	10.68	18.65	1.72	0.52	
11/14/07 16:32:15	13.14	6.63	10.58	19.49	2.06	0.52	
11/14/07 16:32:30	13.16	6.60	10.43	22.63	2.01	0.52	
11/14/07 16:32:45	13.12	6.67	10.38	25.77	1.94	0.52	
11/14/07 16:33:00	13.22	6.62	10.38	27.42	1.90	0.52	
11/14/07 16:33:15	13.32	6.49	10.19	26.76	1.96	0.52	
11/14/07 16:33:30	13.21	6.63	10.18	25.52	1.83	0.52	
11/14/07 16:33:45	13.08	6.71	10.19	24.88	1.91	0.52	
11/14/07 16:34:00	13.02	6.76	10.33	26.02	2.02	0.52	
11/14/07 16:34:15	13.12	6.63	10.58	27.99	1.88	0.52	
11/14/07 16:34:30	13.28	6.45	10.43	28.91	1.86	0.52	
11/14/07 16:34:45	13.37	6.43	10.08	29.74	1.77	0.52	
11/14/07 16:35:00	13.35	6.48	9.84	31.40	1.92	0.52	
11/14/07 16:35:15	13.25	6.63	9.78	32.51	1.79	0.52	
11/14/07 16:35:30	13.37	6.42	9.83	29.31	1.85	0.52	
11/14/07 16:35:45	13.26	6.55	9.99	26.42	2.06	0.52	
11/14/07 16:36:00	13.11	6.68	9.89	25.62	2.04	0.52	
11/14/07 16:36:15	13.12	6.67	10.38	25.17	2.10	0.52	
11/14/07 16:36:30	13.08	6.69	10.43	23.23	1.86	0.52	
11/14/07 16:36:45	13.11	6.68	10.38	20.84	1.79	0.52	
11/14/07 16:37:00	12.97	6.62	10.38	19.44	1.78	0.52	
11/14/07 16:37:15	12.96	6.80	10.68	18.76	1.84	0.52	
11/14/07 16:37:30	12.96	6.79	10.63	18.25	1.81	0.52	
11/14/07 16:37:45	13.06	6.71	10.58	18.98	1.91	0.52	
11/14/07 16:38:00	13.12	6.68	10.58	16.35	1.84	0.52	
11/14/07 16:38:15	13.09	6.77	10.48	16.50	1.90	0.52	
11/14/07 16:38:30	12.97	6.80	10.53	14.78	2.00	0.52	
11/14/07 16:38:45	13.03	6.76	10.78	15.71	97.23	0.52	
11/14/07 16:39:00	13.03	6.74	10.53	17.06	126.03	0.52	
11/14/07 16:39:15	13.08	6.70	10.59	16.36	96.59	0.52	
11/14/07 16:39:30	13.04	6.73	10.58	20.34	3.82	0.52	
11/14/07 16:39:45	13.07	6.69	10.59	21.93	-0.56	0.52	
11/14/07 16:40:00	13.22	6.54	10.58	22.93	-0.15	0.52	
11/14/07 16:40:15	13.23	6.55	10.28	23.83	0.16	0.52	
11/14/07 16:40:30	13.30	6.49	10.18	24.23	1.06	0.52	
11/14/07 16:40:45	13.27	6.52	10.19	25.72	1.09	0.52	
11/14/07 16:41:00	13.19	6.61	10.19	26.62	1.28	0.52	
11/14/07 16:41:15	13.11	6.67	10.28	24.16	1.38	0.52	
11/14/07 16:41:30	13.13	6.66	10.38	21.14	1.44	0.52	
11/14/07 16:41:45	13.08	6.71	10.38	21.68	1.61	0.52	
11/14/07 16:42:00	13.16	6.60	10.63	21.95	1.61	0.53	
11/14/07 16:42:15	13.27	6.53	10.28	23.73	1.61	0.52	
11/14/07 16:42:30	13.17	6.60	10.18	27.82	1.67	0.52	
11/14/07 16:42:45	13.32	6.46	10.18	30.11	1.37	0.52	
11/14/07 16:43:00	13.32	6.46	10.04	30.81	1.59	0.52	
11/14/07 16:43:15	13.21	6.56	9.99	32.25	1.68	0.53	
11/14/07 16:43:30	13.24	6.55	10.14	34.99	1.55	0.52	
11/14/07 16:43:45	13.16	6.62	10.18	33.86	1.87	0.53	
11/14/07 16:44:00	13.12	6.68	10.18	28.21	1.71	0.53	
11/14/07 16:44:15	13.06	6.74	10.28	27.17	1.69	0.52	
11/14/07 16:44:30	13.19	6.62	10.38	26.22	1.67	0.52	
11/14/07 16:44:45	13.18	6.64	10.38	22.83	2.09	0.52	
11/14/07 16:45:00	13.02	6.77	10.23	20.84	1.81	0.53	
11/14/07 16:45:15	13.06	6.73	10.68	20.19	1.79	0.53	
11/14/07 16:45:30	13.07	6.70	10.63	21.24	1.55	0.53	
11/14/07 16:45:45	13.20	6.58	10.38	21.83	1.71	0.53	
11/14/07 16:46:00	13.16	6.58	10.23	20.44	1.74	0.53	
11/14/07 16:46:15	13.06	6.76	10.38	18.06	1.77	0.52	
11/14/07 16:46:30	12.97	6.92	10.83	19.85	1.76	0.52	
11/14/07 16:46:45	12.90	6.85	10.78	15.11	1.50	0.52	
11/14/07 16:47:00	12.93	6.87	10.93	12.47	1.95	0.52	
11/14/07 16:47:15	12.89	6.93	10.88	8.53	1.81	0.52	
11/14/07 16:47:30	12.76	7.01	10.93	7.49	1.68	0.53	
11/14/07 16:47:45	12.68	7.08	11.08	6.84	1.78	0.52	
11/14/07 16:48:00	12.79	6.94	11.34	6.69	1.67	0.52	
11/14/07 16:48:15	12.92	6.82	10.98	7.04	1.89	0.52	
11/14/07 16:48:30	12.85	6.91	10.78	7.09	1.76	0.53	
11/14/07 16:48:45	12.80	6.95	10.88	7.64	1.61	0.52	
11/14/07 16:49:00	12.86	6.88	10.98	8.16	1.49	0.53	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 16:49:15	13.02	6.74	10.88	8.78	1.66	0.53	
11/14/07 16:49:30	12.94	6.81	10.78	10.19	1.66	0.53	
11/14/07 16:49:45	13.13	6.60	10.53	11.92	1.76	0.53	
11/14/07 16:50:00	13.15	6.60	10.59	13.96	1.77	0.53	
11/14/07 16:50:15	13.07	6.70	10.46	15.76	1.67	0.53	
11/14/07 16:50:30	13.06	6.73	10.38	17.55	1.67	0.53	
11/14/07 16:50:45	13.01	6.77	10.59	18.75	1.66	0.53	
11/14/07 16:51:00	12.96	6.80	10.59	19.54	1.44	0.53	
11/14/07 16:51:15	12.97	6.79	10.59	20.89	1.50	0.53	
11/14/07 16:51:30	13.06	6.72	10.53	21.84	1.56	0.53	
11/14/07 16:51:45	13.01	6.76	10.59	23.03	1.60	0.53	
11/14/07 16:52:00	13.02	6.74	10.59	24.65	1.62	0.53	
11/14/07 16:52:15	13.10	6.67	10.59	27.52	1.69	0.52	
11/14/07 16:52:30	13.20	6.57	10.56	29.91	1.72	0.53	
11/14/07 16:52:45	13.23	6.55	10.46	32.06	1.66	0.53	
11/14/07 16:53:00	13.13	6.66	10.23	33.40	1.57	0.53	
11/14/07 16:53:15	13.14	6.66	10.46	31.96	1.52	0.53	
11/14/07 16:53:30	13.02	6.78	10.59	31.80	1.59	0.53	
11/14/07 16:53:45	12.96	6.80	10.46	30.71	1.58	0.53	
11/14/07 16:54:00	13.02	6.78	10.73	27.42	1.78	0.53	
11/14/07 16:54:15	13.01	6.78	10.59	24.45	1.69	0.53	
11/14/07 16:54:30	13.08	6.69	10.73	22.43	1.58	0.53	
11/14/07 16:54:45	13.07	6.75	10.53	22.93	1.58	0.53	
11/14/07 16:55:00	12.88	6.91	10.59	26.72	1.83	0.53	
11/14/07 16:55:15	13.03	6.72	10.53	29.21	1.62	0.53	
11/14/07 16:55:30	13.12	6.63	10.53	31.19	1.57	0.53	
11/14/07 16:55:45	13.02	6.76	10.46	0.01	1.56	0.53	
11/14/07 16:56:00	13.07	6.70	10.59	6.89	1.69	0.53	
11/14/07 16:56:15	13.15	6.62	10.59	27.62	1.64	0.53	
11/14/07 16:56:30	13.20	6.60	10.43	26.37	1.54	0.53	
11/14/07 16:56:45	13.12	6.69	10.28	24.73	1.74	0.53	
11/14/07 16:57:00	13.01	6.76	10.38	22.49	1.76	0.53	
11/14/07 16:57:15	12.96	6.84	10.53	20.44	1.64	0.53	
11/14/07 16:57:30	12.95	6.83	10.76	18.30	1.78	0.53	
11/14/07 16:57:45	12.93	6.87	10.78	18.06	1.67	0.53	
11/14/07 16:58:00	12.89	6.89	10.64	16.21	1.70	0.53	
11/14/07 16:58:15	12.96	6.82	10.53	16.58	1.57	0.53	
11/14/07 16:58:30	12.99	6.79	10.53	16.95	1.59	0.53	
11/14/07 16:58:45	13.01	6.77	10.59	16.48	1.71	0.53	
11/14/07 16:59:00	12.97	6.80	10.59	17.10	1.72	0.53	
11/14/07 16:59:15	13.13	6.63	10.78	16.63	1.67	0.53	
11/14/07 16:59:30	13.16	6.63	10.53	19.40	1.45	0.53	
11/14/07 16:59:45	13.12	6.67	10.19	17.85	1.46	0.53	
11/14/07 17:00:00	13.09	6.69	10.21	15.86	1.74	0.53	
11/14/07 17:00:15	13.07	6.73	10.38	15.28	1.73	0.53	
11/14/07 17:00:30	13.01	6.75	10.38	15.31	1.68	0.53	
11/14/07 17:00:45	13.07	6.71	10.38	14.86	1.66	0.53	
11/14/07 17:01:00	13.06	6.72	10.38	15.61	1.68	0.53	
11/14/07 17:01:15	13.10	6.68	10.38	17.65	1.53	0.53	
11/14/07 17:01:30	13.27	6.50	10.33	19.69	1.59	0.53	
11/14/07 17:01:45	13.29	6.49	10.19	20.24	1.70	0.53	
11/14/07 17:02:00	13.27	6.53	10.04	17.75	1.57	0.53	
11/14/07 17:02:15	13.09	6.75	9.99	16.56	1.66	0.53	
11/14/07 17:02:30	12.84	6.94	10.39	16.68	1.45	0.53	
11/14/07 17:02:45	12.83	6.94	10.78	16.56	1.53	0.53	
11/14/07 17:03:00	13.04	6.72	10.74	19.48	1.62	0.53	
11/14/07 17:03:15	13.20	6.57	10.53	20.24	1.77	0.53	
11/14/07 17:03:30	13.25	6.55	10.34	21.89	1.59	0.53	
11/14/07 17:03:45	13.20	6.59	10.09	22.83	1.60	0.53	
11/14/07 17:04:00	13.22	6.58	10.19	21.39	1.38	0.53	
11/14/07 17:04:15	13.06	6.73	10.19	20.24	1.49	0.53	
11/14/07 17:04:30	12.99	6.80	10.39	19.99	1.56	0.53	
11/14/07 17:04:45	12.93	6.87	10.53	18.85	1.56	0.53	
11/14/07 17:05:00	12.91	6.89	10.64	17.75	1.71	0.53	
11/14/07 17:05:15	13.02	6.75	10.78	16.66	1.52	0.53	
11/14/07 17:05:30	13.00	6.79	10.74	14.71	1.55	0.53	
11/14/07 17:05:45	12.99	6.79	10.53	14.06	1.46	0.53	
11/14/07 17:06:00	13.00	6.77	10.53	14.96	1.59	0.53	
11/14/07 17:06:15	13.12	6.66	10.53	16.29	1.91	0.53	
11/14/07 17:06:30	13.17	6.60	10.39	18.26	1.89	0.53	
11/14/07 17:06:45	13.34	6.45	10.09	18.86	1.79	0.53	
11/14/07 17:07:00	13.19	6.64	9.94	17.95	1.89	0.53	
11/14/07 17:07:15	13.10	6.66	10.19	20.24	1.64	0.53	
11/14/07 17:07:30	13.17	6.61	10.19	23.29	1.64	0.53	
11/14/07 17:07:45	13.33	6.45	10.09	24.03	1.72	0.53	
11/14/07 17:08:00	13.26	6.57	9.99	24.13	1.71	0.53	
11/14/07 17:08:15	13.14	6.66	10.09	23.33	1.79	0.53	
11/14/07 17:08:30	13.14	6.68	10.24	22.43	1.64	0.53	
11/14/07 17:08:45	13.05	6.74	10.39	21.44	1.67	0.54	
11/14/07 17:09:00	13.03	6.78	10.54	19.94	1.64	0.53	
11/14/07 17:09:15	13.02	6.78	10.59	18.26	1.68	0.53	
11/14/07 17:09:30	12.99	6.81	10.59	16.98	1.63	0.53	
11/14/07 17:09:45	12.95	6.82	10.59	13.37	1.62	0.53	
11/14/07 17:10:00	13.04	6.74	10.69	12.37	1.52	0.53	
11/14/07 17:10:15	13.05	6.72	10.49	12.37	1.54	0.53	
11/14/07 17:10:30	13.12	6.66	10.39	13.17	1.48	0.53	
11/14/07 17:10:45	13.10	6.69	10.39	13.96	1.67	0.53	
11/14/07 17:11:00	13.06	6.73	10.39	14.56	1.54	0.53	
11/14/07 17:11:15	13.01	6.78	10.39	14.26	1.77	0.53	
11/14/07 17:11:30	13.01	6.76	10.54	13.02	1.57	0.53	
11/14/07 17:11:45	13.05	6.74	10.49	12.27	1.74	0.53	
11/14/07 17:12:00	13.03	6.76	10.39	12.72	1.53	0.53	
11/14/07 17:12:15	13.01	6.79	10.49	13.57	1.46	0.53	
11/14/07 17:12:30	12.90	6.89	10.54	13.98	1.53	0.53	
11/14/07 17:12:45	12.86	6.92	10.76	13.67	1.60	0.53	
11/14/07 17:13:00	12.95	6.85	10.53	13.76	1.59	0.53	
11/14/07 17:13:15	12.94	6.83	10.59	13.37	1.57	0.53	
11/14/07 17:13:30	13.02	6.78	10.84	12.67	1.52	0.53	
11/14/07 17:13:45	12.97	6.83	10.79	11.67	1.63	0.53	
11/14/07 17:14:00	12.91	6.88	10.69	10.92	1.48	0.28	
11/14/07 17:14:15	12.87	6.90	10.79	10.89	1.71	0.03	
11/14/07 17:14:30	12.90	6.88	10.83	10.63	1.38	0.03	
11/14/07 17:14:45	12.87	6.89	10.39	10.38	1.64	0.03	
11/14/07 17:15:00	12.94	6.83	10.94	10.78	3.28	0.03	
11/14/07 17:15:15	12.99	6.77	10.78	9.38	2.93	0.03	
11/14/07 17:15:30	11.34	5.36	10.59	5.14	2.01	0.03	
11/14/07 17:15:45	5.15	2.04	14.18	2.00	2.20	0.03	
11/14/07 17:16:00	1.09	0.39	21.48	0.91	2.12	0.03	
11/14/07 17:16:15	0.16	0.12	12.76	0.71	1.96	0.03	
11/14/07 17:16:30	0.11	0.09	4.79	0.76	1.96	0.03	
11/14/07 17:16:45	0.10	0.08	0.29	0.71	1.98	0.03	
11/14/07 17:17:00	0.08	0.07	0.14	0.66	2.12	0.28	
11/14/07 17:17:15	0.08	0.06	-0.01	0.61	1.98	0.53	
11/14/07 17:17:30	0.08	0.06	-0.01	0.66	1.97	0.53	Calibration Bias
11/14/07 17:17:45	0.07	0.06	-0.01	0.71	1.82	0.53	Zero N2 injection
11/14/07 17:18:00	0.07	0.06	-0.01	0.61	2.01	0.53	0.07 % db Oxygen
11/14/07 17:18:15	0.07	0.06	-0.01	0.61	2.07	0.53	0.06 % db Carbon Dioxide
11/14/07 17:18:30	0.07	0.06	-0.01	0.71	1.90	0.53	-0.01 ppmv NOx
11/14/07 17:18:45	0.06	0.06	-0.01	0.61	1.89	0.53	0.66 ppmv CO
11/14/07 17:19:00	0.07	0.04	-0.01	0.61	1.95	0.53	
11/14/07 17:19:15	0.06	0.04	-0.01	0.61	1.80	0.53	
11/14/07 17:19:30	0.06	0.04	-0.01	1.11	2.11	0.53	
11/14/07 17:19:45	1.00	0.76	-0.01	1.41	1.75	0.53	
11/14/07 17:20:00	2.92	1.71	0.34	1.01	1.75	0.53	
11/14/07 17:20:15	4.78	4.97	2.09	0.51	1.81	0.53	
11/14/07 17:20:30	8.07	8.07	1.99	0.11	1.65	0.53	
11/14/07 17:20:45	9.54	9.42	0.99	0.01	1.73	0.53	
11/14/07 17:21:00	9.79	9.51	0.44	0.01	1.69	0.53	
11/14/07 17:21:15	9.81	9.45	0.19	0.01	1.66	0.53	
11/14/07 17:21:30	9.83	9.51	0.19	0.01	1.81	0.53	
11/14/07 17:21:45	9.84	9.66	0.19	0.01	1.81	0.53	
11/14/07 17:22:00	9.85	9.78	0.19	0.01	1.88	0.53	
11/14/07 17:22:15	9.85	9.84	0.19	0.01	1.49	0.53	
11/14/07 17:22:30	9.85	9.87	0.19	0.01	1.45	0.53	Calibration Bias
11/14/07 17:22:45	9.86	9.88	0.19	0.01	1.27	0.53	10.0% Oxygen injection
11/14/07 17:23:00	9.86	9.88	0.19	0.01	1.44	0.28	9.86 % db Oxygen
11/14/07 17:23:15	9.86	9.89	0.19	0.01	1.47	0.02	
11/14/07 17:23:30	9.86	9.90	0.19	0.01	1.54	0.03	
11/14/07 17:23:45	9.86	9.90	0.19	0.06	1.48	0.02	
11/14/07 17:24:00	9.84	9.90	0.19	0.31	1.47	0.03	
11/14/07 17:24:15	9.96	9.77	0.19	0.28	1.59	0.03	
11/14/07 17:24:30	10.07	9.58	0.54	0.11	1.39	0.03	
11/14/07 17:24:45	9.83	9.80	0.69	0.01	1.65	0.03	
11/14/07 17:25:00	9.79	9.84	0.39	0.01	1.44	0.02	Calibration Bias
11/14/07 17:25:15	9.79	9.86	0.19	0.01	1.60	0.02	10.0% CO2 injection

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 17:25:30	9.80	9.85	0.19	0.01	1.25	0.02	9.85 % db CO2
11/14/07 17:25:45	9.80	9.85	0.19	0.01	1.45	0.03	
11/14/07 17:26:00	9.80	9.85	0.19	0.01	1.48	0.02	
11/14/07 17:26:15	9.80	9.85	0.19	0.01	1.38	0.02	
11/14/07 17:26:30	9.80	9.85	0.19	0.51	1.81	0.02	
11/14/07 17:26:45	9.81	9.82	0.19	2.40	1.82	0.02	
11/14/07 17:27:00	10.37	9.20	0.44	11.67	1.92	0.02	
11/14/07 17:27:15	8.85	7.20	1.79	28.91	1.96	0.02	
11/14/07 17:27:30	3.65	2.95	1.64	40.47	1.97	0.02	
11/14/07 17:27:45	0.72	0.50	0.79	44.06	2.36	0.02	
11/14/07 17:28:00	0.15	0.21	0.24	44.76	2.09	0.02	
11/14/07 17:28:15	0.12	0.15	-0.01	44.96	1.96	0.02	
11/14/07 17:28:30	0.11	0.13	-0.01	44.85	1.89	0.02	
11/14/07 17:28:45	0.10	0.11	-0.01	44.81	2.01	0.02	
11/14/07 17:29:00	0.09	0.10	-0.01	44.88	2.04	0.27	
11/14/07 17:29:15	0.08	0.09	-0.01	44.91	1.82	0.52	Calibration Bias
11/14/07 17:29:30	0.08	0.08	-0.01	44.95	1.87	0.53	45.0 ppmv db CO injection
11/14/07 17:29:45	0.06	0.06	-0.01	44.96	1.80	0.52	44.96 ppmv db CO
11/14/07 17:30:00	0.08	0.07	-0.01	44.96	1.77	0.52	
11/14/07 17:30:15	0.07	0.07	-0.01	45.06	1.86	0.52	
11/14/07 17:30:30	0.07	0.07	-0.01	44.96	1.84	0.52	
11/14/07 17:30:45	0.07	0.08	-0.01	43.91	1.66	0.53	
11/14/07 17:31:00	0.06	0.06	-0.01	38.18	1.97	0.52	
11/14/07 17:31:15	1.54	1.10	-0.01	32.70	1.95	0.52	
11/14/07 17:31:30	3.29	1.57	1.49	20.84	1.88	0.52	
11/14/07 17:31:45	1.01	0.41	3.09	7.84	1.84	0.53	
11/14/07 17:32:00	0.14	0.09	9.19	1.70	1.69	0.52	
11/14/07 17:32:15	0.07	0.06	31.28	1.01	1.87	0.52	
11/14/07 17:32:30	0.07	0.05	40.48	0.91	1.46	0.53	
11/14/07 17:32:45	0.06	0.05	40.08	0.88	1.62	0.53	
11/14/07 17:33:00	0.05	0.05	36.78	0.81	1.99	0.52	
11/14/07 17:33:15	0.05	0.05	42.88	0.81	1.83	0.52	
11/14/07 17:33:30	0.05	0.04	45.88	0.81	1.84	0.52	
11/14/07 17:33:45	0.05	0.04	46.06	0.81	2.03	0.53	
11/14/07 17:34:00	0.05	0.04	45.93	0.81	1.85	0.53	
11/14/07 17:34:15	0.05	0.04	45.66	0.81	1.93	0.53	
11/14/07 17:34:30	0.05	0.04	45.53	0.81	1.84	0.53	
11/14/07 17:34:45	0.05	0.04	45.38	0.81	1.97	0.52	
11/14/07 17:35:00	0.05	0.04	45.18	0.81	1.84	0.52	
11/14/07 17:35:15	0.05	0.04	45.08	0.81	1.90	0.52	
11/14/07 17:35:30	0.05	0.04	44.98	0.81	1.62	0.52	
11/14/07 17:35:45	0.05	0.04	44.88	0.81	1.70	0.53	
11/14/07 17:36:00	0.05	0.04	44.78	0.81	1.65	0.53	
11/14/07 17:36:15	0.05	0.03	44.78	0.81	1.69	0.53	
11/14/07 17:36:30	0.05	0.03	44.73	0.81	1.66	0.52	
11/14/07 17:36:45	0.05	0.03	44.58	0.81	1.95	0.53	
11/14/07 17:37:00	0.05	0.03	44.57	0.81	1.89	0.52	
11/14/07 17:37:15	0.05	0.03	44.58	0.81	1.76	0.52	
11/14/07 17:37:30	0.05	0.03	44.52	0.81	1.82	0.52	Calibration Bias
11/14/07 17:37:45	0.04	0.03	44.37	0.81	1.76	0.52	45.0 ppmv db NOx injection
11/14/07 17:38:00	0.05	0.03	44.37	0.81	1.49	0.52	44.37 ppmv db NOx
11/14/07 17:38:15	0.04	0.03	44.37	2.05	1.65	0.52	
11/14/07 17:38:30	0.55	0.53	44.37	7.58	1.60	0.52	
11/14/07 17:38:45	5.74	3.50	42.07	13.71	1.72	0.52	
11/14/07 17:39:00	10.73	5.77	33.36	16.75	1.37	0.53	
11/14/07 17:39:15	12.57	6.51	21.28	17.10	1.96	0.52	
11/14/07 17:39:30	12.90	6.71	13.08	14.36	1.38	0.52	
11/14/07 17:39:45	11.50	5.77	10.98	7.49	1.11	0.52	
11/14/07 17:40:00	6.75	2.44	12.98	2.30	1.05	0.52	
11/14/07 17:40:15	13.52	0.41	23.96	0.86	195.49	0.52	
11/14/07 17:40:30	19.66	0.11	15.28	0.61	137.46	0.52	
11/14/07 17:40:45	20.84	0.06	6.09	0.68	34.93	0.52	
11/14/07 17:41:00	20.72	0.05	0.39	0.81	-0.05	0.52	Calibration Bias
11/14/07 17:41:15	20.74	0.04	0.29	0.66	-0.56	0.52	Zero Air Injection
11/14/07 17:41:30	20.75	0.04	0.19	0.61	-0.54	0.52	-0.42 ppm Total VOC
11/14/07 17:41:45	20.77	0.04	0.19	0.56	-0.48	0.53	
11/14/07 17:42:00	20.78	0.03	-0.01	0.71	-0.07	0.52	
11/14/07 17:42:15	20.79	0.03	-0.01	0.66	0.17	0.52	
11/14/07 17:42:30	20.79	0.03	-0.01	0.71	0.35	0.52	
11/14/07 17:42:45	20.80	0.03	-0.01	0.76	0.33	0.52	
11/14/07 17:43:00	20.50	0.03	-0.01	0.81	0.65	0.52	
11/14/07 17:43:15	20.80	0.03	-0.01	2.55	16.85	0.53	
11/14/07 17:43:30	19.92	1.04	-0.01	3.30	50.30	0.52	
11/14/07 17:43:45	18.81	1.37	0.79	2.10	50.17	0.52	Calibration Bias
11/14/07 17:44:00	19.35	0.29	3.24	1.11	50.39	25.57	50.0 ppm CH4 injection
11/14/07 17:44:15	20.06	0.06	3.59	0.96	50.38	50.61	50.38 ppm Total VOC
11/14/07 17:44:30	20.29	0.04	1.59	0.81	50.39	50.61	
11/14/07 17:44:45	20.33	0.03	0.29	0.91	50.24	50.61	
11/14/07 17:45:00	20.36	0.03	-0.01	0.91	50.27	50.61	
11/14/07 17:45:15	20.38	0.03	-0.01	0.86	50.30	50.61	
11/14/07 17:45:30	20.40	0.03	-0.01	0.81	24.42	50.61	
11/14/07 17:45:45	20.42	0.03	-0.01	3.30	2.16	50.61	
11/14/07 17:46:00	19.97	0.74	0.04	11.67	1.43	50.61	
11/14/07 17:46:15	16.49	4.21	0.19	17.32	1.49	50.61	
11/14/07 17:46:30	13.74	6.26	4.69	19.25	1.37	50.51	
11/14/07 17:46:45	13.06	6.70	8.19	20.45	1.53	50.51	
11/14/07 17:47:00	13.10	6.84	10.58	21.93	1.35	25.57	
11/14/07 17:47:15	13.06	6.72	10.58	20.61	1.37	0.52	
11/14/07 17:47:30	13.00	6.78	10.63	16.75	1.16	0.52	
11/14/07 17:47:45	12.66	6.93	10.78	17.27	1.29	0.52	
11/14/07 17:48:00	12.79	6.97	10.63	16.56	1.31	0.52	
11/14/07 17:48:15	12.95	6.79	11.08	16.35	1.47	0.52	
11/14/07 17:48:30	12.94	6.66	10.93	15.66	1.10	0.52	
11/14/07 17:48:45	12.80	6.58	10.88	14.66	1.23	0.52	
11/14/07 17:49:00	12.86	6.91	11.13	13.96	1.18	0.52	
11/14/07 17:49:15	12.87	6.69	10.96	14.48	1.11	0.52	
11/14/07 17:49:30	13.01	6.75	10.96	13.96	1.39	0.52	
11/14/07 17:49:45	13.06	6.74	10.88	13.51	1.25	0.52	
11/14/07 17:50:00	13.02	6.76	10.56	13.07	1.10	0.52	
11/14/07 17:50:15	12.91	6.90	10.56	13.11	1.34	0.52	
11/14/07 17:50:30	12.74	7.03	10.66	14.36	1.27	0.52	
11/14/07 17:50:45	12.88	6.86	11.18	15.31	1.17	0.52	Run 3
11/14/07 17:51:00	13.01	6.79	11.13	15.98	1.44	0.52	N409
11/14/07 17:51:15	12.91	6.86	10.78	16.46	1.16	0.52	
11/14/07 17:51:30	12.90	6.90	10.63	16.76	1.31	0.53	
11/14/07 17:51:45	12.98	6.90	10.38	16.55	1.33	0.52	
11/14/07 17:52:00	12.96	6.82	10.98	17.25	1.27	0.52	
11/14/07 17:52:15	12.98	6.90	10.88	17.50	1.44	0.52	
11/14/07 17:52:30	13.07	6.72	10.78	17.65	1.28	0.52	
11/14/07 17:52:45	13.08	6.79	10.88	20.74	1.27	0.52	
11/14/07 17:53:00	13.11	6.87	10.58	23.65	1.58	0.52	
11/14/07 17:53:15	13.22	6.87	10.58	26.77	1.96	0.52	
11/14/07 17:53:30	13.22	6.68	10.33	29.01	1.96	0.52	
11/14/07 17:53:45	13.18	6.63	10.28	32.70	1.87	0.52	
11/14/07 17:54:00	13.16	6.66	10.38	33.30	1.70	0.52	
11/14/07 17:54:15	12.86	6.86	10.38	33.16	1.99	0.52	
11/14/07 17:54:30	12.87	6.81	10.63	34.08	1.89	0.52	
11/14/07 17:54:45	13.17	6.90	10.88	34.64	1.79	0.52	
11/14/07 17:55:00	13.20	6.63	10.63	33.89	1.92	0.52	
11/14/07 17:55:15	13.24	6.54	10.28	32.60	1.92	0.52	
11/14/07 17:55:30	13.23	6.60	10.13	32.30	1.70	0.52	
11/14/07 17:55:45	13.13	6.68	10.18	32.65	1.69	0.52	
11/14/07 17:56:00	13.13	6.67	10.58	33.39	1.66	0.52	
11/14/07 17:56:15	13.18	6.63	10.58	33.54	1.68	0.52	
11/14/07 17:56:30	13.11	6.72	10.38	31.20	1.64	0.52	
11/14/07 17:56:45	13.08	6.72	10.48	25.42	1.60	0.52	
11/14/07 17:57:00	13.06	6.70	10.58	23.93	1.57	0.52	
11/14/07 17:57:15	13.06	6.74	10.58	28.91	1.70	0.52	
11/14/07 17:57:30	13.18	6.61	10.58	31.50	1.48	0.52	
11/14/07 17:57:45	13.27	6.54	10.48	30.71	1.81	0.52	
11/14/07 17:58:00	13.17	6.67	10.18	29.81	1.47	0.52	
11/14/07 17:58:15	13.04	6.76	10.18	26.92	1.62	0.52	
11/14/07 17:58:30	13.06	6.74	10.43	24.43	1.54	0.52	
11/14/07 17:58:45	13.08	6.74	10.58	24.33	1.49	0.52	
11/14/07 17:59:00	12.87	6.84	10.43	24.73	1.48	0.52	
11/14/07 17:59:15	12.97	6.82	10.71	26.57	1.76	0.52	
11/14/07 17:59:30	13.04	6.76	10.78	26.02	1.58	0.52	
11/14/07 17:59:45	13.03	6.70	10.66	26.47	1.77	0.52	
11/14/07 18:00:00	12.94	6.83	10.56	23.63	1.61	0.52	
11/14/07 18:00:15	12.85	6.96	10.73	22.63	1.49	0.52	
11/14/07 18:00:30	12.95	6.63	10.63	23.63	1.56	0.52	
11/14/07 18:00:45	13.02	6.79	10.53	24.28	1.60	0.52	
11/14/07 18:01:00	12.96	6.82	10.58	22.23	1.30	0.52	
11/14/07 18:01:15	12.98	6.86	10.73	19.99	1.37	0.52	
11/14/07 18:01:30	12.92	6.87	10.78	20.14	1.70	0.52	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 18:01:45	12.97	6.85	10.78	20.84	1.88	0.52	
11/14/07 18:02:00	12.97	6.84	10.78	21.14	1.60	0.77	
11/14/07 18:02:15	13.03	6.77	10.78	22.78	1.62	1.02	
11/14/07 18:02:30	13.06	6.78	10.68	24.45	1.84	1.02	
11/14/07 18:02:45	12.97	6.94	10.58	25.67	1.70	1.01	
11/14/07 18:03:00	13.04	6.74	10.73	26.92	1.81	1.02	
11/14/07 18:03:15	13.13	6.69	10.58	27.72	1.87	1.02	
11/14/07 18:03:30	13.04	6.78	10.53	27.92	1.82	1.01	
11/14/07 18:03:45	13.04	6.78	10.63	26.16	1.50	1.02	
11/14/07 18:04:00	12.99	6.81	10.63	27.92	1.78	1.01	
11/14/07 18:04:15	12.97	6.84	10.78	25.87	1.62	1.02	
11/14/07 18:04:30	12.94	6.87	10.78	22.83	1.73	1.02	
11/14/07 18:04:45	12.90	6.91	10.78	24.13	1.85	1.01	
11/14/07 18:05:00	13.01	6.77	10.78	26.92	1.19	0.77	
11/14/07 18:05:15	13.12	6.68	10.78	25.72	1.31	0.52	
11/14/07 18:05:30	13.11	6.72	10.68	23.53	1.29	0.52	
11/14/07 18:05:45	13.00	6.81	10.68	23.58	1.48	0.52	
11/14/07 18:06:00	12.99	6.82	10.68	22.53	1.44	0.52	
11/14/07 18:06:15	12.96	6.82	10.68	20.09	1.33	0.52	
11/14/07 18:06:30	12.93	6.89	10.78	18.65	1.28	0.52	
11/14/07 18:06:45	12.90	6.91	10.78	19.00	1.16	0.52	
11/14/07 18:07:00	12.92	6.87	10.98	19.54	1.47	0.52	
11/14/07 18:07:15	13.01	6.76	10.88	18.45	1.48	0.52	
11/14/07 18:07:30	13.00	6.82	10.73	18.65	1.47	0.52	
11/14/07 18:07:45	12.97	6.84	10.73	19.99	1.48	0.52	
11/14/07 18:08:00	12.96	6.86	10.78	22.03	1.26	1.52	
11/14/07 18:08:15	12.97	6.83	10.78	24.68	1.29	2.52	
11/14/07 18:08:30	13.00	6.86	10.78	24.82	1.20	2.52	
11/14/07 18:08:45	13.03	6.80	10.63	23.28	1.29	2.52	
11/14/07 18:09:00	12.97	6.95	10.63	23.13	1.49	2.52	
11/14/07 18:09:15	12.84	6.95	10.78	22.03	1.49	2.52	
11/14/07 18:09:30	12.90	6.90	10.98	21.34	1.35	2.52	
11/14/07 18:09:45	12.93	6.96	10.98	21.54	1.47	2.52	
11/14/07 18:10:00	13.07	6.73	10.93	22.13	1.17	2.52	
11/14/07 18:10:15	13.09	6.74	10.83	24.63	1.41	2.52	
11/14/07 18:10:30	13.02	6.80	10.63	29.91	1.28	2.52	
11/14/07 18:10:45	13.09	6.69	10.63	33.69	1.27	2.52	
11/14/07 18:11:00	13.19	6.84	10.73	31.60	1.18	2.27	
11/14/07 18:11:15	13.09	6.74	10.43	27.22	1.34	2.02	
11/14/07 18:11:30	13.01	6.82	10.43	24.03	1.06	2.02	
11/14/07 18:11:45	12.96	6.96	10.58	19.09	1.12	2.02	
11/14/07 18:12:00	12.97	6.83	10.63	16.65	1.38	2.02	
11/14/07 18:12:15	13.07	6.73	10.78	21.98	1.31	2.02	
11/14/07 18:12:30	13.07	6.78	10.53	23.13	1.30	2.02	
11/14/07 18:12:45	13.02	6.90	10.63	21.78	1.35	2.02	
11/14/07 18:13:00	12.99	6.82	10.58	22.33	1.33	2.02	
11/14/07 18:13:15	12.93	6.89	10.73	24.13	1.22	2.02	
11/14/07 18:13:30	12.97	6.83	10.83	23.83	1.05	2.02	
11/14/07 18:13:45	12.96	6.85	10.83	23.13	1.27	2.02	
11/14/07 18:14:00	12.88	6.84	10.78	23.13	1.22	1.77	
11/14/07 18:14:15	12.95	6.86	10.63	23.88	1.38	1.52	
11/14/07 18:14:30	12.90	6.80	10.78	24.73	1.37	1.52	
11/14/07 18:14:45	12.89	6.81	10.78	25.92	1.37	1.52	
11/14/07 18:15:00	13.07	6.74	10.78	26.92	1.43	1.52	
11/14/07 18:15:15	13.06	6.76	10.63	30.96	1.18	1.52	
11/14/07 18:15:30	13.11	6.70	10.58	32.10	1.30	1.52	
11/14/07 18:15:45	13.10	6.72	10.58	30.56	1.31	1.52	
11/14/07 18:16:00	13.07	6.77	10.38	28.81	1.23	1.52	
11/14/07 18:16:15	12.95	6.86	10.63	25.67	1.39	1.52	
11/14/07 18:16:30	12.91	6.91	10.63	24.15	1.28	1.52	
11/14/07 18:16:45	12.91	6.91	10.78	21.39	1.12	1.52	
11/14/07 18:17:00	12.88	6.94	10.98	19.94	1.17	1.27	
11/14/07 18:17:15	12.85	6.96	10.98	18.00	1.35	1.02	
11/14/07 18:17:30	12.87	6.94	11.03	18.96	1.30	1.02	
11/14/07 18:17:45	12.93	6.87	11.03	17.30	1.37	1.02	
11/14/07 18:18:00	12.92	6.92	10.83	16.18	0.91	1.02	
11/14/07 18:18:15	12.80	7.02	10.78	14.16	1.17	1.02	
11/14/07 18:18:30	12.77	7.03	11.03	15.36	1.19	1.02	
11/14/07 18:18:45	12.83	6.98	11.18	18.25	1.38	1.02	
11/14/07 18:19:00	12.99	6.80	11.13	19.54	1.39	1.02	
11/14/07 18:19:15	13.06	6.77	10.93	18.38	1.27	1.01	
11/14/07 18:19:30	13.04	6.78	10.73	19.94	1.41	1.02	
11/14/07 18:19:45	12.96	6.84	10.73	21.83	1.24	1.02	
11/14/07 18:20:00	12.95	6.85	10.78	23.33	1.18	1.02	
11/14/07 18:20:15	13.03	6.78	10.78	24.88	1.37	1.02	
11/14/07 18:20:30	13.06	6.78	10.73	26.92	1.29	1.02	
11/14/07 18:20:45	13.09	6.73	10.58	27.87	1.30	1.02	
11/14/07 18:21:00	13.10	6.73	10.58	31.20	1.40	1.02	
11/14/07 18:21:15	13.14	6.66	10.58	35.24	1.31	1.01	
11/14/07 18:21:30	13.24	6.59	10.63	36.59	1.27	1.02	
11/14/07 18:21:45	13.23	6.61	10.43	31.40	1.31	1.01	
11/14/07 18:22:00	13.14	6.70	10.38	29.91	1.07	1.02	
11/14/07 18:22:15	13.08	6.74	10.53	33.30	1.27	1.02	
11/14/07 18:22:30	13.13	6.69	10.58	35.70	1.39	1.02	
11/14/07 18:22:45	13.21	6.60	10.58	35.38	1.06	1.01	
11/14/07 18:23:00	13.24	6.63	10.53	34.96	1.29	1.01	
11/14/07 18:23:15	13.17	6.65	10.38	35.99	1.01	1.02	
11/14/07 18:23:30	13.18	6.65	10.38	35.76	1.06	1.01	
11/14/07 18:23:45	13.19	6.64	10.38	33.94	1.38	1.02	
11/14/07 18:24:00	13.18	6.65	10.43	31.58	1.22	1.02	
11/14/07 18:24:15	13.14	6.71	10.68	30.21	1.38	1.01	
11/14/07 18:24:30	13.06	6.77	10.58	30.06	1.04	1.01	
11/14/07 18:24:45	13.10	6.71	10.68	30.58	1.39	1.01	
11/14/07 18:25:00	13.17	6.64	10.58	31.80	1.33	1.01	
11/14/07 18:25:15	13.15	6.69	10.68	31.76	1.38	1.01	
11/14/07 18:25:30	13.07	6.78	10.68	31.18	1.21	1.01	
11/14/07 18:25:45	13.08	6.73	10.68	30.68	1.29	1.01	
11/14/07 18:26:00	13.13	6.71	10.58	29.36	1.32	0.77	
11/14/07 18:26:15	13.11	6.71	10.43	26.87	1.32	0.52	
11/14/07 18:26:30	13.07	6.77	10.58	24.63	1.30	0.52	
11/14/07 18:26:45	12.96	6.82	10.68	23.33	1.20	0.52	
11/14/07 18:27:00	13.06	6.78	10.73	22.88	1.14	0.52	
11/14/07 18:27:15	13.10	6.72	10.68	22.63	1.15	0.52	
11/14/07 18:27:30	13.13	6.69	10.68	26.02	1.09	0.52	
11/14/07 18:27:45	13.14	6.68	10.68	28.38	1.00	0.52	
11/14/07 18:28:00	13.20	6.63	10.38	29.28	1.28	0.52	
11/14/07 18:28:15	13.11	6.72	10.38	28.11	1.31	0.52	
11/14/07 18:28:30	13.18	6.63	10.48	26.62	1.20	0.52	
11/14/07 18:28:45	13.13	6.72	10.43	25.07	1.16	0.52	
11/14/07 18:29:00	13.12	6.69	10.28	24.18	1.37	0.52	
11/14/07 18:29:15	13.17	6.67	10.38	24.29	1.22	0.52	
11/14/07 18:29:30	13.10	6.73	10.38	27.27	1.31	0.52	
11/14/07 18:29:45	13.11	6.71	10.38	31.05	1.13	0.52	
11/14/07 18:30:00	13.15	6.67	10.58	31.60	1.38	0.52	
11/14/07 18:30:15	13.14	6.69	10.43	34.56	1.43	0.52	
11/14/07 18:30:30	13.23	6.67	10.38	33.40	1.21	0.52	
11/14/07 18:30:45	13.28	6.61	10.23	28.96	1.32	0.52	
11/14/07 18:31:00	13.05	6.79	10.15	29.73	0.99	0.52	
11/14/07 18:31:15	13.03	6.80	10.53	19.69	1.26	0.52	
11/14/07 18:31:30	13.01	6.82	10.68	19.29	1.14	0.52	
11/14/07 18:31:45	12.96	6.86	10.73	19.49	1.16	0.52	
11/14/07 18:32:00	12.97	6.85	10.78	20.24	1.32	0.77	
11/14/07 18:32:15	13.01	6.82	10.78	21.43	1.25	1.02	
11/14/07 18:32:30	13.00	6.82	10.88	21.28	1.13	1.02	
11/14/07 18:32:45	13.07	6.76	10.58	21.58	1.10	1.02	
11/14/07 18:33:00	13.16	6.65	10.58	22.03	1.04	1.02	
11/14/07 18:33:15	13.15	6.70	10.43	22.73	1.14	1.02	
11/14/07 18:33:30	13.08	6.78	10.38	23.93	1.20	1.02	
11/14/07 18:33:45	13.10	6.72	10.53	23.98	1.27	1.02	
11/14/07 18:34:00	13.10	6.74	10.68	23.98	1.35	1.02	
11/14/07 18:34:15	13.01	6.83	10.68	23.63	1.17	1.02	
11/14/07 18:34:30	13.01	6.81	10.68	24.28	1.06	1.02	
11/14/07 18:34:45	13.04	6.77	10.78	23.73	1.19	1.01	
11/14/07 18:35:00	13.09	6.75	10.88	22.36	1.40	0.77	
11/14/07 18:35:15	12.89	6.94	10.68	23.28	1.00	0.52	
11/14/07 18:35:30	13.02	6.79	10.68	26.12	1.38	0.52	
11/14/07 18:35:45	13.22	6.59	10.79	27.62	92.91	0.52	
11/14/07 18:36:00	13.33	6.80	10.43	28.92	137.18	0.52	
11/14/07 18:36:15	13.22	6.65	10.23	22.68	32.39	0.52	
11/14/07 18:36:30	13.00	6.84	10.28	20.59	-0.17	0.52	
11/14/07 18:36:45	13.01	6.91	10.53	23.38	-0.56	0.52	
11/14/07 18:37:00	13.14	6.87	10.78	24.72	-0.40	0.52	
11/14/07 18:37:15	13.26	6.57	10.83	23.06	-0.04	0.52	
11/14/07 18:37:30	13.17	6.66	10.28	23.88	0.05	0.52	
11/14/07 18:37:45	13.21	6.62	10.18	23.78	0.51	0.52	

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 18:36:00	13.18	6.70	10.38	22.43	0.68	0.77	
11/14/07 18:38:15	13.02	6.80	10.38	20.84	0.82	1.02	
11/14/07 18:38:30	13.09	6.75	10.88	22.43	0.77	1.01	
11/14/07 18:38:45	12.98	6.86	10.78	27.76	0.91	1.02	
11/14/07 18:39:00	13.14	6.64	10.58	30.76	0.80	1.02	
11/14/07 18:39:15	13.35	6.49	10.73	30.26	1.10	1.02	
11/14/07 18:39:30	13.20	6.68	10.18	30.26	1.00	1.02	
11/14/07 18:39:45	13.01	6.82	10.28	30.76	1.18	1.02	
11/14/07 18:40:00	13.07	6.75	10.58	31.65	0.93	1.02	
11/14/07 18:40:15	13.09	6.74	10.58	33.00	1.03	1.02	
11/14/07 18:40:30	13.14	6.69	10.68	34.19	1.05	1.02	
11/14/07 18:40:45	13.21	6.62	10.43	34.14	1.00	1.02	
11/14/07 18:41:00	13.24	6.60	10.38	34.29	1.23	1.27	
11/14/07 18:41:15	13.30	6.52	10.38	31.15	1.29	1.52	
11/14/07 18:41:30	13.34	6.51	10.18	28.97	1.18	1.52	
11/14/07 18:41:45	13.17	6.68	10.18	25.12	0.90	1.52	
11/14/07 18:42:00	13.09	6.75	10.28	28.82	1.03	1.52	
11/14/07 18:42:15	13.18	6.62	10.53	27.17	1.28	1.52	
11/14/07 18:42:30	13.28	6.58	10.38	28.92	1.16	1.52	
11/14/07 18:42:45	13.18	6.68	10.38	24.67	1.31	1.52	
11/14/07 18:43:00	13.12	6.73	10.28	23.03	1.08	1.52	
11/14/07 18:43:15	13.02	6.84	10.38	21.24	1.28	1.52	
11/14/07 18:43:30	12.91	6.93	10.68	19.59	1.33	1.52	
11/14/07 18:43:45	12.89	6.94	10.78	21.14	1.29	1.52	
11/14/07 18:44:00	13.01	6.90	10.58	23.03	1.13	1.02	
11/14/07 18:44:15	13.20	6.81	10.78	24.78	1.30	0.52	
11/14/07 18:44:30	13.22	6.64	10.38	26.87	1.07	0.52	
11/14/07 18:44:45	13.11	6.74	10.33	26.37	1.54	0.52	
11/14/07 18:45:00	13.10	6.74	10.49	28.82	0.96	0.52	
11/14/07 18:45:15	13.07	6.78	10.68	30.01	1.23	0.52	
11/14/07 18:45:30	13.13	6.71	10.68	35.39	1.16	0.52	
11/14/07 18:45:45	13.16	6.68	10.68	38.29	1.00	0.52	
11/14/07 18:46:00	13.24	6.60	10.48	41.42	1.11	0.52	
11/14/07 18:46:15	13.25	6.68	10.38	48.75	1.18	0.52	
11/14/07 18:46:30	13.34	6.50	10.38	49.64	1.31	0.52	
11/14/07 18:46:45	13.28	6.60	10.23	48.74	1.16	0.52	
11/14/07 18:47:00	13.15	6.69	10.28	45.60	0.98	0.52	
11/14/07 18:47:15	13.16	6.68	10.38	43.31	1.16	0.52	
11/14/07 18:47:30	13.23	6.60	10.38	40.17	1.09	0.52	
11/14/07 18:47:45	13.26	6.62	10.38	39.32	1.00	0.52	
11/14/07 18:48:00	13.14	6.70	10.28	37.98	1.08	0.52	
11/14/07 18:48:15	13.14	6.71	10.53	31.90	1.07	0.52	
11/14/07 18:48:30	13.07	6.79	10.68	25.62	1.24	0.52	
11/14/07 18:48:45	13.03	6.80	10.58	22.43	1.44	0.52	
11/14/07 18:49:00	13.04	6.80	10.68	20.79	1.28	0.52	
11/14/07 18:49:15	12.98	6.86	10.58	13.14	1.24	0.52	
11/14/07 18:49:30	12.88	6.96	10.88	19.59	1.31	0.52	
11/14/07 18:48:45	12.96	6.88	10.98	19.94	1.12	0.52	
11/14/07 18:50:00	12.91	6.93	10.88	19.04	1.25	0.82	
11/14/07 18:50:15	12.96	6.87	10.88	18.80	0.90	0.62	
11/14/07 18:50:30	12.87	6.97	10.68	19.69	1.31	0.82	
11/14/07 18:50:45	12.91	6.90	10.93	20.24	1.12	0.62	
11/14/07 18:51:00	13.01	6.82	11.08	18.60	1.23	0.52	
11/14/07 18:51:15	12.98	6.87	10.83	16.75	1.27	0.52	
11/14/07 18:51:30	12.96	6.88	10.78	15.26	1.13	0.52	
11/14/07 18:51:45	12.88	6.96	10.78	16.45	20.77	0.52	
11/14/07 18:52:00	12.84	6.99	10.88	16.75	24.60	0.52	
11/14/07 18:52:15	13.06	6.60	11.13	10.62	2.69	0.52	
11/14/07 18:52:30	15.56	2.97	11.08	3.75	1.90	0.52	
11/14/07 18:52:45	9.78	0.56	8.18	1.11	1.97	0.52	
11/14/07 18:53:00	1.75	0.18	2.49	0.66	1.64	0.77	
11/14/07 18:53:15	0.24	0.10	0.59	0.61	1.81	1.02	
11/14/07 18:53:30	0.14	0.08	0.09	0.61	2.00	1.01	
11/14/07 18:53:45	0.12	0.07	-0.01	0.61	1.77	1.02	
11/14/07 18:54:00	0.11	0.06	-0.01	0.61	1.98	1.02	
11/14/07 18:54:15	0.10	0.06	-0.01	0.61	1.73	1.01	Calibration Bias
11/14/07 18:54:30	0.10	0.06	-0.01	0.61	1.84	1.01	Zero N2 Injection
11/14/07 18:54:45	0.09	0.05	-0.01	0.61	1.87	1.01	0.09 % db Oxygen
11/14/07 18:55:00	0.09	0.05	-0.01	0.61	1.85	1.01	0.06 % db Carbon Dioxide
11/14/07 18:55:15	0.08	0.04	-0.01	0.61	1.87	1.01	-0.01 ppmv NOx
11/14/07 18:55:30	0.08	0.04	-0.01	0.61	1.65	1.01	0.61 ppmv CO
11/14/07 18:55:45	0.08	0.04	-0.01	0.91	1.64	1.01	
11/14/07 18:56:00	0.39	0.34	-0.01	2.25	3.34	1.01	
11/14/07 18:56:15	3.04	1.64	-0.01	1.80	1.68	1.01	
11/14/07 18:56:30	3.97	3.36	2.19	0.78	1.38	1.02	
11/14/07 18:56:45	7.20	7.06	2.09	0.18	1.41	1.01	
11/14/07 18:57:00	9.27	9.11	0.69	0.01	1.35	1.01	
11/14/07 18:57:15	9.79	9.54	0.29	0.01	1.32	1.01	
11/14/07 18:57:30	9.83	9.48	0.19	0.01	1.20	1.01	
11/14/07 18:57:45	9.84	9.49	0.19	0.01	1.30	1.01	
11/14/07 18:58:00	9.86	9.62	0.19	0.01	1.33	1.01	Calibration Bias
11/14/07 18:58:15	9.87	9.75	0.19	0.01	1.33	1.01	10.0% Oxygen Injection
11/14/07 18:58:30	9.87	9.64	0.19	0.01	1.16	1.02	9.67 % db Oxygen
11/14/07 18:58:45	9.87	9.87	0.19	0.01	1.21	1.01	
11/14/07 18:59:00	9.87	9.88	0.19	0.01	1.14	0.77	
11/14/07 18:59:15	9.87	9.89	0.19	0.01	1.06	0.52	
11/14/07 18:59:30	9.87	9.90	0.19	0.01	1.38	0.52	
11/14/07 18:59:45	9.87	9.91	0.19	1.90	1.45	0.52	
11/14/07 19:00:00	10.17	9.46	0.19	2.40	1.07	0.52	
11/14/07 19:00:15	10.89	8.96	0.64	0.91	1.15	0.52	
11/14/07 19:00:30	10.08	9.66	3.09	0.11	1.07	0.52	
11/14/07 19:00:45	9.82	9.82	2.24	0.01	1.22	0.52	
11/14/07 19:01:00	9.81	9.85	0.29	0.01	1.03	0.52	
11/14/07 19:01:15	9.81	9.85	0.19	0.01	1.01	0.52	
11/14/07 19:01:30	9.81	9.85	0.19	0.01	1.14	0.52	
11/14/07 19:01:45	9.81	9.85	0.19	0.01	0.99	0.52	Calibration Bias
11/14/07 19:02:00	9.81	9.86	0.19	0.01	1.30	0.52	10.0% CO2 Injection
11/14/07 19:02:15	9.80	9.86	0.19	0.01	1.38	0.52	9.86 % db CO2
11/14/07 19:02:30	9.81	9.88	0.19	0.01	1.18	0.52	
11/14/07 19:02:45	9.81	9.88	0.19	0.01	1.14	0.52	
11/14/07 19:03:00	9.81	9.87	0.19	0.01	1.10	0.52	
11/14/07 19:03:15	9.81	9.87	0.19	2.50	1.50	0.52	
11/14/07 19:03:30	10.00	9.56	0.19	4.70	1.42	0.52	
11/14/07 19:03:45	10.92	8.61	1.04	19.74	1.56	0.52	
11/14/07 19:04:00	7.37	5.95	1.69	33.00	1.88	0.52	
11/14/07 19:04:15	2.50	2.00	1.74	42.47	1.74	0.52	
11/14/07 19:04:30	0.42	0.39	0.69	44.46	1.79	0.52	
11/14/07 19:04:45	0.14	0.19	0.14	44.85	1.68	0.52	
11/14/07 19:05:00	0.12	0.15	-0.01	44.86	1.73	0.27	Calibration Bias
11/14/07 19:05:15	0.11	0.13	-0.01	45.06	1.44	0.02	45.0 ppmv db CO Injection
11/14/07 19:05:30	0.10	0.11	-0.01	45.06	1.44	0.02	45.03 ppmv db CO
11/14/07 19:05:45	0.09	0.10	-0.01	44.96	1.45	0.02	
11/14/07 19:06:00	0.08	0.09	-0.01	45.06	1.44	0.02	
11/14/07 19:06:15	0.08	0.08	-0.01	45.06	1.51	0.02	
11/14/07 19:06:30	0.08	0.08	-0.01	45.06	1.21	0.02	
11/14/07 19:06:45	0.07	0.07	-0.01	41.27	1.41	0.02	
11/14/07 19:07:00	0.33	0.33	-0.01	30.68	1.47	0.02	
11/14/07 19:07:15	3.15	1.77	0.39	28.02	1.59	0.02	
11/14/07 19:07:30	2.41	1.02	2.29	14.86	1.32	0.02	
11/14/07 19:07:45	0.41	0.18	5.84	2.90	1.37	0.02	
11/14/07 19:08:00	0.10	0.07	16.38	1.18	1.49	0.27	
11/14/07 19:08:15	0.07	0.06	36.08	0.91	1.38	0.52	
11/14/07 19:08:30	0.07	0.05	36.78	0.86	1.80	0.52	
11/14/07 19:08:45	0.06	0.05	36.83	0.81	1.31	0.52	
11/14/07 19:09:00	0.06	0.05	39.68	0.81	1.50	0.52	
11/14/07 19:09:15	0.06	0.04	44.63	0.81	1.32	0.52	
11/14/07 19:09:30	0.06	0.04	45.86	0.81	1.54	0.52	
11/14/07 19:09:45	0.06	0.04	45.93	0.81	1.39	0.53	
11/14/07 19:10:00	0.06	0.04	45.88	0.81	1.51	0.53	
11/14/07 19:10:15	0.05	0.04	45.53	0.81	1.44	0.52	
11/14/07 19:10:30	0.05	0.04	45.38	0.81	1.40	0.53	
11/14/07 19:10:45	0.05	0.04	45.23	0.81	1.38	0.52	
11/14/07 19:11:00	0.05	0.04	45.18	0.81	1.41	0.53	
11/14/07 19:11:15	0.05	0.04	45.03	0.81	1.47	0.53	
11/14/07 19:11:30	0.05	0.04	44.98	0.81	1.10	0.52	
11/14/07 19:11:45	0.05	0.04	44.83	0.81	1.20	0.52	
11/14/07 19:12:00	0.05	0.04	44.78	0.81	1.50	0.52	
11/14/07 19:12:15	0.05	0.04	44.78	0.81	1.24	0.52	
11/14/07 19:12:30	0.05	0.04	44.68	0.81	1.31	0.53	Calibration Bias
11/14/07 19:12:45	0.05	0.04	44.68	0.81	1.33	0.52	45.0 ppmv db NOx Injection
11/14/07 19:13:00	0.05	0.04	44.58	0.81	1.36	0.52	44.56 ppmv db NOx
11/14/07 19:13:15	0.05	0.04	44.58	1.01	1.34	0.52	
11/14/07 19:13:30	0.08	0.10	44.48	3.45	1.11	0.52	
11/14/07 19:13:45	3.31	2.35	44.28	9.18	1.13	0.52	
11/14/07 19:14:00	9.10	5.23	39.36	11.12	0.93	0.27	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 19:14:15	12.10	8.55	25.73	11.37	1.01	0.02	
11/14/07 19:14:30	12.67	6.94	15.88	10.87	1.30	0.02	
11/14/07 19:14:45	12.47	5.87	12.18	6.39	0.96	0.02	
11/14/07 19:15:00	8.48	4.06	12.98	3.00	0.53	0.02	
11/14/07 19:15:15	9.15	1.00	16.93	0.91	0.52	0.02	
11/14/07 19:15:30	17.97	0.18	21.78	0.66	0.40	0.02	Changing stack parameters to 1575
11/14/07 19:15:45	20.46	0.08	12.94	0.81	0.44	0.02	
11/14/07 19:16:00	20.71	0.06	1.59	0.81	0.58	0.02	
11/14/07 19:16:15	20.74	0.06	0.44	0.81	0.54	0.02	
11/14/07 19:16:30	20.76	0.05	0.19	0.81	0.66	0.02	
11/14/07 19:16:45	20.78	0.05	0.14	0.81	0.50	0.02	
11/14/07 19:17:00	20.79	0.04	-0.01	0.81	0.59	0.27	
11/14/07 19:17:15	20.80	0.04	-0.01	0.81	0.62	0.53	GC Zero
11/14/07 19:17:30	20.81	0.04	-0.01	0.81	0.50	0.52	
11/14/07 19:17:45	20.81	0.03	-0.01	0.81	0.58	0.52	
11/14/07 19:18:00	20.81	0.03	-0.01	0.81	0.71	0.53	Calibration Bias
11/14/07 19:18:15	20.82	0.03	-0.01	0.81	0.47	0.63	Zero Air Injection
11/14/07 19:18:30	20.82	0.03	-0.01	0.81	0.45	0.63	0.61 ppm Total VOC
11/14/07 19:18:45	20.82	0.03	-0.01	0.81	0.69	0.63	0.63 ppm Methane
11/14/07 19:19:00	20.83	0.03	-0.01	0.81	0.56	0.53	
11/14/07 19:19:15	20.83	0.03	-0.01	0.81	0.42	0.53	
11/14/07 19:19:30	20.83	0.03	-0.01	0.81	0.16	0.53	
11/14/07 19:19:45	20.83	0.03	-0.01	0.81	0.49	0.53	
11/14/07 19:20:00	20.84	0.03	-0.01	0.81	0.35	0.53	Calibration Bias
11/14/07 19:20:15	20.84	0.02	-0.01	0.81	0.42	0.63	Zero Air Injection
11/14/07 19:20:30	20.84	0.02	-0.01	0.81	0.47	0.63	
11/14/07 19:20:45	20.84	0.02	-0.01	0.81	0.34	0.63	0.63 ppm Methane
11/14/07 19:21:00	20.84	0.02	-0.01	0.81	0.63	0.63	
11/14/07 19:21:15	20.84	0.02	-0.01	0.81	0.33	0.53	
11/14/07 19:21:30	20.84	0.02	-0.01	0.81	0.48	0.53	
11/14/07 19:21:45	20.85	0.02	-0.01	0.81	0.21	0.53	
11/14/07 19:22:00	20.85	0.02	-0.01	0.81	0.54	0.53	
11/14/07 19:22:15	20.85	0.02	-0.01	0.81	0.59	0.53	
11/14/07 19:22:30	20.85	0.02	-0.01	0.81	0.38	0.53	
11/14/07 19:22:45	20.85	0.02	-0.01	0.81	0.27	0.53	
11/14/07 19:23:00	20.85	0.02	-0.01	0.81	0.10	0.53	Calibration Bias
11/14/07 19:23:15	20.85	0.02	-0.01	0.81	0.46	0.63	Zero Air Injection
11/14/07 19:23:30	20.86	0.02	-0.01	0.81	0.48	0.63	
11/14/07 19:23:45	20.85	0.02	-0.01	0.81	0.66	0.63	0.63 ppm Methane
11/14/07 19:24:00	20.85	0.03	-0.01	0.81	13.27	0.63	
11/14/07 19:24:15	20.00	1.04	0.09	1.11	49.74	0.53	
11/14/07 19:24:30	18.58	1.66	0.59	1.21	50.41	0.53	Methane Calibration
11/14/07 19:24:45	19.39	0.37	1.84	1.11	50.54	0.53	Zero Air Injection
11/14/07 19:25:00	20.09	0.08	2.59	1.01	50.47	0.53	
11/14/07 19:25:15	20.33	0.04	1.59	1.01	50.16	0.53	0.63 ppm Methane
11/14/07 19:25:30	20.35	0.04	0.59	1.01	50.07	0.53	
11/14/07 19:25:45	20.37	0.03	0.14	1.01	50.03	0.53	
11/14/07 19:26:00	20.39	0.03	-0.01	1.01	49.79	25.56	
11/14/07 19:26:15	20.41	0.03	-0.01	1.01	49.69	50.62	Calibration Bias
11/14/07 19:26:30	20.44	0.03	-0.01	1.01	49.83	50.62	50.0 ppm CH4 Injection
11/14/07 19:26:45	20.47	0.03	-0.01	1.01	49.89	50.62	
11/14/07 19:27:00	20.50	0.03	-0.01	1.01	49.66	50.62	50.62 ppm Methane
11/14/07 19:27:15	20.52	0.03	-0.01	1.01	49.86	50.62	
11/14/07 19:27:30	20.53	0.03	-0.01	1.01	49.79	50.62	
11/14/07 19:27:45	20.54	0.03	-0.01	1.01	49.67	50.62	
11/14/07 19:28:00	20.54	0.03	-0.01	1.01	49.62	50.62	
11/14/07 19:28:15	20.54	0.03	-0.01	1.01	49.50	50.62	
11/14/07 19:28:30	20.54	0.03	-0.01	1.01	49.67	50.62	
11/14/07 19:28:45	20.54	0.03	-0.01	1.01	49.56	50.62	
11/14/07 19:29:00	20.54	0.03	-0.01	1.01	49.81	50.37	
11/14/07 19:29:15	20.55	0.03	-0.01	1.01	49.56	50.11	Calibration Bias
11/14/07 19:29:30	20.55	0.03	-0.01	1.01	49.87	50.11	50.0 ppm CH4 Injection
11/14/07 19:29:45	20.55	0.03	-0.01	1.01	49.74	50.12	49.85 ppm Total VOC
11/14/07 19:30:00	20.55	0.02	-0.01	1.01	49.88	50.12	50.12 ppm Methane
11/14/07 19:30:15	20.55	0.02	-0.01	1.01	49.92	50.12	
11/14/07 19:30:30	20.55	0.02	-0.01	1.01	49.83	50.11	
11/14/07 19:30:45	20.55	0.02	-0.01	1.01	49.67	50.11	
11/14/07 19:31:00	20.55	0.02	-0.01	1.01	49.91	50.12	
11/14/07 19:31:15	20.55	0.02	-0.01	1.01	49.70	50.12	
11/14/07 19:31:30	20.55	0.02	-0.01	1.01	49.43	50.11	
11/14/07 19:31:45	20.55	0.02	-0.01	1.01	49.78	50.12	
11/14/07 19:32:00	20.55	0.02	-0.01	1.01	49.77	50.12	
11/14/07 19:32:15	20.55	0.02	-0.01	1.01	49.56	50.11	
11/14/07 19:32:30	20.55	0.02	-0.01	1.01	49.84	50.12	
11/14/07 19:32:45	20.55	0.02	-0.01	1.01	49.65	50.12	
11/14/07 19:33:00	20.55	0.02	-0.01	1.01	50.00	50.11	
11/14/07 19:33:15	20.56	0.02	-0.01	1.01	49.63	50.12	Calibration Bias
11/14/07 19:33:30	20.55	0.02	-0.01	1.01	49.90	50.12	50.0 ppm CH4 Injection
11/14/07 19:33:45	20.55	0.02	-0.01	1.01	22.45	50.12	
11/14/07 19:34:00	20.55	0.02	-0.01	1.41	1.86	50.12	50.12 ppm Methane
11/14/07 19:34:15	20.01	0.83	0.04	2.90	1.26	50.12	
11/14/07 19:34:30	16.28	4.51	0.19	4.21	1.18	50.12	
11/14/07 19:34:45	13.50	6.41	5.19	4.99	1.16	50.12	
11/14/07 19:35:00	13.03	6.83	8.79	4.88	0.96	24.82	
11/14/07 19:35:15	12.91	6.93	11.04	4.99	0.83	-0.47	
11/14/07 19:35:30	12.95	6.89	11.19	4.90	0.97	-0.47	Methane Calibration
11/14/07 19:35:45	12.88	6.96	11.19	5.30	1.00	-0.47	50.0 CH4 Injection
11/14/07 19:36:00	12.88	6.96	11.19	6.09	0.97	-0.47	
11/14/07 19:36:15	12.95	6.91	11.34	6.39	0.97	-0.47	50.28 ppm Methane
11/14/07 19:36:30	12.91	6.96	11.19	6.09	0.51	-0.47	
11/14/07 19:36:45	12.66	7.00	11.24	5.99	0.77	-0.47	
11/14/07 19:37:00	12.85	7.00	11.39	6.79	0.46	-0.47	
11/14/07 19:37:15	12.98	6.86	11.34	7.79	0.51	-0.47	
11/14/07 19:37:30	13.12	6.74	11.09	7.84	0.71	-0.47	
11/14/07 19:37:45	13.13	6.76	10.94	7.09	0.86	-0.47	
11/14/07 19:38:00	12.95	6.94	10.79	6.69	0.98	-0.22	
11/14/07 19:38:15	12.78	7.09	11.04	6.89	0.51	0.03	
11/14/07 19:38:30	12.84	7.01	11.39	7.19	0.61	0.03	
11/14/07 19:38:45	12.84	7.03	11.39	7.39	0.81	0.03	
11/14/07 19:39:00	12.86	6.99	11.39	7.14	0.51	0.03	
11/14/07 19:39:15	12.94	6.93	11.34	7.39	0.84	0.03	
11/14/07 19:39:30	12.93	6.94	11.19	7.63	0.76	0.03	
11/14/07 19:39:45	12.93	6.94	11.19	8.08	0.83	0.03	
11/14/07 19:40:00	12.66	7.02	11.19	7.79	0.96	0.03	
11/14/07 19:40:15	12.80	7.07	11.24	7.59	0.76	0.03	
11/14/07 19:40:30	12.66	6.99	11.39	7.79	0.56	0.03	
11/14/07 19:40:45	12.96	6.92	11.34	8.18	0.57	0.03	
11/14/07 19:41:00	12.92	6.94	11.18	8.38	0.78	0.03	
11/14/07 19:41:15	12.98	6.89	11.19	8.28	0.41	0.02	
11/14/07 19:41:30	12.98	6.88	11.09	8.43	0.65	0.03	
11/14/07 19:41:45	13.04	6.82	10.99	8.48	0.65	0.03	
11/14/07 19:42:00	13.02	6.87	10.99	8.73	0.77	0.03	
11/14/07 19:42:15	12.98	6.90	10.84	8.68	1.05	0.03	
11/14/07 19:42:30	12.92	6.95	10.89	8.13	1.76	0.03	
11/14/07 19:42:45	12.91	6.96	11.18	7.39	1.38	0.03	
11/14/07 19:43:00	12.86	7.01	11.19	7.89	1.46	0.03	
11/14/07 19:43:15	13.02	6.81	11.18	8.88	1.49	0.03	
11/14/07 19:43:30	13.13	6.76	11.08	8.63	1.41	0.03	
11/14/07 19:43:45	12.98	6.92	10.94	8.78	1.18	0.03	
11/14/07 19:44:00	13.02	6.54	10.89	9.13	0.91	0.78	
11/14/07 19:44:15	13.00	6.89	11.19	9.48	0.76	1.53	
11/14/07 19:44:30	12.98	6.89	11.09	9.33	0.96	1.53	
11/14/07 19:44:45	12.96	6.91	11.19	8.88	1.16	1.53	
11/14/07 19:45:00	12.99	6.89	11.19	8.53	0.99	1.53	
11/14/07 19:45:15	12.88	6.99	11.04	7.98	1.34	1.53	
11/14/07 19:45:30	12.93	6.94	11.29	7.49	1.00	1.53	
11/14/07 19:45:45	12.92	6.95	11.19	7.19	0.96	1.53	
11/14/07 19:46:00	12.96	6.91	11.18	6.29	1.21	1.53	
11/14/07 19:46:15	12.77	7.14	11.24	5.79	1.03	1.53	
11/14/07 19:46:30	12.57	7.26	11.39	5.79	0.59	1.53	
11/14/07 19:46:45	12.82	7.02	11.63	5.59	0.62	1.53	
11/14/07 19:47:00	12.88	7.00	11.68	6.29	0.79	1.03	
11/14/07 19:47:15	12.92	6.95	11.18	7.19	1.19	0.53	
11/14/07 19:47:30	12.90	6.95	11.19	8.08	0.68	0.53	
11/14/07 19:47:45	13.04	6.84	11.19	8.48	1.06	0.53	Run 4
11/14/07 19:48:00	12.98	6.88	11.19	8.53	1.26	0.53	
11/14/07 19:48:15	13.06	6.80	10.83	8.38	1.11	0.53	
11/14/07 19:48:30	13.06	6.81	10.69	8.68	0.89	0.63	
11/14/07 19:48:45	13.12	6.78	10.78	8.68	1.13	0.63	
11/14/07 19:49:00	12.97	6.93	10.78	8.88	0.83	0.63	
11/14/07 19:49:15	12.83	6.94	10.88	9.18	1.01	0.63	
11/14/07 19:49:30	12.96	6.81	11.09	9.68	1.06	0.63	
11/14/07 19:49:45	13.02	6.86	11.14	9.58	1.02	0.53	
11/14/07 19:50:00	12.98	6.83	10.99	9.28	0.96	0.28	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 19:50:16	12.87	6.88	11.04	9.18	1.02	0.03	
11/14/07 19:50:30	13.12	6.75	11.19	8.78	1.02	0.03	
11/14/07 19:50:45	13.07	6.82	10.89	8.38	1.12	0.03	
11/14/07 19:51:00	12.94	6.96	10.59	7.78	1.07	0.03	
11/14/07 19:51:15	12.88	7.19	11.09	7.49	0.97	0.03	
11/14/07 19:51:30	12.76	7.06	11.49	7.59	0.91	0.03	
11/14/07 19:51:45	12.87	7.01	11.39	7.69	0.96	0.03	
11/14/07 19:52:00	12.83	7.02	11.39	7.83	0.96	0.03	
11/14/07 19:52:15	12.87	6.89	11.34	7.98	0.56	0.03	
11/14/07 19:52:30	12.91	6.97	11.08	7.74	0.82	0.03	
11/14/07 19:52:45	12.89	6.97	11.19	7.49	1.09	0.03	
11/14/07 19:53:00	12.92	6.96	11.19	8.13	0.86	0.03	
11/14/07 19:53:15	12.96	6.89	11.19	8.98	0.91	0.03	
11/14/07 19:53:30	13.04	6.95	11.19	9.48	0.87	0.03	
11/14/07 19:53:45	12.98	6.90	11.13	9.28	0.98	0.03	
11/14/07 19:54:00	12.92	6.96	11.09	8.93	0.83	0.03	
11/14/07 19:54:15	12.93	7.03	11.24	8.28	0.73	0.03	
11/14/07 19:54:30	12.84	7.03	11.39	8.03	0.94	0.03	
11/14/07 19:54:45	12.80	7.08	11.39	8.38	0.78	0.03	
11/14/07 19:55:00	12.92	6.94	11.39	8.78	0.85	0.03	
11/14/07 19:55:15	12.91	6.97	11.39	8.78	0.84	0.03	
11/14/07 19:55:30	12.83	7.04	11.29	7.58	0.82	0.03	
11/14/07 19:55:45	12.86	7.01	11.44	6.89	0.87	0.03	
11/14/07 19:56:00	12.87	6.96	11.49	6.54	1.07	0.03	
11/14/07 19:56:15	12.80	7.08	11.39	7.29	0.78	0.03	
11/14/07 19:56:30	12.91	6.90	11.39	7.74	0.54	0.03	
11/14/07 19:56:45	13.07	6.82	11.14	7.79	0.87	0.03	
11/14/07 19:57:00	12.96	6.92	10.89	7.88	0.78	0.03	
11/14/07 19:57:15	12.92	6.96	11.19	8.48	0.82	0.03	
11/14/07 19:57:30	12.83	7.03	11.18	9.19	0.76	0.03	
11/14/07 19:57:45	12.85	7.00	11.39	9.78	0.77	0.03	
11/14/07 19:58:00	12.91	6.96	11.39	10.33	0.75	0.08	
11/14/07 19:58:15	12.89	6.96	11.38	11.37	0.90	0.03	
11/14/07 19:58:30	12.91	6.96	11.39	11.32	0.89	0.03	
11/14/07 19:58:45	12.91	6.96	11.34	10.18	1.09	0.03	
11/14/07 19:59:00	12.90	6.97	11.34	9.23	0.75	0.03	
11/14/07 19:59:15	12.94	6.93	11.34	9.48	0.80	0.03	
11/14/07 19:59:30	12.90	6.96	11.18	9.43	0.78	0.03	
11/14/07 19:59:45	12.92	6.96	11.24	9.48	0.89	0.03	
11/14/07 20:00:00	12.91	6.97	11.24	10.13	0.74	0.03	
11/14/07 20:00:15	12.91	6.94	11.19	9.88	0.76	0.03	
11/14/07 20:00:30	12.91	6.98	11.19	9.18	0.75	0.08	
11/14/07 20:00:45	12.74	7.13	11.19	9.28	0.98	0.03	
11/14/07 20:01:00	12.76	7.06	11.24	9.23	0.93	0.03	
11/14/07 20:01:15	12.78	7.09	11.54	8.88	1.04	0.02	
11/14/07 20:01:30	12.76	7.08	11.39	8.89	0.82	0.03	
11/14/07 20:01:45	12.91	6.94	11.39	10.08	0.87	0.03	
11/14/07 20:02:00	12.91	6.95	11.24	9.68	0.83	-0.22	
11/14/07 20:02:16	12.78	7.07	11.19	8.78	0.78	-0.47	
11/14/07 20:02:30	12.87	6.99	11.34	7.74	0.69	-0.47	
11/14/07 20:02:45	12.80	7.06	11.18	6.89	1.01	-0.47	
11/14/07 20:03:00	12.71	7.15	11.34	6.54	0.85	-0.47	
11/14/07 20:03:15	12.78	7.04	11.58	6.08	0.80	-0.47	
11/14/07 20:03:30	12.90	6.96	11.58	5.74	0.82	-0.47	
11/14/07 20:03:45	12.90	6.96	11.34	5.30	0.74	-0.47	
11/14/07 20:04:00	12.84	7.04	11.19	5.00	0.81	-0.47	
11/14/07 20:04:15	12.82	7.03	11.24	4.80	0.77	-0.47	
11/14/07 20:04:30	12.76	7.10	11.39	4.95	0.82	-0.47	
11/14/07 20:04:45	12.75	7.06	11.58	4.80	0.78	-0.47	
11/14/07 20:05:00	12.85	7.00	11.59	4.70	0.86	-0.47	
11/14/07 20:05:15	12.73	7.12	11.44	4.70	0.83	-0.47	
11/14/07 20:05:30	12.85	6.98	11.59	4.55	0.83	-0.47	
11/14/07 20:05:45	12.82	7.06	11.34	4.40	1.00	-0.47	
11/14/07 20:06:00	12.68	7.15	11.48	4.35	0.89	-0.47	
11/14/07 20:06:15	12.73	7.12	11.74	4.20	0.75	-0.47	
11/14/07 20:06:30	12.72	7.12	11.44	4.15	0.84	-0.47	
11/14/07 20:06:45	12.72	7.13	11.58	4.10	0.78	-0.47	
11/14/07 20:07:00	12.62	7.22	11.58	4.35	0.86	-0.47	
11/14/07 20:07:15	12.70	7.12	11.64	4.30	0.94	-0.47	
11/14/07 20:07:30	12.53	7.24	11.78	4.20	0.88	-0.47	
11/14/07 20:07:45	12.47	7.35	11.93	4.10	0.90	-0.47	
11/14/07 20:08:00	12.90	7.33	11.98	4.00	0.89	-0.47	
11/14/07 20:08:15	12.82	7.30	12.13	4.20	1.05	-0.47	
11/14/07 20:08:30	12.54	7.30	11.98	4.30	0.70	-0.47	
11/14/07 20:08:45	12.51	7.31	11.88	4.40	0.79	-0.47	
11/14/07 20:09:00	12.49	7.34	11.98	4.50	0.64	-0.47	
11/14/07 20:09:15	12.54	7.27	11.98	4.80	0.98	-0.47	
11/14/07 20:09:30	12.59	7.25	11.98	4.75	0.93	-0.47	
11/14/07 20:09:45	12.56	7.25	11.93	4.70	0.93	-0.47	
11/14/07 20:10:00	12.57	7.27	11.78	5.15	0.80	-0.48	
11/14/07 20:10:15	12.57	7.15	11.78	5.39	0.75	-0.47	
11/14/07 20:10:30	12.57	7.21	11.78	5.44	0.88	-0.47	
11/14/07 20:10:45	12.56	7.29	11.78	6.78	1.08	-0.47	
11/14/07 20:11:00	12.64	7.19	11.78	6.47	0.72	-0.22	
11/14/07 20:11:15	12.71	7.12	11.83	6.99	0.80	0.03	
11/14/07 20:11:30	12.78	7.08	11.63	7.49	0.94	0.03	
11/14/07 20:11:45	12.78	7.10	11.54	7.78	0.93	0.03	
11/14/07 20:12:00	12.83	7.02	11.39	8.48	1.01	0.03	
11/14/07 20:12:15	12.98	6.99	11.54	8.78	0.81	0.03	
11/14/07 20:12:30	12.90	6.97	11.39	8.78	0.97	0.03	
11/14/07 20:12:45	12.78	7.12	11.18	8.88	0.92	0.03	
11/14/07 20:13:00	12.59	7.27	11.34	8.43	0.79	0.03	
11/14/07 20:13:15	12.55	7.16	11.63	7.98	0.87	0.03	
11/14/07 20:13:30	12.67	7.19	11.78	8.13	0.97	0.03	
11/14/07 20:13:45	12.71	7.12	11.78	8.88	1.00	0.03	
11/14/07 20:14:00	12.85	7.01	11.63	9.58	0.68	-0.22	
11/14/07 20:14:15	12.83	7.05	11.39	9.38	0.81	-0.47	
11/14/07 20:14:30	12.78	7.09	11.39	8.43	0.90	-0.47	
11/14/07 20:14:45	12.74	7.12	11.44	7.78	0.68	-0.47	
11/14/07 20:15:00	12.77	7.09	11.44	7.24	1.18	-0.47	
11/14/07 20:15:15	12.79	7.10	11.39	6.29	0.88	-0.47	
11/14/07 20:15:30	12.63	7.19	11.64	5.34	0.84	-0.47	
11/14/07 20:15:45	12.63	7.20	11.59	5.39	0.91	-0.47	
11/14/07 20:15:00	12.71	7.13	11.73	6.04	0.94	-0.47	
11/14/07 20:16:15	12.77	7.09	11.73	6.29	0.96	-0.47	
11/14/07 20:16:30	12.70	7.15	11.58	6.14	0.71	-0.47	
11/14/07 20:16:45	12.72	7.14	11.63	5.79	0.79	-0.47	
11/14/07 20:17:00	12.73	7.11	11.53	6.04	0.87	-0.22	
11/14/07 20:17:15	12.88	6.98	11.54	6.39	0.88	0.03	
11/14/07 20:17:30	12.88	7.02	11.39	7.04	0.81	0.03	
11/14/07 20:17:45	12.80	6.97	11.39	7.19	0.74	0.03	
11/14/07 20:18:00	12.89	6.96	11.24	7.14	0.96	0.03	
11/14/07 20:18:15	12.88	7.00	11.19	6.89	0.65	0.03	
11/14/07 20:18:30	12.88	7.04	11.34	7.04	0.81	0.03	
11/14/07 20:18:45	12.85	7.02	11.39	7.09	0.69	0.03	
11/14/07 20:19:00	12.78	7.09	11.39	6.98	0.70	0.03	
11/14/07 20:19:15	12.78	7.10	11.38	6.98	0.77	0.03	
11/14/07 20:19:30	12.77	7.08	11.54	7.19	0.87	0.03	
11/14/07 20:19:45	12.79	7.06	11.63	7.29	0.82	0.03	
11/14/07 20:20:00	12.91	6.94	11.39	7.59	0.77	0.03	
11/14/07 20:20:15	12.87	6.90	11.34	7.69	0.65	0.03	
11/14/07 20:20:30	12.87	6.90	11.03	7.98	0.94	0.03	
11/14/07 20:20:45	12.91	6.97	10.98	8.18	0.88	0.03	
11/14/07 20:21:00	12.94	7.02	11.13	8.13	0.97	0.03	
11/14/07 20:21:15	12.88	7.02	11.19	7.79	0.90	0.03	
11/14/07 20:21:30	12.90	7.07	11.19	7.39	0.84	0.03	
11/14/07 20:21:45	12.78	7.07	11.24	7.39	0.85	0.03	
11/14/07 20:22:00	12.87	7.00	11.39	7.74	0.87	0.03	
11/14/07 20:22:15	12.86	7.02	11.39	7.45	0.91	0.03	
11/14/07 20:22:30	12.80	7.07	11.24	7.54	0.82	0.03	
11/14/07 20:22:45	12.81	7.04	11.39	7.98	0.71	0.03	
11/14/07 20:23:00	12.90	6.97	11.39	8.08	0.81	-0.28	
11/14/07 20:23:15	12.80	6.96	11.18	7.69	0.79	-0.47	
11/14/07 20:23:30	12.93	7.06	11.19	6.89	0.91	-0.47	
11/14/07 20:23:45	12.78	7.08	11.38	6.99	0.81	-0.47	
11/14/07 20:24:00	12.73	7.14	11.39	6.29	0.93	-0.47	
11/14/07 20:24:15	12.70	7.15	11.24	5.98	0.75	-0.47	
11/14/07 20:24:30	12.74	7.11	11.39	5.99	0.73	-0.47	
11/14/07 20:24:45	12.74	7.13	11.58	6.19	0.79	-0.47	
11/14/07 20:25:00	12.71	7.14	11.58	6.69	0.95	-0.47	
11/14/07 20:25:15	12.83	7.02	11.53	6.79	0.72	-0.47	
11/14/07 20:25:30	12.82	7.06	11.39	6.84	0.55	-0.47	
11/14/07 20:25:45	12.72	7.13	11.39	7.09	0.41	-0.47	
11/14/07 20:26:00	12.77	7.09	11.39	7.39	0.84	-0.47	
11/14/07 20:26:15	12.78	7.07	11.39	7.49	0.73	-0.47	

Range	20.0	20.0	88.98	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 20:26:30	12.88	6.97	11.39	8.16	0.90	-0.47	
11/14/07 20:26:45	12.97	6.90	11.31	8.18	0.81	-0.47	
11/14/07 20:27:00	12.91	6.96	11.19	8.18	0.86	-0.47	
11/14/07 20:27:15	12.91	7.06	11.18	7.98	0.86	-0.47	
11/14/07 20:27:30	12.83	7.03	11.34	7.59	0.96	-0.47	
11/14/07 20:27:45	12.81	7.06	11.39	7.49	0.76	-0.47	
11/14/07 20:28:00	12.84	7.02	11.39	7.19	0.74	-0.47	
11/14/07 20:28:15	12.92	7.03	11.39	7.29	0.58	-0.47	
11/14/07 20:28:30	12.98	6.97	11.39	7.14	0.93	-0.47	
11/14/07 20:28:45	12.94	6.97	11.09	7.09	0.85	-0.47	
11/14/07 20:29:00	12.81	7.05	11.13	7.84	0.55	-0.47	
11/14/07 20:29:15	12.87	6.98	11.39	7.59	0.89	-0.47	
11/14/07 20:29:30	12.98	6.91	11.39	7.34	0.91	-0.47	
11/14/07 20:29:45	12.87	7.01	11.09	7.19	0.76	-0.47	
11/14/07 20:30:00	12.98	7.01	11.14	7.34	0.98	-0.47	
11/14/07 20:30:15	12.86	7.00	11.39	6.99	0.89	-0.47	
11/14/07 20:30:30	12.85	7.03	11.39	6.19	0.62	-0.47	
11/14/07 20:30:45	12.75	7.11	11.39	6.29	0.76	-0.47	
11/14/07 20:31:00	12.82	7.02	11.39	6.39	0.69	-0.47	
11/14/07 20:31:15	12.97	6.90	11.49	6.29	0.76	-0.47	
11/14/07 20:31:30	12.91	6.98	11.09	6.19	0.88	-0.47	
11/14/07 20:31:45	12.78	7.09	11.18	6.39	0.74	-0.47	
11/14/07 20:32:00	12.82	7.04	11.18	7.14	0.58	-0.47	
11/14/07 20:32:15	12.81	7.06	11.39	7.49	0.87	-0.47	
11/14/07 20:32:30	12.80	7.06	11.39	7.78	0.63	-0.47	
11/14/07 20:32:45	12.80	7.05	11.39	7.49	0.64	-0.47	
11/14/07 20:33:00	12.82	7.07	11.39	7.39	0.71	-0.47	
11/14/07 20:33:15	12.68	7.17	11.49	7.29	0.78	-0.48	
11/14/07 20:33:30	12.82	7.04	11.58	8.84	0.79	-0.47	
11/14/07 20:33:45	12.76	7.13	11.29	8.09	0.96	-0.47	
11/14/07 20:34:00	12.88	7.19	11.34	8.89	0.77	-0.47	
11/14/07 20:34:15	12.71	7.13	11.58	8.58	0.81	-0.47	
11/14/07 20:34:30	12.82	7.04	11.58	8.04	0.83	-0.47	
11/14/07 20:34:45	12.90	6.96	11.49	8.29	0.85	-0.47	
11/14/07 20:35:00	12.92	6.95	11.24	8.68	0.59	-0.47	
11/14/07 20:35:15	12.89	6.99	11.08	7.09	0.76	-0.48	
11/14/07 20:35:30	12.85	7.00	11.18	7.19	0.76	-0.47	
11/14/07 20:35:45	12.96	6.92	11.18	7.09	0.86	-0.47	
11/14/07 20:36:00	12.90	6.98	11.18	7.24	0.70	-0.47	
11/14/07 20:36:15	12.81	6.97	11.18	7.29	0.89	-0.48	
11/14/07 20:36:30	12.87	7.00	11.18	6.69	0.78	-0.47	
11/14/07 20:36:45	12.85	7.03	11.29	6.29	0.77	-0.47	
11/14/07 20:37:00	12.92	7.05	11.39	6.29	0.86	-0.47	
11/14/07 20:37:15	12.94	7.03	11.39	5.79	0.78	-0.47	
11/14/07 20:37:30	12.74	7.14	11.23	5.64	0.79	-0.47	
11/14/07 20:37:45	12.76	7.10	11.49	5.63	0.82	-0.47	
11/14/07 20:38:00	12.84	7.02	11.58	5.40	0.96	-0.47	
11/14/07 20:38:15	12.76	7.11	11.49	5.53	0.79	-0.47	
11/14/07 20:38:30	12.79	7.06	11.58	5.94	0.76	-0.47	
11/14/07 20:38:45	12.81	6.98	11.39	6.59	1.02	-0.47	
11/14/07 20:39:00	12.93	6.93	11.23	7.68	0.96	-0.47	
11/14/07 20:39:15	12.96	6.95	11.08	7.98	0.72	-0.47	
11/14/07 20:39:30	12.74	7.13	10.98	7.78	0.80	-0.47	
11/14/07 20:39:45	12.90	6.94	11.29	7.98	0.79	-0.47	
11/14/07 20:40:00	12.99	6.89	11.24	7.68	0.54	-0.47	
11/14/07 20:40:15	12.96	6.92	10.98	7.09	0.88	-0.47	
11/14/07 20:40:30	12.88	7.03	10.98	6.69	0.59	-0.48	
11/14/07 20:40:45	12.72	7.15	11.18	6.29	0.75	-0.47	
11/14/07 20:41:00	12.78	7.11	11.34	6.24	0.93	-0.47	
11/14/07 20:41:15	12.73	7.12	11.58	6.49	0.63	-0.48	
11/14/07 20:41:30	12.74	7.13	11.68	6.64	0.74	-0.47	
11/14/07 20:41:45	12.79	7.04	11.58	6.69	0.76	-0.47	
11/14/07 20:42:00	12.96	6.92	11.44	7.24	0.86	-0.47	
11/14/07 20:42:15	12.96	7.03	11.18	7.39	0.85	-0.47	
11/14/07 20:42:30	12.88	6.99	11.18	7.64	0.86	-0.47	
11/14/07 20:42:45	12.91	6.97	11.18	7.98	0.86	-0.47	
11/14/07 20:43:00	12.96	6.91	11.18	8.83	0.85	-0.47	
11/14/07 20:43:15	13.00	6.87	11.18	9.48	0.92	-0.47	
11/14/07 20:43:30	13.05	6.83	11.03	10.28	0.80	-0.47	
11/14/07 20:43:45	13.04	6.84	10.98	9.98	0.98	-0.47	
11/14/07 20:44:00	13.01	6.86	10.78	10.53	0.77	-0.45	
11/14/07 20:44:15	13.01	6.86	10.89	11.07	1.12	-0.47	
11/14/07 20:44:30	13.00	6.88	10.98	10.57	0.97	-0.47	
11/14/07 20:44:45	12.96	6.95	10.98	9.66	0.94	-0.47	
11/14/07 20:45:00	12.78	7.11	11.13	8.93	0.89	-0.47	
11/14/07 20:45:15	12.79	7.08	11.29	8.64	0.95	-0.47	
11/14/07 20:45:30	12.80	7.08	11.53	7.98	0.86	-0.48	
11/14/07 20:45:45	12.79	7.09	11.39	8.11	0.87	-0.48	
11/14/07 20:46:00	12.81	7.04	11.39	8.88	0.76	-0.47	
11/14/07 20:46:15	12.91	6.97	11.29	8.68	0.82	-0.47	
11/14/07 20:46:30	12.94	6.94	11.19	8.93	0.79	-0.47	
11/14/07 20:46:45	12.98	7.01	11.08	7.47	0.80	-0.47	
11/14/07 20:47:00	12.87	7.01	11.13	8.54	0.95	-0.48	
11/14/07 20:47:15	12.90	7.09	11.18	8.24	0.85	-0.47	
11/14/07 20:47:30	12.78	7.11	11.34	8.34	0.77	-0.47	
11/14/07 20:47:45	12.79	7.07	11.39	6.04	0.70	-0.47	
11/14/07 20:48:00	12.81	7.07	11.39	5.89	0.80	-0.47	
11/14/07 20:48:15	12.79	7.08	11.29	6.44	0.74	-0.48	
11/14/07 20:48:30	12.84	7.02	11.39	6.79	0.70	-0.48	
11/14/07 20:48:45	13.03	6.83	11.39	6.64	0.83	-0.47	
11/14/07 20:49:00	12.96	6.95	11.09	6.14	0.78	-0.47	
11/14/07 20:49:15	12.83	7.06	10.88	6.29	17.61	-0.47	
11/14/07 20:49:30	12.82	7.04	11.29	5.94	25.64	-0.47	
11/14/07 20:49:45	13.01	6.72	11.39	4.00	2.47	-0.47	
11/14/07 20:50:00	15.60	3.29	10.93	1.95	1.69	33.56	
11/14/07 20:50:15	10.62	0.65	8.39	0.91	1.54	45.11	
11/14/07 20:50:30	2.03	0.17	2.89	0.81	1.44	45.11	
11/14/07 20:50:45	0.25	0.10	0.59	0.81	1.38	45.11	
11/14/07 20:51:00	0.14	0.09	0.04	0.66	1.35	45.11	
11/14/07 20:51:15	0.12	0.08	-0.01	0.81	1.53	45.11	
11/14/07 20:51:30	0.11	0.07	-0.01	0.61	1.40	45.11	
11/14/07 20:51:45	0.10	0.07	-0.01	0.51	1.31	45.11	
11/14/07 20:52:00	0.09	0.06	-0.01	0.81	1.49	45.11	
11/14/07 20:52:15	0.09	0.06	-0.01	0.81	1.62	45.11	
11/14/07 20:52:30	0.08	0.06	-0.01	0.81	1.48	45.11	
11/14/07 20:52:45	0.08	0.05	-0.01	0.66	1.21	45.11	Calibration Bias
11/14/07 20:53:00	0.08	0.06	-0.01	0.81	1.07	11.38	Zero N2 injection
11/14/07 20:53:15	0.08	0.06	-0.01	0.81	1.30	0.03	0.08 % db Oxygen
11/14/07 20:53:30	0.07	0.06	-0.01	0.81	1.56	0.03	0.05 % db Carbon Dioxide
11/14/07 20:53:45	0.08	0.06	-0.01	0.81	1.33	0.03	-0.01 ppmv NOx
11/14/07 20:54:00	0.07	0.05	-0.01	0.96	1.43	0.03	0.81 ppmv CO
11/14/07 20:54:15	0.07	0.04	-0.01	0.66	1.10	0.03	
11/14/07 20:54:30	0.07	0.04	-0.01	0.91	1.32	0.03	
11/14/07 20:54:45	0.38	0.36	-0.01	1.21	2.97	0.03	
11/14/07 20:55:00	2.92	1.67	0.44	1.06	1.11	0.03	
11/14/07 20:55:15	3.93	3.46	1.29	0.46	0.99	0.03	
11/14/07 20:55:30	7.28	7.11	2.16	0.36	0.99	0.03	
11/14/07 20:55:45	9.31	9.12	0.89	0.21	1.01	0.03	
11/14/07 20:56:00	9.50	9.51	0.24	0.06	0.94	-0.72	
11/14/07 20:56:15	9.84	9.43	0.19	0.21	0.92	-0.97	
11/14/07 20:56:30	9.85	9.45	0.19	0.21	0.85	-0.97	
11/14/07 20:56:45	9.87	9.60	0.19	0.06	1.04	-0.97	Calibration Bias
11/14/07 20:57:00	9.88	9.77	0.19	0.21	0.78	-0.97	10.0% Oxygen injection
11/14/07 20:57:15	9.88	9.87	0.19	0.21	0.90	-0.97	9.88 % db Oxygen
11/14/07 20:57:30	9.88	9.90	0.19	0.06	0.93	-0.97	
11/14/07 20:57:45	9.89	9.92	0.19	0.21	0.93	-0.97	
11/14/07 20:58:00	9.88	9.93	0.19	0.06	0.87	-0.97	
11/14/07 20:58:15	9.88	9.94	0.19	0.21	0.81	-0.97	
11/14/07 20:58:30	9.89	9.93	0.19	0.81	1.08	-0.97	
11/14/07 20:58:45	10.17	9.59	0.19	0.66	0.96	-0.97	
11/14/07 20:59:00	10.17	9.56	1.24	0.21	0.99	-0.59	
11/14/07 20:59:15	9.85	9.84	1.89	0.21	0.72	-0.47	
11/14/07 20:59:30	9.82	9.88	0.59	0.01	0.65	-0.47	Calibration Bias
11/14/07 20:59:45	9.82	9.89	0.19	0.01	0.82	-0.47	10.0% CO2 injection
11/14/07 21:00:00	9.82	9.89	0.19	0.06	0.83	-0.46	9.89 % db CO2
11/14/07 21:00:15	9.82	9.98	0.19	0.06	0.94	-0.46	
11/14/07 21:00:30	9.82	9.89	0.19	0.21	1.02	-0.46	
11/14/07 21:00:45	9.82	9.89	0.19	0.06	0.78	-0.46	
11/14/07 21:01:00	9.82	9.89	0.19	0.06	1.03	-0.46	
11/14/07 21:01:15	9.82	9.90	0.19	0.81	1.22	-0.46	
11/14/07 21:01:30	9.93	9.72	0.19	2.65	1.10	-0.46	
11/14/07 21:01:45	10.69	8.91	0.19	15.66	1.07	-0.46	
11/14/07 21:02:00	7.62	6.27	1.99	32.96	1.24	-0.46	
11/14/07 21:02:15	2.68	2.19	2.99	42.07	1.32	-0.46	
11/14/07 21:02:30	0.46	0.42	0.79	44.66	1.39	-0.46	

Range	20.0	20.0	88.88	90.41	100.0	100.0	
Units	%	%	ppm	ppm	ppm	ppm	
Time	Oxygen	CO2	NOx	CO	Total VOC	CH4	COMMENTS
11/14/07 21:02:45	0.14	0.19	0.09	45.26	1.20	-0.46	
11/14/07 21:03:00	0.12	0.15	-0.01	45.41	1.09	-0.46	
11/14/07 21:03:15	0.11	0.13	-0.01	45.26	1.04	-0.46	
11/14/07 21:03:30	0.10	0.12	-0.01	45.31	1.05	-0.46	
11/14/07 21:03:45	0.09	0.10	-0.01	45.46	0.84	-0.46	
11/14/07 21:04:00	0.09	0.10	-0.01	45.26	1.01	-0.46	Calibration Bias
11/14/07 21:04:15	0.08	0.09	-0.01	45.41	1.07	-0.47	45.0 ppmv db CO injection
11/14/07 21:04:30	0.08	0.08	-0.01	45.46	0.68	-0.47	45.38 ppmv db CO
11/14/07 21:04:45	0.08	0.08	-0.01	45.16	0.70	-0.46	
11/14/07 21:05:00	0.07	0.08	-0.01	45.46	0.85	-0.46	
11/14/07 21:05:15	0.07	0.07	-0.01	45.31	0.77	-0.46	
11/14/07 21:05:30	0.07	0.07	-0.01	45.56	0.90	-0.47	
11/14/07 21:05:45	0.07	0.07	-0.01	45.41	0.79	-0.46	
11/14/07 21:06:00	0.07	0.06	-0.01	45.41	0.54	-0.46	
11/14/07 21:06:15	0.06	0.06	-0.01	44.66	0.66	-0.46	
11/14/07 21:06:30	0.08	0.09	-0.01	37.34	0.91	-0.46	
11/14/07 21:06:45	1.87	1.18	-0.01	32.11	0.66	-0.46	
11/14/07 21:07:00	2.63	1.12	1.24	17.75	0.86	-0.46	
11/14/07 21:07:15	0.58	0.23	4.79	5.20	0.90	-0.46	
11/14/07 21:07:30	0.11	0.07	13.34	1.36	0.89	-0.46	
11/14/07 21:07:45	0.07	0.06	32.88	1.21	0.84	-0.46	
11/14/07 21:08:00	0.07	0.05	36.53	1.01	0.99	-0.46	
11/14/07 21:08:15	0.06	0.05	34.48	1.01	1.06	-0.46	
11/14/07 21:08:30	0.06	0.05	36.98	1.01	0.76	-0.46	
11/14/07 21:08:45	0.06	0.05	44.08	1.01	0.75	-0.46	
11/14/07 21:09:00	0.06	0.04	48.08	1.01	0.86	-0.46	
11/14/07 21:09:15	0.05	0.04	48.28	1.01	1.00	-0.46	
11/14/07 21:09:30	0.05	0.04	48.13	1.01	1.02	-0.46	
11/14/07 21:09:45	0.05	0.04	45.98	1.01	0.99	-0.46	
11/14/07 21:10:00	0.05	0.04	45.78	1.01	0.67	-0.46	
11/14/07 21:10:15	0.05	0.04	45.58	1.01	1.04	-0.46	
11/14/07 21:10:30	0.05	0.04	45.53	1.01	0.71	-0.46	
11/14/07 21:10:45	0.05	0.04	45.36	1.01	0.91	-0.46	
11/14/07 21:11:00	0.05	0.04	45.33	1.01	0.94	-0.84	
11/14/07 21:11:15	0.05	0.04	45.18	1.01	0.92	-0.96	
11/14/07 21:11:30	0.05	0.04	45.18	1.01	0.76	-0.97	
11/14/07 21:11:45	0.04	0.03	45.18	0.66	0.55	-0.96	
11/14/07 21:12:00	0.05	0.03	45.04	1.01	0.94	-0.96	Calibration Bias
11/14/07 21:12:15	0.05	0.03	44.99	1.01	0.74	-0.96	45.0 ppmv db NOx injection
11/14/07 21:12:30	0.05	0.03	44.99	1.01	0.62	-0.96	44.99 ppmv db NOx
11/14/07 21:12:45	0.05	0.03	44.99	1.01	0.57	-0.96	
11/14/07 21:13:00	0.05	0.03	44.99	6.84	0.68	-0.96	
11/14/07 21:13:15	1.66	1.26	44.79	26.73	0.68	-0.96	
11/14/07 21:13:30	7.75	4.39	42.13	39.64	0.57	-0.96	
11/14/07 21:13:45	11.72	6.18	29.39	51.60	0.56	-0.96	
11/14/07 21:14:00	12.92	6.60	18.69	64.21	0.37	-0.96	
11/14/07 21:14:15	13.24	6.51	12.29	79.91	0.60	-0.96	
11/14/07 21:14:30	13.32	6.47	10.99	79.46	0.43	-0.96	
11/14/07 21:14:45	12.67	5.82	10.59	42.68	-0.05	-0.96	
11/14/07 21:15:00	7.32	2.70	13.04	12.37	0.10	-0.96	
11/14/07 21:15:15	12.21	0.46	17.29	2.35	0.09	-0.96	
11/14/07 21:15:30	19.31	0.13	20.84	1.01	-0.22	-0.96	
11/14/07 21:15:45	20.84	0.08	7.89	1.01	-0.21	-0.96	
11/14/07 21:16:00	20.75	0.06	1.29	1.01	0.06	-0.96	
11/14/07 21:16:15	20.78	0.06	0.19	1.01	0.05	-0.96	
11/14/07 21:16:30	20.80	0.05	0.19	1.01	-0.06	-0.96	
11/14/07 21:16:45	20.81	0.05	0.19	1.01	-0.28	-0.96	
11/14/07 21:17:00	20.82	0.05	0.04	0.61	-0.20	-0.96	
11/14/07 21:17:15	20.83	0.05	-0.01	0.96	0.01	-0.96	
11/14/07 21:17:30	20.84	0.05	-0.01	0.96	0.01	-0.96	
11/14/07 21:17:45	20.84	0.04	-0.01	0.81	3.01	-0.96	
11/14/07 21:18:00	20.85	0.04	-0.01	17.51	3.15	-0.96	
11/14/07 21:18:15	20.67	0.33	-0.01	61.77	36.11	-0.96	
11/14/07 21:18:30	18.77	1.90	0.39	44.47	49.37	-0.96	
11/14/07 21:18:45	19.06	0.82	2.39	10.53	49.71	-0.96	
11/14/07 21:19:00	19.73	0.14	3.44	1.86	49.43	-0.96	
11/14/07 21:19:15	20.28	0.06	2.99	1.21	49.51	-0.96	
11/14/07 21:19:30	20.36	0.05	0.94	1.16	49.72	-0.96	
11/14/07 21:19:45	20.36	0.05	0.29	1.16	49.51	-0.96	
11/14/07 21:20:00	20.40	0.04	0.04	1.01	49.63	36.24	
11/14/07 21:20:15	20.41	0.04	-0.01	1.16	49.55	48.65	
11/14/07 21:20:30	20.44	0.04	-0.01	1.01	49.39	48.65	
11/14/07 21:20:45	20.47	0.04	-0.01	1.16	49.51	46.65	
11/14/07 21:21:00	20.51	0.04	-0.01	1.11	49.42	48.84	
11/14/07 21:21:15	20.53	0.04	-0.01	1.21	49.47	48.65	
11/14/07 21:21:30	20.54	0.04	-0.01	1.11	49.37	48.65	
11/14/07 21:21:45	20.65	0.04	-0.01	1.01	49.45	48.65	
11/14/07 21:22:00	20.55	0.04	-0.01	1.01	49.58	48.65	
11/14/07 21:22:15	20.55	0.04	-0.01	1.01	49.52	48.65	
11/14/07 21:22:30	20.56	0.03	-0.01	1.01	49.55	48.65	
11/14/07 21:22:45	20.56	0.03	-0.01	1.16	49.43	48.65	
11/14/07 21:23:00	20.56	0.03	-0.01	1.11	49.67	48.27	
11/14/07 21:23:15	20.66	0.03	-0.01	1.01	49.63	48.14	
11/14/07 21:23:30	20.56	0.03	-0.01	1.01	49.58	48.14	
11/14/07 21:23:45	20.56	0.03	-0.01	1.01	49.57	48.14	
11/14/07 21:24:00	20.56	0.03	-0.01	1.01	49.53	48.14	
11/14/07 21:24:15	20.57	0.03	-0.01	1.01	49.59	48.15	
11/14/07 21:24:30	20.57	0.03	-0.01	1.11	49.51	48.14	
11/14/07 21:24:45	20.57	0.03	-0.01	1.06	49.84	48.14	
11/14/07 21:25:00	20.57	0.03	-0.01	1.01	49.53	48.15	
11/14/07 21:25:15	20.57	0.03	-0.01	1.01	49.60	48.14	
11/14/07 21:25:30	20.57	0.03	-0.01	1.01	49.62	48.14	
11/14/07 21:25:45	20.57	0.03	-0.01	1.01	49.55	48.14	
11/14/07 21:26:00	20.57	0.03	-0.01	1.01	49.48	48.88	
11/14/07 21:26:15	20.57	0.03	-0.01	1.01	49.66	49.14	
11/14/07 21:26:30	20.57	0.03	-0.01	1.11	274.78	49.14	
11/14/07 21:26:45	20.57	0.03	-0.01	26.18	965.96	49.15	
11/14/07 21:27:00	20.51	0.17	-0.01	199.38	1,024.92	49.15	
11/14/07 21:27:15	18.51	2.37	0.29	199.38	1,024.93	49.15	
11/14/07 21:27:30	15.89	4.57	1.74	199.38	1,022.34	49.15	
11/14/07 21:27:45	15.45	4.82	5.49	199.38	915.96	49.15	
11/14/07 21:28:00	15.43	4.90	7.24	199.38	620.79	49.15	
11/14/07 21:28:15	15.05	5.27	7.49	199.38	930.60	49.15	
11/14/07 21:28:30	14.66	5.55	7.94	199.38	1,010.12	49.15	
11/14/07 21:28:45	14.60	5.56	8.59	199.38	1,024.95	49.15	

APPENDIX D

Process Data

DAQSTANDARD	R6.05	
Data Viewer	R6.05	
Energy Developments	EDI	115-55398-****

Device Type	DX100	
Serial No.	S5G407093	
File Message	9062818 ZION LANDFILL	
Time Correction	None	
Starting Condition	Over Write	
Dividing Condition	Interrupted	
Meas Ch.	5	
Math Ch.	1	
Data Count	44890	
Sampling Interval	60.000 sec	
Start Time	2007/11/09 07:44:00	0.000
Stop Time	2007/12/10 11:53:00	0.000
Trigger Time	2007/12/10 11:53:00	0.000
Trigger No.	44889	
Damage Check	Not Damaged	

Converted Group 1 - 1

		Ch.	CH01		CH02		CH03		CH04		CH05		
		Tag	GAS FLOW		FLARE TEMP		INLET PRESS		DISCHARGE PRESS		FACILITY FLOW		
		Unit	SCFM		°F		IN H2O		IN H2O		SCFM		
Date	Time	sec	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
2007/12/07	09:14:00	0.000	0	791	26	27	-22.4	-7.7	-34.2	-1.4	-4	-3	
2007/12/07	09:15:00	0.000	791	2222	26	32	-28.9	-15.4	-1.4	3.3	-4	-3	
2007/12/07	09:16:00	0.000	2222	5978	32	172	-38.5	-28.9	3.2	5.6	-4	-3	
2007/12/07	09:17:00	0.000	5978	6000	132	364	-45.4	-38.5	5.5	7.5	-4	-3	
2007/12/07	09:18:00	0.000	5622	5999	364	658	-49.8	-45.4	7.3	11.0	-3	-3	
2007/12/07	09:19:00	0.000	3983	5622	658	1341	-53.3	-49.4	10.6	11.5	-4	-3	
2007/12/07	09:20:00	0.000	3468	3983	1341	1644	-55.5	-53.3	10.5	11.9	-4	-3	
2007/12/07	09:21:00	0.000	3238	3468	1509	1689	-57.1	-55.4	11.4	13.7	-4	-3	
2007/12/07	09:22:00	0.000	2152	3238	1543	1708	-58.0	-56.3	13.3	14.9	-4	-3	
2007/12/07	09:23:00	0.000	1829	2152	1669	1736	-58.4	-56.8	13.1	18.3	-3	-3	
2007/12/07	09:24:00	0.000	1881	2570	1604	1678	-58.8	-57.1	12.7	18.8	-3	-3	
2007/12/07	09:25:00	0.000	2570	2802	1599	1638	-59.4	-58.0	12.6	15.0	-4	-3	
2007/12/07	09:26:00	0.000	2772	2843	1599	1628	-59.3	-58.5	12.2	13.6	-3	-3	
2007/12/07	09:27:00	0.000	2843	2916	1628	1634	-59.2	-58.6	12.1	12.9	-3	-3	
2007/12/07	09:28:00	0.000	2915	2937	1612	1633	-59.3	-58.6	12.1	12.7	-4	-3	
2007/12/07	09:29:00	0.000	2874	2982	1579	1612	-59.1	-58.4	12.1	13.7	-4	-3	
2007/12/07	09:30:00	0.000	2786	2882	1571	1579	-59.0	-58.6	11.9	12.6	-3	-3	
2007/12/07	09:31:00	0.000	2780	2807	1577	1603	-58.9	-58.3	11.8	13.2	-4	-3	
2007/12/07	09:32:00	0.000	2780	2798	1603	1615	-59.4	-58.3	11.5	13.0	-4	-3	
2007/12/07	09:33:00	0.000	2756	2791	1615	1617	-59.7	-58.4	11.6	12.7	-4	-3	
2007/12/07	09:34:00	0.000	2752	2780	1612	1617	-58.9	-58.3	11.5	12.4	-4	-3	
2007/12/07	09:35:00	0.000	2766	2790	1610	1612	-59.3	-58.4	11.6	12.8	-4	-3	
2007/12/07	09:36:00	0.000	2753	2784	1606	1612	-59.1	-58.5	11.6	12.7	-4	-3	
2007/12/07	09:37:00	0.000	2739	2771	1600	1606	-59.1	-58.4	11.6	12.9	-4	-3	
2007/12/07	09:38:00	0.000	2761	2787	1595	1602	-58.9	-58.4	11.5	13.5	-4	-3	
2007/12/07	09:39:00	0.000	2754	2783	1594	1600	-58.9	-58.4	11.4	12.5	-4	-3	
2007/12/07	09:40:00	0.000	2754	2781	1599	1603	-58.9	-58.5	11.4	12.1	-4	-3	
2007/12/07	09:41:00	0.000	2770	2780	1602	1606	-58.9	-58.5	11.3	12.0	-4	-3	
2007/12/07	09:42:00	0.000	2754	2776	1594	1603	-59.1	-58.5	11.2	11.9	-4	-3	
2007/12/07	09:43:00	0.000	2743	2771	1596	1602	-58.9	-58.4	11.3	12.6	-4	-3	
2007/12/07	09:44:00	0.000	2736	2758	1601	1603	-58.9	-58.5	11.2	12.2	-4	-3	
2007/12/07	09:45:00	0.000	2726	2757	1589	1603	-58.9	-58.3	11.0	12.2	-4	-3	
2007/12/07	09:46:00	0.000	2728	2762	1578	1589	-58.9	-58.4	11.2	12.1	-4	-3	
2007/12/07	09:47:00	0.000	2722	2743	1578	1611	-58.9	-58.5	11.0	11.6	-4	-3	
2007/12/07	09:48:00	0.000	2725	2740	1611	1617	-59.0	-58.4	11.1	12.3	-4	-3	
2007/12/07	09:49:00	0.000	2725	2740	1612	1617	-58.9	-58.5	11.1	11.7	-4	-3	
2007/12/07	09:50:00	0.000	2717	2734	1593	1613	-58.9	-58.5	11.1	11.7	-4	-3	
2007/12/07	09:51:00	0.000	2710	2739	1586	1593	-59.0	-58.3	11.0	11.8	-4	-3	
2007/12/07	09:52:00	0.000	2721	2739	1582	1595	-58.9	-58.4	11.0	11.4	-4	-4	
2007/12/07	09:53:00	0.000	2710	2746	1595	1604	-58.9	-58.3	11.0	12.3	-4	-3	
2007/12/07	09:54:00	0.000	2726	2745	1594	1600	-58.9	-58.3	11.0	11.6	-4	-3	
2007/12/07	09:55:00	0.000	2726	2756	1586	1597	-58.9	-58.4	10.9	11.6	-4	-3	
2007/12/07	09:56:00	0.000	2724	2746	1586	1598	-58.8	-58.3	10.8	11.8	-4	-3	
2007/12/07	09:57:00	0.000	2725	2736	1598	1610	-58.9	-58.3	10.9	11.7	-4	-4	

2007/12/07	09:58:00	0.000	2729	2801	1609	1614	-60.3	-58.3	10.8	12.5	-4	-3
2007/12/07	09:59:00	0.000	2753	2787	1606	1618	-59.9	-59.4	10.9	12.0	-4	-3
2007/12/07	10:00:00	0.000	2739	2759	1618	1626	-59.9	-59.2	10.9	11.6	-4	-3
2007/12/07	10:01:00	0.000	2727	2749	1598	1619	-59.8	-59.1	10.8	11.8	-4	-3
2007/12/07	10:02:00	0.000	2722	2746	1595	1600	-59.6	-59.1	10.7	11.6	-4	-3
2007/12/07	10:03:00	0.000	2710	2743	1599	1610	-59.5	-59.1	10.8	11.4	-4	-3
2007/12/07	10:04:00	0.000	2727	2739	1595	1608	-59.5	-59.2	10.9	11.5	-4	-3
2007/12/07	10:05:00	0.000	2710	2736	1585	1596	-59.6	-59.0	10.9	11.4	-4	-3
2007/12/07	10:06:00	0.000	2712	2722	1583	1594	-59.5	-59.0	10.6	11.6	-4	-3
2007/12/07	10:07:00	0.000	2706	2729	1593	1606	-59.5	-59.0	10.6	11.3	-4	-3
2007/12/07	10:08:00	0.000	2708	2722	1605	1609	-59.5	-59.1	10.5	11.4	-4	-3
2007/12/07	10:09:00	0.000	2708	2729	1600	1608	-59.5	-59.1	10.7	11.2	-4	-3
2007/12/07	10:10:00	0.000	2696	2720	1600	1604	-59.7	-59.0	10.7	11.1	-4	-3
2007/12/07	10:11:00	0.000	2700	2720	1604	1606	-59.4	-59.1	10.8	11.2	-4	-3
2007/12/07	10:12:00	0.000	2712	2726	1593	1606	-59.6	-58.9	10.6	11.2	-4	-3
2007/12/07	10:13:00	0.000	2708	2729	1593	1608	-59.7	-59.0	10.5	11.1	-4	-3
2007/12/07	10:14:00	0.000	2686	2720	1598	1608	-59.5	-58.9	10.4	11.3	-4	-3
2007/12/07	10:15:00	0.000	2682	2717	1592	1598	-59.5	-58.9	10.7	11.3	-4	-3
2007/12/07	10:16:00	0.000	2680	2706	1590	1600	-59.5	-58.9	10.8	11.3	-4	-3
2007/12/07	10:17:00	0.000	2690	2706	1600	1607	-59.4	-59.0	10.7	11.2	-4	-3
2007/12/07	10:18:00	0.000	2680	2701	1601	1608	-59.4	-58.9	10.6	11.1	-4	-3
2007/12/07	10:19:00	0.000	2682	2710	1598	1604	-59.5	-58.9	10.7	11.1	-4	-3
2007/12/07	10:20:00	0.000	2671	2720	1589	1598	-59.4	-59.0	10.8	11.1	-4	-3
2007/12/07	10:21:00	0.000	2694	2725	1589	1599	-59.3	-58.9	10.7	11.3	-4	-3
2007/12/07	10:22:00	0.000	2694	2722	1595	1601	-59.4	-58.9	10.5	11.0	-4	-3
2007/12/07	10:23:00	0.000	2708	2721	1595	1597	-59.3	-59.0	10.6	11.2	-4	-3
2007/12/07	10:24:00	0.000	2690	2716	1597	1605	-59.4	-58.9	10.3	11.1	-4	-3
2007/12/07	10:25:00	0.000	2698	2718	1604	1608	-59.3	-58.9	10.6	11.0	-4	-3
2007/12/07	10:26:00	0.000	2708	2725	1607	1612	-59.4	-59.0	10.6	10.9	-4	-3
2007/12/07	10:27:00	0.000	2706	2729	1600	1613	-59.5	-59.1	10.6	10.9	-4	-3
2007/12/07	10:28:00	0.000	2692	2721	1597	1600	-59.5	-58.9	10.5	10.9	-4	-3
2007/12/07	10:29:00	0.000	2698	2725	1593	1600	-59.3	-59.0	10.6	11.0	-4	-3
2007/12/07	10:30:00	0.000	2699	2721	1595	1604	-59.6	-59.0	10.5	10.9	-4	-3
2007/12/07	10:31:00	0.000	2702	2720	1602	1604	-59.5	-58.9	10.3	10.8	-4	-3
2007/12/07	10:32:00	0.000	2703	2730	1602	1606	-59.4	-59.0	10.4	10.7	-4	-3
2007/12/07	10:33:00	0.000	2715	2734	1604	1609	-59.7	-58.9	10.2	10.8	-4	-3
2007/12/07	10:34:00	0.000	2696	2718	1590	1607	-59.5	-59.0	10.3	10.7	-4	-3
2007/12/07	10:35:00	0.000	2703	2722	1587	1590	-59.3	-59.0	10.3	10.6	-4	-3
2007/12/07	10:36:00	0.000	2703	2723	1587	1589	-59.5	-58.7	10.1	10.7	-4	-3
2007/12/07	10:37:00	0.000	2705	2731	1589	1600	-59.3	-58.9	10.3	10.6	-4	-3
2007/12/07	10:38:00	0.000	2691	2710	1600	1606	-59.4	-59.0	10.2	10.5	-4	-3
2007/12/07	10:39:00	0.000	2685	2713	1606	1612	-59.5	-59.0	10.3	10.6	-4	-3
2007/12/07	10:40:00	0.000	2696	2720	1611	1619	-59.2	-58.9	10.3	10.5	-4	-3
2007/12/07	10:41:00	0.000	2699	2721	1604	1616	-59.5	-58.9	10.3	10.5	-4	-3
2007/12/07	10:42:00	0.000	2698	2713	1604	1607	-59.5	-58.9	10.2	10.6	-4	-3
2007/12/07	10:43:00	0.000	2694	2713	1602	1604	-59.5	-59.0	10.2	10.5	-4	-3
2007/12/07	10:44:00	0.000	2681	2710	1599	1606	-59.5	-59.0	10.2	10.5	-4	-2
2007/12/07	10:45:00	0.000	2686	2708	1599	1607	-59.4	-59.0	10.2	10.5	-4	-3
2007/12/07	10:46:00	0.000	2687	2701	1590	1599	-59.4	-59.0	10.1	10.5	-4	-3
2007/12/07	10:47:00	0.000	2680	2694	1587	1590	-59.5	-59.0	10.2	10.5	-4	-3
2007/12/07	10:48:00	0.000	2677	2702	1584	1588	-59.4	-59.0	10.2	10.4	-4	-3
2007/12/07	10:49:00	0.000	2661	2687	1583	1595	-59.5	-58.9	9.9	10.4	-3	-3
2007/12/07	10:50:00	0.000	2675	2703	1595	1600	-59.6	-58.9	9.8	10.4	-4	-3
2007/12/07	10:51:00	0.000	2693	2744	1600	1605	-59.3	-58.3	10.0	10.8	-5	-2
2007/12/07	10:52:00	0.000	2744	2811	1604	1608	-59.0	-58.0	10.4	11.3	-4	-2
2007/12/07	10:53:00	0.000	2758	2811	1608	1617	-58.8	-58.1	10.6	11.7	-5	-2
2007/12/07	10:54:00	0.000	2756	2799	1595	1614	-58.9	-58.1	10.9	11.7	-5	-1
2007/12/07	10:55:00	0.000	2799	2838	1595	1618	-59.0	-58.3	11.0	11.8	-5	-1
2007/12/07	10:56:00	0.000	2799	2832	1616	1627	-59.0	-58.4	11.0	11.6	-5	-2
2007/12/07	10:57:00	0.000	2793	2814	1606	1616	-58.9	-58.2	11.0	11.8	-6	-1
2007/12/07	10:58:00	0.000	2802	2833	1604	1614	-59.0	-58.3	11.1	11.7	-6	-1
2007/12/07	10:59:00	0.000	2807	2832	1578	1604	-58.9	-58.3	11.1	11.6	-5	-1
2007/12/07	11:00:00	0.000	2811	2830	1499	1578	-59.1	-58.3	10.9	11.8	-5	-1
2007/12/07	11:01:00	0.000	2812	2830	1497	1504	-59.0	-58.3	11.2	11.8	-5	-1
2007/12/07	11:02:00	0.000	2816	2837	1500	1505	-58.9	-58.4	11.0	11.7	-5	-1
2007/12/07	11:03:00	0.000	2816	2837	1500	1504	-58.9	-58.4	11.1	11.5	-5	-1
2007/12/07	11:04:00	0.000	2816	2827	1495	1503	-58.9	-58.4	11.2	11.6	-5	-2
2007/12/07	11:05:00	0.000	2825	2863	1492	1508	-59.3	-58.3	11.0	11.6	-5	-1
2007/12/07	11:06:00	0.000	2834	2865	1505	1509	-59.3	-58.4	11.0	11.6	-5	-2
2007/12/07	11:07:00	0.000	2842	2866	1499	1506	-59.1	-58.3	11.0	11.6	-5	-2

2007/12/07	11:08:00	0.000	2839	2862	1492	1499	-58.9	-58.4	11.1	11.5	-4	-3
2007/12/07	11:09:00	0.000	2826	2858	1492	1496	-58.9	-58.4	11.1	11.5	-4	-2
2007/12/07	11:10:00	0.000	1791	2855	1496	1500	-59.0	-38.7	1.2	11.5	-4	-3
2007/12/07	11:11:00	0.000	1160	2730	1425	1617	-53.6	-28.1	-1.5	12.9	-4	-3
2007/12/07	11:12:00	0.000	2711	2822	1469	1491	-57.6	-53.4	10.0	12.2	-4	-2
2007/12/07	11:13:00	0.000	2822	2930	1482	1522	-60.1	-57.4	11.5	12.3	-4	-3
2007/12/07	11:14:00	0.000	2928	3027	1520	1525	-63.4	-60.1	11.9	13.5	-4	-3
2007/12/07	11:15:00	0.000	3027	3085	1517	1525	-65.1	-63.3	12.8	14.1	-4	-2
2007/12/07	11:16:00	0.000	3076	3166	1512	1518	-67.9	-64.9	13.2	14.5	-4	-2
2007/12/07	11:17:00	0.000	3156	3260	1512	1517	-71.2	-67.6	13.8	16.1	-5	-1
2007/12/07	11:18:00	0.000	3260	3304	1501	1518	-72.5	-70.8	15.1	16.5	-5	-1
2007/12/07	11:19:00	0.000	3304	3324	1439	1503	-73.5	-72.1	15.4	16.6	-5	-1
2007/12/07	11:20:00	0.000	3299	3334	1484	1539	-73.8	-73.0	15.7	18.8	-4	-3
2007/12/07	11:21:00	0.000	3315	3337	1483	1509	-74.7	-73.6	15.8	18.8	-4	-2
2007/12/07	11:22:00	0.000	3325	3354	1509	1531	-74.8	-74.1	15.6	16.7	-4	-3
2007/12/07	11:23:00	0.000	3323	3343	1504	1526	-74.8	-74.3	15.6	16.9	-4	-3
2007/12/07	11:24:00	0.000	3314	3341	1483	1504	-75.1	-74.5	15.5	17.4	-4	-3
2007/12/07	11:25:00	0.000	3332	3356	1483	1488	-75.1	-74.6	15.3	16.2	-3	-3
2007/12/07	11:26:00	0.000	3316	3342	1488	1495	-75.1	-74.5	15.3	16.1	-4	-3
2007/12/07	11:27:00	0.000	3316	3344	1493	1496	-75.1	-74.5	15.1	16.3	-4	-3
2007/12/07	11:28:00	0.000	3323	3343	1494	1504	-75.3	-74.7	15.1	15.9	-4	-3
2007/12/07	11:29:00	0.000	3304	3341	1504	1519	-75.2	-74.8	15.3	16.0	-3	-3
2007/12/07	11:30:00	0.000	3311	3337	1516	1518	-75.2	-74.8	15.1	16.8	-4	-3
2007/12/07	11:31:00	0.000	3313	3334	1504	1518	-75.3	-74.8	15.0	16.0	-4	-3
2007/12/07	11:32:00	0.000	3313	3342	1496	1504	-75.3	-74.8	15.1	15.9	-4	-3
2007/12/07	11:33:00	0.000	3322	3346	1496	1549	-75.3	-74.7	15.1	15.6	-4	-3
2007/12/07	11:34:00	0.000	3324	3354	1541	1548	-75.3	-74.9	15.1	15.7	-3	-3
2007/12/07	11:35:00	0.000	3321	3347	1541	1544	-75.3	-74.6	14.9	15.7	-3	-3
2007/12/07	11:36:00	0.000	3327	3343	1540	1546	-75.2	-74.8	15.0	15.9	-3	-3
2007/12/07	11:37:00	0.000	3321	3337	1541	1555	-75.1	-74.6	15.1	16.0	-3	-3
2007/12/07	11:38:00	0.000	3321	3350	1555	1559	-75.2	-74.5	15.0	16.5	-3	-3
2007/12/07	11:39:00	0.000	3318	3337	1556	1564	-75.3	-74.8	15.1	15.4	-4	-3
2007/12/07	11:40:00	0.000	3317	3338	1559	1565	-75.2	-74.8	15.1	15.5	-4	-3
2007/12/07	11:41:00	0.000	3316	3339	1553	1559	-75.2	-74.7	14.9	16.3	-4	-3
2007/12/07	11:42:00	0.000	3306	3342	1552	1554	-75.2	-74.7	15.0	15.6	-4	-3
2007/12/07	11:43:00	0.000	3325	3360	1551	1554	-75.1	-74.8	15.0	15.9	-4	-3
2007/12/07	11:44:00	0.000	3321	3344	1548	1551	-75.2	-74.8	14.9	15.7	-4	-3
2007/12/07	11:45:00	0.000	3318	3342	1549	1552	-75.3	-74.8	14.9	15.5	-4	-3
2007/12/07	11:46:00	0.000	3323	3351	1550	1556	-75.1	-74.7	15.0	15.5	-4	-3
2007/12/07	11:47:00	0.000	3327	3355	1550	1558	-75.4	-74.8	14.8	15.4	-4	-3
2007/12/07	11:48:00	0.000	3316	3342	1554	1558	-75.4	-74.8	14.9	15.3	-4	-3
2007/12/07	11:49:00	0.000	3324	3344	1550	1557	-75.7	-74.7	14.7	15.4	-3	-3
2007/12/07	11:50:00	0.000	3314	3337	1546	1552	-75.2	-74.8	14.8	15.2	-4	-3
2007/12/07	11:51:00	0.000	3314	3331	1539	1552	-75.4	-74.8	14.8	15.2	-4	-3
2007/12/07	11:52:00	0.000	3318	3346	1535	1540	-75.4	-74.7	14.7	15.5	-4	-3
2007/12/07	11:53:00	0.000	3310	3337	1535	1541	-75.3	-74.8	14.8	15.2	-3	-2
2007/12/07	11:54:00	0.000	3327	3349	1540	1544	-75.1	-74.8	14.8	15.2	-3	-3
2007/12/07	11:55:00	0.000	3323	3341	1542	1545	-75.2	-74.9	14.7	15.0	-3	-3
2007/12/07	11:56:00	0.000	3318	3335	1545	1549	-75.3	-74.9	14.7	15.1	-3	-3
2007/12/07	11:57:00	0.000	3312	3335	1543	1549	-75.2	-74.8	14.7	15.1	-3	-3
2007/12/07	11:58:00	0.000	3312	3337	1546	1561	-75.5	-74.8	14.6	15.1	-4	-3
2007/12/07	11:59:00	0.000	3316	3337	1558	1587	-75.3	-74.9	14.7	15.1	-4	-3
2007/12/07	12:00:00	0.000	3321	3342	1575	1597	-75.5	-74.8	14.7	15.1	-4	-3
2007/12/07	12:01:00	0.000	3306	3342	1554	1575	-75.2	-74.9	14.7	15.1	-4	-3
2007/12/07	12:02:00	0.000	3321	3349	1556	1577	-75.2	-74.8	14.7	15.1	-4	-3
2007/12/07	12:03:00	0.000	3316	3340	1577	1585	-75.2	-74.8	14.8	15.0	-4	-3
2007/12/07	12:04:00	0.000	3315	3360	1585	1588	-75.3	-74.8	14.7	15.1	-4	-2
2007/12/07	12:05:00	0.000	3360	3417	1585	1590	-75.2	-74.9	14.7	15.0	-4	-3
2007/12/07	12:06:00	0.000	3316	3365	1579	1585	-75.2	-74.8	14.7	15.0	-4	-3
2007/12/07	12:07:00	0.000	3318	3337	1577	1584	-75.3	-74.8	14.6	14.9	-4	-3
2007/12/07	12:08:00	0.000	3324	3344	1573	1577	-75.2	-74.8	14.5	14.9	-4	-3
2007/12/07	12:09:00	0.000	3321	3345	1571	1576	-75.3	-74.8	14.6	14.8	-4	-3
2007/12/07	12:10:00	0.000	3317	3333	1569	1575	-75.2	-74.8	14.6	14.9	-3	-3
2007/12/07	12:11:00	0.000	3321	3342	1575	1582	-75.5	-74.7	14.5	14.9	-3	-3
2007/12/07	12:12:00	0.000	3326	3346	1569	1579	-75.3	-74.8	14.6	14.8	-3	-3
2007/12/07	12:13:00	0.000	3319	3340	1570	1580	-75.4	-74.8	14.5	14.9	-4	-3
2007/12/07	12:14:00	0.000	3325	3339	1580	1588	-75.4	-74.8	14.5	14.8	-3	-3
2007/12/07	12:15:00	0.000	3325	3341	1583	1591	-75.3	-74.8	14.5	14.8	-4	-3
2007/12/07	12:16:00	0.000	3320	3337	1562	1583	-75.3	-74.8	14.5	14.8	-4	-3
2007/12/07	12:17:00	0.000	3317	3351	1551	1562	-75.2	-74.8	14.5	14.7	-4	-3

2007/12/07	12:18:00	0.000	3310	3342	1550	1582	-75.2	-74.9	14.5	14.7	-4	-3
2007/12/07	12:19:00	0.000	3321	3337	1560	1579	-75.3	-74.8	14.4	14.7	-4	-3
2007/12/07	12:20:00	0.000	3316	3345	1545	1560	-75.3	-74.9	14.5	14.7	-4	-3
2007/12/07	12:21:00	0.000	3312	3333	1542	1550	-75.3	-74.8	14.5	14.7	-4	-3
2007/12/07	12:22:00	0.000	3325	3346	1550	1582	-75.2	-74.8	14.5	14.8	-4	-3
2007/12/07	12:23:00	0.000	3327	3347	1582	1587	-75.1	-74.7	14.5	14.7	-4	-3
2007/12/07	12:24:00	0.000	3321	3340	1568	1583	-75.1	-74.7	14.5	14.7	-4	-3
2007/12/07	12:25:00	0.000	3325	3342	1563	1568	-75.1	-74.7	14.5	14.7	-4	-2
2007/12/07	12:26:00	0.000	3309	3339	1540	1563	-75.1	-74.8	14.5	14.7	-4	-3
2007/12/07	12:27:00	0.000	3297	3316	1539	1604	-75.1	-74.8	14.4	14.8	-4	-2
2007/12/07	12:28:00	0.000	3306	3321	1533	1583	-75.0	-74.7	14.4	14.7	-4	-3
2007/12/07	12:29:00	0.000	3315	3349	1552	1582	-74.8	-74.3	14.5	15.3	-4	-3
2007/12/07	12:30:00	0.000	3346	3382	1551	1559	-74.8	-74.2	14.9	15.6	-4	-2
2007/12/07	12:31:00	0.000	3265	3360	1540	1588	-74.8	-74.3	15.1	15.9	-4	-3
2007/12/07	12:32:00	0.000	3260	3301	1548	1571	-74.8	-74.2	15.2	15.9	-4	-3
2007/12/07	12:33:00	0.000	3222	3291	1539	1550	-74.8	-74.3	15.4	15.9	-4	-3
2007/12/07	12:34:00	0.000	3205	3222	1525	1544	-74.9	-74.4	15.4	15.9	-4	-3
2007/12/07	12:35:00	0.000	3211	3226	1544	1574	-74.8	-74.5	15.4	15.7	-4	-3
2007/12/07	12:36:00	0.000	3207	3246	1574	1582	-74.9	-74.4	15.5	16.2	-5	-2
2007/12/07	12:37:00	0.000	3208	3248	1574	1582	-74.7	-74.5	15.6	15.8	-4	-2
2007/12/07	12:38:00	0.000	3220	3241	1565	1575	-74.8	-74.4	15.5	16.3	-4	-3
2007/12/07	12:39:00	0.000	3217	3231	1555	1566	-75.1	-74.4	15.5	16.1	-4	-2
2007/12/07	12:40:00	0.000	3214	3235	1538	1556	-75.1	-74.3	15.5	16.0	-4	-3
2007/12/07	12:41:00	0.000	3209	3239	1536	1547	-74.9	-74.5	15.7	16.0	-4	-3
2007/12/07	12:42:00	0.000	3217	3243	1547	1563	-74.9	-74.5	15.5	16.2	-4	-3
2007/12/07	12:43:00	0.000	3230	3243	1563	1568	-74.8	-74.5	15.6	15.8	-4	-3
2007/12/07	12:44:00	0.000	3226	3250	1558	1567	-74.8	-74.5	15.6	15.9	-4	-2
2007/12/07	12:45:00	0.000	3224	3246	1556	1559	-74.8	-74.5	15.6	15.8	-4	-3
2007/12/07	12:46:00	0.000	3215	3237	1559	1575	-74.9	-74.5	15.6	16.0	-4	-3
2007/12/07	12:47:00	0.000	3236	3259	1575	1580	-74.7	-74.5	15.5	15.9	-4	-2
2007/12/07	12:48:00	0.000	3240	3260	1575	1580	-74.7	-74.4	15.6	15.9	-4	-2
2007/12/07	12:49:00	0.000	3226	3255	1571	1583	-74.8	-74.5	15.7	16.0	-4	-2
2007/12/07	12:50:00	0.000	3237	3257	1567	1571	-74.8	-74.5	15.6	16.0	-3	-2
2007/12/07	12:51:00	0.000	3240	3256	1564	1570	-74.8	-74.5	15.7	15.9	-4	-2
2007/12/07	12:52:00	0.000	3230	3262	1560	1564	-74.8	-74.5	15.7	15.9	-3	-2
2007/12/07	12:53:00	0.000	3236	3266	1550	1562	-74.8	-74.4	15.7	15.9	-4	-3
2007/12/07	12:54:00	0.000	3250	3266	1543	1552	-74.9	-74.5	15.6	15.8	-4	-3
2007/12/07	12:55:00	0.000	3252	3264	1552	1583	-74.8	-74.5	15.6	15.9	-4	-3
2007/12/07	12:56:00	0.000	3254	3272	1582	1594	-74.9	-74.5	15.7	15.9	-4	-3
2007/12/07	12:57:00	0.000	3243	3268	1576	1594	-74.9	-74.5	15.7	15.9	-3	-3
2007/12/07	12:58:00	0.000	3250	3268	1569	1576	-74.8	-74.6	15.7	15.9	-3	-3
2007/12/07	12:59:00	0.000	3241	3264	1558	1570	-74.8	-74.6	15.7	15.9	-4	-3
2007/12/07	13:00:00	0.000	3241	3270	1549	1558	-74.7	-74.5	15.8	16.0	-4	-3
2007/12/07	13:01:00	0.000	3245	3274	1550	1562	-74.8	-74.6	15.7	16.0	-4	-3
2007/12/07	13:02:00	0.000	3255	3278	1558	1565	-74.9	-74.5	15.7	16.0	-4	-3
2007/12/07	13:03:00	0.000	3255	3269	1528	1567	-74.7	-74.5	15.7	16.0	-4	-3
2007/12/07	13:04:00	0.000	3263	3285	1525	1550	-74.7	-74.5	15.7	16.0	-4	-3
2007/12/07	13:05:00	0.000	3268	3288	1532	1556	-74.8	-74.5	15.7	15.9	-4	-3
2007/12/07	13:06:00	0.000	3268	3289	1524	1532	-74.8	-74.5	15.7	16.0	-4	-3
2007/12/07	13:07:00	0.000	3265	3288	1525	1538	-74.8	-74.5	15.7	15.9	-4	-3
2007/12/07	13:08:00	0.000	3266	3288	1538	1548	-74.8	-74.6	15.7	15.9	-4	-3
2007/12/07	13:09:00	0.000	3275	3288	1538	1544	-74.8	-74.5	15.7	15.9	-4	-3
2007/12/07	13:10:00	0.000	3271	3294	1525	1540	-74.8	-74.5	15.7	15.9	-4	-3
2007/12/07	13:11:00	0.000	3279	3301	1513	1525	-74.8	-74.5	15.7	15.9	-4	-3
2007/12/07	13:12:00	0.000	3270	3301	1514	1522	-74.9	-74.7	15.7	15.8	-3	-3
2007/12/07	13:13:00	0.000	3278	3294	1522	1532	-75.0	-74.7	15.6	15.8	-4	-3
2007/12/07	13:14:00	0.000	3274	3303	1532	1537	-74.9	-74.7	15.6	15.8	-3	-3
2007/12/07	13:15:00	0.000	3283	3305	1534	1538	-74.9	-74.7	15.6	15.9	-4	-2
2007/12/07	13:16:00	0.000	3282	3301	1533	1535	-75.0	-74.6	15.6	15.8	-4	-3
2007/12/07	13:17:00	0.000	3279	3296	1533	1539	-75.1	-74.7	15.5	15.9	-4	-3
2007/12/07	13:18:00	0.000	3259	3287	1527	1541	-75.5	-75.1	15.1	15.6	-4	-2
2007/12/07	13:19:00	0.000	3275	3295	1528	1542	-75.7	-75.2	14.8	15.5	-4	-3
2007/12/07	13:20:00	0.000	3289	3398	1492	1548	-75.6	-75.2	14.6	15.3	-4	-3
2007/12/07	13:21:00	0.000	3328	3409	1537	1564	-75.6	-75.1	14.5	15.1	-4	-3
2007/12/07	13:22:00	0.000	3379	3451	1550	1564	-75.5	-75.1	14.6	15.0	-4	-3
2007/12/07	13:23:00	0.000	3412	3438	1551	1566	-75.6	-75.2	14.5	14.9	-4	-3
2007/12/07	13:24:00	0.000	3402	3430	1527	1551	-75.5	-75.1	14.4	14.8	-4	-3
2007/12/07	13:25:00	0.000	3385	3414	1517	1527	-75.5	-75.1	14.4	14.8	-4	-3
2007/12/07	13:26:00	0.000	3400	3420	1524	1546	-75.6	-75.2	14.3	14.8	-4	-3
2007/12/07	13:27:00	0.000	3404	3427	1542	1546	-75.6	-75.2	14.4	14.8	-4	-3

2007/12/07	13:28:00	0.000	3395	3419	1534	1544	-75.5	-75.1	14.4	14.8	-4	-3
2007/12/07	13:29:00	0.000	3397	3414	1529	1534	-75.5	-75.1	14.3	14.7	-4	-3
2007/12/07	13:30:00	0.000	3400	3428	1527	1535	-75.5	-75.1	14.2	14.7	-4	-3
2007/12/07	13:31:00	0.000	3391	3423	1531	1535	-75.5	-75.1	14.2	14.6	-4	-3
2007/12/07	13:32:00	0.000	3391	3423	1519	1533	-75.4	-75.1	14.4	14.6	-4	-3
2007/12/07	13:33:00	0.000	3393	3421	1517	1529	-75.4	-75.1	14.4	14.6	-4	-3
2007/12/07	13:34:00	0.000	3411	3432	1529	1535	-75.4	-75.2	14.4	14.6	-4	-3
2007/12/07	13:35:00	0.000	3398	3429	1530	1535	-75.5	-75.2	14.4	14.6	-4	-3
2007/12/07	13:36:00	0.000	3400	3421	1531	1535	-75.5	-75.1	14.3	14.6	-4	-3
2007/12/07	13:37:00	0.000	3394	3423	1530	1533	-75.5	-75.1	14.1	14.6	-4	-3
2007/12/07	13:38:00	0.000	3388	3420	1530	1533	-75.5	-75.1	14.0	14.6	-4	-3
2007/12/07	13:39:00	0.000	3395	3409	1530	1533	-75.4	-75.2	14.4	14.6	-3	-3
2007/12/07	13:40:00	0.000	3385	3418	1526	1530	-75.4	-75.1	14.4	14.6	-3	-3
2007/12/07	13:41:00	0.000	3401	3423	1526	1530	-75.4	-75.1	14.3	14.6	-3	-3
2007/12/07	13:42:00	0.000	3407	3425	1522	1526	-75.3	-75.1	14.4	14.6	-3	-3
2007/12/07	13:43:00	0.000	3395	3414	1521	1523	-75.4	-75.2	14.4	14.6	-3	-3
2007/12/07	13:44:00	0.000	3395	3421	1523	1524	-75.4	-75.1	14.3	14.5	-3	-3
2007/12/07	13:45:00	0.000	3395	3416	1523	1544	-75.4	-75.1	14.4	14.6	-3	-3
2007/12/07	13:46:00	0.000	3395	3417	1544	1555	-75.3	-75.1	14.3	14.5	-3	-3
2007/12/07	13:47:00	0.000	3397	3416	1533	1550	-75.3	-75.1	14.3	14.5	-3	-3
2007/12/07	13:48:00	0.000	3402	3414	1527	1533	-75.4	-75.1	14.3	14.5	-3	-3
2007/12/07	13:49:00	0.000	3397	3416	1531	1532	-75.3	-75.1	14.2	14.5	-4	-3
2007/12/07	13:50:00	0.000	3386	3421	1524	1532	-75.4	-75.1	14.2	14.4	-4	-3
2007/12/07	13:51:00	0.000	3386	3421	1524	1532	-75.5	-75.2	14.2	14.5	-3	-3
2007/12/07	13:52:00	0.000	3405	3418	1532	1542	-75.3	-75.1	14.2	14.4	-4	-3
2007/12/07	13:53:00	0.000	3403	3418	1531	1541	-75.5	-75.1	14.2	14.5	-4	-3
2007/12/07	13:54:00	0.000	3400	3432	1526	1537	-75.5	-75.1	13.9	14.4	-4	-3
2007/12/07	13:55:00	0.000	3391	3409	1512	1526	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	13:56:00	0.000	3400	3412	1510	1512	-75.4	-75.1	14.1	14.3	-4	-3
2007/12/07	13:57:00	0.000	3386	3418	1511	1521	-75.4	-75.2	14.1	14.3	-4	-3
2007/12/07	13:58:00	0.000	3388	3410	1521	1534	-75.4	-75.2	14.1	14.3	-4	-3
2007/12/07	13:59:00	0.000	3392	3413	1531	1534	-75.4	-75.1	14.1	14.3	-3	-3
2007/12/07	14:00:00	0.000	3398	3420	1531	1549	-75.5	-75.2	14.0	14.3	-4	-3
2007/12/07	14:01:00	0.000	3391	3418	1548	1550	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:02:00	0.000	3391	3410	1547	1549	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:03:00	0.000	3392	3410	1539	1549	-75.5	-75.1	14.0	14.3	-4	-3
2007/12/07	14:04:00	0.000	3393	3418	1515	1539	-75.4	-75.0	13.9	14.3	-3	-3
2007/12/07	14:05:00	0.000	3388	3424	1512	1516	-75.4	-75.2	14.0	14.2	-4	-3
2007/12/07	14:06:00	0.000	3390	3409	1515	1519	-75.4	-75.2	14.0	14.2	-4	-3
2007/12/07	14:07:00	0.000	3397	3414	1517	1522	-75.5	-75.2	13.9	14.2	-4	-3
2007/12/07	14:08:00	0.000	3388	3430	1522	1530	-75.4	-75.1	14.0	14.2	-4	-3
2007/12/07	14:09:00	0.000	3388	3416	1530	1533	-75.4	-75.1	14.1	14.3	-4	-3
2007/12/07	14:10:00	0.000	3395	3419	1529	1532	-75.4	-75.1	14.0	14.2	-4	-3
2007/12/07	14:11:00	0.000	3390	3410	1532	1537	-75.4	-75.1	14.0	14.2	-4	-2
2007/12/07	14:12:00	0.000	3393	3410	1536	1537	-75.5	-75.1	14.0	14.3	-4	-3
2007/12/07	14:13:00	0.000	3401	3417	1536	1539	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:14:00	0.000	3384	3409	1539	1542	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:15:00	0.000	3385	3416	1535	1539	-75.4	-75.2	14.1	14.3	-3	-3
2007/12/07	14:16:00	0.000	3376	3410	1534	1537	-75.5	-75.1	13.9	14.3	-4	-3
2007/12/07	14:17:00	0.000	3382	3407	1532	1536	-75.4	-75.1	13.8	14.3	-4	-3
2007/12/07	14:18:00	0.000	3387	3414	1530	1532	-75.5	-75.2	14.1	14.3	-3	-2
2007/12/07	14:19:00	0.000	3386	3414	1529	1532	-75.5	-75.1	13.9	14.3	-3	-3
2007/12/07	14:20:00	0.000	3391	3414	1526	1529	-75.4	-75.1	14.1	14.3	-3	-3
2007/12/07	14:21:00	0.000	3388	3408	1522	1526	-75.5	-75.2	14.0	14.3	-3	-3
2007/12/07	14:22:00	0.000	3388	3406	1521	1523	-75.5	-75.1	13.9	14.2	-4	-3
2007/12/07	14:23:00	0.000	3380	3410	1521	1523	-75.4	-75.1	14.1	14.3	-4	-3
2007/12/07	14:24:00	0.000	3388	3416	1523	1529	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:25:00	0.000	3383	3406	1529	1533	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	14:26:00	0.000	3386	3417	1531	1535	-75.5	-75.1	14.0	14.2	-4	-2
2007/12/07	14:27:00	0.000	3385	3401	1531	1534	-75.4	-75.1	14.0	14.2	-4	-2
2007/12/07	14:28:00	0.000	3388	3414	1534	1537	-75.4	-75.1	14.0	14.3	-4	-2
2007/12/07	14:29:00	0.000	3386	3409	1533	1536	-75.4	-75.0	14.0	14.3	-4	-2
2007/12/07	14:30:00	0.000	3396	3434	1533	1543	-75.1	-74.3	14.1	14.8	-4	-2
2007/12/07	14:31:00	0.000	3416	3452	1539	1543	-74.8	-74.4	14.3	14.8	-4	-2
2007/12/07	14:32:00	0.000	3287	3417	1534	1539	-75.1	-74.7	14.3	14.7	-4	-2
2007/12/07	14:33:00	0.000	3273	3298	1500	1581	-75.1	-74.8	14.4	14.7	-4	-2
2007/12/07	14:34:00	0.000	3287	3347	1449	1502	-75.1	-74.8	14.4	14.7	-4	-3
2007/12/07	14:35:00	0.000	3334	3353	1502	1525	-75.1	-74.8	14.4	14.6	-4	-3
2007/12/07	14:36:00	0.000	3330	3365	1525	1530	-75.2	-74.8	14.4	14.6	-4	-3
2007/12/07	14:37:00	0.000	3333	3354	1518	1528	-75.0	-74.8	14.5	14.6	-4	-3

2007/12/07	14:38:00	0.000	3331	3351	1518	1525	-75.1	-74.8	14.5	14.6	-3	-3
2007/12/07	14:39:00	0.000	3337	3351	1525	1528	-75.1	-74.8	14.4	14.7	-4	-3
2007/12/07	14:40:00	0.000	3334	3363	1527	1534	-75.2	-74.9	14.5	14.7	-3	-3
2007/12/07	14:41:00	0.000	3344	3358	1534	1536	-75.2	-74.9	14.5	14.7	-3	-3
2007/12/07	14:42:00	0.000	3343	3366	1527	1535	-75.3	-74.9	14.5	14.7	-3	-3
2007/12/07	14:43:00	0.000	3342	3358	1526	1527	-75.2	-74.9	14.5	14.7	-3	-3
2007/12/07	14:44:00	0.000	3342	3364	1526	1532	-75.2	-75.0	14.5	14.7	-3	-3
2007/12/07	14:45:00	0.000	3346	3367	1532	1540	-75.3	-75.0	14.5	14.7	-3	-3
2007/12/07	14:46:00	0.000	3341	3366	1538	1540	-75.2	-75.0	14.5	14.8	-3	-3
2007/12/07	14:47:00	0.000	3337	3359	1539	1546	-75.3	-75.1	14.5	14.8	-3	-3
2007/12/07	14:48:00	0.000	3342	3366	1533	1546	-75.3	-75.1	14.5	14.8	-4	-3
2007/12/07	14:49:00	0.000	3345	3369	1531	1535	-75.3	-75.1	14.6	14.8	-4	-3
2007/12/07	14:50:00	0.000	3337	3363	1523	1534	-75.4	-75.1	14.5	14.8	-3	-3
2007/12/07	14:51:00	0.000	3346	3369	1516	1523	-75.4	-75.1	14.6	14.8	-3	-3
2007/12/07	14:52:00	0.000	3346	3369	1509	1516	-75.4	-75.2	14.6	14.8	-4	-3
2007/12/07	14:53:00	0.000	3344	3366	1508	1523	-75.4	-75.2	14.5	14.8	-3	-3
2007/12/07	14:54:00	0.000	3346	3376	1523	1541	-75.4	-75.3	14.5	14.8	-4	-3
2007/12/07	14:55:00	0.000	3346	3371	1541	1545	-75.5	-75.1	14.3	14.8	-4	-3
2007/12/07	14:56:00	0.000	3347	3368	1534	1542	-75.4	-75.2	14.6	14.8	-4	-3
2007/12/07	14:57:00	0.000	3353	3374	1531	1534	-75.5	-75.0	14.5	14.8	-4	-3
2007/12/07	14:58:00	0.000	3341	3361	1532	1544	-75.4	-75.2	14.6	14.8	-4	-2
2007/12/07	14:59:00	0.000	3342	3371	1538	1543	-75.4	-75.1	14.6	14.8	-4	-2
2007/12/07	15:00:00	0.000	3342	3372	1527	1538	-75.5	-75.1	14.6	14.8	-4	-2
2007/12/07	15:01:00	0.000	3342	3360	1519	1527	-75.4	-75.0	14.4	14.8	-4	-3
2007/12/07	15:02:00	0.000	3342	3367	1519	1525	-75.5	-75.1	14.3	14.8	-4	-2
2007/12/07	15:03:00	0.000	3344	3367	1525	1535	-75.4	-75.1	14.6	14.8	-4	-3
2007/12/07	15:04:00	0.000	3328	3365	1528	1533	-75.4	-75.1	14.5	14.8	-4	-2
2007/12/07	15:05:00	0.000	3336	3364	1533	1545	-75.3	-75.1	14.5	14.8	-4	-3
2007/12/07	15:06:00	0.000	3348	3365	1540	1546	-75.5	-75.1	14.3	14.8	-4	-3
2007/12/07	15:07:00	0.000	3342	3364	1531	1540	-75.3	-75.0	14.6	14.8	-3	-3
2007/12/07	15:08:00	0.000	3334	3361	1517	1531	-75.3	-75.1	14.6	14.8	-4	-3
2007/12/07	15:09:00	0.000	3346	3363	1513	1517	-75.4	-75.1	14.5	14.8	-4	-3
2007/12/07	15:10:00	0.000	3334	3360	1513	1526	-75.4	-75.1	14.5	14.8	-4	-3
2007/12/07	15:11:00	0.000	3343	3370	1526	1538	-75.4	-75.1	14.6	14.8	-5	-2
2007/12/07	15:12:00	0.000	3344	3373	1538	1540	-75.3	-75.0	14.7	14.9	-4	-2
2007/12/07	15:13:00	0.000	3342	3367	1530	1538	-75.2	-74.6	14.7	15.0	-5	-2
2007/12/07	15:14:00	0.000	3352	3371	1529	1533	-74.8	-74.3	14.8	15.4	-5	-2
2007/12/07	15:15:00	0.000	3321	3374	1515	1531	-75.1	-74.4	14.9	15.4	-5	-2
2007/12/07	15:16:00	0.000	3253	3321	1511	1559	-75.5	-75.0	14.7	15.2	-6	-1
2007/12/07	15:17:00	0.000	3253	3278	1510	1537	-75.7	-75.0	14.4	15.2	-5	-2
2007/12/07	15:18:00	0.000	3260	3310	1537	1553	-75.7	-75.0	14.2	14.9	-6	-1
2007/12/07	15:19:00	0.000	3289	3346	1485	1591	-75.7	-75.1	14.0	14.6	-6	-2
2007/12/07	15:20:00	0.000	3304	3358	1509	1589	-75.6	-75.1	13.9	14.6	-5	-1
2007/12/07	15:21:00	0.000	3346	3369	1527	1554	-75.5	-75.1	14.1	14.5	-5	-2
2007/12/07	15:22:00	0.000	3355	3393	1525	1547	-75.5	-75.1	14.1	14.5	-5	-2
2007/12/07	15:23:00	0.000	3362	3391	1547	1558	-75.5	-75.1	14.1	14.4	-4	-2
2007/12/07	15:24:00	0.000	3365	3387	1548	1558	-75.4	-75.2	14.1	14.4	-5	-2
2007/12/07	15:25:00	0.000	3375	3399	1547	1558	-75.5	-75.1	13.9	14.3	-4	-2
2007/12/07	15:26:00	0.000	3369	3395	1527	1547	-75.4	-75.1	13.8	14.3	-4	-3
2007/12/07	15:27:00	0.000	3376	3395	1516	1527	-75.4	-75.1	14.1	14.3	-4	-3
2007/12/07	15:28:00	0.000	3376	3396	1513	1523	-75.4	-75.2	14.1	14.3	-4	-3
2007/12/07	15:29:00	0.000	3372	3397	1523	1529	-75.5	-75.2	14.1	14.3	-4	-3
2007/12/07	15:30:00	0.000	3378	3391	1527	1530	-75.4	-75.1	13.8	14.3	-4	-3
2007/12/07	15:31:00	0.000	3371	3399	1529	1530	-75.4	-75.2	14.0	14.3	-4	-2
2007/12/07	15:32:00	0.000	3378	3389	1526	1530	-75.4	-75.1	14.1	14.3	-4	-2
2007/12/07	15:33:00	0.000	3365	3386	1525	1536	-75.5	-75.0	13.9	14.3	-4	-2
2007/12/07	15:34:00	0.000	3377	3392	1536	1540	-75.4	-75.1	14.1	14.3	-4	-2
2007/12/07	15:35:00	0.000	3372	3398	1532	1540	-75.5	-75.1	13.8	14.3	-4	-3
2007/12/07	15:36:00	0.000	3370	3387	1531	1534	-75.4	-75.0	13.7	14.2	-4	-3
2007/12/07	15:37:00	0.000	3378	3389	1523	1532	-75.3	-75.1	14.0	14.2	-4	-3
2007/12/07	15:38:00	0.000	3373	3395	1523	1527	-75.3	-75.1	14.0	14.2	-4	-3
2007/12/07	15:39:00	0.000	3358	3392	1525	1528	-75.4	-75.1	14.0	14.2	-5	-3
2007/12/07	15:40:00	0.000	3376	3393	1526	1528	-75.4	-75.1	14.0	14.2	-5	-2
2007/12/07	15:41:00	0.000	3370	3386	1521	1527	-75.4	-75.0	14.0	14.2	-5	-2
2007/12/07	15:42:00	0.000	3367	3396	1516	1521	-75.4	-75.1	14.0	14.3	-5	-2
2007/12/07	15:43:00	0.000	3361	3377	1517	1527	-75.5	-75.0	13.8	14.3	-5	-1
2007/12/07	15:44:00	0.000	3369	3389	1527	1531	-75.3	-75.1	14.0	14.2	-5	-1
2007/12/07	15:45:00	0.000	3371	3385	1531	1539	-75.4	-75.1	14.0	14.2	-5	-1
2007/12/07	15:46:00	0.000	3367	3390	1535	1539	-75.5	-75.1	14.0	14.3	-6	-1
2007/12/07	15:47:00	0.000	3372	3391	1536	1539	-75.4	-75.0	13.9	14.3	-6	-1

2007/12/07	15:48:00	0.000	3369	3383	1539	1541	-75.4	-75.1	13.9	14.4	-6	-1
2007/12/07	15:49:00	0.000	3364	3387	1539	1540	-75.3	-75.1	13.9	14.3	-6	-1
2007/12/07	15:50:00	0.000	3358	3373	1534	1539	-75.4	-75.1	13.9	14.3	-6	0
2007/12/07	15:51:00	0.000	3356	3376	1530	1537	-75.4	-75.1	13.9	14.4	-6	0
2007/12/07	15:52:00	0.000	3355	3388	1520	1530	-75.5	-75.1	13.9	14.4	-6	0
2007/12/07	15:53:00	0.000	3357	3388	1519	1525	-75.5	-75.0	13.6	14.4	-6	0
2007/12/07	15:54:00	0.000	3362	3383	1525	1528	-75.5	-75.1	13.9	14.4	-6	0
2007/12/07	15:55:00	0.000	3364	3393	1528	1537	-75.4	-75.1	14.0	14.4	-6	0
2007/12/07	15:56:00	0.000	3355	3388	1534	1537	-75.4	-75.1	14.0	14.4	-6	0
2007/12/07	15:57:00	0.000	3369	3389	1528	1534	-75.4	-75.1	14.0	14.4	-6	0
2007/12/07	15:58:00	0.000	3364	3388	1527	1528	-75.4	-75.1	14.1	14.5	-6	-1
2007/12/07	15:59:00	0.000	3360	3383	1527	1533	-75.5	-75.2	14.1	14.6	-6	-1
2007/12/07	16:00:00	0.000	3360	3391	1530	1535	-75.4	-75.1	14.1	14.6	-6	-1
2007/12/07	16:01:00	0.000	3368	3384	1535	1540	-75.5	-75.1	14.1	14.6	-6	-1
2007/12/07	16:02:00	0.000	3358	3381	1539	1541	-75.5	-75.1	14.1	14.6	-6	-1
2007/12/07	16:03:00	0.000	3360	3381	1530	1540	-75.4	-75.1	14.2	14.5	-6	-1
2007/12/07	16:04:00	0.000	3368	3393	1530	1532	-75.4	-75.1	14.1	14.5	-6	0
2007/12/07	16:05:00	0.000	3368	3387	1531	1535	-75.4	-75.1	14.1	14.5	-6	0
2007/12/07	16:06:00	0.000	3371	3388	1524	1533	-75.4	-75.1	14.0	14.5	-6	0
2007/12/07	16:07:00	0.000	3367	3384	1523	1526	-75.4	-75.1	14.0	14.4	-6	0
2007/12/07	16:08:00	0.000	3365	3389	1524	1528	-75.4	-75.0	14.0	14.5	-6	0
2007/12/07	16:09:00	0.000	3366	3400	1525	1527	-75.5	-75.0	14.0	14.4	-6	0
2007/12/07	16:10:00	0.000	3362	3383	1523	1527	-75.4	-75.1	14.0	14.4	-6	-1
2007/12/07	16:11:00	0.000	3355	3373	1523	1530	-75.4	-75.0	14.0	14.4	-5	-1
2007/12/07	16:12:00	0.000	3364	3385	1530	1534	-75.4	-75.1	14.1	14.3	-5	-1
2007/12/07	16:13:00	0.000	3349	3382	1531	1537	-75.3	-75.1	14.1	14.4	-5	-2
2007/12/07	16:14:00	0.000	3349	3386	1537	1542	-75.3	-75.0	14.1	14.3	-4	-2
2007/12/07	16:15:00	0.000	3374	3391	1536	1540	-75.4	-75.1	14.0	14.2	-4	-3
2007/12/07	16:16:00	0.000	3362	3387	1535	1537	-75.3	-75.1	14.0	14.3	-4	-3
2007/12/07	16:17:00	0.000	3372	3387	1528	1535	-75.3	-75.1	14.0	14.3	-4	-2
2007/12/07	16:18:00	0.000	3369	3390	1530	1533	-75.4	-75.1	13.9	14.2	-4	-3
2007/12/07	16:19:00	0.000	3364	3381	1527	1530	-75.4	-75.1	13.8	14.2	-4	-2
2007/12/07	16:20:00	0.000	3356	3386	1526	1529	-75.5	-75.1	13.9	14.2	-4	-2
2007/12/07	16:21:00	0.000	3351	3386	1524	1529	-75.4	-75.1	13.9	14.3	-4	-2
2007/12/07	16:22:00	0.000	3364	3385	1517	1524	-75.5	-75.2	14.0	14.3	-4	-2
2007/12/07	16:23:00	0.000	3351	3378	1521	1537	-75.4	-75.2	14.0	14.2	-4	-3
2007/12/07	16:24:00	0.000	3360	3378	1536	1550	-75.5	-75.2	14.0	14.2	-4	-3
2007/12/07	16:25:00	0.000	3351	3377	1547	1552	-75.4	-75.2	14.0	14.2	-3	-3
2007/12/07	16:26:00	0.000	3351	3377	1526	1547	-75.4	-75.0	13.7	14.2	-4	-2
2007/12/07	16:27:00	0.000	3355	3381	1518	1526	-75.4	-75.1	14.0	14.2	-4	-2
2007/12/07	16:28:00	0.000	3348	3377	1522	1529	-75.5	-75.1	14.0	14.3	-5	-1
2007/12/07	16:29:00	0.000	3358	3377	1525	1529	-75.4	-75.1	14.0	14.3	-5	-2
2007/12/07	16:30:00	0.000	3353	3377	1525	1532	-75.4	-75.1	14.0	14.3	-5	-2
2007/12/07	16:31:00	0.000	3359	3385	1523	1526	-75.4	-75.0	14.0	14.2	-6	-2
2007/12/07	16:32:00	0.000	3355	3386	1525	1536	-75.4	-75.0	13.9	14.4	-6	-1
2007/12/07	16:33:00	0.000	3359	3383	1528	1536	-75.4	-75.0	13.9	14.3	-5	-1
2007/12/07	16:34:00	0.000	3359	3385	1524	1528	-75.3	-75.0	13.9	14.2	-5	-2
2007/12/07	16:35:00	0.000	3362	3385	1528	1533	-75.4	-75.0	13.9	14.2	-5	-2
2007/12/07	16:36:00	0.000	3351	3378	1525	1531	-75.4	-75.0	14.0	14.2	-4	-3
2007/12/07	16:37:00	0.000	3351	3389	1528	1539	-75.4	-75.1	13.9	14.2	-4	-3
2007/12/07	16:38:00	0.000	3347	3374	1532	1539	-75.3	-75.2	13.9	14.2	-3	-3
2007/12/07	16:39:00	0.000	3369	3386	1527	1532	-75.3	-75.0	14.0	14.2	-4	-2
2007/12/07	16:40:00	0.000	3369	3393	1521	1527	-75.3	-75.1	13.9	14.2	-4	-2
2007/12/07	16:41:00	0.000	3366	3383	1522	1528	-75.4	-75.1	13.9	14.1	-4	-2
2007/12/07	16:42:00	0.000	3364	3380	1527	1542	-75.4	-75.1	13.9	14.2	-4	-2
2007/12/07	16:43:00	0.000	3357	3371	1537	1542	-75.4	-75.1	13.9	14.2	-4	-2
2007/12/07	16:44:00	0.000	3366	3379	1535	1537	-75.5	-75.0	13.8	14.1	-4	-3
2007/12/07	16:45:00	0.000	3355	3383	1534	1539	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	16:46:00	0.000	3358	3383	1525	1534	-75.5	-75.1	13.9	14.1	-4	-2
2007/12/07	16:47:00	0.000	3358	3389	1517	1525	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	16:48:00	0.000	3348	3384	1515	1518	-75.6	-75.1	13.7	14.1	-3	-3
2007/12/07	16:49:00	0.000	3355	3371	1514	1521	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	16:50:00	0.000	3355	3380	1521	1534	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	16:51:00	0.000	3344	3367	1534	1546	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	16:52:00	0.000	3360	3377	1546	1552	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	16:53:00	0.000	3360	3374	1539	1548	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	16:54:00	0.000	3366	3391	1535	1539	-75.4	-75.1	13.9	14.2	-4	-3
2007/12/07	16:55:00	0.000	3364	3385	1533	1537	-75.5	-75.1	13.7	14.1	-4	-3
2007/12/07	16:56:00	0.000	3357	3374	1526	1533	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	16:57:00	0.000	3366	3378	1521	1526	-75.4	-75.1	13.9	14.1	-4	-3

2007/12/07	16:58:00	0.000	3362	3377	1523	1531	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	16:59:00	0.000	3358	3381	1520	1532	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:00:00	0.000	3355	3381	1517	1524	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:01:00	0.000	3368	3391	1524	1530	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:02:00	0.000	3352	3378	1529	1530	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:03:00	0.000	3355	3383	1530	1537	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:04:00	0.000	3360	3379	1535	1538	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:05:00	0.000	3360	3382	1527	1535	-75.5	-75.1	13.9	14.1	-3	-3
2007/12/07	17:06:00	0.000	3355	3377	1531	1538	-75.4	-75.1	13.7	14.1	-3	-3
2007/12/07	17:07:00	0.000	3346	3380	1527	1536	-75.4	-75.1	13.9	14.2	-4	-3
2007/12/07	17:08:00	0.000	3347	3377	1531	1536	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:09:00	0.000	3353	3364	1522	1538	-75.3	-75.1	13.9	14.2	-3	-3
2007/12/07	17:10:00	0.000	3351	3374	1521	1524	-75.5	-75.2	13.9	14.1	-4	-3
2007/12/07	17:11:00	0.000	3351	3374	1517	1522	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:12:00	0.000	3356	3376	1522	1526	-75.4	-75.2	13.9	14.1	-4	-3
2007/12/07	17:13:00	0.000	3349	3368	1523	1529	-75.5	-75.1	13.9	14.1	-3	-3
2007/12/07	17:14:00	0.000	3354	3382	1529	1533	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:15:00	0.000	3355	3382	1523	1530	-75.4	-75.2	13.9	14.1	-4	-3
2007/12/07	17:16:00	0.000	3356	3372	1525	1528	-75.5	-75.2	13.9	14.1	-4	-3
2007/12/07	17:17:00	0.000	3355	3378	1525	1533	-75.4	-75.2	14.0	14.2	-4	-3
2007/12/07	17:18:00	0.000	3354	3380	1528	1533	-75.4	-75.2	13.9	14.1	-4	-3
2007/12/07	17:19:00	0.000	3356	3381	1525	1530	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:20:00	0.000	3349	3370	1530	1535	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:21:00	0.000	3356	3370	1535	1538	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:22:00	0.000	3360	3375	1538	1548	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:23:00	0.000	3356	3376	1539	1548	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:24:00	0.000	3360	3381	1525	1539	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:25:00	0.000	3360	3381	1525	1528	-75.5	-75.2	13.9	14.1	-3	-3
2007/12/07	17:26:00	0.000	3340	3370	1523	1525	-75.5	-75.0	13.6	14.1	-3	-3
2007/12/07	17:27:00	0.000	3351	3367	1518	1524	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:28:00	0.000	3353	3376	1513	1519	-75.4	-75.1	13.8	14.1	-3	-3
2007/12/07	17:29:00	0.000	3340	3369	1519	1541	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:30:00	0.000	3353	3373	1541	1551	-75.4	-75.1	13.7	14.1	-4	-3
2007/12/07	17:31:00	0.000	3354	3381	1530	1547	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:32:00	0.000	3346	3370	1523	1530	-75.5	-75.1	13.6	14.1	-3	-3
2007/12/07	17:33:00	0.000	3346	3371	1521	1524	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:34:00	0.000	3351	3374	1523	1533	-75.4	-75.1	13.9	14.1	-4	-3
2007/12/07	17:35:00	0.000	3344	3365	1526	1531	-75.5	-75.1	13.8	14.1	-3	-3
2007/12/07	17:36:00	0.000	3351	3372	1527	1540	-75.4	-75.0	13.6	14.1	-3	-3
2007/12/07	17:37:00	0.000	3351	3378	1540	1548	-75.5	-75.2	13.9	14.0	-3	-3
2007/12/07	17:38:00	0.000	3344	3365	1539	1547	-75.4	-75.1	13.9	14.1	-3	-3
2007/12/07	17:39:00	0.000	3355	3370	1537	1539	-75.4	-75.2	13.8	14.1	-3	-3
2007/12/07	17:40:00	0.000	3342	3362	1535	1539	-75.4	-75.2	13.9	14.1	-3	-3
2007/12/07	17:41:00	0.000	3349	3364	1526	1535	-75.4	-75.1	13.9	14.0	-4	-3
2007/12/07	17:42:00	0.000	3351	3379	1523	1527	-75.4	-75.1	13.8	14.1	-4	-3
2007/12/07	17:43:00	0.000	3350	3379	1523	1532	-75.5	-75.1	13.7	14.1	-3	-3
2007/12/07	17:44:00	0.000	3344	3369	1529	1534	-75.4	-75.2	13.9	14.0	-4	-3
2007/12/07	17:45:00	0.000	3349	3371	1525	1529	-75.4	-75.2	13.9	14.1	-4	-3
2007/12/07	17:46:00	0.000	3356	3376	1521	1528	-75.4	-75.1	13.7	14.1	-4	-3
2007/12/07	17:47:00	0.000	3351	3367	1520	1522	-75.4	-75.1	13.8	14.0	-4	-3
2007/12/07	17:48:00	0.000	3344	3367	1519	1531	-75.4	-75.1	13.8	14.1	-4	-3
2007/12/07	17:49:00	0.000	3342	3378	1531	1535	-75.4	-75.2	13.8	14.0	-4	-3
2007/12/07	17:50:00	0.000	3337	3374	1531	1536	-75.4	-75.1	13.7	14.0	-4	-3
2007/12/07	17:51:00	0.000	3342	3372	1526	1536	-75.4	-75.2	13.8	14.0	-4	-3
2007/12/07	17:52:00	0.000	3342	3365	1527	1531	-75.5	-75.1	13.6	14.0	-4	-3
2007/12/07	17:53:00	0.000	3325	3357	1525	1531	-75.5	-75.1	13.6	14.0	-4	-3
2007/12/07	17:54:00	0.000	3333	3356	1525	1537	-75.5	-75.2	13.8	14.0	-4	-3
2007/12/07	17:55:00	0.000	3337	3351	1537	1546	-75.5	-75.1	13.5	14.0	-4	-3
2007/12/07	17:56:00	0.000	3335	3357	1527	1545	-75.4	-75.2	13.8	14.0	-4	-3
2007/12/07	17:57:00	0.000	3340	3362	1518	1527	-75.5	-75.2	13.8	14.0	-4	-3
2007/12/07	17:58:00	0.000	3335	3361	1521	1526	-75.5	-75.1	13.7	14.0	-4	-3
2007/12/07	17:59:00	0.000	3342	3360	1525	1530	-75.4	-75.1	13.8	14.1	-4	-3
2007/12/07	18:00:00	0.000	3337	3358	1530	1533	-75.5	-75.1	13.6	14.0	-4	-3
2007/12/07	18:01:00	0.000	3340	3360	1531	1533	-75.4	-75.1	13.6	14.0	-4	-3
2007/12/07	18:02:00	0.000	3337	3365	1524	1532	-75.4	-75.1	13.7	13.9	-4	-3
2007/12/07	18:03:00	0.000	3325	3362	1524	1526	-75.4	-75.1	13.7	14.0	-4	-3
2007/12/07	18:04:00	0.000	3326	3360	1521	1530	-75.6	-75.1	13.7	14.0	-4	-3
2007/12/07	18:05:00	0.000	3335	3356	1530	1535	-75.4	-75.1	13.7	13.9	-4	-3
2007/12/07	18:06:00	0.000	3319	3347	1533	1535	-75.4	-75.1	13.7	13.9	-4	-3
2007/12/07	18:07:00	0.000	3328	3358	1531	1536	-75.4	-75.1	13.7	13.9	-4	-3

2007/12/07	18:08:00	0.000	3333	3362	1536	1538	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:09:00	0.000	3337	3362	1533	1536	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:10:00	0.000	3331	3362	1536	1538	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:11:00	0.000	3331	3356	1529	1537	-75.4	-75.1	13.7	13.9	-4	-3
2007/12/07	18:12:00	0.000	3336	3356	1529	1534	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:13:00	0.000	3342	3359	1526	1534	-75.4	-75.2	13.6	13.9	-4	-3
2007/12/07	18:14:00	0.000	3335	3356	1526	1533	-75.4	-75.1	13.6	13.9	-3	-3
2007/12/07	18:15:00	0.000	3333	3372	1521	1533	-75.3	-75.1	13.7	13.9	-4	-3
2007/12/07	18:16:00	0.000	3340	3360	1523	1532	-75.3	-75.1	13.7	13.9	-4	-3
2007/12/07	18:17:00	0.000	3332	3359	1532	1537	-75.4	-75.1	13.7	13.9	-3	-3
2007/12/07	18:18:00	0.000	3333	3356	1525	1537	-75.4	-75.0	13.6	13.9	-3	-3
2007/12/07	18:19:00	0.000	3342	3367	1523	1526	-75.4	-75.0	13.6	13.9	-3	-3
2007/12/07	18:20:00	0.000	3334	3360	1523	1524	-75.3	-75.1	13.6	13.9	-3	-3
2007/12/07	18:21:00	0.000	3342	3360	1523	1535	-75.4	-75.1	13.7	13.9	-3	-3
2007/12/07	18:22:00	0.000	3334	3353	1533	1537	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:23:00	0.000	3333	3360	1527	1533	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:24:00	0.000	3336	3372	1525	1528	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:25:00	0.000	3336	3362	1525	1530	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:26:00	0.000	3337	3354	1529	1530	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:27:00	0.000	3334	3356	1528	1532	-75.4	-75.2	13.7	13.9	-4	-3
2007/12/07	18:28:00	0.000	3344	3370	1530	1533	-75.4	-75.1	13.7	13.9	-4	-3
2007/12/07	18:29:00	0.000	3335	3356	1531	1535	-75.5	-75.1	13.6	13.9	-4	-3
2007/12/07	18:30:00	0.000	3328	3356	1532	1536	-75.5	-75.0	13.5	13.9	-4	-3
2007/12/07	18:31:00	0.000	3336	3370	1532	1536	-75.4	-75.1	13.6	13.8	-3	-3
2007/12/07	18:32:00	0.000	3340	3364	1532	1536	-75.4	-75.1	13.6	13.8	-3	-3
2007/12/07	18:33:00	0.000	3342	3360	1533	1537	-75.3	-75.0	13.6	13.8	-4	-3
2007/12/07	18:34:00	0.000	3337	3373	1531	1535	-75.4	-75.1	13.6	13.8	-4	-3
2007/12/07	18:35:00	0.000	3346	3356	1530	1538	-75.4	-75.1	13.6	13.9	-3	-3
2007/12/07	18:36:00	0.000	3337	3354	1523	1539	-75.4	-75.1	13.6	13.8	-3	-3
2007/12/07	18:37:00	0.000	3335	3351	1519	1525	-75.4	-75.0	13.3	13.9	-4	-3
2007/12/07	18:38:00	0.000	3334	3363	1525	1542	-75.4	-75.1	13.6	13.8	-4	-3
2007/12/07	18:39:00	0.000	3346	3371	1540	1543	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:40:00	0.000	3351	3374	1539	1542	-75.5	-75.1	13.5	13.9	-3	-3
2007/12/07	18:41:00	0.000	3344	3359	1523	1539	-75.4	-75.1	13.5	13.8	-4	-3
2007/12/07	18:42:00	0.000	3341	3363	1513	1523	-75.4	-75.1	13.4	13.8	-4	-3
2007/12/07	18:43:00	0.000	3336	3363	1515	1537	-75.4	-75.1	13.5	13.9	-4	-3
2007/12/07	18:44:00	0.000	3342	3363	1537	1542	-75.4	-75.1	13.6	13.8	-4	-3
2007/12/07	18:45:00	0.000	3346	3360	1533	1541	-75.4	-75.1	13.6	13.9	-4	-3
2007/12/07	18:46:00	0.000	3337	3356	1529	1533	-75.4	-75.1	13.6	13.8	-4	-3
2007/12/07	18:47:00	0.000	3338	3361	1529	1531	-75.4	-75.1	13.5	13.8	-4	-3
2007/12/07	18:48:00	0.000	3342	3362	1531	1533	-75.5	-75.0	13.6	13.8	-4	-3
2007/12/07	18:49:00	0.000	3337	3360	1526	1533	-75.4	-75.0	13.5	13.8	-4	-3
2007/12/07	18:50:00	0.000	3340	3367	1525	1532	-75.4	-75.1	13.6	13.8	-4	-3
2007/12/07	18:51:00	0.000	3344	3374	1529	1533	-75.3	-75.1	13.5	13.7	-4	-3
2007/12/07	18:52:00	0.000	3337	3362	1527	1531	-75.4	-75.2	13.6	13.8	-4	-3
2007/12/07	18:53:00	0.000	3344	3356	1523	1528	-75.4	-75.1	13.5	13.7	-4	-3
2007/12/07	18:54:00	0.000	3339	3365	1523	1525	-75.3	-75.1	13.5	13.8	-3	-3
2007/12/07	18:55:00	0.000	3342	3360	1523	1528	-75.4	-75.1	13.5	13.7	-3	-3
2007/12/07	18:56:00	0.000	3338	3359	1519	1524	-75.4	-75.1	13.5	13.8	-3	-3
2007/12/07	18:57:00	0.000	3344	3362	1524	1536	-75.4	-75.2	13.6	13.7	-3	-3
2007/12/07	18:58:00	0.000	3342	3360	1531	1536	-75.4	-75.2	13.3	13.7	-4	-3
2007/12/07	18:59:00	0.000	3335	3356	1532	1536	-75.5	-75.2	13.5	13.7	-4	-3
2007/12/07	19:00:00	0.000	3345	3358	1534	1541	-75.5	-75.0	13.3	13.6	-4	-3
2007/12/07	19:01:00	0.000	3328	3354	1536	1539	-75.4	-75.1	13.4	13.7	-4	-3
2007/12/07	19:02:00	0.000	3337	3360	1535	1540	-75.3	-75.1	13.5	13.7	-4	-3
2007/12/07	19:03:00	0.000	3331	3347	1521	1535	-75.3	-75.1	13.4	13.6	-4	-3
2007/12/07	19:04:00	0.000	3325	3359	1521	1529	-75.4	-75.1	13.4	13.6	-4	-3
2007/12/07	19:05:00	0.000	3342	3349	1529	1539	-75.5	-75.1	13.4	13.6	-4	-3
2007/12/07	19:06:00	0.000	3338	3362	1538	1540	-75.3	-75.1	13.4	13.6	-3	-3
2007/12/07	19:07:00	0.000	3335	3365	1537	1538	-75.3	-75.1	13.3	13.6	-4	-3
2007/12/07	19:08:00	0.000	3349	3370	1529	1539	-75.4	-75.1	13.4	13.6	-4	-3
2007/12/07	19:09:00	0.000	3339	3366	1525	1530	-75.4	-75.1	13.4	13.7	-3	-3
2007/12/07	19:10:00	0.000	3340	3363	1519	1526	-75.4	-75.2	13.5	13.7	-3	-3
2007/12/07	19:11:00	0.000	3335	3356	1519	1525	-75.4	-75.2	13.5	13.7	-3	-3
2007/12/07	19:12:00	0.000	3333	3356	1525	1526	-75.5	-75.2	13.5	13.7	-3	-3
2007/12/07	19:13:00	0.000	3337	3356	1525	1526	-75.4	-75.2	13.5	13.7	-3	-3
2007/12/07	19:14:00	0.000	3337	3355	1525	1530	-75.4	-75.1	13.4	13.7	-3	-3
2007/12/07	19:15:00	0.000	3335	3354	1521	1529	-75.4	-75.1	13.5	13.7	-3	-3
2007/12/07	19:16:00	0.000	3336	3362	1521	1525	-75.4	-75.2	13.4	13.6	-3	-3
2007/12/07	19:17:00	0.000	3335	3367	1521	1525	-75.5	-75.1	13.4	13.6	-3	-3

2007/12/07	19:18:00	0.000	3335	3364	1523	1540	-75.4	-75.2	13.5	13.7	-3	-3
2007/12/07	19:19:00	0.000	3335	3354	1539	1547	-75.4	-75.0	13.3	13.6	-4	-3
2007/12/07	19:20:00	0.000	3331	3355	1542	1546	-75.5	-75.1	13.2	13.8	-3	-3
2007/12/07	19:21:00	0.000	3333	3354	1536	1548	-75.5	-75.2	13.5	13.7	-4	-3
2007/12/07	19:22:00	0.000	3331	3356	1519	1536	-75.4	-75.2	13.5	13.8	-3	-3
2007/12/07	19:23:00	0.000	3340	3354	1513	1519	-75.5	-75.2	13.5	13.7	-4	-3
2007/12/07	19:24:00	0.000	3323	3351	1513	1521	-75.5	-75.1	13.3	13.7	-4	-3
2007/12/07	19:25:00	0.000	3331	3351	1521	1582	-75.5	-75.2	13.3	13.7	-4	-3
2007/12/07	19:26:00	0.000	3333	3349	1565	1582	-75.5	-75.2	13.5	13.8	-4	-3
2007/12/07	19:27:00	0.000	3328	3350	1568	1583	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:28:00	0.000	3324	3353	1583	1588	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:29:00	0.000	3337	3359	1586	1588	-75.6	-75.1	13.4	13.7	-4	-3
2007/12/07	19:30:00	0.000	3324	3349	1587	1591	-75.5	-75.2	13.5	13.7	-4	-3
2007/12/07	19:31:00	0.000	3333	3354	1577	1590	-75.5	-75.2	13.4	13.7	-4	-3
2007/12/07	19:32:00	0.000	3326	3344	1570	1577	-75.5	-75.2	13.5	13.7	-4	-3
2007/12/07	19:33:00	0.000	3328	3350	1568	1574	-75.5	-75.1	13.3	13.7	-4	-3
2007/12/07	19:34:00	0.000	3330	3354	1568	1573	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:35:00	0.000	3330	3351	1573	1580	-75.4	-75.1	13.5	13.7	-4	-3
2007/12/07	19:36:00	0.000	3326	3345	1569	1578	-75.5	-75.1	13.3	13.6	-4	-3
2007/12/07	19:37:00	0.000	3328	3345	1571	1578	-75.4	-75.1	13.4	13.7	-4	-3
2007/12/07	19:38:00	0.000	3319	3340	1577	1581	-75.4	-75.1	13.5	13.7	-4	-3
2007/12/07	19:39:00	0.000	3322	3350	1579	1580	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:40:00	0.000	3333	3345	1577	1581	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:41:00	0.000	3328	3356	1575	1578	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:42:00	0.000	3330	3347	1562	1575	-75.4	-75.1	13.5	13.7	-4	-3
2007/12/07	19:43:00	0.000	3320	3342	1562	1568	-75.4	-75.1	13.4	13.7	-4	-3
2007/12/07	19:44:00	0.000	3319	3353	1568	1576	-75.4	-75.2	13.5	13.7	-4	-3
2007/12/07	19:45:00	0.000	3328	3342	1574	1577	-75.4	-75.2	13.5	13.6	-4	-3
2007/12/07	19:46:00	0.000	3324	3347	1573	1575	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	19:47:00	0.000	3326	3346	1575	1581	-75.5	-75.1	13.4	13.7	-4	-3
2007/12/07	19:48:00	0.000	3322	3344	1577	1581	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	19:49:00	0.000	3324	3346	1575	1579	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	19:50:00	0.000	3316	3349	1577	1579	-75.4	-75.1	13.4	13.6	-4	-3
2007/12/07	19:51:00	0.000	3331	3356	1577	1580	-75.4	-75.2	13.4	13.7	-4	-3
2007/12/07	19:52:00	0.000	3333	3354	1577	1580	-75.5	-75.2	13.5	13.6	-4	-3
2007/12/07	19:53:00	0.000	3312	3347	1580	1582	-75.5	-75.0	13.3	13.7	-4	-3
2007/12/07	19:54:00	0.000	3312	3350	1581	1583	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	19:55:00	0.000	3314	3346	1579	1583	-75.4	-75.1	13.4	13.6	-4	-3
2007/12/07	19:56:00	0.000	3323	3346	1579	1582	-75.5	-75.1	13.1	13.6	-4	-3
2007/12/07	19:57:00	0.000	3328	3343	1578	1581	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	19:58:00	0.000	3321	3349	1574	1579	-75.4	-75.2	13.4	13.7	-4	-3
2007/12/07	19:59:00	0.000	3333	3344	1574	1579	-75.4	-75.1	13.4	13.6	-4	-3
2007/12/07	20:00:00	0.000	3326	3345	1565	1577	-75.4	-75.1	13.3	13.6	-4	-3
2007/12/07	20:01:00	0.000	3328	3349	1564	1568	-75.4	-75.1	13.3	13.6	-4	-3
2007/12/07	20:02:00	0.000	3319	3349	1568	1570	-75.4	-75.1	13.3	13.6	-4	-3
2007/12/07	20:03:00	0.000	3319	3341	1564	1570	-75.4	-75.1	13.3	13.6	-4	-3
2007/12/07	20:04:00	0.000	3333	3346	1554	1564	-75.4	-75.1	13.3	13.6	-4	-3
2007/12/07	20:05:00	0.000	3328	3348	1553	1561	-75.4	-75.2	13.4	13.6	-4	-3
2007/12/07	20:06:00	0.000	3330	3342	1561	1571	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:07:00	0.000	3323	3341	1571	1582	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:08:00	0.000	3317	3347	1582	1589	-75.3	-75.1	13.3	13.4	-4	-3
2007/12/07	20:09:00	0.000	3337	3363	1589	1595	-75.5	-75.1	13.3	13.4	-4	-3
2007/12/07	20:10:00	0.000	3325	3346	1586	1591	-75.4	-75.1	13.2	13.5	-4	-3
2007/12/07	20:11:00	0.000	3320	3349	1588	1594	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:12:00	0.000	3324	3342	1582	1594	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:13:00	0.000	3317	3349	1581	1584	-75.3	-75.1	13.3	13.5	-4	-3
2007/12/07	20:14:00	0.000	3325	3342	1561	1581	-75.4	-75.1	13.3	13.4	-4	-3
2007/12/07	20:15:00	0.000	3331	3349	1556	1561	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:16:00	0.000	3330	3351	1558	1560	-75.4	-75.1	13.2	13.5	-4	-3
2007/12/07	20:17:00	0.000	3325	3344	1558	1577	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:18:00	0.000	3325	3346	1577	1585	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:19:00	0.000	3330	3350	1582	1586	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:20:00	0.000	3335	3354	1581	1586	-75.4	-75.1	13.3	13.4	-4	-3
2007/12/07	20:21:00	0.000	3324	3345	1579	1582	-75.4	-75.2	13.2	13.4	-4	-3
2007/12/07	20:22:00	0.000	3319	3340	1579	1583	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:23:00	0.000	3324	3341	1578	1583	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:24:00	0.000	3322	3349	1573	1582	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:25:00	0.000	3332	3354	1570	1577	-75.5	-75.2	13.3	13.5	-4	-3
2007/12/07	20:26:00	0.000	3315	3338	1568	1571	-75.5	-75.0	13.0	13.5	-4	-3
2007/12/07	20:27:00	0.000	3323	3337	1567	1568	-75.4	-75.2	13.2	13.4	-4	-3

2007/12/07	20:28:00	0.000	3325	3335	1565	1568	-75.5	-75.2	13.2	13.4	-4	-3
2007/12/07	20:29:00	0.000	3321	3346	1566	1575	-75.5	-75.2	13.0	13.5	-4	-3
2007/12/07	20:30:00	0.000	3308	3337	1573	1576	-75.4	-75.1	13.0	13.4	-4	-3
2007/12/07	20:31:00	0.000	3319	3335	1575	1578	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:32:00	0.000	3323	3347	1571	1578	-75.4	-75.0	13.0	13.4	-4	-3
2007/12/07	20:33:00	0.000	3316	3333	1569	1576	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:34:00	0.000	3328	3346	1573	1577	-75.5	-75.1	12.9	13.4	-4	-3
2007/12/07	20:35:00	0.000	3309	3336	1573	1575	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:36:00	0.000	3323	3340	1573	1575	-75.4	-75.1	13.1	13.4	-4	-3
2007/12/07	20:37:00	0.000	3326	3349	1573	1585	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:38:00	0.000	3319	3349	1583	1586	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:39:00	0.000	3314	3333	1582	1587	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:40:00	0.000	3322	3342	1580	1582	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	20:41:00	0.000	3324	3351	1571	1582	-75.3	-75.1	13.2	13.5	-4	-3
2007/12/07	20:42:00	0.000	3325	3342	1570	1577	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	20:43:00	0.000	3319	3342	1573	1577	-75.3	-75.2	13.3	13.5	-4	-3
2007/12/07	20:44:00	0.000	3315	3340	1573	1577	-75.4	-75.1	13.3	13.4	-4	-3
2007/12/07	20:45:00	0.000	3315	3340	1577	1579	-75.5	-75.1	13.3	13.5	-4	-3
2007/12/07	20:46:00	0.000	3319	3335	1571	1579	-75.5	-74.9	13.0	13.5	-4	-3
2007/12/07	20:47:00	0.000	3312	3342	1566	1571	-75.4	-75.0	13.3	13.5	-4	-3
2007/12/07	20:48:00	0.000	3328	3347	1567	1570	-75.5	-75.2	13.3	13.5	-4	-3
2007/12/07	20:49:00	0.000	3322	3342	1569	1575	-75.5	-75.2	13.3	13.6	-4	-3
2007/12/07	20:50:00	0.000	3315	3340	1565	1573	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:51:00	0.000	3315	3342	1565	1573	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:52:00	0.000	3323	3342	1573	1576	-75.5	-75.2	13.2	13.5	-4	-3
2007/12/07	20:53:00	0.000	3319	3351	1571	1574	-75.4	-75.1	13.2	13.5	-4	-3
2007/12/07	20:54:00	0.000	3317	3337	1573	1574	-75.4	-75.2	13.2	13.6	-4	-3
2007/12/07	20:55:00	0.000	3315	3342	1573	1583	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:56:00	0.000	3307	3337	1580	1583	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	20:57:00	0.000	3314	3340	1579	1582	-75.4	-75.1	13.3	13.5	-3	-3
2007/12/07	20:58:00	0.000	3315	3344	1578	1580	-75.5	-75.0	13.0	13.5	-3	-3
2007/12/07	20:59:00	0.000	3319	3340	1579	1582	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	21:00:00	0.000	3317	3346	1579	1585	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	21:01:00	0.000	3318	3337	1576	1579	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	21:02:00	0.000	3315	3333	1566	1577	-75.4	-75.1	13.3	13.5	-4	-3
2007/12/07	21:03:00	0.000	3313	3340	1563	1566	-75.4	-75.0	12.9	13.5	-4	-3
2007/12/07	21:04:00	0.000	3313	3333	1563	1569	-75.3	-75.0	13.3	13.5	-4	-3
2007/12/07	21:05:00	0.000	3319	3336	1568	1570	-75.4	-75.2	13.3	13.5	-4	-3
2007/12/07	21:06:00	0.000	3322	3340	1568	1572	-75.4	-75.1	13.2	13.4	-4	-3
2007/12/07	21:07:00	0.000	3326	3345	1571	1584	-75.3	-75.1	13.3	13.5	-4	-3
2007/12/07	21:08:00	0.000	3317	3345	1584	1594	-75.4	-75.1	13.2	13.5	-4	-3
2007/12/07	21:09:00	0.000	3317	3343	1587	1594	-75.3	-75.1	13.2	13.4	-4	-3
2007/12/07	21:10:00	0.000	3315	3344	1587	1592	-75.4	-75.0	13.0	13.5	-4	-3
2007/12/07	21:11:00	0.000	3306	3340	1578	1591	-75.4	-75.2	12.9	13.5	-4	-3
2007/12/07	21:12:00	0.000	3301	3336	1569	1629	-75.5	-75.1	13.0	13.4	-4	-3
2007/12/07	21:13:00	0.000	3136	3324	1560	1614	-75.3	-68.3	13.2	24.0	-4	-3
2007/12/07	21:14:00	0.000	3099	3136	1550	1566	-68.6	-67.3	20.5	21.6	-4	-3
2007/12/07	21:15:00	0.000	3091	3108	1566	1582	-67.3	-66.3	20.6	21.3	-4	-3
2007/12/07	21:16:00	0.000	3077	3099	1558	1579	-66.5	-65.8	20.4	21.1	-4	-3
2007/12/07	21:17:00	0.000	3045	3082	1560	1568	-65.9	-65.4	19.9	20.8	-4	-3
2007/12/07	21:18:00	0.000	3000	3072	1565	1569	-65.8	-65.3	18.8	20.8	-4	-3
2007/12/07	21:19:00	0.000	2842	3000	1554	1565	-65.8	-65.2	17.1	19.7	-4	-3
2007/12/07	21:20:00	0.000	2674	2842	1551	1555	-65.8	-65.4	15.4	17.4	-4	-3
2007/12/07	21:21:00	0.000	2491	2674	1544	1553	-65.9	-65.5	12.8	15.8	-4	-3
2007/12/07	21:22:00	0.000	2392	2492	1553	1560	-65.7	-65.4	12.1	13.6	-4	-3
2007/12/07	21:23:00	0.000	2259	2392	1540	1558	-65.8	-65.4	10.6	12.4	-4	-3
2007/12/07	21:24:00	0.000	2165	2259	1540	1544	-65.8	-65.3	9.6	10.9	-4	-3
2007/12/07	21:25:00	0.000	2089	2168	1540	1573	-65.7	-65.3	8.9	9.9	-4	-3
2007/12/07	21:26:00	0.000	1977	2089	1570	1576	-65.8	-65.3	7.7	9.3	-4	-3
2007/12/07	21:27:00	0.000	1894	1978	1563	1698	-65.7	-65.2	6.2	8.2	-4	-3
2007/12/07	21:28:00	0.000	1917	1944	1595	1651	-65.6	-65.2	7.1	7.8	-4	-3
2007/12/07	21:29:00	0.000	1795	1923	1556	1595	-65.7	-65.2	5.8	7.6	-4	-3
2007/12/07	21:30:00	0.000	1717	1799	1526	1556	-65.7	-65.2	5.2	6.3	-4	-3
2007/12/07	21:31:00	0.000	1660	1717	1526	1546	-65.6	-65.2	4.4	5.5	-4	-3
2007/12/07	21:32:00	0.000	1574	1660	1545	1580	-65.6	-65.2	3.7	4.7	-4	-3
2007/12/07	21:33:00	0.000	1502	1574	1580	1594	-65.7	-65.1	3.0	3.9	-4	-3
2007/12/07	21:34:00	0.000	1417	1502	1564	1584	-65.6	-65.2	2.2	3.2	-4	-3
2007/12/07	21:35:00	0.000	1367	1417	1561	1574	-65.6	-65.2	1.8	2.4	-4	-3
2007/12/07	21:36:00	0.000	1335	1367	1574	1587	-65.6	-65.2	1.5	2.0	-4	-3
2007/12/07	21:37:00	0.000	1305	1335	1583	1588	-65.5	-65.1	1.2	1.8	-4	-3

2007/12/07	21:38:00	0.000	1286	1331	1588	1595	-65.5	-65.1	1.0	1.9	-4	-3
2007/12/07	21:39:00	0.000	1174	1290	1586	1597	-66.1	-65.3	0.1	1.4	-4	-3
2007/12/07	21:40:00	0.000	1099	1174	1574	1586	-66.4	-66.0	-0.2	0.4	-4	-3
2007/12/07	21:41:00	0.000	1040	1100	1574	1605	-66.4	-66.2	-0.6	0.1	-4	-3
2007/12/07	21:42:00	0.000	1005	1058	1605	1616	-66.3	-65.8	-0.8	-0.1	-4	-3
2007/12/07	21:43:00	0.000	972	1007	1589	1611	-65.9	-65.4	-1.0	-0.5	-4	-3
2007/12/07	21:44:00	0.000	931	977	1564	1589	-65.8	-65.2	-1.4	-0.9	-4	-3
2007/12/07	21:45:00	0.000	927	943	1565	1604	-65.8	-65.2	-1.4	-1.0	-4	-3
2007/12/07	21:46:00	0.000	943	984	1604	1625	-65.5	-65.2	-1.2	-0.6	-4	-3
2007/12/07	21:47:00	0.000	954	991	1620	1625	-65.5	-65.2	-1.1	-0.6	-4	-3
2007/12/07	21:48:00	0.000	934	962	1601	1622	-65.5	-65.1	-1.3	-0.9	-3	-3
2007/12/07	21:49:00	0.000	936	953	1584	1601	-65.5	-65.1	-1.3	-0.9	-3	-3
2007/12/07	21:50:00	0.000	953	973	1554	1584	-65.4	-65.2	-1.1	-0.9	-3	-3
2007/12/07	21:51:00	0.000	947	964	1556	1609	-65.6	-65.1	-1.4	-0.9	-4	-3
2007/12/07	21:52:00	0.000	934	948	1609	1630	-65.5	-65.3	-1.4	-1.0	-4	-3
2007/12/07	21:53:00	0.000	918	934	1586	1617	-65.6	-65.2	-1.5	-1.1	-4	-3
2007/12/07	21:54:00	0.000	927	968	1575	1587	-65.5	-65.2	-1.3	-0.9	-4	-3
2007/12/07	21:55:00	0.000	939	968	1579	1625	-65.4	-65.2	-1.3	-1.0	-4	-3
2007/12/07	21:56:00	0.000	922	943	1597	1626	-65.5	-65.2	-1.4	-1.1	-4	-3
2007/12/07	21:57:00	0.000	911	935	1577	1597	-65.5	-65.3	-1.6	-1.2	-4	-3
2007/12/07	21:58:00	0.000	922	935	1577	1583	-65.5	-65.2	-1.5	-1.1	-4	-3
2007/12/07	21:59:00	0.000	927	943	1582	1610	-65.4	-65.2	-1.4	-1.0	-4	-3
2007/12/07	22:00:00	0.000	913	930	1610	1625	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:01:00	0.000	909	920	1614	1625	-65.5	-65.3	-1.6	-1.2	-4	-3
2007/12/07	22:02:00	0.000	918	952	1597	1614	-65.5	-65.3	-1.4	-1.1	-4	-3
2007/12/07	22:03:00	0.000	915	954	1588	1598	-65.5	-65.2	-1.7	-1.2	-4	-3
2007/12/07	22:04:00	0.000	913	929	1590	1602	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:05:00	0.000	909	930	1602	1606	-65.5	-65.1	-1.7	-1.3	-4	-3
2007/12/07	22:06:00	0.000	911	945	1591	1603	-65.4	-65.2	-1.5	-1.0	-4	-3
2007/12/07	22:07:00	0.000	941	950	1591	1612	-65.5	-65.2	-1.5	-1.0	-4	-3
2007/12/07	22:08:00	0.000	915	943	1610	1614	-65.4	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:09:00	0.000	904	915	1594	1610	-65.5	-65.2	-1.7	-1.4	-4	-3
2007/12/07	22:10:00	0.000	904	938	1591	1594	-65.5	-65.1	-1.7	-1.1	-4	-3
2007/12/07	22:11:00	0.000	906	936	1587	1594	-65.6	-65.1	-1.6	-1.3	-4	-3
2007/12/07	22:12:00	0.000	880	914	1591	1608	-65.6	-65.2	-1.8	-1.3	-4	-3
2007/12/07	22:13:00	0.000	880	902	1600	1609	-65.4	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:14:00	0.000	891	920	1582	1600	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:15:00	0.000	895	922	1579	1582	-65.4	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:16:00	0.000	899	913	1580	1591	-65.4	-65.3	-1.7	-1.3	-4	-3
2007/12/07	22:17:00	0.000	895	913	1591	1632	-65.4	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:18:00	0.000	875	915	1612	1631	-65.6	-65.1	-1.9	-1.1	-4	-3
2007/12/07	22:19:00	0.000	904	938	1610	1613	-65.3	-65.1	-1.6	-1.1	-4	-3
2007/12/07	22:20:00	0.000	882	904	1607	1614	-65.4	-65.2	-1.7	-1.5	-4	-3
2007/12/07	22:21:00	0.000	894	909	1591	1614	-65.5	-65.2	-1.7	-1.5	-4	-3
2007/12/07	22:22:00	0.000	897	925	1576	1591	-65.5	-65.1	-1.6	-1.1	-4	-3
2007/12/07	22:23:00	0.000	913	937	1577	1611	-65.5	-65.2	-1.5	-1.1	-4	-3
2007/12/07	22:24:00	0.000	887	915	1599	1611	-65.5	-65.1	-1.8	-1.3	-4	-3
2007/12/07	22:25:00	0.000	885	897	1593	1604	-65.4	-65.2	-1.7	-1.5	-4	-3
2007/12/07	22:26:00	0.000	893	902	1578	1593	-65.5	-65.2	-1.8	-1.3	-4	-3
2007/12/07	22:27:00	0.000	895	911	1578	1597	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:28:00	0.000	897	921	1593	1599	-65.5	-65.1	-1.8	-1.4	-4	-3
2007/12/07	22:29:00	0.000	899	912	1588	1593	-65.4	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:30:00	0.000	893	912	1591	1624	-65.5	-65.2	-1.7	-1.3	-4	-3
2007/12/07	22:31:00	0.000	907	923	1624	1635	-65.4	-65.2	-1.6	-1.2	-4	-3
2007/12/07	22:32:00	0.000	882	914	1588	1635	-65.5	-65.2	-1.7	-1.4	-4	-3
2007/12/07	22:33:00	0.000	876	900	1566	1588	-65.5	-65.1	-1.8	-1.4	-4	-3
2007/12/07	22:34:00	0.000	882	897	1564	1571	-65.6	-65.2	-1.8	-1.4	-4	-3
2007/12/07	22:35:00	0.000	897	925	1571	1602	-65.4	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:36:00	0.000	882	914	1602	1633	-65.5	-65.3	-1.7	-1.4	-4	-3
2007/12/07	22:37:00	0.000	880	893	1618	1635	-65.4	-65.3	-1.7	-1.4	-4	-3
2007/12/07	22:38:00	0.000	880	894	1609	1618	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:39:00	0.000	885	916	1612	1617	-65.5	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:40:00	0.000	889	913	1589	1617	-65.5	-65.3	-1.6	-1.3	-4	-3
2007/12/07	22:41:00	0.000	886	897	1565	1589	-65.5	-65.1	-1.6	-1.2	-4	-3
2007/12/07	22:42:00	0.000	886	902	1569	1595	-65.5	-65.3	-1.6	-1.2	-4	-3
2007/12/07	22:43:00	0.000	899	911	1595	1627	-65.5	-65.1	-1.6	-1.1	-4	-3
2007/12/07	22:44:00	0.000	885	907	1611	1632	-65.5	-65.1	-1.6	-1.2	-4	-3
2007/12/07	22:45:00	0.000	866	893	1567	1611	-65.5	-65.1	-1.6	-1.3	-4	-3
2007/12/07	22:46:00	0.000	871	883	1565	1587	-65.5	-65.3	-1.6	-1.2	-4	-3
2007/12/07	22:47:00	0.000	880	914	1587	1616	-65.4	-65.2	-1.3	-1.0	-4	-3

2007/12/07	22:48:00	0.000	864	907	1606	1618	-65.4	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:49:00	0.000	852	871	1591	1606	-65.4	-65.2	-1.6	-1.3	-4	-3
2007/12/07	22:50:00	0.000	852	904	1591	1618	-65.4	-65.2	-1.6	-1.1	-4	-3
2007/12/07	22:51:00	0.000	882	918	1618	1633	-65.4	-65.2	-1.4	-1.0	-4	-3
2007/12/07	22:52:00	0.000	891	920	1595	1624	-65.5	-65.3	-1.6	-1.3	-4	-3
2007/12/07	22:53:00	0.000	875	897	1583	1595	-65.5	-65.3	-1.5	-1.3	-4	-3
2007/12/07	22:54:00	0.000	875	920	1585	1591	-65.4	-65.1	-1.4	-1.1	-4	-3
2007/12/07	22:55:00	0.000	908	920	1591	1609	-65.4	-65.2	-1.4	-1.0	-4	-3
2007/12/07	22:56:00	0.000	886	912	1609	1614	-65.5	-65.2	-1.4	-1.1	-4	-3
2007/12/07	22:57:00	0.000	880	900	1583	1610	-65.5	-65.1	-1.5	-1.1	-4	-3
2007/12/07	22:58:00	0.000	870	890	1566	1583	-65.5	-65.1	-1.5	-1.2	-4	-3
2007/12/07	22:59:00	0.000	887	939	1569	1602	-65.5	-65.2	-1.3	-0.9	-4	-3
2007/12/07	23:00:00	0.000	900	932	1602	1641	-65.4	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:01:00	0.000	882	902	1613	1642	-65.4	-65.2	-1.4	-1.2	-4	-3
2007/12/07	23:02:00	0.000	877	898	1593	1613	-65.5	-65.2	-1.6	-1.0	-4	-3
2007/12/07	23:03:00	0.000	893	911	1585	1593	-65.4	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:04:00	0.000	874	912	1586	1600	-65.5	-65.0	-1.4	-1.0	-4	-3
2007/12/07	23:05:00	0.000	870	889	1583	1599	-65.5	-64.9	-1.5	-1.1	-4	-3
2007/12/07	23:06:00	0.000	878	888	1581	1595	-65.5	-65.3	-1.4	-1.1	-4	-3
2007/12/07	23:07:00	0.000	878	900	1592	1595	-65.5	-65.3	-1.4	-0.9	-4	-3
2007/12/07	23:08:00	0.000	873	893	1591	1620	-65.6	-65.1	-1.5	-1.0	-4	-3
2007/12/07	23:09:00	0.000	875	889	1620	1635	-65.5	-65.1	-1.5	-1.1	-4	-3
2007/12/07	23:10:00	0.000	857	881	1610	1630	-65.4	-65.2	-1.5	-1.2	-4	-3
2007/12/07	23:11:00	0.000	864	916	1601	1610	-65.4	-65.2	-1.3	-0.8	-4	-3
2007/12/07	23:12:00	0.000	868	909	1601	1610	-65.4	-65.2	-1.4	-0.9	-4	-3
2007/12/07	23:13:00	0.000	863	873	1586	1608	-65.4	-65.2	-1.4	-1.1	-4	-3
2007/12/07	23:14:00	0.000	873	887	1570	1586	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:15:00	0.000	875	891	1570	1584	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:16:00	0.000	865	893	1583	1599	-65.4	-65.3	-1.4	-1.1	-4	-3
2007/12/07	23:17:00	0.000	843	865	1591	1595	-65.5	-65.0	-1.6	-1.1	-4	-3
2007/12/07	23:18:00	0.000	847	868	1593	1595	-65.4	-65.3	-1.4	-1.1	-4	-3
2007/12/07	23:19:00	0.000	868	898	1593	1631	-65.4	-65.2	-1.2	-0.8	-4	-3
2007/12/07	23:20:00	0.000	862	895	1628	1641	-65.4	-65.2	-1.3	-1.1	-4	-3
2007/12/07	23:21:00	0.000	862	878	1589	1628	-65.4	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:22:00	0.000	846	864	1576	1589	-65.5	-65.2	-1.4	-1.0	-4	-3
2007/12/07	23:23:00	0.000	851	907	1581	1608	-65.5	-65.2	-1.3	-0.7	-4	-3
2007/12/07	23:24:00	0.000	859	907	1608	1622	-65.5	-65.2	-1.3	-0.7	-4	-3
2007/12/07	23:25:00	0.000	846	867	1581	1609	-65.5	-65.3	-1.4	-1.1	-4	-3
2007/12/07	23:26:00	0.000	846	871	1581	1604	-65.5	-65.1	-1.5	-1.0	-4	-3
2007/12/07	23:27:00	0.000	867	890	1604	1633	-65.5	-65.0	-1.4	-0.8	-4	-3
2007/12/07	23:28:00	0.000	862	875	1620	1635	-65.5	-65.0	-1.4	-1.1	-4	-3
2007/12/07	23:29:00	0.000	859	871	1600	1620	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:30:00	0.000	850	862	1585	1600	-65.5	-65.1	-1.5	-1.1	-4	-3
2007/12/07	23:31:00	0.000	847	889	1576	1585	-65.4	-65.2	-1.2	-0.8	-4	-3
2007/12/07	23:32:00	0.000	856	882	1576	1579	-65.4	-65.2	-1.2	-0.9	-4	-3
2007/12/07	23:33:00	0.000	847	862	1578	1585	-65.5	-65.1	-1.4	-1.0	-4	-3
2007/12/07	23:34:00	0.000	847	859	1585	1626	-65.4	-65.3	-1.3	-1.0	-4	-3
2007/12/07	23:35:00	0.000	854	889	1624	1633	-65.5	-65.2	-1.2	-0.8	-4	-3
2007/12/07	23:36:00	0.000	862	892	1607	1624	-65.4	-65.2	-1.2	-0.8	-4	-3
2007/12/07	23:37:00	0.000	842	864	1591	1607	-65.4	-65.3	-1.4	-1.0	-4	-3
2007/12/07	23:38:00	0.000	840	862	1586	1595	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:39:00	0.000	862	883	1595	1602	-65.5	-65.1	-1.1	-0.8	-4	-3
2007/12/07	23:40:00	0.000	850	875	1596	1604	-65.5	-65.2	-1.3	-0.9	-4	-3
2007/12/07	23:41:00	0.000	846	860	1594	1597	-65.5	-65.1	-1.3	-1.0	-4	-3
2007/12/07	23:42:00	0.000	829	855	1593	1600	-65.5	-65.1	-1.4	-1.0	-4	-3
2007/12/07	23:43:00	0.000	829	890	1600	1626	-65.4	-65.1	-1.2	-0.7	-4	-3
2007/12/07	23:44:00	0.000	855	889	1626	1641	-65.4	-65.2	-1.3	-0.9	-4	-3
2007/12/07	23:45:00	0.000	848	860	1593	1629	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:46:00	0.000	847	864	1576	1593	-65.4	-65.0	-1.3	-0.9	-4	-3
2007/12/07	23:47:00	0.000	848	862	1576	1587	-65.4	-65.1	-1.3	-0.9	-4	-3
2007/12/07	23:48:00	0.000	861	869	1587	1604	-65.4	-65.2	-1.2	-0.9	-4	-3
2007/12/07	23:49:00	0.000	838	864	1594	1607	-65.4	-65.2	-1.3	-0.9	-4	-3
2007/12/07	23:50:00	0.000	836	862	1585	1595	-65.5	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:51:00	0.000	840	876	1588	1614	-65.4	-65.2	-1.3	-0.8	-4	-3
2007/12/07	23:52:00	0.000	855	878	1613	1620	-65.4	-65.2	-1.2	-0.9	-4	-3
2007/12/07	23:53:00	0.000	833	855	1589	1613	-65.5	-65.1	-1.3	-1.1	-4	-3
2007/12/07	23:54:00	0.000	832	864	1576	1589	-65.4	-65.2	-1.3	-1.0	-4	-3
2007/12/07	23:55:00	0.000	848	883	1581	1598	-65.4	-65.2	-1.2	-0.7	-4	-3
2007/12/07	23:56:00	0.000	856	889	1598	1635	-65.5	-65.2	-1.2	-0.7	-4	-3
2007/12/07	23:57:00	0.000	843	862	1626	1638	-65.5	-65.1	-1.2	-1.0	-4	-3

2007/12/07	23:58:00	0.000	832	850	1617	1626	-65.5	-65.3	-1.3	-1.0	-4	-3
2007/12/07	23:59:00	0.000	831	860	1581	1617	-65.4	-65.0	-1.3	-0.7	-4	-3

APPENDIX E

Calibration Data

CEM Calibration Error Data Sheet
Analyzer Response

Plant Name:	Veolia Services - Zion Landfill
Sampling Location:	Thermal Control
Date:	12/7/2007

ANALYZER SPAN VALUE (% or ppm)		ANALYZER SPAN VALUE (% or ppm)	
Oxygen	20.00	CH4	100.00
CO2	20.00		
NOx	88.98		
CO	90.41		
Total VOC	100.00		

		MONITOR SERIAL NUMBER	CYLINDER NUMBER	CYLINDER VALUE (% or ppm)	ANALYZER CALIBRATION RESPONSE	DIFFERENCE (% OF GAS/SPAN)
Oxygen	Zero	01440D1/3807	ALM-051228: Zero N2	0.0	0.03	0.16
Oxygen	Low		ALM-035729: 22.64 % O2			
Oxygen	Mid		ALM-035729: 22.64 % O2	10.0	9.91	-0.44
Oxygen	High		ALM-035729: 22.64 % O2	20.0	19.97	-0.15
CO2	Zero	01440D1/3807	ALM-051228: Zero N2	0.0	0.01	0.03
CO2	Low		ALM-035729: 22.80 % CO2			
CO2	Mid		ALM-035729: 22.80 % CO2	10.0	9.92	-0.40
CO2	High		ALM-035729: 22.80 % CO2	20.0	20.02	0.09
NOx	Zero	42CHL-73079-372	ALM-051228: Zero N2	0.0	0.00	0.00
NOx	Low		ALM-027015: 88.98 ppm	22.5	21.99	-0.57
NOx	Mid		ALM-027015: 88.98 ppm	45.0	44.79	-0.24
NOx	High		ALM-027015: 88.98 ppm	88.98	89.37	0.44
CO	Zero	48C-73409-373	ALM-051228: Zero N2	0.0	0.02	0.02
CO	Low		ALM-018450: 90.41 ppm	22.5	22.34	-0.18
CO	Mid		ALM-018450: 90.41 ppm	45.0	44.66	-0.38
CO	High		ALM-018450: 90.41 ppm	90.4	90.08	-0.36
Total VOC	Zero	1171002	ALM-051228: Zero N2	0.0	0.29	0.29
Total VOC	Low		ALM-041269: 90.02 ppm CH4	25.0	23.95	4.20
Total VOC	Mid		ALM-041269: 90.02 ppm CH4	50.0	49.08	1.85
Total VOC	High		ALM-041269: 90.02 ppm CH4	90.0	88.82	1.34
CH4	Zero	1171002	ALM-051228: Zero N2	0.0	0.57	0.57
CH4	Low		ALM-041269: 90.02 ppm CH4	25.0	24.28	-0.72
CH4	Mid		ALM-041269: 90.02 ppm CH4	50.0	49.67	-0.33
CH4	High		ALM-041269: 90.02 ppm CH4	90.0	90.91	0.89

CEM CALIBRATION DATA
System Bias and Drift
Page #1

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control

Run:	1			2			3		
Date:	12/7/2007			12/7/2007			12/7/2007		
Time:	1433-1533			1615-1715			1751-1851		
Oxygen	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.06	0.08	0.02	0.08	0.07	-0.01	0.07	0.09	0.01
Zero Bias, % of Span	0.32	0.41	0.10	0.41	0.35	-0.06	0.35	0.43	0.07
Mid-Range Calibration Conc.	10.00	10.00		10.00	10.00		10.00	10.00	
System Response to Cal	9.84	9.88	0.03	9.88	9.86	-0.02	9.86	9.87	0.01
Cal Bias, % of Span	-0.78	-0.62	0.17	-0.62	-0.71	-0.10	-0.71	-0.66	0.06
CO2	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.02	0.03	0.00	0.03	0.05	0.03	0.05	0.05	0.00
Zero Bias, % of Span	0.12	0.13	0.01	0.13	0.26	0.13	0.26	0.24	-0.01
Mid-Range Calibration Conc.	10.00	10.00		10.00	10.00		10.00	10.00	
System Response to Cal	9.83	9.83	0.00	9.83	9.85	0.02	9.85	9.86	0.01
Cal Bias, % of Span	-0.83	-0.84	-0.01	-0.84	-0.76	0.08	-0.76	-0.70	0.06
NOx	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.20	-0.01	-0.21	-0.01	-0.01	0.00	-0.01	-0.01	0.00
Zero Bias, % of Span	0.23	-0.01	-0.24	-0.01	-0.01	0.00	-0.01	-0.01	0.00
Mid-Range Calibration Conc.	45.00	45.00		45.00	45.00		45.00	45.00	
System Response to Cal	45.59	44.37	-1.22	44.37	44.37	0.00	44.37	44.55	0.18
Cal Bias, % of Span	0.67	-0.70	-1.37	-0.70	-0.70	0.00	-0.70	-0.50	0.20
CO	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.62	0.61	-0.01	0.61	0.66	0.05	0.66	0.61	-0.05
Zero Bias, % of Span	0.68	0.67	-0.01	0.67	0.73	0.06	0.73	0.67	-0.06
Mid-Range Calibration Conc.	45.00	45.00		45.00	45.00		45.00	45.00	
System Response to Cal	45.37	44.94	-0.43	44.94	44.95	0.01	44.95	45.03	0.08
Cal Bias, % of Span	0.41	-0.06	-0.47	-0.06	-0.05	0.01	-0.05	0.03	0.08
Total VOC	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.29	0.60	0.31	0.60	-0.42	-1.02	-0.42	0.51	0.93
Zero Bias, % of Span	0.29	0.60	0.31	0.60	-0.42	-1.02	-0.42	0.51	0.93
Mid-Range Calibration Conc.	50.00	50.00		50.00	50.00		50.00	50.00	
System Response to Cal	49.08	49.44	0.37	49.44	50.35	0.90	50.35	49.85	-0.50
Cal Bias, % of Span	-1.02	-0.61	0.41	-0.61	0.39	1.00	0.39	-0.16	-0.55
CH4	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.57	0.53	-0.04	0.57	0.53	-0.04	0.57	0.53	-0.04
Zero Bias, % of Span	0.57	0.53	-0.04	0.57	0.53	-0.04	0.53	0.53	0.00
Mid-Range Calibration Conc.	50.00	50.00		50.00	50.00		50.00	50.00	
System Response to Cal	49.67	50.28	0.61	49.67	50.28	0.61	49.67	50.28	0.61
Cal Bias, % of Span	-0.33	0.28	0.61	-0.33	0.28	0.61	0.28	0.28	0.00

CEM CALIBRATION DATA
System Bias and Drift
Page #2

Company: Veolia Services - Zion Landfill
Location: Zion, Illinois
Source: Thermal Control

Run:	4		
Date:	12/7/2007		
Time:	1948-2048		
Oxygen	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.09	0.08	-0.01
Zero Bias, % of Span	0.43	0.38	-0.04
Mid-Range Calibration Conc.	10.00	10.00	
System Response to Cal	9.87	9.88	0.01
Cal Bias, % of Span	-0.66	-0.59	0.06
CO2	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.05	0.05	0.00
Zero Bias, % of Span	0.24	0.25	0.00
Mid-Range Calibration Conc.	10.00	10.00	
System Response to Cal	9.86	9.89	0.03
Cal Bias, % of Span	-0.70	-0.56	0.14
SO2	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.00	0.00	0.00
Zero Bias, % of Span	0.00	0.00	0.00
Mid-Range Calibration Conc.	50.00	50.00	
System Response to Cal	0.00	0.00	0.00
Cal Bias, % of Span	-50.00	-50.00	0.00
NOx	**Pretest**	**Posttest**	**Drift**
Zero Reading	-0.01	-0.01	0.00
Zero Bias, % of Span	-0.01	-0.01	0.00
Mid-Range Calibration Conc.	45.00	45.00	
System Response to Cal	44.55	44.99	0.44
Cal Bias, % of Span	-0.50	-0.02	0.49
CO	**Pretest**	**Posttest**	**Drift**
Zero Reading	0.61	0.81	0.20
Zero Bias, % of Span	0.67	0.90	0.22
Mid-Range Calibration Conc.	45.00	45.00	
System Response to Cal	45.03	45.38	0.34
Cal Bias, % of Span	0.03	0.42	0.38

STRATIFICATION CHECK

Company: Veolia Services - Zion Landfill
Location Zion, Illinois
Source: Thermal Control
Test Date: 12/7/2007

	POINT 1					POINT 2					POINT 3					AVERAGE	
	Reading		Difference from average		% Diff from ave.		Reading		Difference from average		% Diff from ave.		Reading		Difference from average	% Diff from ave.	Reading	
O2 AVERAGE	12.91	%	-0.03	%	-0.19	%	12.90	%	-0.03	%	-0.21	%	12.98	%	0.05	0.40	12.93	%
CO2 AVERAGE	6.74	%	0.03	%	0.48	%	6.72	%	0.02	%	0.28	%	6.65	%	-0.05	-0.76	6.71	%
NOX AVERAGE	10.52	ppmv	0.08	ppmv	0.76	ppmv	10.53	ppmv	0.09	ppmv	0.83	ppmv	10.28	ppmv	-0.17	-1.59	10.44	ppmv
CO AVERAGE	11.49	ppmv	-0.53	ppmv	-4.45	ppmv	12.15	ppmv	0.13	ppmv	1.10	ppmv	12.42	ppmv	0.40	3.35	12.02	ppmv

Allowable differences < 5% of average or <0.5 ppm for CO, NOx and SO2 and <0.3% CO2 or O2 whichever is less restrictive
All constituents meet requirements-no stratification exists at the stack sampling location.

RESPONSE TIME TEST

Company:	Veolia Services - Zion Landfill
Location	Zion, Illinois
Source:	Thermal Control
Test Date:	12/7/2007

Component	Upscale Response Time Minutes	Downscale Response Time Minutes
O2	1.50	1.50
CO2	1.50	1.50
NOX	1.50	1.25
CO	1.25	1.50

USE 2X THE RESPONSE TIME FOR HIHGEST TIME BEFORE STARTING A RUN AT FIRST POINT

ARI REFERENCE METHOD CEMS DATA
USEPA METHOD 205
DILUTION SYSTEM VERIFICATION

Company: Veolia
Location: Zion, Illinois
Dilution System ID: 2336 MFC2
Dilution Flow Rate: 4.50
Verification date: 12/6/2007

Analyzer Info

Monitor type: Oxygen
Monitor range (%): 23
Monitor Serial No.: 01440d1/3807

Initial Calibration Data

Calibration Concentration		Calibration results		% Difference	
Zero:	0.00	Zero:	0.02	Zero:	0.09
Mid:	10.00	Mid:	9.93	Mid:	0.33
High:	20.00	High:	20.08	High:	0.35

Dilution System Verification

Mid level gas type: USEPA Protocol 1
Mid level concentration: 12.48 ppm
Mid level tank serial #: ALM-023625

High level dilution gas type: USEPA Protocol 1
High level concentration: 22.64
High level tank serial #: ALM-035729
Target concentration No. 1: 12.50
Target concentration No. 2: 6.00

Dilution System Results (Precision Test)

Target Concentration No. 1

	Instrument Response	% difference from average*
Trial No. 1:	12.51	0.20
Trial No. 2:	12.47	0.09
Trial No. 3:	12.47	0.11
Average:	12.485	

% Difference from target concentration: 0.12%

Target Concentration No. 2

	Instrument Response	% difference from average*
Trial No. 1:	5.92	0.27
Trial No. 2:	5.90	0.11
Trial No. 3:	5.89	0.16
Average:	5.902	

% Difference from target concentration: 1.63%

Mid Level Calibration Gas Results (Accuracy Test)

	Instrument Response
Trial No. 1:	12.55
Trial No. 2:	12.54
Trial No. 3:	12.54

Mid Level calibration gas concentration: 12.48
Average analyzer response: 12.541
Percent difference: **0.49** *

* Must be less than 2 %

Veolia - Zion Landfill
Zion, IL
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15 Second Averages

	Type	0 - 25	
	Units	% db	
Date	**Time, s**	**Oxygen**	**Comments**
12/6/2007	14:29:00	20.30	
12/6/2007	14:29:15	20.30	
12/6/2007	14:29:30	20.31	
12/6/2007	14:29:45	20.31	
12/6/2007	14:30:00	20.31	
12/6/2007	14:30:15	20.51	
12/6/2007	14:30:30	20.84	
12/6/2007	14:30:45	13.64	
12/6/2007	14:31:00	2.40	
12/6/2007	14:31:15	0.24	
12/6/2007	14:31:30	0.14	
12/6/2007	14:31:45	0.13	
12/6/2007	14:32:00	0.12	
12/6/2007	14:32:15	0.11	
12/6/2007	14:32:30	0.08	
12/6/2007	14:32:45	0.08	
12/6/2007	14:33:00	0.08	
12/6/2007	14:33:15	0.08	
12/6/2007	14:33:30	0.08	
12/6/2007	14:33:45	0.08	
12/6/2007	14:34:00	0.03	
12/6/2007	14:34:15	0.03	
12/6/2007	14:34:30	0.02	
12/6/2007	14:34:45	0.03	**Calibration Error**
12/6/2007	**14:35:00**	**0.02**	**Zero Gas**
12/6/2007	**14:35:15**	**0.02**	**O_2 = 0.02**
12/6/2007	**14:35:30**	**0.02**	
12/6/2007	**14:35:45**	**0.02**	
12/6/2007	14:36:00	0.01	
12/6/2007	14:36:15	0.02	
12/6/2007	14:36:30	0.01	
12/6/2007	14:36:45	0.95	
12/6/2007	14:37:00	9.30	
12/6/2007	14:37:15	15.45	
12/6/2007	14:37:30	18.73	
12/6/2007	14:37:45	20.01	
12/6/2007	14:38:00	20.19	
12/6/2007	14:38:15	20.18	
12/6/2007	14:38:30	20.18	
12/6/2007	14:38:45	20.17	
12/6/2007	14:39:00	20.13	
12/6/2007	14:39:15	20.08	
12/6/2007	14:39:30	20.08	
12/6/2007	14:39:45	20.07	**Calibration Error**
12/6/2007	**14:40:00**	**20.08**	**20.00% O_2**
12/6/2007	**14:40:15**	**20.08**	
12/6/2007	**14:40:30**	**20.08**	**O_2 = 20.08**
12/6/2007	**14:40:45**	**20.08**	
12/6/2007	14:41:00	20.09	
12/6/2007	14:41:15	20.08	
12/6/2007	14:41:30	20.08	
12/6/2007	14:41:45	20.09	
12/6/2007	14:42:00	20.09	
12/6/2007	14:42:15	20.09	
12/6/2007	14:42:30	20.07	
12/6/2007	14:42:45	17.48	
12/6/2007	14:43:00	12.47	
12/6/2007	14:43:15	10.19	
12/6/2007	14:43:30	9.93	
12/6/2007	14:43:45	9.91	
12/6/2007	14:44:00	9.92	
12/6/2007	14:44:15	9.92	
12/6/2007	14:44:30	9.92	**Calibration Error**
12/6/2007	**14:44:45**	**9.93**	**12.50% O_2**
12/6/2007	**14:45:00**	**9.93**	
12/6/2007	**14:45:15**	**9.93**	**O_2 = 9.93**
12/6/2007	**14:45:30**	**9.92**	
12/6/2007	14:45:45	9.92	
12/6/2007	14:46:00	9.99	
12/6/2007	14:46:15	11.17	
12/6/2007	14:46:30	12.28	
12/6/2007	14:46:45	12.49	

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Date	Time, s	Oxygen	Comments
12/6/2007	14:47:00	12.51	
12/6/2007	14:47:15	12.51	
12/6/2007	14:47:30	12.51	**Precision 1: Trial 1**
12/6/2007	**14:47:45**	**12.51**	**12.50% Injection**
12/6/2007	**14:48:00**	**12.51**	**12.51 % Oxygen**
12/6/2007	**14:48:15**	**12.51**	
12/6/2007	**14:48:30**	**12.51**	
12/6/2007	14:48:45	12.51	
12/6/2007	14:49:00	12.51	
12/6/2007	14:49:15	12.25	
12/6/2007	14:49:30	9.12	
12/6/2007	14:49:45	6.40	
12/6/2007	14:50:00	5.93	
12/6/2007	14:50:15	5.91	**Precision 2: Trial 1**
12/6/2007	**14:50:30**	**5.92**	**6.00% Injection**
12/6/2007	**14:50:45**	**5.92**	**5.92 % Oxygen**
12/6/2007	**14:51:00**	**5.92**	
12/6/2007	**14:51:15**	**5.92**	
12/6/2007	14:51:30	5.92	
12/6/2007	14:51:45	5.92	
12/6/2007	14:52:00	8.05	
12/6/2007	14:52:15	12.26	
12/6/2007	14:52:30	12.50	
12/6/2007	14:52:45	12.46	
12/6/2007	14:53:00	12.52	
12/6/2007	14:53:15	12.55	
12/6/2007	14:53:30	12.56	
12/6/2007	14:53:45	12.56	**Accuracy Trial 1**
12/6/2007	**14:54:00**	**12.55**	**Cylinder # ALM023625 12.48%**
12/6/2007	**14:54:15**	**12.55**	**12.55 % Oxygen**
12/6/2007	**14:54:30**	**12.55**	
12/6/2007	**14:54:45**	**12.55**	
12/6/2007	14:55:00	12.54	
12/6/2007	14:55:15	12.54	
12/6/2007	14:55:30	12.58	
12/6/2007	14:55:45	13.35	
12/6/2007	14:56:00	13.06	
12/6/2007	14:56:15	12.63	
12/6/2007	14:56:30	12.48	
12/6/2007	14:56:45	12.48	**Precision 1: Trial 2**
12/6/2007	**14:57:00**	**12.47**	**12.50% Injection**
12/6/2007	**14:57:15**	**12.47**	**12.47 % Oxygen**
12/6/2007	**14:57:30**	**12.48**	
12/6/2007	**14:57:45**	**12.47**	
12/6/2007	14:58:00	12.47	
12/6/2007	14:58:15	11.46	
12/6/2007	14:58:30	7.81	
12/6/2007	14:58:45	6.06	
12/6/2007	14:59:00	5.90	
12/6/2007	14:59:15	5.89	**Precision 2: Trial 2**
12/6/2007	**14:59:30**	**5.90**	**6.00% Injection**
12/6/2007	**14:59:45**	**5.89**	**5.90 % Oxygen**
12/6/2007	**15:00:00**	**5.90**	
12/6/2007	**15:00:15**	**5.90**	
12/6/2007	15:00:30	5.90	
12/6/2007	15:00:45	5.91	
12/6/2007	15:01:00	7.79	
12/6/2007	15:01:15	11.71	
12/6/2007	15:01:30	12.48	
12/6/2007	15:01:45	12.52	
12/6/2007	15:02:00	12.53	**Accuracy Trial 2**
12/6/2007	**15:02:15**	**12.54**	**Cylinder # ALM023625 12.48%**
12/6/2007	**15:02:30**	**12.54**	**12.54 % Oxygen**
12/6/2007	**15:02:45**	**12.54**	
12/6/2007	**15:03:00**	**12.54**	
12/6/2007	15:03:15	12.54	
12/6/2007	15:03:30	12.54	
12/6/2007	15:03:45	12.49	
12/6/2007	15:04:00	12.26	
12/6/2007	15:04:15	12.38	
12/6/2007	15:04:30	12.46	**Precision 1: Trial 3**
12/6/2007	**15:04:45**	**12.47**	**12.50% Injection**
12/6/2007	**15:05:00**	**12.47**	**12.47 % Oxygen**
12/6/2007	**15:05:15**	**12.47**	
12/6/2007	**15:05:30**	**12.47**	
12/6/2007	15:05:45	12.47	
12/6/2007	15:06:00	12.47	
12/6/2007	15:06:15	12.46	
12/6/2007	15:06:30	10.66	
12/6/2007	15:06:45	7.13	
12/6/2007	15:07:00	5.97	**Precision 2: Trial 3**
12/6/2007	**15:07:15**	**5.89**	**6.00% Injection**
12/6/2007	**15:07:30**	**5.89**	**5.89 % Oxygen**
12/6/2007	**15:07:45**	**5.89**	
12/6/2007	**15:08:00**	**5.89**	

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Date	Time, s	Oxygen	Comments
12/6/2007	15:08:15	5.89	
12/6/2007	15:08:30	5.90	
12/6/2007	15:08:45	5.90	
12/6/2007	15:09:00	6.01	
12/6/2007	15:09:15	9.13	
12/6/2007	15:09:30	12.12	
12/6/2007	15:09:45	12.50	
12/6/2007	15:10:00	12.52	
12/6/2007	15:10:15	12.53	
12/6/2007	15:10:30	12.54	
12/6/2007	15:10:45	12.53	**Accuracy Trial 3**
12/6/2007	**15:11:00**	**12.54**	**Cylinder # ALM023625 12.48%**
12/6/2007	**15:11:15**	**12.53**	**12.54 % Oxygen**
12/6/2007	**15:11:30**	**12.54**	
12/6/2007	**15:11:45**	**12.54**	
12/6/2007	15:12:00	12.53	
12/6/2007	15:12:15	12.50	
12/6/2007	15:12:30	12.93	
12/6/2007	15:12:45	18.36	
12/6/2007	15:13:00	19.25	
12/6/2007	15:13:15	8.26	
12/6/2007	15:13:30	0.96	
12/6/2007	15:13:45	0.17	
12/6/2007	15:14:00	0.12	
12/6/2007	15:14:15	0.10	
12/6/2007	15:14:30	0.09	
12/6/2007	15:14:45	0.09	
12/6/2007	15:15:00	0.08	
12/6/2007	15:15:15	0.08	
12/6/2007	15:15:30	4.06	
12/6/2007	15:15:45	15.03	
12/6/2007	15:16:00	20.09	
12/6/2007	15:16:15	20.78	
12/6/2007	15:16:30	20.83	
12/6/2007	15:16:45	20.84	
12/6/2007	15:17:00	20.84	
12/6/2007	15:17:15	20.84	
12/6/2007	15:17:30	20.85	
12/6/2007	15:17:45	20.84	
12/6/2007	15:18:00	20.85	
12/6/2007	15:18:15	20.84	
12/6/2007	15:18:30	20.84	
12/6/2007	15:18:45	20.84	
12/6/2007	15:19:00	20.84	
12/6/2007	15:19:15	20.84	
12/6/2007	15:19:30	20.84	
12/6/2007	15:19:45	20.84	
12/6/2007	15:20:00	20.84	

Interference Response

Analyzer Type: Oxygen (O_2)
Manufacturer: Servomex
Detector Type: Paramagnetic
Model No.: 1440
Serial No.: 1420C/2765
Calibration Span (%): 11.27

Test Gas	Test Gas Conc.	High Standard			Zero			Maximum % Interference
		O_2 without interferent	O_2 with interferent	% Interference	Zero without interferent	Zero with interferent	% Interference	
NH_3	10 ppm	11.27	11.27	0.00	0.03	0.01	0.18	0.18
SO_2	20 ppm	11.25	11.25	0.00	0.01	0.01	0.00	0.00
CH_4	50 ppm	11.24	11.25	0.09	0.02	0.04	-0.18	0.18
CO	50 ppm	11.23	11.24	0.09	0.00	0.01	-0.09	0.09
CO_2	5%	11.23	11.26	0.27	0.00	-0.01	0.09	0.27
CO_2	12.55%	11.25	11.27	0.18	0.03	-0.02	0.44	0.44
NO_2	15 ppm	11.22	11.24	0.18	0.01	0.00	0.09	0.18
NO_x	15 ppm	11.22	11.25	0.27	0.01	0.01	0.00	0.27
H_2	1,020 ppm	11.24	11.23	-0.09	0.02	0.01	0.09	0.09
HCl	10 ppm	11.29	11.31	0.18	0.00	-0.01	0.09	0.18

Sum of the highest absolute value obtained with and without the pollutant present: 1.88 %
Allowable interference response: 2.5 %

Certification Date: 8/9/2006
Operator: [signature]

Interference Response

Analyzer Type: Carbon Dioxide (CO_2)
Manufacturer: Servomex
Detector Type: NDIR
Model No.: 1440
Serial No.: 1415C
Calibration Span (%): 11.41

Test Gas	Test Gas Conc.	High Standard			Zero			Maximum % Interference
		CO_2 without interferent	CO_2 with interferent	% Interference	Zero without interferent	Zero with interferent	% Interference	
NH_3	10 ppm	11.41	11.39	-0.18	0.01	0.01	0.00	0.18
SO_2	20 ppm	11.37	11.37	0.00	0.01	0.01	0.00	0.00
CH_4	50 ppm	11.37	11.37	0.00	0.01	0.01	0.00	0.00
CO	50 ppm	11.41	11.41	0.00	0.01	0.01	0.00	0.00
NO_2	15 ppm	11.37	11.37	0.00	0.01	0.01	0.00	0.00
NO_x	15 ppm	11.37	11.37	0.00	0.01	0.01	0.00	0.00
H_2	1,020 ppm	11.37	11.37	0.00	0.01	0.01	0.00	0.00
HCl	10 ppm	11.41	11.38	-0.26	0.01	0.01	0.00	0.26

Sum of the highest absolute value obtained with and without the pollutant present: 0.44 %
Allowable interference response: 2.5 %

Certification Date: 8/9/2006
Operator: [signature]

Interference Response

Analyzer Type: Sulfur Dioxide (SO_2)
Manufacturer: Bovar Engineered Products (Western Research)
Detector Type: Pulsed Fluorescence
Model No.: 721-ATM
Serial No.: 92-721ATM-7947-1-1
Calibration Span (%): 100

Test Gas	Test Gas Conc.	High Standard			Zero			Maximum % Interference
		SO_2 without interferent	SO_2 with interferent	% Interference	Zero without interferent	Zero with interferent	% Interference	
NH_3	10 ppm	100.1	100.1	0.0	0.1	0.1	0.0	0.0
CH_4	50 ppm	102.6	103.1	0.5	0.1	0.3	0.2	0.5
CO	50 ppm	100.5	100.5	0.0	0.3	0.3	0.0	0.0
CO_2	5%	100.9	101.1	0.2	0.1	0.1	0.0	0.2
CO_2	12.55%	100.9	101.2	0.3	0.1	0.2	0.1	0.3
NO_2	15 ppm	101.6	102.2	0.6	0.3	0.5	0.2	0.6
NO_x	15 ppm	101.4	101.4	0.0	0.3	0.3	0.0	0.0
H_2	1020 ppm	100.6	100.6	0.0	0.4	0.4	0.0	0.0
HCl	10 ppm	100.8	100.6	-0.2	0.1	0.3	0.2	0.2

Sum of the highest absolute value obtained with and without the pollutant present: 1.80 %
Allowable interference response: 2.5 %

Certification Date: 8/9/2006
Operator: [signature]

Interference Response

Analyzer Type:	Oxides of Nitrogen (NO_x)
Manufacturer:	Thermo Environmental Instruments Inc.
Detector Type:	Chemiluminescent
Model No.:	42C
Serial No.:	42CHL64932-345
Calibration Span (ppm):	100

Test Gas	Test Gas Conc.	High Standard			Zero			Maximum % Interference
		NO_x without interferent	NO_x with interferent	% Interference	Zero without interferent	Zero with interferent	% Interference	
NH_3	10 ppm	100.02	100.00	-0.02	0.08	-0.06	-0.14	0.14
CH_4	50 ppm	100.10	100.04	-0.06	0.08	0.05	-0.03	0.06
CO_2	5%	100.07	99.92	-0.15	0.08	-0.13	-0.21	0.21
CO_2	12.55%	100.11	99.07	-1.04	0.08	-0.42	-0.50	1.04
SO_2	20 ppm	100.10	100.08	-0.02	0.08	0.09	0.01	0.02
CO	50 ppm	100.09	99.96	-0.13	0.08	0.07	-0.01	0.13
H_2	1,020 ppm	100.11	100.10	-0.01	0.08	0.01	-0.07	0.07
HCl	10 ppm	100.02	99.94	-0.08	0.08	0.01	-0.07	0.08

Sum of the highest absolute value obtained with and without the pollutant present: 1.75 %
Allowable interference response: 2.5 %

Certification Date: 8/9/2006
Operator: [signature]

Interference Response

Analyzer Type: Carbon Monoxide (CO)
Manufacturer: Thermo Electron Corporation
Detector Type: Non-Dispersive Infrared (NDIR)
Model No.: 48C
Serial No.: 506610701
Calibration Span (ppm): 100

Test Gas	Test Gas Conc.	High Standard			Zero			Maximum % Interference
		CO without interferent	CO with interferent	% Interference	Zero without interferent	Zero with interferent	% Interference	
NH_3	10 ppm	100.0	100.0	0.0	0.0	0.0	0.0	0.0
SO_2	20 ppm	100.0	100.0	0.0	0.0	0.3	0.3	0.3
CH_4	50 ppm	100.0	100.0	0.0	0.0	0.1	0.1	0.1
CO_2	5%	100.0	99.8	-0.2	0.0	0.2	0.2	0.2
CO_2	12.55%	100.0	99.6	-0.4	0.0	-0.1	-0.1	0.4
NO_2	15 ppm	100.0	100.0	0.0	0.0	0.2	0.2	0.2
NO_x	15 ppm	100.0	100.0	0.0	0.0	0.2	0.2	0.2
H_2	1020 ppm	100.0	100.0	0.0	0.0	0.1	0.1	0.1
HCl	10 ppm	100.0	100.0	0.0	0.0	0.1	0.1	0.1

Sum of the highest absolute value obtained with and without the pollutant present: 1.6 %
Allowable interference response: 2.5 %

Certification Date: 8/10/2006
Operator: [signature]

Instrument: 2336 MFC: 1

MAX Flow: 5,000.00 CCM
Cal Date: 08/14/2007 , 11:29:35
Reference Gas: AIR
Description: Factory MFC #1 Calibration Table

- Table is selected

Set Flow	True Flow
250.00	261.67
500.00	525.58
1,000.00	1,044.70
1,500.00	1,559.43
2,000.00	2,079.54
2,500.00	2,579.93
3,000.00	3,094.56
3,500.00	3,599.52
4,000.00	4,122.32
4,500.00	4,645.12
5,000.00	5,183.17

Instrument: 2336 MFC: 2

MAX Flow: 5,000.00 CCM
Cal Date: 08/14/2007 , 12:12:55
Reference Gas: AIR
Description: Factory MFC #2 Calibration Table

- Table is selected

Set Flow	True Flow
250.00	278.06
500.00	541.66
1,000.00	1,057.44
1,500.00	1,573.13
2,000.00	2,091.52
2,500.00	2,592.83
3,000.00	3,099.54
3,500.00	3,611.64
4,000.00	4,127.33
4,500.00	4,643.92
5,000.00	5,183.87

Instrument: 2336 MFC: 3

MAX Flow: 500.00 CCM
Cal Date: 08/14/2007 , 16:00:49
Reference Gas: AIR
Description: Factory MFC #3 Calibration Table

- Table is selected

Set Flow	True Flow
25.00	35.21
50.00	58.15

100.00	111.31
150.00	164.50
200.00	217.60
250.00	270.51
300.00	324.15
350.00	376.35
400.00	432.41
450.00	486.76
500.00	542.91

Instrument: 2336 **MFC: 4**

MAX Flow: 50.00 CCM
Cal Date: 08/14/2007 , 16:29:21
Reference Gas: AIR
Description: Factory MFC #4 Calibration Table

Set Flow	True Flow
2.50	3.05
5.00	5.71
10.00	10.92
15.00	16.14
20.00	21.48
25.00	26.71
30.00	32.15
35.00	37.58
40.00	43.03
45.00	48.70
50.00	54.09

- Table is selected

Scott Specialty Gases

Shipped From:
1290 COMBERMERE STREET
TROY MI 48083
Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ANALYSIS

WAREHOUSE/STOCK
WAREHOUSE/STOCK/
CHICAGO WAREHOUSE
868 SIVERT
WOOD DALE IL 60191

PROJECT #: 05-59479-004
PO#: GEN STOCK
ITEM #: 0501813 AL
DATE: 02Oct2007

CYLINDER #: ALM051228
FILL PRESSURE: 02000 PSIG

PURE MATERIAL: NITROGEN CAS# 7727-37-9

GRADE: ZERO GAS

PURITY: 99.998%

IMPURITY	MAXIMUM CONCENTRATIONS
THC	0.5 PPM

ANALYST:

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-330-06
Project No.: 05-47370-001

Customer

ARI ENVIRONMENTAL, INC.

951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM035729 **Certification Date:** 28Sep2006 **Exp. Date:** 27Sep2009
Cylinder Pressure*:** 1900 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
CARBON DIOXIDE	22.80	%	+/- 1%	Direct NIST and NMi
OXYGEN	22.64	%	+/- 1%	Direct NIST and NMi
NITROGEN		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 2300	01Jan2008	ALM049142	23.34 %	CARBON DIOXIDE
NTRM 2350	01May2009	K026542	23.48 %	OXYGEN

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/10693	20Sep2006	THERMAL CONDUCTIVITY
CALIFORNIA/110P/S02041	27Sep2006	PARAMAGNETIC

ANALYZER READINGS

(Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

First Triad Analysis **Second Triad Analysis** **Calibration Curve**

CARBON DIOXIDE

First Triad Analysis		
Date: 27Sep2006	Response Unit:MV	
Z1=0.00000	R1=1155214.	T1=1131870.
R2=1154373.	Z2=0.00000	T2=1129312.
Z3=0.00000	T3=1128455.	R3=1156490.
Avg. Concentration:	22.80	%

Second Triad Analysis:

Calibration Curve	
Concentration=A+Bx+Cx2+Dx3+Ex4	
r=0.999996	
Constants:	A=-0.013103
B=0.000020	C=0.000000
D=0.000000	E=0.000000

OXYGEN

First Triad Analysis		
Date: 27Sep2006	Response Unit:MV	
Z1=0.00000	R1=23.48000	T1=22.65000
R2=23.48000	Z2=0.00000	T2=22.65000
Z3=0.00000	T3=22.66000	R3=23.49000
Avg. Concentration:	22.64	%

Second Triad Analysis:

Calibration Curve	
Concentration=A+Bx+Cx2+Dx3+Ex4	
r=0.999999	
Constants:	A=-0.002088
B=0.999740	C=0.000000
D=0.000000	E=0.000000

APPROVED BY: _____
E-18

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-128-07
Project No.: 05-51731-006

Customer

ARI ENVIRONMENTAL, INC.

951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM027015 **Certification Date:** 05Feb2007 **Exp. Date:** 04Feb2009
Cylinder Pressure*:** 1914 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
NITRIC OXIDE	88.98	PPM	+/- 1%	Direct NIST and NMi
NITROGEN - OXYGEN FREE		BALANCE		
TOTAL OXIDES OF NITROGEN	88.99	PPM		Reference Value Only

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1684	01Jun2009	AAL070944	98.40 PPM	NITRIC OXIDE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
FTIR//0928621	15Jan2007	FTIR

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

First Triad Analysis

NITRIC OXIDE

Date: 28Jan2007	Response Unit:PPM	
Z1 = 0.01868	R1 = 97.61883	T1 = 88.32379
R2 = 98.00741	Z2 = 0.19010	T2 = 88.50212
Z3 = 0.26167	T3 = 88.64807	R3 = 98.18493
Avg. Concentration:	88.89	PPM

Second Triad Analysis

Date: 05Feb2007	Response Unit: PPM	
Z1 = -0.14891	R1 = 97.10913	T1 = 87.96520
R2 = 97.40254	Z2 = -0.08419	T2 = 88.08845
Z3 = -0.07440	T3 = 88.24948	R3 = 97.50939
Avg. Concentration:	89.07	PPM

Calibration Curve

Concentration = A + Bx + Cx2 + Dx3 + Ex4	
r = 9.99999E-1	
Constants:	A = 0.00000E+0
B = 9.85324E-1	C = 5.10000E-5
D = 0.00000E+0	E = 0.00000E+0

APPROVED BY: _____
Scott King

E-19

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-128-07
Project No.: 05-51731-002

Customer

ARI ENVIRONMENTAL, INC.

951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM018450 **Certification Date:** 08Feb2007 **Exp. Date:** 07Feb2010
Cylinder Pressure*:** 1900 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
CARBON MONOXIDE	90.41	PPM	+/- 1%	Direct NIST and NMi
NITROGEN		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 1679	02Apr2007	ALM007707	94.90 PPM	CARBON MONOXIDE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
HORIBA/A1A-220/57297601	30Jan2007	NDIR

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

CARBON MONOXIDE

First Triad Analysis

Date: 30Jan2007	Response Unit:MV	
Z1 = 0.00000	R1 = 100.0000	T1 = 95.30000
R2 = 100.0000	Z2 = 0.00000	T2 = 95.20000
Z3 = 0.00000	T3 = 95.30000	R3 = 100.0000
Avg. Concentration:	90.43	PPM

Second Triad Analysis

Date: 07Feb2007	Response Unit: MV	
Z1 = 0.00000	R1 = 54.60000	T1 = 95.20000
R2 = 54.60000	Z2 = 0.00000	T2 = 95.20000
Z3 = 0.10000	T3 = 95.20000	R3 = 54.60000
Avg. Concentration:	90.39	PPM

Calibration Curve

Concentration = A + Bx + Cx2 + Dx3 + Ex4	
r = 0.999988	
Constants:	A = 0.058385
B = 0.910506	C = 0.000763
D = -0.000004	E = 0.000000

APPROVED BY: _____
E-20

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-392-07
Project No.: 05-59804-005

Customer

ARI ENVIRONMENTAL, INC.
BILL CRANE
951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM041269 **Certification Date:** 29Oct2007 **Exp. Date:** 28Oct2010

Cylinder Pressure*:** 1850 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
METHANE	90.02	PPM	+/- 1%	Direct NIST and NMi
AIR		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 2751	01Nov2010	K022940	100.2 PPM	METHANE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
VARIAN/3400/7506	28Sep2007	TCD/FID

ANALYZER READINGS

(Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

METHANE

First Triad Analysis			Second Triad Analysis	Calibration Curve	
Date: 23Oct2007	Response Unit:AREA			Concentration=A+Bx+Cx2+Dx3+Ex4	
Z1=0.00000	R1=762427.0	T1=683153.0		r=0.999997353	
R2=461062.0	Z2=0.00000	T2=683463.0		Constants:	A=0.052634385
Z3=0.00000	T3=682591.0	R3=760755.0		B=0.000123339	C=0
Avg. Concentration:	90.02	PPM		D=0	E=0

APPROVED BY: ROBERT LESNIAK

E-21

RATA CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-417-05
05-35429-001

Customer

ARI ENVIRONMENTAL, INC.
BILL CRANE
951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM023625 **Certification Date:** 29Sep2005 **Exp. Date:** 28Sep2008
Cylinder Pressure*:** 2000 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)	ANALYTICAL ACCURACY**	TRACEABILITY
OXYGEN	12.48 %	+/- 1%	Direct NIST and NMi
NITROGEN	BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol Procedure G1, September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 2350	01May2009	K026542	23.48 %	OXYGEN

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
ROSEMOUNT/755R/1000430	01Sep2005	PARAMAGNETIC

ANALYZER READINGS

(Z = Zero Gas R = Reference Gas T = Test Gas r = Correlation Coefficient)

OXYGEN

First Triad Analysis		
Date: 28Sep2005	Response Unit:MV	
Z1 = 0.00000	R1 = 23.46000	T1 = 12.46000
R2 = 23.45000	Z2 = 0.00000	T2 = 12.49000
Z3 = 0.00000	T3 = 12.48000	R3 = 23.45000
Avg. Concentration:	12.48	%

Second Triad Analysis

Calibration Curve

Concentration = A + Bx + Cx2 + Dx3 + Ex4	
r = 1.0000	
Constants:	A = -0.009861
B = 0.999831	C = 0
D = 0	E = 0

APPROVED BY: _____
E-22

COMPLIANCE CLASS

Scott Specialty Gases

Dual-Analyzed Calibration Standard

1290 COMBERMERE STREET,TROY,MI 48083 Phone: 248-589-2950 Fax: 248-589-2134

CERTIFICATE OF ACCURACY: EPA Protocol Gas

Assay Laboratory

SCOTT SPECIALTY GASES
1290 COMBERMERE STREET
TROY,MI 48083

P.O. No.: IL-350-06
Project No.: 05-48415-001

Customer

ARI ENVIRONMENTAL

951 OLD RAND ROAD #106
WAUCONDA IL 60084

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; Procedure G-1; September, 1997.

Cylinder Number: ALM026305 **Certification Date:** 18Oct2006 **Exp. Date:** 18Oct2008

Cylinder Pressure*:** 1775 PSIG

COMPONENT	CERTIFIED CONCENTRATION (Moles)		ANALYTICAL ACCURACY**	TRACEABILITY
NITROGEN DIOXIDE	50.8	PPM	+/- 2%	NIST and NMi
NITROGEN		BALANCE		

*** Do not use when cylinder pressure is below 150 psig.

** Analytical accuracy is based on the requirements of EPA Protocol procedures , September 1997.

REFERENCE STANDARD

TYPE/SRM NO.	EXPIRATION DATE	CYLINDER NUMBER	CONCENTRATION	COMPONENT
NTRM 2654	04Jul2008	ALM058105	528.0 PPM	NITROGEN DIOXIDE

INSTRUMENTATION

INSTRUMENT/MODEL/SERIAL#	DATE LAST CALIBRATED	ANALYTICAL PRINCIPLE
BECKMAN/951/010177	18Oct2006	CHEMILUMINESCENCE

APPROVED BY: _____